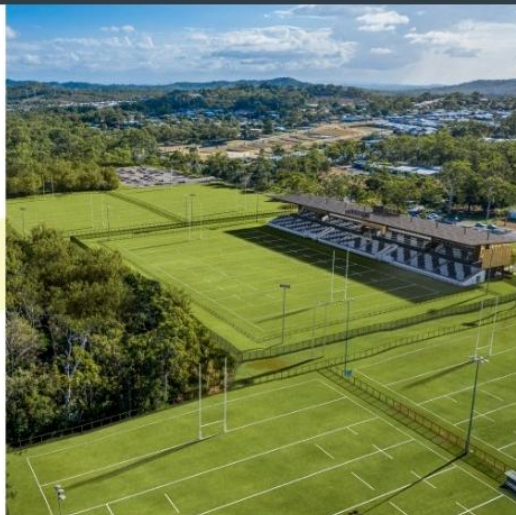




The experience **you deserve** 



560 Chambers Flat Road, Logan Reserve
Park Lane Stage 5
Civil Engineering Report

Client: CFR No.3 Pty Ltd (GDM Property)
Project Number: BE230588
Document Number: BE230588-RP-CER-02

Date of Issue: 30 April 2025



Document Control Record

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Date:	April 2025

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Date:	April 2025

Version No.	Description	Date	Prepared	Approved
01	Original Issue	11/2024	CB	LF
02	Revised Layout	04/2025	HL	LF

Recipients are responsible for eliminating all superseded documents in their possession.

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Appendix A – Plan of Development

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1. Introduction

CFR No.3 Pty Ltd (GDM Property) have engaged Burchills Engineering Solutions to prepare a Civil Engineering Report to be considered part of a Development Application to Logan City Council for the establishment of a 54-lot extension of the adjacent Park Lane development (COM/60/2022). The proposed development is located across 560 Chambers Flat Road, Logan Reserve.

This report determined that the site is suitable for the proposed development, in relation to matters concerning civil engineering design parameters and site constraints. The development can be undertaken in accordance with the current Logan City Council guidelines, SEQ Water Supply and Sewerage, Design and Construction Code and best management practices.

1.1 Scope of Report

This report describes the existing physical conditions of the site, and suitability for the proposed development with particular respect to:

- Project Identification;
- Proposed Development;
- Site Earthworks;
- Roadworks, Access and Traffic;
- Stormwater Drainage;
- Water Supply;
- Sewer Reticulation;
- Electricity and Telecommunications Supply.

This report represents an assessment of the facts and circumstances pertaining to these matters, as they are known to the writer at the time of preparation.





2. Project Identification

2.1 Real Property Description

The site is legally described as Lot 4 RP97736. The corresponding street address is 560 Chambers Flat Road, Logan Reserve. The combined site is generally rectangular and occupies an area of approximately 4.934 ha.

The site to be developed is shown on the Master Plan prepared by Burchills Engineering Solutions (Drawing No. BE230558-SK01-E) which is included in Appendix A of this report. The location of the subject site is shown on Figure 2.1 below.



Figure 2.1 Site Locality Plan

2.2 Physical Description

Multiple dwellings, ancillary structures and greenhouses spread throughout; where the remaining ground coverage is predominantly crop and grassed areas, with some minor tree coverage in the Eastern-most portion of the site.

The site is bounded by the following existing land uses:

North:	Park Lane Stages 1-3 (Under Construction);
South:	Neighbouring Rural Property;
East:	Neighbouring Rural Property (Future Collector Road); and
West:	552 Chambers Flat Road.





3. Proposed Development

The subject site is proposed to be reconfigured and developed from one (1) into fifty-seven (54) lots, along with a Drainage Reserve and Bioretention Basin. The proposed development layout is shown below in Figure 3.1, and on the Masterplan prepared by Burchills Engineering Solutions (Drawing No. BE230588-SK01-G) which is included in Appendix A of this report. See also Appendix B which contains the full Concept Civil Engineering Plans.

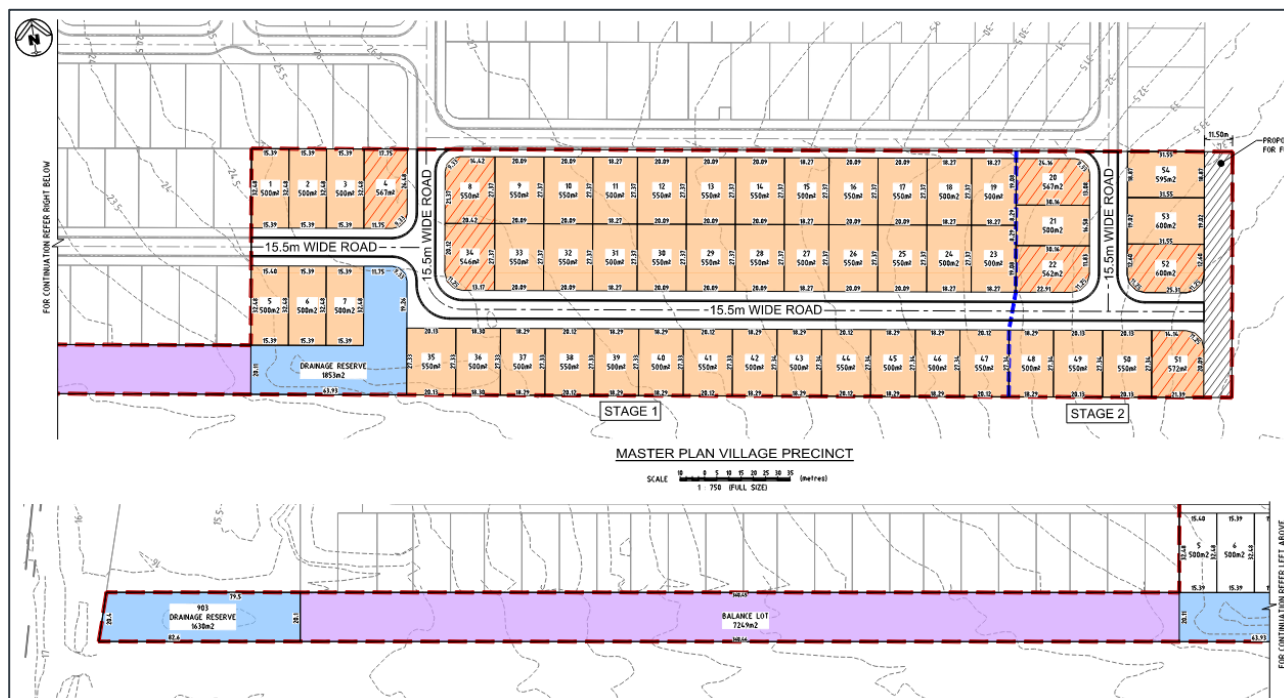


Figure 3.1 Subdivision Proposal Plan

Based on the SEQ Water Supply and Sewerage Design & Construction Code, the Equivalent Tenements (ET) and Equivalent Population (EP) for the proposed development is shown in Table 3.1.

Table 3.1 Development Summary

Use	Unit	Total Units	EP's/Unit	Total EP
Detached Dwelling	Per Dwelling	54	2.79	150.66
Total	-	54	-	150.66





4. Site Earthworks

It is anticipated that earthworks associated with the proposed development will be kept to a minimum with general cutting and filling associated with road construction, trenching of services, stormwater management devices, and minor alterations to levels to allow for level building pads.

The Preliminary Earthworks Layout Plan, Drawing No. BE230588-C200-A demonstrates the development's grading, finished surface levels and retaining walls and is included within Appendix B. It should be noted that the existing biodiversity corridor will generally be undisturbed in accordance with the above-mentioned plan and rehabilitated in accordance with the environmental reports.

4.1 Sediment and Erosion Control

The best management practices will be implemented according to the IECA Best Practice Erosion and Sediment Control (2008) guidelines.

The following is a procedure of water quality controls to be implemented for the construction stage of the development.

