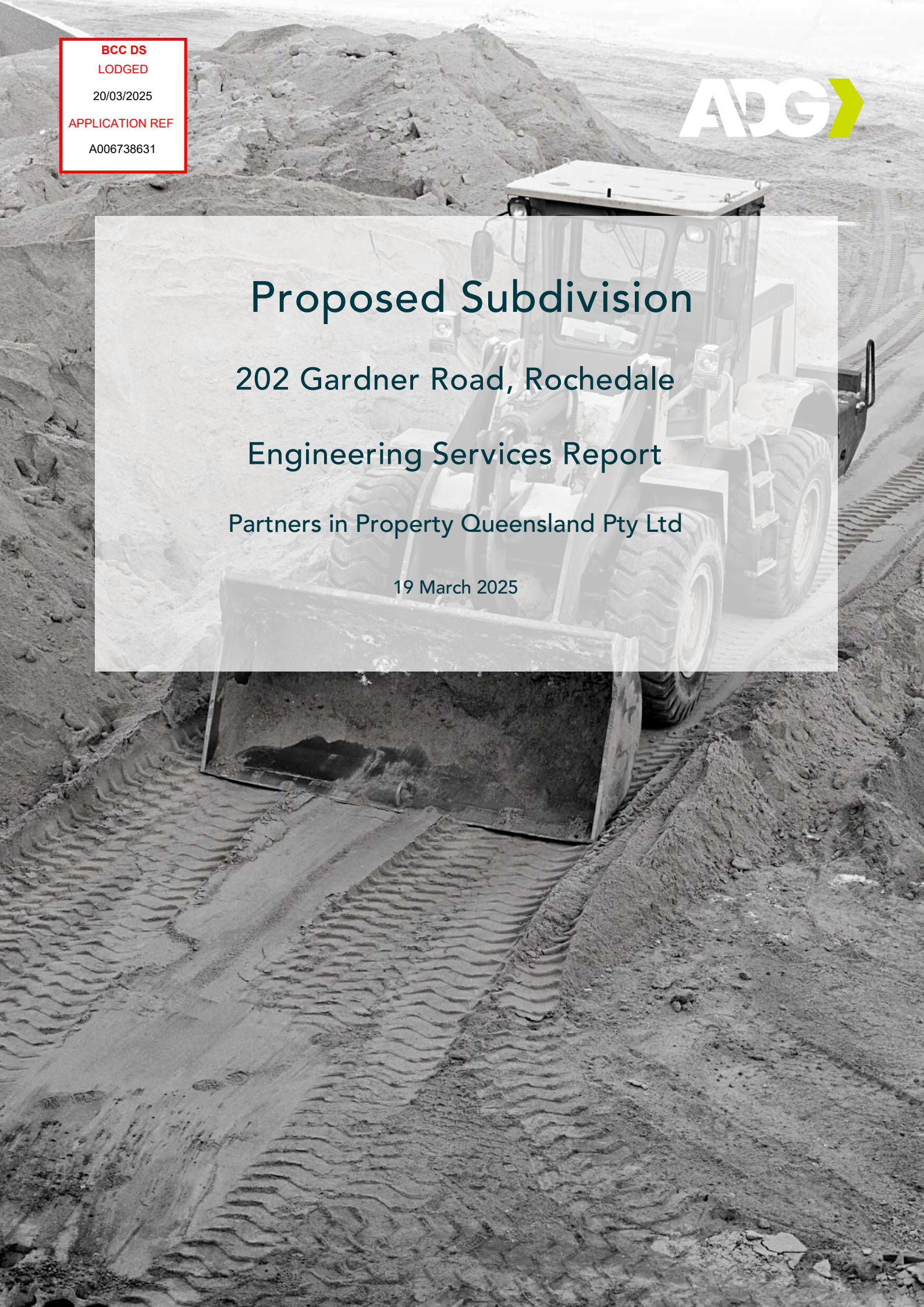


Proposed Subdivision

202 Gardner Road, Rochedale

Engineering Services Report

Partners in Property Queensland Pty Ltd

19 March 2025

DOCUMENT VERIFICATION

Job Title **Proposed Subdivision**

Job Number 27292

Document Title Engineering Services Report

DOCUMENT CONTROL

Date	Document	Revision No.	Author	Reviewer
11.09.24	Engineering Services Report	00	WN	MRB/ML
19.03.25	Engineering Services Report	01	WN	MRB/ML

APPROVAL FOR ISSUE

Authority	Name	Signature	Date
Author	William Nuthun		19.03.25
Reviewer	Michael Lepelaar		19.03.25

CONTENTS

FIGURES

TABLES

APPENDIX

1 INTRODUCTION

1.1 General

ADG Engineers (Aust.) Pty Ltd has been engaged by Partners in Property Queensland Pty Ltd to prepare an Engineering Services Report (ESR) suitable for submission to Brisbane City Council (BCC) as additional information in support of a Reconfiguration of Lot (ROL) Development Application for a proposed englobo subdivision located at 202 Gardner Road, Rochedale QLD 4123.

This ESR has been prepared to provide advice relating to a further development application to create one (1) balance lot and a new road reserve in the south-western corner of the site as shown in the Plan of Reconfiguration in Appendix A.

The proposed road will provide connectivity between the ultimate intersection in Prebble Street to the west and the proposed road within 198 Gardner Road (BCC Ref: A005747839).

The works described herein are subject to further approvals and cover works required to service the proposed development with regard to earthworks, roadworks, stormwater drainage, sewerage and water supply, electrical and communications.

The required infrastructure will be subject to the conditions attached to the Development Approval to be provided by Brisbane City Council and any nominated referral agencies.

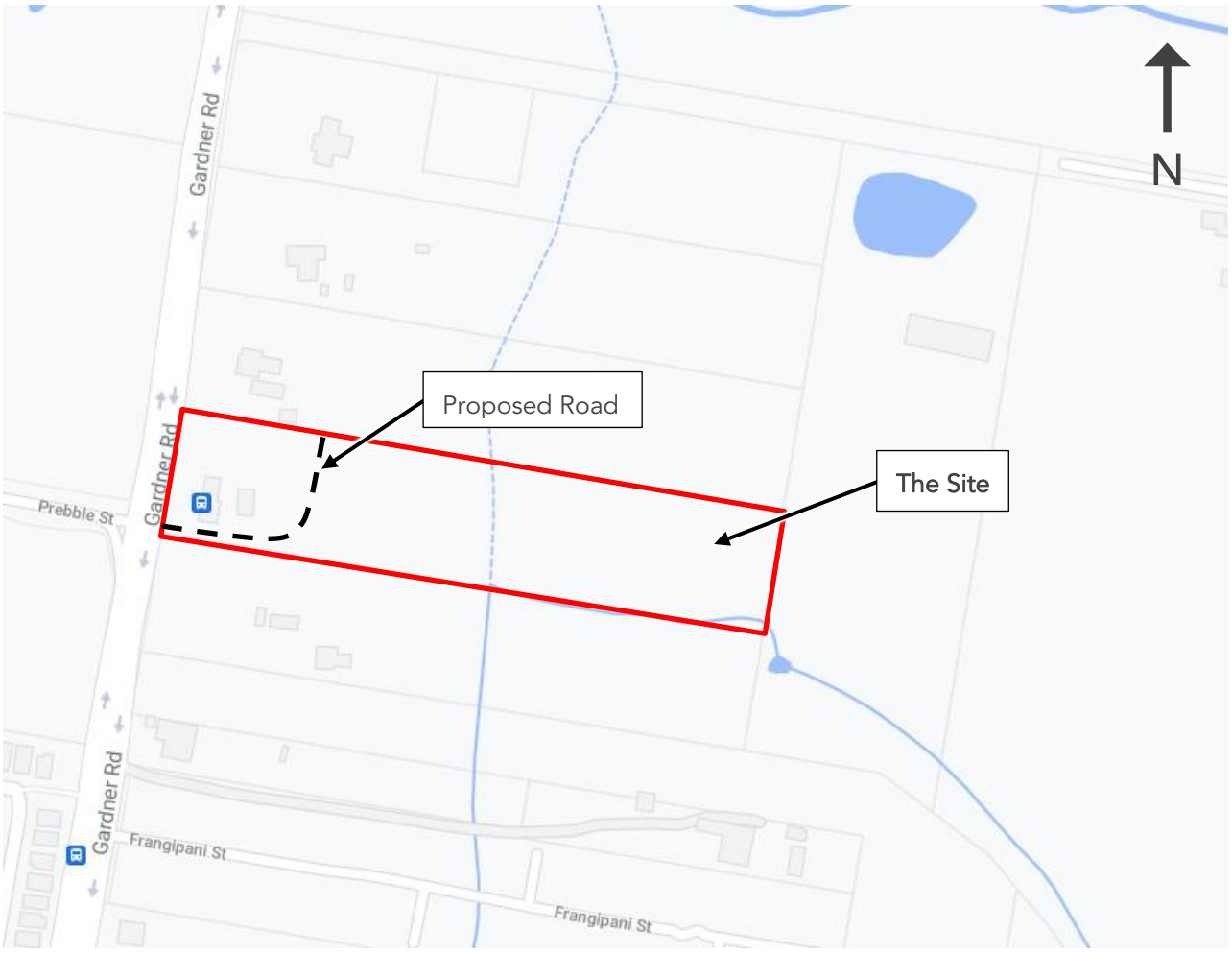


Figure 1 – Locality Map (As accessed from Google Maps 10.11.2023)

1.2 Background Information

This report was compiled using information from the following sources:

- Plan of Reconfiguration by Wolter Consulting Group (refer to Appendix A);
- Site Survey by Wolter Consulting Group (refer to Appendix B);
- ADG preliminary drawings (refer to Appendix C);
- BCC eBimap2 records (refer to Appendix D);
- BCC Overlay Mapping (refer to Appendix E);
- 'Before You Dig Australia' (BYDA) search results (refer to Appendix F); and
- Aerial Imagery.

1.1 Property Details

The existing land titles that make up the site are given in Table 1. Refer to the Site Plan in Appendix A for further details regarding the proposed development.

Table 1 – Property Detail

Title Details	Lot 4 on RP114765
Street Address	202 Gardner Road, Rochedale QLD 4123
Site Area	3.676 ha

2 THE SITE

2.1 Location

The site is located at 202 Gardner Road, Rochedale QLD. The site is fronted by Gardner Road to the west and is surrounded by lots zoned for 'Emerging Community' by BCC Zone Overlay Map to the remaining boundaries. The land titles that make up the site are given in Table 1. Figure 1 displays the site locality.

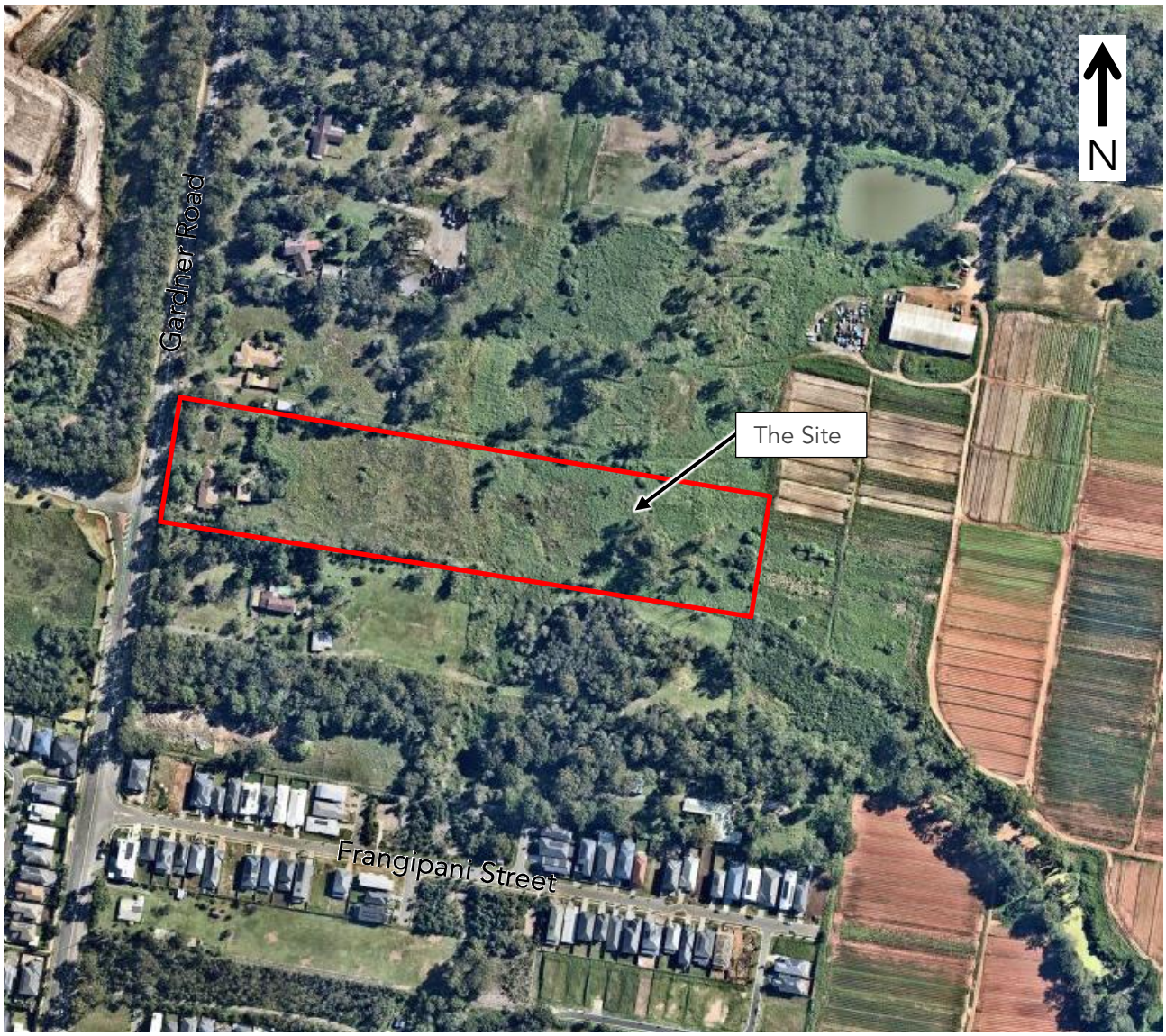


Figure 2 – Pre-developed Site Features (Nearmap Image dated 06.06.2022)

3 PLAN OF DEVELOPMENT

3.1 The Proposal

The proposed development as described in Appendix A proposes to create one (1) balance lot and a new road reserve. The proposed road will provide connectivity between the ultimate intersection in Prebble Street to the west and the proposed road within 198 Gardner Road (BCC Ref: A005747839). Figure 3 illustrates the proposed development.

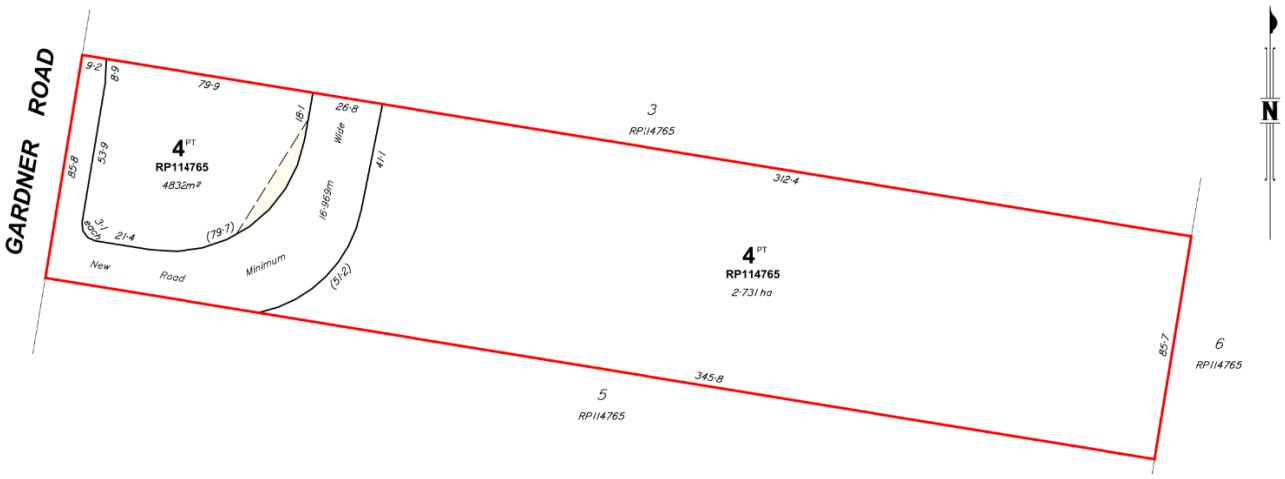


Figure 3 – Plan of Reconfiguration by Wolter Consulting Group

4 CHARACTERISTICS OF THE LAND & SURROUNDING AREA

4.1 Description

The pre-developed site comprises of a rural residential dwelling, along with sheds and associated driveway and hardstand areas. The site is fronted by Gardner Road to the west and is surrounded by lots zoned for 'Emerging Community'.

4.2 Dimensions

The site has a total area of 3.676 hectares with approximately 85.8m of road frontage to Gardner Road. The site has a rectangular shape with a depth of approximately 428m from Gardner Road. Refer to the site survey in Appendix B for further information on the existing site dimensions.

4.3 Topography

Two (2) catchments have been identified across the existing site. Both catchments generally fall towards an existing waterway corridor that flows south to north through the centre of the site. The high point in the south-western corner of the site is 50.22m AHD, with a low point of 32.87m AHD along the northern boundary of the site. The site falls at varying grades generally between 5% and 10%. Refer to the site survey in Appendix B for further information.

4.4 Features

The pre-developed site is mostly pervious with exception to the existing dwelling, sheds and associated hardstand areas. The balance of the pre-developed site can be characterised by good vegetation coverage with several trees located across the site. Figure 2 demonstrates the pre-developed site conditions discussed above.

4.5 Surrounding Land Use

The site is surrounded by existing allotments that, according to BCC's zoning overlay map, are zoned as 'Emerging Community'.

4.6 Accessibility

Current access to the subject site is gained via a vehicular crossover from Gardner Road to the west. It is proposed to construct a new road in the south-western corner of the site. The new road will provide connectivity between the ultimate intersection in Prebble Street to the west and the proposed road within 198 Gardner Road which will be part of a separate application.

A specialist traffic report is to be completed by TTM in support of this development, which will include additional information regarding the accessibility of the site. Refer to the Plan of Reconfiguration in Appendix A for further information regarding the proposed road system.

4.7 Easements

No easements have been identified across the existing site.

4.8 External Catchments

The site is impacted by external catchments to the east and south of the site, with flow crossing of the site boundary via sheet flow.

5 EARTHWORKS

5.1 Proposed Earthworks

Earthworks are proposed to facilitate the construction of the new road. No further earthworks are required to facilitate the creation of the proposed balance lot.

The fill material and placement procedure will comply with Council's specification for earthworks procedures and the necessary permits from Council shall be obtained prior to earthworks commencing. In all situations where earthworks are proposed, sediment and erosion control measures will be implemented in accordance with the following:

- I.E. Australia "Sediment and Erosion Control Guidelines";
- International Erosion Control Association, Australasia: Erosion and Sediment Control Field Guide for Builders; and
- BCC Infrastructure Planning Scheme.

Refer to the preliminary bulk earthworks layout plan and sections prepared by ADG in Appendix C for further information.

5.2 Slope Stability

BCC Landslide Overlay Maps indicate the site is *not* within an area subject to the Landslide Overlay Code.

5.3 Erosion and Sediment Control

The erosion risk has been assessed against the BCC Erosion hazard guidelines and found to be 'medium risk'. The BCC Erosion Hazard Assessment has advised that an RPEQ or CPESC must prepare a sediment and erosion control plan for the lodgement of operational works and the following construction phase of the development. Detailed Erosion and Sediment Control Plans will be prepared at the detailed design phase.

Refer to the BCC Erosion Hazard Assessment attached in Appendix H.

5.4 Acid Sulfate Soils

Acid Sulfate Soils are soils which contain iron sulphides generally found in low-lying coastal areas below 20m AHD. The site survey has identified that levels across the site vary from a low point of 32.87m AHD to a high point of 50.22m AHD. A review of the BCC Potential and Actual Acid Sulfate Soils Overlay Map has confirmed that the subject site is *not* located in areas subject to the Potential and Actual Acid Sulfate Soils Overlay Code.

6 ROADWORKS

6.1 Existing Infrastructure

The site has a frontage of approximately 85.8m to Gardner Road.

Gardner road consists of a single traffic lane in each direction with centre line marking. The pavement cross-section consists of a two-way crossfall and a crown in the centre such that stormwater flows away from the cress towards open swales on both side of the road. The posted speed limit is 70km/hr.

Refer to the site survey in Appendix B for further information regarding the existing infrastructure.

6.2 Proposed Infrastructure

As part of the proposed development a new district road is proposed within the site. The proposed road will consist of a minimum 16.969m wide road reserve and provide connectivity between the ultimate intersection in Prebble Street to the west and the proposed road within 198 Gardner Road (BCC Ref: A005747839). The proposed road pavement and overall road reserve widths are in accordance with the minimum requirements for a district road.

External roadworks are proposed along the development side of Gardner Road to facilitate the proposed upgrade works at the Pebble Street and Gardner Road intersection. As shown on DA06 in Appendix C, an approximately maximum 9m wide pavement is proposed along the development side of Gardner Road. The external roadworks will also facilitate the ultimate connection between Prebble Street and the proposed road within the site.

For more information on the proposed road infrastructure refer to the ADG preliminary roadworks plans located within Appendix C.

7 WATER SUPPLY

7.1 Existing Infrastructure

The site survey, Before You Dig Australia (BYDA) and BCC eBIMAP2 records has identified the following water infrastructure within the vicinity of the site:

- An existing DN450 Ductile Iron (DI) trunk water main (Asset ID: TS413627) runs along the non-development side verge of Gardner Road;
- An existing DN180 Polyethylene (PE) reticulation water main (Asset ID: RS274605) runs along the development side verge of Gardner Road;
- A water hydrant (Asset ID: RHY159614) located over the abovementioned DN180 PE water main near the western boundary of the site;
- Two (2) 355 diameter PE water mains (Asset ID's: RS449974 & RS423836) run south from Prebble Street, along the non-development side verge of Gardner Road; and
- The site is currently serviced by a 25mm diameter property connection (Asset ID: WS454466) to the abovementioned DN180 PE water main.

Refer to the site survey in Appendix B and BCC eBIMAP2 information in Appendix D for further information regarding the existing water infrastructure.

7.2 Proposed Infrastructure

To provide a connection point for the new lot, it is proposed to construct a new water main along the proposed road that extends from the existing DN180 PE water main in Gardner Road described in Section 7.1. The proposed main will connect to the southern end of the water main in 198 Gardner Road proposed as part of a separate application (BCC Ref: A005747839).

A conceptual layout of the proposed water network prepared by ADG can be found on DA05 in Appendix C. Detailed water reticulation drawings will be provided to Urban Utilities as part of a future operational works application once the development application has been approved by Council.

The proposed water reticulation within the development will comply with the following documents;

- BCC Planning Scheme;
- UU Water Supply & Sewerage Standards;
- SEQ Water Supply and Sewerage Design & Construction Code; and
- AS3500.1 Plumbing and Drainage – Water Services.

8 SEWERAGE RETICULATION

8.1 Existing Infrastructure

The site survey, Before You Dig Australia (BYDA) and BCC eBIMAP2 records has identified the following sewer infrastructure within the vicinity of the site:

- An existing DN250 Polyethylene (PE) sewer gravity main (Asset ID's: LS978172 - LS978178) flows north through the centre of the site and other adjoining lots to the north of the site.

Refer to the site survey in Appendix B and the BCC eBimap2 records in Appendix D for further information regarding the existing sewer infrastructure.

8.2 Proposed Infrastructure

To provide a connection point for the new lot, it is proposed to construct a sewer across the proposed road that connects to the southern end of the sewer in 198 Gardner Road proposed as part of a separate application (BCC Ref: A005747839). Alternatively, if there is to be no connection to the sewer in 198 Gardner Road, it is proposed to connect to the existing DN250 sewer main within the site described in Section 8.1.

A conceptual layout of the proposed sewer network prepared by ADG can be found in DA04 in Appendix C. Detailed sewer reticulation drawings will be provided to Urban Utilities as part of a future operational works application once the development application has been approved by Council.

The sewerage works proposed within the development will comply with the following documents:

- BCC Planning Scheme;
- UU Water Supply & Sewerage Standards;
- SEQ Water Supply and Sewerage Design & Construction Code; and
- AS3500.2 Plumbing and Drainage – Sanitary plumbing and drainage.

9 STORMWATER DRAINAGE

9.1 Existing Drainage

BCC overlay mapping from eBIMAP2 records in addition to the site survey have identified the following stormwater infrastructure within the vicinity of the site:

- An overland flow path passes through the site from south to the north; and
- Open swales on both side of Gardner Road;

Refer to the site survey in Appendix B and eBIMAP2 records Appendix D for further information regarding the existing stormwater infrastructure.

9.2 Proposed Drainage

The drainage proposed within the development will comply with the following documents:

- BCC Stormwater Drainage Guidelines;
- Queensland Urban Drainage Manual (QUDM); and
- AS 3500.3 Plumbing and Drainage – Stormwater Drainage.

For the purposes of the ROL creating the englobo lot, a stormwater management plan has not been prepared. A stormwater management plan for each of the further development applications on the englobo lot will be prepared as part of those applications. Given the proximity to overland flow path, detention for the future uses on the englobo lot and for the road catchment of the new road proposed through 202 Gardner Rd is not required. Stormwater quality management for the new road is proposed through the implementation of WSUD tree pits in accordance with BCC Drg BSD-8331-8334. Refer further details shown on ADG Preliminary Roadwork Layout Plan DA02 located within Appendix C. Further stormwater quality management measures will be addressed as part of the future development applications on the englobo lot.

9.3 Flooding Considerations

The site is located outside of Council's Overland Flow Flood Planning Area. Refer to Appendix E for the BCC Flood Overlay map Creek/waterway overlay map.

10 ELECTRICAL SUPPLY

The BYDA search has identified that there are currently minimal underground electrical cables within close proximity to the site along Gardner Road. On review of aerial imagery, it is evident that the site is currently serviced via overhead electrical cables that run along the development side verge of Gardner Road.

The Electrical Consultant will determine the extent of the network and connection works that will be required to facilitate the electrical reticulation for the proposed development at the detailed design stage.

Refer to the BYDA Information in Appendix F for further details on the existing electrical reticulation.

11 COMMUNICATIONS

According to BYDA information, the following communication services are in the vicinity to the site:

- A 100mm Polyvinyl Chloride (PVC) conduit owned by Telstra runs along the development side verge of Gardner Road to a 5-pit located near the western boundary of the site;
- A 50mm PVC conduit owned by Telstra containing assorted cables runs along the development side verge of Gardner Road between two (2) 5-pits located near the western boundary of the site;
- A small section of TPG PIPE network duct and an adjoining PIPE network pit located within the opposite side verge of Gardner Road;
- An underground Uecomm conduit and Optus cable runs along the non-development side of Gardner Road; and
- A 10mm PVC Conduit owned by NBN runs across Gardner Road and currently services the site.

The telecommunications consultant will negotiate with the relevant carriers regarding the requirements of the proposed development telecommunications connection and the extent of any upgrading and possible relocation works to the system if necessary.

Refer to the BYDA Information in Appendix F for further details on the existing communication infrastructure.

12 GAS

According to BYDA information there is the following gas infrastructure in close proximity of the site:

- An existing 110mm Polyethylene (PE) high pressure gas reticulation main within the development side verge of Gardner Road to the west of the site that turns into Prebble Street.

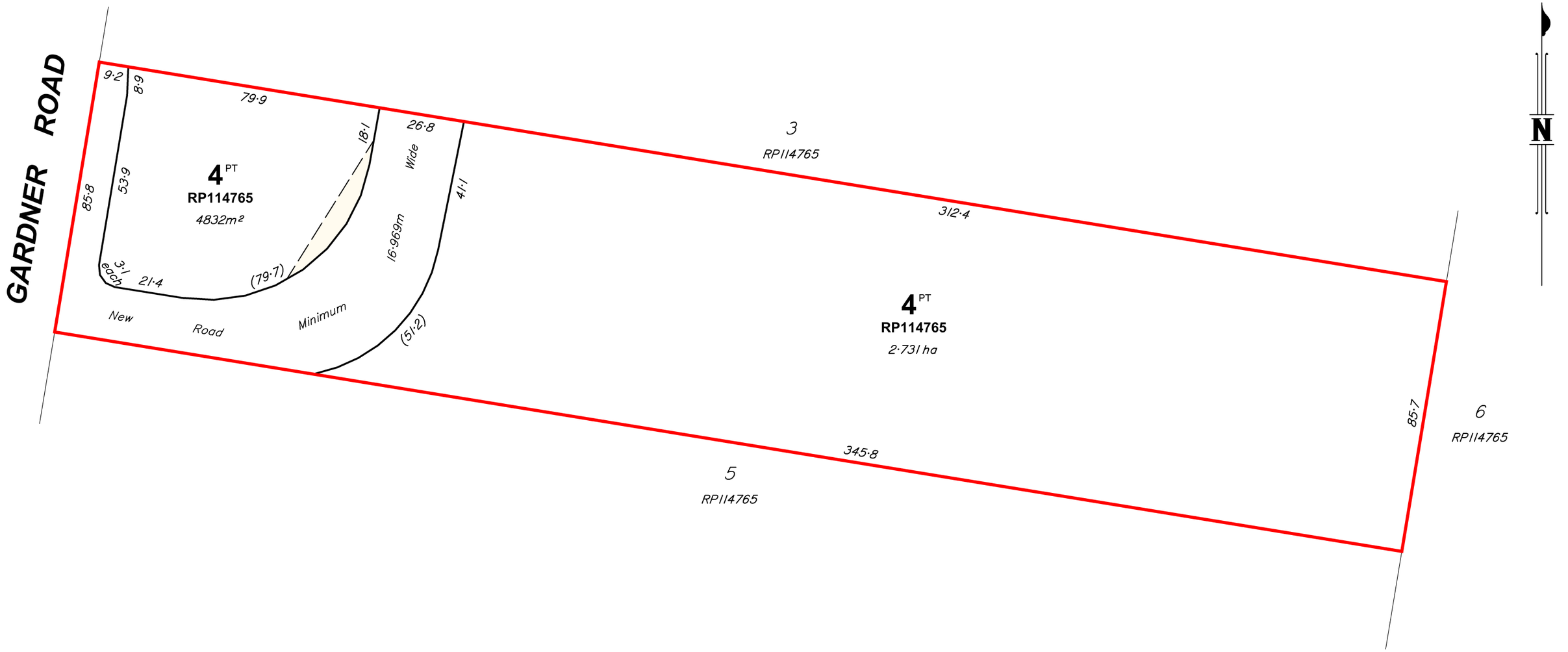
For further information regarding the gas reticulation infrastructure relevant to the site, refer to the BYDA information shown in Appendix F.

13 CONCLUSION

With the abovementioned site servicing measures implemented, the site appears to be able to be adequately serviced by roadworks, stormwater drainage and management, sewer, water, electricity and communications. The preliminary sewer and water designs are subject to assessment by Urban Utilities and the electrical and communications requirements are to be determined by a suitably qualified engineer during detailed design.

Further detailed engineering drawings will be prepared on approval of the development prior to construction.

Appendix A
Site Plan



Legend

Site Boundary

Proposed Height Restricted Easement (Light & Air) - 222m²

Notes

1. Any licence, express or implied, to use this document for any purpose whatsoever is restricted to the terms of the agreement or implied agreement between Therefor Group and the instructing party.

2. Design subject to local authority approval & detailed engineering requirements, areas and dimensions are approximate only and are subject to survey. Therefore this drawing is not to be used for engineering design.

3. Indicative road pavement design, subject to biopods and engineering review.

4. This note is an integral part of this plan. This plan may not be reproduced without this notation being included.

Table of Development

Gross area of subject land	3.676ha
Area of new road	4614m²
Length of new road	227m
Net area of subject land	3.214ha
Number of proposed lots	1
Number of existing lots	1

Future intended use of new lots:

Proposed Lot is for residential/commercial use.

therefor GROUP

Scale 1:1250 @ A3 – Lengths are in metres.

10 0 10 20 30 40 50 60 70 80 90 100

Plan of Reconfiguration

202 Gardner Road, Rochedale

Description: Lot 4 on RP114765

Local Authority: Brisbane City

DRAWING NO. 24-01814P-01

VERSION B

DATE DRAWN 19-03-2025

SHEET NO. 1 of 1

JC

Appendix B
Site Survey

IMPORTANT NOTES

MAP GRID OF AUSTRALIA
This plan is on GDA2020, MGA Zone 56 with ground distances. For true MGA Zone 56 Coordinates, scale all data from PSM 21911 by 0.9996.

