



# CIVIL ENGINEERING SERVICES REPORT

## PROPOSED TOWNHOUSE DEVELOPMENT

### 10 HONEYEATER CIRCUIT, OXLEY

PLANS AND DOCUMENTS  
referred to in the PDA  
DEVELOPMENT APPROVAL

Approval no: DEV2024/1545

Date: 10 December 2024



PREPARED FOR HONEYCOMBES DEVELOPMENTS PTY LTD

C24004AR001



# HURLEY

CONSULTING ENGINEERS

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Revision	Date	Author	Verifier	Approver
A	22/08/2024	RW	CH	CH

Approved for issue for and on behalf of Hurley Consulting Engineers Pty Ltd



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Craig Hurley BE(Civil) MIEAust CPEng RPEQ 15957  
Director & Principal Civil Engineer

This report has been prepared for the exclusive use of our client under the terms and conditions of our engagement. No responsibility is taken for any third party that uses or relies upon any information contained within this document.

# 1 INTRODUCTION

Hurley Consulting Engineers has been commissioned by Honeycombes Developments Pty Ltd to prepare a Civil Engineering Services Report for a proposed townhouse development at 10 Honeyeater Circuit, Oxley. The development will comprise of 34 new townhouses as shown on the architectural plans prepared by Arqus enclosed in **Appendix A**.

The intent of this report is to review existing infrastructure in the vicinity of the site and to demonstrate how the proposed development can be serviced in general accordance with the local planning scheme requirements.

## 2 SITE DESCRIPTION

The subject site is located at 10 Honeyeater Circuit, Oxley, on land described as Lot 302 on SP326512. The site has an area of approximately 9,644m<sup>2</sup> and is located within the Brisbane City Council local government area and the Oxley Priority Development Area (PDA).



**Figure 2.1 – Locality Plan**  
**Image Source:** QLD Globe 2024

The subject site is currently surrounded by Honeyeater Circuit and Whipbird Place to the south, an existing regional detention basin to the north, an existing bioretention basin to the north-east and new residential developments in construction to the west. The site ranges in elevation from approximately RL 12.5m AHD at the northern boundary of the site to RL 19.0m AHD in the south-western corner of the site.

The subject site is within the Oxley Priority Development Area (PDA) under QLD Government Department of State Development reference DEV2021/1191 located at 53 Seventeen Mile Rocks Road, Oxley QLD 4075. Previously, the site has been approved for a Retirement Facility and Multiple Dwelling, Community Use, Food and Drink Outlet and Sales Office under QLD Government Department of State Development reference DEV2023/1383, however, the new layout is changed to a proposed townhouse development, so a new application is required.

### 3 FILLING & EXCAVATION

Based on the Brisbane City Council (BCC) FloodWise Property Report obtained for this site, the Residential Flood Level (RFL) is RL 11.6m AHD associated with a Brisbane River flood source. The minimum habitable floor level for residential dwellings within the site shall be 12.1m AHD (RFL + 500mm) in accordance with the Brisbane City Plan 2014 and the entire site has previously been filled above that level.

Filling and excavation are proposed to provide the new building pad levels and to construct the new private roadways, associated stormwater drainage and sewer main reticulation within the site. The existing fall generally to the north will be maintained.

Retaining walls are proposed to facilitate level building pads for dwelling footings. The maximum retaining wall height for the development is expected to be approximately 1.85m however they will not be visible from outside the development. On that basis, retaining walls are not anticipated to cause any amenity impacts to the surrounding development. All filling will be undertaken in accordance with Brisbane City Council planning scheme requirements and the requirements of AS3798 for Level 1 filling.

Construction phase stormwater quality can be managed by implementing appropriate erosion and sediment control techniques during the construction phase. Erosion and sediment control guidance is given in the International Erosion Control Association (IECA) Australasia Best Practice Erosion and Sediment Control (BPESC) document. The IECA BPESC documents are available for download from the IECA website.

The proposed extents of cutting and filling are shown on the Concept Bulk Earthworks Layout Plan enclosed in **Appendix C**. Final site levels will be subject to confirmation in a future operational works application to Council.

Responses to the Brisbane City Council Filling & Excavation Code are included in **Appendix D**. An Erosion Hazard Assessment Form has been completed and is enclosed in **Appendix E**. The Erosion Hazard Assessment Form suggests that the proposed development has a 'medium' risk of soil erosion and sediment pollution to the receiving environment.

## 4 ROADWORKS & SITE ACCESS

The site has road frontage to Whipbird Place and Honeyeater Circuit. Access into the new townhouse development is intended to be provided by a new concrete crossover from Whipbird Place in accordance with BCC standard drawings. No other external roadwork is proposed, as Whipbird Place and Honeyeater Circuit are both fully sealed roads with kerb & channel.

New private access roads will provide access to each dwelling and the common facilities. Refuse collection will be provided from the new private access roads via kerbside collection and mobile wheelie bins. Adequate space can be provided on site for refuse collection manoeuvring and for the storage, loading and unloading of bins.

The development incorporates a pedestrian connection to the adjacent property (Lot 301 on SP326512) at 11 Whipbird Place, Oxley, to provide access to shared communal facilities.

The proposed access and driveway arrangements are shown on the Conceptual Civil Servicing Plan enclosed in **Appendix C**.

## 5 STORMWATER DRAINAGE

The site currently flows overland towards the existing stormwater drainage network along the northern boundary of the site. Detailed site survey identifies an existing stormwater pit and pipe at the north-eastern corner of the site which directly connects into a diversion stormwater manhole to the north-east of the site.

Frequent flows from the site are diverted into an existing regional bioretention basin to the east of the site to be treated in accordance with the Oxley PDA approved Stormwater Management Plan under reference DEV2021/1191. Major flows from the site are discharged into the regional detention basin to the north of the site, eventually draining to a tributary of the Brisbane River. It is proposed to maintain the existing discharge arrangement.

The development is proposed to have new underground stormwater pipes within the new private roads draining generally from south to north, that will directly connect into the existing stormwater drainage network at the north-eastern corner of the site. This approach is consistent with the previously approved Stormwater Management Plan for the site under reference DEV2023/1383.

The Oxley PDA Stormwater Management Plan has allowed for a fraction impervious of 80% for the subject site. On that basis, no on-site stormwater detention or additional quality treatment are proposed which is consistent with the previously approved Stormwater Management Plan for the site.

The internal and external drainage system is shown on the Concept Civil Servicing Plan enclosed in **Appendix C**. Responses to the Brisbane City Council Stormwater Code are included in **Appendix D**.

## 6 SEWERAGE RETICULATION

Urban Utilities GIS mapping and detailed site survey identify an existing sewerage reticulation main and maintenance hole located within the south-west portion of the site. This existing sewerage maintenance main runs through the site and discharges into an existing sewer maintenance hole located on the northern verge of Honeyeater Circuit.

It is proposed to realign the existing public gravity sewerage main to avoid clashing with buildings and other services. Private sewerage reticulation is proposed to connect into the existing public sewerage main within the site to service the development. The lower northern portions of the site will drain to a private sewer pump located near the north-eastern corner of the site. The private rising main from the private pump station will discharge to the public sewerage main within the site via a private discharge manhole.

The existing Council sewerage mains and the proposed sewer servicing arrangements are shown on the Concept Civil Servicing Plan enclosed in **Appendix C**. It is noted that final alignments, levels, and sites will be confirmed by a hydraulic engineer and detailed design phase; and is therefore subject to change.

Water and sewerage applications are assessed by Urban Utilities independently of the development application to EDQ. A separate application will be submitted to Urban Utilities to confirm the proposed water and sewerage servicing arrangements.