4.1.1 Phase 1 – Stripping & Bulk Earthworks

- Identify and mark all trees to be retained and erect exclusions zones, if required;
- Prior to any demolition, stripping or bulk earthworks on site, sediment fences, inlet traps, gully protection and entry/exit pad shall be put in place;
- A wash-down area and entry/exit pad will be provided at the construction site entrance to minimise the amount of sediment being tracked off the site;
- The wash down area will be drained to a suitable sediment capture device installed downstream of the construction entry;
- Sediment fences are to be installed along the downstream property boundaries prior to stripping and earthworks commencing;
- Construct an appropriately sized sediment basin for the development;
- If refuelling of machinery is to occur on site, appropriate absorbent products for cleaning oil spills will be provided;
- Provide bins on site for the disposal of waste and building debris;
- All fresh water upstream of disturbed areas and stockpiles is to be diverted around the disturbed area to minimise the amount of sediment mobilization;
- If it is anticipated that stockpiled material will not be used for a period of two weeks or more, a polythene cover (or equivalent) shall be used to prevent sediment transport by rain during wet periods. Conversely during dry periods, a cover shall be used to prevent fine sediments becoming airborne;
- The contractor shall provide on-going maintenance of sediment and erosion control devices around the site; and
- The contractor is to stage all works so that disturbed areas remain exposed for a short a period as practicable.

Measures to minimise airborne pollutants during construction in the form of dust during dry and/or windy weather shall include the following:

- Exposed soils shall be kept damp to prevent particulates becoming airborne; and
- Stockpiles exposed for more than two weeks shall be covered to prevent wind erosion.





4.2 Phase 2 – Infrastructure, Building & Roadworks

- The site stormwater pipes and pits shall be installed with drop inlets provided to all pits;
- Provide sediment fences, sandbags or fine mesh cover to all gully pits;
- Monitoring of new stormwater pipes and infrastructure (including the storm water quality improvement devices) to ensure they are free of sediment and debris;
- Maintain shake down and wash down area at entry/exit; and
- All disturbed areas are to be surfaced or landscaped/grassed (maintained to minimum 70% ground cover) as soon as practicable after completion of localized works.

4.2.1 Phase 3 – Finishing Works & Defects Liability Period

All erosion and sediment control measures, including sediment fences and inlet traps shall be maintained until completion of surface finishes including landscaping and turfing:

- Maintain sediment fences; and
- Attend to landscaped areas to maintain ground cover.





5. Roadworks, Access and Traffic

Ultimately, access into the development is proposed via connection to the north to roads located in the adjoining Park Lane (Stages 1-3) development that is currently being developed by CFR No.3 Pty Ltd (GDM Property).

The internal road network will have a 15.5m road reserve, and a 7.5m pavement width (K-K). The road pavement will be constructed with a crown and two-way crossfall. Design and grading of the new roads will be in accordance with the Logan City Council Development Guidelines.

The Overall Site Layout and Road Structure Plan, Drawing No. BE230588-C300-A, attached in Appendix B, has been prepared to demonstrate road connectivity from the subject site onto adjoining properties and the future trunk road network depicted in the Logan City Council's Local Area Plan.

It has been noted that Council officers have queried whether appropriate sight distance has been achieved to Lots 34-36. We can confirm that there are no restrictions on sight distances for lots 35 or 36. Both allotments have clear line of sight along the frontage road in both directions. The general minimum sight distance for a domestic driveway is 30 metres which is achieved in this case. For lot 34 the driveway will need to be minimum 6 metres clear of the boundary truncation on the parcel's western-end, and as such the future VXO will be positioned accordingly during the building phase of the development.





6. Stormwater Drainage

The internal road network will collect stormwater runoff and convey it to inlet pits on the edges of the road. These pits will be connected through a series of stormwater drain lines, discharging into a bioretention basin where flows will be released in a controlled manner to ensure that there is non-worsening peak flow in the post-developed scenario.

For further details, reference can be made to the Conceptual Stormwater Management Plan that has been prepared by Burchills Engineering Solutions and is intended to accompany this Development Application (BE230588-RP-CSMP-02).





7. Water Supply

In accordance with the Pre-lodgement Meeting minutes provided by Logan City Council, the development is proposed to receive water supply by connecting to the neighbouring development (COM/60/2022) via a DN200 water main. The extents of this water main are depicted in the Water Reticulation Layout Plan, Drawing No. BE230588-C400-A, included within Appendix B.

We note that this internal schematic is intended for preliminary purposes only and is subject to a more detailed assessment, including a detailed sizing of mains during the detailed design phase.

7.1 Water Demand Calculation

To determine suitable pipe sizing for the proposed development, water demands are calculated according to the intended new development. The water criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code); and
- Water Services Association of Australia – WSA 03-2013 Water Supply Code of Australia, Part 1: Planning and Design.

The service mains internal of each building will be designed and constructed in accordance with AS/NZS 3500.1:2003 Plumbing and Drainage – Water services (Standards Australia, 2003).

The water flow parameters shown in Table 7.1, 7.2 and 7.3 required to meet Unity Water Standards of Service and have been based on Single Supply (Drinking Water Only) Network parameters shown in SEQ Design Criteria Table 7.1.

Table 7.1 Potable Water Supply Demand and Peaking Factor

Property Type	Average Day Demand L/EP/day	Non-Revenue L/EP/day	Peaking Factors		
			MDMM	PD	PH
Residential	230	30	1.5	2.0	4.0

Notes:

MDMM	Mean Day Maximum Month Demand
PD	Peak Day Demand
AD	Average Day Demand
PH	Peak Hour Demand

Table 7.2 Potable Water Pressure Parameters

Item	Pressure Parameter
Minimum Service Pressure	22 metres (at the property boundary)
Maximum Service Pressure	Target 55 metres (at the property boundary)



**Table 7.3 Fire Fighting Parameters**

Item	Pressure Parameter
Minimum Residential Mains Pressure (Emergency Fire operating conditions)	12 metres at the main at the property boundary 6 metres elsewhere
Fire Flow Urban Residential	7.5 L/s for a duration of 2 hrs
Fire Flow Commercial	30 L/s for a duration of 4 hrs
Background Demand	2/3 x Peak Hour demand (not less than Average Day demand)

The calculated water supply demand for the proposed development is shown in Table 7.4.

Table 7.4 Water Supply Demand Calculations

Use	EP	AD Flow	Non-Revenue	AD (kL/day)	PH (L/s)
Residential	150.66	230	30	143.13	1.657

Calculations of maximum peak demand and demand multiplier for the residential aspect of the development are based on an allowance of 230 L/EP/day and a peak hour factor of 4.0 while applying the Non-Revenue flows of 30 L/EP/day, as follows:

Maximum Peak Demand = PHF x Demand Rate x EP's + NR

= 4.0 x 230 x 150.66+ (30 x 150.66)

= 143,127 L/day

= 1.657 L/s

Demand Multiplier = Maximum Demand / EP's

= 0.011 L/sec/EP





8. Sewer Reticulation

The adjacent development (COM/60/2022) will be delivering a gravity sewerage main from the north. It is anticipated that wastewater generated by the development will be conveyed to this proposed sewerage main. The Sewer Reticulation Layout Plan, Drawing No. BE23588-C400-A, depicts the development's internal sewer reticulation and is included within Appendix B.

We note that this internal schematic is intended for preliminary purposes only and is subject to a more detailed assessment, including a detailed sizing of mains during the detailed design phase.

8.1 Sewer Demand Calculation

The sewer criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code); and
- Water Services Association of Australia – WSA 02-2014 Sewerage Code of Australia, Part 1: Planning and Design.