PROPERTY BOUNDARIES
The subject lot boundaries and dimensions shown on this plan are compiled from original survey records and plotted with a surveying methodology that gives these boundaries a positional uncertainty of 100-200 millimetres and must not be used for detailed design. A Cadastral Survey as defined by the Surveying and Mapping Infrastructure Act 2003 and Surveyors Act 2003 is required for accurate boundary positions and dimensions.

UNDERGROUND SERVICES

This plan generally complies with Australian Standard 5488—2013: Classification of Subsurface Utility Information (SUI).

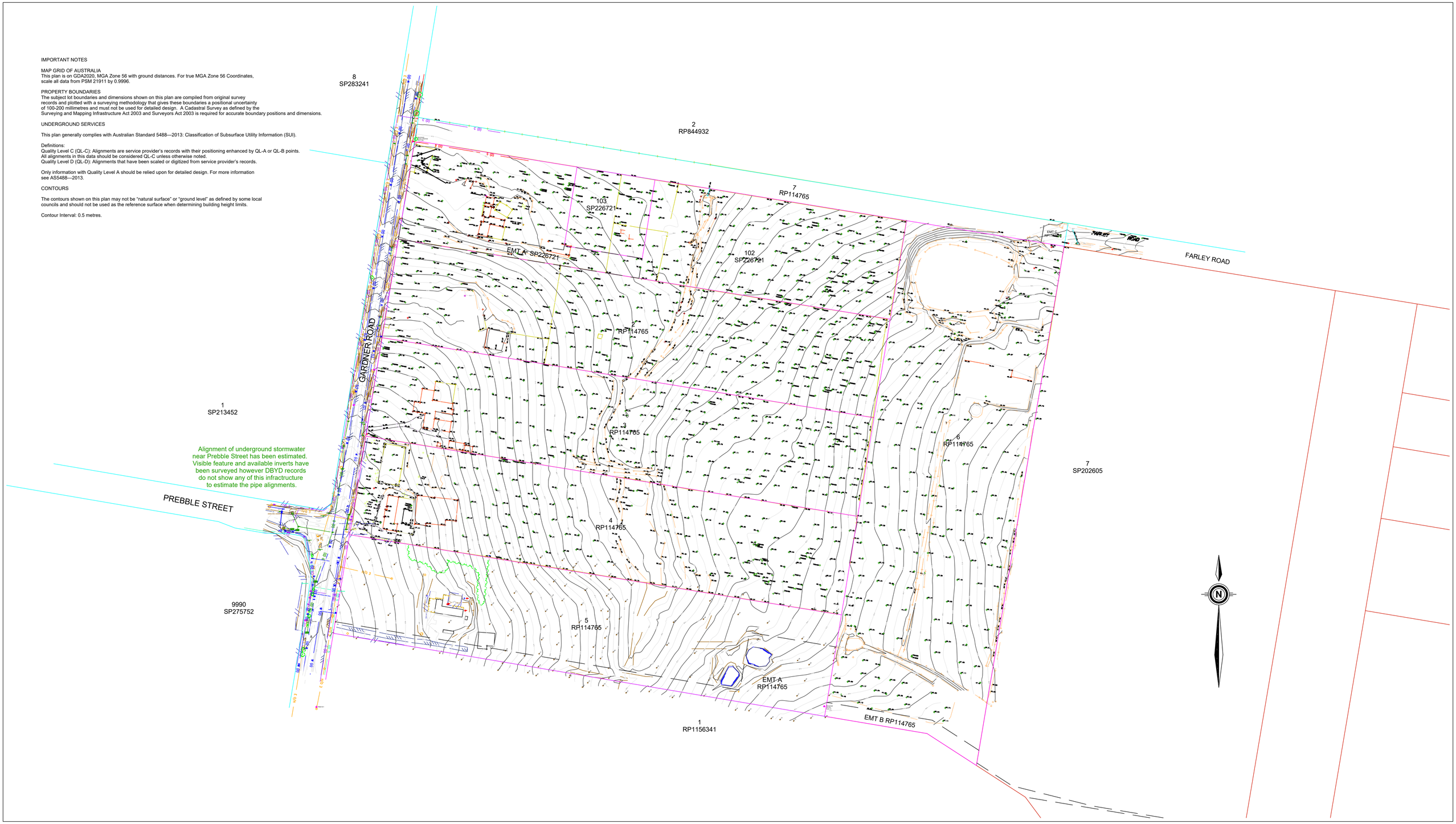
Definitions:
Quality Level C (QL-C): Alignments are service provider's records with their positioning enhanced by QL-A or QL-B points. All alignments in this data should be considered QL-C unless otherwise noted.
Quality Level D (QL-D): Alignments that have been scaled or digitized from service provider's records.

Only information with Quality Level A should be relied upon for detailed design. For more information see AS5488—2013.

CONTOURS

The contours shown on this plan may not be "natural surface" or "ground level" as defined by some local councils and should not be used as the reference surface when determining building height limits.

Contour Interval: 0.5 metres.



PROJECT:
Gardiner and Farley Road, Rochedale

CLIENT:
Partners in Property

TITLE :
Detail and Contour Survey
Verification Plot

Rev.	Reason for Issue or Amendment	Date	Surveyed	Drawn	Approved
B	Updated Gardner Road Detail	19-10-2022	M.Le Guier	G.Hanton	G.Hanton
A	Original Issue	23-09-2022	M.Le Guier	G.Hanton	G.Hanton

Scale: 1: 1500 at A1
Sheet: 1 of 1
Level Datum: AHD (d)
Origin:
Co-ord System: MGA2020 (localised)

WOLTER consulting group
Planning Urban Design Landscape Environment Surveying

Wolter Consulting Group
ACN 147 343 084
ABN 61 147 343 084

Suite 2, Level 2
1 Breakfast Creek Road
Newstead QLD 4006

T (07) 3666 5200
F (07) 3666 5202

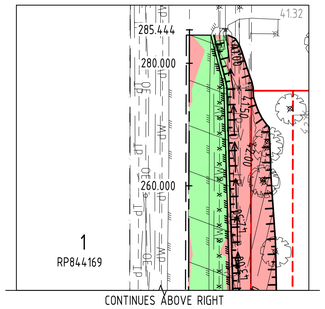
W wolterconsulting.com.au

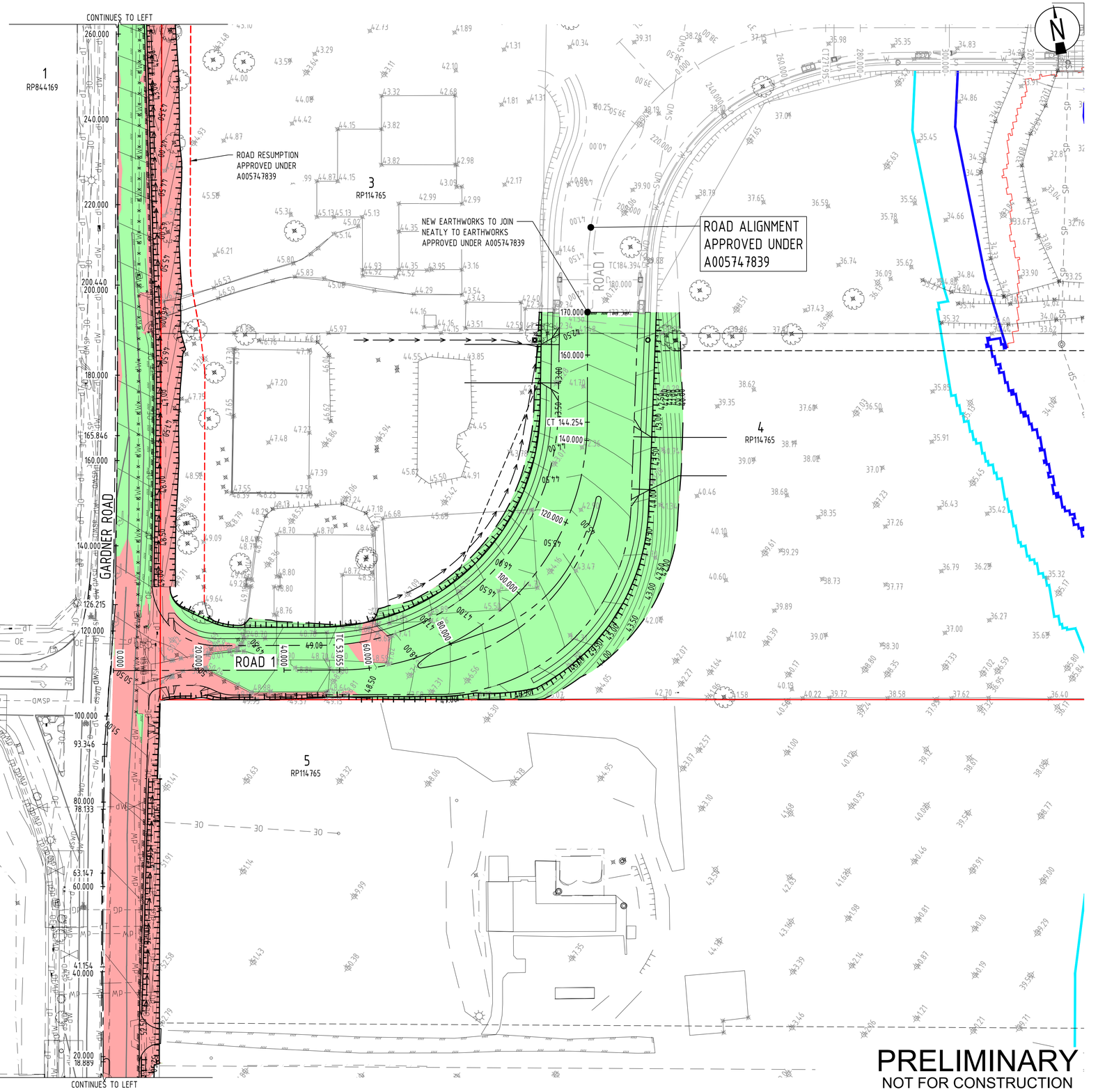
Project Number: 21-0260S
Drawing Number: 002
Revision: B

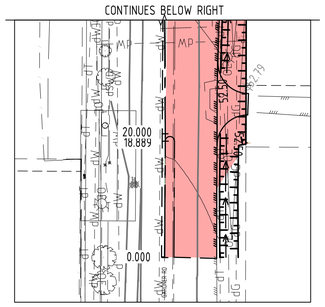
Appendix C
ADG Preliminary Drawings

LEGEND

- SITE BOUNDARY
- PROPOSED ROAD RESUMPTION LINE
- EXISTING PROPERTY BOUNDARY
- EXISTING SURFACE CONTOURS
- EARTHWORKS CONTOURS
- EXISTING SURFACE LEVEL
- FINISHED SURFACE LEVEL
- EXISTING NOMINAL KERB LINE
- EXISTING EDGE OF BITUMEN LINE
- EXISTING ROAD CENTERLINE
- EXISTING EDGE OF BUILDING
- PROPOSED NOMINAL KERB LINE
- PROPOSED ROAD CENTRE LINE
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER (RECORDS)
- EXISTING WATER (RECORDS)
- EXISTING OVERHEAD ELECTRICITY
- EXISTING TELECOMMUNICATIONS (RECORDS)
- ABANDONED SERVICE
- EXISTING BATTER
- EXISTING FENCE
- PROPOSED BATTER
- PROPOSED TEMPORARY SWALE
- LIMIT OF WORKS
- PROPOSED EARTHWORKS CUT
- PROPOSED EARTHWORKS FILL
- POST DEVELOPMENT 1% AEP FLOOD LINE
- EXISTING WATERWAY FRINGE (10m)
- EXISTING WATERWAY CORE (30m)
- EXISTING WATERWAY CENTRELNE







ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 10 20 30m
SCALE 1:500
AT ORIGINAL SIZE (A1)

ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD
Project Name: 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123

Discipline		Status
CIVIL		PRELIMINARY
Designed By	Checked By	Approved By
LDV	ML	ML
Project No.	Drawn By	Scale at A1
27292	LDV	1:500

Title: PRELIMINARY EARTHWORKS LAYOUT PLAN
Drawing No.: DA01
Revision: 02

PLOT DATE: 3/18/2025 7:27 AM FILENAME: J:\GLC\27000\27292\CVL\DWG\27292_DA01_PRELIMINARY EARTHWORKS LAYOUT PLAN.DWG

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

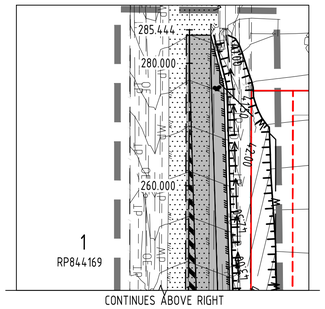
LEGEND

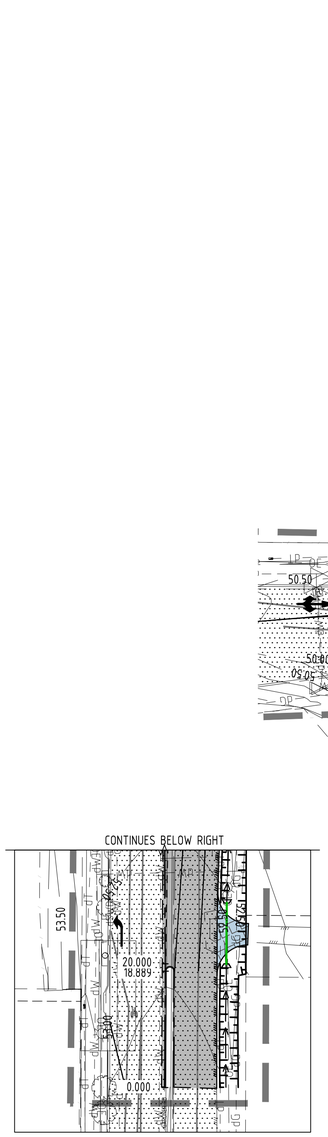
- SITE BOUNDARY
- PROPOSED ROAD RESUMPTION LINE
- EXISTING PROPERTY BOUNDARY
- EXISTING EASEMENT BOUNDARY
- EXISTING NOMINAL KERB LINE
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTERLINE
- SWD — EXISTING STORMWATER DRAINAGE
- dS — EXISTING SEWER (RECORDS)
- dW — EXISTING WATER (RECORDS)
- OE — EXISTING OVERHEAD ELECTRICITY
- dT — EXISTING TELECOMMUNICATIONS (RECORDS)
- ABANDONED SERVICE
- EXISTING BATTER
- EXISTING FENCE
- LIMIT OF WORKS
- SWD — PROPOSED STORMWATER DRAINAGE
- SWD — PREVIOUS STAGE STORMWATER DRAINAGE
- PROPOSED BIORETENTION TREE PITS
- S — PROPOSED SEWER MAIN
- S — PREVIOUS STAGE SEWER
- W — PROPOSED WATER
- W — PREVIOUS STAGE WATER
- PROPOSED ROAD CENTRE LINE
- PREVIOUS STAGE ROAD CENTRE LINE
- EXISTING ROAD
- PROPOSED 1.2m WIDE FOOTPATH IN ACCORDANCE WITH BCC STD DRG. BSD-5201
- PROPOSED ROAD PAVEMENT
- PROPOSED DRIVEWAY CROSSOVER
- PROPOSED RURAL DRIVEWAY CROSSOVER
- PROPOSED EASEMENTS
- TE — PROPOSED 'TYPE E' BARRIER KERB AND CHANNEL IN ACCORDANCE WITH BCC STD DRG BSD-2001
- TEK — PROPOSED 'TYPE E' BARRIER KERB ONLY IN ACCORDANCE WITH BCC STD DRG BSD-2001
- SH — PROPOSED EDGE OF SHOULDER
- PREVIOUS STAGE KERB NOMINAL LINE
- PROPOSED TEMPORARY SWALE
- PROPOSED 1% AEP FLOOD LINE
- EXISTING WATERWAY FRINGE (10m)
- EXISTING WATERWAY CORE (30m)

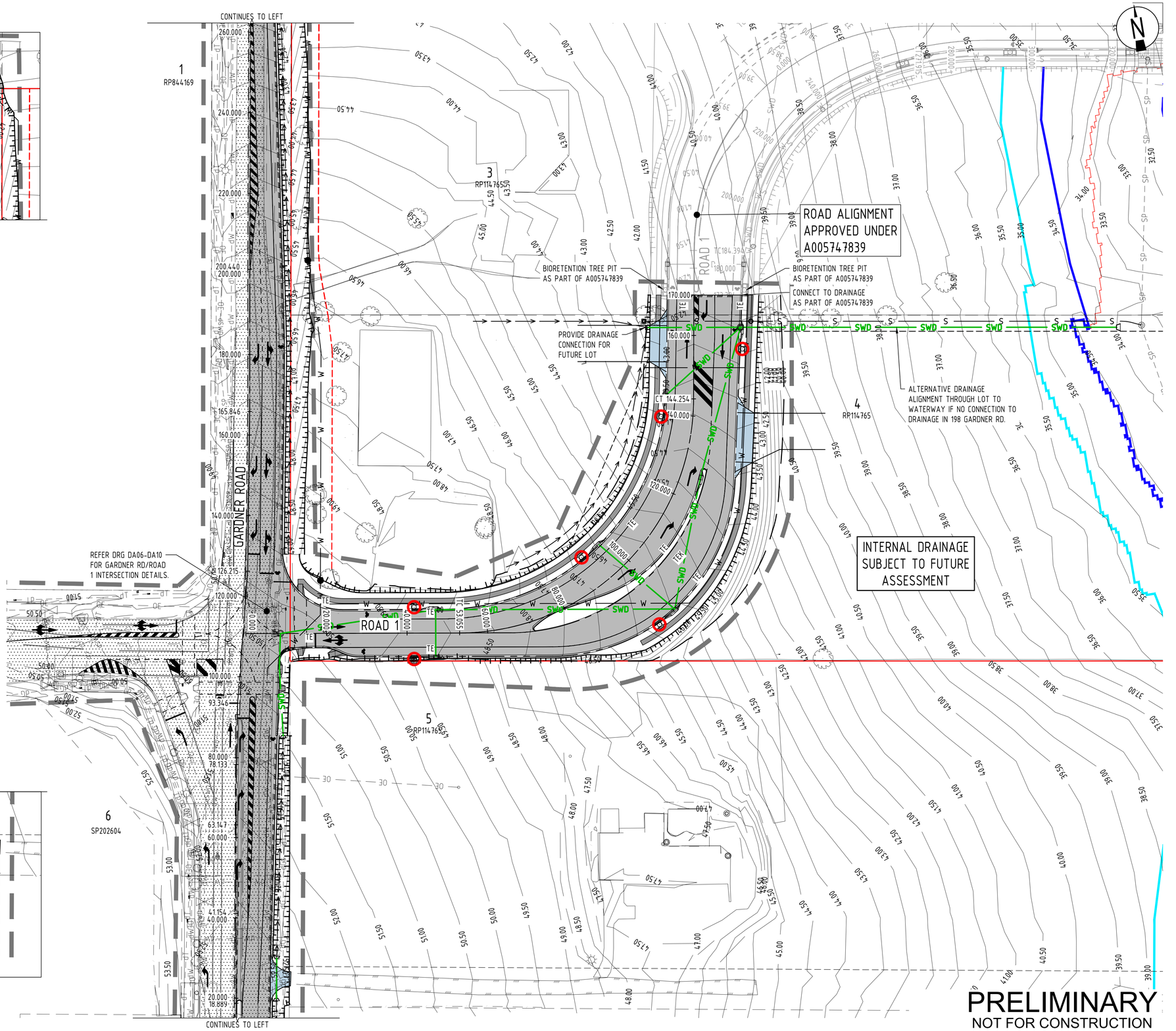
NOTES

1. FOR ROADWORKS LONGITUDINAL SECTIONS REFER DRG No. DA03.
2. FOR ROADWORKS AND DRAINAGE TYPICAL CROSS SECTION REFER DRG No. DA03.

ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN







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T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD

Project Name: 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123

Discipline		Status
CIVIL		PRELIMINARY
Designed By	Checked By	Approved By
LDV	ML	ML
Project No.	Drawn By	Scale at A1
27292	LDV	1:500

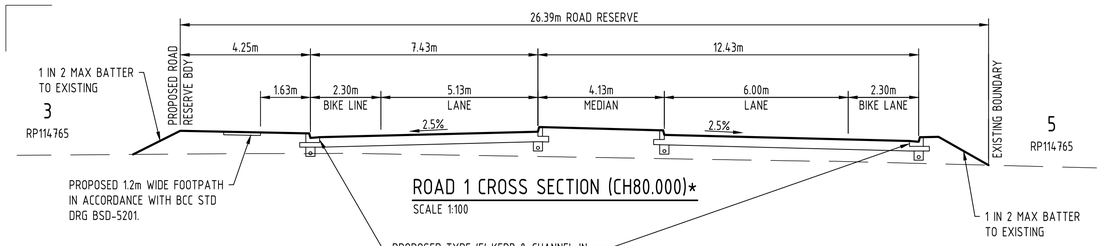
Title: PRELIMINARY ROADWORK LAYOUT PLAN

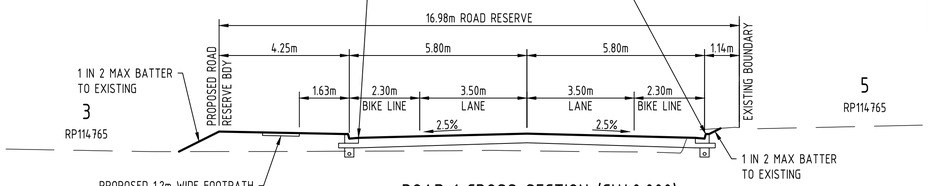
Drawing No.: DA02

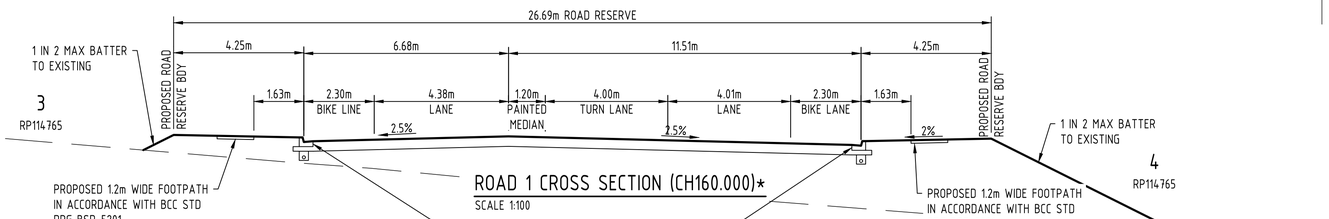
Revision: 02

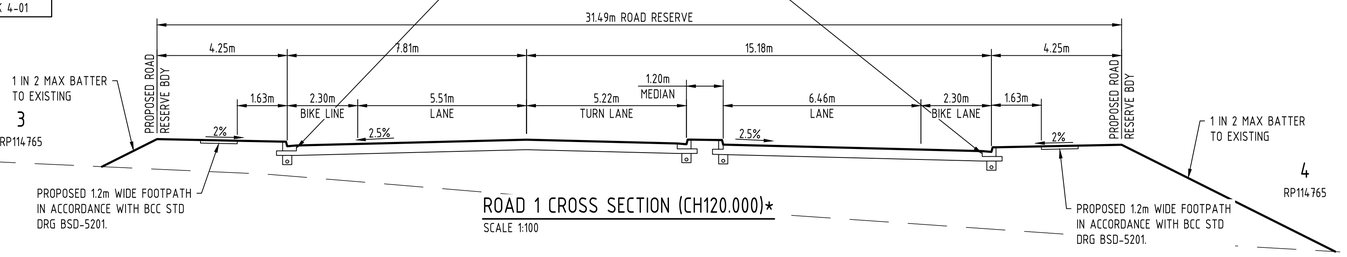
FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

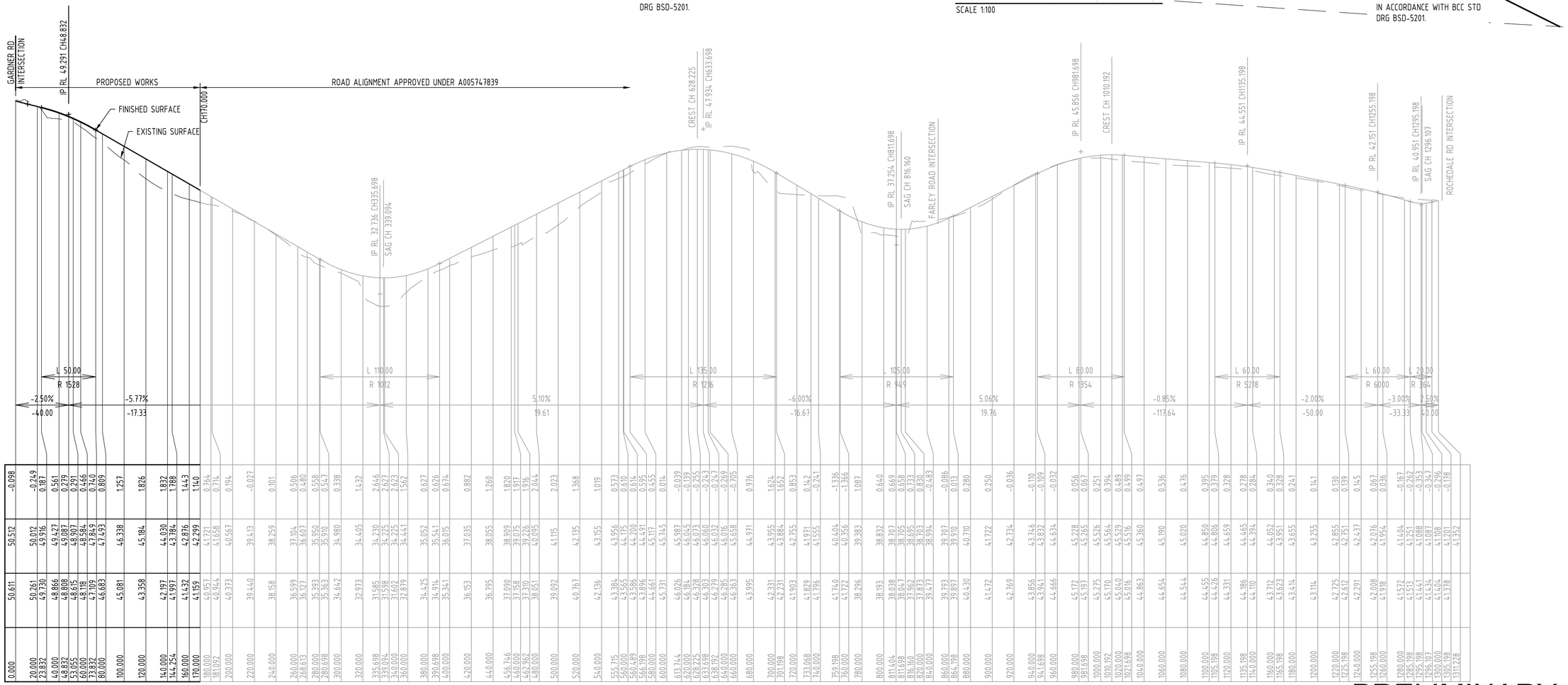
PLOT DATE: 3/18/2025 7:27 AM FILENAME: J:\QLC\27000\27292\CIVIL\DWG\27292_DA02_PRELIMINARY ROADWORK LAYOUT PLAN.DWG











ROAD 1 CROSS SECTION (CH80.000)*
SCALE 1:100

ROAD 1 CROSS SECTION (CH40.000)*
SCALE 1:100

* LANE WIDTHS VARY TO BE IN ACCORDANCE WITH TTM INTERIM LAYOUT PLAN 23BRT0408-SK 4-01

ROAD 1 CROSS SECTION (CH160.000)*
SCALE 1:100

ROAD 1 CROSS SECTION (CH120.000)*
SCALE 1:100

ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

Vertical Curve Length (m): L 50.00 | L 110.00 | L 135.00 | L 105.00 | L 80.00 | L 60.00 | L 60.00 | L 20.00
Vertical Curve Radius (m): R 1528 | R 1012 | R 1216 | R 949 | R 1354 | R 5218 | R 6000 | R 364
Vertical Grade (%): -2.50% | -5.77% | 5.10% | -6.00% | 5.06% | -0.85% | -2.00% | -3.00% | 2.50%
Vertical Grade (1 in ...): -40.00 | -17.33 | 19.61 | -16.67 | 19.76 | -117.64 | -50.00 | -33.33 | 40.00

DATUM RL17.000

CUT / FILL DEPTH	DESIGN LEVELS ON ROAD CL	EXISTING SURFACE ON ROAD CL	CHAINAGE
-0.098	50.512	50.611	0.000
-0.249	50.012	50.261	20.000
0.187	49.916	49.730	23.832
0.561	49.427	48.866	40.000
0.279	49.087	48.808	48.832
0.291	48.907	48.615	53.055
0.466	48.584	48.118	60.000
0.740	47.849	47.109	73.832
0.809	47.493	46.683	80.000
1.257	46.338	45.081	100.000
1.826	45.184	43.358	120.000
1.832	44.030	42.197	140.000
1.788	43.784	41.997	144.254
1.443	42.876	41.432	160.000
1.140	42.299	41.159	170.000
0.764	41.721	40.957	180.000
0.714	41.658	40.944	181.092
0.194	40.567	40.373	200.000
-0.027	39.413	39.440	220.000
0.101	38.259	38.158	240.000
0.506	37.104	36.599	260.000
0.480	36.607	36.127	268.613
0.558	35.950	35.393	280.000
0.547	35.910	35.363	280.698
0.338	34.980	34.642	300.000
1.432	34.405	32.973	320.000
2.646	34.230	31.585	335.698
2.627	34.225	31.598	339.094
2.623	34.225	31.602	340.000
1.562	34.441	32.879	360.000
0.627	35.052	34.425	380.000
0.626	35.541	34.914	390.698
0.674	36.015	35.341	400.000
0.882	37.035	36.153	420.000
1.260	38.055	36.795	440.000
1.820	38.909	37.090	456.746
1.917	39.075	37.158	460.000
1.916	39.226	37.310	462.962
2.044	40.095	38.051	480.000
2.023	41.115	39.092	500.000
1.368	42.135	40.767	520.000
1.019	43.155	42.136	540.000
0.573	43.956	43.384	555.715
0.610	44.175	43.565	560.000
0.614	44.200	43.586	560.489
0.595	44.491	43.896	566.198
0.455	45.117	44.661	580.000
0.014	45.745	45.731	600.000
-0.039	45.987	46.026	613.744
-0.139	46.045	46.184	620.000
-0.255	46.073	46.328	628.225
-0.243	46.060	46.303	633.698
-0.247	46.032	46.279	638.192
-0.269	46.016	46.285	640.000
-0.705	45.658	46.363	660.000
0.976	44.971	43.995	680.000
1.624	43.955	42.331	700.000
1.652	43.884	42.231	701.198
0.853	42.755	41.903	720.000
0.142	41.971	41.829	733.068
-0.241	41.555	41.796	740.000
-1.336	40.404	41.740	759.198
-1.366	40.356	41.722	760.000
1.087	39.383	38.296	780.000
0.640	38.832	38.193	800.000
0.669	38.707	38.038	811.404
0.658	38.705	38.047	811.698
0.733	38.695	37.962	816.160
0.830	38.703	37.873	820.000
-0.483	38.994	39.477	840.000
-0.086	39.707	39.793	860.000
0.013	39.910	39.897	864.198
0.280	40.710	40.430	880.000
0.250	41.722	41.472	900.000
-0.036	42.734	42.769	920.000
-0.110	43.746	43.856	940.000
-0.109	43.832	43.941	941.698
-0.032	44.634	44.666	960.000
0.056	45.228	45.172	980.000
0.067	45.265	45.197	981.698
0.251	45.526	45.275	1000.000
0.394	45.564	45.170	1010.192
0.489	45.529	45.040	1020.000
0.499	45.516	45.016	1021.698
0.497	45.360	44.863	1040.000
0.536	45.190	44.654	1060.000
0.476	45.020	44.544	1080.000
0.395	44.850	44.455	1100.000
0.379	44.806	44.426	1105.198
0.328	44.659	44.331	1120.000
0.278	44.465	44.186	1135.198
0.284	44.394	44.110	1140.000
0.340	44.052	43.712	1160.000
0.328	43.951	43.623	1165.198
0.241	43.655	43.414	1180.000
0.141	43.255	43.114	1200.000
0.130	42.855	42.725	1220.000
0.139	42.751	42.612	1225.198
0.145	42.437	42.291	1240.000
0.067	42.076	42.008	1255.198
0.036	41.954	41.918	1260.000
-0.167	41.404	41.572	1280.000
-0.262	41.251	41.513	1285.198
-0.353	41.088	41.441	1295.198
-0.347	41.087	41.434	1296.107
-0.296	41.108	41.404	1300.000
-0.178	41.201	41.378	1305.198
	41.352		1311.228

