PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2026-BNH-4372

Date: 19th May 2026

Queensland Government

SERVICEABILITY REPORT

FOR THE PROPOSED MIXED-USE DEVELOPMENT

LOCATED AT
17 HAMILTON PLACE, 26 & 28 CAMPBELL STREET,
BOWEN HILLS QLD 4006

PREPARED FOR
LANDITUDE

BORNHORST + WARD

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Bornhorst and Ward Project No: **25160**

If you have any queries regarding this proposal, then please contact: **Nicholas Rozis**

Revision	Date	Description	Author	Rev.	App.
A	January 2026	Issue for DA	DGT	NR	NR

Nicholas Rozis: RPEQ 7729

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BORNHORST +WARD

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1. INTRODUCTION

Bornhorst & Ward has been commissioned to investigate and report on the serviceability requirements pertaining to the proposed mixed-use development located at 17 Hamilton Place, 26 and 28 Campbell Street, Bowen Hills (formally described as Lot 2 on RP83400, Lots 30 & 31 on RP9982, Easement A on SP145847 and Lot 0 on SP247766). The proposal consists of constructing a 2-level basement carpark along with associated infrastructure connections required to service the development, a 4-level podium and a 24-level mixed use tower. Plans of the proposed development layout can be seen in Appendix A.

This document reports on the existing and proposed civil works and infrastructure required as part of the proposed development. The engineering requirements for this proposal shall be in accordance with Engineering Best Management Practices, Brisbane City Council City Plan (2014) and the State Planning Policy (2017).

This report outlines the preliminary design methodology and calculations in support of a Development Application and should be read in conjunction with other documents issued by the consultant team.

2. SITE CHARACTERISTICS

2.1 LOCATION AND EXISTING FEATURES

The development site, located at 17 Hamilton Place, 26 & 28 Campbell Street, Bowen Hills (formally described as Lot 2 on RP83400, Lots 30 & 31 on RP9982, Easement A on SP145847 and Lot 0 on SP247766), has the following existing characteristics:

- The site is bound by, Campbell Street to the north, commercial lots to the east and south and Hamilton Place to the west;
- The development site is comprised of three commercial lots with two existing 2-storey buildings on Lots 30 and 31 on RP9982 and a 1-storey building on Lot 2 on RP83400 with associated driveways, footpaths and carparking;
- The total area of the site is approximately 0.151 ha;
- Vehicle access to the site is via Campbell Street and Jeays Street;
- There is an existing access easement directly south of the development site on Lot 0 on SP247766;
- The nearest downstream waterway to the site is Enoggera Creek which is approximately 425m north-west of the site.

Refer to Figure 1 for locality details.

Figure 1: Site Locality Plan

2.2 PROPOSED DEVELOPMENT

The following points outline the extent of works for the proposed development:

- Material Change of Use from commercial use to residential mixed use;
- The existing commercial buildings is to be demolished and a residential tower including a podium level and basement level is to be constructed in its place;
- The site will be accessed via a driveway onto Campbell Street and the existing access easement from Jeays Street, a lower-order road consistent with EDQ's preferred access hierarchy.

2.3 TOPOGRAPHY AND CATCHMENT CHARACTERISTICS

The existing topography and catchment characteristics are as follows:

- The high point of the existing site is RL 20m AHD located in the south-western corner of the site. The low point of the site is approximately RL 19m AHD located in the north-western corner of the site;
- The development falls at an average approximate grade of 2.8% from the high to low point;
- Roof water is currently discharged to the kerb and channel within Jeays Street and Hamilton Place via kerb adaptors;
- During storm events, runoff from the site discharges as overland flow over the north-western corner of the development site to an existing stormwater gully pit;
- The site's external catchment is fully developed and considered to be serviced by existing systems and road flow.

See the survey plan in Appendix C for more information.

2.4 EXISTING FLOODING CONDITIONS

A BCC Floodwise Report has been obtained for the site and can be provided upon request. This report indicated that no flood levels or flags for building or development purposes exist for the development site. The interactive mapping system within BCC's (2014) City Plan confirms that the development site is not affected by Brisbane River, creek/waterway or overland flow flooding. As a result of this, it is expected that the site is at a low risk of flood inundation.

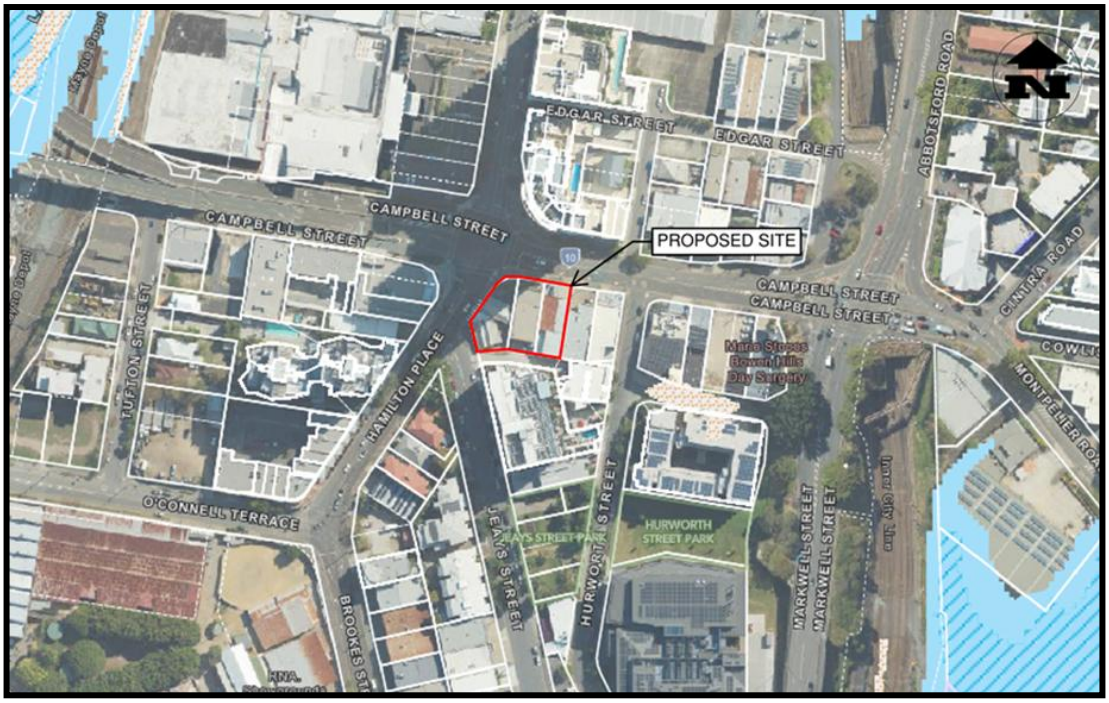


Figure 2: Brisbane City Council Interactive Flood Map

3. EXISTING AND PROPOSED CIVIL WORKS AND INFRASTRUCTURE

3.1 STORMWATER

3.1.1 Existing Infrastructure

A Before You Dig has been completed of the site and its surrounding area. The following stormwater infrastructure was noted:

- An existing 100mm diameter stormwater pipe is located within Hamilton Place road reserve. This stormwater line ultimately drains north towards an existing unknown diameter stormwater pipe within Hamilton Place road reserve. Runoff from the existing site is not conveyed to this stormwater pipe;
- An existing unknown diameter stormwater pipe is located within the Hamilton Place road reserve. This stormwater line ultimately drains north towards the existing stormwater infrastructure within Campbell Street road reserve. Runoff from the existing site is conveyed to this stormwater pipe via an existing stormwater gully pit;
- An existing stormwater gully pit is located west of the development site within the eastern verge of Hamilton Place. Runoff from the existing site is conveyed to this gully pit and ultimately drains to the unknown diameter stormwater pipe;

- An existing stormwater gully pit is located at the north-western corner of the development site within the corner between Hamilton Place and Campbell Street. Runoff from the existing site is conveyed to this stormwater pipe and ultimately drains north towards a 300mm diameter stormwater pipe;
- An existing 300mm diameter stormwater pipe is located within the Campbell Street road reserve. This stormwater line connects to the existing stormwater gully pit and drains north towards a 375mm diameter stormwater pipe;
- An existing 375mm diameter stormwater pipe is located within the Campbell Street road reserve. This stormwater line connects to an existing field inlet located within the Campbell Street road reserve and ultimately drains west towards the existing stormwater network within Airport Link;
- There are three existing manholes between the existing gully pit north-western corner of the site and the existing filed inlet within Campbell Street;
- The stormwater infrastructure has been built for a fully developed catchment.

Refer to the Before You Dig investigation of the existing stormwater infrastructure can be found in Appendix C of this report.

3.1.2 Proposed Infrastructure

The following points outline the proposed stormwater infrastructure for the development site:

- It is proposed to maintain the existing stormwater catchments and flow direction for the discharge of the stormwater from the development site while it is used for a residential tower;
- Minor storm events will be captured by the proposed internal stormwater network and discharge to the existing gully pit located at the north-western corner of the development site;
- Major storm events will be conveyed via overland flow to the existing gully pit at the north-western corner of the site;
- Existing roof water kerb adaptors to be demolishes for excavation;
- As there will be no increase to the impervious area as a result of the development, there will be no expected increase to peak stormwater discharge rates from the site. Based on this, no stormwater detention measures are required;
- Considering the development works area is less than 2,500m^2, stormwater quality improvement is required under the State Planning Policy.

Refer to Bornhorst and Ward's Stormwater Management Plan for further details. Refer to the engineering drawings in Appendix B for further information.

3.2 EARTHWORKS

Earthworks will be required to construct building foundations, basement levels, create appropriate carpark grades and to ensure the site can be serviced. A detailed earthworks plan will be prepared as part of the detailed design operational works lodgement.

The site has been identified on Brisbane City Council Potential ad Actual Acid Sulfate Soils Overlay Map, refer to Figure 3 below. As the proposed development is to undertake excavation below RL 20.0m AHD to create the additional basement levels, it is anticipated that Acid Sulfate Soils may be encountered. Therefore, it is recommended that an Acid Sulfate Soil investigation is to be completed as part of the detailed geotechnical investigation conducted for the site. If Acid Sulfate Soils are present, then an Acid Sulfate Soil Management Plan will be required.

Figure 3: Brisbane City Council Potential and Actual Acid Sulfate Soils Overlay

All earthworks will be undertaken in accordance with the Brisbane City Council guidelines, including the Potential and actual acid sulfate soils planning scheme policy.

3.3 EROSION AND SEDIMENT CONTROL PLAN

A comprehensive Erosion and Sediment Control Plan (ESCP) including a construction process will be prepared for this development during the detailed design phase and included within the Construction Management Plan. The ESCP designs will be in accordance with the State Planning Policy (2017) and the Brisbane City Council guidelines.

An Erosion Hazard form has also been included in this application (refer to Appendix D).

3.4 ROAD WORKS

The proposed road works are as follows:

- Existing crossovers from Campbell Sreet will be made redundant, with kerb and channel to be reinstated in accordance with Brisbane City Council and EDQ standards;
- Vehcular access to the basement level carpark is proposed via the existing access easement from Jeays Street, consistent with EDQ's preference for access from lower-order roads;
- Road widening along Hamilton Place is identified under the Bowen Hills PDA;
- All proposed road works will be undertaken in accordance with Brisbane City Council Guidelines.

Refer to the engineering drawings in Appendix B for further information.

3.5 SEWER

3.5.1 Existing Infrastructure

The Urban Utilities (UU) Asset Plans from a Before You Dig investigation indicated the following existing sewer information:

- There is an existing 150mm diameter sewer trunk main draining west within the southern verge of Campbell Street fronting the development site;
- There is an existing 150mm diameter sewer trunk main draining north within the eastern verge of Hamilton Place;
- There is an existing 150mm diameter sewer trunk main draining north within the western verge of Jeays Street;
- These sewer trunk mains drain towards an existing sewer manhole within the Hamilton Place and Campbell Street intersection north-west of the development site. This sewer manhole ultimately drains west along an existing sewer main within Campbell Street;
- There is an existing sewer manhole within the Jeays Street and Hamilton Place intersection to the west of the development site ;
- There is an existing sewer manhole within Jeays Street to the south-west of the development site;
- There are three 100mm diameter sewer service connections servicing each lot within the development site.

UU Asset Plans of the existing sewer infrastructure can be found in Appendix C of this report.

3.5.2 Proposed Infrastructure

The proposed sewer infrastructure for this development is as follows:

- It is expected that one sewer service connection is to be upgraded to a 150mm diameter to continue servicing the development. The remaining sewer service connections will be made redundant as part of this development;

Refer to Appendix B for preliminary drawings of the proposed sewer works.

3.5.3 Service Advice Notice

A Service Advice Notice application has been lodged with UU to determine the requirements, and whether the existing network has sufficient capacity to service the development. Works required to service the site will be undertaken in accordance with UU requirements and procedures. All of the internal sewer infrastructure will be documented by a hydraulic consultant.

Further pre-requisite applications may be requested within the Service Advice Notice once received.

3.6 WATER

3.6.1 Existing Infrastructure

The UU Asset Plans from a Before You Dig investigation indicated the following existing water infrastructure:

- There is an existing 300mm diameter water trunk main within the western verge of Hamilton Place located to the west of the development site. This water main is currently servicing the development site;

- An existing 20mm diameter water service connection is currently servicing the development site. This water service connection is connected to a 32mm diameter water service connection from the 300mm diameter water trunk main;
- There is an existing 150mm water reticulation main within the Campbell road reserve located north of the development site. This water main is currently servicing the lots within the development site;
- There are two existing 20mm diameter water service connections from the 150mm water reticulation main.

UU Asset Plans of the existing water infrastructure can be found in Appendix B of this report.

3.6.2 Proposed Infrastructure

The proposed water infrastructure for the development is as follows:

- It is proposed to remove all existing water connections currently servicing the development;
- A new 100mm diameter water service connection from the existing 300mm diameter trunk main within Hamilton Place will be constructed to service the development site for both fire and domestic use, subject to Urban Utilities approval.