## 7 WATER RETICULATION

Urban Utilities GIS mapping and detailed site survey identifies an existing 180mm diameter PE water reticulation main located on the northern verge of Honeyeater Circuit. An existing connection point has previously been provided from this existing water reticulation main, located near the south-eastern corner of the site. This existing stub will be the point of connection for the proposed development.

Each lot will have access to new water reticulation within the site that connects to a new commercial water meter at the existing connection point. An internal firefighting system will also be required to provide fire hydrant coverage for each building in accordance with NCC requirements.

The existing Council water mains and the proposed water servicing arrangements are shown on the Concept Civil Servicing Plan enclosed in **Appendix C**. It is noted that final alignments, levels, and sites will be confirmed by a hydraulic engineer and detailed design phase; and is therefore subject to change.

Water and sewerage applications are assessed by Urban Utilities independently of the development application to Brisbane City Council. A separate application will be submitted to Urban Utilities to confirm the proposed water and sewerage servicing arrangements.

## 8 CONCLUSION

Hurley Consulting Engineers has been commissioned by Honeycombes Developments Pty Ltd to prepare a Civil Engineering Services Report for a proposed townhouse development at 10 Honeyeater Circuit, Oxley. The development will comprise of 34 new townhouses as shown on the architectural plans prepared by Arqus enclosed in **Appendix A**.

This report has reviewed existing infrastructure in the vicinity of the site and demonstrated how the proposed development can be serviced in general accordance with the local planning scheme requirements. Concept civil engineering plans are included in **Appendix C** to show the likely servicing and earthworks arrangements for the proposed development.

Responses to the relevant Brisbane City Council planning scheme codes are enclosed in **Appendix D** to demonstrate general compliance with those parts of the planning scheme. An Erosion Hazard Assessment Form is enclosed in **Appendix E**, which suggests that the proposed development has a 'medium' risk of soil erosion and sediment pollution to the receiving environment.

No civil engineering constraints have been identified that, in our opinion, would preclude approval of the proposed development with reasonable and relevant conditions.

# Appendix A - Architectural Plans

**NOTES**  
 Contractors are to verify all dimensions on site before commencing any work or producing shop drawings.

These drawings are protected by the laws of copyright and may not be copied or reproduced without the written permission of Arqus Design.

Detail applicable to the scale of the drawing published.

DATE	REVISION	ISSUE
29/05/24	FOR INFORMATION	A
30/05/24	FOR INFORMATION	B
04/07/24	FOR INFORMATION	C
18/07/24	SITE PLAN- UPDATE	D
19/07/24	PRELIMINARY DA PACKAGE	E
23/07/24	PRELIMINARY DA PACKAGE-UPDATED	F
31/07/24	SITE PLAN-UPDATE	G
20/08/24	SITE PLAN-UPDATE	H
21/08/24	PRELIMINARY DA PACKAGE	I

**NOTES:**  
 REFER REFERENCED DRAWINGS BELOW FOR THE RELEVANT CONSULTANT INFORMATION FOR CIVIL INFRASTRUCTURE, LOT BOUNDARIES, LANDSCAPE DETAILS, LEVELS AND FALLS.  
 VERIFY ALL REFERENCED INFORMATION ON THIS PLAN WITH THE RELEVANT CONSULTANT DRAWINGS AND NOTIFY OF NEW INFORMATION MADE AVAILABLE OR OF ANY DISCREPANCIES.