The sewer flow generation, pipe design parameters, minimum sewer pipe grades and maximum capacity are shown below in Table 8.1, 8.2 and 8.3. The following parameters are based on a RIGGS system:

Table 8.1 Sewer Flow Generation Parameters

Flow	Parameter
Average Dry Weather Flow (ADWF)	200 L/EP/d
Peak Dry Weather Flow (PDWF)	PDWF = C2 x ADWF Where: $C2 = 4.7 \times (EP)^{-0.105} = 2.78$
Peak Wet Weather Flow (PWWF)	PWWF = 5 x ADWF

Table 8.2 Pipe Design Parameters

Flow	Parameter
Mannings 'n'	0.013
Minimum velocity @ PDWF	0.7 m/s
Depth of Flow @ PWWF – Existing system	Up to 1.0 m below MH cover level and no spillage through overflow structures
Depth of Flow @ PWWF – Proposed sewers	Max flow depth shall not exceed $\frac{3}{4}$ pipe full (75% d/D).





Table 8.3 Minimum Pipe Capacity – New Sewers Flowing $\frac{3}{4}$ Full

Pipe Size (mm)	Min Pipe Grade (1 in x)	Capacity (L/s)
150	180	10.4
225	300	23.6
300	400	44.1
525	750	143.0
1200	2400	796.1

The total development yield has been taken into account, not just the increase in equivalent persons on the subject site. The calculated sewer demand generation for the proposed development is shown in Table 8.4.

Table 8.4 Sewer Demand Calculation

Use	EP	ADWF Rate	ADWF (L/d)	PWWF (L/d)	PWWF (L/s)
Residential	150.66	200	30,132	150,660	1.744

The calculations indicate that the total post development demand at PWWF will be approximately 1.744 L/s.





9. Electrical and Telecommunications

A Dial Before You Dig (DBYD) is included in Appendix C of this report. It is envisaged that adequate power supply can be provided to the site from the existing infrastructure. However, a specialist electrical consultant will need to be engaged to provide advice in relation to internal electrical reticulation requirements, to prepare detailed designs and to liaise with the relevant authorities.





10. Conclusion

The findings of this Civil Engineering Report support the site use proposed in this development application to Logan City Council.

Earthworks associated with the proposed development will be kept to a minimum with general cutting and filling associated with road construction, trenching of services, stormwater management devices, and minor alterations to levels to allow for level building pads.

The internal road network will collect stormwater runoff and convey it to inlet pits on the edges of the road. These pits will be connected through a series of stormwater drain lines, discharging into a bioretention basin where flows will be released in a controlled manner to ensure that there is non-worsening peak flow in the post-developed scenario.

In accordance with the Pre-lodgement Meeting minutes, the development is proposed to receive water supply by connecting to the neighbouring development (COM/60/2022) via a DN200 main. The extents of this water main are depicted in the Water Reticulation Layout Plan, Drawing No. BE230588-C400-A, included within Appendix B.

The adjacent development (COM/60/2022) will also be delivering a gravity sewerage main from the north. It is anticipated that wastewater generated by the development will be conveyed to this proposed sewerage. The extents of this sewer main are depicted in the Sewer Reticulation Layout Plan, Drawing No. BE230588-C400-A, included within Appendix B.

All required essential services can be suitably provided to the development, including:

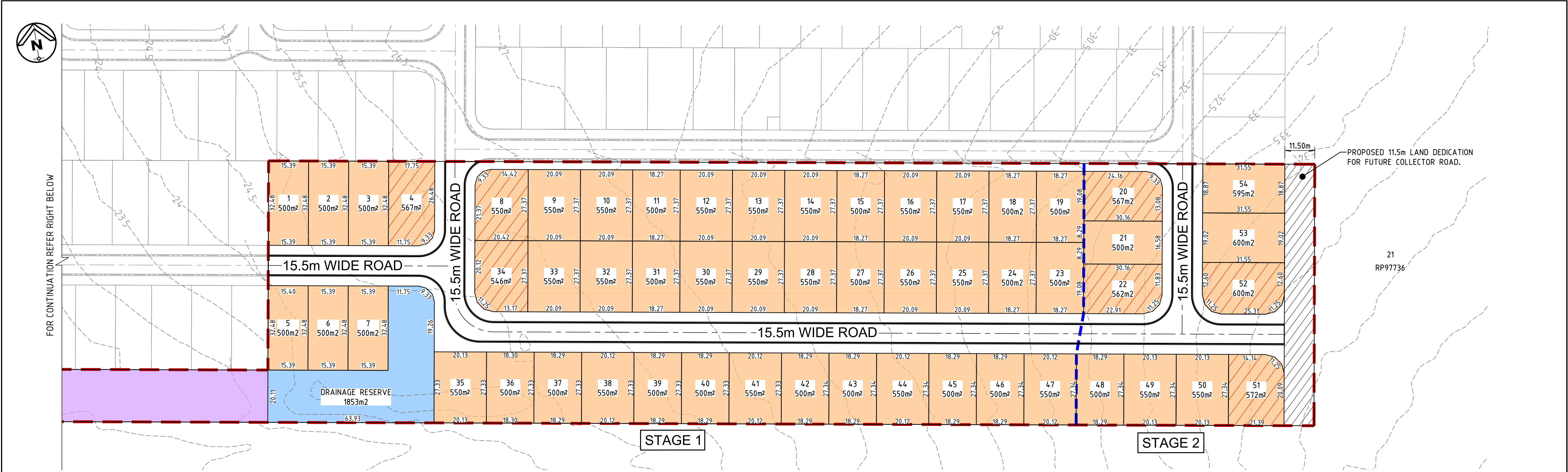
- Stormwater Drainage;
- Reticulated Water Services;
- Reticulated Sewerage Services;
- Electricity and Telecommunications Supply.



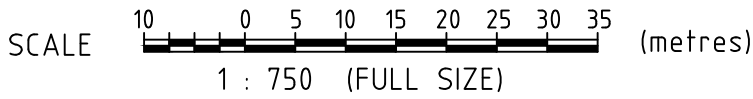
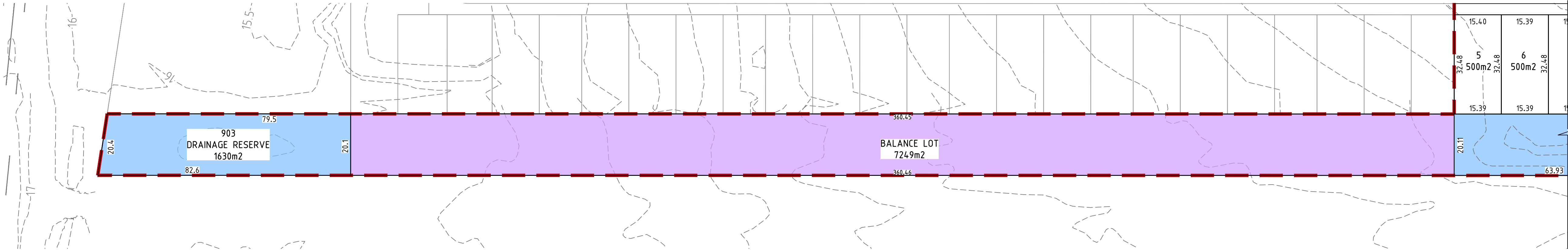
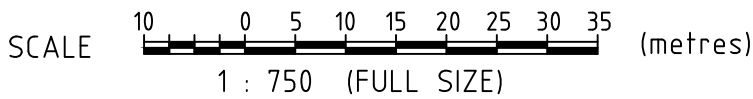