Refer to Appendix A for preliminary drawings of the proposed water works.

3.6.3 Service Advice Notice

A Service Advice Notice application has been lodged with UU to determine the requirements, and whether the existing network has sufficient capacity to service the development. Works required to service the site will be undertaken in accordance with UU requirements and procedures. All of the internal water infrastructure will be documented by a hydraulic consultant.

Further pre-requisite applications may be requested within the Service Advice Notice once received.

3.7 ELECTRICITY

The Energex Asset Plans from a Before You Dig investigation indicated the following:

- Underground electrical infrastructure is present within both Hamilton Place, Jeays Street and Campbell Street road reserve;
- Existing power supply is assumed to service the commercial tenancies and shopfronts currently on-site;

Electrical services required for the proposed development including assessment of the existing infrastructure capacity will be designed and determined by an electrical engineer and will be assessed by Energex during the detailed design phase of the development.

3.8 COMMUNICATIONS

The Telstra and Optus Asset Plans from a Before You Dig investigation indicated the following:

- Below ground telecommunications infrastructure exists within Hamilton Place, Jeays Street and Campbell Street road reserve along the northern, western and south-western boundary of the development site;
- The site is currently serviced by this infrastructure, with connections assumed to the existing commercial buildings.

All works required to provide communication services to the proposed development will be undertaken with the relevant service providers approval and coordination.

3.9 GAS

The APA Asset Plans from a Before You Dig investigation indicated the following:

- A medium-pressure natural gas infrastructure exists within the Campbell Street road reserve and Jeays Street road reserve located north and west of the development site;
- It is assumed that gas service connections are available for extension to the site if required.

APA Asset Plans of the existing gas infrastructure can be found in Appendix C of this report. All works required to provide gas services to the proposed development will be undertaken by the appropriate consultant with APA Group's approval and coordination.

4. BRISBANE CITY COUNCIL CODES

The relevant Brisbane City Council Codes with respect to engineering aspects for assessment of the Development Application have been addressed as well as an erosion hazard assessment. The codes will assist in assessing operational works requirements. The codes addressed in this report include:

- Infrastructure Design Code;
- Filling and Excavation Code.

The completed codes can be found attached in Appendix D of this Report.

5. SUMMARY

This report relating to the proposed mixed-use development located at 17 Hamilton Place, 26 & 28 Campbell Street, Bowen Hills (formally described as Lot 2 on RP83400, Lots 30 & 31 on RP9982, Easement A on SP145847 and Lot 0 on SP247766) has shown the following:

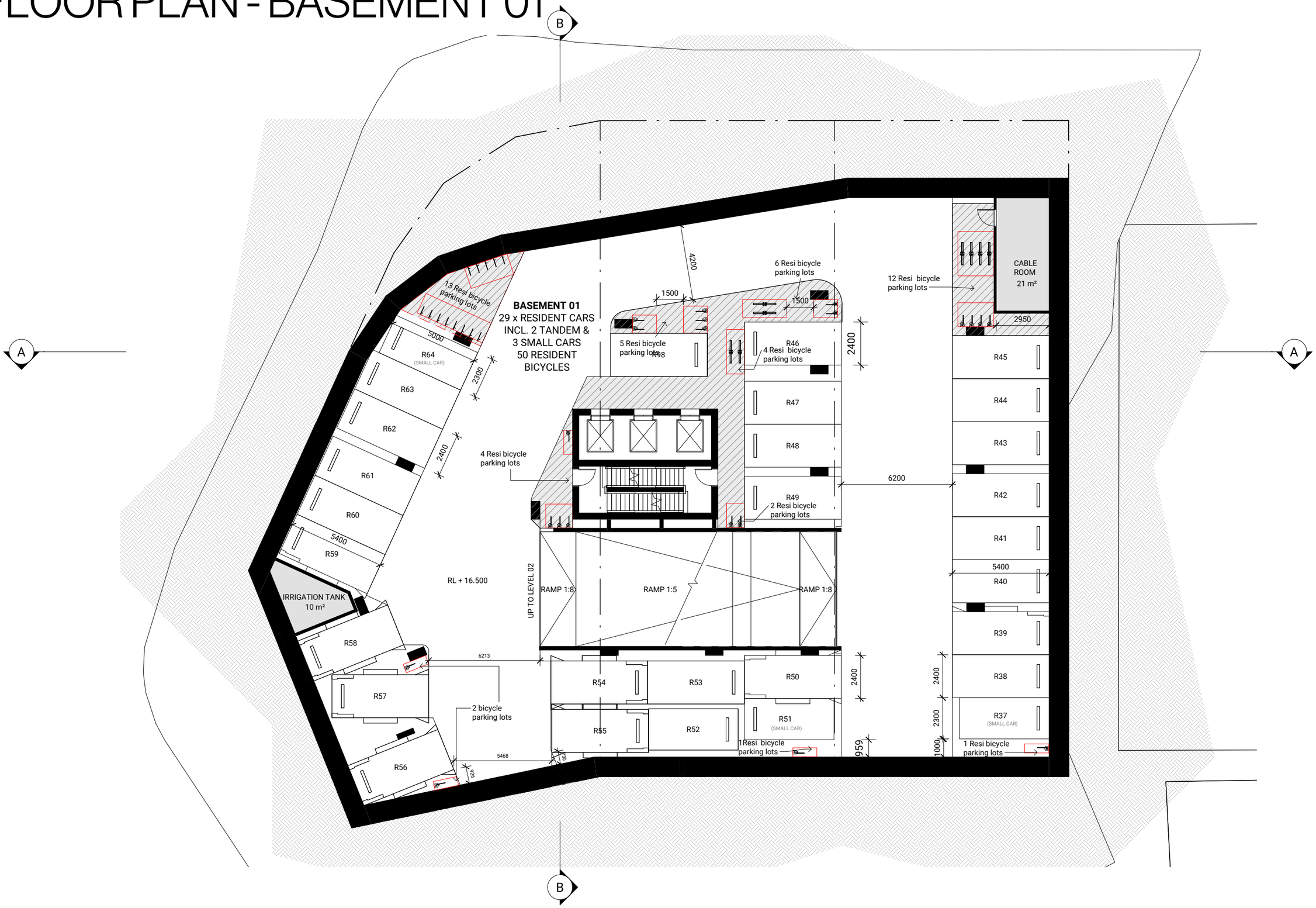
- The proposed development site has no flood levels or flags for building or development purposes and is expected to be low risk;
- A new stormwater connection is proposed from the existing stormwater network within Campbell Street with a formal point of discharge;
- There will be no increase in peak stormwater runoff as a result of the development for 17 Hamilton Place, 26 & 28 Campbell Street, Bowen Hills and is considered negligible. Therefore, no detention is proposed;
- Minor storm events will be captured by the proposed internal stormwater network and discharge to the existing gully pit located at the north-western corner of the development site;
- Major storm events will be conveyed via overland flow to the existing gully pit at the north-western corner of the site;
- Earthworks will be required to level the site, and facilitate the construction of basement levels and foundatins for the proposed residential tower;
- As earthworks required will be below 20m AHD, it is expected that acid sulfates will be encountered during construction. An acid sulfate management plan will be completed during the detailed design phase;
- Existing crossovers from Campbell Sreet will be made redundant, with kerb and channel to be reinstated in accordance with Brisbane City Council and EDQ standards;
- Road widening and active transport upgrades may be required along Hamilton Place as identified under the Bowen Hills PDA Development Charges and Offset Plan (DCOP);
- Sewer and water connections to the existing surround infrastructure to the north and west are proposed to service the development. Urban Utilities will be required to confirm the suitability of these connections and the capacity of the existing network;
- There is existing electrical, gas and telecommunications surround the site which may be used to service the development.

APPENDIX A

DEVELOPMENT DRAWINGS

Our Solution

FLOOR PLAN - BASEMENT 01



SCALE 1:200 @ A3 SIZE

Our Solution

FLOOR PLAN - GROUND LEVEL

PLUS STUDIO

SCALE 1:200 @ A3 SIZE

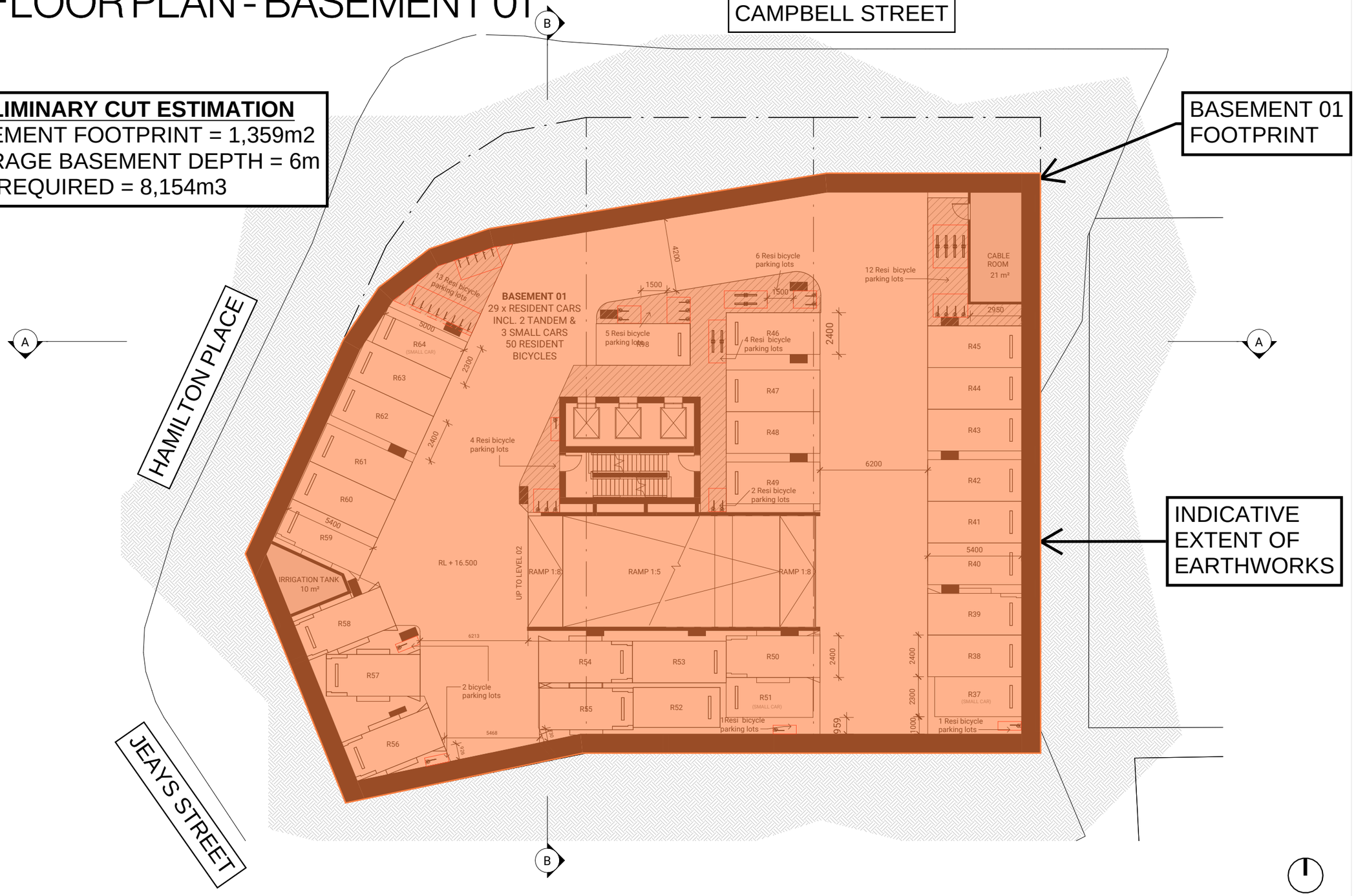
APPENDIX B

ENGINEERING DRAWINGS

Our Solution

FLOOR PLAN - BASEMENT 01

PRELIMINARY CUT ESTIMATION
BASEMENT FOOTPRINT = 1,359m2
AVERAGE BASEMENT DEPTH = 6m
CUT REQUIRED = 8,154m3



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PROJECT
17 HAMILTON PLACE, 26 & 28 CAMPBELL STREET, BOWEN HILLS, QLD