REFERENCED DRAWINGS:  
 LANDPARTNERS- BUILT ENVIRONMENT CONSULTANTS  
 DETAIL SURVEY  
 PLAN REFERENCE BRSS8271-000-3-1

RPS GROUP  
 OXLEY LANDSCAPE BASE- SKETCH  
 PLAN REFERENCE 004868

**ABBREVIATIONS**

CODE	DESCRIPTION
LRB	LETTER BOX



CLIENT



PROJECT  
**OXLEY RESIDENTIAL DEVELOPMENT**  
 10 HONEYEATER CIRCUIT, OXLEY  
 LOT 302 ON SP326512

Country: Yugara & Yugarabul  
 DRAWING

**SITE PLAN -GROUND FLOOR**

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0069	SP	ZC	SP

SCALE	DATE CREATED	NORTH
1 : 250	29/02/24	

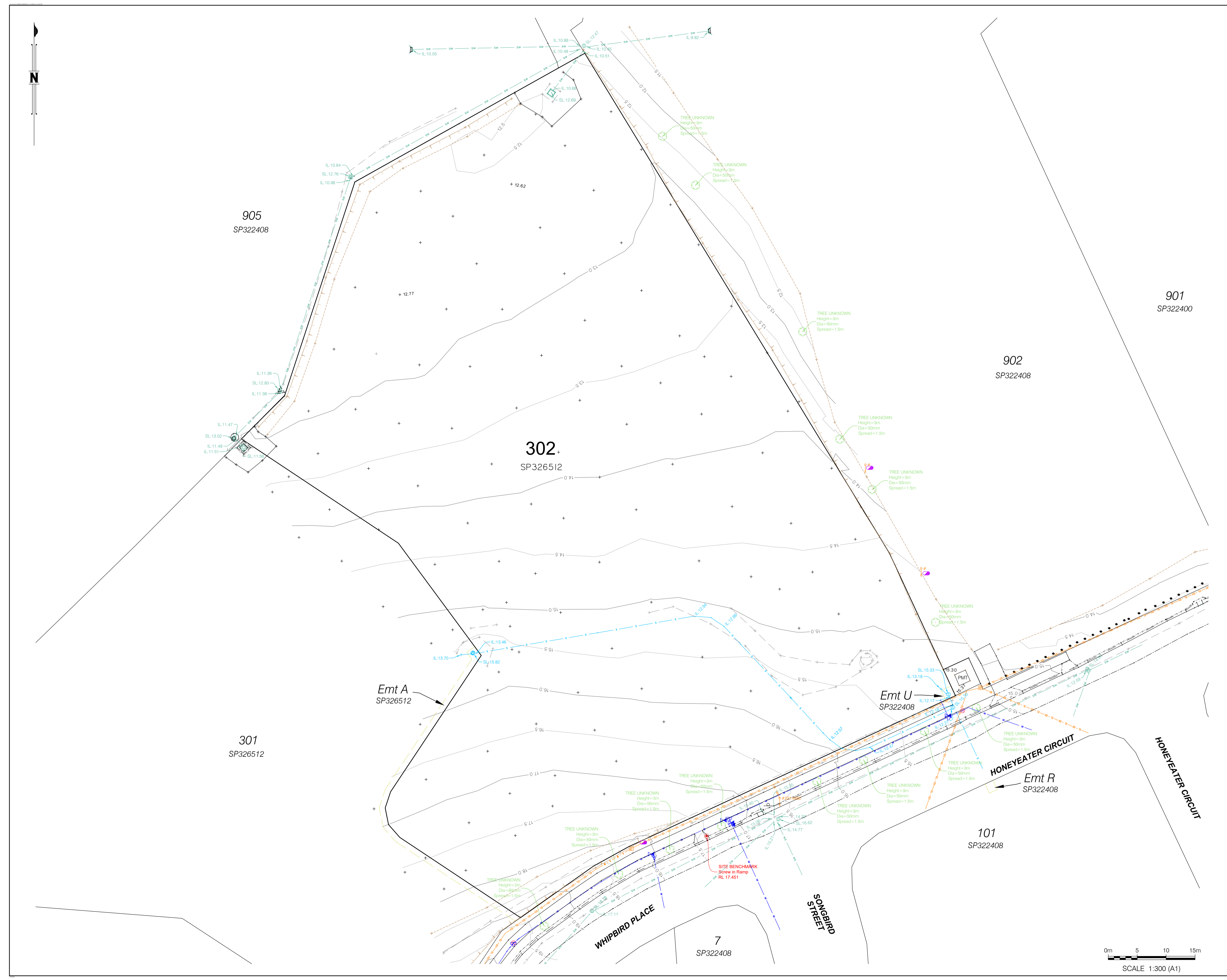
DRAWING NUMBER  
**A1-1-01**

ISSUED FOR  
**PRELIMINARY**

1 SITE PLAN- GFA GROUND FLOOR  
 1 : 250

HONEYEATER CIRCUIT

# Appendix B - Detailed Site Survey



**CLIENT**  
**HONEYCOMBES DEVELOPMENTS PTY LTD**

**PROJECT**  
**DETAIL SURVEY OF LOT 302 ON SP326512 (Honeyeater Circuit, Oxley)**

**NOTES**  
 (i) This plan has been prepared for the exclusive use of Honeycombes and their consultants for design purposes and is not to be used for any other purpose or by any other entity without the express permission of LandPartners Pty Ltd.  
 (ii) The site boundaries as shown hereon were not marked or surveyed at the time of survey and have been determined from the dimensions shown on plans of survey registered in the Department of Resources.  
 (iii) Services shown hereon have been located where visible by field survey. If not able to be so located, services have been plotted from LandPartners AsConstructed Survey records of relevant authorities where available and have been noted or symbolised accordingly. Where such records do not exist or are inadequate a notation has been made hereon.  
 (iv) Underground connections between services have been joined based on relevant authority records and have been symbolised accordingly.  
 (v) Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.  
 (vi) This data should not be reproduced in any way without the permission of LandPartners Pty Ltd. Any reproduction of this data must contain these notes.

1	MJT	6/10/2022	Initial Issue

SYM	CODE	DESCRIPTION	SYM	CODE	DESCRIPTION
●	BM	BENCHMARK	▲	SGN	SIGNS
○	BOL	BOLLARD	○	SIO	INSPECTION OPENING
●	CP	COLUMN / PILLAR	○	SM	SEWERAGE MANHOLE
□	EBX	ELECTRICAL BOX	▲	SN	STREET NAME SIGN
—	ECM	ELEC CABLE MARKER	▲	SPR	SPRINKLER
—	ELP	ELECTRICAL POLE	▲	SPR	TREE
□	EM	ELECTRICAL PIT	▲	SSV	STOP/SUICE VALVE
—	EP	ELECTRICITY POLE	▲	STN	SURVEY STATION
—	ESP	ELECTRICITY STAY POLE	▲	SW	STORMWTR. MANHOLE
●	FH	FIRE HYDRANT	▲	TAP	TAP
●	FHP	FIRE HYDRANT PILLAR	▲	TE	TELECOM PIT
—	FP	FLAG POLE	▲	TM	TELECOM MANHOLE
●	GMH	GAS MANHOLE	▲	TOH	TRANSFORMER OVERHEAD
●	GMK	GAS MARKER	▲	TP	TELEPHONE POLE
—	GP	GUIDE POST	▲	TFL	TRAFFIC LIGHTS
—	GS	GUIDE SIGN	▲	TRP	TRAFFIC PIT
—	GT	GULLY TRAP	▲	WAV	WATER AIR VALVE
—	GV	GAS VALVE	▲	WCJ	WATER END CAP
—	HB	HOSE BOX/FREEL	▲	WM	WATER METER
—	HM	HYDRANT MARKER	▲	WMH	WATER MANHOLE
—	HMU	MANHOLE UNKNOWN	▲	WPR	WATER REDUCER
—	PLM	PALM TREE	▲	WRV	WATER REFLEX VALVE
—	PIL	TELECOM PILLAR	▲	WSP	WATER SAMPLE POINT
—	PKM	PARKING METER	▲	WSV	WATER SCOUR VALVE
—	PSM	PERM. SURVEY MARK	▲	WTE	WATER TEE JUNCTION
—	SEV	SEWERAGE VENT	▲	WV	WATER VALVE
—	SHB	SHRUB	▲	WVM	WATER VALVE MARKER

Symbols shown are indicative only. The symbol size and orientation does not necessarily represent the real size or orientation of the feature.

**Services from LandPartners AsConstructed Surveys:**  
 DRAINAGE PIPE U/G  
 SEWERAGE PIPE  
 WATER PIPE

**Services compiled from design (not surveyed):**  
 ELEC. CABLE U/G

**Brisbane Office**  
 Level 1  
 18 Little Cribb Street,  
 Milton Qld 4064  
 PO Box 1599  
 Milton Qld 4064

p: (07) 3842 1000  
 f: (07) 3842 1001  
 e: info@landpartners.com.au  
 w: www.landpartners.com.au

LEVEL DATUM AHD D	LOCAL AUTHORITY BRISBANE C.C.
LEVEL ORIGIN PSM50046 RL28.007	SCALE 1:300 (A1)
MERIDIAN MGA	CONTOUR INTERVAL 0.5 Metre
CO-ORD SYSTEM Arbitrary Plane	DRAWN MJT
	DATE 6/10/2022
SURVEYOR MJT	DATE OF SURVEY 5/10/2022
	CHECKED RGA
	DATE 7/10/2022
FIELD FILE BRSS8271-000-2	APPROVED RGA
	DATE 7/10/2022
UDN	SHEET \$(FIX,??) OF ?

**BRSS8271-000-3-1**

SCALE 1:300 (A1)

0m 5 10 15m

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# Appendix C - Conceptual Civil Plans



**PROPOSED LEGEND**

- EXTENT OF EARTHWORKS ( CUT )
- EXTENT OF EARTHWORKS ( FILL )
- PROPOSED CONCRETE ROAD
- PROPOSED CONCRETE FOOTPATH
- PROPOSED 'B1' CONCRETE CROSSOVER
- PROPOSED RETAINING WALL
- PROPOSED DESIGN CONTOUR
- PROPOSED FINISHED FLOOR LEVEL ( FFL )