ROAD 1 - LONGITUDINAL SECTION
SCALE HORIZONTAL 1 : 2000
VERTICAL 1 : 200

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

SCALE 1:100
SCALE 1:200 VERTICAL
SCALE 1:2000 HORIZONTAL
AT ORIGINAL SIZE (A1)

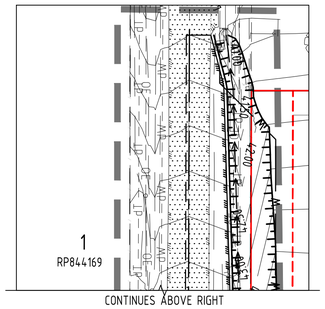
ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

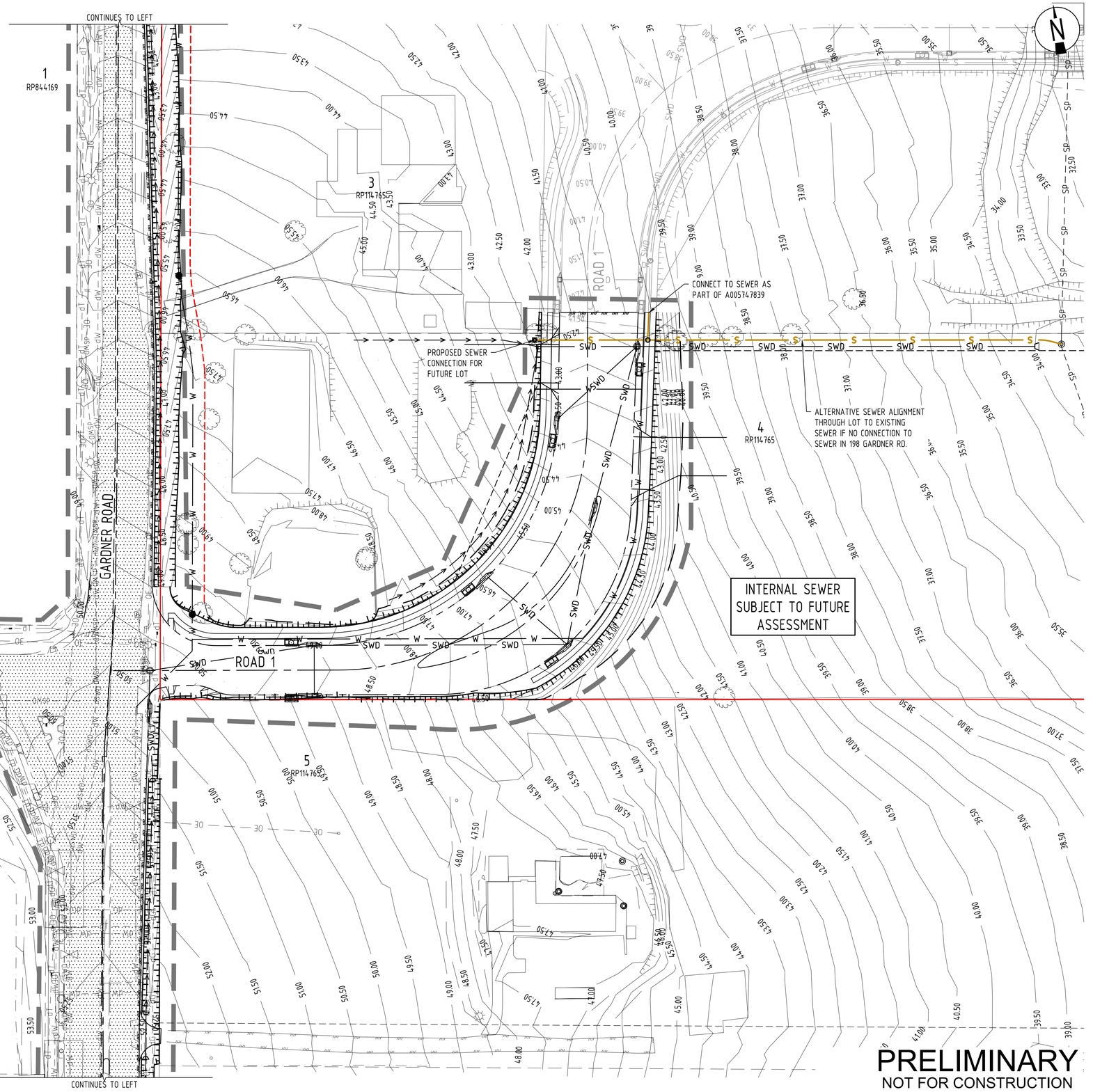
Client: PARTNERS IN PROPERTY QLD PTY LTD
Project Name: 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123
Discipline: CIVIL
Status: PRELIMINARY
Designed By: LDV
Checked By: ML
Approved By: ML
Project No.: 27292
Drawn By: LDV
Scale at A1: AS SHOWN

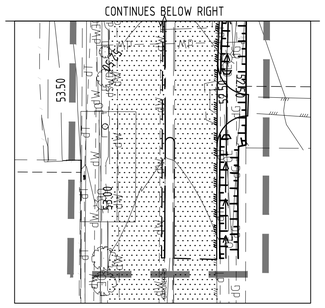
Title: PRELIMINARY ROAD 1 LONGITUDINAL AND TYPICAL CROSS SECTION
Drawing No.: DA03
Revision: 02

LEGEND

- 12.0 — FINISHED SURFACE CONTOURS
- SITE BOUNDARY
- PROPOSED ROAD RESUMPTION LINE
- EXISTING PROPERTY BOUNDARY
- EXISTING EASEMENT BOUNDARY
- EXISTING NOMINAL KERB LINE
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTERLINE
- EXISTING EDGE OF BUILDING
- SWD — EXISTING STORMWATER DRAINAGE
- dS — EXISTING SEWER (RECORDS)
- dT — EXISTING TELECOMMUNICATIONS (RECORDS)
- dW — EXISTING WATER (RECORDS)
- ABANDONED SERVICE
- EXISTING BATTER
- EXISTING FENCE
- LIMIT OF WORKS
- SWD — PROPOSED STORMWATER DRAINAGE
- SWD — PREVIOUS STAGE STORMWATER DRAINAGE
- S — PROPOSED SEWER MAIN
- S — PREVIOUS STAGE SEWER MAIN
- W — PROPOSED WATER MAIN
- W — PREVIOUS STAGE WATER MAIN
- PROPOSED NOMINAL KERB LINE
- PREVIOUS STAGE NOMINAL KERB LINE
- PROPOSED ROAD CENTRE LINE
- PREVIOUS STAGE ROAD CENTRE LINE
- PROPOSED EASEMENTS







ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 10 20 30m
SCALE 1:500
AT ORIGINAL SIZE (A1)

ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD
Project Name: 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123

Discipline: CIVIL
Status: PRELIMINARY

Designed By	Checked By	Approved By
LDV	ML	ML
Project No.	Drawn By	Scale at A1
27292	LDV	1:500

Title: PRELIMINARY SEWER RETICULATION LAYOUT PLAN

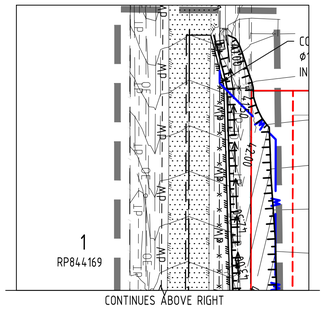
Drawing No.: DA04
Revision: 02

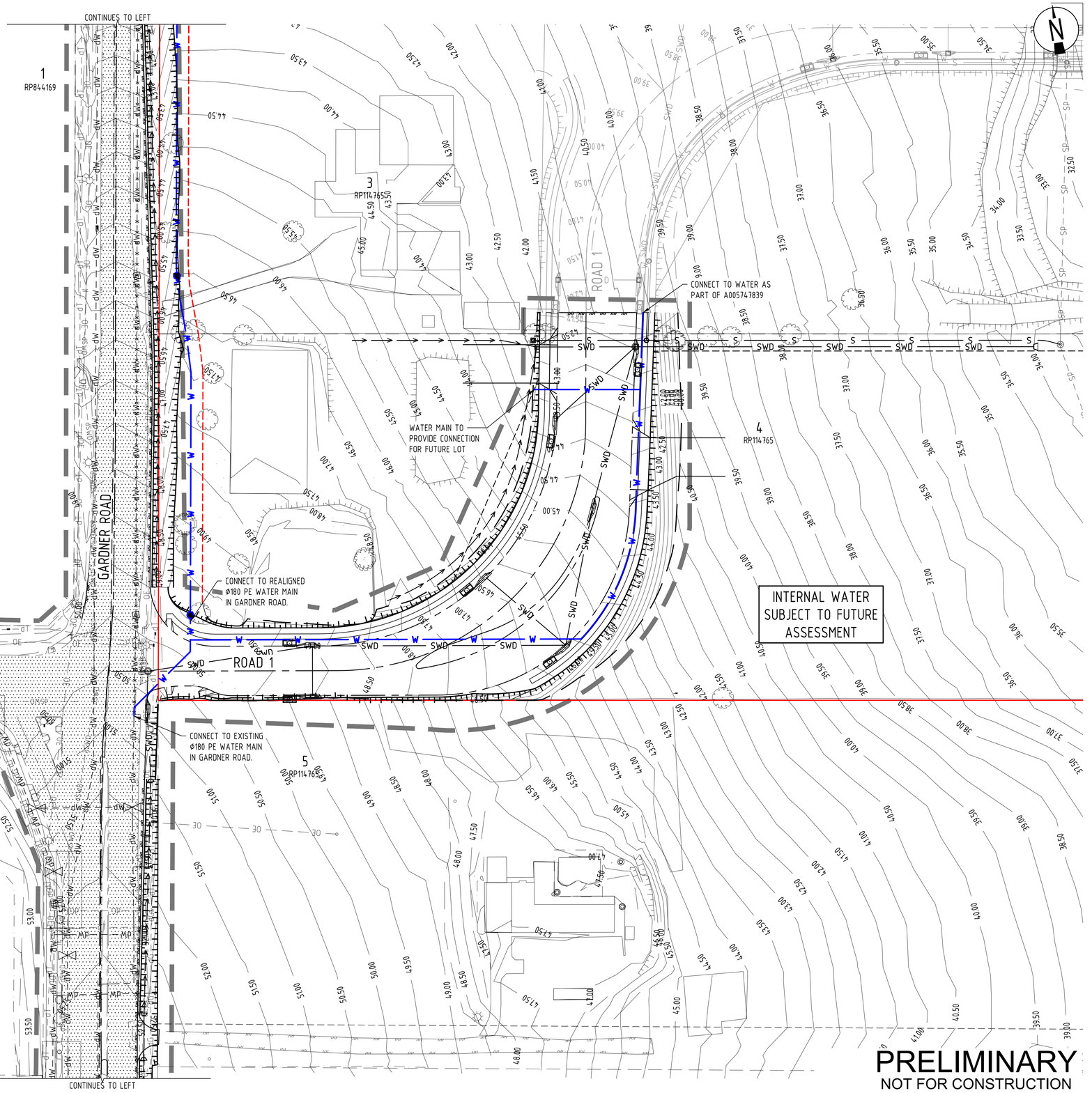
PLOT DATE: 3/18/2025 7:27 AM FILENAME: J:\QLC\27000\27292\CVL\DWG\27292_DA04_PRELIMINARY SEWER RETICULATION LAYOUT PLAN.DWG

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

LEGEND

- 12.0 — FINISHED SURFACE CONTOURS
- SITE BOUNDARY
- PROPOSED ROAD RESUMPTION LINE
- EXISTING PROPERTY BOUNDARY
- EXISTING EASEMENT BOUNDARY
- EXISTING NOMINAL KERB LINE
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTERLINE
- EXISTING EDGE OF BUILDING
- SWD — EXISTING STORMWATER DRAINAGE
- S — EXISTING SEWER
- OE — EXISTING OVERHEAD ELECTRICITY
- T — EXISTING TELECOMMUNICATIONS
- W — EXISTING WATER
- ABANDONED SERVICE
- EXISTING BATTER
- EXISTING RETAINING WALL
- EXISTING FENCE
- LIMIT OF WORKS
- SWD — PROPOSED STORMWATER DRAINAGE
- SWD — PREVIOUS STAGE STORMWATER DRAINAGE
- S — PROPOSED SEWER
- S — PREVIOUS STAGE SEWER MAIN
- W — PROPOSED WATER MAIN
- W FH — PROPOSED FIRE HYDRANT
- W — PROPOSED SLUICE VALVE
- W — PREVIOUS STAGE WATER MAIN
- PROPOSED NOMINAL KERB LINE
- PREVIOUS STAGE NOMINAL KERB LINE
- PROPOSED ROAD CENTRE LINE
- PREVIOUS STAGE ROAD CENTRE LINE
- PROPOSED EASEMENTS
- EXISTING ROAD





ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 10 20 30m
SCALE 1:500
AT ORIGINAL SIZE (A1)

T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD

Project Name: 202-210 GARDNER ROAD
ROCHEDALE, QLD, 4123

Discipline		Status
CIVIL		PRELIMINARY
Designed By: LDV	Checked By: ML	Approved By: ML
Project No.: 27292	Drawn By: LDV	Scale at A1: 1:500

Title: PRELIMINARY WATER RETICULATION LAYOUT PLAN

Drawing No.: DA05
Revision: 02

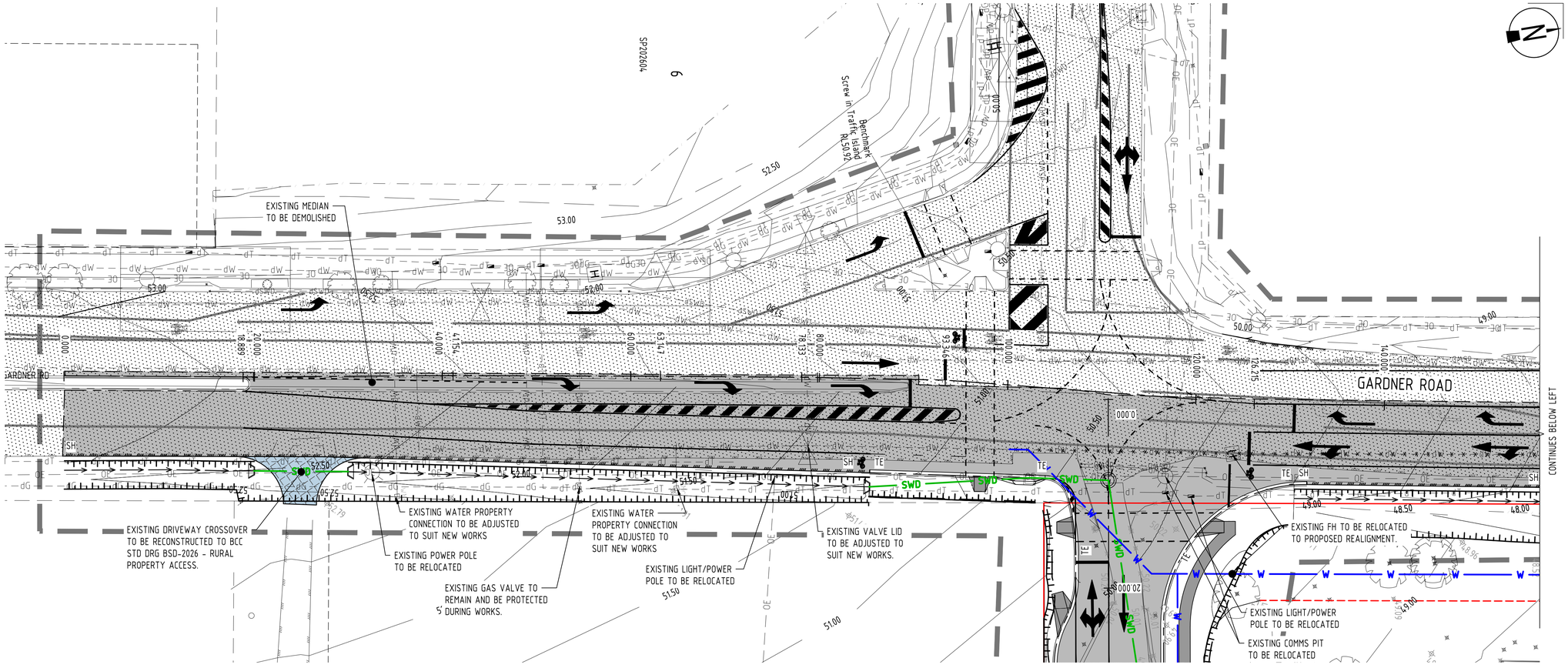
PLOT DATE: 3/18/2025 7:28 AM FILENAME: J:\QLC\27000\27292\CVL\DWG\27292_DA05_PRELIMINARY WATER RETICULATION LAYOUT PLAN.DWG

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

LEGEND

- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EXISTING EASEMENT BOUNDARY
- EXISTING NOMINAL KERB LINE
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTERLINE
- EXISTING BATTER
- EXISTING FENCE
- LIMIT OF WORKS
- PROPOSED PROPERTY BOUNDARY
- PROPOSED ROAD RESUMPTION LINE
- PROPOSED ROAD CENTRE LINE
- EXISTING ROAD
- PROPOSED 1.2m WIDE FOOTPATH IN ACCORDANCE WITH BCC STD DRG. BSD-5201
- PROPOSED ROAD PAVEMENT
- PROPOSED DRIVEWAY CROSSOVER
- PROPOSED RURAL DRIVEWAY CROSSOVER
- TE — PROPOSED 'TYPE E' BARRIER KERB AND CHANNEL IN ACCORDANCE WITH BCC STD DRG BSD-2001
- SH — PROPOSED EDGE OF SHOULDER
- SWD — PROPOSED STORMWATER DRAINAGE
- W — PROPOSED WATERMAIN ALIGNMENT SUBJECT TO UU APPROVAL

NOTES
REFER ALSO FUNCTIONAL LAYOUT PLAN BY TTM DRG 23BRT0408-SK 4-01 REV B



ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

NOTE:
ALL EXISTING SERVICES LOCATED WITHIN PROPOSED PAVEMENT WIDENING TO BE RELOCATED AS REQUIRED AS DIRECTED BY SERVICES AUTHORITIES.

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 5 10 15m
SCALE 1:250
AT ORIGINAL SIZE (A1)

ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD
Project Name: 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123

Discipline	Status
CIVIL	PRELIMINARY

Designed By	Checked By	Approved By
LDV	ML	ML

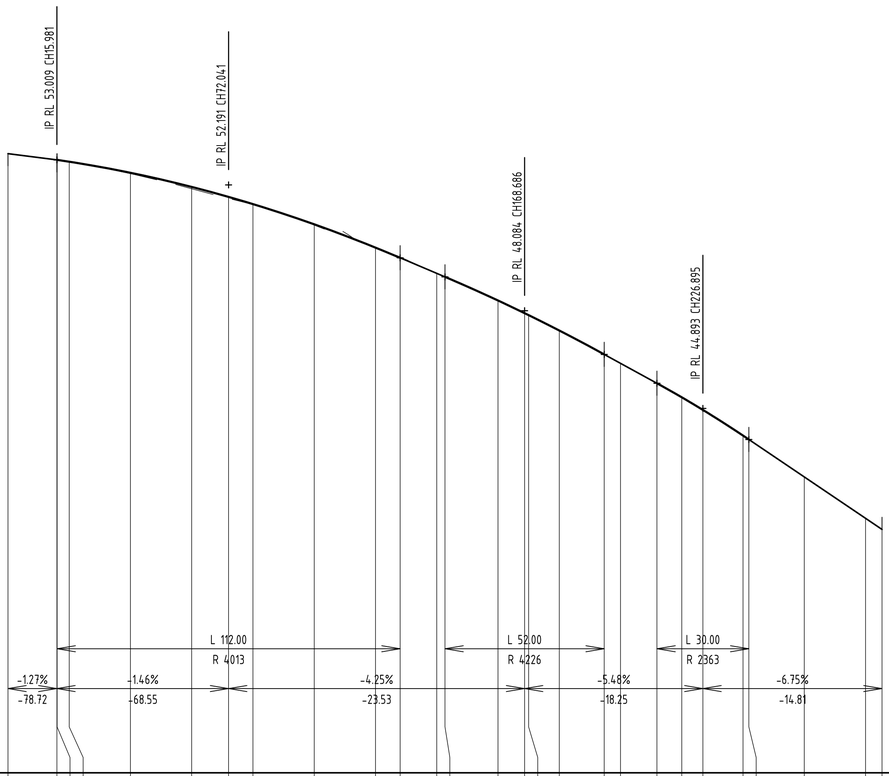
Project No.	Drawn By	Scale at A1
27292	LDV	1:250

Title: GARDNER ROAD PRELIMINARY INTERSECTION LAYOUT PLAN

Drawing No.: DA06
Revision: 02

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

PLOT DATE: 3/18/2025 7:28 AM FILENAME: J:\GLC\27000\27292\CIVL\DWG\27292_DA06_GARDNER ROAD PRELIMINARY INTERSECTION LAYOUT PLAN.DWG



DATUM RL33.000

CUT / FILL DEPTH	-0.000	0.001	0.001	0.004	0.029	0.061	0.051	0.013	0.025	0.004	-0.026	0.003	0.009	0.011
DESIGN LEVELS ON ROAD CL	53.212	53.009	53.008	52.948	52.587	52.126	51.800	51.565	50.905	50.145	49.811	49.303	49.189	48.417
EXISTING SURFACE ON ROAD CL	53.212	53.008	53.007	52.944	52.558	52.064	51.749	51.552	50.879	50.141	49.837	49.300	49.180	48.406
CHAINAGE	0.000	15.981	16.041	20.000	40.000	60.000	72.041	80.000	100.000	120.000	128.041	140.000	142.686	160.000

CUT / FILL DEPTH	-0.003	-0.004	-0.020	0.003	0.003	0.004	-0.016	-0.001	-0.005	-0.006	0.006	-0.006	-0.004	
DESIGN LEVELS ON ROAD CL	48.004	47.939	47.438	46.659	46.367	45.716	45.257	44.846	44.008	43.881	42.659	41.309	40.945	40.945
EXISTING SURFACE ON ROAD CL	48.007	47.943	47.458	46.656	46.364	45.712	45.274	44.847	44.014	43.887	42.653	41.315	40.949	
CHAINAGE	168.686	170.000	180.000	194.686	200.000	211.895	220.000	226.895	240.000	241.895	260.000	280.000	285.383	285.444

ROAD GARDNER RD - LONGITUDINAL SECTION

SCALE HORIZONTAL 1 : 1000
VERTICAL 1 : 100

ALL DETAILS SHOWN ARE
SUBJECT TO FURTHER
DETAILED DESIGN

ALL DETAILS SHOWN ARE
SUBJECT TO FURTHER
DETAILED DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

SCALE 1:100 VERTICAL
0 1 2 3 4 5m
0 10 20 30 40 50m
SCALE 1:1000 HORIZONTAL
AT ORIGINAL SIZE (A1)

T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

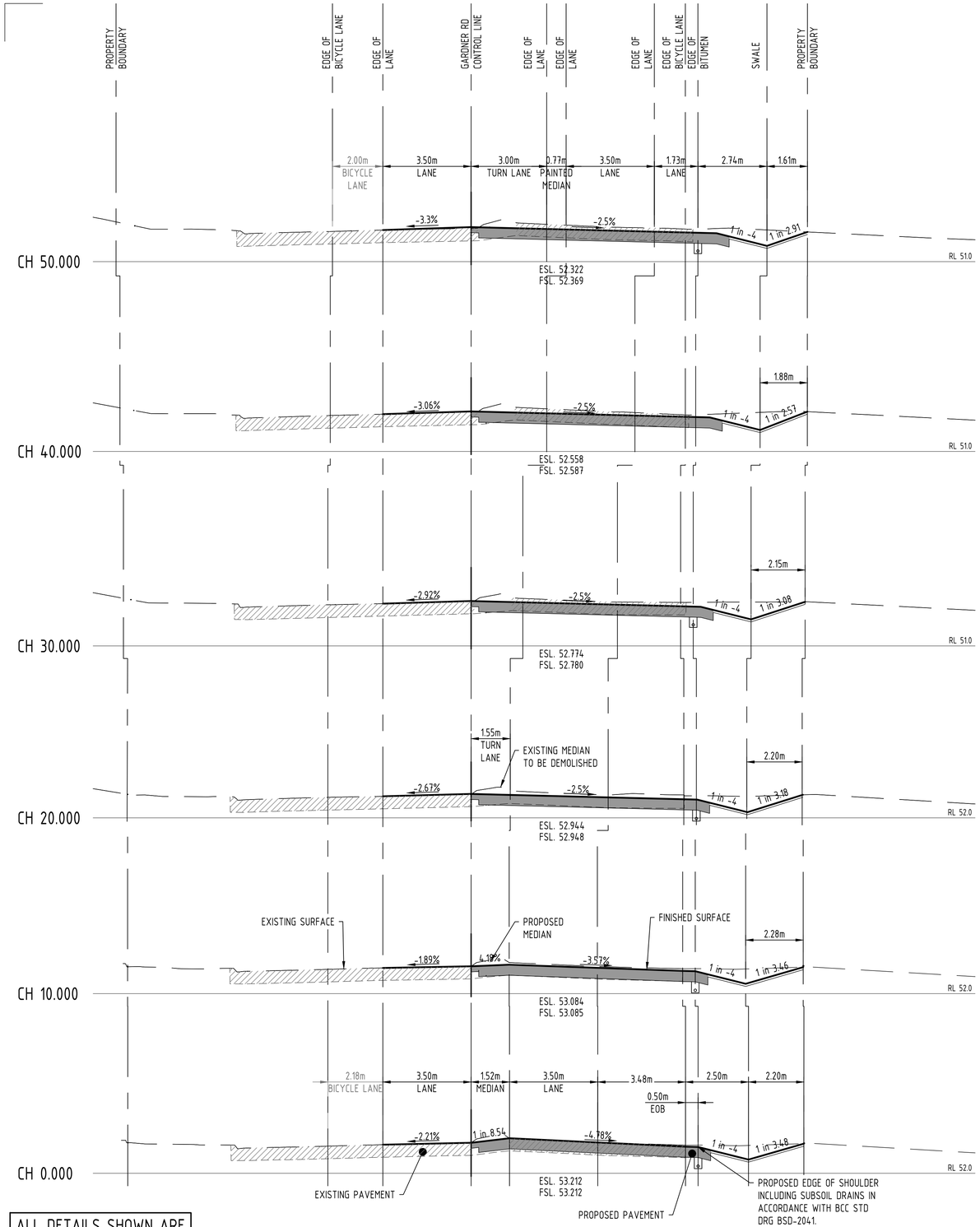
Client PARTNERS IN PROPERTY QLD PTY LTD	Discipline CIVIL		Status PRELIMINARY
Project Name 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123	Designed By LDV	Checked By ML	Approved By ML
	Project No. 27292	Drawn By LDV	Scale at A1 AS SHOWN

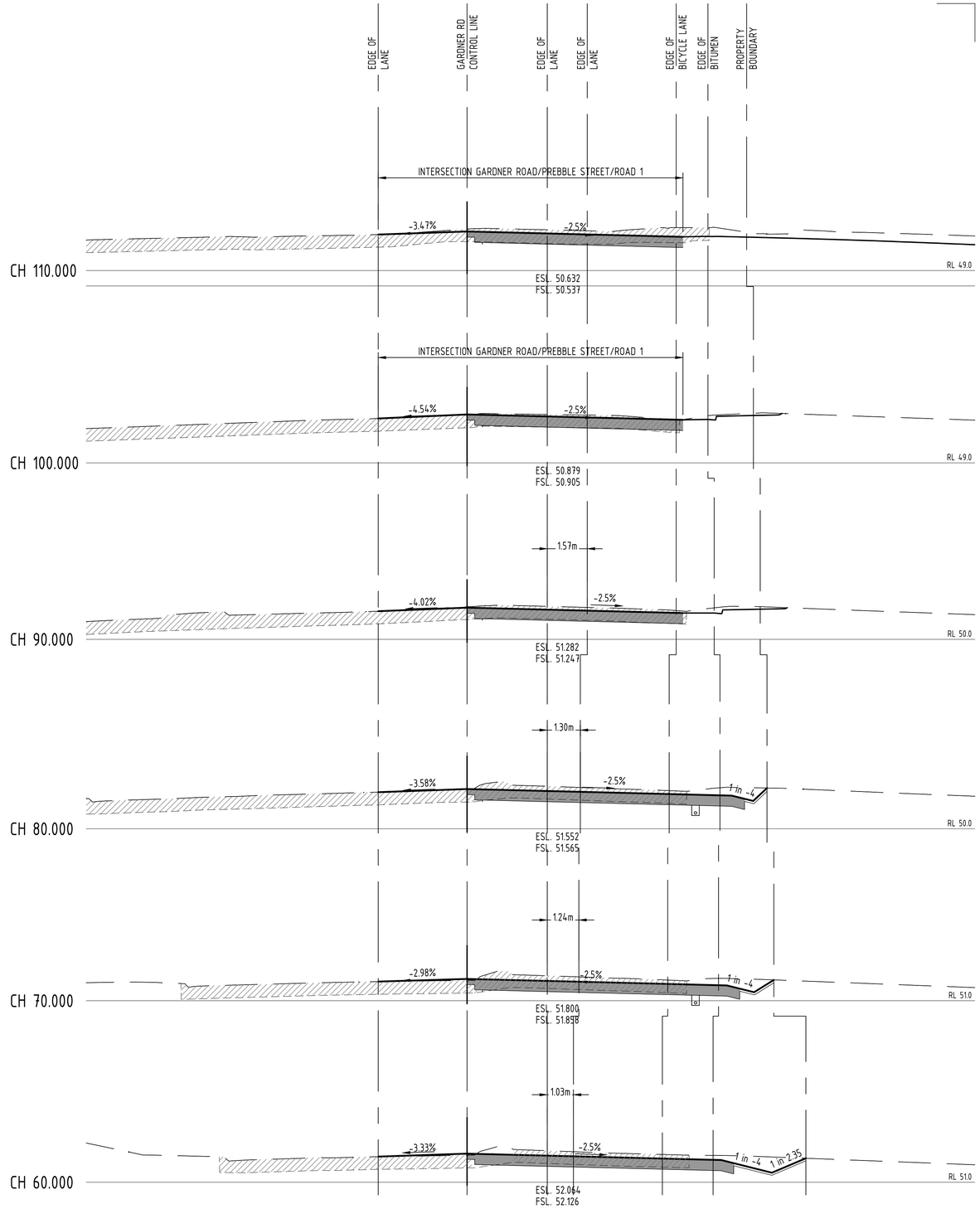
Title
GARDNER ROAD
PRELIMINARY LONGITUDINAL SECTION

Drawing No. DA07
Revision 02

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

PLOT DATE: 3/18/2025 7:28 AM FILENAME: J:\GLC\27000\27292\CVL\DWG\27292_DA07_GARDNER ROAD PRELIMINARY LONGITUDINAL SECTION.DWG





ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

GARDNER ROAD CROSS SECTIONS

SCALE 1:100

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 1 2 3 4 5m
SCALE 1:100
AT ORIGINAL SIZE (A1)

ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD
Project Name: 202-210 GARDNER ROAD
ROCHEDALE, QLD, 4123