SUBJECT
PRELIMINARY EARTHWORKS PLAN SHEET 1

PROJECT No.
25160

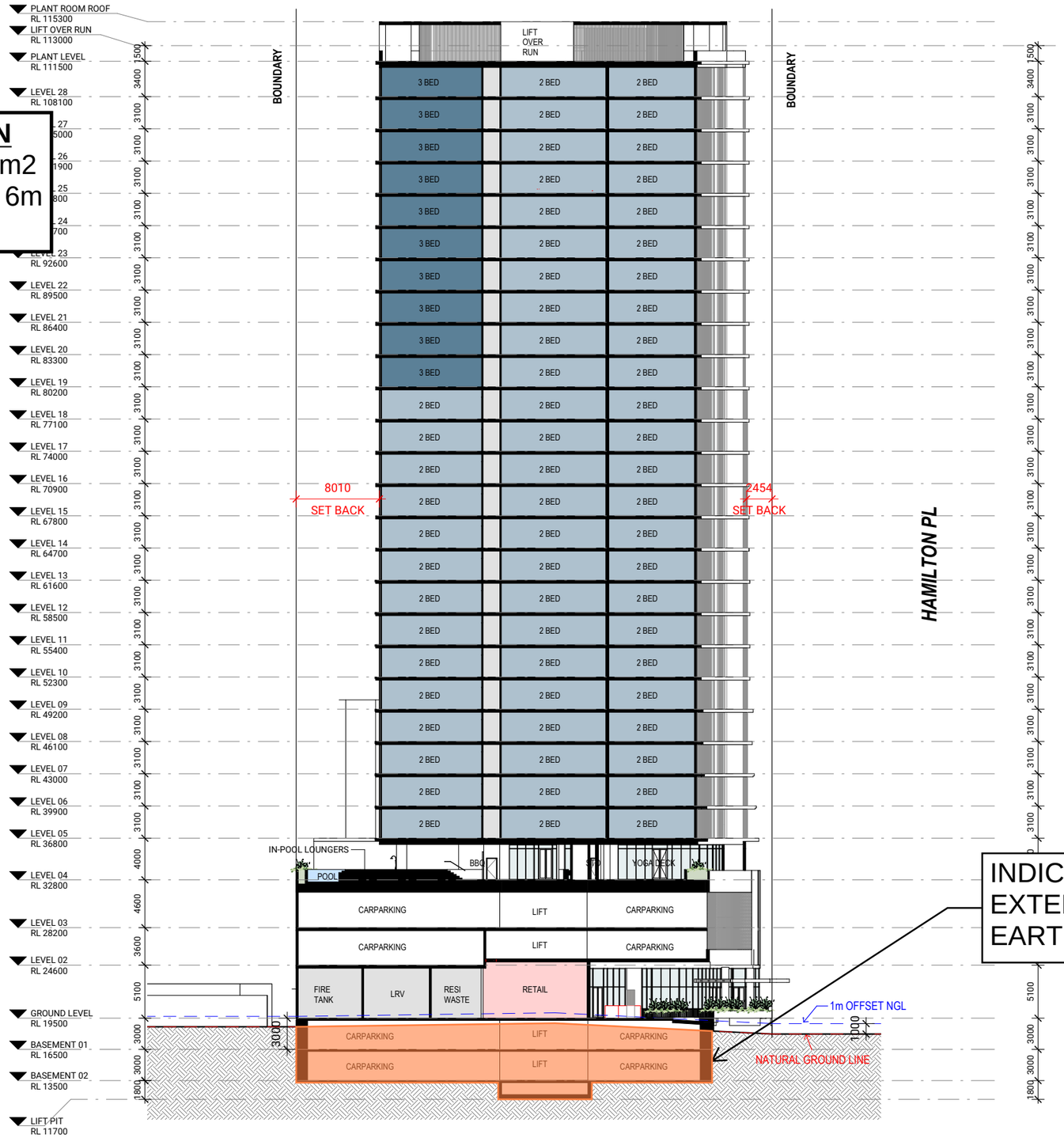
DRAWING No. CK-001
REVISION A

ORIGINAL SIZE A3

Our Solution

SECTION A

PRELIMINARY CUT ESTIMATION
BASEMENT FOOTPRINT = 1,359m2
AVERAGE BASEMENT DEPTH = 6m
CUT REQUIRED = 8,154m3



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PROJECT
17 HAMILTON PLACE, 26 & 28 CAMPBELL STREET, BOWEN HILLS, QLD

SUBJECT
PRELIMINARY EARTHWORKS PLAN SHEET 2

PROJECT No.
25160

DRAWING No. CK-002
REVISION A

ORIGINAL SIZE A3

Our Solution

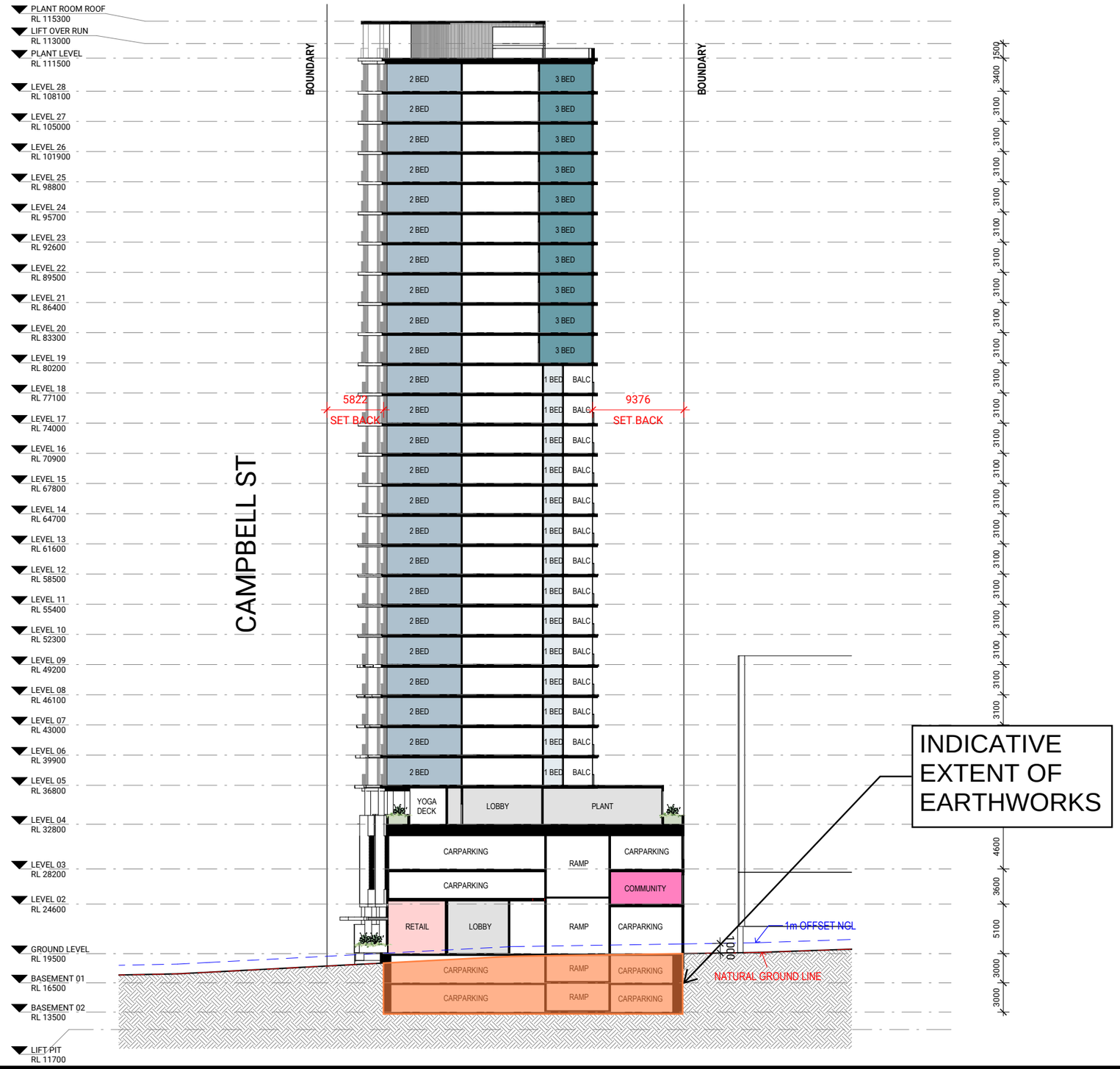
SECTION B

PRELIMINARY CUT ESTIMATION

BASEMENT FOOTPRINT = 1,359m2

AVERAGE BASEMENT DEPTH = 6m

CUT REQUIRED = 8,154m3



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PROJECT

17 HAMILTON PLACE, 26 & 28 CAMPBELL STREET, BOWEN HILLS, QLD

SUBJECT

PRELIMINARY EARTHWORKS PLAN SHEET 3

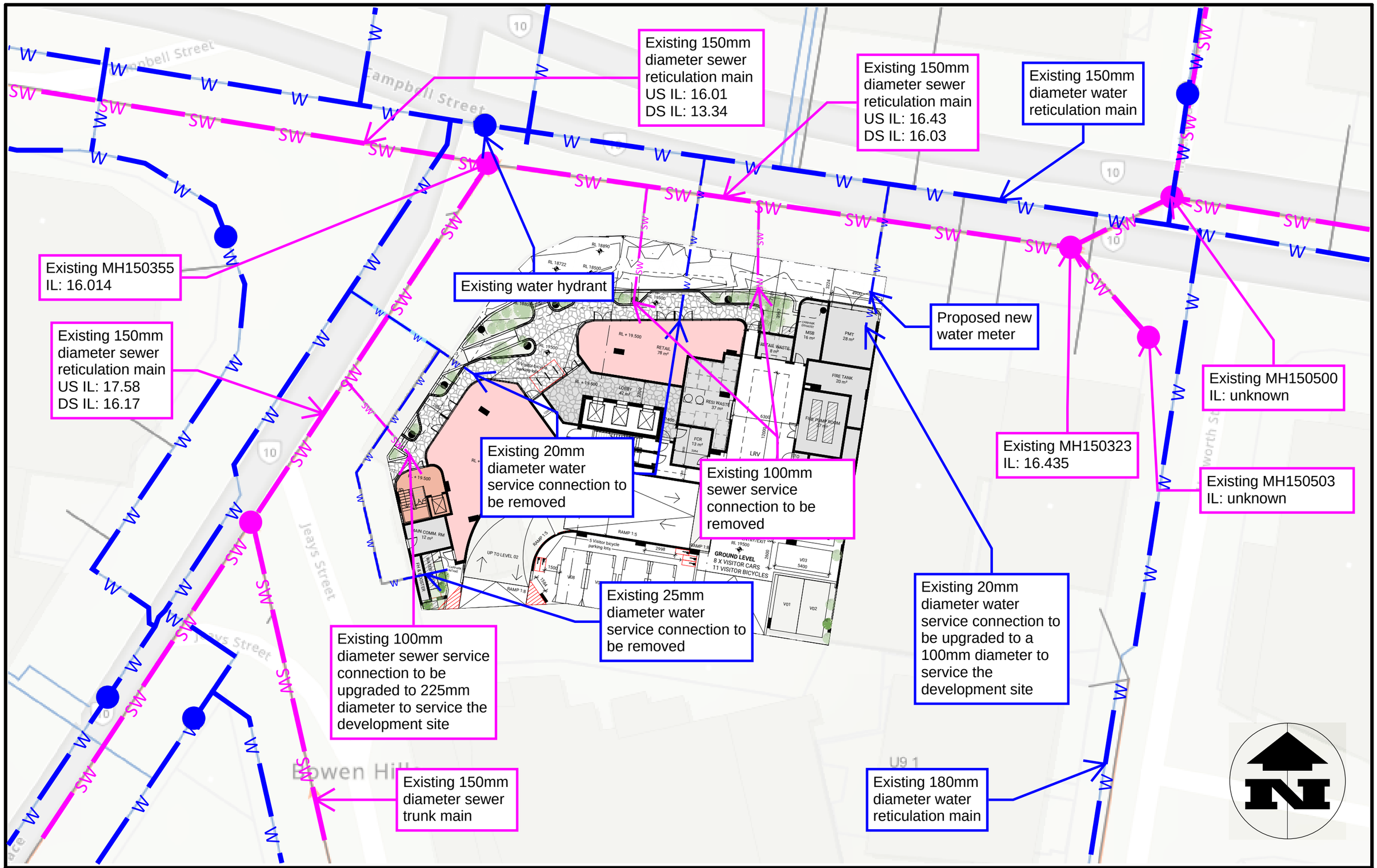
PROJECT No.

25160

DRAWING No. CK-003

REVISION A

ORIGINAL SIZE A3



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PROJECT

17 HAMILTON PLACE, 26 & 28 CAMPBELL STREET, BOWEN HILLS, QLD

SUBJECT

EXISTING & PROPOSED SEWER AND WATER RETICULATION LAYOUT

PROJECT No. 25160

DRAWING No. SK-C001

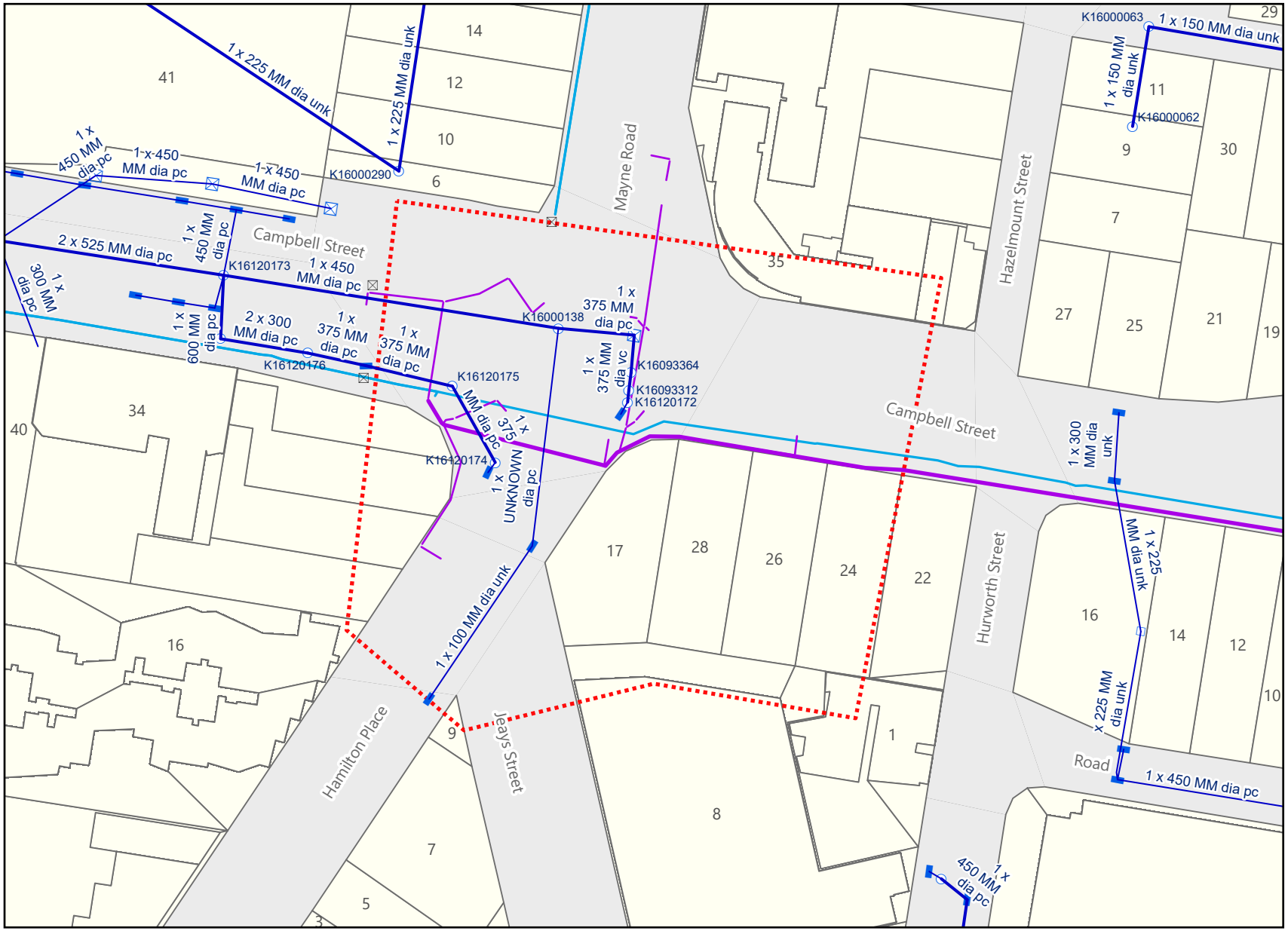
REVISION A

ORIGINAL SIZE A3

APPENDIX C

EXISTING SITE INFORMATION

Job # 52043634
Seq # 266284238
Provider: Brisbane City Council
Telephone: (07) 3403 8888