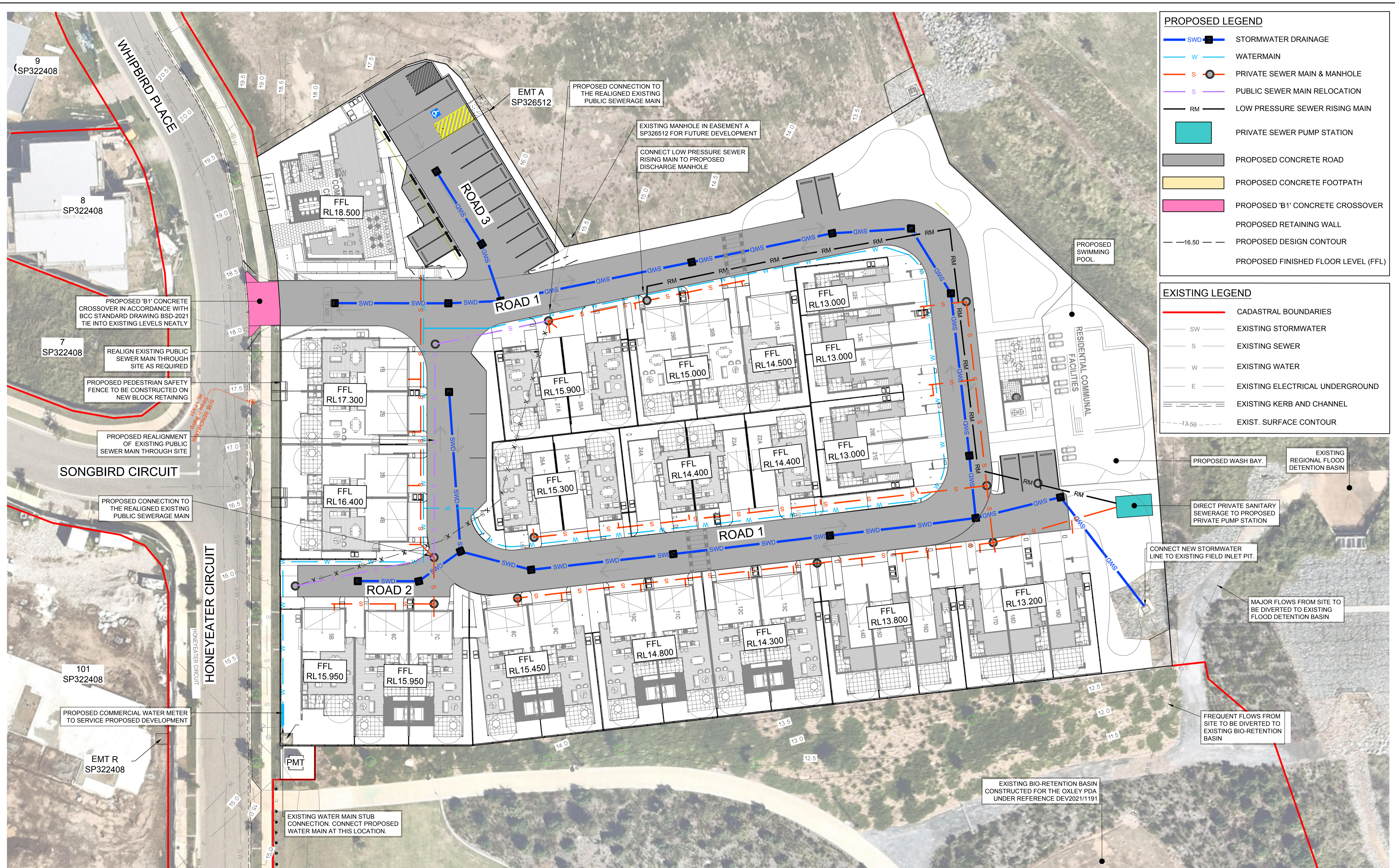
**EXISTING LEGEND**

- CADASTRAL BOUNDARIES
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING WATER
- EXISTING ELECTRICAL UNDERGROUND
- EXISTING KERB AND CHANNEL
- EXIST. SURFACE CONTOUR

**BULK EARTHWORKS LAYOUT PLAN**

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK	LOT DESCRIPTION: Lot 302 SP326512 HORZ. DATUM: LOCAL SCREW IN RAMP RL 17.451 APPROVED FOR AND ON BEHALF OF HURLEY CONSULTING ENGINEERS PTY LTD:  NAME: CRAIG HURLEY RPEQ NO: 15957	ORIENTATION & SCALES:  0 2.5 5 10 15 A1 1:250 ; A3 1:500 Scale (m) DO NOT SCALE FROM DRAWING	NOTES: THESE DRAWINGS REMAIN THE PROPERTY OF HURLEY CONSULTING ENGINEERS PTY LTD AND MUST NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION. THESE DRAWINGS HAVE BEEN PREPARED FOR EXCLUSIVE USE BY OUR CLIENT. NO RESPONSIBILITY IS TAKEN FOR ANY THIRD PARTY THAT RELIES UPON OR USES THIS INFORMATION.  THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS NOTED OR INSTRUCTED OTHERWISE BY HURLEY CONSULTING ENGINEERS.  EXISTING SERVICES ARE SHOWN FOR INFORMATION ONLY AND NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THIS INFORMATION. ALL EXISTING SERVICES IN THE VICINITY OF THE SITE SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.	 PO BOX 417 CARINA QLD 4152 TELEPHONE: 0432 418 815 EMAIL: mail@hurleyce.com	CLIENT: HONEYCOMBES DEVELOPMENTS PTY LTD  DEVELOPMENT APPLICATION NO:  LOCAL GOVERNMENT AUTHORITY: BRISBANE CITY COUNCIL	PROJECT: PROPOSED TOWNHOUSE DEVELOPMENT 10 HONEYEATER CIRCUIT, OXLEY  DRAWING TITLE: CONCEPT BULK EARTHWORKS LAYOUT PLAN  ORIGINAL SIZE: A1 DRAWING NO.: C24004A-SK-C100 REV: B
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**PROPOSED LEGEND**

- SWD ■ STORMWATER DRAINAGE
- W WATERMAIN
- S ● PRIVATE SEWER MAIN & MANHOLE
- S PUBLIC SEWER MAIN RELOCATION
- RM LOW PRESSURE SEWER RISING MAIN
- PRIVATE SEWER PUMP STATION
- PROPOSED CONCRETE ROAD
- PROPOSED CONCRETE FOOTPATH
- PROPOSED 'B1' CONCRETE CROSSOVER
- PROPOSED RETAINING WALL
- PROPOSED DESIGN CONTOUR
- PROPOSED FINISHED FLOOR LEVEL (FFL)

**EXISTING LEGEND**

- CADASTRAL BOUNDARIES
- SW EXISTING STORMWATER
- S EXISTING SEWER
- W EXISTING WATER
- E EXISTING ELECTRICAL UNDERGROUND
- EXISTING KERB AND CHANNEL
- EXIST. SURFACE CONTOUR

**CIVIL SERVICING LAYOUT PLAN**

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK	LOT DESCRIPTION:
A	PRELIMINARY DESIGN	06/04/24	JH	JH	CH	Lot 302 SP326512
2	ARCHITECTURAL LAYOUT AND DESIGN LEVELS UPDATED	21/08/24	HW	HW	CH	HORZ. DATUM: LOCAL SCREW IN RAMP RL 17.451
						APPROVED FOR AND ON BEHALF OF HURLEY CONSULTING ENGINEERS PTY LTD:
						NAME: CRAIG HURLEY RPEQ NO: 15957

**ORIENTATION & SCALES:**

A1 1:250 ; A3 1:500  
Scale (m)  
DO NOT SCALE FROM DRAWING

**NOTES:**  
 THESE DRAWINGS REMAIN THE PROPERTY OF HURLEY CONSULTING ENGINEERS PTY LTD AND MUST NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION. THESE DRAWINGS HAVE BEEN PREPARED FOR EXCLUSIVE USE BY OUR CLIENT. NO RESPONSIBILITY IS TAKEN FOR ANY THIRD PARTY THAT RELIES UPON OR USES THIS INFORMATION.  
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 EXISTING SERVICES ARE SHOWN FOR INFORMATION ONLY AND NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THIS INFORMATION. ALL EXISTING SERVICES IN THE VICINITY OF THE SITE SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.