Appendix A – Plan of Development





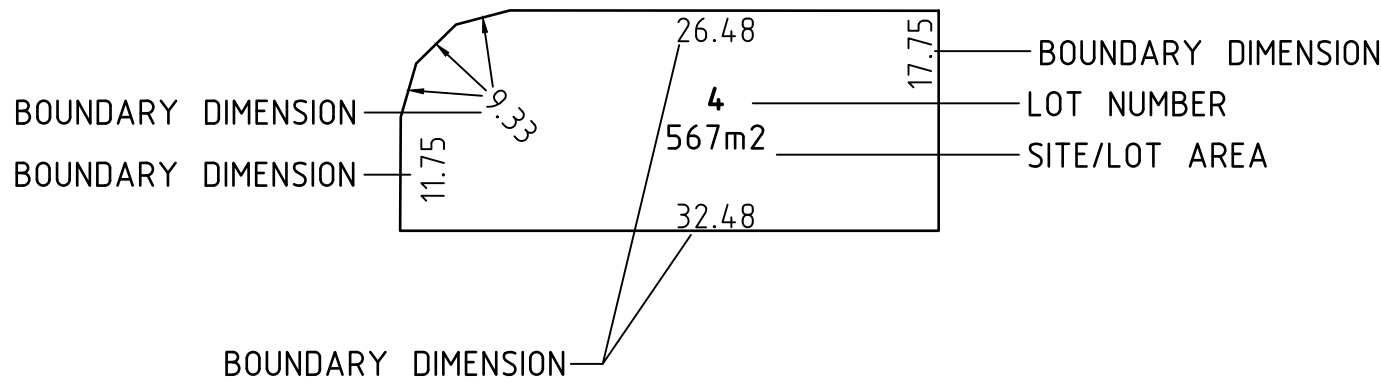
MASTER PLAN VILLAGE PRECINCT



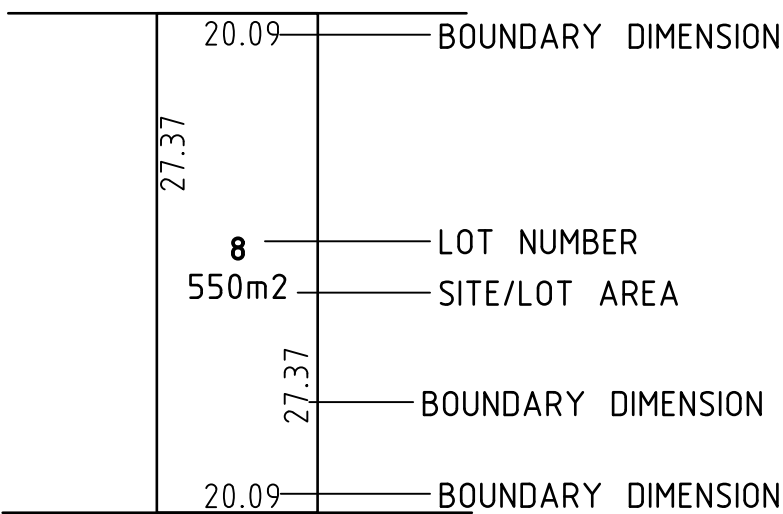
DEVELOPMENT SUMMARY

TOTAL SITE AREA:	4.934 ha
TOTAL AREA OF NEW ROAD:	0.873 ha
LENGTH OF NEW ROAD:	469.61 meters
TOTAL AREA ROAD PAVEMENT:	0.370 ha
TOTAL AREA BALANCE LOT :	0.725 ha
TOTAL AREA OF DRAINAGE RESERVE :	0.348 ha
NET DEVELOPMENT AREA :	2.871 ha
NET SITE AREA DENSITY:	18.81 DWELLINGS/ha
GROSS SITE DENSITY:	10.94 DWELLINGS/ha

CORNER ALLOTMENT



STANDARD ALLOTMENT



LEGEND

- TYPICAL ALLOTMENTS
- CORNER ALLOTMENTS
- DEVELOPMENT BOUNDARY
- STAGE BOUNDARY

LOT FRONTAGE WIDTH BREAKDOWN

FRONTAGE WIDTH	No. ON LOTS
15.00-17.99m	13
≥18m	41
TOTAL	54

YIELD BREAKDOWN

LOT SIZE	No. ON LOTS
500-549m2	24
550-599m2	28
≥600m2	2
TOTAL	54

PRELIMINARY

CHAMBERS FLAT ROAD LOGAN RESERVE LOT 4 RP97736; 560 CHAMBERS FLAT ROAD FOR  A1 ORIGINAL SIZE BEFORE REDUCTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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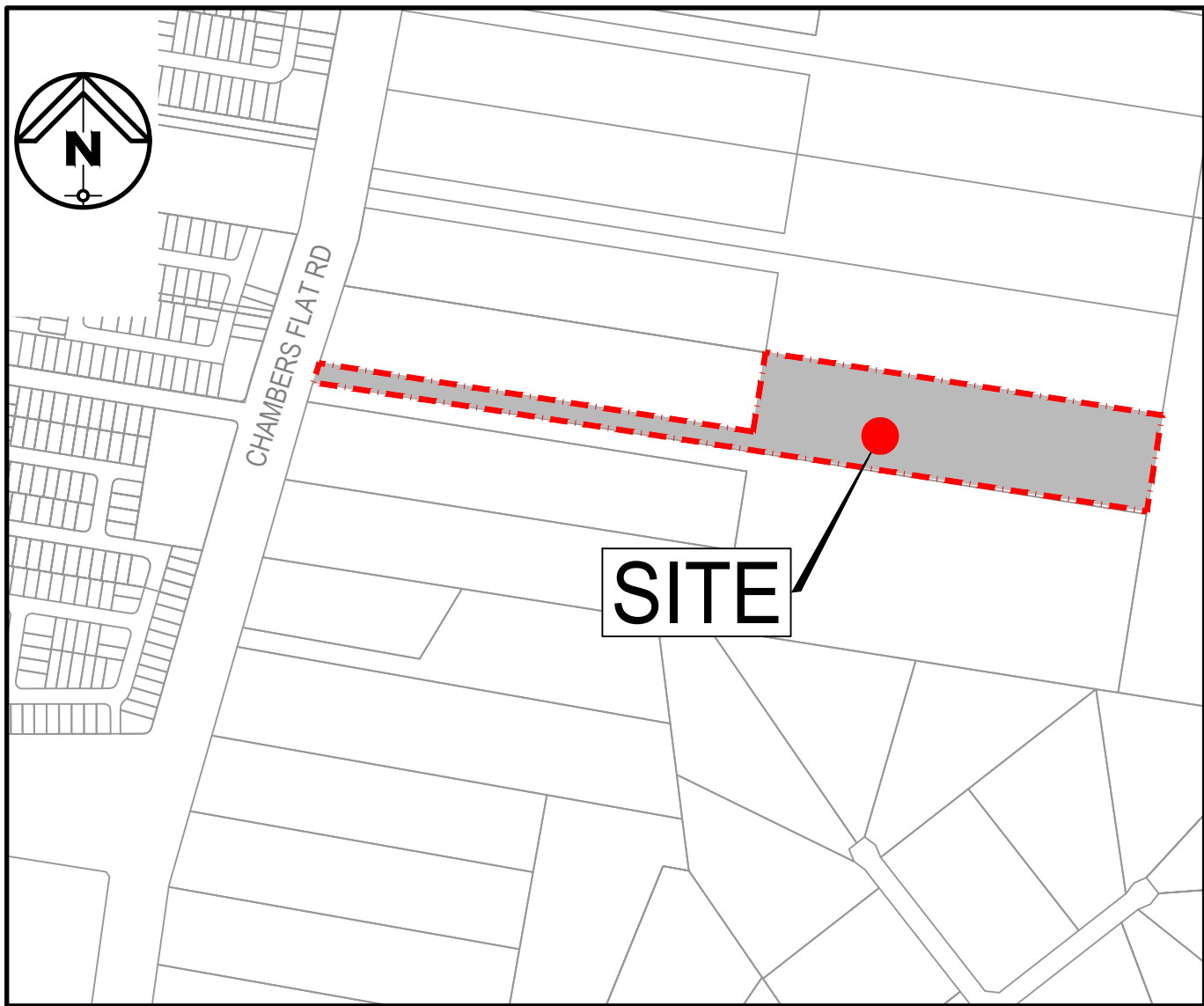


Appendix B – Conceptual Engineering Drawings



PROPOSED SUBDIVISION DEVELOPMENT
AT 560 CHAMBERS FLAT RD, LOGAN RESERVE
QUEENSLAND

PRELIMINARY CIVIL ENGINEERING DESIGN
CONTRACT BE230588



LOCALITY PLAN
N.T.S.