Legend

BYDA Enquiry

Stormwater Network

- Stormwater Drain
- Stormwater Gully / Roofwater Connection
- Stormwater Maintenance Hole
- Stormwater Roofwater Pit
- Stormwater Gully Pit
- Stormwater Field Inlet

BCC Cable Network

- Fibre Optic Pit Location
- Traffic System Cable
- Traffic Signal Ducting
- Fibre Optic Cable Location

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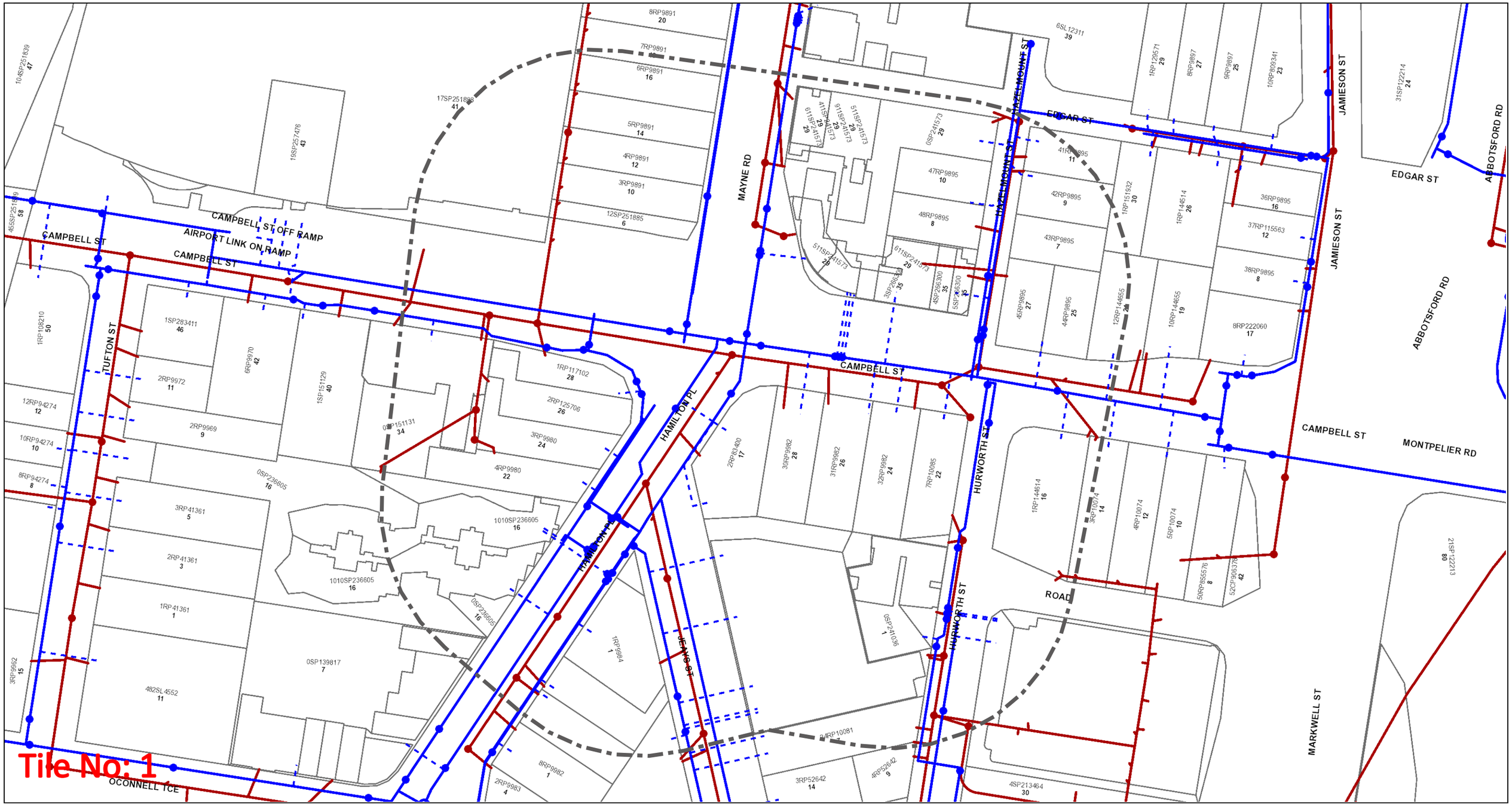
In an emergency contact Brisbane City Council on 07 3403 8888
06/01/26 (valid for 30 days)

0 10 20 40 m

Scale 1:1,000

Plans generated by SmarterWX™ Automate

Urban Utilities - Water, Recycled Water and Sewer Infrastructure



UrbanUtilities

N

Map Scale
1:1000

Before You Dig Australia- Urban Utilities Water, Recycled Water and Sewer Infrastructure

BYDA Reference No: 266284239

Date BYDA Ref Received: 06/01/2026

Date BYDA Job to Commence: 13/01/2026

Date BYDA Map Produced: 06/01/2026

This Map is valid for 30 days

Produced By: Urban Utilities

Sewer
- Infrastructure
- Major Infrastructure
- Network Pipelines
- Network Structures

Water
- Infrastructure
- Major Infrastructure
- Network Pipelines
- Network Structures
- Water Service (Indicative only)

Recycled Water
- Infrastructure
- Major Infrastructure
- Network Pipelines
- Network Structures

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This plan should be used as guide only. Any dimensions should be confirmed on site by the relevant authority.

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For further information, please call Urban Utilities on 13 26 57 (8am-6pm weekdays). Faults and emergencies 13 23 64 (24/7).

www.urbanutilities.com.au

ABN 86 673 835 011

APPENDIX D

EROSION HAZARD FORM

BRISBANE CITY COUNCIL ABN 72 002 765 795

Erosion Hazard Assessment

Brisbane City Council (BCC), *Erosion Hazard Assessment* form must be read in conjunction with the *Erosion Hazard Assessment- Supporting Technical Notes* (June 2014 or later version) for explanatory terms and Certification information.

What is an Erosion Hazard Assessment?
Soil erosion and sediment from urban development, particularly during construction activities, is a significant source of sediment pollution in Brisbane's waterways. The Erosion Hazard Assessment determines whether the risk of soil erosion and sediment pollution to the environment is 'low', 'medium' or 'high'.

When is the EHA required?
An Erosion Hazard Assessment form must be completed and lodged with BCC for any Development Application (ie MCU or ROL) that will result in soil disturbance OR Operational Works or Compliance Assessment Application for 'Filling' or Excavation.

Failure to submit this form during lodgement of an application may result in assessment delays or refusal of the application.

Privacy Statement
The personal information collected on this form will be used by Brisbane City Council for the purposes of fulfilling your request and undertaking associated Council functions and services. Your personal information will not be disclosed to any third party without your consent, unless this is required or permitted by law.

Assessment Details

1 Please turn over and complete the erosion hazard assessment.

2 Based on the erosion hazard assessment overleaf, is the side:

☐ ***A 'low' risk site***

Best practice erosion and sediment control (ESC) must be implemented but no erosion and sediment control plans need to be submitted with the development application. Factsheets outlining best practice ESC can be found at https://waterbydesign.com.au/download/erosion-sediment-control-for-small-construction-sites

☒ ***A 'medium' risk site***

If the development is approved, the applicant will need to engage a Registered Professional Engineer (RPEQ) or Certified Professional in Erosion and Sediment Control (CPESC) to prepare an ESC Program and Plan and supporting documentation — in accordance with the requirements of the Infrastructure Design Planning Scheme Policy.

☐ ***A 'high' risk site***

If the development is approved, the applicant will need to engage a RPEQ and CPESC to prepare an ESC Program and Plan and supporting documentation — in accordance with the requirements of the Infrastructure Design Planning Scheme Policy. The plans and program will need to be certified by a CPESC.

3 Site Information and Certification

Application number (if known)

Site address

17 Hamilton Place, 26 & 28 Campbell Street, Bowen Hills

Postcode 4006

I certify that:

☒ I have made all relevant enquiries and am satisfied no matters of significance have been withheld from the assessment manager.

☒ I am a person with suitable qualifications and/or experience in erosion and sediment control.

☒ The Erosion Hazard Assessment was completed in accordance with the Erosion Hazard Assessment Supporting Technical Notes and the BCC Infrastructure Design Planning Scheme Policy.

☒ The Erosion Hazard Assessment accurately reflects the site's overall risk of soil erosion and sediment pollution to the environment.

☒ I acknowledge and accept that the BCC, as assessment manager, relies, in good faith, on this certification as part of its development assessment process and the provision of false or misleading information to the BCC constitutes an offence for which BCC may take punitive steps/ action against me/ enforcement action against me.

Certified by *(Print name)*

DEAN TRAN

Certifier's signature

Date

14 / 01 / 2026

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Assessment Table

Table 1: Low Risk Test

		Yes	*No*
1.1	is the area of land disturbance > 1000 m2?	X	
1.2	does any land disturbance occur in a BCC mapped waterway corridor?		X
1.3	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 5%?		X
1.4	does any land disturbance occur below 5 m AHD?		X
1.5	does development involve endorsement of a staging plan?		X
1.6	is there an upstream catchment passing through the site > 1 hectare?		X

If you answered ***'No'*** to **ALL** of these questions, then the site is **low risk** with respect to erosion and sediment control. (Do not continue to Table 2)

If you answered ***'Yes'*** to **ANY** of these questions, then proceed to ***Table 2***

Table 2: Medium Risk Test

		Yes	*No*
2.1	is the area of land disturbance > 1 hectare?		X

If ***'No'*** then the site is **medium risk** with respect to erosion and sediment control. (Do not continue to Table 3)

If ***'Yes'*** then proceed to ***Table 3***

Table 3: High Risk Test

		Yes	*No*
3.1	is there an upstream catchment passing through the site > 1 hectare?		
3.2	does any land disturbance occurs in a BCC mapped waterway corridor?		
3.3	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 15%?		

If you answered ***'No'*** to **ALL** of these questions, then the site is also **medium risk** with respect to erosion and sediment control.

If you answered ***'Yes'*** to **ANY** of these questions, then the site is **high risk** with respect to erosion and sediment control.

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APPENDIX E

BRISBANE CITY COUNCIL CODES

9.4.4 Infrastructure design code

9.4.4.1 Application

1. This code applies to assessing a material change of use, reconfiguring a lot or building work if:
    a. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for a material change of use (section 5.5), reconfiguring a lot (section 5.6),operational work (section 5.8), or an overlay (section 5.10); or
    b. impact assessable development, to the extent relevant.
2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- ecological assessment, koala habitat or development design, guidance is provided in the Biodiversity areas planning scheme policy;
- infrastructure design and construction works, guidance is provided in the Infrastructure design planning scheme policy;
- noise and dust impacts during construction and/or demolition, guidance is provided in the Management plans planning scheme policy;
- noise impact assessment, guidance is provided in the Noise impact assessment planning scheme policy;
- refuse and recycling, guidance is provided in the Refuse planning scheme policy;
- parking or servicing management during construction, guidance is provided in the Transport, access, parking and servicing planning scheme policy.

9.4.4.2 Purpose

1. The purpose of the Infrastructure design code is to assess the suitability of infrastructure for development.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development is provided with a safe, connected and efficient transport network for all modes that has a minimal whole-of-life cost.
    b. Development provides for public utilities and services to the standards acceptable to the Council and the reasonable expectations of service providers.
    c. Development involving infrastructure which is intended to become a Council asset is safe, aesthetically pleasing, functional, fit for purpose, durable, minimises environmental impacts and has minimal whole-of-life cost.
    d. Development provides for a public space to be safe and inviting, allowing high levels of pedestrian activity.
    e. Development ensures that the community and environment are not unreasonably disrupted or impacted by construction or demolition for the development.
    f. Development involving infrastructure is designed with consideration of, and to integrate with, other related and interfacing infrastructure components.
    g. Development accessed by common private title is provided with appropriate fire hydrant infrastructure and has unimpeded access for refuse vehicles and for emergency service vehicles to protect people, property and the environment.
    h. Development ensures major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System is not compromised.
    i. Development for major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System

avoids or otherwise minimises adverse impacts on surrounding land uses.