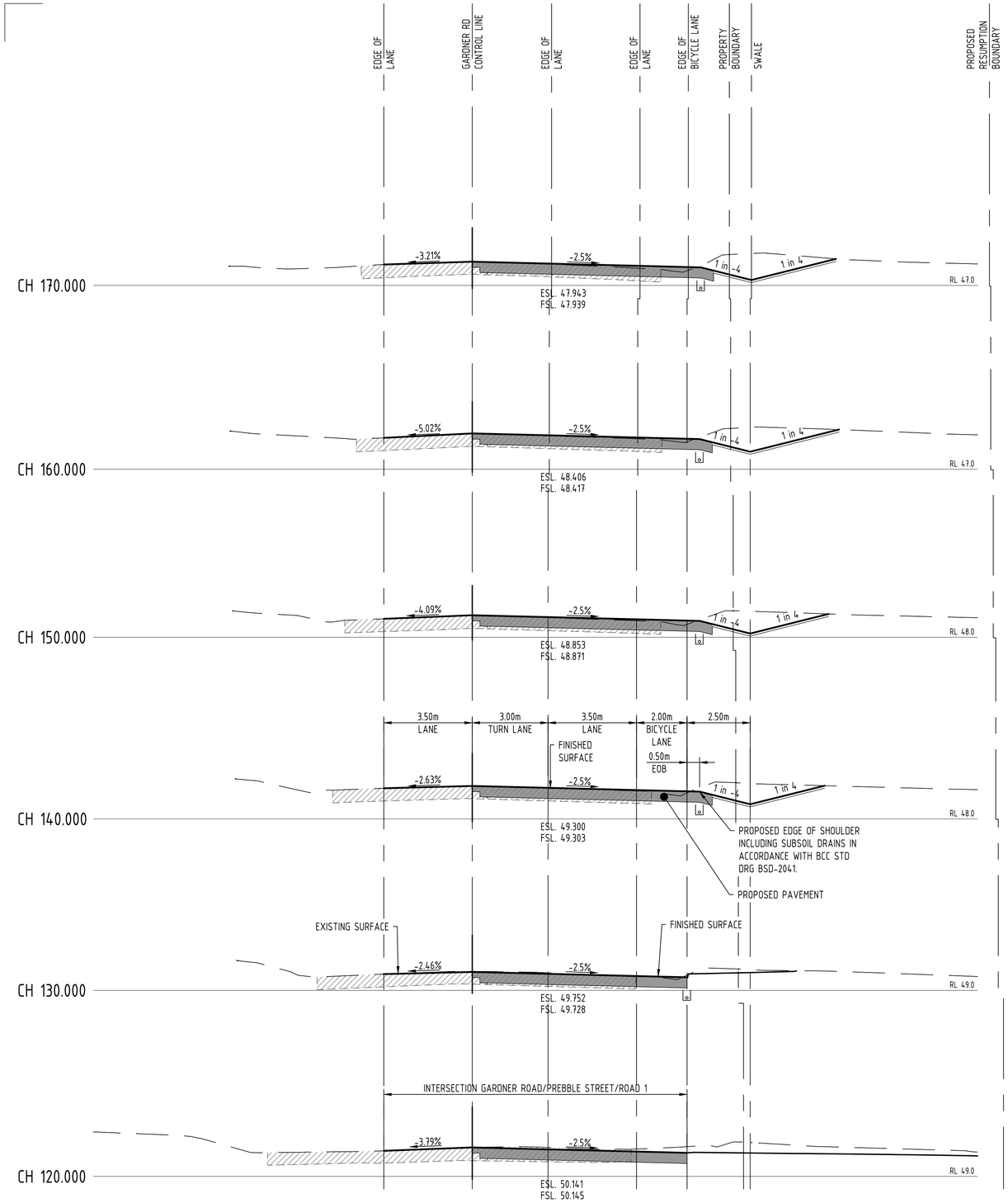
Discipline		Status
CIVIL		PRELIMINARY
Designed By	Checked By	Approved By
LDV	ML	ML
Project No.	Drawn By	Scale at A1
27292	LDV	1:100

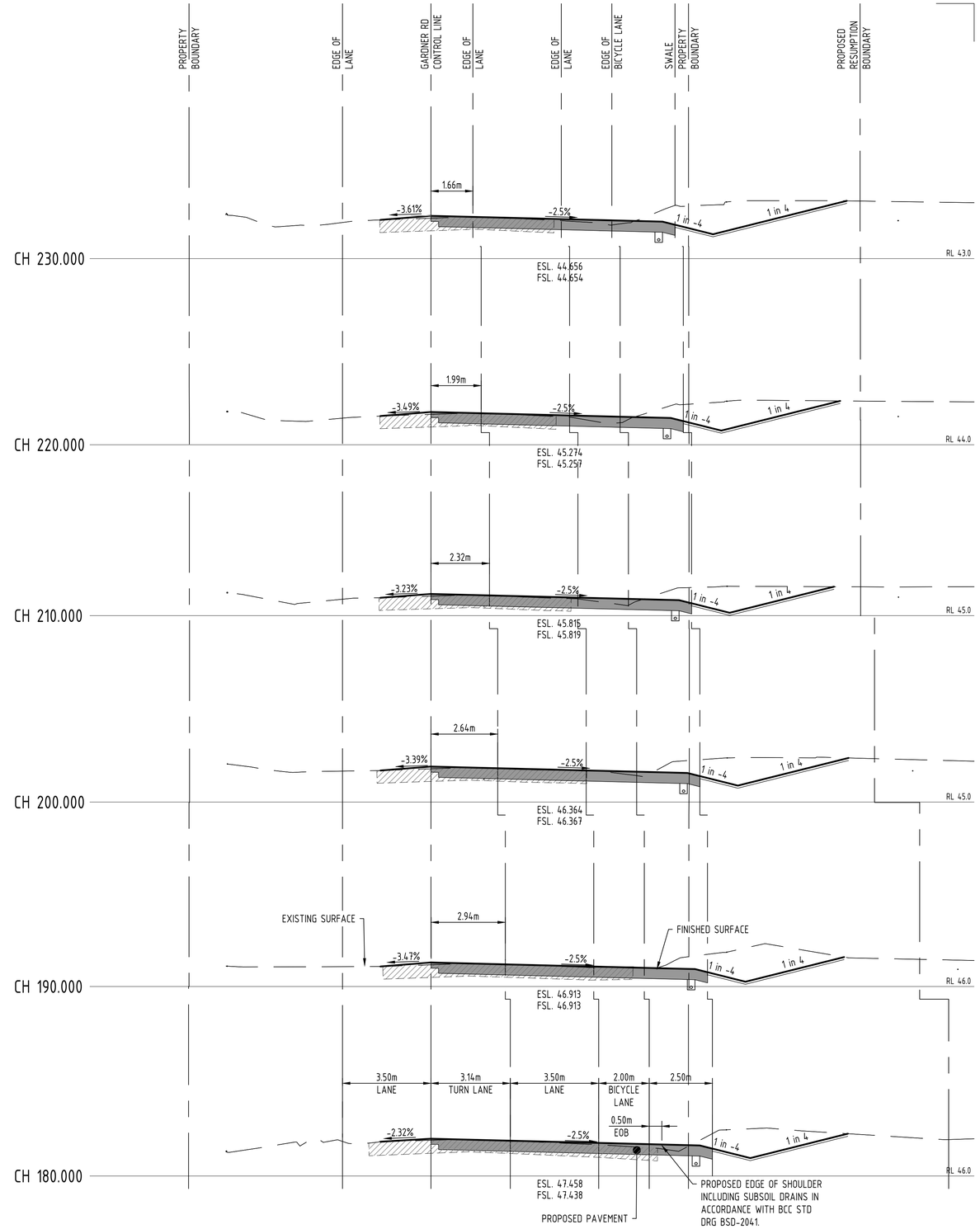
Title: GARDNER ROAD
PRELIMINARY CROSS SECTIONS
SHEET 1 OF 3

Drawing No.: DA08
Revision: 02

PLOT DATE: 3/18/2025 7:58 AM FILENAME: J:\GLC\27000\27292\CVL\DWG\27292_DA08_GARDNER ROAD PRELIMINARY CROSS SECTIONS SHEET 1 OF 3.DWG

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm





ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

GARDNER ROAD CROSS SECTIONS

SCALE 1:100

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 1 2 3 4 5m
SCALE 1:100
AT ORIGINAL SIZE (A1)

ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD
Project Name: 202-210 GARDNER ROAD ROCHEDALE, QLD, 4123

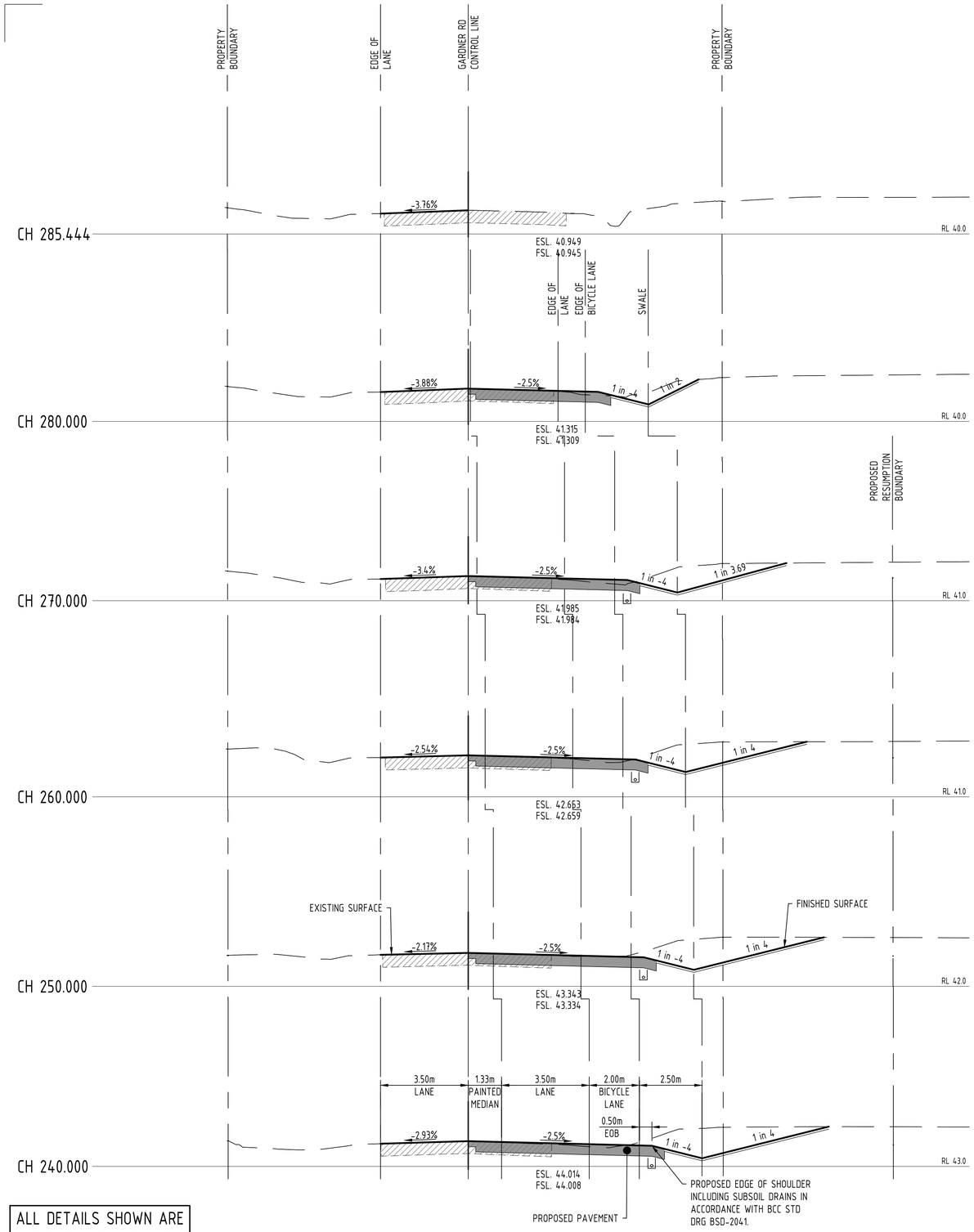
Discipline		Status
CIVIL		PRELIMINARY
Designed By	Checked By	Approved By
LDV	ML	ML
Project No.	Drawn By	Scale at A1
27292	LDV	1:100

Title: GARDNER ROAD PRELIMINARY CROSS SECTIONS SHEET 2 OF 3

Drawing No.: DA09
Revision: 02

PLOT DATE: 3/18/2025 7:58 AM FILENAME: J:\QLC\27000\27292\CVL\DWG\27292_DA09_GARDNER ROAD PRELIMINARY CROSS SECTIONS SHEET 2 OF 3.DWG

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm



ALL DETAILS SHOWN ARE SUBJECT TO FURTHER DETAILED DESIGN

GARDNER ROAD CROSS SECTIONS

SCALE 1:100

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Date	Description	By	Chk
02	18.03.25	PRELIMINARY - ISSUED FOR INFORMATION	CM	ML
01	27.08.24	PRELIMINARY - ISSUED FOR INFORMATION	LDV	ML

0 1 2 3 4 5m
SCALE 1:100
AT ORIGINAL SIZE (A1)

ADG
T:1300 657 402 E: info@adgce.com W: www.adgce.com
Quality Assurance ISO 9001:2015 | Work Health Safety ISO 45001:2018
Environmental Management ISO 14001:2015

Client: PARTNERS IN PROPERTY QLD PTY LTD

Project Name: 202-210 GARDNER ROAD
ROCHEDALE, QLD, 4123

Discipline	Designed By	Checked By	Status
CIVIL	LDV	ML	PRELIMINARY
	Project No. 27292	Drawn By LDV	Approved By ML
			Scale at A1 1:100

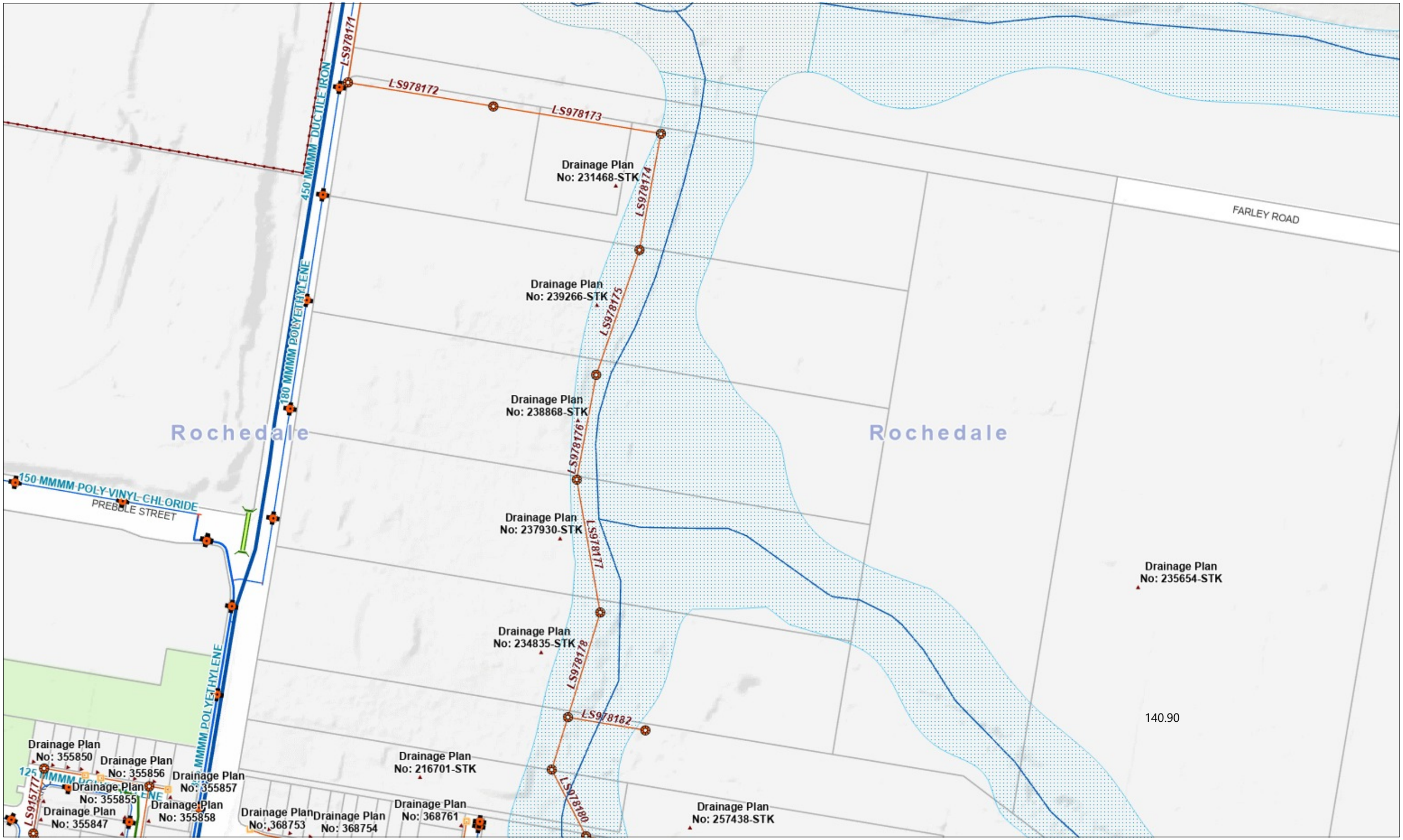
Title: GARDNER ROAD
PRELIMINARY CROSS SECTIONS
SHEET 3 OF 3

Drawing No. DA10
Revision 02

PLOT DATE: 3/18/2025 7:59 AM FILENAME: J:\QLC\27000\27292\CIVL\DWG\27292_DA10_GARDNER ROAD PRELIMINARY CROSS SECTIONS SHEET 3 OF 3.DWG

FULL SIZE ON ORIGINAL 0 10 20 30 40 50 60 70 80 90 100mm

Appendix D
Brisbane City Council eBimap2 Records



Print Date:
14/11/2023 - 10:02 AM

Projection:
Web Mercator Auxiliary Sphere

Notes:

N

BRISBANE CITY

Dedicated to a better Brisbane

Infrastructure

125.0 0 62.0 93.8 125.0

Metres

Scale: 1: 2,500

Legend

Brisbane River flood planning are
Brisbane River flood planning area 4
Brisbane River corridor - section
LEVEL SENSOR
Recycled Water Fitting
GIBAULT JOINT
TEE
CHEMICAL INJECTION POINT
HEAD WALL
Recycled Network Structure Bou
Recycled Water Control Valve
PRESSURE REDUCING
AIR - OFFLINE
Recycled Water System Valve
BALL, OPEN
<all other values>
TREATMENT PLANT
Recycled Water Network Structu
LIFT PUMP - OFFLINE
TRUNK MAIN
Sewer Fitting - Main Fittings
Sewer Fitting - All Other Fittings
END CAP
GIBAULT JOINT
Sewer Manholes
AIR
SCOUR - OFFLINE
GATE
<all other values>
STORAGE FACILITY
ODOUR CONTROL - OFFLINE
Sewer Vertical Gravity Main
TRUNK MAIN
DISCHARGE - OFFLINE
<all other values>
VACUUM MAIN
Sewer Drainage Plan
SQID
Lake
FLOW METER - OFFLINE
PILLAR HYDRANT
SEQWATER
QUU - OFFLINE
QUU
PRIVATE - OFFLINE
BORE PUMP
Water Vertical Pressure Main
Trunk Main

Brisbane River flood planning area 1
Brisbane River flood planning area 5
Waterway centreline
PRESSURE GAUGE - OFFLINE
BEND
TAPPING BAND
RESERVOIR INLET
<all other values>
PIER
Recycled Water Hydrant
REFLUX
ALTITUDE
PRESSURE SUSTAINING - OFFLINE
GATE, CLOSED
<all other values>
Recycled Water- Reservoirs
FILLING STATION
Recycled Water Pumps
Recycled Vertical Pressure Main
SCOUR MAIN
END FLUSHING POINT
JOINT
BEND
CROSS
MANHOLE
SCOUR
VACCUM - OFFLINE
BUTTERFLY
Sewer Network Structure -Treatn
ODOUR CONTROL
Sewer Pump Station
Sewer Vertical Pressure Main
RETICULATION MAIN
TRUNK MAIN - OFFLINE
Sewer Pressure Main - by Type
MODEL LINK - OFFLINE
Sewer Drainage Plan Joiner
Surface Drain
Water Device - All Other Assets
PRESSURE GAUGE - OFFLINE
INGROUND HYDRANT
PRIVATE
SEQ - OFFLINE
SEQWATER
<all other values>
LIFT PUMP
Water Pressure Main - by Type
Scour Main

Brisbane River flood planning area 2a
Brisbane River corridor
Recycled Water Device
FLOW METER - OFFLINE
END CAP
TAPPING
SCOUR OUTLET
Recycled Water Structures
PIPE BRIDGE
INGROUND HYDRANT
SCOUR
FLOW CONTROL
PRESSURE REDUCING - OFFLINE
GATE, OPEN
Recycled Water Service Valve
RESERVOIR
Recycled Water Pump Stations
BOOSTER PUMP
Recycled Water Pressure Main
RETIC MAIN - OFFLINE
INLINE FLUSHING POINT
RODDING JOINT
WYE
INLET
MANHOLE - OFFLINE
VACCUM, AS CONSTRUCTED
REFLUX - OFFLINE
SEWER DOOR - OFFLINE
TREATMENT PLANT, AS CONSTRUC
WET WELL
PUMP STATION
Sewer Gravity Main - by Type
OVERFLOW MAIN
RETICULATION MAIN - OFFLINE
MODEL LINK
LOW PRESSURE MAIN - OFFLINE
Sewer Drainage Plan Extension
Waterbody
FLOW METER
LEVEL SENSOR - OFFLINE
<all other values>
QUU - NON POT
PRIV - OFFLINE
PRIVATE
Water Sampling Point
BOOSTER PUMP - OFFLINE
Water - Model Link
Property Holding

Brisbane River flood planning area 2b
Citywide waterway corridor
PRESSURE GAUGE
LEVEL SENSOR - OFFLINE
CROSS
REDUCER
PIGGING POINT
ANCHOR BLOCK
<all other values>
PILLAR HYDRANT
AIR
REFLUX - OFFLINE
ALTITUDE - OFFLINE
BUTTERFLY, OPEN
SERVICE VALVE CLOSED
RESERVOIR - OFFLINE
PUMP STATION
LIFT PUMP
MODEL LINK
TRUNK MAIN - OFFLINE
OUTLET
PROPERTY CONNECTION BOUNDA
TEE
OUTLET
<all other values>
REFLUX
Sewer System Valve - by Type
GATE - OFFLINE
TREATMENT PLANT - OFFLINE
STORAGE FACILITY - OFFLINE
PUMP STATION - OFFLINE
SYPHON
MODEL LINK
OVERFLOW MAIN - OFFLINE
LOW PRESSURE MAIN
RISING MAIN - OFFLINE
Culvert
Artesian Well
PRESSURE GAUGE
<all other values>
Water Network Structure - Reser
SEQ - NON POT
Water Network Structure Bounda
QUU - OFFLINE
Water Pumps
BORE PUMP - OFFLINE
Raw Water Main
Sealed Plan

Brisbane River flood planning area 3
Local waterway corridor
FLOW METER
<all other values>
JOINT
WYE
SAMPLING STATION
CONCRETE STOP
Recycled Water Chamber
Recycled Water Flow Meter
PRESSURE SUSTAINING
SCOUR - OFFLINE
FLOW CONTROL - OFFLINE
BALL, CLOSED
SERVICE VALVE OPEN
Recycled Water Network Structu
PUMP STATION - OFFLINE
BOOSTER PUMP - OFFLINE
RETIC MAIN
SCOUR MAIN - OFFLINE
VACUUM LIFT
JUNCTION
REDUCER
<all other values>
Sewer Control Valve - by Type
AIR - OFFLINE
SEWER DOOR
BUTTERFLY - OFFLINE
Sewer Network Structure - All Fe
WET WELL - OFFLINE
Sewer Network Structure Bounda
DISCHARGE
SYPHON - OFFLINE
MODEL LINK - OFFLINE
RISING MAIN
VACUUM MAIN - OFFLINE
Drain
Detention Basin
LEVEL SENSOR
Water Hydrant
QUU
PRIVATE - NON POT
Water Pump Stations
SEQWATER - OFFLINE
BOOSTER PUMP
LIFT PUMP - OFFLINE
Reticulation Main
Parcel - Outside Brisbane

Appendix E
Brisbane City Council Overlay Mapping

Overland flow flood planning area

Overland flow flood planning area

Local Government Authorities

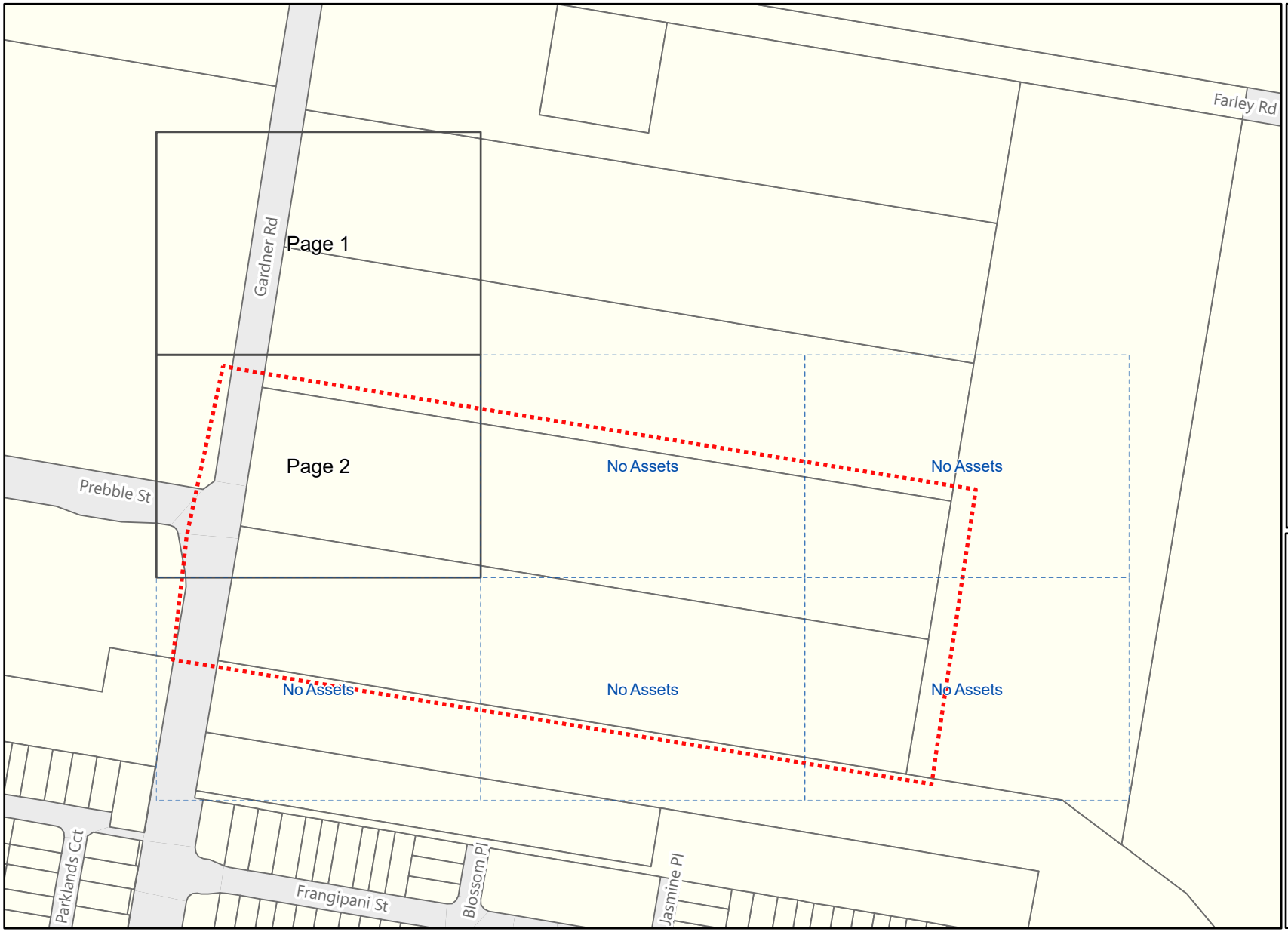
LGA boundary

Property boundaries holding

Property Holding

Appendix F
BYDA

Job # 35459884
Seq # 232066488
Provider: Brisbane City Council
Telephone: 07 3403 8888



Legend

- BYDA Enquiry
- Detailed map page
- No dig site assets

In an emergency contact Brisbane City Council on 07 3403 8888

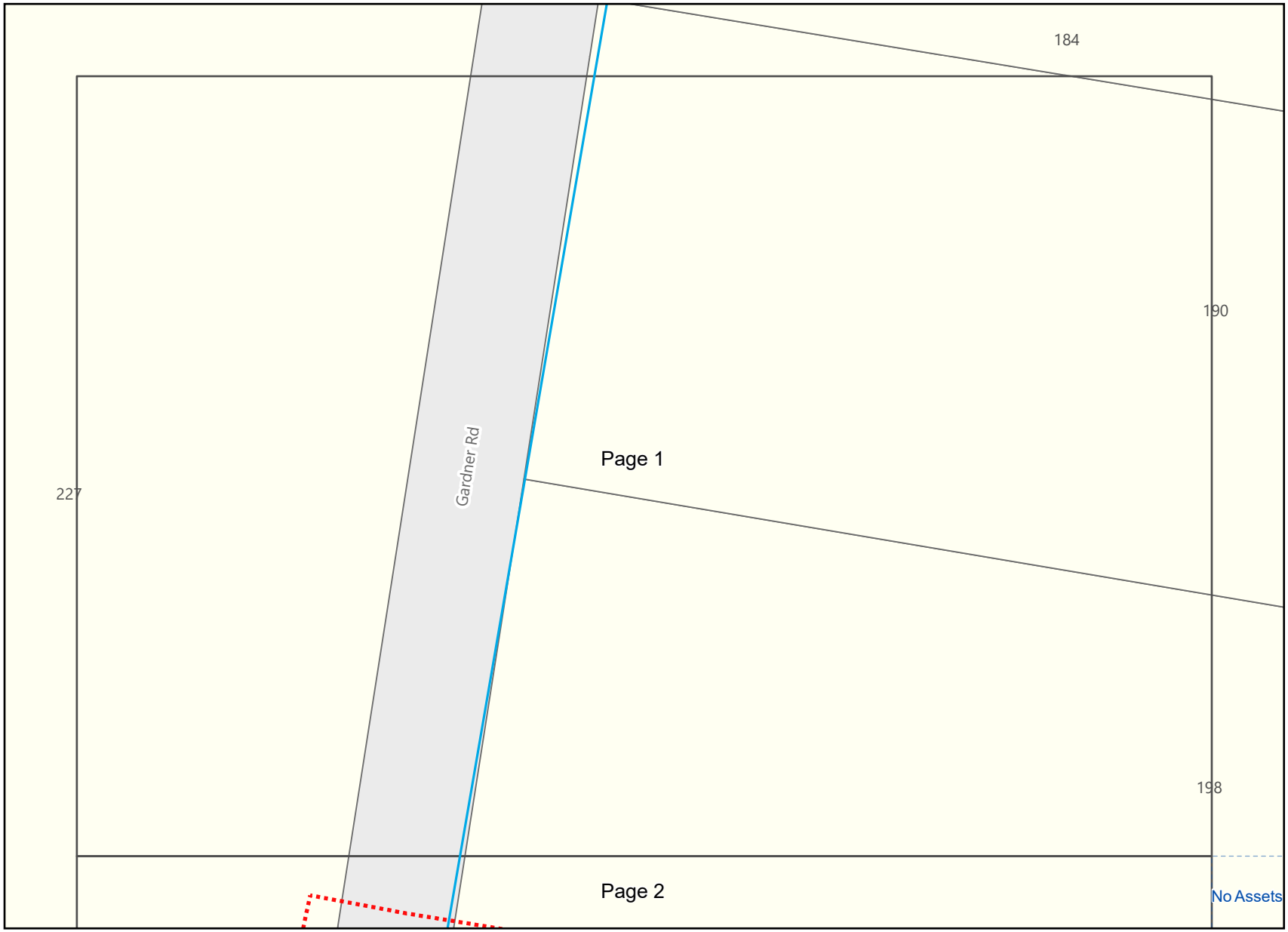
Index Sheet

0 37.5 75 150 m

Scale 1:3,500

Plans generated by SmarterWX™ Automate

Job # 35459884
Seq # 232066488
Provider: Brisbane City Council
Telephone: 07 3403 8888



Legend

BYDA Enquiry

BCC Cable Network

Fibre Optic Cable Location

In an emergency contact Brisbane City Council on 07 3403 8888
13/11/23 (valid for 30 days)