DRAWING INDEX	
DWG No.	TITLE
C000	COVER SHEET AND DRAWING SCHEDULE
C100	PRELIMINARY TYPICAL CROSS SECTION, NOTES AND DETAILS
C200	PRELIMINARY EARTHWORKS LAYOUT PLAN
C210	PRELIMINARY EARTHWORKS SECTIONS SHEET 1
C211	PRELIMINARY EARTHWORKS SECTIONS SHEET 2
C300	PRELIMINARY ROADWORKS & DRAINAGE LAYOUT PLAN
C310	PRELIMINARY BASIN LAYOUT PLAN
C311	PRELIMINARY BASIN DETAILS
C400	PRELIMINARY SEWER & WATER LAYOUT PLAN
C500	PRELIMINARY FUTURE COLLECTOR ROAD PLAN & TYPICAL DETAIL
C510	PRELIMINARY FUTURE COLLECTOR ROAD LONGITUDINAL SECTION
C520	PRELIMINARY FUTURE COLLECTOR ROAD CROSS SECTIONS
C800	PRELIMINARY VEHICLE CHECKING LAYOUT PLAN

NOTE:
CONCEPT DESIGNS ARE BASED ON SITE SURVEY
DATA PROVIDED BY LANDPARTNERS.

PREPARED FOR



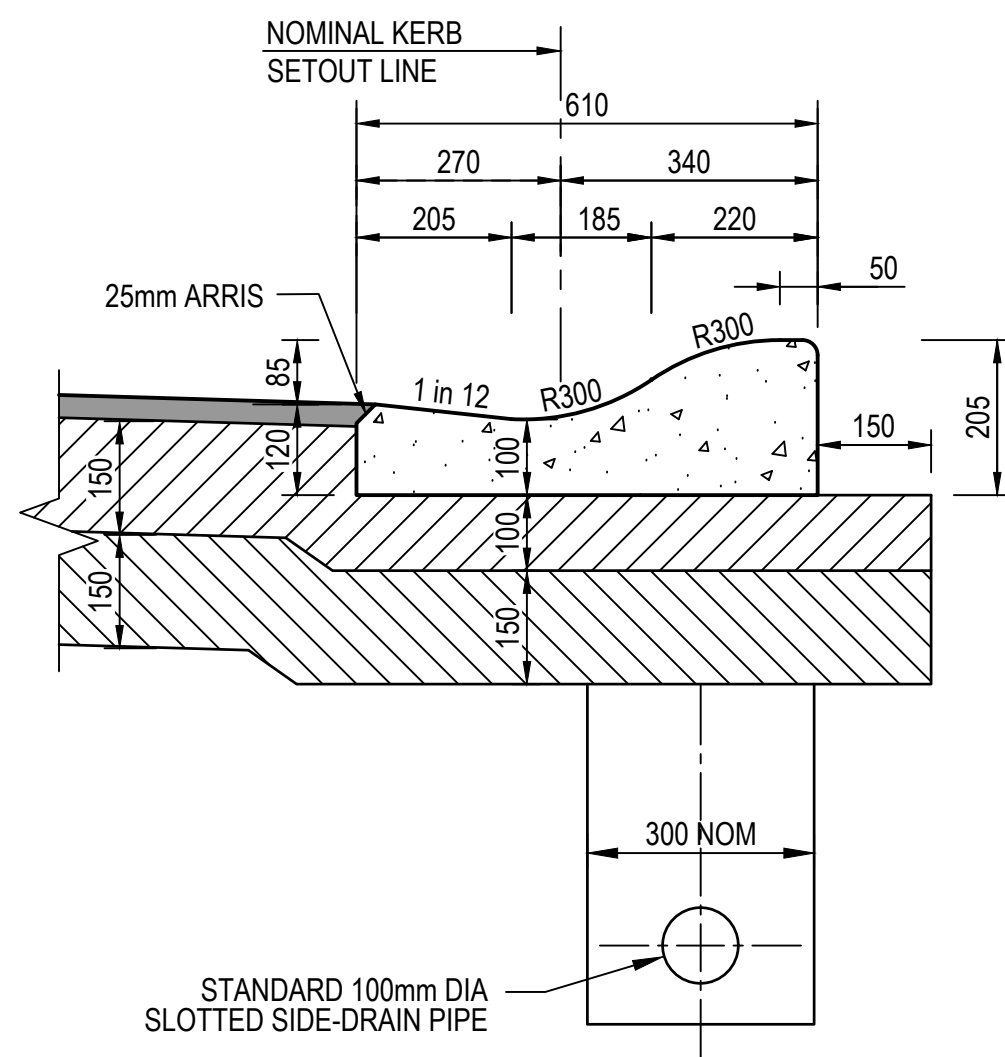
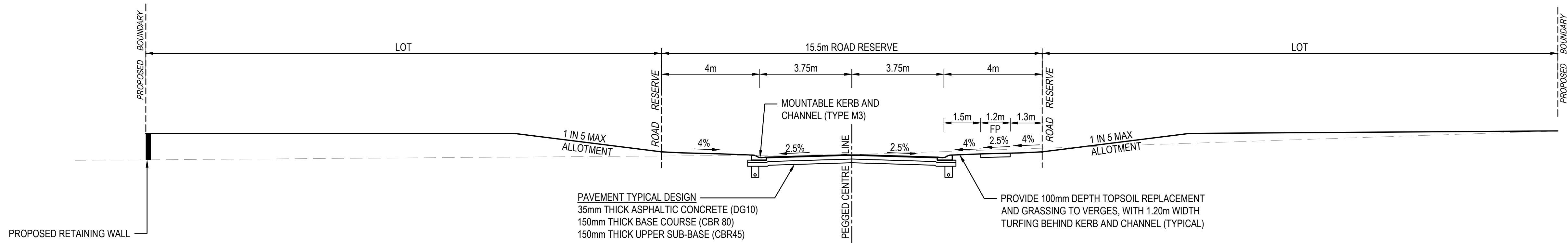
PREPARED BY



GOLD COAST | BRISBANE | TOOWOOMBA
IPSWICH | MORETON BAY
PHONE: +61 7 5509 6400
FAX: +61 7 5509 6411
EMAIL: ADMIN@BURCHILLS.COM.AU
COOTE BURCHILLS ENGINEERING PTY LTD
ABN 76 166 942 365