9.4.4.3 Performance outcomes and acceptable outcomes

Table 9.4.4.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
PO1 Development provides roads, pavement, edging and landscaping which: a. are designed and constructed in accordance with the road hierarchy; b. provide for safe travel for pedestrians, cyclists and vehicles; c. provide access to properties for all modes; d. provide utilities; e. provide high levels of aesthetics and amenity, improved liveability and future growth; f. provide for the amelioration of noise and other pollution; g. provide a high-quality streetscape; h. provide a low-maintenance asset with a minimal whole-of-life cost. Note—This can be demonstrated in an engineering report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.	**AO1** Development provides roads and associated pavement, edging and landscaping which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	Acceptable Solution Landscaping will be designed and constructed in compliance with the road corridor design standards in the infrastructure design planning scheme policy. No roads or pavement proposed for development. Services exist within the surrounding road reserves and will be connected to the proposed development.
PO2 Development provides road pavement surfaces which: a. are well designed and constructed; b. durable enough to carry the wheel loads of the intended types and numbers of travelling and parked vehicles; c. ensures the safe passage of vehicles,	**AO2** Development provides road pavement surfaces which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	Acceptable Solution Road pavement surfaces will be designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.

pedestrians and cyclists, the discharge of stormwater run-off and the preservation of all-weather access; d. allows for reasonable travel comfort.		
PO3 Development provides a pavement edge which is designed and constructed to: a. control vehicle movements by delineating the carriageway for all users; b. provide for people with disabilities by allowing safe passage of wheelchairs and other mobility aids.	**AO3** Development provides pavement edges which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	Acceptable Solution Pavement edges proposed for development will be designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.
PO4 Development provides verges which are designed and constructed to: a. provide safe access for pedestrians clear of obstructions and access areas for vehicles onto properties; b. provide a sufficient area for public utility services; c. be maintainable by the Council.	**AO4** Development provides verges which are designed and constructed in compliance with the road corridor design and streetscape locality advice standards in the Infrastructure design planning scheme policy.	Acceptable Solution Verges proposed for development will be designed and constructed in compliance with the road corridor design and streetscape locality advice standards in the Infrastructure design planning scheme policy.
PO5 Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which: a. allows equitable access for all modes; b. is safe and secure; c. has 24-hour access; d. is a low-speed shared zone environment; e. has a high-quality streetscape.	**AO5** Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which is embellished in compliance with the streetscape locality advice standards in the Infrastructure design planning scheme policy.	N/A No lane or laneway identified on the Bowen Hills neighbourhood plan or the Streetscape hierarchy overlay map within the development area.
PO6 Development of an existing premises provides at the frontage to the site, if not already provided, the following	**AO6** Development of an existing premises provides at the frontage of the site, if not already existing, the following	Acceptable Solution

infrastructure to an appropriate urban standard: a. an effective, high-quality paved roadway; b. an effective, high-quality roadway kerb and channel; c. safe, high-quality vehicle crossings over channels and verges; d. safe, accessible, high-quality verges compatible and integrated with the surrounding environment; e. safe vehicle access to the site that enables ingress and egress in a forward gear; f. provision of and required alterations to public utilities; g. effective drainage; h. appropriate conduits to facilitate the provision of required street-lighting systems and traffic signals.	infrastructure to the standard that would have applied if the development involved new premises as stated in the road corridor design standards in the Infrastructure design planning scheme policy: a. concrete kerb and channel; b. forming and grading to verges; c. crossings over channels and verges; d. a constructed bikeway; e. a constructed verge or reconstruction of any damaged verge; f. construction of the carriageway; g. payment of costs for required alterations to public utility mains, services or installations; h. construction of and required alterations to public utility mains, services or installations; i. drainage works; j. installation of electrical conduits.	Any works required within the adjacent road corridors will be to the standards stated in the Infrastructure design planning scheme policy.
PO7 Development provides both cycle and walking routes which: a. are located, designed and constructed to their network classification (where applicable); b. provide safe and attractive travel routes for pedestrians and cyclists for commuter and recreational purposes; c. provide safe and comfortable access to properties for pedestrians and cyclists; d. incorporate water sensitive urban design into stormwater drainage; e. provide for utilities; f. provide for a high level of aesthetics and amenity, improved liveability and future growth; g. are a low-maintenance asset with a minimal whole-of-life cost;	**AO7** Development provides cycle and walking routes which are located, designed and constructed in compliance with the road corridor design and off-road pathway design standards in the Infrastructure design planning scheme policy.	Acceptable Solution Development joins and expands walking routes which are located, designed and constructed in compliance with the road corridor design and off-road pathway design standards in the Infrastructure design planning scheme policy.

h. minimise the clearing of significant native vegetation. Note—This can be demonstrated in an engineering report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.		
PO8 Development provides refuse and recycling collection, separation and storage facilities that are located and managed so that adverse impacts on building occupants, neighbouring properties and the public realm are minimised.	**AO8.1** Development provides refuse and recycling collection and storage facilities in accordance with the Refuse planning scheme policy. **AO8.2** Development ensures that refuse and recycling collection and storage location and design do not have any adverse impact including odour, noise or visual impacts on the amenity of land uses within or adjoining the development. Note—Refer to the Refuse planning scheme policy for further guidance.	Acceptable Solution Development will provide refuse and recycling collection and storage facilities in accordance with the Refuse planning scheme policy and they will have no adverse impacts.
PO9 Development ensures that: a. land used for an urban purpose is serviced adequately with regard to water supply and waste disposal; b. the water supply meets the stated standard of service for the intended use and fire-fighting purposes.	**AO9.1** Development ensures that the reticulated water and sewerage distribution system for all services is in place before the first use is commenced. **AO9.2** Development provides the lot with reticulated water supply and sewerage to a standard acceptable to the distributor—retailer.	Acceptable Solution Development ensures that the reticulated water and sewerage distribution system for all services is in place before the first use is commenced. Development provides the lot with reticulated water supply and sewerage to a standard acceptable to the distributor.
PO10 Development provides public utilities and street lighting which are the best current or alternative technology and facilitate accessibility, easy maintenance, minimal whole-of-life costs, and minimal adverse environmental impacts.	**AO10.1** Development provides public utilities and street lighting which are located and aligned to: a. avoid significant native vegetation and areas identified within the Biodiversity areas overlay map; b. minimise earthworks; c. avoid crossing waterways, waterway corridors and wetlands or if a crossing is unavoidable,	Acceptable Solution Public utilities required will be located and aligned to minimise earthworks and avoid crossing waterways, waterway corridors and wetlands or if a crossing is unavoidable, tunnel-boring techniques are used to minimise disturbance, and a disturbed area is reinstated and restored on completion of the work.

	tunnel-boring techniques are used to minimise disturbance, and a disturbed area is reinstated and restored on completion of the work. Note—Guidance on the restoration of habitat is included in the Biodiversity areas planning scheme policy. **AO10.2** Development provides compatible public utility services and street-lighting services which are co-located in common trenching for underground services.	Acceptable Solution Where possible services will be co-located within the same trench
	AO10.3 Development provides public utilities and street lighting which are designed and constructed in compliance with the public utilities standards in the Infrastructure design planning scheme policy.	Acceptable Solution Public utilities and street lighting will be designed and constructed in compliance with the public utilities standards in the Infrastructure design planning scheme policy.
PO11 Development ensures that land used for urban purposes is serviced adequately with telecommunications and energy supply.	**AO11** Development provides land with the following services to the standards of the approved supplier: a. electricity; b. telecommunications services; c. gas service where practicable.	Acceptable Solution The development will be serviced by gas telecommunications and electricity where practicable.
PO12 Development ensures that major public projects promote the provision of affordable, high-bandwidth telecommunications services throughout the city.	**AO12** Development provides conduits which are provided in all major Council and government works projects to enable the future provision of fibre optic cabling, if: a. the additional expense is unlikely to be prohibitive; or b. further major work is unlikely or disruption would be a major concern, such as where there is a limited capacity road; or c. there is a clear gap in the telecommunications network; or d. there is a clear gap in the bandwidth available to	N/A Surrounding area already has appropriate NBN cabling from previous area redevelopment.

	the area. Editor's note—An accurate, digital 'as built' three-dimensional location plan is to be supplied for all infrastructure provided in a road.	
PO13 Development provides public art identified in a neighbourhood plan or park concept plan which: a. is provided commensurate with the status and scale of the proposed development; b. is sited and designed: i. as an integrated part of the project design; ii. as conceptually relevant to the context of the location; iii. to reflect and respond to the cultural values of the community; iv. to promote local character in a planned and informed manner.	**AO13** Development provides public art identified in a neighbourhood plan or park concept plan which is sited and designed in compliance with the public art standards in the Infrastructure design planning scheme policy.	N/A No public art proposed for this development
PO14 Development provides signage of buildings and spaces which promote legibility to help users find their way.	**AO14** Development provides public signage: a. at public transport interchanges and stops, key destinations, public spaces, pedestrian linkages and at entries to centre developments; b. which details the location of the key destinations, public spaces and pedestrian linkages in the vicinity, the services available within the development and where they are located. Editor's note—Signage is to be in accordance with Local Law Number 1 (Control of Advertisements Local Law).	N/A No public signage proposed for this development
PO15 Development that provides community facilities which form part of the development is functional, safe, low maintenance, and fit for purpose.	**AO15** Development that provides community facilities which form part of the development is designed in compliance with the community facilities standards in the Infrastructure design planning scheme policy.	N/A Development does not provide community facilities

PO16 Development provides public toilets which: a. are required as part of a community facility or park; b. are located, designed and constructed to be: i. safe; ii. durable; iii. resistant to vandalism; iv. able to service expected demand; v. fit for purpose.	**AO16** Development that provides public toilets is designed and constructed in compliance with the public toilets standards in the Infrastructure design planning scheme policy.	N/A Public toilets are not required as part of this development
PO17 Development provides bridges, tunnels, elevated structures and water access structures that are designed and constructed using proven methods, materials and technology to provide for: a. safe movement of intended users; b. an attractive appearance appropriate to the general surroundings and any adjacent structures; c. functionality and easy maintenance; d. minimal whole-of-life cost; e. longevity; f. current and future services. Note—All bridges and elevated and associated elements must be designed and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.	**AO17** Development that provides bridges, tunnels, elevated structures and water access structures is designed and constructed in compliance with the standards in the Infrastructure design planning scheme policy.	N/A No Bridges, tunnels or elevated structures are required as part of this development.
PO18 Development provides culverts which are designed and constructed using proven methods, materials and technology to provide for: a. safety; b. an attractive appearance appropriate to the general surroundings;	**AO18** Development that provides culverts is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.	N/A No culverts are required as part of this development

c. functionality and easy maintenance; d. minimal whole-of-life cost; e. longevity; f. future widening; g. current and future services; h. minimal adverse impacts, such as increase in water levels or flow velocities, and significant change of flood patterns. Note—All culverts and associated elements are to be designed and certified by a Registered Professional Engineer Queensland in accordance with the applicable design standards.		
PO19 Development provides batters, retaining walls, and seawalls and river walls which are designed and constructed using proven methods, materials and technology to provide for: a. safety; b. an attractive appearance appropriate to the surrounding area; c. easy maintenance; d. minimal whole-of-life cost; e. longevity; f. minimal water seepage. Note—All retaining walls and associated elements are to be designed and certified by a Registered Professional Engineer Queensland in accordance with the applicable design standards.	**AO19** Development that provides batters, retaining walls, seawalls and river walls is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.	Acceptable Solution The development will provide batter and retaining walls which are designed and constructed using proven methods, materials and technology in compliance with the structures standards in the Infrastructure design planning scheme policy.
If for development with a gross floor area greater than 1,000m^2		
PO20 Development ensures that construction is managed so that use of public spaces and movement on pedestrian, cyclist and other traffic routes is not unreasonably disrupted and existing landscaping is adequately protected from short- and long-term impacts. Note—The preparation of a construction management plan can assist	**AO20** Development ensures that during construction: a. the ongoing use of adjoining and surrounding parks and public spaces, such as malls and outdoor dining, is not compromised; b. adjoining and surrounding landscaping is protected from damage;	Acceptable Solution Development ensures safe, legible, efficient and sufficient pedestrian cyclist and vehicular accessibility and connectivity to the wider network are maintained.

in demonstrating achievement of this performance outcome. Note—The Transport, access, parking and servicing planning scheme policy provides advice on the management of vehicle parking and deliveries during construction.	c. safe, legible, efficient and sufficient pedestrian, cyclist and vehicular accessibility and connectivity to the wider network are maintained.	
PO21 Development ensures that construction and demolition activities are guided by measures that prevent or minimise adverse impacts including sleep disturbance at a sensitive use, due to noise and dust, including dust from construction vehicles entering and leaving the site. Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO21.1** Development ensures that demolition and construction: a. only occur between 6:30am and 6:30pm Monday to Saturday, excluding public holidays; b. do not occur over periods greater than 6 months.	Acceptable Solution Demolition and construction will only occur during the prescribed hours and days.
	AO21.2 Development including construction and demolition does not release dust emissions beyond the boundary of the site.	Acceptable Solution Dust emissions will not extend past the site boundaries and will be ensured using dust suppression methods.
	AO21.3 Development construction and demolition does not involve asbestos-containing materials.	Acceptable Solution Asbestos has not been found on site and is not expected to be required to be removed however an asbestos management plan will be implemented in the event it is encountered.
PO22 Development ensures that: a. construction and demolition do not result in damage to surrounding property as a result of vibration; b. vibration levels achieve the vibration criteria in Table 9.4.4.3.B, Table 9.4.4.3.C, Table 9.4.4.3.D and Table 9.4.4.3.E. Note—A vibration impact assessment report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO22** Development ensures that the nature and scale of construction and demolition do not generate noticeable levels of vibration.	Acceptable Solution Vibration levels are to be kept within the allowable levels of Table 9.4.4.3.B, Table 9.4.4.3.C, Table 9.4.4.3.D and Table 9.4.4.3.E.
If for a material change of use or reconfiguring a lot in an urban area (as defined in the Regulation) involving premises that is, or will be, accessed by common private title, where involving buildings, either attached or detached, that are not covered by other legislation mandating fire hydrants		

PO23 Development ensures that fire hydrants are: a. installed and located to enable fire services to access water safely, effectively and efficiently; b. suitably identified so that fire services can locate them at all hours.	**AO23.1** Above or below ground fire hydrants are provided on residential, commercial and industrial streets and private roads, at not more than 90m intervals, and at each street intersection. Note—On residential streets, above ground fire hydrants may be single outlet. On commercial and industrial streets above ground fire hydrants should have dual valved outlets. **AO23.2** Fire hydrants are identified by: a. raised reflectorised pavement markers (RRPM) on sealed roads; b. marker posts at the fence line where on an unsealed road, as road (HR) or path (HP) hydrants.	Acceptable Solution The development requires a new road extension to existing roads. Therefore, requiring the need to implement new fire hydrants.
PO24 Development ensures road widths and construction within the development, are adequate for refuse vehicles and for fire emergency vehicles to gain access to a safe working area close to buildings and near water supplies whether or not on-street parking spaces are occupied.	**AO24** Internal private roads have a minimum roadway clearance between obstructions of 3.5m wide and 4.8m high in addition to any width required for on-street parking.	Acceptable Solution Internal private roads are to be constructed as part of this development with required minimum roadway clearance between obstruction of 3.5m wide and 4.8m high in addition to any width required for on-street parking.
Development for major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System where not in the Utility services zone precinct of the Special purpose zone		
PO25 Development avoids or otherwise minimises adverse impacts on surrounding land uses through the use of buffers and setbacks and the appropriate design and location of plant and operational areas within the site.	**AO25** No acceptable outcome is prescribed.	Acceptable Solution Setbacks to major services identified on the State planning policy interactive map have been identified.