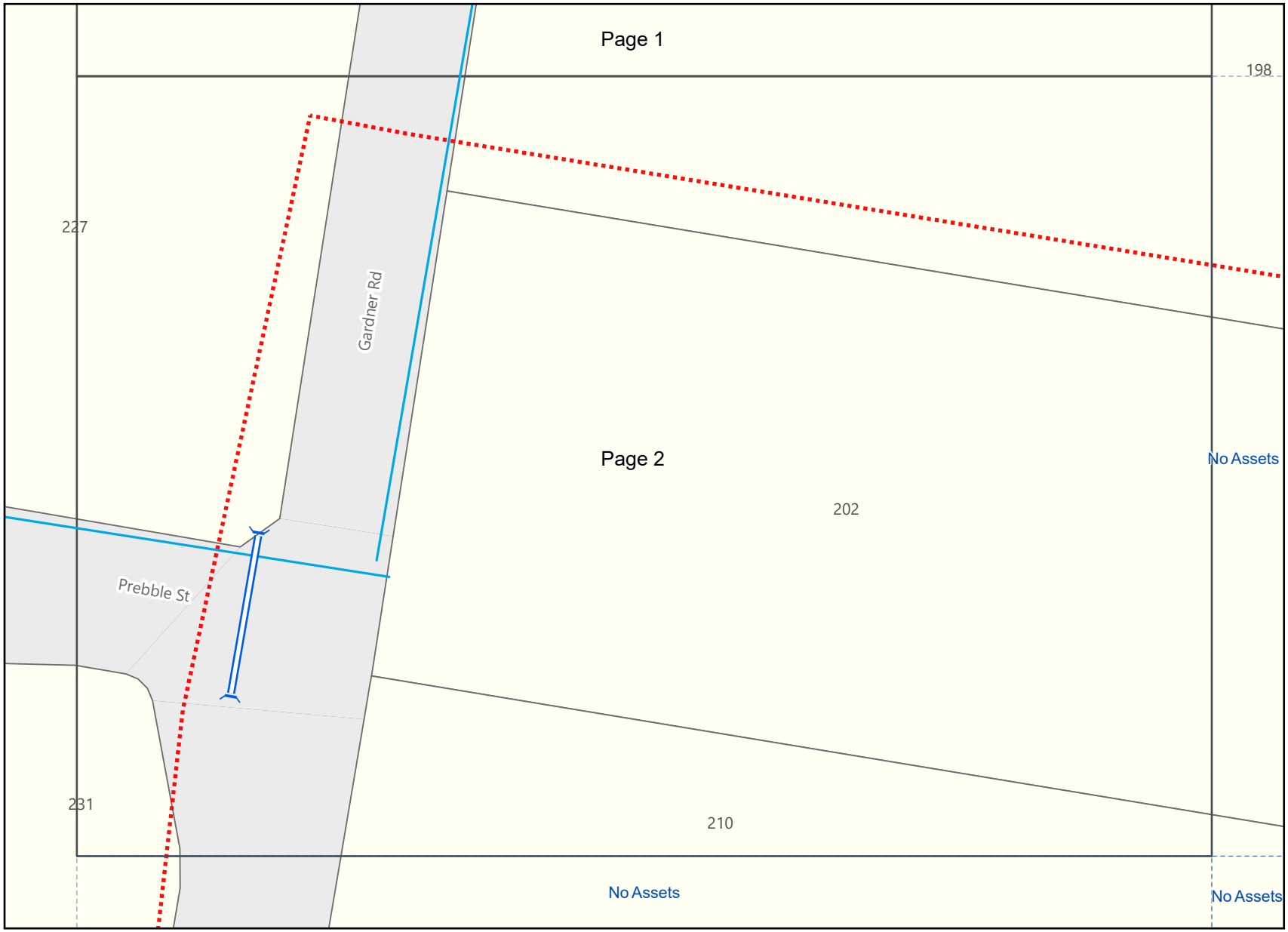
0 10 20 40 m

Scale 1:1,000

N

Plans generated by SmarterWX™ Automate

Job # 35459884
Seq # 232066488
Provider: Brisbane City Council
Telephone: 07 3403 8888



Legend

BYDA Enquiry

Stormwater Network

Stormwater Culvert

BCC Cable Network

Fibre Optic Cable Location

In an emergency contact Brisbane City Council on 07 3403 8888
13/11/23 (valid for 30 days)

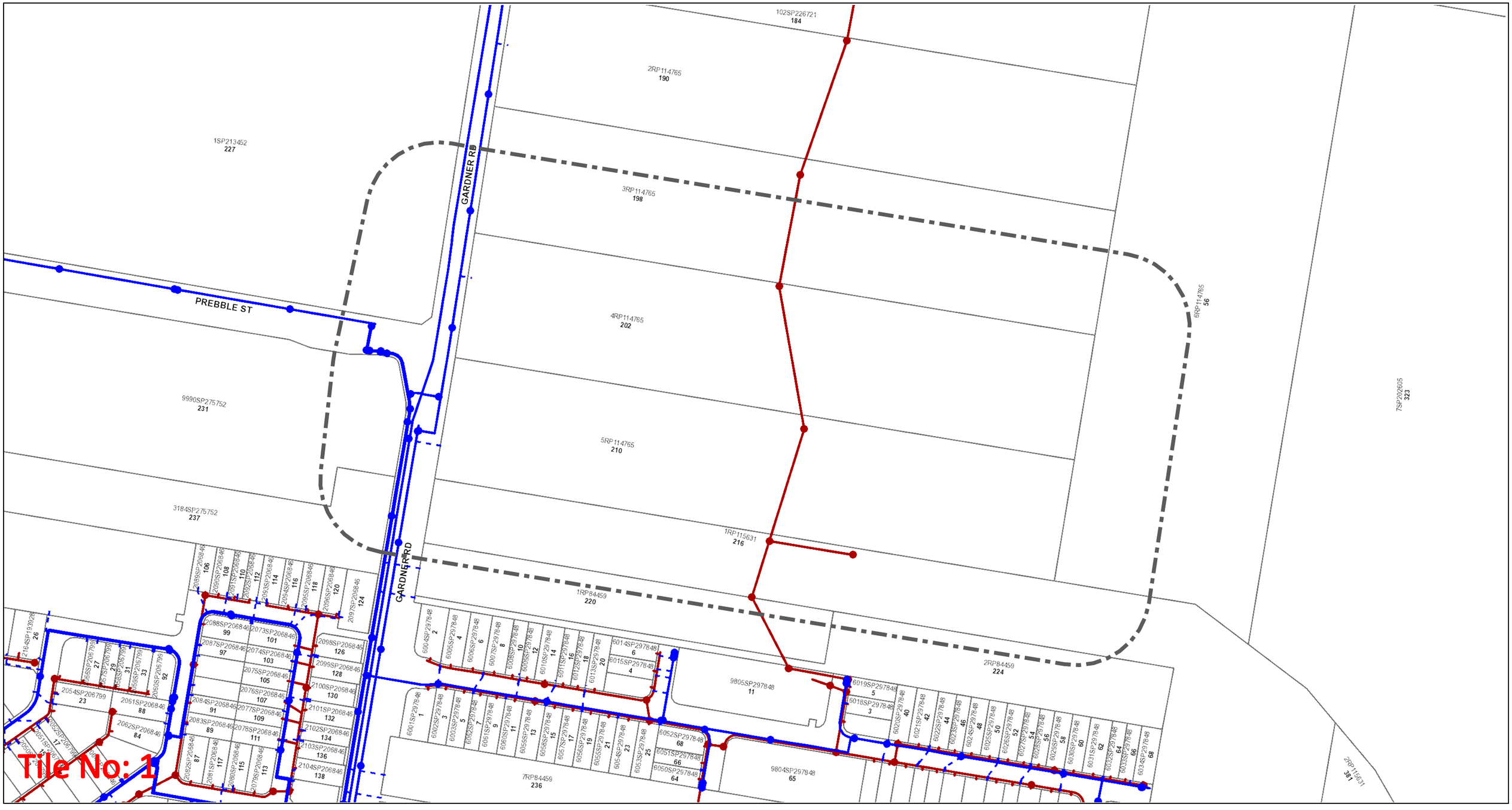
0 10 20 40 m

Scale 1:1,000

N

Plans generated by SmarterWX™ Automate

Urban Utilities - Water, Recycled Water and Sewer Infrastructure



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

DBYD Reference No: 232066495

Date DBYD Ref Received: 13/11/2023

Date DBYD Job to Commence: 14/11/2023

Date DBYD Map Produced: 13/11/2023

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)

N

Map Scale 1:2500

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

BYDA SYMBOLOGY LEGEND

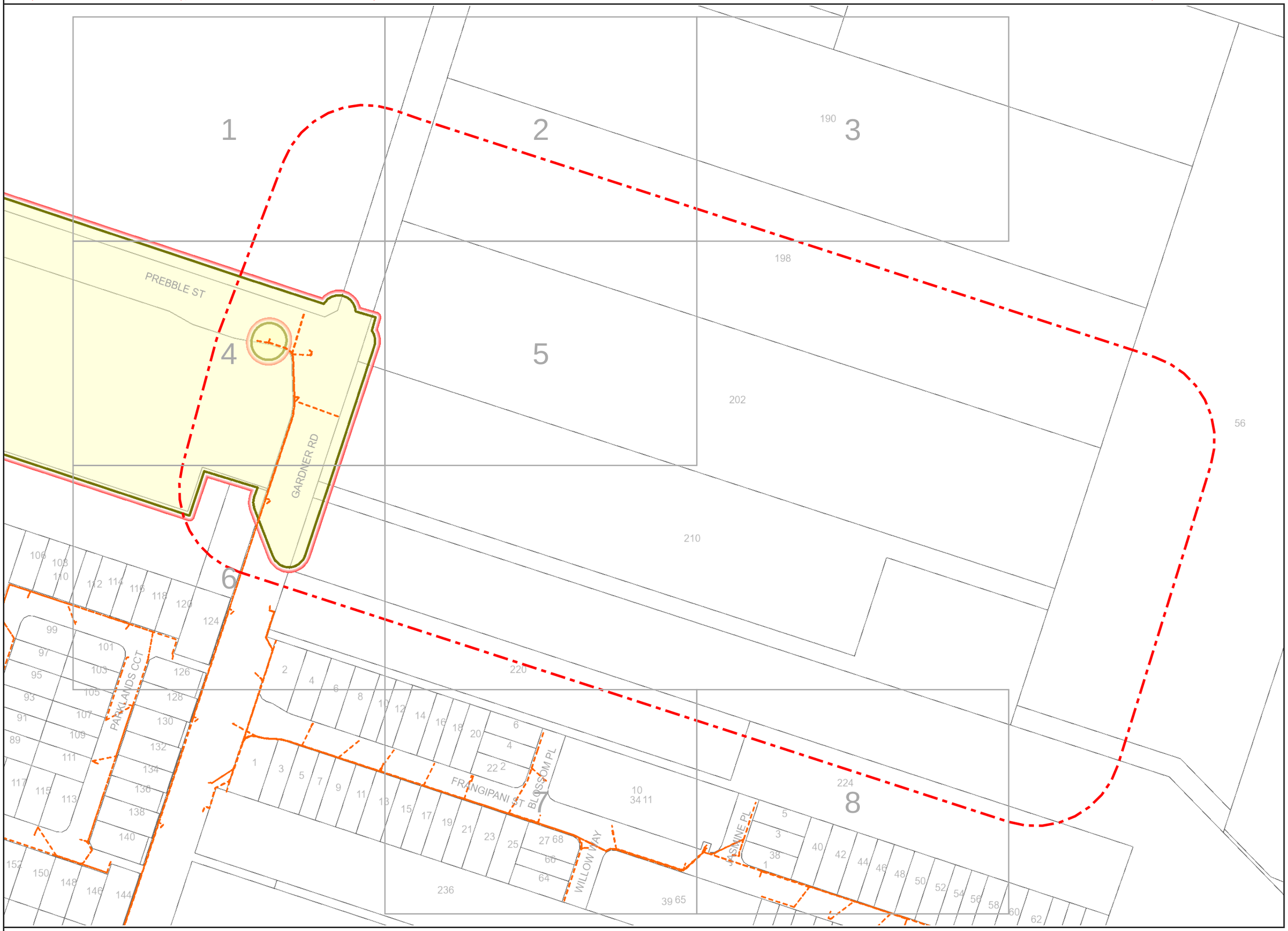
Energy Queensland

- Cross Bonding Link Box - **Critical**
- Disconnect Box - **Critical**
- Ring Main Unit
- Distribution Pad Substation
- Earth
- Remote Earth
- Cable Marker
- Handhole
- Manhole
- Commercial Industrial Pillar
- Distribution Cabinet
- Link Pillar
- Service Pillar
- Feeder Pillar
- Pole
- Streetlight Column
- Communication Junction Pillar
- Communication Pit
- Fibre Patch Panel
- Pilot Cubicle
- Underground Asset 33kV and above
- Underground Asset below 33kV
- Underground Conduit with or without cable
- Pit
- Communication Boundary
- Reserve (RE)
- Water Resource (WR)
- Cadastral Parcels

- Planned Jointing Pit – New/Updated
- Planned Jointing Pit - Remove
- Planned Communication Boundary – New/Updated
- Planned Communication Boundary - Remove
- Planned Tunnel/Trench/Bore - New/Updated
- Planned Tunnel/Trench/Bore - Remove
- Planned Cross Bonding Link Box - New/Updated
- Planned Cross Bonding Link Box - Remove
- Planned Disconnect Box - New/Updated
- Planned Disconnect Box - Remove
- Planned Distribution Pad Substation – New/Updated
- Planned Distribution Pad Substation - Remove
- Planned Distribution Ground Substation – New/Updated
- Planned Distribution Ground Substation - Remove
- Planned Ring Main Unit – New/Updated
- Planned Ring Main Unit - Remove
- Planned Earth – New/Updated
- Planned Earth - Remove
- Planned Cable Marker – New/Updated
- Planned Cable Marker - Remove
- Planned Remote Earth – New/Updated
- Planned Remote Earth - Remove
- Planned Underground Warning Post – New/Updated
- Planned Underground Warning Post - Remove
- Planned Pilot Cubicle – New/Updated
- Planned Pilot Cubicle – Remove
- Planned Fibre Patch Panel – New/Updated
- Planned Fibre Patch Panel – Remove
- Planned Commercial Industrial Pillar – New/Updated
- Planned Commercial Industrial Pillar – Remove
- Planned Distribution Cabinet – New/Updated
- Planned Distribution Cabinet – Remove
- Planned Link Pillar – New/Updated
- Planned Link Pillar – Remove
- Planned Service Pillar – New/Updated
- Planned Service Pillar – Remove
- Planned Pole – New/Updated
- Planned Pole – Remove
- Planned Manhole – New/Updated
- Planned Manhole – Remove
- Planned Streetlight Column – New/Updated
- Planned Streetlight Column – Remove
- Planned Handhole – New/Updated
- Planned Handhole – Remove
- Planned Communication Junction Pillar – New/Updated
- Planned Communication Junction Pillar – Remove

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the ENERGEX BYDA map, then ENERGEX shall be contacted immediately.

For Emergency Situations please call 13 19 62



This output provides details of the ENERGEX electrical network. As variations map exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

energex

BYDA

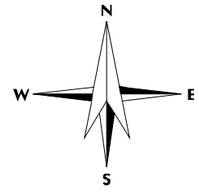
Sequence: 232066490
Date: 13/11/2023

Scale: 1:2050

OVERVIEW

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

AS5488 Category "D" Plan



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energex

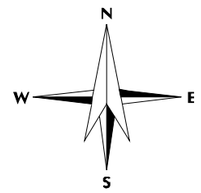
BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 1

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

AS5488 Category "D" Plan



GARDNER RD

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

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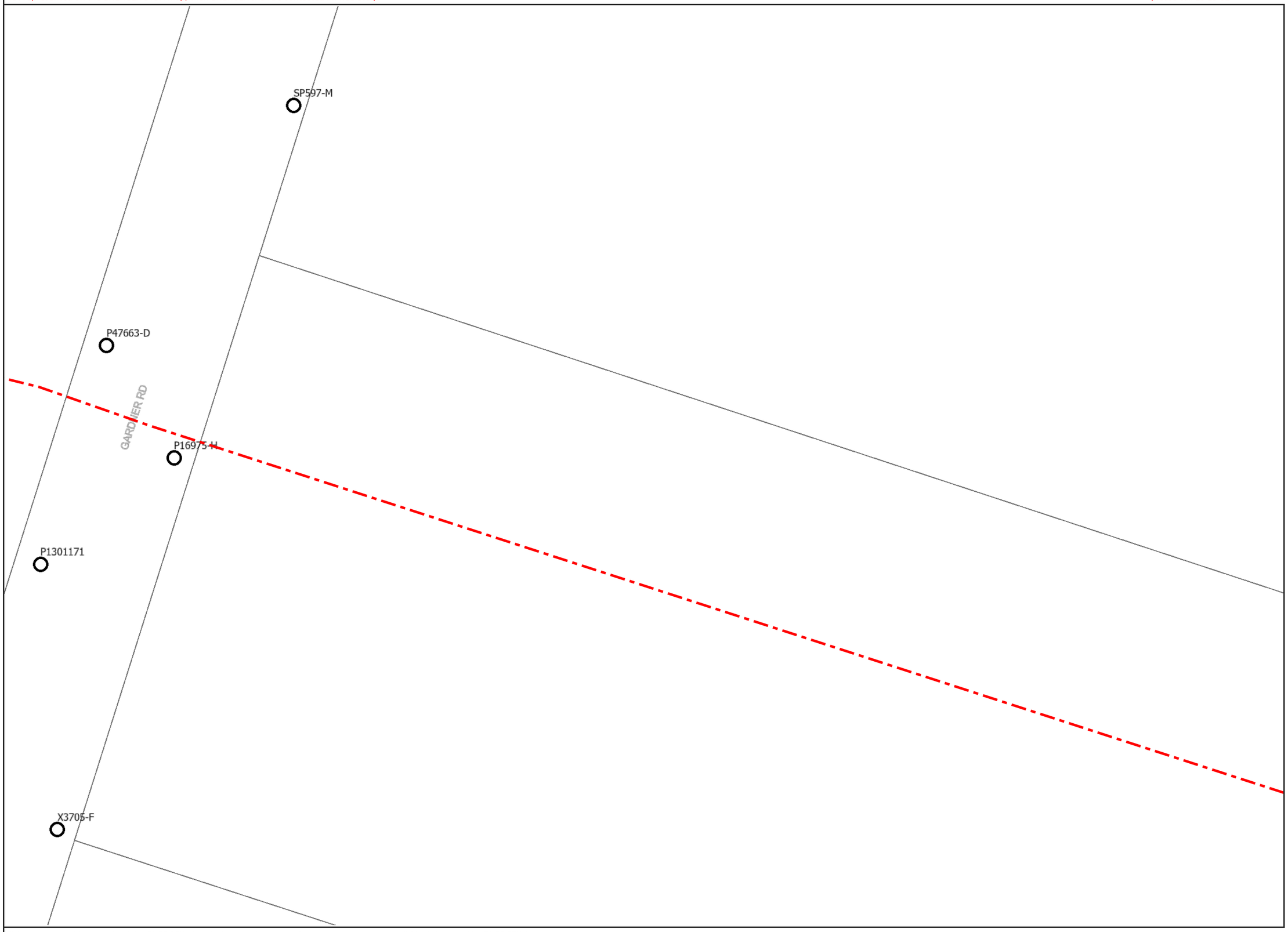


energex

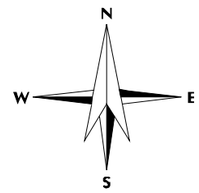
BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 2

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

AS5488 Category "D" Plan



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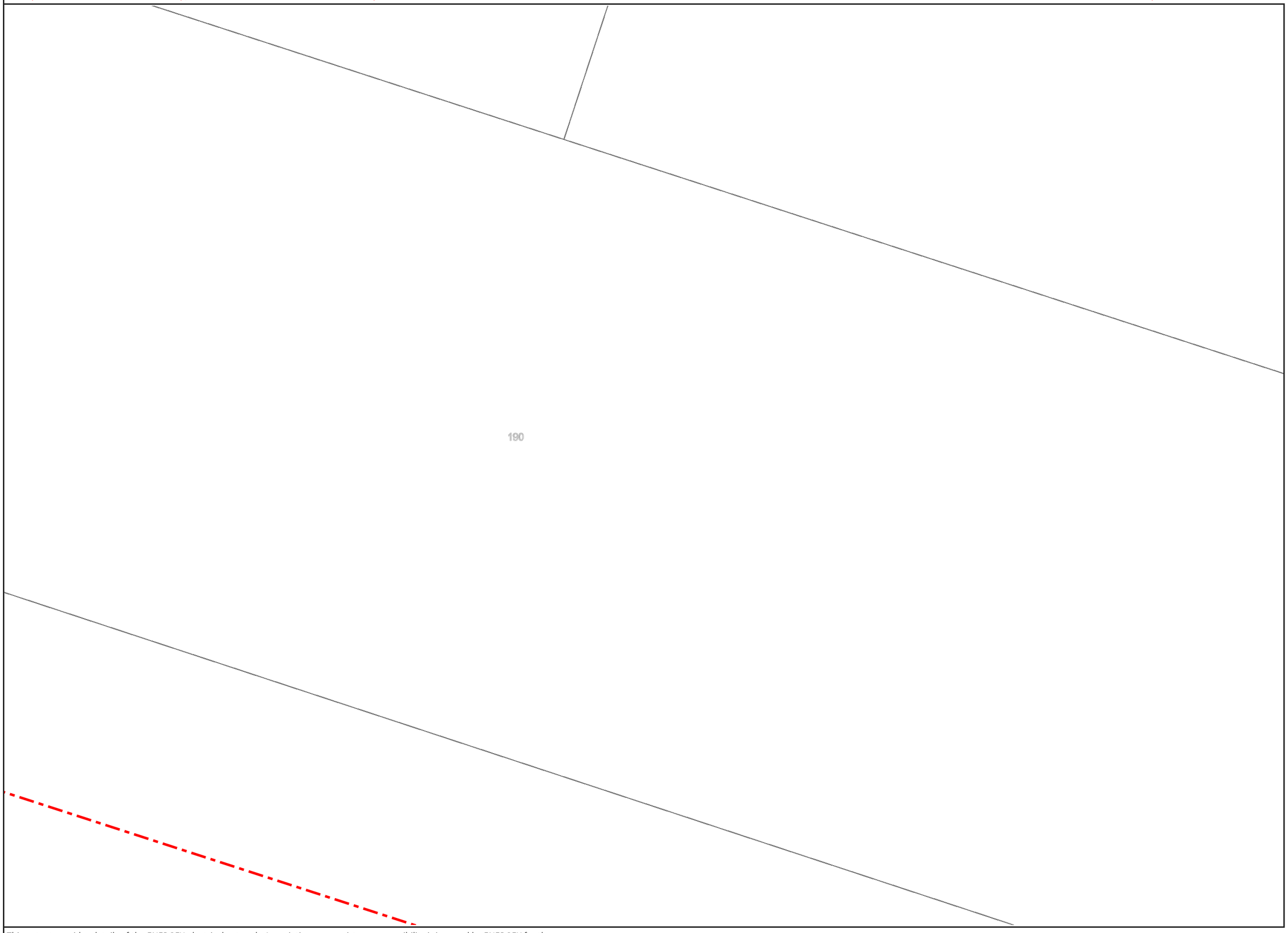

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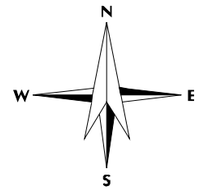
BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 3

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

AS5488 Category "D" Plan



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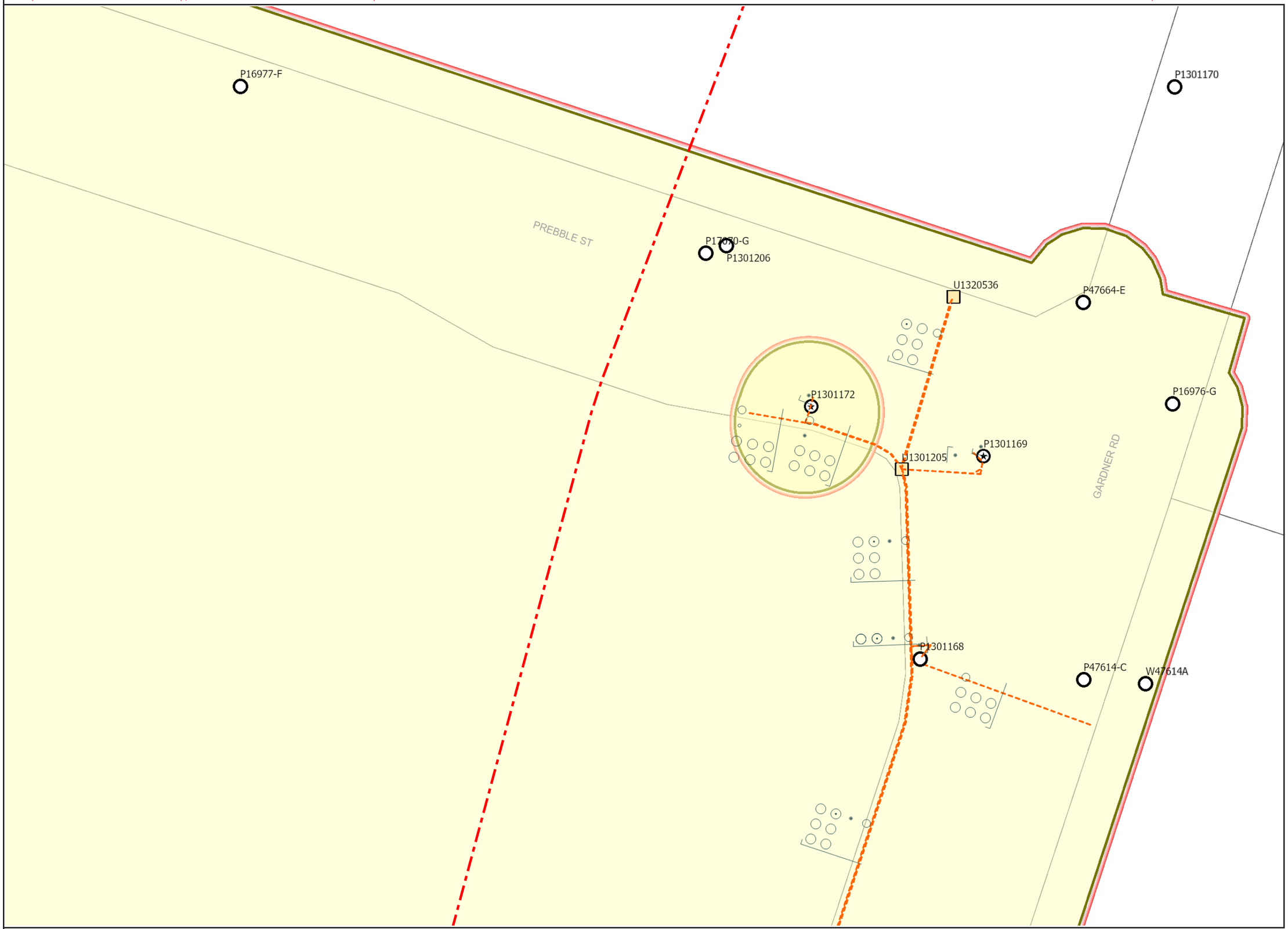

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energex

BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 4

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

AS5488 Category "D" Plan

N
W
E
S

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For Emergency Situations please call 13 19 62

BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 5

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

AS5488 Category “D” Plan

N
W E
S

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

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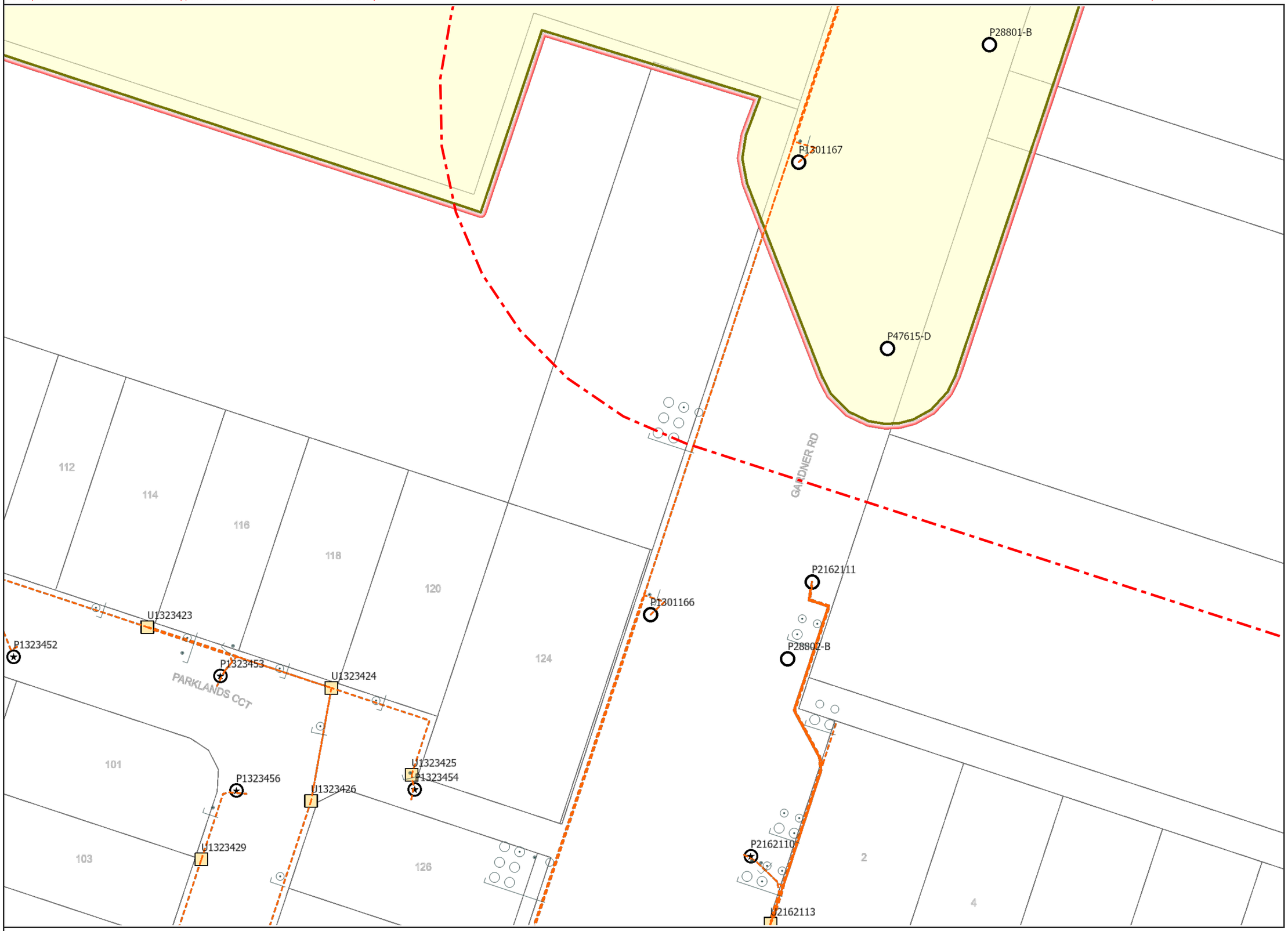
For Emergency Situations please call 13 19 62



This output provides details of the ENERGEX electrical network. As variations map exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 6

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

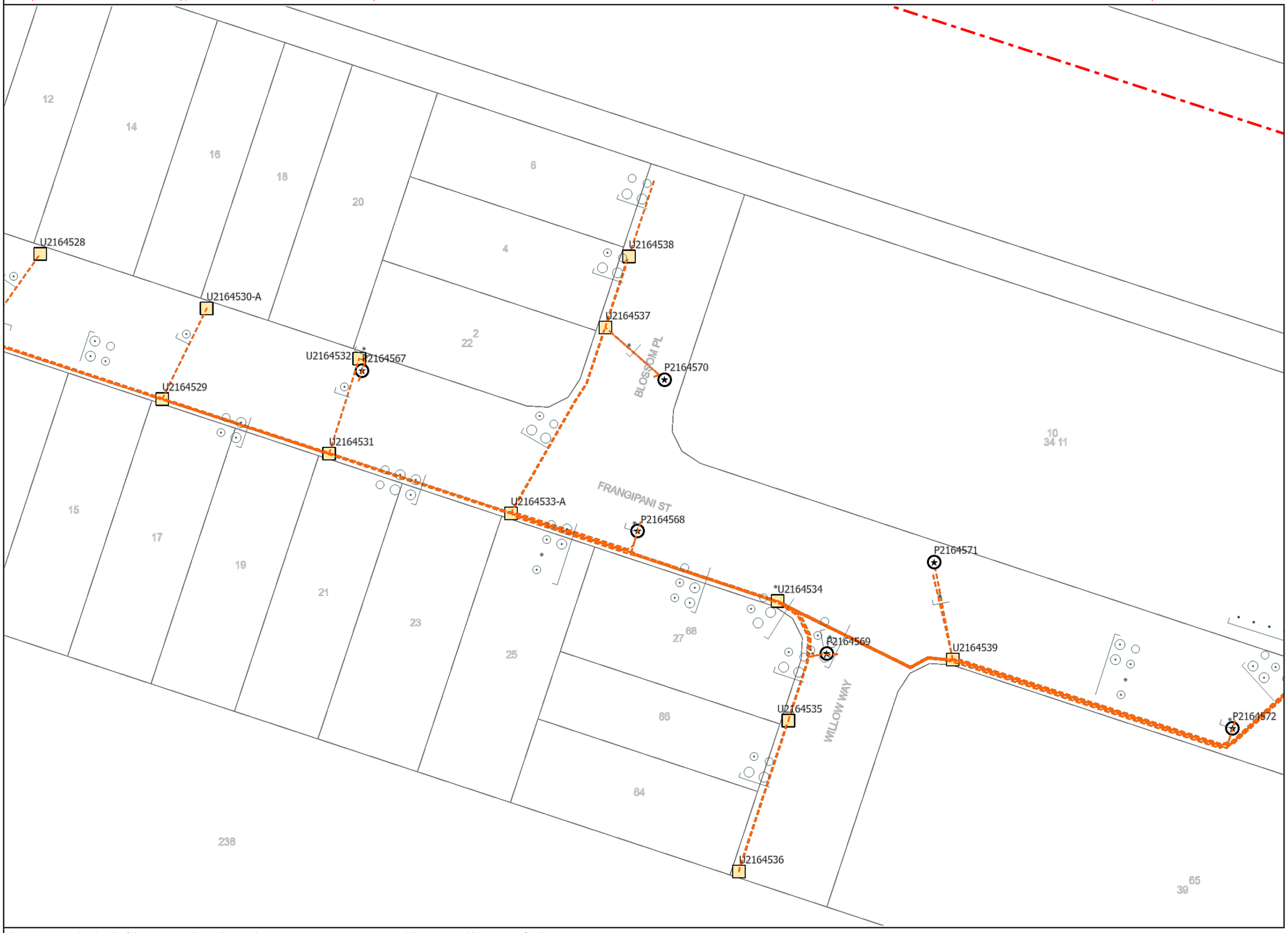
AS5488 Category "D" Plan

N
W
E
S

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the ENERGEX BYDA map, then ENERGEX shall be contacted immediately.