DATE : 23-04-25

PROJECT No.:	DRAWING No.:	VERSION:
BE230588	C000	A

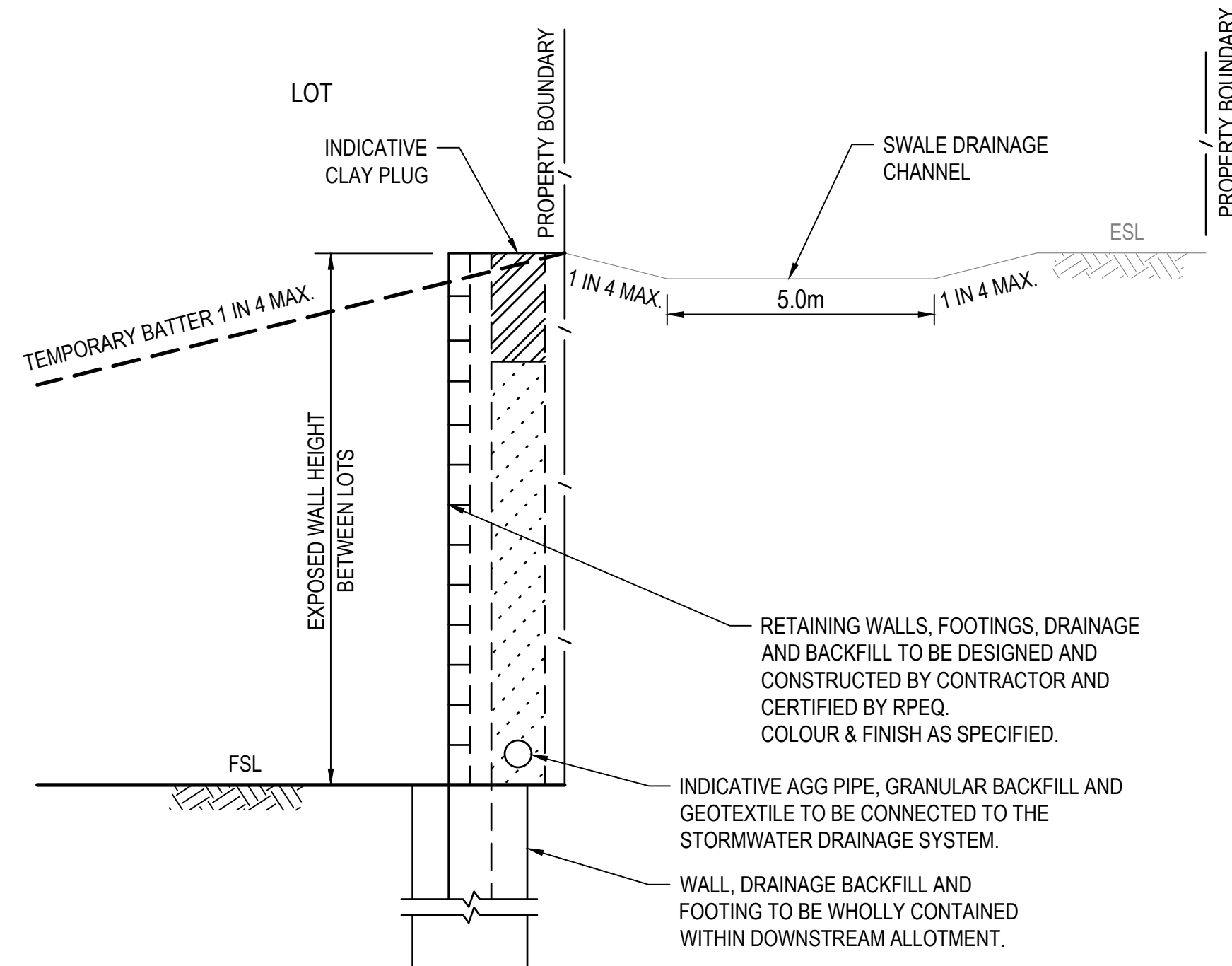


MOUNTABLE KERB AND CHANNEL
TYPE M3

SCALE 0.1 0 0.1 0.2 0.3 0.4 0.5 (metres)
1 : 10 (FULL SIZE)

PAVEMENT AND KERB NOTES:

- BATTER SLOPES AND PAVEMENT CROSSFALLS SHOWN ON THIS DRAWING ARE TYPICAL ONLY. FOR VARIATION FROM THE STANDARD PROFILES REFER RELEVANT ROADWORKS DRAWINGS.
- PAVEMENT DEPTHS SHOWN ON THIS DRAWING ARE PRELIMINARY DESIGN DEPTHS ONLY AND MAY BE VARIED ONCE SUBGRADE TESTS ARE TAKEN. TURNOUTS ARE TO BE PAVED WITH THE SAME MATERIAL AND COMPACTED TO THE SAME STANDARD AS THE ROAD ADJACENT.
- KERB AND CHANNEL, MEDIAN KERB AND OTHER EDGE SECTIONS SHALL BE CONCRETE CLASS S25, AND THE MIX DESIGNED SPECIFICALLY FOR EXTRUSION.
- REFER IPWEAQ STD DWG RSD-200 FOR TYPICAL KERB DETAILS AND NOTES.
- FOR DETAILS OF SIDE-DRAIN CONSTRUCTION REFER IPWEAQ STD DWGS RSD-801 AND RSD-802.
- 1.2m WIDE REINFORCED CONCRETE FOOTPATH INCLUDING KERB RAMPS AND JOINTING TO BE CONSTRUCTED IN ACCORDANCE WITH IPWEAQ STD DWGS PCD-101, PCD-201 AND PCD-205.



FUTURE RETAINING WALL CONFIGURATION
BETWEEN LOT & SWALE DRAINAGE

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

PRELIMINARY

CHAMBERS FLAT ROAD LOGAN RESERVE
LOT 4 RP97736; 560 CHAMBERS FLAT ROAD

FOR



A1 ORIGINAL SIZE BEFORE REDUCTION

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NOTE

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Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:

560 CHAMBER FLAT ROAD
PRELIMINARY CIVIL
ENGINEERING DESIGN

DRAWING TITLE :

PRELIMINARY TYPICAL CROSS
SECTION, NOTES AND DETAILS

DEVEL. APPLIC. No. :

DATE : 23.04.2025

PROJECT LEADER : FRASER LUCAS

DESIGNER : TG

DRAFTSPERSON : TN

CHECKED : FRASER LUCAS

APPROVED FOR AND ON BEHALF OF
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ:

SCALE :

DATUM : AHD

FULL SIZE : A1

PROJECT No.:

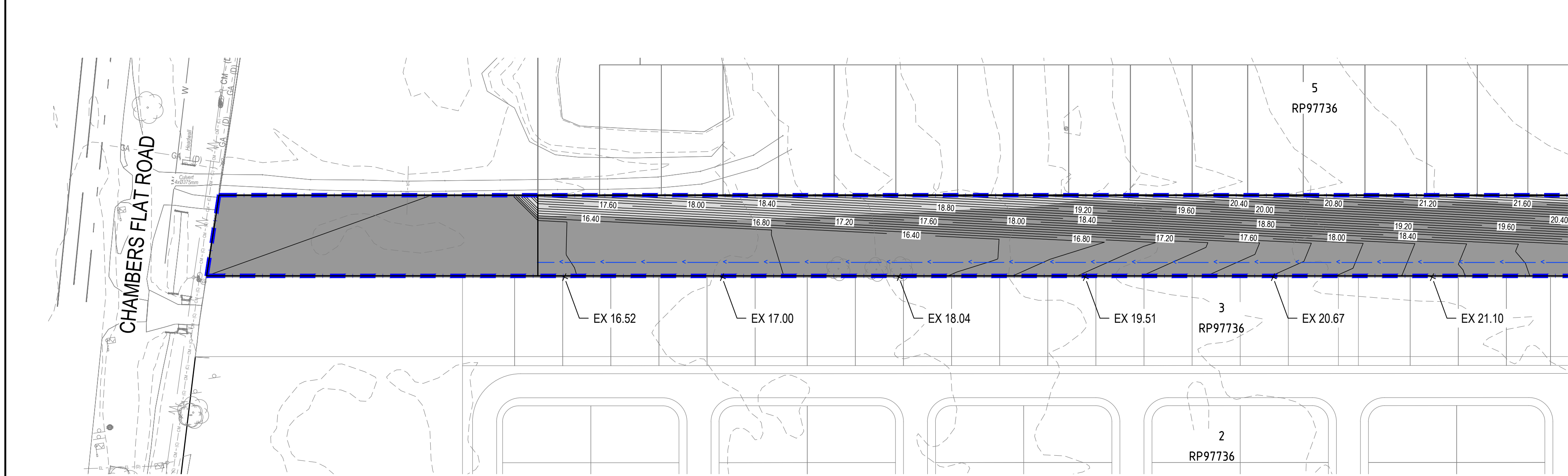
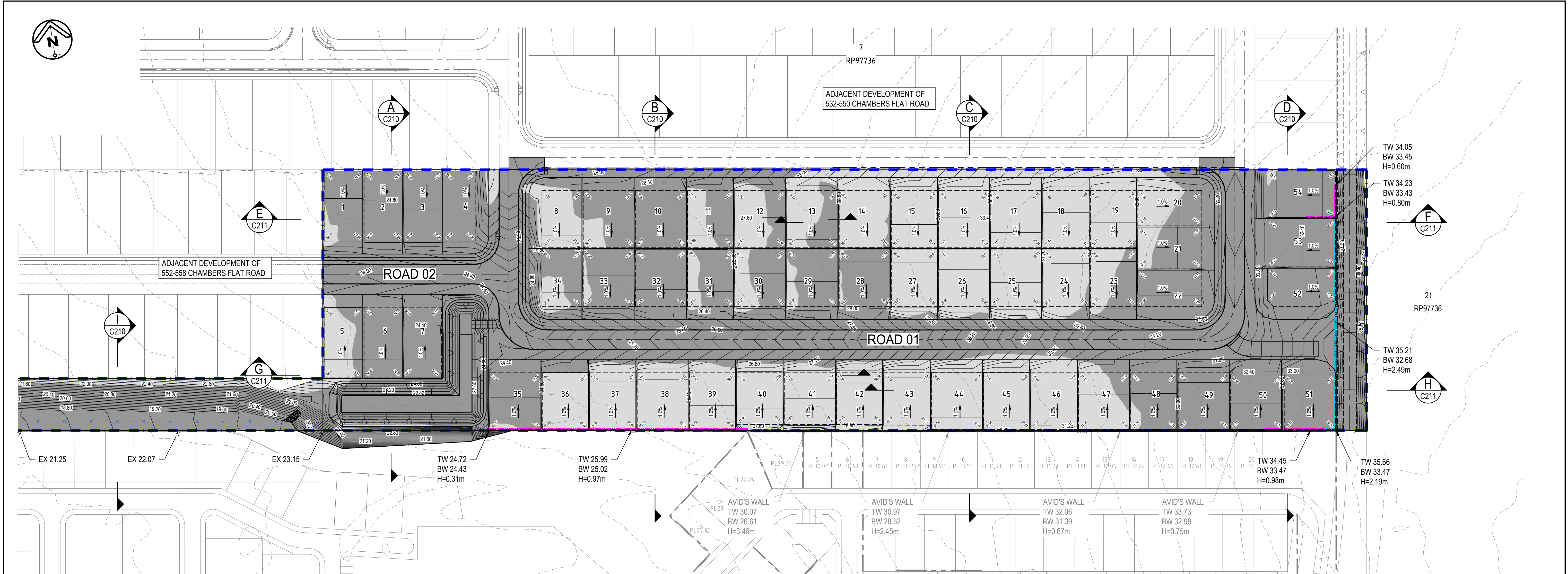
BE230588