Development potentially impacting on major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System where the infrastructure is not in the Utility services zone precinct of the Special purpose zone		
PO26 Development is sited and designed to: a. avoid safety risks to people or property; b. minimise noise and visual impacts to people and property; c. ensure the physical integrity and operation, maintenance and expansion of the infrastructure is not compromised.	**AO26** No acceptable outcome is prescribed.	Acceptable Solution Development has been sited and designed to avoid safety risks to people or property, minimise noise and visual impacts to people and property and ensure the physical integrity and operation, maintenance and expansion of the adjacent infrastructure is not compromised.

Table 9.4.4.3.B—Recommended intermittent vibration levels for cosmetic damage

Type of building	**Peak particle velocity (mm/s)**		
Reinforced or framed structures; industrial and heavy commercial buildings	50mm/s at 4Hz and above		
Unreinforced or light-framed structures; residential or light commercial type buildings	Below 4Hz	4Hz to 15Hz	15Hz and above
	0.6mm/s	15mm/s at 4Hz increasing to 20mm/s at 15Hz	20mm/s at 15Hz increasing to 50mm/s at 40Hz and above

Table 9.4.4.3.C—Recommended blasting vibration levels for human comfort

Type of building	Type of blasting operations	Peak component particle velocity (mm/s)
Residences, educational establishments and places of worship	Operation blasting longer than 12 months or more than 20 blasts	5mm/s for 95% blasts per year 10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Residences, educational establishments and places of worship	Operation blasting longer than 12 months or more than 20 blasts	10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Industry or commercial premises	All blasting	25mm/s maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications or levels that do not adversely affect the equipment operation.

Table 9.4.4.3.D—Recommended levels for continuous and impulsive vibration acceleration (m/s^2) 1—80Hz for human comfort

Location	Assessment period(1)	Preferred values(3)		Maximum values(3)	
Continuous vibration		z-axis	x and y axes	z-axis	x and y axes
Critical areas(2)	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.01 m/s^2	0.0071 m/s^2	0.02 m/s^2	0.014 m/s^2
-	Night	0.007 m/s^2	0.005 m/s^2	0.014 m/s^2	0.01 m/s^2
Offices, educational establishments and places of worship	Day or night	0.02 m/s^2	0.014 m/s^2	0.04 m/s^2	0.028 m/s^2

Workshops	Day or night	0.04 m/s^2	0.029 m/s^2	0.08 m/s^2	0.058 m/s^2
Impulsive vibration					
Critical areas	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.3 m/s^2	0.21 m/s^2	0.6 m/s^2	0.42 m/s^2
-	Night	0.1 m/s^2	0.071 m/s^2	0.2 m/s^2	0.14 m/s^2
Offices, educational establishments and places of worship	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2
Workshops	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

Table 9.4.4.3.E—Recommended vibration dose values for intermittent vibration ($m/s^{1.75}$) for human comfort

Location	**Daytime(1)**		**Night time(1)**	
	Preferred value	**Maximum value**	**Preferred value(3)**	**Maximum value(3)**
Critical areas(2)	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$
Residences	0.2 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.13 $m/s^{1.75}$	0.26 $m/s^{1.75}$
Offices, educational establishments and places of worship	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$
Workshops	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

9.4.3 Filling and excavation code

9.4.3.1 Application

1. This code applies to assessing:
    a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
    b. operational work for filling or excavation which is assessable development if this code is an applicable code identified in the assessment benchmarks column of a table of assessment for operational work (section 5.8) or an overlay (section 5.10); or
    c. a material change of use or reconfiguring a lot if:
        i. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for material change of use (section 5.5) or reconfiguring a lot (section 5.6); or
        ii. impact assessable development, to the extent relevant.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—This code does not apply to building work as defined in the Act.

Note—A development application involving a rock anchor within an adjoining site is submitted with proof of consent from an adjoining land and building owner.

Editor's note—Guidance on managing the spread of invasive species in filling or excavation activities is provided in Minimising Pest Spread Advisory Guidelines prepared for the Petroleum industry.

Editor's note—Where filling or excavation is conducted on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register, the relevant Queensland Government department should be contacted for advice and guidelines.

2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:
- air quality assessment, guidance is provided in the Air quality planning scheme policy;
- ecological assessment, koala habitat or development design, guidance is provided in the Biodiversity areas planning scheme policy;
- retaining wall construction, guidance is provided in the Infrastructure design planning scheme policy;
- landscape design, guidance is provided in the Landscape design planning scheme policy;
- noise and dust impacts during construction and/or demolition, guidance is provided in the Management plans planning scheme policy;
- noise impact assessment, guidance is provided in the Noise impact assessment planning scheme policy;
- the selection of planting species, guidance is provided in the Planting species planning scheme policy;
- significant vegetation, guidance is provided in the Vegetation planning scheme policy.

Editor's note—For a proposal to be accepted development, subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is triggered, only the specific acceptable outcome that the proposal fails to meet needs to be assessed against the corresponding acceptable outcome or performance outcome and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

9.4.3.2 Purpose

1. The purpose of the Filling and excavation code is to assess the suitability of development for filling or excavation.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. filling or excavation does not adversely affect the visual character and amenity of the site or the surrounding area and provides access for maintenance to any structure as a result of filling or excavation.
    b. filling or excavation does not adversely impact significant vegetation, water quality or drainage of upstream, downstream and adjoining land.
    c. filling or excavation effectively manages the impacts associated with the activity.
    d. filling or excavation and any retaining structure is designed and constructed to be fit for purpose and to protect services and utilities.

9.4.3.3 Performance outcomes and acceptable outcomes

Table 9.4.3.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
PO1 Development for filling or excavation minimises visual impacts from retaining walls and earthworks.	**AO1** Development ensures that the total height of any cut and fill, whether or not retained, does not exceed: a. 2.5m in a zone in the Industry zones category; b. 1m in all other zones, or if adjoining a sensitive zone.	Acceptable Solution Cut/fill required exceeds 1m, however will not visually impact the character of the development site or surrounds
PO2 Development of a retaining wall proposed as a result of filling or excavation: a. is designed and constructed to be fit for purpose; b. does not impact adversely on significant vegetation; c. is capable of easy maintenance. Editor's note—A retaining wall also needs to comply with the Building Regulation and embankment gradients will need to comply with the Building Regulation.	**AO2.1** Development of a retaining structure, including footings, surface drainage and subsoil drainage: a. is wholly contained within the site; b. if the total height to be retained is greater than 1m, then: i. the retaining wall at the property boundary is no greater than 1m above the ground level; ii. all further terracing from the 1m high	Acceptable Solution Proposed development includes retaining walls/structures.

Note—Guidance on the protection of native vegetation is included in the Biodiversity areas planning scheme policy.	boundary retaining wall is 1 vertical unit:1 horizontal unit; iii. the distance between each successive retaining wall (back of lower wall to face of higher wall) is no less than 1m horizontally to incorporate planting areas. **AO2.2** Development of a retaining wall over 1m in height protects significant vegetation on the site and on adjoining land and is designed and constructed in accordance with the structures standards in the Infrastructure design planning scheme policy and certified by a Registered Professional Engineer Queensland.	
	AO2.3 Development provides a retaining wall finish that presents to adjoining land that is maintenance free if the setback is less than 750mm from the boundary.	
	AO2.4 Development for filling only uses clean fill that does not include any construction rubble, debris, weed seed or viable parts of plant species listed as an undesirable plant species in the Planting species planning scheme policy.	Acceptable Solution. Fill required will be clean – free of construction rubble, debris, weed seed or viable parts of plant species listed as an undesirable plant species in the Planting species planning scheme policy.
PO3 Development ensures that a rock anchor is designed and constructed to be fit for purpose.	**AO3** Development ensures that a rock anchor: a. is constructed in accordance with the standards in the Infrastructure design planning scheme policy; b. where it extends beyond the property boundary, is supported by a letter of consent from the	Acceptable Solution Rock anchors, where used, will be constructed in accordance with the Infrastructure design planning scheme policy, and where extending beyond the property boundary, will be supported by a letter of consent from the adjoining land and building owners.

	adjoining land and building owners.	
PO4 Development protects all services and public utilities.	**AO4** Development protects services and public utilities and ensures that any alteration or relocation of services or public utilities meets the standard design specifications of the responsible service authorities.	Acceptable Solution Design of service connections and crossings are designed with the protection of existing services and public utilities. No service relocation is proposed.
PO5 Development provides surface and sub-surface drainage to prevent water seepage, concentration of run-off or ponding of stormwater on adjacent land.	**AO5** Development ensures all flows and subsoil drainage are directed to a lawful point of discharge of a surface water diversion drain, including to the top or toe of a retaining wall in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	Acceptable Solution Captured flow to be drained to underground council infrastructure – legal point of discharge.
PO6 Development ensures that the design and construction of all open drainage works is undertaken in accordance with natural channel design principles, being the development of a stormwater conveyance system for major flows, by using a vegetated open channel or drain that approximates the features and functions of a natural waterway to enhance or improve riparian values of those stormwater conveyance systems. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.	**AO6** Filling or excavation does not involve the construction of open drainage.	Acceptable Solution Proposed development does not include any open drainage.
PO7 Development for filling or excavation: a. does not degrade water quality or adversely affect environmental values in receiving waters; b. ensures site sediment and erosion control standards are best practice.	**AO7.1** Development for filling or excavation provides water quality treatment that complies with the stormwater drainage section of the Infrastructure design planning scheme policy. **AO7.2** Development provides erosion and sediment control standards that are in accordance with the stormwater drainage section of the Infrastructure design planning	Acceptable Solution A comprehensive erosion and sediment control plan will be provided as part of the detailed design phase, complying with the stormwater drainage section of the Infrastructure design planning scheme policy.

	scheme policy.	
PO8 Development for filling or excavation is conducted such that adverse impacts at a sensitive use due to noise and dust are prevented or minimised. Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO8.1** Development ensures that no dust emissions extend beyond the boundary of the site, including dust from construction vehicles entering and leaving the site. **AO8.2** Development for filling or excavation activity only occurs between the hours of 6:30am and 6:30pm Monday to Saturday, excluding public holidays.	Acceptable Solution Dust emissions will not extend past the site boundaries and will be ensured using dust suppression methods. Filling or excavation will only occur during the prescribed hours and days.
PO9 Development ensures that vibration generated by the filling or excavation operation does not exceed the vibration criteria in Table 9.4.3.3.B, Table 9.4.3.3.C, Table 9.4.3.3.D and Table 9.4.3.3.E. Note—A noise management report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO9** Development involving filling or excavation does not cause a ground-borne vibration beyond the boundary of the site.	Acceptable Solution Vibration levels are to be kept within the allowable levels of Table 9.4.4.3.B, Table 9.4.4.3.C, Table 9.4.4.3.D and Table 9.4.4.3.E.
PO10 Development ensures that heavy trucks hauling material to and from the site do not affect the amenity of established areas and limits environmental nuisance impact on adjacent land.	**AO10** Development ensures that heavy trucks hauling material to and from the site: a. occur for a maximum of 3 weeks; b. use a major road to access the site; c. only use a minor road for the shortest-most-direct route that has the least amount of environmental nuisance if there is no major road alternative.	N/A Outside of design scope
PO11 Development for filling or excavation protects the environment and community health and wellbeing from exposure to contaminated land and contaminated material.	**AO11** Development does not involve: a. excavation on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register; b. filling with material containing a contaminant.	Acceptable Solution Development site has not been previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register.

PO12 Development provides for: a. landscaping for water conservation purposes; b. water sensitive urban design measures which are employed within the landscape design to maximise stormwater use; c. drainage and stormwater measures to reduce any adverse impacts on the landscape; d. stormwater harvesting to be maximised and any adverse impacts of stormwater minimised; e. reticulated irrigation to all artificial growing environments. Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.	**AO12.1** Development provides drainage for artificial growing environments which is connected to the stormwater drain. **AO12.2** Development ensures that the maximum site stormwater harvest capacity is utilised to meet the irrigation demand of the development before alternative irrigation sources are utilised and is in compliance with the standards in the Landscape design planning scheme policy. **AO12.3** Development provides areas of pavement, turf, landscaping and mulched garden beds which are drained. Note—This may be achieved through the provision and/or treatment of swales, spoon drains, field gullies, sub-surface drainage and stormwater connections. **AO12.4** Development provides a reticulated irrigation system to all landscaping areas in accordance with the Landscape design planning scheme policy.	Acceptable Solution. Development site landscaping and irrigation designed in accordance with the Landscape design planning scheme policy.
PO13 Development ensures cutting and filling for the development of canals or artificial waterways avoids adverse impacts on coastal resources and processes.	**AO13** Development does not involve the creation of canals or artificial waterways.	Acceptable Solution Development does not include canals or artificial waterways.