PO BOX 417  
CARINA QLD 4152  
TELEPHONE: 0432 418 815  
EMAIL: mail@hurleyce.com

**CLIENT:** HONEYCOMBES DEVELOPMENTS PTY LTD  
**PROJECT:** PROPOSED TOWNHOUSE DEVELOPMENT 10 HONEYEATER CIRCUIT, OXLEY  
**DRAWING TITLE:** CONCEPT CIVIL SERVICING LAYOUT PLAN  
**DEVELOPMENT APPLICATION NO.:**  
**LOCAL GOVERNMENT AUTHORITY:** BRISBANE CITY COUNCIL

ORIGINAL SIZE:	A1	DRAWING NO.:	C24004A-SK-C200	REV:	B
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# Appendix D - Planning Scheme Code Responses

**FILLING AND EXCAVATION CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO1</b> Development for filling and excavation minimises visual and amenity impacts from retaining walls and excessive earthworks.</p>	<p><b>AO1</b> Development ensures that the total height of any cut and fill, whether or not retained, does not exceed:</p> <ul style="list-style-type: none"> <li>(a) 2.5m in industrial zones;</li> <li>(b) 1m in all other zones, or if adjoining a sensitive zone.</li> </ul>	<p>✓</p>	<p>Retaining walls will be located within the site boundaries. Retaining walls are not proposed to be terraced because amenity impacts are negligible.</p>	
<p><b>PO2</b> Development of a retaining wall proposed as a result of filling or excavation:</p> <ul style="list-style-type: none"> <li>(a) does not impact adversely on adjoining land and vegetation;</li> <li>(b) has a high-quality finish;</li> <li>(c) is capable of easy maintenance.</li> </ul> <p>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.</p>	<p><b>AO2.1</b> Development of a retaining structure, including footings, surface drainage and subsoil drainage:</p> <ul style="list-style-type: none"> <li>(a) is wholly contained within the site;</li> <li>(b) if the total height to be retained is greater than 1m, then:               <ul style="list-style-type: none"> <li>(i) the retaining wall at the property boundary is no greater than 1m above the ground level;</li> <li>(ii) all further terracing from the 1m high boundary retaining wall is 1 vertical unit:1 horizontal unit;</li> <li>(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.</li> </ul> </li> </ul>	<p>✓</p> <p>✓</p>		

**FILLING AND EXCAVATION CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
	<p><b>AO2.2</b> Development of a retaining wall over 1m in height protects vegetation on the site and on adjoining land.</p> <p><b>AO2.3</b> 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.</p> <p><b>AO2.4</b> Development for filling only uses clean fill that does not include any construction rubble or debris.</p>	<p>✓</p> <p>✓</p> <p>✓</p>	All earthworks will be constructed in accordance with AS3798 and Brisbane City Council requirements.	
<b>PO3</b> Development ensures that a rock anchor is designed and constructed to be fit for purpose.	<b>AO3</b> Development ensures that a rock anchor: (a) is constructed in accordance with the standards in the Infrastructure design planning scheme policy; (b) which extends beyond the property boundary, is supported by a letter of consent from the adjoining land and building owners.	N/A	No rock anchors are proposed.	
<b>PO4</b> Development protects all services and public utilities.	<b>AO4</b> 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.	✓	All operational works are to be carried out in accordance with the Brisbane City Council's Planning Scheme Policy (Infrastructure Design).	

**FILLING AND EXCAVATION CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO5</b> Development provides surface and sub-surface drainage to prevent water seepage, concentration of run-off or ponding of stormwater on adjacent land.</p>	<p><b>AO5</b> 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.</p>	<p align="center">✓</p>	<p>All operational works are to be carried out in accordance with the Brisbane City Council's Planning Scheme Policy (Infrastructure Design).</p>	
<p><b>PO6</b> 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.</p> <p>Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.</p>	<p><b>AO6</b> No acceptable outcome is prescribed.</p>	<p align="center">N/A</p>	<p>No open drainage work is proposed.</p>	

**FILLING AND EXCAVATION CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO7</b> 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.</p>	<p><b>A07.1</b> Development or filling or excavation provides water quality treatment that complies with the stormwater drainage section of the Infrastructure design planning scheme policy</p> <p><b>A07.2</b> Development provides erosion and sediment control standards that are in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.</p>	<p align="center">✓</p> <p align="center">✓</p>	<p>Erosion and sediment control plans will be prepared and implemented for the project in accordance with Brisbane City Council requirements.</p>	
<p><b>PO8</b> Development for filling or excavation is conducted such that adverse impacts at a sensitive use due to noise and dust are prevented or minimised.</p> <p>Note—The preparation of a noise and dust impact management plan in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome</p>	<p><b>A08.1</b> Development ensures that no dust emissions extend beyond the boundary of the site, including dust from construction vehicles entering and leaving the site.</p> <p><b>A08.2</b> Development for filling or excavation activity only occurs between the hours of 6:30am and 6:30pm Monday to Saturday, excluding public holidays.</p>	<p align="center">✓</p> <p align="center">✓</p>	<p>Erosion and sediment control plans will be prepared and implemented for the project in accordance with Brisbane City Council requirements.</p>	
<p><b>PO9</b> Development ensures that vibration generated by the filling or excavation operation does not exceed the vibration criteria in Table 9.4.3.3.D, Table 9.4.3.3.E, Table 9.4.3.3.F and Table 9.43.3.G.</p> <p>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.</p>	<p><b>A09</b> Development involving filling excavation does not cause a ground-borne vibration beyond the boundary of the site.</p>	<p align="center">✓</p>	<p>To be managed by contractor during construction.</p>	

**FILLING AND EXCAVATION CODE**  
*Performance Criteria and Acceptable Solution*

<b>PERFORMANCE CRITERIA</b>	<b>ACCEPTABLE SOLUTIONS</b>	<b>SOLUTIONS</b>	<b>COMMENTS</b>	<b>COUNCIL USE ONLY</b>
<b>PO10</b> Development ensures that heavy trucks hauling material to and from site do not affect the amenity of established areas and limits environmental nuisance impacts on adjacent land.	<b>AO10</b> 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.	✓	Construction duration will be subject to confirmation following tendering of the works. The site will be accessed via Whipbird Place.	
<b>PO11</b> Development for filling or excavation protects the environment and community health and well-being from exposure to contaminated land and contaminated material.	<b>AO11</b> 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.	✓	All earthworks will be constructed in accordance with AS3798 and Brisbane City Council requirements.	

**FILLING AND EXCAVATION CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO12</b> Development provides for;</p> <ul style="list-style-type: none"> <li>(a) Landscaping for water conservation purpose;</li> <li>(b) Water sensitive urban design measures which are employed within the landscape design to maximise stormwater use and to reduce any adverse impacts on the landscape;</li> <li>(c) Stormwater harvesting to be maximised and any adverse impacts of stormwater minimised.</li> </ul>	<p><b>AO12.1</b> Development provides landscaping which is designed using the standards in the Landscape design guidelines for water conservation planning scheme policy.</p> <p><b>AO12.2</b> Development ensures that the design and requirements for irrigation are in compliance with the standards in the Landscape design guidelines for water conservation planning scheme policy.</p> <p><b>AO12.3</b> Development provides areas of pavement turf and mulched garden beds which are drained.</p> <p>Note—This may be achieved through the provision and/ or treatment of swales, spoon drains, field gullies, sub-surface drainage and stormwater connections.</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>Stormwater management is catered for by regional basins to the north-east.</p>	



**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>ROADS</b>				
<p><b>PO1</b> Development provides roads, pavement, edging and landscaping which:</p> <ul style="list-style-type: none"> <li>(a) are designed and constructed in accordance with the road hierarchy;</li> <li>(b) provide for safe travel for pedestrians, cyclists and vehicles;</li> <li>(c) provide access to properties for all modes;</li> <li>(d) provide utilities;</li> <li>(e) provide high levels of aesthetics and amenity, improved liveability and future growth;</li> <li>(f) provide for the amelioration of noise and other pollution;</li> <li>(g) provide a high-quality streetscape;</li> <li>(h) provide a low-maintenance asset with a minimal whole of life cost</li> </ul> <p>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.</p>	<p><b>AO1</b> 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.</p>	✓	Roads will be concrete pavement.	

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>PO2</b> 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, pedestrians and cyclists, the discharge of stormwater run-off and the preservation of all-weather access; (d) allows for reasonable travel comfort.	<b>AO2</b> 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.	✓	Roads will be concrete pavement.	
<b>PO3</b> 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	<b>AO3</b> Development provides pavement edges which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	N/A	Roads will be concrete pavement with inverted crown and no kerb & channel.	