DRAWING No.:

C100

VERSION:

A



PRELIMINARY EARTHWORKS LAYOUT PLAN

SCALE 10 0 5 10 15 20 25 30 35 (metres)
1 : 750 (FULL SIZE)

BULK EARTHWORKS SUMMARY		
STRUCTURAL FILLING		
AREA	NETT SOLID FILL	incl. COMPACTION FACTOR (0.85)
OVERALL FILLING		
(ALLOTMENTS AND BATTERS)	9,115 cu.m.	
TOTAL FILL REQUIRED	9,115 cu.m.	10,724 cu.m.
EXCAVATION		
AREA	NETT CUT	
OVERALL EXCAVATION	32,181 cu.m.	
(INCLUDING BASEMENT EXCAVATION)		
TOTAL CUT	32,181 cu.m.	
SUMMARY: TOTAL MATERIAL ON LEADS (NETT CUT) = 21,457 cu.m. i.e. 32,181cu.m. - 10,724cu.m. = 21,457 cu.m. EXCESS MATERIAL TO BE SPOIL OFF SITE (NETT CUT)		

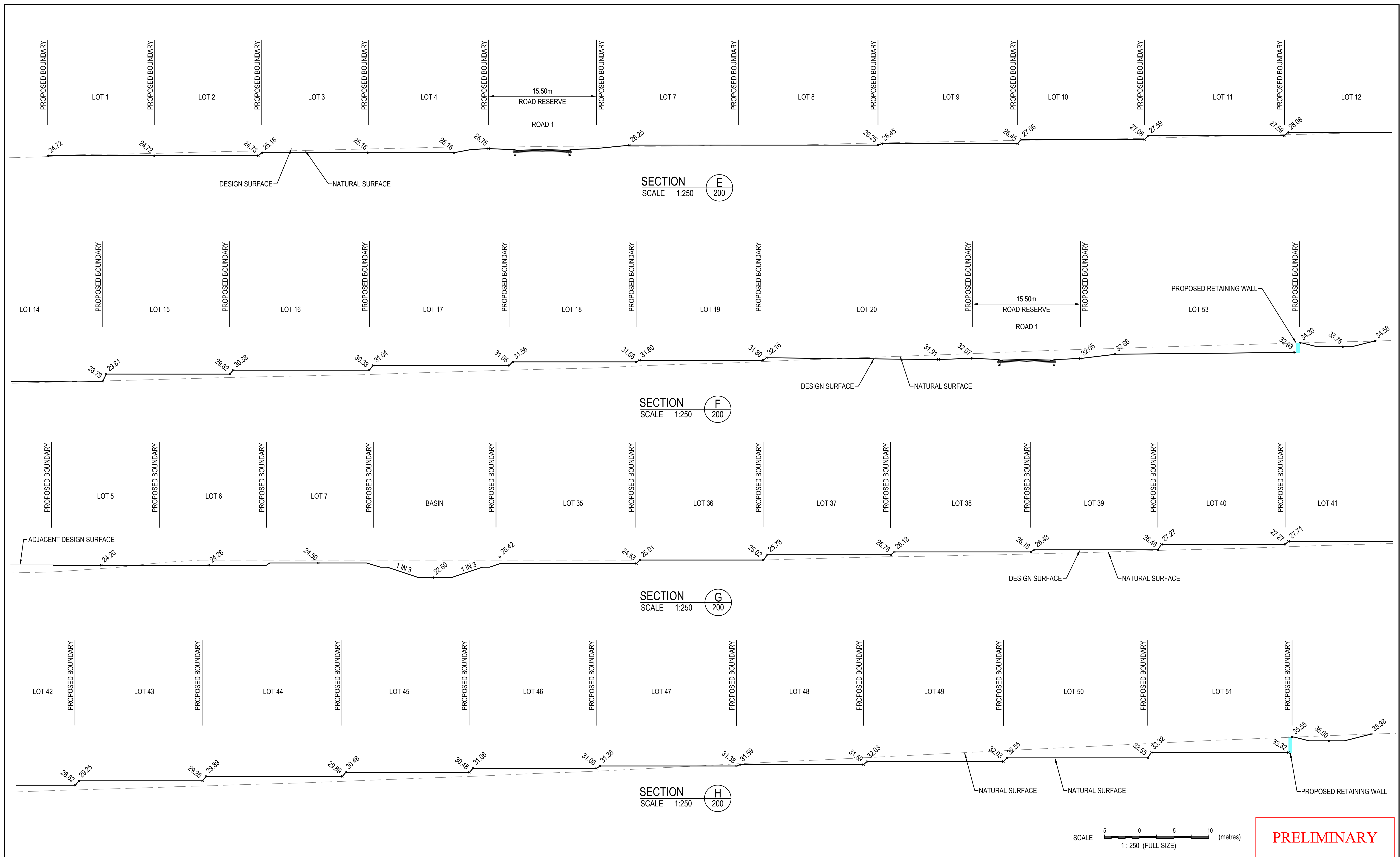
LEGEND	
	DEVELOPMENT BOUNDARY
	DESIGN SURFACE CONTOURS
	EXISTING LOT BOUNDARY
	EXISTING STORMWATER
	EXISTING WATER
	EXISTING SEWER
	EXISTING ROAD CONTROL LINE
	EXISTING KERB
	AVID'S WALL
	DESIGN SURFACE CONTOURS
	PROPOSED ROAD CONTROL LINE
	PROPOSED MOUNTABLE KERB AND CHANNEL (TYPE M3)
	PROPOSED RETAINING WALL (0.6m-1.5m)
	PROPOSED RETAINING WALL (1.5m-3.0m)
	EARTHWORKS AREA OF FILL
	EARTHWORKS AREA OF CUT