For Emergency Situations please call 13 19 62



This output provides details of the ENERGEX electrical network. As variations map exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

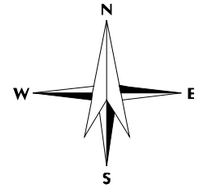
BYDA

Sequence: 232066490
Date: 13/11/2023

Scale: 1:500
Tile No: 7

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

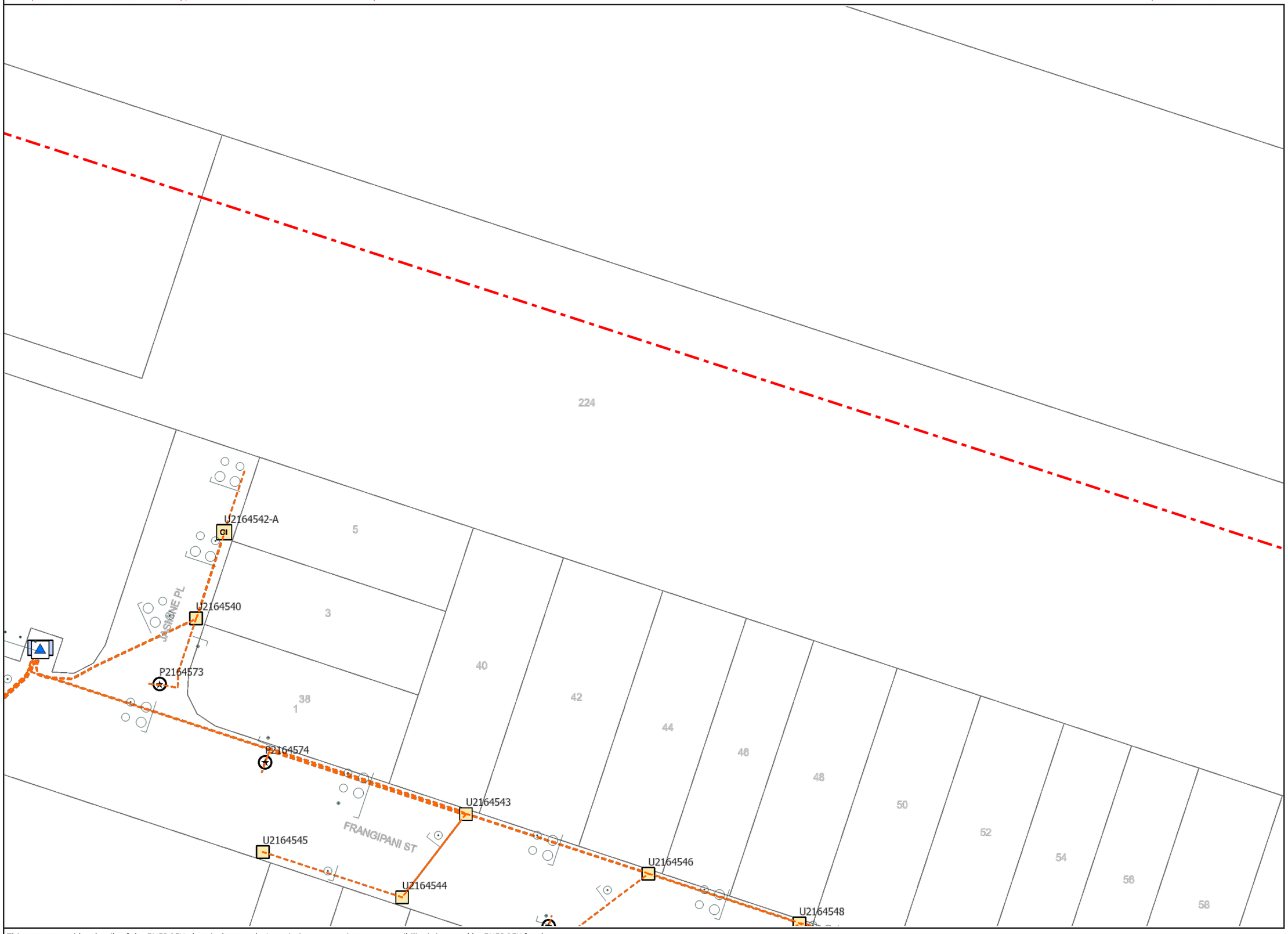
AS5488 Category "D" Plan



DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the ENERGEX BYDA map, then ENERGEX shall be contacted immediately.

For Emergency Situations please call 13 19 62



This output provides details of the ENERGEX electrical network. As variations map exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

BYDA

Sequence: 232066490
Date: 13/11/2023
Scale: 1:500
Tile No: 8

For a full list of Map Symbols, please refer to the supplied BYDA Symbology Legend page

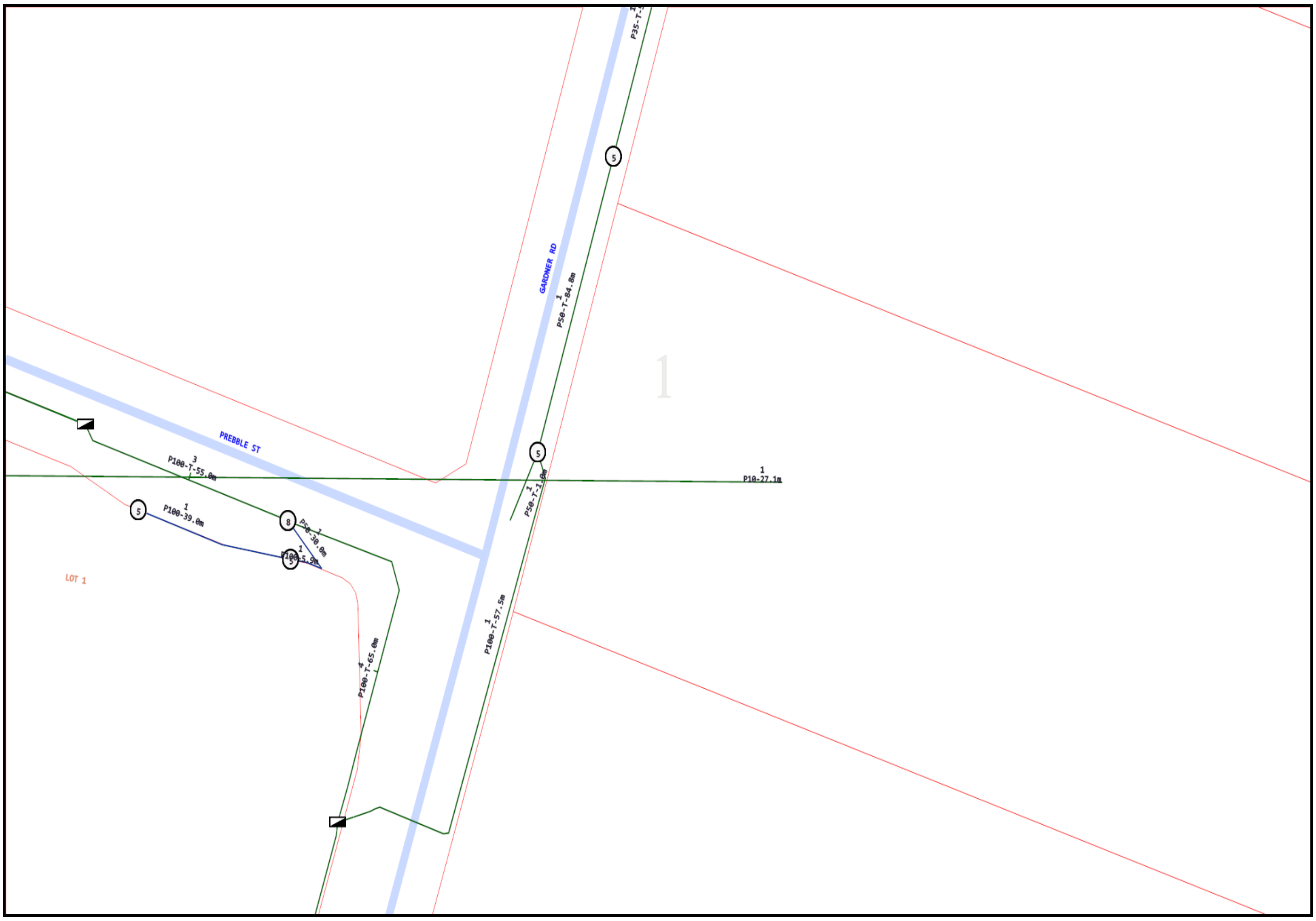
AS5488 Category "D" Plan

N
W E
S

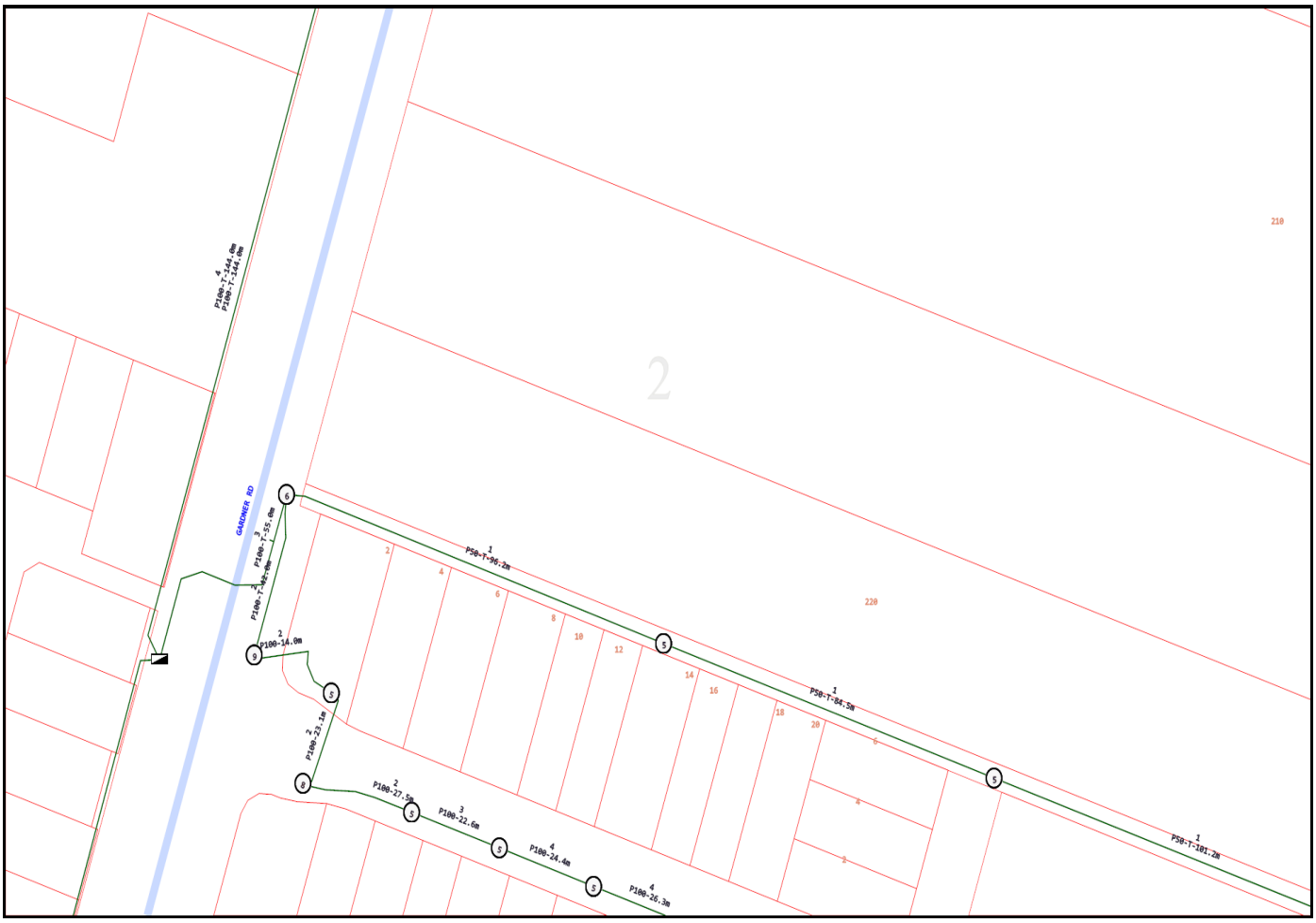
DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

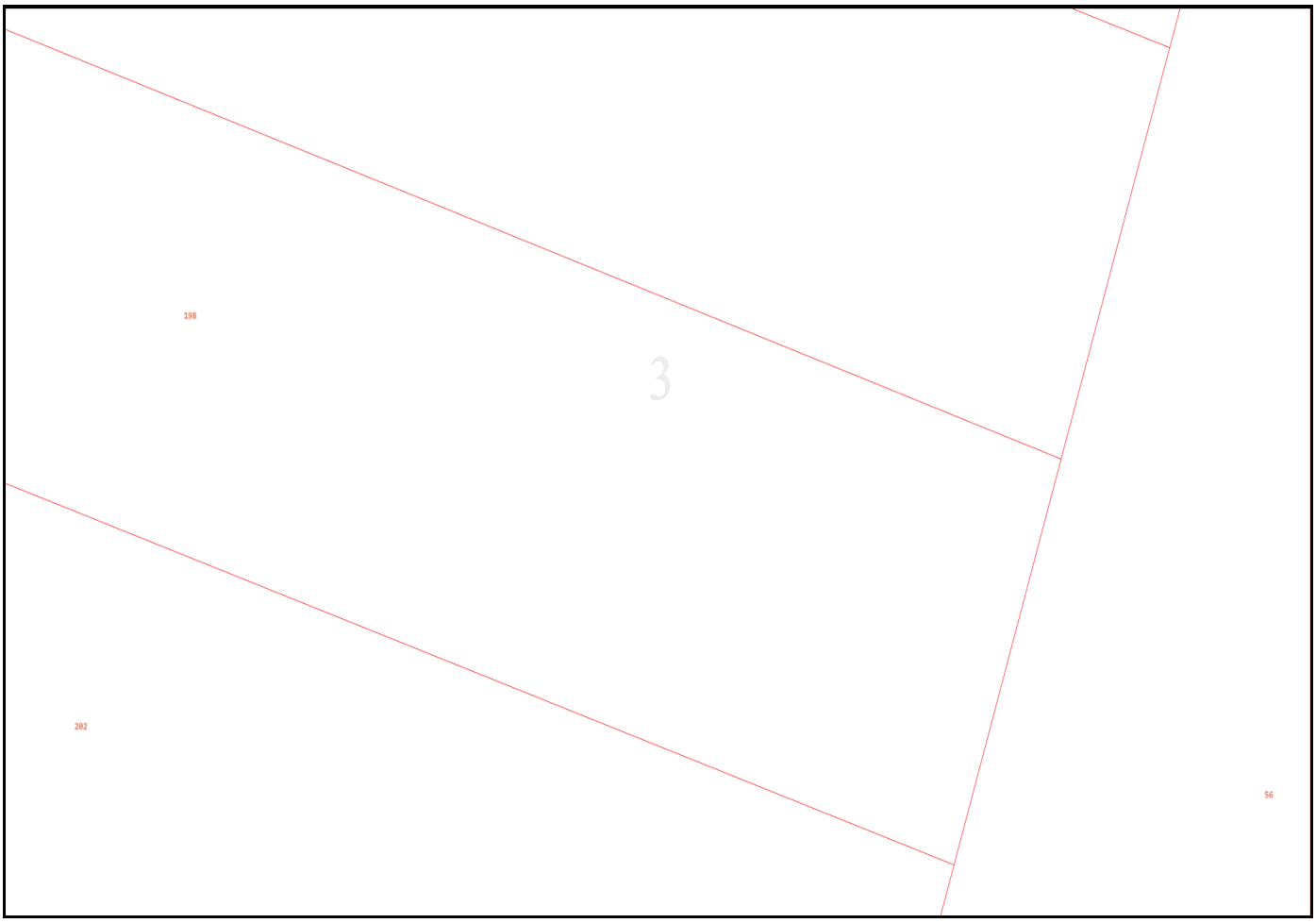
LEGEND

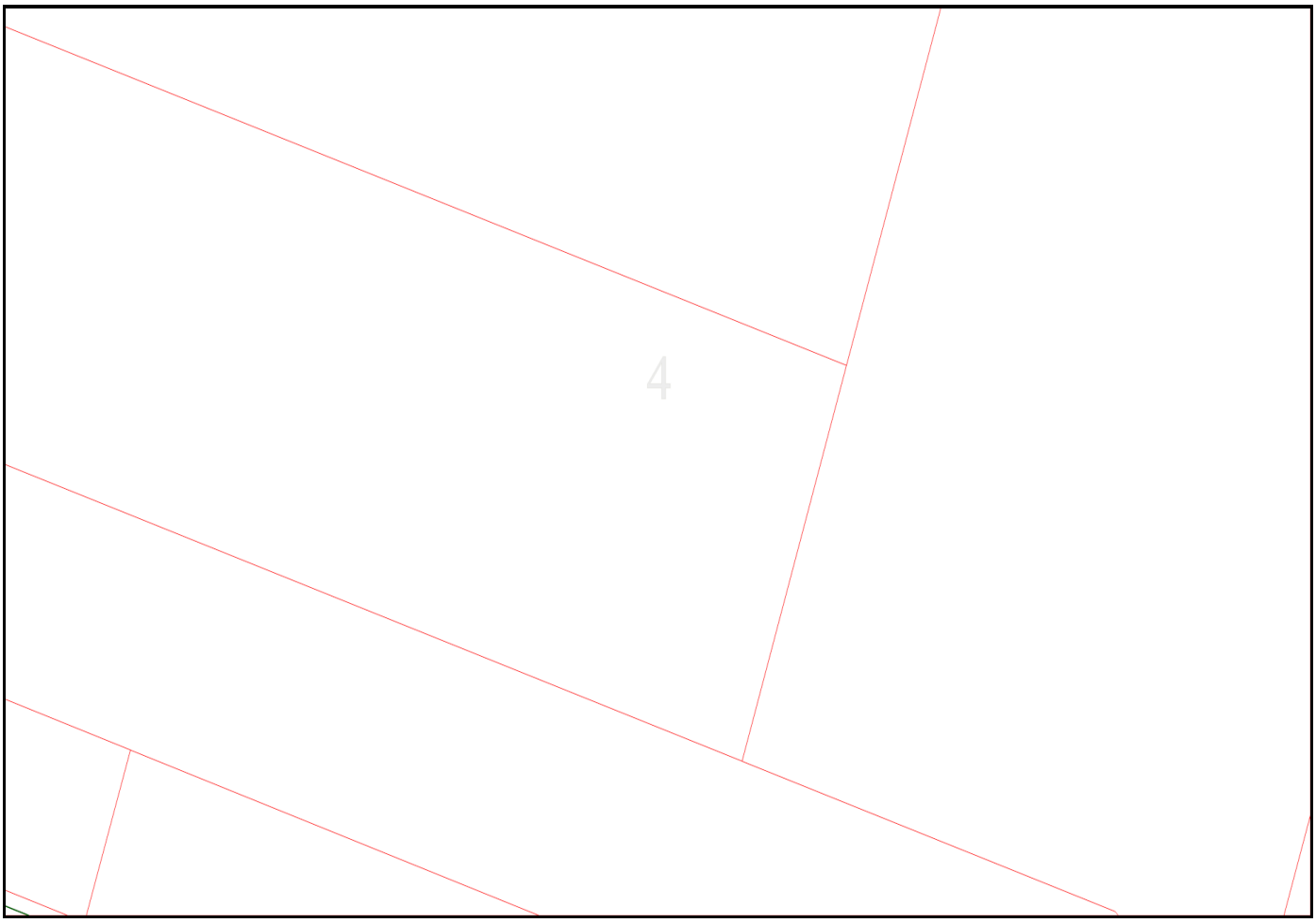
34	Parcel and the location
5	Pit with size "5"
2E	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
2 PO – T- 25.0m P40 – 20.0m 5 9	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
2 10.0m 5 9	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
5 9	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m



GARDNER RD
1
P50-T-84.8m
PREBBLE ST
3
P100-T-55.0m
1
P100-39.0m
1
P50-30.0m
1
P100-5.9m
1
P50-T-1.0m
1
P10-27.1m
1
P100-T-57.5m
4
P100-T-65.0m
LOT 1
1


GARDNER RD
P100-7-144.0m
P100-7-144.0m
P100-7-55.0m
P100-7-96.0m
P50-T-96.2m
P100-14.0m
P100-23.1m
P100-27.5m
P100-22.6m
P100-24.4m
P100-26.3m
P50-T-84.5m
P50-T-101.2m
210
220
2


198
3
202
56



Emergency Contacts

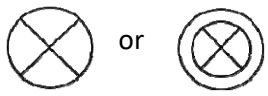
You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

LEGEND

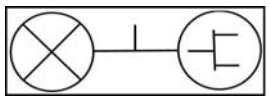
For more info contact a Certified Locating Organisation or Telstra Plan Services 1800 653 935

Exchange
(Major Cable Present)

Footway Access Chamber
(can vary from 1-lid to 12-lid)



Pillar / Cabinet
(above ground / free standing)



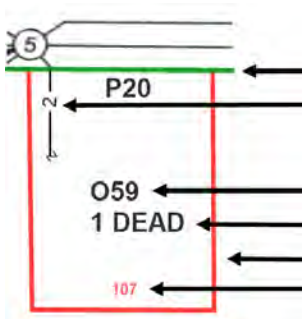
Above ground complex equipment housing (eg RIM)
Please Note: This equipment is powered by 240V Electricity

OC

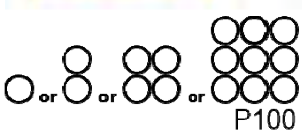
Other Carrier Telecommunications Cable/Asset

Dist
MC

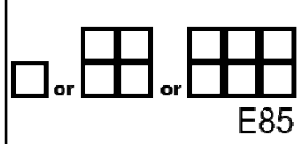
Distribution cables in Main Cable ducts
Main Cable ducts on a Distribution plan
Blocked or damaged duct.



Roadside / Front Boundary
2 pair lead-in to property from pit in street 1
pair working (pair ID 059)
1 pair dead (i.e. spare, not connected)
Side / Rear Property Boundary
Property Number



Single to multiple round conduit
Configurations 1,2,4,9 respectively
(attached text denotes conduit type and size)



Multiple square conduit
Configurations 2, 4, 6 respectively
(attached text denotes conduit type and size)

Cable Jointing Pit
(number / Letter indicating Pit Type)

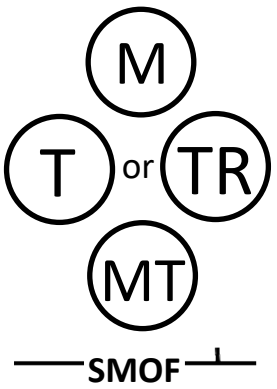
Elevated Joint
(above ground joint on buried cable)

Telstra Plant in shared Utility trench

Aerial Cable / Overhead (includes on wall)

Aerial Cable
(attached to joint Use Pole eg. Power)

Direct Buried Cable



Marker Post Installed

Buried Transponder

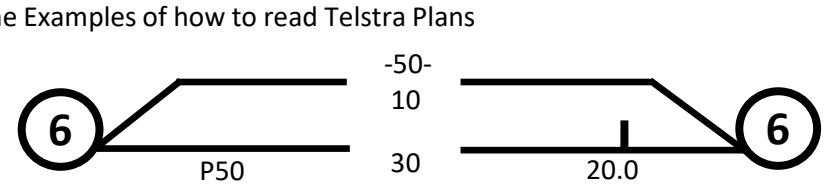
Marker Post, Transponder

Optical Fibre cable direct buried

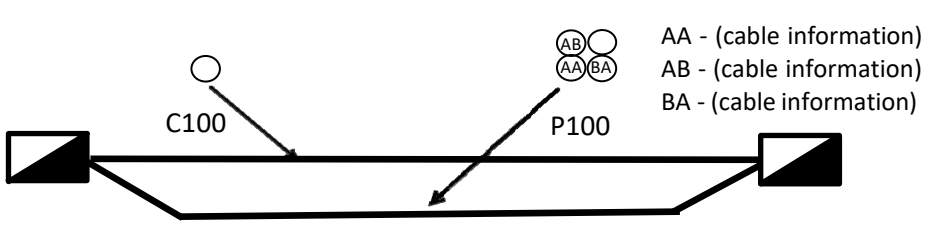
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galanised iron, E - Earthenware
Conduit sizes *nominally* range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

Some Examples of how to read Telstra Plans



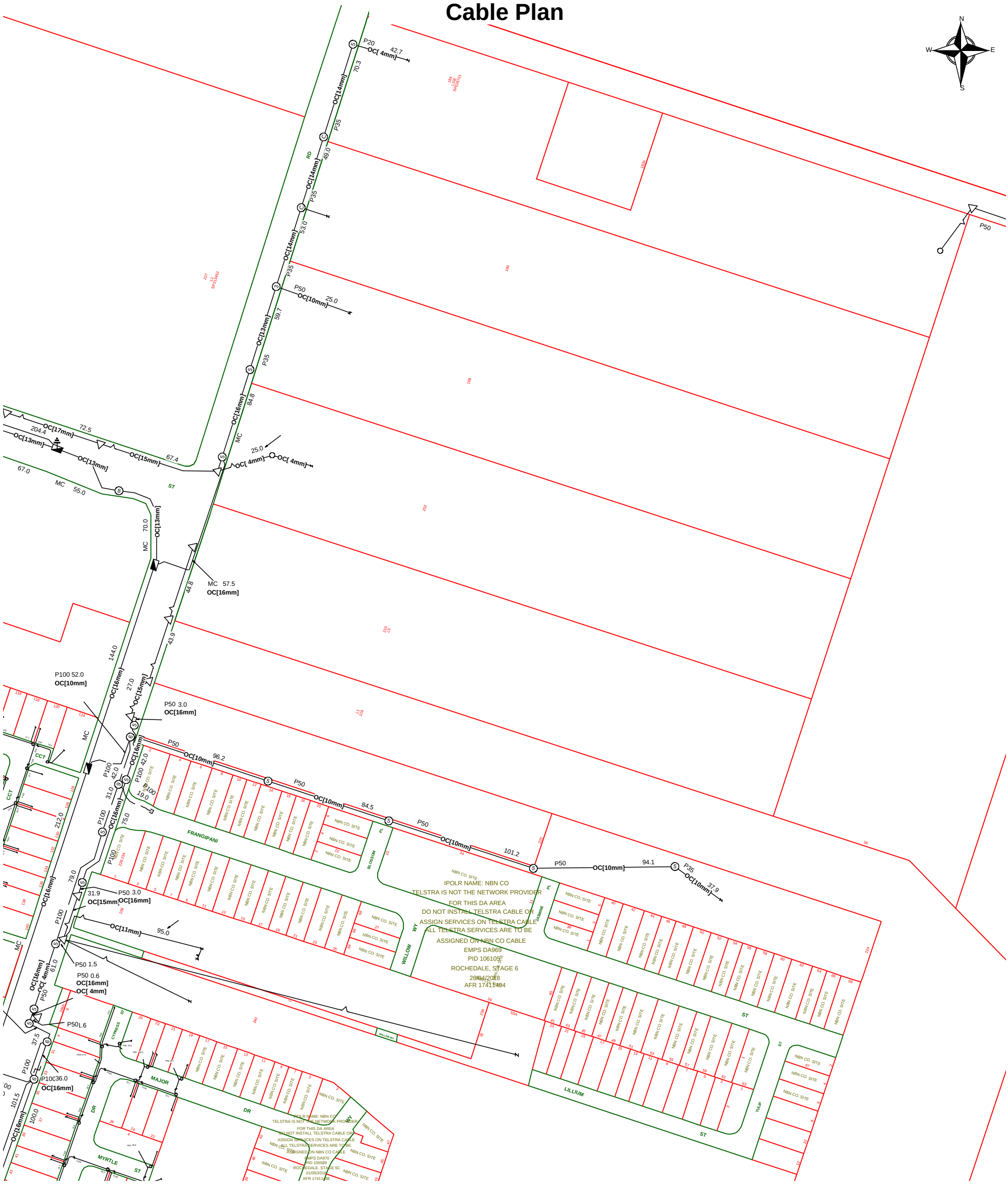
One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6-pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route



Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100)

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK. A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. The exact position of Telstra assets can only be validated by physically exposing them. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Cable Plan



Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 232066492
TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Critical Network Route in plot area. DO NOT PROCEED with any excavation prior to seeking advice from Telstra Plan Services on : 1800 653 935
Generated On 13/11/2023 14:57:27	

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan

Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 13/11/2023 14:57:28

Sequence Number: 232066492

CAUTION: Critical Network Route in plot area.
DO NOT PROCEED with any excavation prior to seeking advice from Telstra Plan Services on : 1800 653 935

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

- Use suitably qualified and supervised professionals, particularly if you are working near assets that contain electricity cables or gas pipes.

- Ensure the below minimum clearance distances between the construction activities and the actual location of our assets are met. If you need clearance distances for our above ground assets, or if the below distances cannot be met, call **1800 786 306** to discuss.

  Minimum assets clearance distances.

  - 300mm when laying asset inline, horizontal or vertical.
  - 1000mm when operating vibrating equipment. Eg: vibrating plates. No vibrating equipment on top of asset.
  - 1000mm when operating mechanical excavators or jackhammers/pneumatic breakers.
  - 2000mm when performing directional bore in-line, horizontal and vertical.
  - No heavy vehicle over 3 tonnes to be driven over asset with less than 600mm of cover.

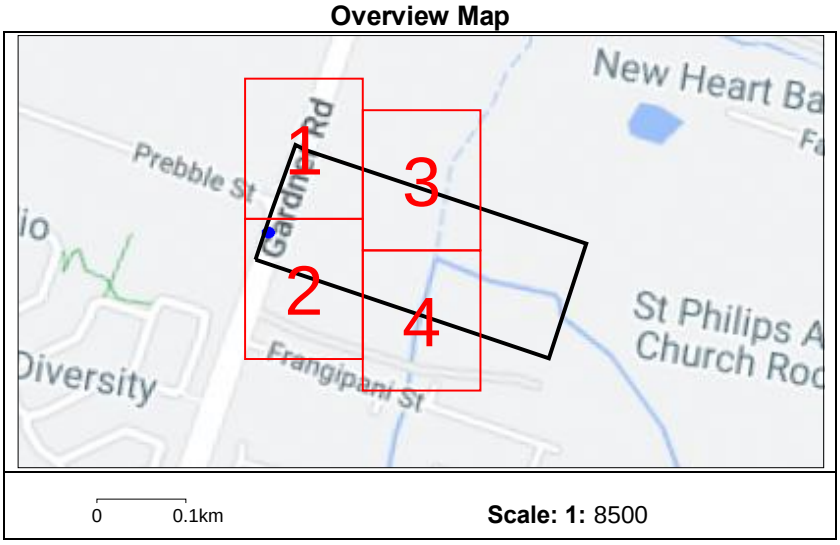
- Reinstate exposed TPG network infrastructure back to original state.