Table 9.4.3.3.B— Recommended intermittent vibration levels for cosmetic damage

Type of building	Peak particle velocity (mm/s)
Reinforced or framed structures; industrial and heavy commercial buildings	50mm/s at 4Hz and above

Unreinforced or light-framed structures; residential or light-commercial type buildings	Below 4Hz	4Hz to 15Hz	15Hz and above
	0.6mm/s	15mm/s at 4Hz increasing to 20mm/s at 15Hz	20mm/s at 15Hz increasing to 50mm/s at 40Hz and above

Table 9.4.3.3.C— Recommended blasting vibration levels for human comfort

Type of building	Type of blasting operations	Peak component particle velocity (mm/s)
Residences, educational establishments and places of worship	Operation blasting longer than 12 months or more than 20 blasts	5mm/s for 95% blasts per year 10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Residences, educational establishments and places of worship	Operations lasting for less than 12 months or less than 20 blasts	10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Industry or commercial premises	All blasting	25 mm/s maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications or levels that do not adversely affect the equipment operation.

Table 9.4.3.3.D— Recommended levels for continuous and impulsive vibration acceleration (m/s^2) 1—80Hz for human comfort

Location	Assessment period(1)	Preferred values(3)		Maximum values(3)	
Continuous vibration		z-axis	x and y axes	z-axis	x and y axes

Critical areas[2]	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.01 m/s^2	0.0071 m/s^2	0.02 m/s^2	0.014 m/s^2
-	Night	0.007 m/s^2	0.005 m/s^2	0.014 m/s^2	0.01 m/s^2
Offices, educational establishments and places of worship	Day or night	0.02 m/s^2	0.014 m/s^2	0.04 m/s^2	0.028 m/s^2
Workshops	Day or night	0.04 m/s^2	0.029 m/s^2	0.08 m/s^2	0.058 m/s^2
Impulsive vibration					
Critical areas	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.3 m/s^2	0.21 m/s^2	0.6 m/s^2	0.42 m/s^2
-	Night	0.1 m/s^2	0.071 m/s^2	0.2 m/s^2	0.14 m/s^2
Offices, educational establishments and places of worship	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2
Workshops	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

Table 9.4.3.3.E— Recommended vibration dose values for intermittent vibration ($m/s^{1.75}$) for human comfort

Location	**Daytime[1]**		**Night time[1]**	
	Preferred value	**Maximum value**	**Preferred value[3]**	**Maximum value[3]**

Critical areas[2]	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$
Residences	0.2 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.13 $m/s^{1.75}$	0.26 $m/s^{1.75}$
Offices, educational establishments and places of worship	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$
Workshops	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$

Note—

[1] Day is 7am to 10pm and night is 10pm to 7am.

[2] Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

[3] Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

APPENDIX F

URBAN UTILITIES SERVICE ADVICE NOTICE

Urban Utilities
GPO Box 2765
BRISBANE QLD 4001
Phone: 07 3432 2200
www.urbanutilities.com.au/development

21 August 2025

Ms Elise de la Rue
Bornhorst & Ward Pty Ltd
Level 14 / 133 Mary Street
Brisbane City QLD 4000
Via Email: e.delarue@bornhorstward.com.au

Dear Elise,

Urban Utilities Services Advice Notice

This Urban Utilities Services Advice Notice, applies in accordance with section 99BRAC(3) of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* and has regard to the Water Netserv Plan Connections Policy. This advice is guidance only, is not lawfully binding and does not constitute approval to connect, disconnect or alter Urban Utilities networks. Urban Utilities provides no warranty or assurance that this information is correct. The service network is dynamic and subject to change. Independent site physical investigation are recommended to verify site conditions and the location, condition and size of any existing infrastructure.

Urban Utilities application number:	25-SAN-82236
Applicant name:	Bornhorst & Ward Pty Ltd
Street address:	17 Hamilton Pl, Bowen Hills, Brisbane City, QLD 4006
Real Property Description:	Lot 2 on RP83400; Lot 30 on RP9982; Lot 31 on RP9982
Services Advice Notice request received:	17/07/2025
Proposed Development:	137 multiple dwelling (1 or 2 bedrooms - 3 or more bedrooms) Retail 250m^2 GFA Commercial 3420m^2 GFA (Office) (Source: Information collected from applicant's email 19/08/2025)
Service connection/alteration/disconnection proposed:	☒Drinking water ☒Wastewater
Development Demand Type:	☒Material change of use ☒ Reconfiguration of a lot
In a Priority Development Area:	☒Yes (Bowen Hills) - Economic Development Queensland assessment and infrastructure charging framework applies
Site Details:	☒Subject site – aligns to existing boundary configuration
Urban Utilities Services Advice Notice Contact:	Name: Nghiep Nguyen Email: Nghiep.Nguyen@urbanutilities.com.au Telephone: 0738556796 or Developer Services: 07 3432 2200 DevelopmentEnquiries@urbanutilities.com.au.

Infrastructure

The project site is within the Bowen Hills Priority Development Area (PDA). Development applications for priority development areas are assessed by Economic Development Queensland (EDQ).

The infrastructure funding framework within each PDA is also prescribed and managed by EDQ under an Infrastructure Charges Offset Plan (ICOP). The developer should review the current ICOP and development scheme to understand the broader infrastructure obligations specific to this site.

Water

Water connection for site:

☒ There is an existing water connection:

A map of existing water and wastewater infrastructure at the vicinity of subject property is provided in Figure 1 below:

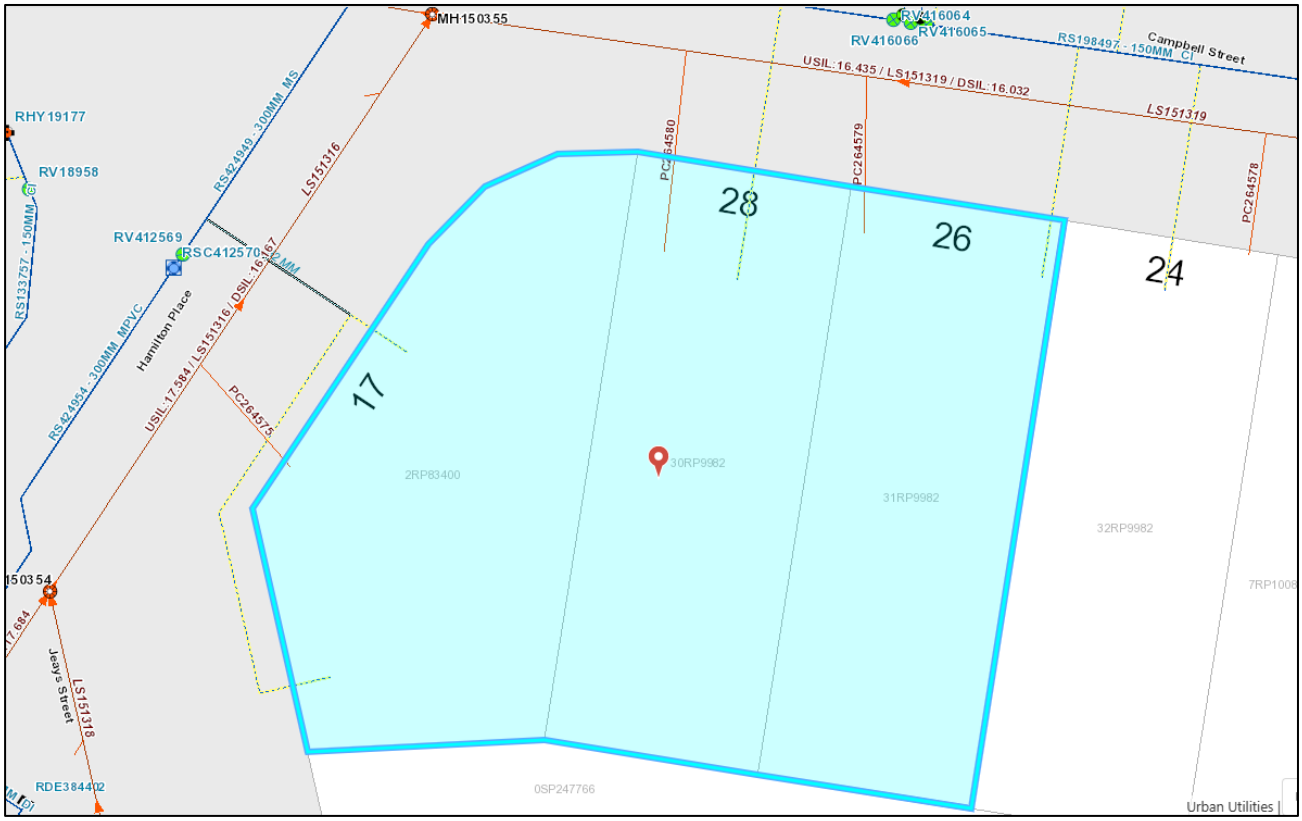

Figure 1: Existing water and wastewater infrastructure within the vicinity of the subject site

Map showing:

- Two existing 20mm water service connection via 150mm Cast Iron (CI) water reticulation main (Vintage: 1904) located at Campbell Street, associated to Lot 30 and 31.
- Two existing 20mm and 25mm water service connection via 300mm Mild Steel (CI) water reticulation main (Vintage: 2012) located at Hamilton Place, associated to Lot 2.

Proposed new Water Connection or Infrastructure:

☒ Applicable:

The applicant has proposed upgraded the existing connection of Lot 31 and replaced with a new water service DN100mm designed to service the proposed development. Urban Utilities does not object to the proposed servicing strategy as illustrated in Figure 2, provided the hydraulic consultant confirms it is sufficient to meet the requirements of the development during the Water Approval stage. The water meter and sub-metering design and arrangements must meet URBAN UTILITIES's requirements, and all redundant water services must be sealed at the main.

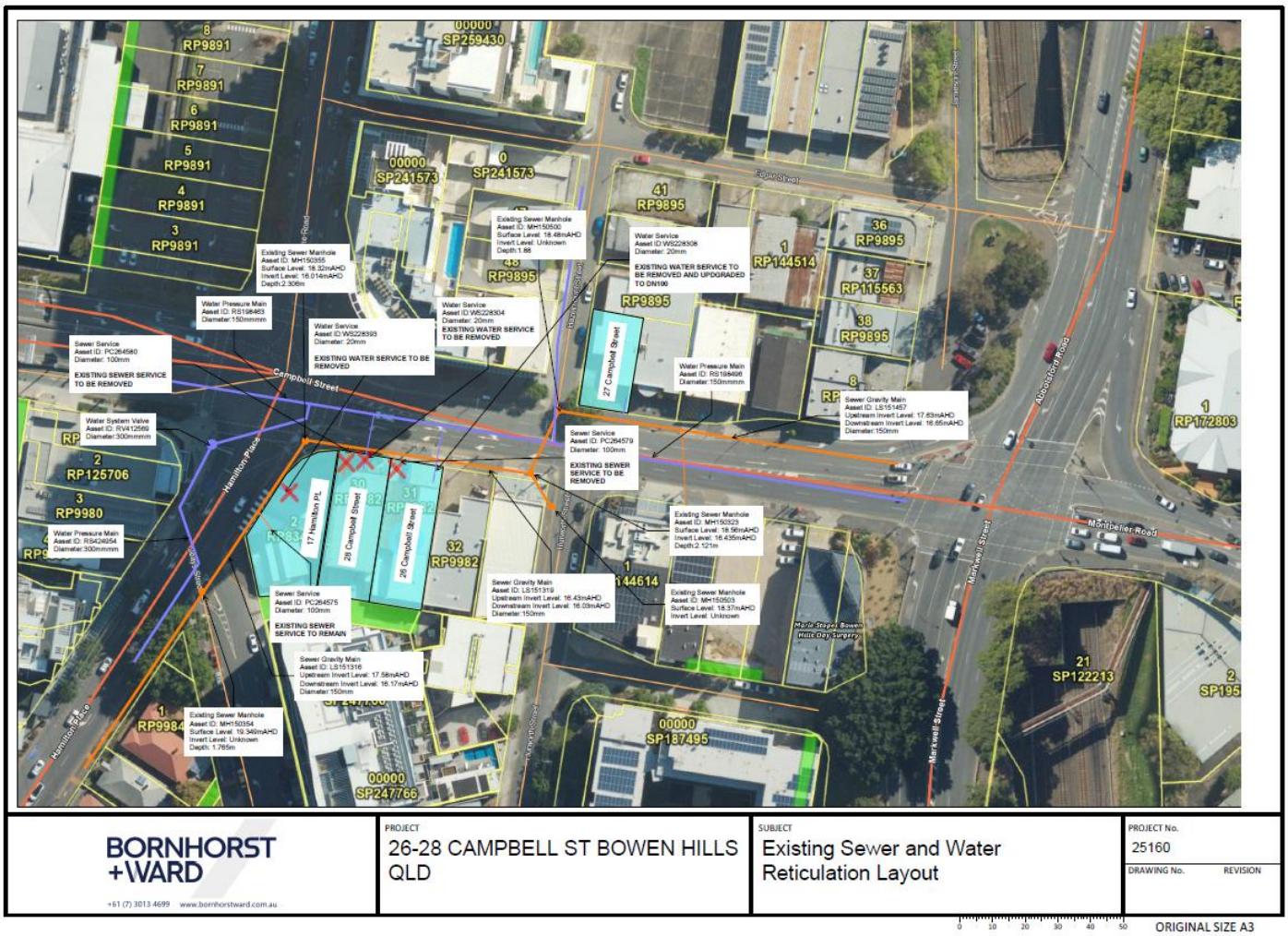

Figure 2: Proposed Water Servicing Strategy by the applicant

Wastewater

Wastewater connection for site:

☒There is an existing wastewater connection: refer to map/details

An illustration of existing wastewater infrastructure at the vicinity of subject property is provided in Figure 1:

Map showing:

- Two existing 100mm sewer property connection via a 150mm Earthenware sewer gravity main (Vintage: 1927) located at Campbell Street, associated to Lot 30 and 31.