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO4</b> Development provides verges which are designed and constructed to:</p> <ul style="list-style-type: none"> <li>(a) provide safe access for pedestrians clear of obstructions and access areas for vehicles onto properties;</li> <li>(b) provide a sufficient area for public utility services;</li> <li>(c) be maintainable by the council</li> </ul>	<p><b>AO4</b> 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.</p>	<p align="center">N/A</p>	<p>Existing verges on the road frontages comply with BCC standards.</p>	
<p><b>PO5</b> Development provides a lane or laneway identified in a neighbourhood plan which:</p> <ul style="list-style-type: none"> <li>(a) allows equitable access for all modes;</li> <li>(b) is safe and secure;</li> <li>(c) has 24-hour access;</li> <li>(d) is a low-speed shared zone environment;</li> <li>(e) has a high-quality streetscape.</li> </ul>	<p><b>AO5</b> Development provides a lane or laneway identified in a neighbourhood plan which is embellished in compliance with the streetscape locality advice standards in the Infrastructure design planning scheme policy.</p>	<p align="center">N/A</p>		

**INFRASTRUCTURE DESIGN CODE**  
**Performance Criteria and Acceptable Solution**

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO6</b> Development of an existing premises provides at the frontage to the site, if not already provided, the following infrastructure to an appropriate urban standard:</p> <ul style="list-style-type: none"> <li>(a) an effective, high-quality paved roadway;</li> <li>(b) an effective, high-quality roadway kerb and channel;</li> <li>(c) safe, high-quality vehicle crossings over channels and verges;</li> <li>(d) safe, accessible, high-quality verges compatible and integrated with the surrounding environment;</li> <li>(e) safe vehicle access to the site that enables ingress and egress in a forward gear;</li> <li>(f) provision of and required alterations to public utilities;</li> <li>(g) effective drainage;</li> <li>(h) appropriate conduits to facilitate the provision of required street-lighting systems and traffic signals.</li> </ul>	<p><b>A06</b> Development of an existing premises provides at the frontage of the site, if not already existing, the following 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:</p> <ul style="list-style-type: none"> <li>(a) concrete kerb and channel;</li> <li>(b) forming and grading to verges;</li> <li>(c) crossings over channels and verges;</li> <li>(d) a constructed bikeway;</li> <li>(e) a constructed verge or reconstruction of any damaged verge;</li> <li>(f) construction of the carriageway;</li> <li>(g) payment of costs for required alterations to public utility mains, services or installations;</li> <li>(h) construction of and required alterations to public utility mains, services or installations;</li> <li>(i) drainage works;</li> <li>(j) installation of electrical conduits.</li> </ul>	<p align="center">✓</p>	<p>The road frontage has been completed so no additional work is proposed other than a new vehicle crossover.</p>	

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>PATHS</b>				
<p><b>PO7</b> Development provides both cycle and walking routes which:</p> <ul style="list-style-type: none"> <li>(a) are located, designed and constructed to their network classification (where applicable);</li> <li>(b) provide safe and attractive travel routes for pedestrians and cyclists for commuter and recreational purposes;</li> <li>(c) provide safe and comfortable access to properties for pedestrians and cyclists;</li> <li>(d) incorporate water sensitive urban design into stormwater drainage;</li> <li>(e) provide for utilities;</li> <li>(f) provide for a high level of aesthetics and amenity, improved liveability and future growth;</li> <li>(g) are a low-maintenance asset with a minimal whole of life cost.</li> <li>(h) minimise the clearing of significant native vegetation.</li> </ul> <p>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.</p>	<p><b>AO8.1</b> 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.</p>	<p align="center">N/A</p>		

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>UTILITIES</b>				
<b>PO8</b> 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.	<b>AO8.3</b> Development provides refuse and recycling collection and storage facilities in accordance with the Refuse planning scheme policy.	✓	Mobile wheelie bins are proposed to be collected from the new private streets.	
	<b>AO8.4</b> 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.	✓		
<b>PO9</b> 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.	<b>AO9.1</b> Development ensures that the reticulated water and sewerage distribution system for all services is in place before the first use is commenced.	✓	The development will be provided with a direct connection to the water and sewerage networks in accordance with SEQ Code requirements.	
	<b>AO9.2</b> Development provides the lot with reticulated water supply and sewerage to a standard acceptable to the distributor-retailer.	✓		

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PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO10</b> 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 minimum adverse environmental impacts.</p>	<p><b>AO10.1</b> Development provides public utilities and street lighting which are located and aligned to:            (a) avoid significant trees and other habitat areas;            (b) minimise earthworks;            (c) 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 revegetated on completion of the work.             Note- Guidance on the restoration of habitat is included in the Biodiversity areas planning scheme policy.</p> <p><b>AO10.2</b> Development provides compatible public utility services and street-lighting services which are co-located in common trenching for underground services.</p> <p><b>AO10.3</b> 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.</p>	<p align="center">✓</p> <p align="center">✓</p> <p align="center">✓</p>		

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

<b>PERFORMANCE CRITERIA</b>	<b>ACCEPTABLE SOLUTIONS</b>	<b>SOLUTIONS</b>	<b>COMMENTS</b>	<b>COUNCIL USE ONLY</b>
<b>PO11</b> Development ensures that land used for urban purposes is serviced adequately with telecommunications and energy supply.	<b>AO11</b> Development provides land with the following services to the standards of the approved supplier: (a) electricity; (b) telecommunications services; (c) gas service where practicable.	✓	Further details to be provided at the operational works phase if required.	
<b>PO12</b> Development ensures that major public projects promote the provision of affordable, high bandwidth telecommunications services throughout the city.	<b>AO12</b> 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 the area.  Editor's note—An accurate, digital 'as built' three-dimension allocation plan is to be supplied for all infrastructure provided in a road.	N/A		



**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>PUBLIC ART AND SIGNAGE</b>				
<p><b>PO13</b> Development provides public art identified in a neighbourhood plan or park concept plan which:</p> <ul style="list-style-type: none"> <li>(a) is provided commensurate with the status and scale of the proposed development;</li> <li>(b) is sited and designed:               <ul style="list-style-type: none"> <li>(i) as an integrated part of the project design;</li> <li>(ii) as conceptually relevant to the context of the location;</li> <li>(iii) to reflect and respond to the cultural values of the community;</li> <li>(iv) to promote local character in a planned and informed manner.</li> </ul> </li> </ul>	<p><b>AO13</b> 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.</p>	N/A		

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>PO14</b> Development provides signage of buildings and spaces which promote legibility to help users find their way.	<b>AO14</b> 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		
<b>PUBLIC FACILITIES</b>				
<b>PO15</b> Development provides community facilities which form part of the development that are functional, safe, low maintenance, and fit for purpose.	<b>AO15</b> Development that provides community facilities which form part of the development are designed in compliance with the community facilities standards in the Infrastructure design planning scheme policy.	N/A		
<b>PO16</b> 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.	<b>AO16</b> Development that provides public toilets are designed and constructed in compliance with the public toilets standards in the Infrastructure design planning scheme policy.	N/A		

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>STRUCTURES</b>				
<p><b>PO17</b> Development provides bridges, tunnels, elevated structures and water access structures that are designed and constructed using proven methods, materials and technology to provide for:</p> <ul style="list-style-type: none"> <li>(a) safe movement of intended users;</li> <li>(b) an attractive appearance appropriate to the general surroundings and any adjacent structures;</li> <li>(c) functionality and easy maintenance;</li> <li>(d) minimal whole of life cost;</li> <li>(e) longevity;</li> <li>(f) current and future services.</li> </ul> <p>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.</p>	<p><b>AO17</b> Development that provides bridges, tunnels, elevated structures and water access structures are designed and constructed in compliance with the standards in the Infrastructure design planning scheme policy.</p>	N/A		