PRIVACY & CONFIDENTIALITY

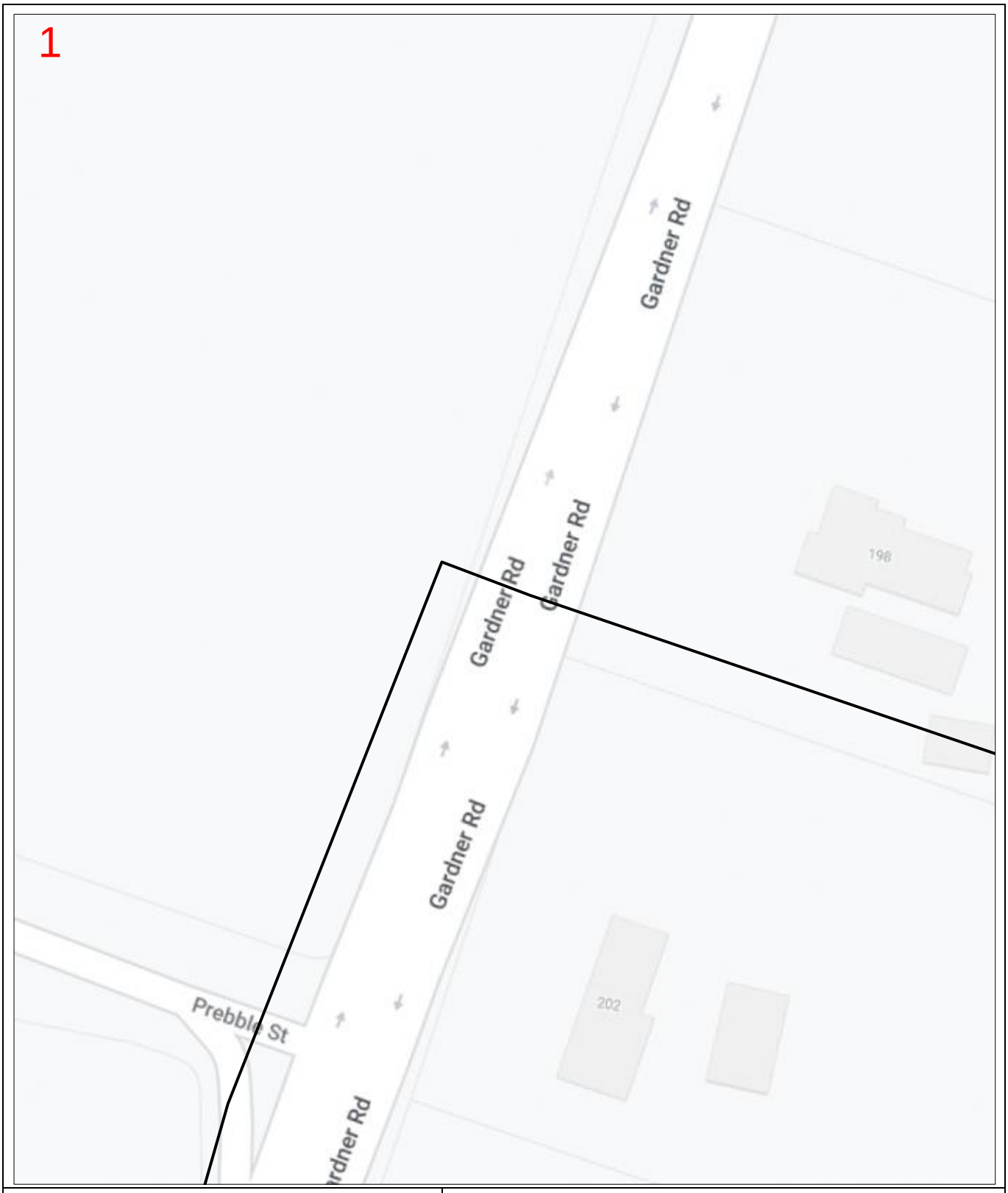
- Privacy Notice – Your information has been provided to us by Before You Dig Australia to respond to your Before You Dig Australia enquiry. We will keep your personal information in accordance with TPG's privacy policy, see www.tpg.com.au/about/privacy.

- Confidentiality – The information we have provided to you is confidential and is to be used only for planning and designing purposes in connection with your Before You Dig Australia enquiry. Please dispose of the information by shredding or other secure disposal method after use. We retain all intellectual property rights (including copyrights) in all our documents and plans.

Overview Map



TPG Telecom Limited



Enquiry Number: 232066494

Map Sheet: 1

Scale: 1: 750

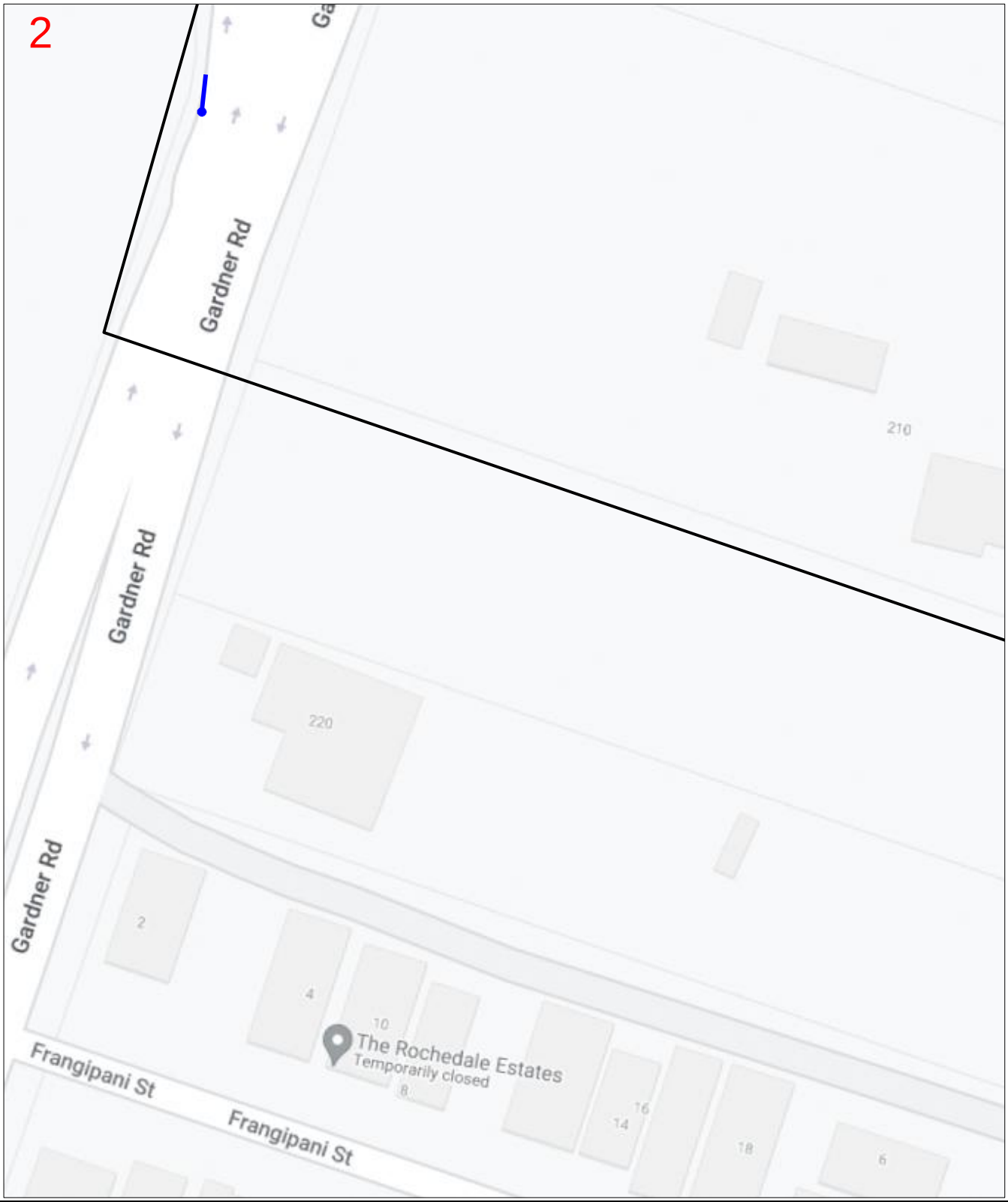
0 0.008km

N

LEGEND

BYDA Work Area

AAPT/PowerTel Pit	TransACT Pit
AAPT/PowerTel Duct	TransACT Duct
DDA Pit	SOUL Pattinson Telecoms Pit
DDA Duct	SOUL Pattinson Telecoms Duct
Agile/Adam Pit	PIPE Networks Pit
Agile/Adam Duct	PIPE Networks Duct



Enquiry Number: 232066494

Map Sheet: 2

Scale: 1: 750

0 0.008km

N

LEGEND

BYDA Work Area			
AAPT/PowerTel Pit		TransACT Pit	
AAPT/PowerTel Duct		TransACT Duct	
DDA Pit		SOUL Pattinson Telecoms Pit	
DDA Duct		SOUL Pattinson Telecoms Duct	
Agile/Adam Pit		PIPE Networks Pit	
Agile/Adam Duct		PIPE Networks Duct	

Enquiry Number: 232066494

Map Sheet: 3

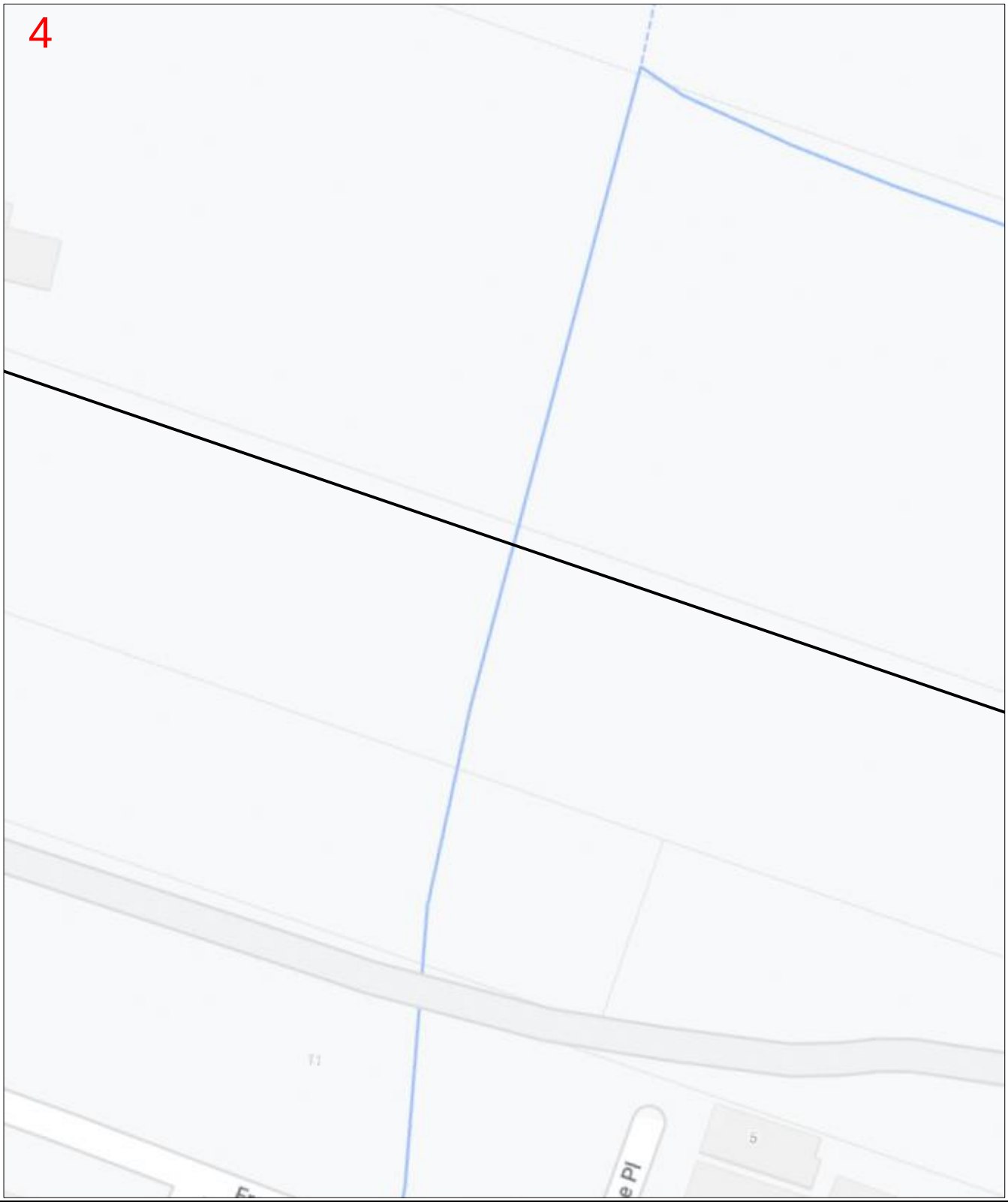
Scale: 1: 750

0 0.008km

N

LEGEND

BYDA Work Area			
AAPT/PowerTel Pit		TransACT Pit	
AAPT/PowerTel Duct		TransACT Duct	
DDA Pit		SOUL Pattinson Telecoms Pit	
DDA Duct		SOUL Pattinson Telecoms Duct	
Agile/Adam Pit		PIPE Networks Pit	
Agile/Adam Duct		PIPE Networks Duct	



Enquiry Number: 232066494

Map Sheet: 4

Scale: 1: 750

0 0.008km

N

LEGEND

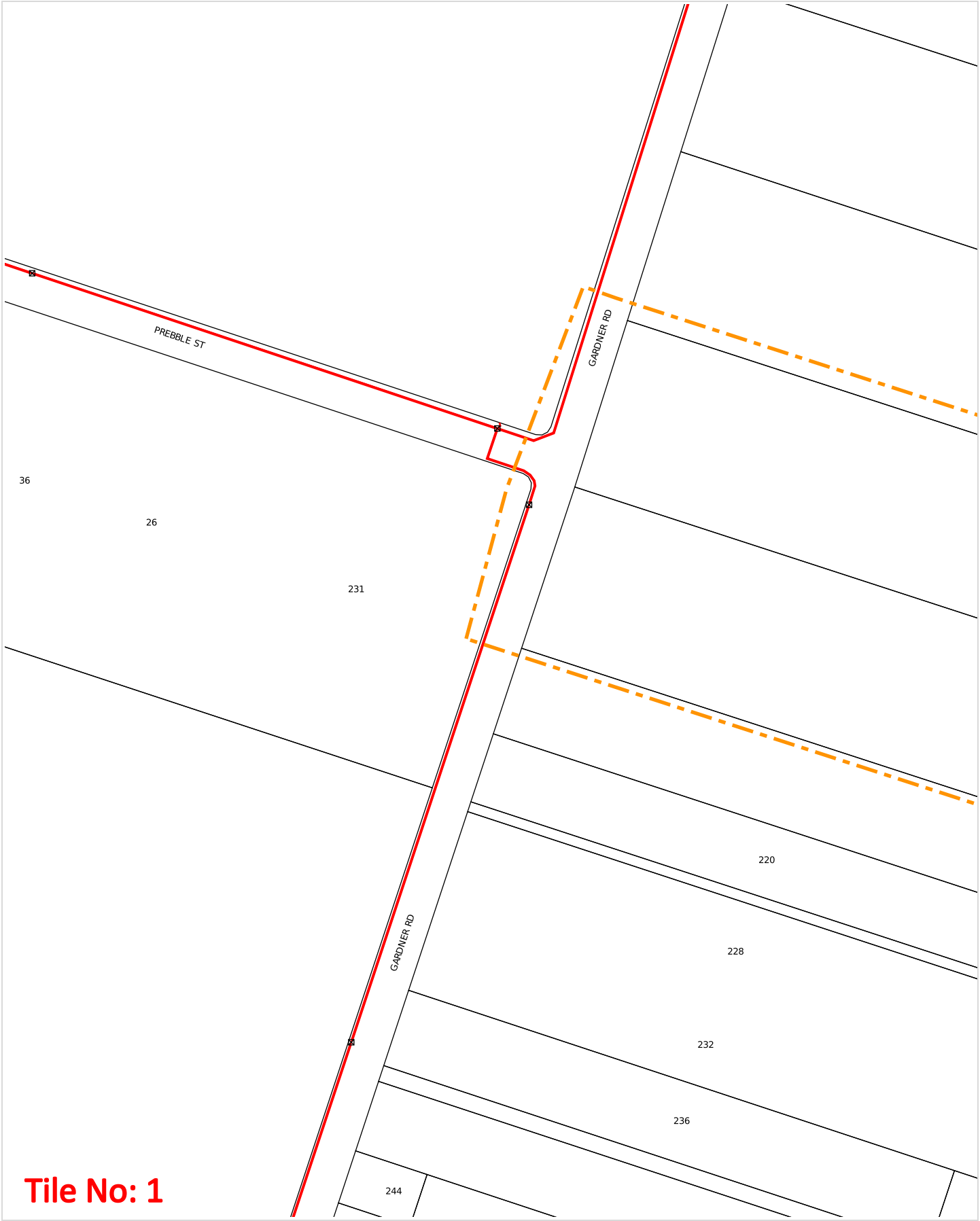
BYDA Work Area			
AAPT/PowerTel Pit		TransACT Pit	
AAPT/PowerTel Duct		TransACT Duct	
DDA Pit		SOUL Pattinson Telecoms Pit	
DDA Duct		SOUL Pattinson Telecoms Duct	
Agile/Adam Pit		PIPE Networks Pit	
Agile/Adam Duct		PIPE Networks Duct	

OVERVIEW

Sequence Number: 232066489

Date Generated: 13 Nov 2023

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208



Tile No: 1

Sequence Number: 232066489

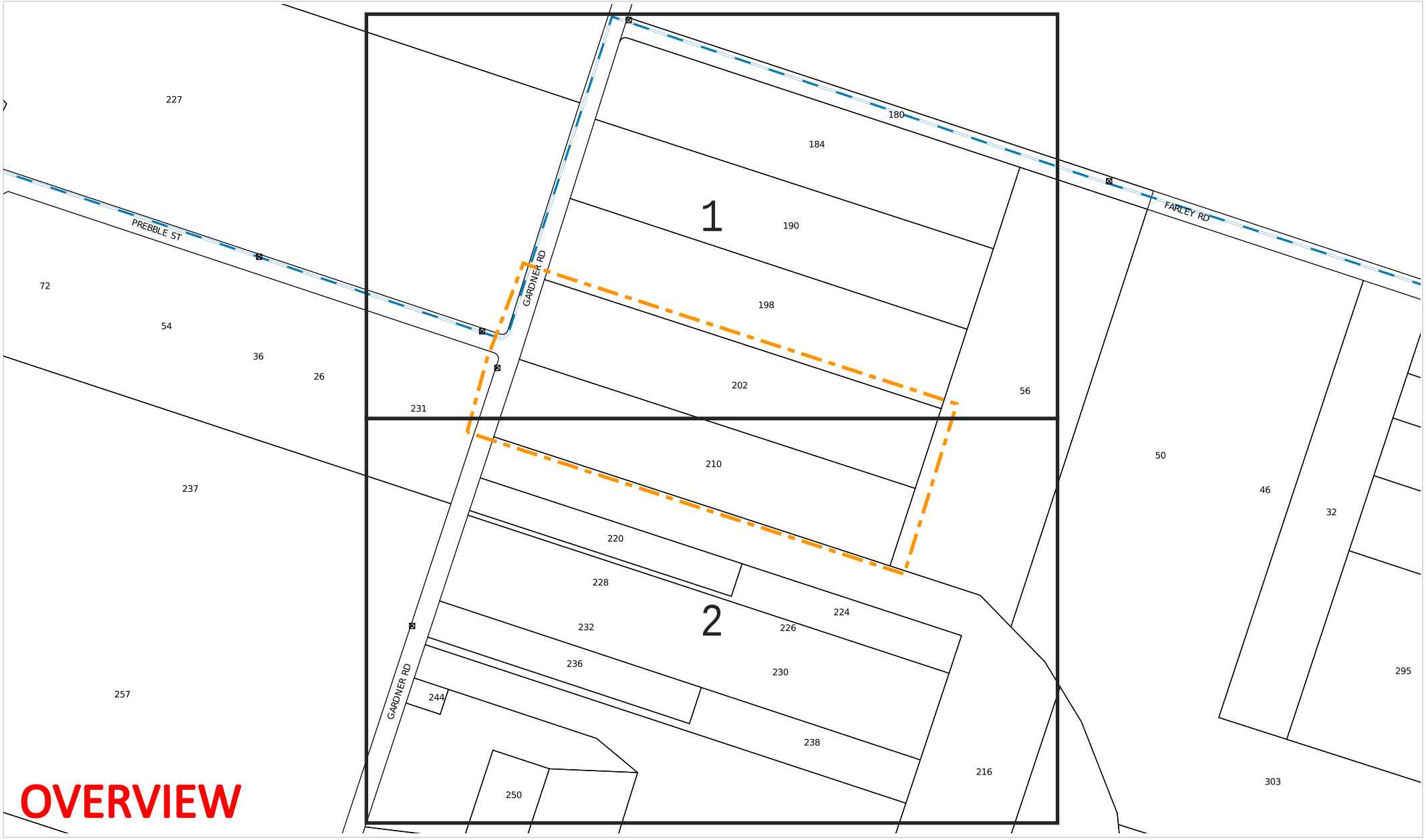
Date Generated: 13 Nov 2023

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

Sequence Number: 232066489

Date Generated: 13 Nov 2023

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208



Uecomm Underground Cable

Scale: 1:5125

Printed on: 13 Nov 2023

Sequence Number: 232066489

Location: 202 Gardner Road, Rochedale, QLD 4123

Job Location

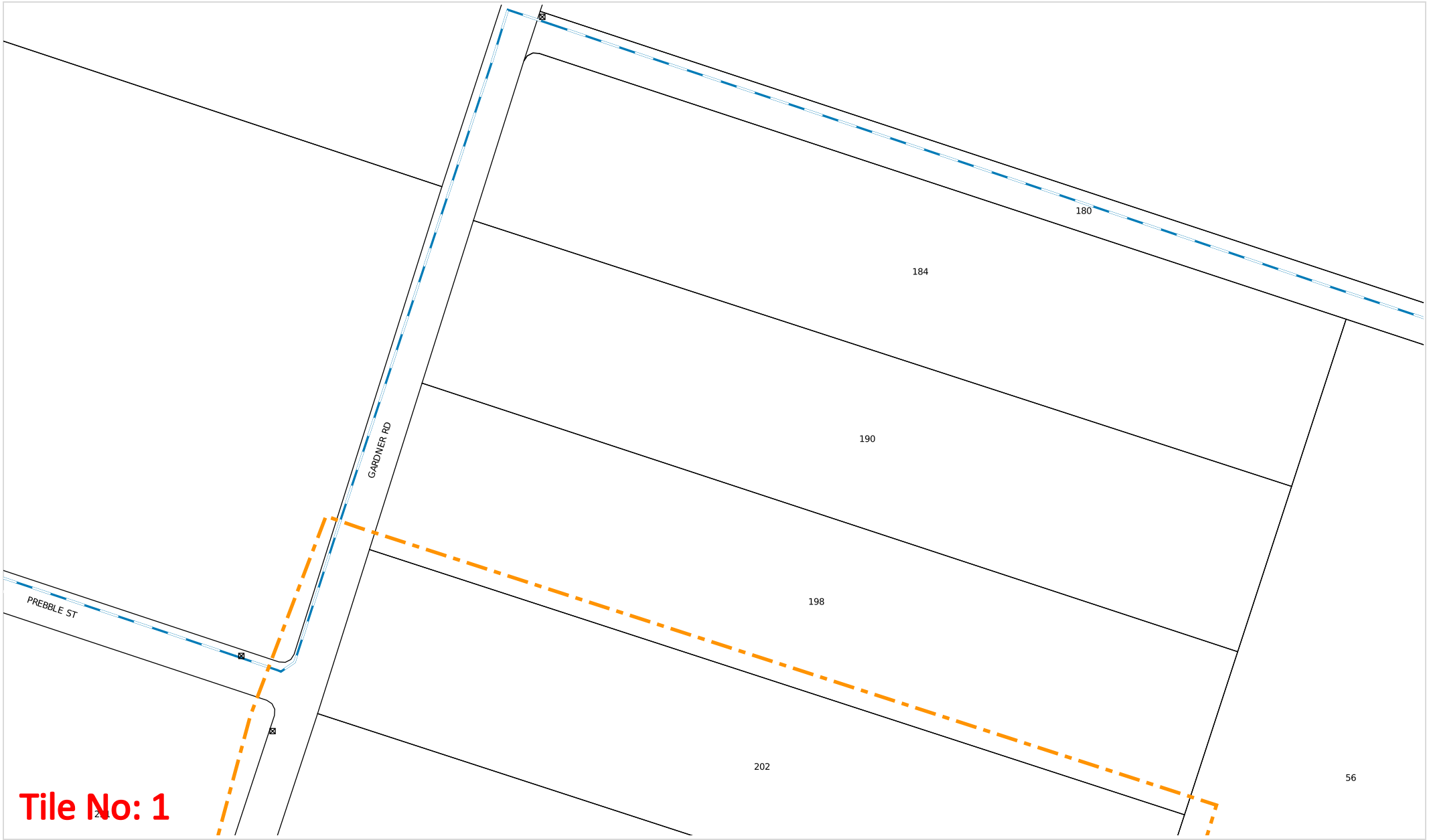
Line

Point

Area

Undergound Asset

Uecomm



Tile No: 1

Uecomm Underground Cable

Scale: 1:2500

Printed on: 13 Nov 2023

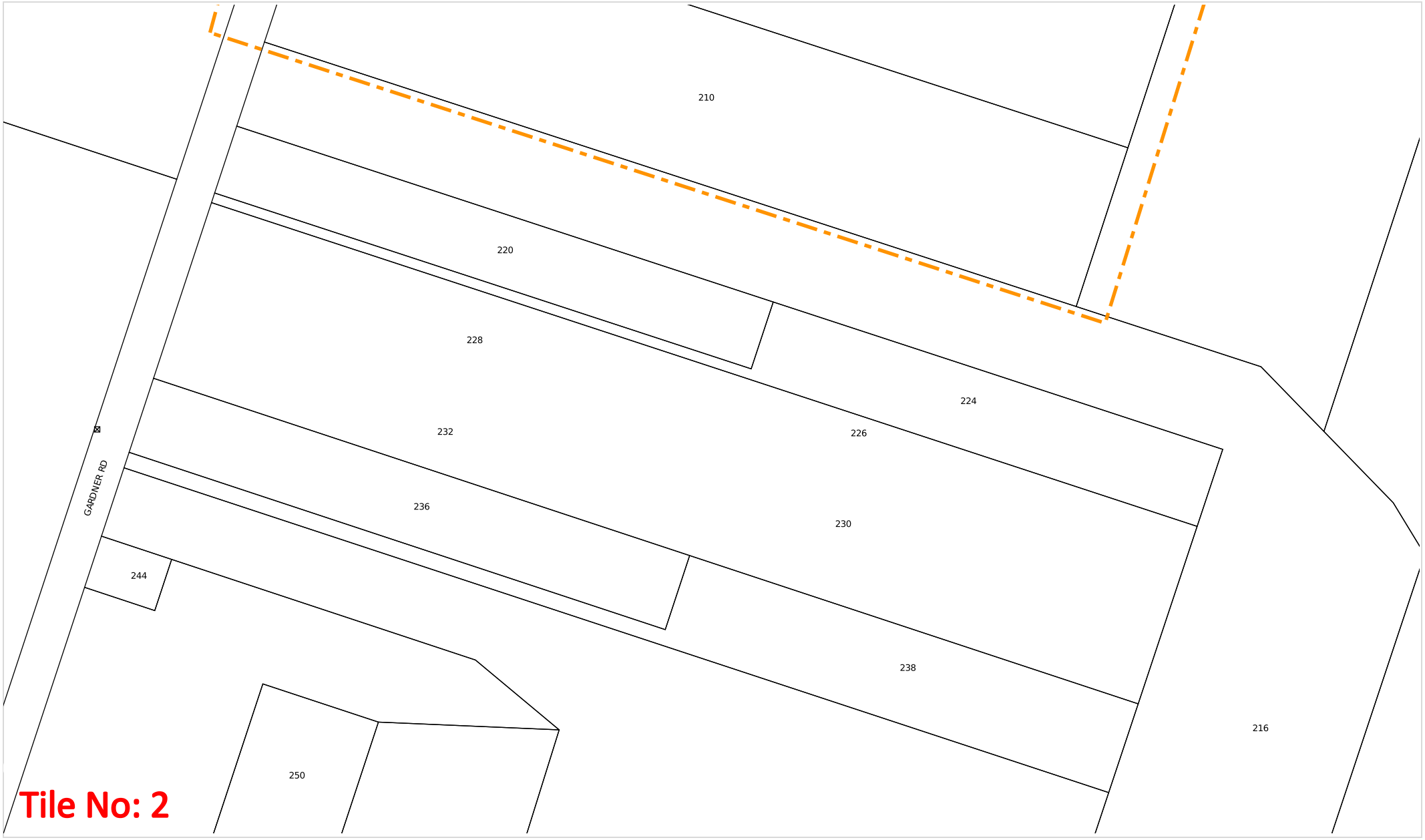
Sequence Number: 232066489

Location: 202 Gardner Road, Rochedale, QLD 4123

N
W
E
S

Job Location
Line
Point
Area

Undergound Asset
Uecomm



Tile No: 2

Uecomm Underground Cable

Scale: 1:2500

Printed on: 13 Nov 2023

Sequence Number: 232066489

Location: 202 Gardner Road, Rochedale, QLD 4123

Job Location

Line

Point

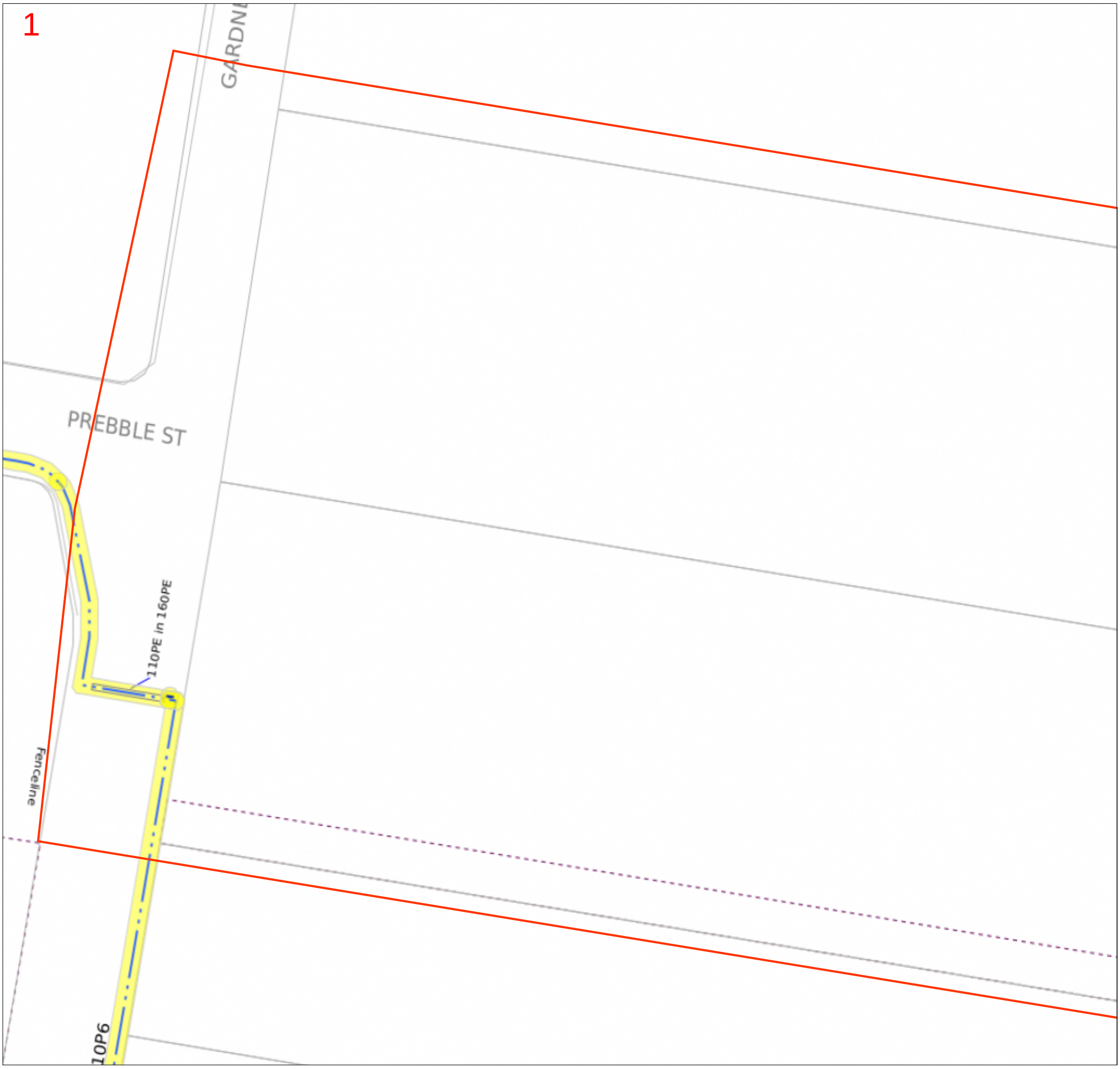
Area

Undergound Asset

Uecomm

Site Address	202 Gardner Road Rochedale 4123	Sequence No	232066493

Before you commence any works you are required to complete the attached 'Work In The Vicinity Of Critical Gas Assets' request form and forward this to APA as soon as practicable.