- One existing 100mm sewer property connection via a 150mm Earthenware sewer gravity main (Vintage: 1927) located at Hamilton Place, associated with Lot 2.

A standard Water Approval condition is that wastewater infrastructure shall terminate in a location and in an arrangement that allows future connection to the network to be made without requiring the consent of private landowners. Where upstream properties do not have an existing property connection, and where the development is likely to isolate upstream properties from the sewer, a property connection through the subject site and servicing the upstream lot must be provided.

Sewer Connection Reuse:
☒Applicable:

Urban Utilities does not support the reuse of the existing DN100mm sewer property connection associated with Lot 2. Reuse of the existing DN100 mm sewer property is not in compliance with SEQCODE clause 5.5.4 Table 5.5. In accordance with the Table 5.5 the sewer property connection must be at least DN160.

Table 5.5 MINIMUM PIPE SIZES FOR RETICULATION AND PROPERTY CONNECTION SEWERS

Sewer	Minimum size DN	
	NuSewers	RIGSS
Property connection sewer servicing 1 residential premise on a single lot	110	100

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Sewer	Minimum size DN	
	NuSewers	RIGSS
Property connection sewer servicing 2 residential premises on a single lot or 2 adjoining lots.	110 (QUU), 160 (UW)	150
Property connection sewer servicing more than 2 residential premises on a single lot Property connection sewer servicing commercial and industrial development; Reticulation sewers	160	150
Reuse of existing property connections serving lots to be redeveloped: where the developer can demonstrate, to the	Existing property connection sewers may be used	

Network Demand and Capacity

Water

Hydraulic assessment:
(including modelling of network conditions with peak demand and fire flow)
☒Undertaken:

Detail:
- Analysis assumes a peak demand from the development of 2.73 L/s for 282 EP
- Sufficient capacity available in accordance with the SEQ Water Supply and Sewerage Design and Construction Code

Flow and pressure assessment undertaken:
☒Undertaken:

Indicative flow and pressure advice for the existing 150mm Cast Iron (CI) water reticulation main (Vintage: 1904) located at Campbell Street is provided in Table 1, below.

- The existing water main is cast iron material constructed many years ago and as such field performance can be variable. Field testing to ascertain actual pressure drops is strongly recommended.

Table 1: Indicative Flow and Pressure Advice

Assumed Point of Connection	Estimated RL Connection (m AHD)	Hydraulic Grade Line (m AHD)			
		0 L/s	10 L/s	20 L/s	30 L/s
150mm Cast Iron constructed in 1904	18.68	81	80	79	78
		Pressure (kPa) [1]			
		0 L/s	10 L/s	20 L/s	30 L/s
		618	608	598	589

Notes:

[1] Modelled pressure in supply main, relative to the estimated connection RL (m AHD).

[2] Designers are required to adjust the Hydraulic Grade Line/Pressure model results for site/building RL differences and calculate the extra hydraulic losses from point of connection with the main.

[3] Field performance of cast iron spun (or cement) lined mains can be variable. Field testing to ascertain actual pressure drops may be advisable.

Disclaimer: *Information provided by Urban Utilities is based on hydraulic modelling ("Hydraulic Modelling Information"). Model results are for the anticipated performance. The Hydraulic Modelling Information has not been verified by field measurements and may be inaccurate due to field conditions. As such, users relying on Hydraulic Modelling Information do so at their own risk and should make their own independent investigations to verify model outputs. The Hydraulic Modelling Information does not state nor imply a guaranteed level of service. Designers are referred to Urban Utilities' Customer Charter and Customer Service Standards for facility hydraulic service considerations. Urban Utilities does not provide a service of minimum flows and pressures to private fire-fighting systems. Due to changing operational circumstances, pressure and flows delivered to a service may vary. Designers are advised to make adequate provisions within the fire system installation for the pressure, flow and reliability requirements, for the life of the system.*

Designs incorporating flows above 50 L/s must be supported by evidentiary field tests, and Urban Utilities may require a supporting hydraulic analysis to demonstrate how the reticulated network will be protected from the impacts of water hammer associated with any new property service.

Wastewater

Hydraulic assessment:

(including modelling of peak wet weather flow conditions)

☒Undertaken:

Detail:

- Analysis assumes a Peak Wet Weather Flow from the development of 3.43 L/s.
- Sufficient capacity available in accordance with the SEQ Water Supply and Sewerage Design and Construction Code (with the caveat that analysis assumes a total of 282 EP for the site)

Building/Constructing Over or Near Water and Wastewater Assets

☒ Applicable from information provided at this time

Build Over Assets (BOA) involves the construction of buildings or structures, defined as assessable building works in the current Building Regulation e.g. construction of a new dwelling or a retaining wall higher than 1m above the finished ground level, near or over Urban Utilities' water or sewer infrastructure or encroaching on or over an Urban Utilities registered easement. Construction Over Assets (COA) involves the construction of operational works, not defined as assessable building works e.g. construction of stormwater pipework, stormwater retention basin, roads, and

earthworks, near or over Urban Utilities' water or sewerage infrastructure or encroaching on an Urban Utilities registered easement.

Where works occur within 3 metres of an Urban Utilities asset a BOA/COA referral submission may be required (**https://www.urbanutilities.com.au/development/our-services/build-over-or-near-pipes-or-easements**). If required, lodge a BOA/COA referral request via the Developer Services Portal ensuring:

- All the mandatory information fields are populated, and
- The Assessment Manager (Planning Act) for the building works, /Building Certifier will to be clearly identified as a contact, and
- The application number for any applicable Water Approves will need to be noted in the additional information field in the portal and
- The site plan and RPEQ certified structural drawings must be uploaded showing all water and sewerage infrastructure (i.e. sewer mains, manholes, property connections, water mains and services) correctly represented spatially and demonstrate that the building works and associated footing arrangement will be located and founded as per the minimum requirements specified in the **Asset Protection Standards** document available at the following link: https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines
- The design levels of the ground's finished surface level and the underside of any suspended structural elements need to be provided to consider design criteria compliance.
- Consider future building works and coverage on sites by ensuring access to manholes, avoid sewer bends where building shouldn't occur above and short property connections so that costly reductions are not required in the future.

State Controlled Routes

☒ This development is likely to impact a State Controlled Route (Transport and Main Road Corridor) – requiring Public Utility Plant (PUP) approval by Urban Utilities on your behalf and, if granted by the Queensland Department of Transport and Main Roads (TMR), you will be required to use the PUP and Water Approval Decision Notice to request a Road Corridor Permit from TMR before construction occurs in the corridor. Factor in additional time for your TMR approvals. For further guidance, refer to the 'Developing in a State-controlled (TMR) road Fact sheet' at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

☐ This development is unlikely to impact a State Controlled Route

Water Meters

☒ This development involves a Community Title Scheme (CTS)

☒ This development involves a volumetric/title/management subdivision

Meters must be identified at the time of development network connection or alteration. Management lots can affect metering and submetering configurations. For further guidance, refer to the Metering Guidelines, at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

Infrastructure Charges

☒ Infrastructure charges are likely to apply, in accordance with legislation

Infrastructure Charges are levied in accordance with the Urban Utilities' Water Netserv Plan (Part A) Charges Schedule applicable (online Developer Customer Price List) at the time the water approval application is lodged. Infrastructure charges are paid at the time of connection in accordance with legislation. Further information on what are infrastructure charges is available at: **https://www.urbanutilities.com.au/development/help-and-advice/fees-and-services** and information of the Water Netserv Plan provisions can be found at the following link: **www.urbanutilities.com.au/development/help-and-advice/water-netserv-plan**

Trade Waste

☒ Unknown at this time

The proposed development is a potential generator of Trade Waste. Trade Waste is water-borne waste from business, trade or manufacturing premises excluding domestic sewerage, stormwater, and prohibited substances. It is an offence

under section 193(1) of the *Water Supply (Safety and Reliability) Act 2008* to discharge trade waste into Urban Utilities' infrastructure without a Trade Waste Approval. An application for such an approval must be made to Urban Utilities which will be subject to conditions and the Urban Utilities Trade Waste Environmental Management Plan (TWEMP). Trade Waste information and details are available on the Urban Utilities website: **https://www.urbanutilities.com.au/business/business-services/trade-waste/trade-waste-for-food-service-businesses**

Network Access Permit (NAP)

☒ Likely to involve a NAP (Type 1 or 2) – work within 2 m of an asset/won't impact asset

A Network Access Permit is required for work on our near our assets and for network isolations related to development new connections, alterations and disconnection. Development metering information and infrastructure charges are required at this Water Approval stage to help manage non-revenue water and Water Approval compliance in accordance with legislation. Refer to Network Access Permit Application Guidelines at the following link: **https://www.urbanutilities.com.au/development/our-services/network-access-permits**

Water Approval Application Process

A formal Water Approval assessment will determine if your application qualifies as a:

- *Standard Connection Water Approval* (generally up to 3 residential dwellings / lots) where Urban Utilities assesses the request for development to connect, disconnect or alter Urban Utilities network and a quote is provided for an Urban Utilities engaged contractor to undertake design and construction works once paid (customers are responsible for privately engaging plumbing expertise).

  From receipt of a paid and properly made application, it will take five business days for the Water Approval assessment and five business days to issue a decision notice. Urban Utilities' contractor will contact you within three business days to arrange construction. You will need to confirm that the site is cleared, ready for construction and a plumber organised. If conditions are deemed unsafe due to wet weather, works will be postponed and rescheduled as necessary. The contractor will commence construction within 15-25 business days. A Connection Certificate will be issued once your connection is complete and all fees and charges have been paid. **https://www.urbanutilities.com.au/development/our-services/how-to-connect-water-and-sewerage/standard-connections**

- *Non-Standard Connection Water Approval - Minor Works* (not deemed a Standard Connection and generally with water reticulation up to 80m and wastewater reticulation up to 90m, and no more than two maintenance structures). This is where Urban Utilities assesses the request for development to connect, disconnect or alter Urban Utilities network and design and construction certification is undertaken by a customer engaged Endorsed Consultant, from those that qualified to meet Urban Utilities Certification Scheme Guidelines, and who will be subjected to audits. A 12 month security bond 'warranty period' applies to infrastructure certified as Water Approval compliant but it remains private infrastructure, not owned or maintained by Urban Utilities, until then. Refer to the 'Minor Works Design Technical Guidelines': **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

- *Non-Standard Connection Water Approval - Major Works* (generally all other property and network connections, not deemed a Standard Connection Water Approval, including complex assets, i.e. pumping infrastructure, and multistage developments). This is where Urban Utilities assesses the request for development to connect, disconnect or alter Urban Utilities network and there is a Water Approval condition for a Design Approval. Appropriately registered and licenced specialists are privately engaged by applicants to design and construct works with Urban Utilities undertaking assurance at key construction points and post construction. A 12 month to 2 year security bond 'warranty period' applies to infrastructure certified as Water Approval compliant but it remains private infrastructure, not owned or maintained by Urban Utilities, until then.

From receipt of a paid and properly made Non-Standard Water Approval application, it will take 20 business days for assessment unless otherwise agreed. Information requests may apply (up to 20 business days for you to respond and up to 20 business days to review from receipt of requested information and paid invoice. A Design Approval must be assessed in 20 business days of receipt of all designs and invoice payment. Refer also to 'Our Service Commitments' at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

Fees and Charges

Urban Utilities fees and charges, including scope of works, are stated in the Urban Utilities' Water Netserv Plan 'Developer Customer Price List': **https://www.urbanutilities.com.au/development/help-and-advice/fees-and-services.** Water Approval related fees and charges:

- *Assessment fees* - service costs for assessing Water Approval applications (connect, disconnect or alter water and wastewater connection for development), detailed designs, build over asset referrals and amendments from lodgement stage to post construction compliance
- *Construction fees* – paid to a contractor to undertake construction work related to a water approval (via Urban Utilities only for Standard Connection Water Approvals, otherwise privately engaged by an applicant e.g. plumber, builder, engineer)
- *Developer Product/Service fees* – purchased item or services e.g. complex engineering search, or products e.g. large water meters, security bonds, re-checking/re-inspection fees
- *Infrastructure charges* – State legislated, already discounted rates for new trunk demand, paid at connection (physical connection or certified connection e.g. Connection Certificate) and only used for trunk (shared major infrastructure as per Water Netserv Plan).

Visibility of Activity

- *You can follow Application Progress* – Site owners and agents can see the progress of an application by being a registered and activated contact for an application in the Developer Services Portal. Refer to the 'Application Contact' quick reference guide and 'Adding a Contact' Explainer Byte at the following link: **https://www.urbanutilities.com.au/development/developer-services-portal**
- *GIS* – Urban Utilities owned and operated (not under construction) infrastructure is available for viewing online via 'GIS Open Data'. Refer to the 'GIS Mapping System Guideline' at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/standards-and-guidelines**

Properly Made Application

You are required to submit a lawful Water Approval application. This means ensuring the following are complete and correct:

- all the Owner, Billing Entity and Agent details in the Developer Services Portal
- proposed development and site details with plans (including sequencing for multistage development)
- Proof of ownership and relevant consent of all landowners affected by the development service design.

Refer to the 'Check for completeness guidelines' and relevant consent forms at the following link: **https://www.urbanutilities.com.au/development/help-and-advice/development-forms**

This Services Advice Notice is current for 12 months from the date of issue. Should you wish to proceed with applying for a service connection please lodge your application via Urban Utilities Developer Applications Portal at **www.urbanutilities.com.au/development**. Please include your Services Advice Notice reference number in your application.