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO18</b> Development provides culverts which are designed and constructed using proven methods, materials and technology to provide for:</p> <ul style="list-style-type: none"> <li>(a) safety;</li> <li>(b) an attractive appearance appropriate to the general surroundings;</li> <li>(c) functionality and easy maintenance;</li> <li>(d) minimal whole of life cost;</li> <li>(e) longevity;</li> <li>(f) future widening;</li> <li>(g) current and future services;</li> <li>(h) minimal adverse impacts, such as increase in water levels or flow velocities, and significant change of flood patterns.</li> </ul> <p>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.</p>	<p><b>AO18</b> Development that provides culverts are designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.</p>	<p>N/A</p>		

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO19</b> Development provides batters, retaining walls, and sea and river walls which are designed and constructed using proven methods, materials and technology to provide for:</p> <ul style="list-style-type: none"> <li>(a) safety;</li> <li>(b) an attractive appearance appropriate to the surrounding area;</li> <li>(c) easy maintenance;</li> <li>(d) minimal whole of life cost;</li> <li>(e) longevity;</li> <li>(f) current and future services.</li> </ul> <p>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.</p>	<p><b>AO19</b> Development that provides batters, retaining walls and sea and river walls are designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.</p>	<p>✓</p>	<p>All operational works are to be in accordance with the infrastructure design planning scheme policy unless otherwise approved by Council.</p>	

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>IF INVOLVING DEVELOPMENT WITH A GROSS AREA GREATER THAN 1,000m<sup>2</sup></b>				
<p><b>PO20</b> 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 term and long-term impacts.</p> <p>Note—The preparation of a construction management plan can assist in demonstrating achievement of this performance outcome.</p> <p>Note—The Transport, access, parking and servicing planning scheme policy provides advice on the management of vehicle parking and deliveries during construction</p>	<p><b>AO20</b> Development ensures that during construction:</p> <ul style="list-style-type: none"> <li>(a) the use of adjoining and surrounding parks and public spaces, such as malls and outdoor dining, is not compromised;</li> <li>(b) adjoining and surrounding landscaping is protected from damage;</li> <li>(c) safe, legible, efficient and sufficient pedestrian, cyclist and vehicular accessibility and connectivity to the wider network is maintained.</li> </ul>	<p>✓</p>	<p>To be managed by the contractor during construction.</p>	

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO21</b> 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.</p> <p>Note—The preparation of a noise and dust impact management plan in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p><b>AO21.1</b> Development ensures that demolition and construction:</p> <ul style="list-style-type: none"> <li>(a) only occurs between 6:30am and 6:30pm Monday to Saturday excluding public holidays;</li> <li>(b) do not occur over periods greater than 6 months.</li> </ul> <p><b>AO21.2</b> Development including construction and demolition does not release dust emissions beyond the boundary of the site.</p> <p><b>AO21.3</b> Development construction and demolition does not involve asbestos-containing materials.</p>	<p>✓</p>	<p>To be managed by the contractor during construction.</p>	

**INFRASTRUCTURE DESIGN CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO22</b> Development ensures that:</p> <ul style="list-style-type: none"> <li>(a) construction and demolition do not result in damage to surrounding property as a result of vibration;</li> <li>(b) vibration levels achieve the vibration criteria in Table 9.4.4.3B and Table 9.4.4.3C.</li> </ul> <p>Note— The preparation of a vibration impact assessment report in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p><b>AO22</b> Development ensures that the nature and scale of construction and demolition does not generate noticeable levels of vibration.</p>	<p align="center">✓</p>	<p>To be managed by the contractor during construction.</p>	



**OPERATIONAL WORKS CODE**  
*Performance Criteria and Acceptable Solution*

<b>PERFORMANCE CRITERIA</b>	<b>ACCEPTABLE SOLUTIONS</b>	<b>SOLUTIONS</b>	<b>COMMENTS</b>	<b>COUNCIL USE ONLY</b>
<p><b>PO1</b> Development for operational work:</p> <p>(a) is designed and constructed to the standards in the Compensatory earthworks planning scheme policy, Infrastructure design planning scheme policy and Transport, access, parking and servicing planning scheme policy;</p> <p>(b) is integrated and consistent with the future development envisaged on the site by the planning scheme.</p>	<p><b>A01</b> Development for operational work is undertaken in accordance with the standards specified in the requirements for another relevant permit as identified in the decision notice for a development permit.</p>	✓	All operational works are to be in accordance with the Infrastructure Design Planning Scheme Policy unless otherwise approved by Council.	
<p><b>PO2</b> Development for operational work implements measures to prevent or minimise adverse impacts, including sleep disturbance, at a sensitive use due to noise and dust.</p> <p>Note—The preparation of a noise and dust impact management plan in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p><b>A02.1</b> Development for operational work only occurs between 6:30am and 6:30pm Monday to Saturday, excluding public holidays.</p> <p><b>A02.2</b> Development for operational work is undertaken in accordance with the standards specified in the requirements for another relevant permit as identified in the decision notice for a development permit.</p>	 ✓  ✓	All operational works are to be in accordance with the Infrastructure Design Planning Scheme Policy unless otherwise approved by Council.	

**STORMWATER CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>SECTION A</b> – If for a material change of use, reconfiguring a lot, operational work or building work				
<b>Note-</b> Compliance with the performance outcomes and acceptable outcomes in this section should be demonstrated by the submission of a site-based stormwater management plan.				
<p><b>PO1</b> Development provides a stormwater management system which achieves the integrated management of stormwater to:</p> <ul style="list-style-type: none"> <li>(a) minimise flooding;</li> <li>(b) protect environmental values of receiving waters;</li> <li>(c) maximise the use of water sensitive urban design;</li> <li>(d) minimise safety risk to all persons;</li> <li>(e) maximise the use of natural waterway corridors and natural channel design principles.</li> </ul> <p>Note—The stormwater management system is designed in compliance with the Infrastructure design planning scheme policy.</p>	<p><b>AO1</b> Development provides a stormwater management system designed in compliance with the Infrastructure design planning scheme policy.</p>	<p>✓</p>	<p>The approved Stormwater Management Plan for the Oxley Priority Development Area accounted for development runoff from the subject site.</p>	







**STORMWATER CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO8</b> Development designs stormwater channels, creek modification works and the drainage network to protect and enhance the environmental values of the waterway corridor or drainage path.</p>	<p><b>AO8.5</b> Development ensures natural waterway corridors and drainage paths are retained.</p> <p><b>AO8.6</b> Development incorporates the use of natural channel design principles in constructed components to maximise environmental benefits and minimise scour.            Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.</p> <p><b>AO8.7</b> Development provides stormwater outlets into waterways, creeks, wetlands and overland flow paths with energy dissipation to minimise scour in compliance with Infrastructure design code and the standards in the Infrastructure design planning scheme policy.</p> <p><b>AO8.8</b> Development ensures that the design of modifications to the existing design of new stormwater channels, creeks and major drains is in compliance with the Infrastructure design code and the standards in the Infrastructure design planning scheme policy.</p>	<p align="center">N/A</p>		
<p><b>PO9</b> Development is designed to manage run-off and peak flows by minimising large areas of impervious material and maximising opportunities for capture and re-use.</p>	<p><b>AO9</b> No acceptable outcome is prescribed.</p>	<p align="center">N/A</p>	<p>The approved Stormwater Management Plan for the Oxley Priority Development Area accounted for development runoff from the subject site.</p>	