LEGEND

PIPE AND BOUNDARIES		PIPE CODE / MATERIALS		OBJECTS or TERMS	
LOW PRESSURES		C# *(e.g. C2)*	Cast Iron	VALVES	
MEDIUM PRESSURES		CU	Copper	BURIED VALVES	
HIGH PRESSURES		N2	Nylon	REGULATORS	
TRANSMISSION PRESSURES		P# *(e.g. P6)*	Polyethylene (PE)	GAS SUPPLIED = YES	
PRIORITY MAIN (BEHIND PIPE)		P6,P7,P9-P12	Medium Density PE	CP RECTIFIER UNIT	
PROPOSED (COLOUR BY PRESSURE)		P2,P4,P8	High Density PE	CP TEST POINT/ ANODE	/
LPG (COLOUR BY PRESSURE)		S# *(e.g. S8)*	Steel	SYPHON	
ABANDONED		W2	Wrought Galv. Iron	TRACE WIRE POINT	
IDLE		W3	Poly Coat Wrought Galv. Iron	PIPELINE MARKER	
SLEEVE		*Pipe diameter in millimetres is shown before pipe code* *e.g. 40P6 = 40mm nominal diameter*		NOT TIED IN	N.T.I.
CASING / SPLIT (BEHIND PIPE)	/			DEPTH OF COVER	C
EASEMENT/ JURISDICTION				BACK / FRONT OF KERB	Bok Fok

EXAMPLES

40P6 in 80C2 — 40mm High Pressure Medium Density Polyethylene in an 80mm Cast Iron Casing

63S8 — 63mm Medium Pressure Steel

This map is created in colour and shall be printed in colour

Line / Polygon Request

Map Key

1

Scale 1:700

0 0.008km

N

Appendix G
Development Codes

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.	**Complies** Proposed cut and fill does not exceed 1m.
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. Note—Guidance on the protection of native vegetation is included in the Biodiversity areas planning scheme policy.	**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 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	**N/A** No retaining structures proposed.

	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.	
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 adjoining land and building owners.	**N/A**

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.	**Complies** Alteration and relocation of any services and/or public utilities will be in accordance with authority.
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.	**Complies** Surface and sub-surface drainage design for the development will be in accordance with the BCC Planning Scheme and Policies.
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.	**N/A**
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 scheme policy.	Erosion and Sediment Control measures are to be addressed during the detailed design phase of the development.

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.	**Development will comply at construction phase.**
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.	**Development will comply at construction phase.**
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.	**Development will comply at construction phase.**
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.	**N/A**

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.	**N/A**
	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.	
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.	**N/A**

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.

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.	**Development Complies** Proposed road will be designed in accordance with the Infrastructure design planning scheme policy.
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, pedestrians and cyclists, the discharge of stormwater run-off	**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.	**Development Complies** Proposed road will be designed in accordance with the Infrastructure design planning scheme policy.

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.	**Development Complies** Proposed road will be designed in accordance with 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.	**Development Complies** Proposed road will be designed in accordance with 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 lanes or laneways proposed.
PO6 Development of an existing premises provides at the frontage to the site, if not already provided, the following infrastructure to an appropriate urban standard: a. an effective, high-quality paved roadway; b. an effective, high-quality roadway kerb and	**AO6** 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	**Development complies.** Any design will be in accordance with all relevant BCC and Australian Standards.

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.	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.	
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; h. minimise the clearing of significant native vegetation. Note—This can be demonstrated in an engineering report prepared and	**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.	**N/A**

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.	**N/A – Subdivision**
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.	**Development will comply.** Refer to preliminary engineering drawings 27292_DA04 and 27292_DA05 and Engineering Services Report by ADG Engineers (ADG Ref: 27292 C ESR) for preliminary water and sewer layout proposal.
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, 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	**Development will comply.**

	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.	
	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.	
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.	**Development will comply.** Refer to Engineering Services Report by ADG Engineers (ADG Ref: 27292 C ESR) for details.
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 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.	**Development will comply.**
PO13	**AO13**	**N/A**

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.	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.	
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).	**Development will comply.**
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**
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;	**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**

ii. durable; iii. resistant to vandalism; iv. able to service expected demand; v. fit for purpose.		
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**
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; 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	**AO18** Development that provides culverts is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.	**Development will comply.**

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.	**Development will comply.** Refer to ADG preliminary bulk earthworks plan 27292_DA01 and Engineering Services Report by ADG Engineers (ADG Ref: 27292 C ESR).
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 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.	**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; c. safe, legible, efficient and sufficient pedestrian, cyclist and vehicular accessibility and connectivity to the wider network are maintained.	**N/A**
PO21 Development ensures that construction and demolition activities are guided by measures that prevent or	**AO21.1** Development ensures that demolition and construction: a. only occur between 6:30am and 6:30pm Monday to	**N/A**

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.	Saturday, excluding public holidays; b. do not occur over periods greater than 6 months. **AO21.2** Development including construction and demolition does not release dust emissions beyond the boundary of the site. **AO21.3** Development construction and demolition does not involve asbestos-containing materials.	
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.	**N/A**
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:	**N/A**

	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.	
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.	**N/A**
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.	**N/A**
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.	**N/A**

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.

9.4.9 Stormwater code

9.4.9.1 Application

1. This code applies to assessing a material change of use, reconfiguring a lot or operational 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 infrastructure design and construction works, guidance is provided in the Infrastructure design planning scheme policy.

9.4.9.2 Purpose

1. The purpose of the Stormwater code is to assess the suitability of the stormwater aspects of development.
2. The purpose of the code will be achieved through the following overall outcomes:
   a. Development achieves acceptable levels of stormwater run-off quality and quantity by applying water sensitive urban design principles as part of an integrated stormwater management framework.
   b. Development protects public health and safety and protects against damage or nuisance caused by stormwater flows.
   c. Development has a stormwater management system which maintains, recreates or minimises impact to natural catchment hydrological processes.
   d. Development ensures that the environmental values of the city's waterways are protected or enhanced.
   e. Development minimises run-off, including peak flows.
   f. Development maintains or enhances the efficiency and integrity of the stormwater infrastructure network.
   g. Development minimises the whole of life cycle cost of stormwater infrastructure.

9.4.9.3 Performance outcomes and acceptable outcomes

Table 9.4.9.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for a material change of use, reconfiguring a lot, operational work or building work Note—Compliance with the performance outcomes and acceptable outcomes in this section should be demonstrated by the submission of a site-based stormwater management plan for high risk development only.		

PO1 Development provides a stormwater management system which achieves the integrated management of stormwater to: a. minimise flooding; b. protect environmental values of receiving waters; c. maximise the use of water sensitive urban design; d. minimise safety risk to all persons; e. maximise the use of natural waterway corridors and natural channel design principles. Editor's note—The stormwater management system to be developed to address PO1 is not intended to require management of stormwater quality.	**AO1** Development provides a stormwater management system designed in compliance with the Infrastructure design planning scheme policy.	**Complies** Stormwater management system designed in accordance with Infrastructure design planning scheme policy. Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR for further information.
PO2 Development ensures that the stormwater management system and site work does not adversely impact flooding or drainage characteristics of premises which are up slope, down slope or adjacent to the site.	**AO2.1** Development does not result in an increase in flood level or flood hazard on up slope, down slope or adjacent premises. **AO2.2** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	**Complies** Site outside of flood planning area.
PO3 Development ensures that the stormwater management system does not direct stormwater run-off through existing or proposed lots and property where it is likely to adversely affect the safety of, or cause nuisance to properties.	**AO3.1** Development ensures that the location of the stormwater drainage system is contained within a road reserve, drainage reserve, public pathway, park or waterway corridor. **AO3.2** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy. **AO3.3**	**Complies** Stormwater drainage system designed in accordance with Infrastructure design planning scheme policy. Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.

	Development obtains a lawful point of discharge in compliance with the standards in the Infrastructure design planning scheme policy. **AO3.4** Where on private land, all underground stormwater infrastructure is secured by a drainage easement.	
PO4 Development provides a stormwater management system which has sufficient capacity to safely convey run-off taking into account increased run-off from impervious surfaces and flooding in local catchments.	**AO4.1** Development provides a stormwater conveyance system which is designed to safely convey flows in compliance with the standards in the Infrastructure design planning scheme policy. **AO4.2** Development provides sufficient area to convey run-off which will comply with the standards in the Infrastructure design planning scheme policy.	**Complies** Stormwater management system designed in accordance with Infrastructure design planning scheme policy. Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.
PO5 Development designs stormwater channels, creek modification works, bridges, culverts and major drains to protect and enhance the value of the waterway corridor or drainage path for fauna movement.	**AO5** Development ensures the design of stormwater channels, creek modifications or other infrastructure, permits terrestrial and aquatic fauna movement.	**N/A** No proposed modification to overland flow path.
PO6 Development ensures that location and design of stormwater detention and water quality treatment: a. minimises risk to people and property; b. provides for safe access and maintenance; c. minimises ecological impacts to creeks and waterways.	**AO6.1** Development locates stormwater detention and water quality treatment: a. outside of a waterway corridor; b. offline to any catchment not contained within the development. **AO6.2** Development providing for stormwater detention and water quality treatment devices are designed in compliance with the standards in the Infrastructure design planning scheme policy.	**Complies** Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.

PO7 Development is designed, including any car parking areas and channel works to: a. reduce property damage; b. provide safe access to the site during the defined flood event.	**AO7.1** Development (including any ancillary structures and car parking areas) is located above minimum flood immunity levels in Table 9.4.9.3.B, Table 9.4.9.3.C, Table 9.4.9.3.D, Table 9.4.9.3.E and Table 9.4.9.3.F. Note—Compliance with this acceptable outcome can be demonstrated by the submission of a hydraulic and hydrology report identifying flood levels and development design levels (as part of a site-based stormwater management plan). **AO7.2** Development including the road network provides a stormwater management system that provides safe pedestrian and vehicle access in accordance with the standards in the Infrastructure design planning scheme policy.	**Complies** Minimum design level of road will be above 2% AEP flood level. Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.
PO8 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.	**AO8.1** Development ensures natural waterway corridors and drainage paths are retained. **AO8.2** Development provides the required hydraulic conveyance of the drainage channel and floodway, while maximising its potential 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.	**N/A** No proposed modification to overland flow path.
	AO8.3 Development provides stormwater outlets into waterways, creeks, wetlands and overland flow paths with energy dissipation to minimise scour in compliance with the standards in the Infrastructure design planning scheme policy.	
	AO8.4 Development ensures that the design of modifications to the existing design of new stormwater channels, creeks	

	and major drains is in compliance with the standards in the Infrastructure design planning scheme policy.	
PO9 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.	**AO9** No acceptable outcome is prescribed.	**Development will comply.**
PO10 Development ensures that there is sufficient site area to accommodate an effective stormwater management system. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.	**AO10** No acceptable outcome is prescribed.	**Complies** Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.
PO11 Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to the: a. existing capacity of stormwater infrastructure within and external to the site, and any planned stormwater infrastructure upgrades; b. safe management of stormwater discharge from existing and future up-slope development; c. implication for adjacent and down-slope development.	**AO11.1** 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. **AO11.2** Development ensures that existing stormwater infrastructure that is undersized is upgraded in compliance with the Infrastructure design planning scheme policy.	**Development will comply** Lots to be provided with external catchment diversions where required upon development.
PO12 Development provides stormwater infrastructure which: a. remains fit for purpose for the life of the development and maintains full functionality in the design flood event; b. can be safely accessed and maintained cost effectively; c. ensures no structural damage to existing stormwater infrastructure.	**AO12.1** The stormwater management system is designed in compliance with the Infrastructure design planning scheme policy. **AO12.2** 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.	**Complies** Stormwater management system designed in accordance with Infrastructure design planning scheme policy. Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.

PO13 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: a. the environmental values and water quality objectives of waters; b. waterway hydrology; c. the maintenance and serviceability of stormwater infrastructure. Note—The Infrastructure design planning scheme policy outlines the appropriate measures to be taken into account to achieve the performance outcome.	**AO13** No acceptable outcome is prescribed.	Erosion and Sediment Control measures are to be addressed during the detailed design phase of the development.
PO14 Development ensures that: a. unnecessary disturbance to soil, waterways or drainage channels is avoided; b. all soil surfaces remain effectively stabilised against erosion in the short and long term.	**AO14** No acceptable outcome is prescribed.	Erosion and Sediment Control measures are to be addressed during the detailed design phase of the development.
PO15 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.	**AO15** No acceptable outcome is prescribed.	Erosion and Sediment Control measures are to be addressed during the detailed design phase of the development.
Section B—Additional performance outcomes and acceptable outcomes which apply to high-risk development, being one or more of the following: a. a material change of use for an urban purpose which involves greater than 2,500m^2 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^2 of land and will result in 6 or more lots; c. operational work for an urban purpose which involves disturbing greater than 2,500m^2 of land.		
PO16 Development ensures that the entry and transport of contaminants into stormwater is avoided or minimised to protect receiving water environmental values. Note—Prescribed water contaminants are defined in the *Environmental Protection Act 1994*. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.	**AO16** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	**Complies** Stormwater management system designed in accordance with Infrastructure design planning scheme policy. Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.
PO17 Development ensures that: a. the discharge of wastewater to a waterway or external to the site is avoided; or b. if the discharge cannot practicably be avoided, the development minimises wastewater discharge through re-use, recycling, recovery and treatment. Note—The preparation of a wastewater management plan can assist in demonstrating achievement of this performance outcome. Editor's note—This code does not deal with sewerage which is the subject of the Wastewater code.	**AO17** No acceptable outcome is prescribed.	**N/A**
Section C—Additional performance outcomes and acceptable outcomes for assessable development for a material change of use or reconfiguring a lot		
PO18 Development protects stormwater infrastructure to ensure the following are not compromised: a. the long term infrastructure for the stormwater network in the Long term infrastructure plans; b. the existing and planned infrastructure for the stormwater network in the Local government infrastructure plan; c. the provision of long term, existing and planned	**AO18** Development protects stormwater infrastructure in compliance with the following: a. for long term infrastructure for the stormwater network, the Long term infrastructure plans; b. for existing and planned infrastructure for the stormwater network, the Local government infrastructure plan; c. the standards for stormwater drainage in the	**Complies** Refer to Engineering Services Report by ADG Engineers (Report Ref: 27292 C ESR) for further information.

infrastructure for the stormwater network which: i. is required to service the development or an existing and future urban development in the planning scheme area; or ii. is in the interests of rational development or the efficient and orderly planning of the general area in which the site is situated. Editor's note—A condition which requires a proposed development to keep permanent improvements and structures associated with the approved development clear of the area of long term infrastructure, may be imposed.	Infrastructure design planning scheme policy.	
PO19 Development provides for the payment of extra trunk infrastructure costs for the following: a. for development completely or partly outside the priority infrastructure area in the Local government infrastructure plan; b. for development completely inside the priority infrastructure area in the Local government infrastructure plan involving: i. trunk infrastructure that is to be provided earlier than planned in the Local government infrastructure plan; ii. long term infrastructure for the stormwater network which is made necessary by development that is not assumed future urban development; iii. other infrastructure for the stormwater network associated with development that is not assumed future urban development which is made necessary by the development. Editor's note—The payment of extra trunk infrastructure costs for development completely inside the priority infrastructure area in the Local government infrastructure plan is to be worked out in accordance with the Charges Resolution. Editor's note—See section 130 Imposing Development conditions (Conditions for extra trunk infrastructure costs) of the *Planning Act*	**AO19** No acceptable outcome is prescribed.	**N/A**

2016.		

Table 9.4.9.3.B—Categories of flood planning levels

Flooding type(1)	**Minimum design floor or pavement levels (m AHD)(2) (refer to Table 9.4.9.3.C for assignment of these categories)**				
	Category A	**Category B**	**Category C**	**Category D**	**Category E**
Waterway(A) or open channel	1% AEP flood level + 500mm	1% AEP flood level + 300mm	1% AEP flood level	1% AEP flood level	5% AEP flood level
Overland flow flooding(B)	2% AEP flood level +500mm	2% AEP flood level +300mm	2% AEP flood level	2% AEP flood level	5% AEP flood level

Notes—

(1) Where the site is subject to more than one type of flooding that is overland flow flooding, creek or waterway flooding or river flooding, the minimum flood immunity level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's Floodwise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note (A) A waterway, including any indicated on the planning scheme maps, is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks, typically with a catchment area greater than 30ha.

Note (B) Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

Note—The flood immunity level in some older inner-city areas is often controlled by local ponding.

Table 9.4.9.3.C—Flood planning level categories for development types

BCA building classification(1)	**Development types and design levels, assigned design floor or pavement levels**	**Category Refer to Table 8.2.11.3.L**
Class 1—4	Habitable room	Category A

	Non-habitable room including patio and courtyard	Category B
	Non-habitable part of a Class 2 or Class 3 building excluding the essential services(2) control room	Category B
	Parking located in the building undercroft of a multiple dwelling	Category C
	Carport(4), unroofed car park; vehicular manoeuvring area	Category D
	Essential electrical services(2) of a Class 2 or Class 3 building only	Category A(6)
	Basement parking entry(3)	Category C + 300mm
Class 5, Class 6, or Class 8	Building floor level	Category C
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Basement parking entry(3)	Category C
	Essential electrical services(2)	Class 8 — Category C(6) Class 5 & 6 — Category A(6)
Class 7a	Refer to the relevant building class specified in this table	
Class 7b	Building floor level	Category C
	Vehicular access and manoeuvring area	Category D
	Essential electrical services(2)	Category C
Class 9	Building floor level	Category A

	Building floor level for habitable rooms in Class 9a or 9c where for a residential care facility	0.2% AEP flood
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Essential electrical services(2)	Category A
Class 10a	Car parking facility	Refer to the relevant building class specified in this table
	Shed(5) or the like	Category D
Class 10b	Swimming pool	Category E
	Associated mechanical and electrical pool equipment	Category C
	Other structures	Flood immunity standard does not apply

Notes—

(1) Refer to the Building Code of Australia for definitions of building classifications.

(2) Essential services include any room used for fire control panel, telephone PABX, sensitive substation equipment including transformers, low voltage switch gear, high-voltage switch gear, battery chargers, protection control and communication equipment, low voltage cables, high-voltage cables and lift controls.

(3) Basement car parks must be suitably waterproofed and all air vents, air-conditioning ducts, pedestrian access and entry and exit ramps at the car park entrance have flood immunity in accordance with this table.

(4) A shelter for a motor vehicle, which has a roof and one or more open sides, and which can be built against the side of a building.

(5) A slight or rough structure built for shelter and storage; or a large strongly built structure, often open at the sides or end.

(6) Where essential services are proposed in a basement below the specified flood planning level, the flood immunity of all air vents, air-conditioning ducts, pedestrian access, lift shafts and entry/exit ramps at the basement entrance and any other openings into that basement must conform to Category A for Residential development, and the relevant basement entry level of all other uses. This will require a waterproof basement design to prevent floodwaters entering the basement to ensure flood immunity.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—Where a building has a combination of uses that includes a component of class 2, 3 or 9, the essential services for that building shall comply with the requirements of the building class with the greatest flood immunity requirement.

Note—Use classes for residential development also include basement storage.

Table 9.4.9.3.D—Flood planning levels for a new road

Flooding type[1]	**Minimum design levels at the crown of the road (m AHD) [2]**	
	Residential development	**Industrial or commercial development**
Waterway[A] or open channel	1% AEP flood level	2% AEP flood level
Overland flow flooding[B]	2% AEP flood level	2% AEP flood level

Notes—

[1] Where the site is subject to more than 1 type of flooding, the minimum flood planning level is the highest level determined from these sources. It should be noted that the flooding planning level in some older areas is often controlled by local ponding.

[2] Where flood levels are not available from Council's Floodwise Property Report, such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note [A] A waterway including any indicated on the planning scheme maps is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks typically with a catchment area greater than 30ha.

Note [B] Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

Table 9.4.9.3.E—Flood planning levels for essential community infrastructure

Type of essential community infrastructure	**Minimum design levels**
Emergency services	0.2% AEP flood
Emergency services, where for an emergency shelter	0.5% AEP flood
Emergency services, where for police facilities	0.5% AEP flood
Hospital and health care service, where associated with a hospital	0.2% AEP flood

Community facility where involving storage of valuable records or items of historic or cultural significance (e.g. galleries and libraries)	0.5% AEP flood
State-controlled roads Major or minor electricity infrastructure not otherwise listed in this table Utility installation where for rail transport services Air service Telecommunications facility	No specific recommended level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.
Power stations (as defined in the *Electricity Act 1994*) or renewable energy facility.	0.2% AEP flood
Major electricity infrastructure where a major switch yard	0.2% AEP flood
Substations	0.5% AEP flood
Utility installation where for a sewage treatment plant	DFE
Utility installation where for a water treatment plant	0.5% AEP flood

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—A flood event with an AEP of 0.5% is the equivalent of a 200 year ARI flood event.

Table 9.4.9.3.F—Flood planning levels for reconfiguring a lot

Flooding type(1)	**Minimum lot levels (m AHD)(2)**	
	Residential	**Other than residential**
Waterway(A) or open channel	1% AEP flood level + 300mm	1% AEP flood level
Overland flow flooding(B)	1% AEP flood level + 300mm	2% AEP flood level

Notes—

(1) Where the site is subject to more than one type of flooding, the minimum flood immunity level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's Floodwise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note (A) A waterway including any indicated on the planning scheme maps is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks typically with a catchment area greater than 30ha.

Note [(B)] Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Appendix H
BCC Erosion Hazard Assessment Form

BRISBANE CITY COUNCIL ABN 72 002 765 795

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

202 Gardner Road, Rochedale

Postcode 4123

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*

Michael Lepelaar

Certifier's signature

Date

11 / 09 / 2024

Assessment Table

Table 1: Low Risk Test

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

Have you answered 'yes' to any of the questions in Table 1?	*Yes*	*No*	
	☑	☐	**If '*No*' then site is <u>low risk</u> with respect to erosion and sediment control**

If '*Yes*' then proceed to Table 2

Table 2: Medium Risk Test

		Yes	*No*	
2.1	is the area of land disturbance > 1 hectare	☐	☑	**If '*No*' then site is <u>medium risk</u> with respect to erosion and sediment control**

If '*Yes*' then proceed to Table 3

Table 3: High Risk Test

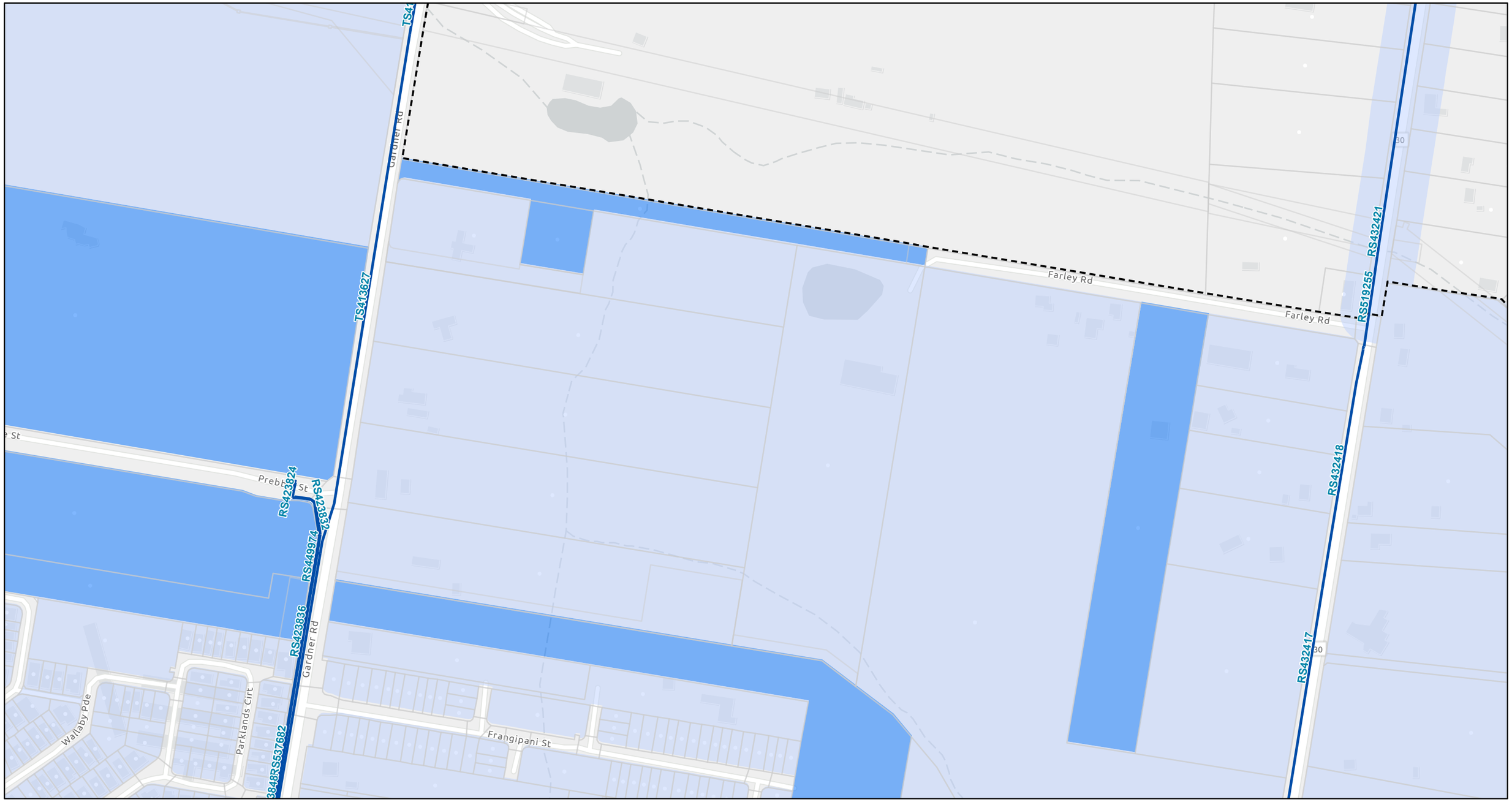
		Yes	*No*
3.1	is there an upstream catchment passing through the site > 1 hectare	☐	☐
3.2	does any land disturbance occurs in a BCC mapped waterway corridor	☐	☐
3.3	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 15%	☐	☐

Have you answered 'yes' to any of the questions in Table 3?	*Yes*	*No*	
	☐	☐	**If '*No*' then site is <u>medium risk</u> with respect to erosion and sediment control**

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

Appendix I
Netserv Plan Extract

Urban Utilities - Water Netserv Plan - Drinking Water



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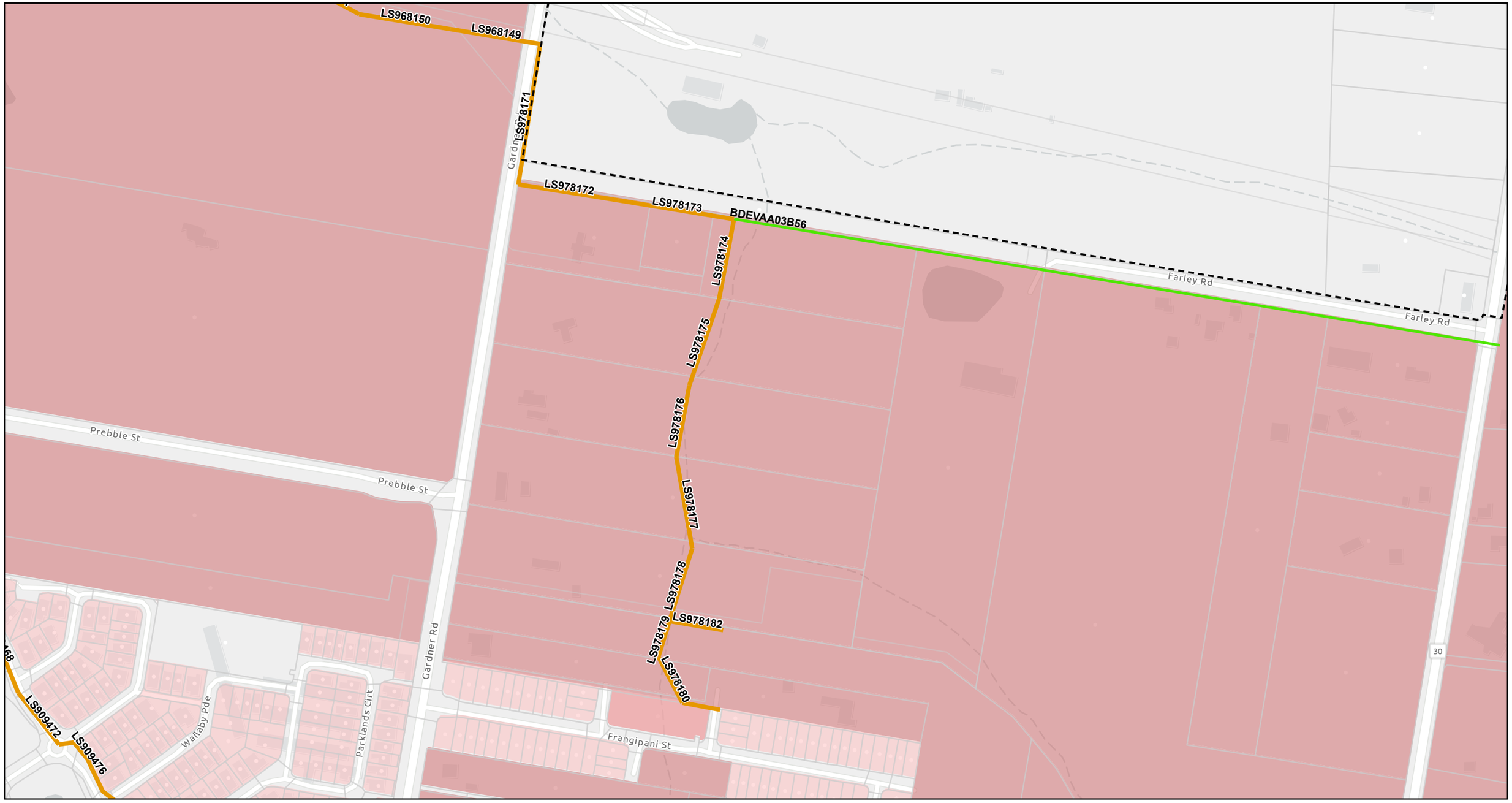
0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

- Priority Infrastructure Area
- Existing Water Trunk Main
- Property Boundary (DCDB)
- Water Connection Area
- Water Future Connection Area

Urban Utilities
Publisher: Integrated Solutions Revision Date: 24 August 2022 File Name: Netserv Plan Map Version 9

Urban Utilities - Water Netserv Plan - Wastewater



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0 0.07 0.15 0.3 km

- Priority Infrastructure Area
- Future Wastewater Pipe
- Future Wastewater Trunk Main
- Existing Wastewater Trunk Main
- Property Boundary (DCDB)
- Wastewater Connection Area
- Wastewater Future Connection Area

Urban Utilities
Publisher: Integrated Solutions Revision Date: 24 August 2022 File Name: Netserv Plan Map Version 8

Adelaide

Level 6, 19 Grenfell Street
Adelaide SA 5000

Phone: 1300 657 402

Email: info@adgce.com

Brisbane

596 Milton Road
Toowong, QLD 4066

Postal: PO Box 1492 Toowong
BC QLD 4066

Phone: 1300 657 402

Email: info@adgce.com

Canberra

Level 1, 68 Northbourne Avenue
Canberra, ACT, 2600, Australia

Phone: 1300 657 402

Email: info@adgce.com

Darwin

Suite G01, Manunda Place
38 Cavenagh Street
Darwin, NT 0800

Phone: 1300 657 402

Email: info@adgce.com

Gold Coast

Level 6, 12 – 14 Marine Parade
Southport, QLD 4215

Postal: PO Box 208
Southport, QLD 4215

Phone: 1300 657 402

Email: info@adgce.com

Hobart

Tenancy 1B, Level 1,
199 Collins Street
Hobart TAS 7000

Phone: 1300 657 402

Email: info@adgce.com

Melbourne

321 / 838 Collins Street
Docklands, VIC 3008

Phone: 1300 657 402

Email: info@adgce.com

Perth

Suite 4, Level 1, 6 Centro Avenue,
Subiaco WA 6008

Phone: 1300 657 402

Email: info@adgce.com

Sunshine Coast

Level 3, 2 Emporio Place
Maroochydore, QLD 4558

Postal: PO Box 5014
Maroochydore BC,
QLD 4558

Phone: 1300 657 402

Email: info@adgce.com

Sydney

Suite 22.02, Level 22,
111 Pacific Highway,
North Sydney, NSW, 2060

Phone: 1300 657 402

Email: info@adgce.com

Toowoomba

Tenancy 8, 158 Margaret Street
Toowoomba QLD 4350

Phone: 1300 657 402

ADG Engineers
www.adgce.com