**STORMWATER CODE**  
**Performance Criteria and Acceptable Solution**

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO10</b> Development ensures that there is sufficient site area to accommodate an effective stormwater management system.</p> <p>Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high risk development only.</p>	<p><b>AO10</b> No acceptable outcome is prescribed.</p>	✓		
<p><b>PO11</b> Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to the:</p> <p>(a) existing capacity of stormwater infrastructure within and external to the site, and any planned stormwater infrastructure upgrades;</p> <p>(b) safe management of stormwater discharge from existing and future upslope development;</p> <p>(c) implication for adjacent and down-slope development.</p>	<p><b>AO11.1</b> Development with up-slope external catchment areas provides a drainage connection sized for ultimate catchment conditions that is directed to a lawful point of discharge.</p> <p><b>AO11.2</b> Development ensures that existing stormwater infrastructure that is undersized is upgraded in compliance with the Priority infrastructure plan and the standards in the Infrastructure design planning scheme policy.</p>	✓	<p>The development is proposed to have new underground stormwater pipes within the new internal private roads draining generally from south to north, that will directly connect into the existing stormwater drainage network at the north-eastern corner of the site. This approach is consistent with the previously approved Stormwater Management Plan for the site under reference DEV2023/1383.</p>	
<p><b>PO12</b> Development provides proposed stormwater infrastructure which:</p> <p>(a) remains fit for purpose for the life of the development and maintains full functionality in the design flood event;</p> <p>(b) can be safely accessed and maintained in a cost effective way;</p> <p>(c) ensures no structural damage to existing stormwater infrastructure.</p>	<p><b>AO12.1</b> The stormwater management system is designed in compliance with the Infrastructure design code and Infrastructure design planning scheme policy.</p> <p><b>AO12.2</b> Development provides a clear area with a minimum of 2m radius from the centre of an existing manhole cover and with a minimum height clearance of 2.5m.</p>	<p>✓</p> <p>N/A</p>		

**STORMWATER CODE**  
**Performance Criteria and Acceptable Solution**

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO13</b> Development ensures that all reasonable and practicable measures are taken to manage the impacts of erosion, turbidity and sedimentation, both within and external to the development site from construction activities, including vegetation clearing, earthworks, civil construction, installation of services, rehabilitation, revegetation and landscaping to protect:</p> <ul style="list-style-type: none"> <li>(a) the environmental values and water quality objectives of waters;</li> <li>(b) waterway hydrology;</li> <li>(c) the maintenance and serviceability of stormwater infrastructure.</li> </ul> <p>Note—The Infrastructure design code and Infrastructure design planning scheme policy outlines the appropriate measures to be taken into account to achieve the performance outcome.</p>	<p><b>AO13</b> No acceptable outcome is prescribed.</p>	<p align="center">✓</p>	<p>Erosion and sediment control plans will be prepared and implemented for the project in accordance with Brisbane City Council requirements.</p>	
<p><b>PO14</b> Development ensures that:</p> <ul style="list-style-type: none"> <li>(a) unnecessary disturbance to soil, waterways or drainage channels is avoided;</li> <li>(b) all soil surfaces remain effectively stabilised against erosion in the short and long terms.</li> </ul>	<p><b>AO14</b> No acceptable outcome is prescribed.</p>	<p align="center">✓</p>	<p>Erosion and sediment control plans will be prepared and implemented for the project in accordance with Brisbane City Council requirements.</p>	



**STORMWATER CODE**  
**Performance Criteria and Acceptable Solution**

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<b>PO15</b> Development does not increase: (a) the concentration of total suspended solids or other contaminants in stormwater flows during site construction; (b) run-off which causes erosion either on-site or off-site.	<b>AO15</b> No acceptable outcome is prescribed.	✓	Erosion and sediment control plans will be prepared and implemented for the project in accordance with Brisbane City Council requirements.	
<b>SECTION B</b> – Additional criteria which applies to high risk development, being: (a) a material change of use for an urban purpose which involves greater than 2,500m <sup>2</sup> of land that: (i) will result in an impervious area greater than 25% of the net developable area; or (ii) will result in 6 or more dwellings. (b) reconfiguring a lot for an urban purpose that involves greater than 2,500m <sup>2</sup> of land and will result in 6 or more lots; (c) operational work for an urban purpose which involves disturbing greater than 2,500m <sup>2</sup> of land.				
<b>WATER QUALITY</b>				
<b>PO16</b> Development ensures that the entry and transport of contaminants into stormwater is avoided or minimised.  Note—Prescribed water contaminants are defined in the Environmental Protection Act 1994.	<b>AO16</b> Development provides a stormwater management system which is designed in compliance with the Infrastructure design code and the standards in the Infrastructure design planning scheme policy.  Note—The preparation of a site based stormwater management plan can assist in demonstrating compliance with this acceptable outcome.	N/A	The approved Stormwater Management Plan for the Oxley Priority Development Area accounted for development runoff from the subject site.	

**STORMWATER CODE**  
*Performance Criteria and Acceptable Solution*

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	SOLUTIONS	COMMENTS	COUNCIL USE ONLY
<p><b>PO17</b> Development ensures that:</p> <p>(a) the discharge of wastewater or contaminated stormwater to a waterway or external to the site is avoided; or</p> <p>(b) if the discharge cannot practicably be avoided, the development minimises wastewater discharge through re-use, recycling, recovery and treatment.</p> <p>Note—The preparation of a wastewater management plan can assist in demonstrating achievement of this performance outcome.</p> <p>Editor's note—This code does not deal in the sewerage which is the subject of the Wastewater code.</p>	<p><b>AO17</b> No acceptable outcome is prescribed.</p>	<p>N/A</p>	<p>The approved Stormwater Management Plan for the Oxley Priority Development Area accounted for development runoff from the subject site.</p>	

# Appendix E - Erosion Hazard Assessment Form



# Erosion Hazard Assessment - June 2014

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 site:

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 <http://www.waterbydesign.com.au/factsheets>*

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

10 Honeyeater Circuit, Oxley

Postcode 4075

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*

Craig Hurley - Hurley Consulting Engineers

Certifier's signature

Date

29 / 07 / 2024

**Table 1: Low Risk Test**

		<b>Yes</b>	<b>No</b>
<b>1.1</b>	is the area of land disturbance > 1000 m <sup>2</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>1.2</b>	does any land disturbance occur in a BCC mapped waterway corridor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>1.3</b>	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 5%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>1.4</b>	does any land disturbance occur below 5 m AHD	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>1.5</b>	does development involve endorsement of a staging plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>1.6</b>	is there an upstream catchment passing through the site > 1 hectare	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Have you answered 'yes' to any of the questions in Table 1?

<b>Yes</b>	<b>No</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

If 'No' then site is **low risk** with respect to erosion and sediment control

If 'Yes' then proceed to Table 2

**Table 2: Medium Risk Test**

		<b>Yes</b>	<b>No</b>
<b>2.1</b>	is the area of land disturbance > 1 hectare	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If 'No' then site is **medium risk** with respect to erosion and sediment control

If 'Yes' then proceed to Table 3

**Table 3: High Risk Test**

<b>3.1</b>	is there an upstream catchment passing through the site > 1 hectare	<input type="checkbox"/>	<input type="checkbox"/>
<b>3.2</b>	does any land disturbance occurs in a BCC mapped waterway corridor	<input type="checkbox"/>	<input type="checkbox"/>
<b>3.3</b>	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 15%	<input type="checkbox"/>	<input type="checkbox"/>

Have you answered 'yes' to any of the questions in Table 3?

<b>Yes</b>	<b>No</b>
<input type="checkbox"/>	<input type="checkbox"/>

If 'No' then site is **medium risk** with respect to erosion and sediment control

If 'Yes' then site is **high risk** with respect to erosion and sediment control