PRELIMINARY

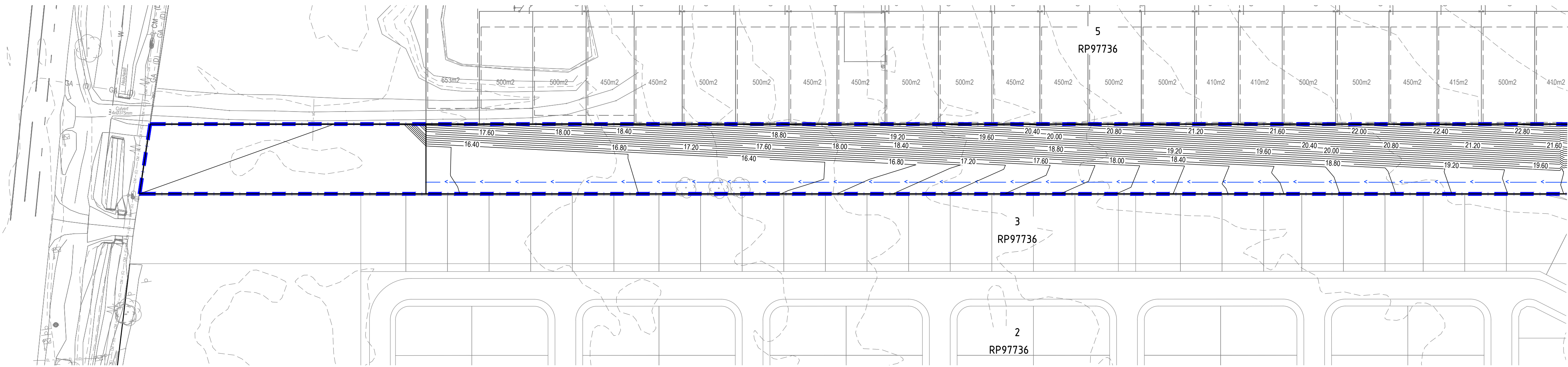
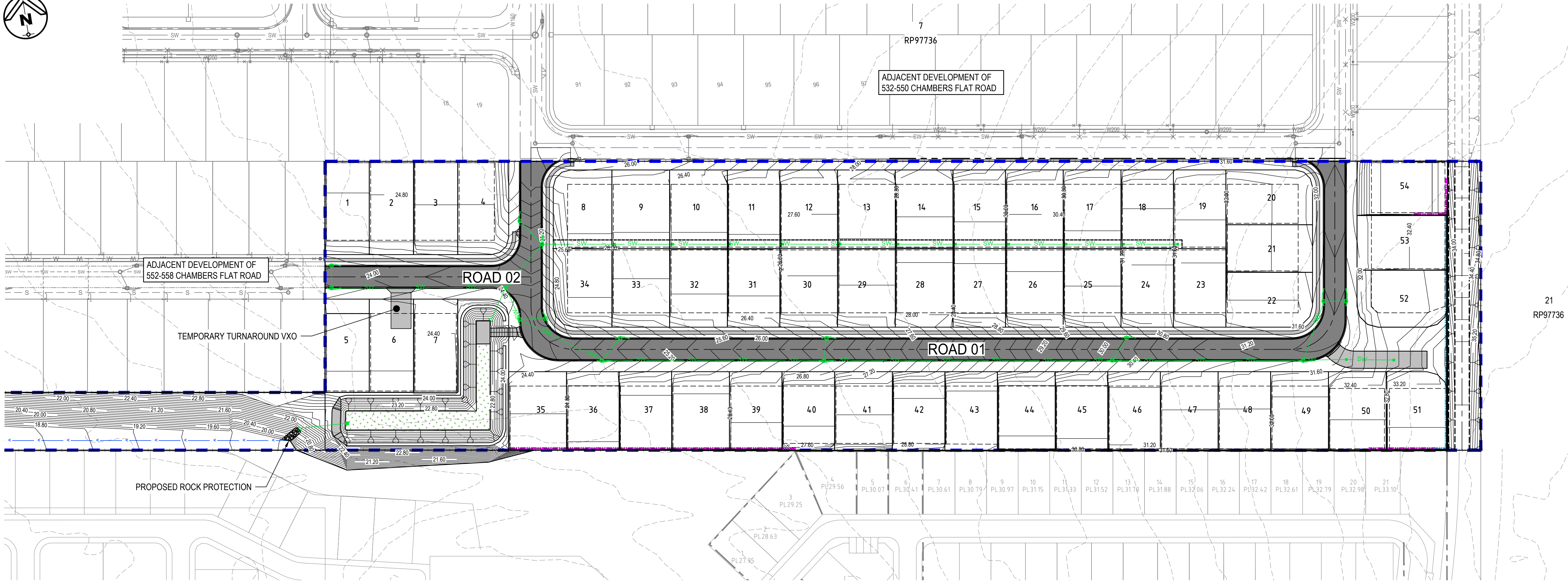
CHAMBERS FLAT ROAD LOGAN RESERVE LOT 4 RP97736; 560 CHAMBERS FLAT ROAD FOR GDM PROPERTY A1 ORIGINAL SIZE BEFORE REDUCTION						COPYRIGHT © This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions. DISCLAIMER This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended. Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party. NOTE This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.		BURCHILLS ENGINEERING SOLUTIONS Gold Coast Brisbane Toowoomba Ipswich Moreton Bay Phone: +61 7 5509 6400 Fax: +61 7 5509 6411 Email: admin@burchills.com.au Coote Burchills Engineering Pty Ltd ABN 76 166 942 365		PROJECT: 560 CHAMBER FLAT ROAD PRELIMINARY CIVIL ENGINEERING DESIGN		DRAWING TITLE : PRELIMINARY EARTHWORKS LAYOUT PLAN		DEVEL. APPLIC. No. :		DATE : 23.04.2025	
		PROJECT LEADER : FRASER LUCAS		DESIGNER : TG													
		DRAFTSPERSON : TN		CHECKED : FRASER LUCAS													
		APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365															
		RPEQ:															
		A		ISSUE FOR INFORMATION		23.04.25											
		VER:		DESCRIPTION		DATE											



CHAMBERS FLAT ROAD LOGAN RESERVE LOT 4 RP97736; 560 CHAMBERS FLAT ROAD FOR GDM PROPERTY A1 ORIGINAL SIZE BEFORE REDUCTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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CHAMBERS FLAT ROAD LOGAN RESERVE LOT 4 RP97736; 560 CHAMBERS FLAT ROAD FOR GDM PROPERTY A1 ORIGINAL SIZE BEFORE REDUCTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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- LEGEND**
- DEVELOPMENT BOUNDARY
 - 15.0- DESIGN SURFACE CONTOURS
 - - - EXISTING LOT BOUNDARY
 - SW - - - EXISTING STORMWATER
 - W - - - EXISTING WATER
 - S - - - EXISTING SEWER
 - - - EXISTING ROAD CONTROL LINE
 - - - EXISTING KERB
 - 15.0- DESIGN SURFACE CONTOURS
 - - - PROPOSED ROAD CONTROL LINE
 - == PROPOSED MOUNTABLE KERB AND CHANNEL (TYPE M3)
 - PROPOSED BOULDER RETAINING WALL (1.5m MAX)
 - PROPOSED SLEEPER RETAINING WALL (1.5m MAX)
 - SW PROPOSED STORMWATER
 - GULLY PIT / MANHOLE STORMWATER
 - PROPOSED ASPHALT PAVEMENT
 - PROPOSED CONCRETE PAVEMENT

PRELIMINARY ROADWORKS & DRAINAGE LAYOUT PLAN

SCALE 10 0 5 10 15 20 25 30 35 (metres)
1:750 (FULL SIZE)

PRELIMINARY

CHAMBERS FLAT ROAD LOGAN RESERVE
LOT 4 RP97736; 560 CHAMBERS FLAT ROAD
FOR



A1 ORIGINAL SIZE BEFORE REDUCTION

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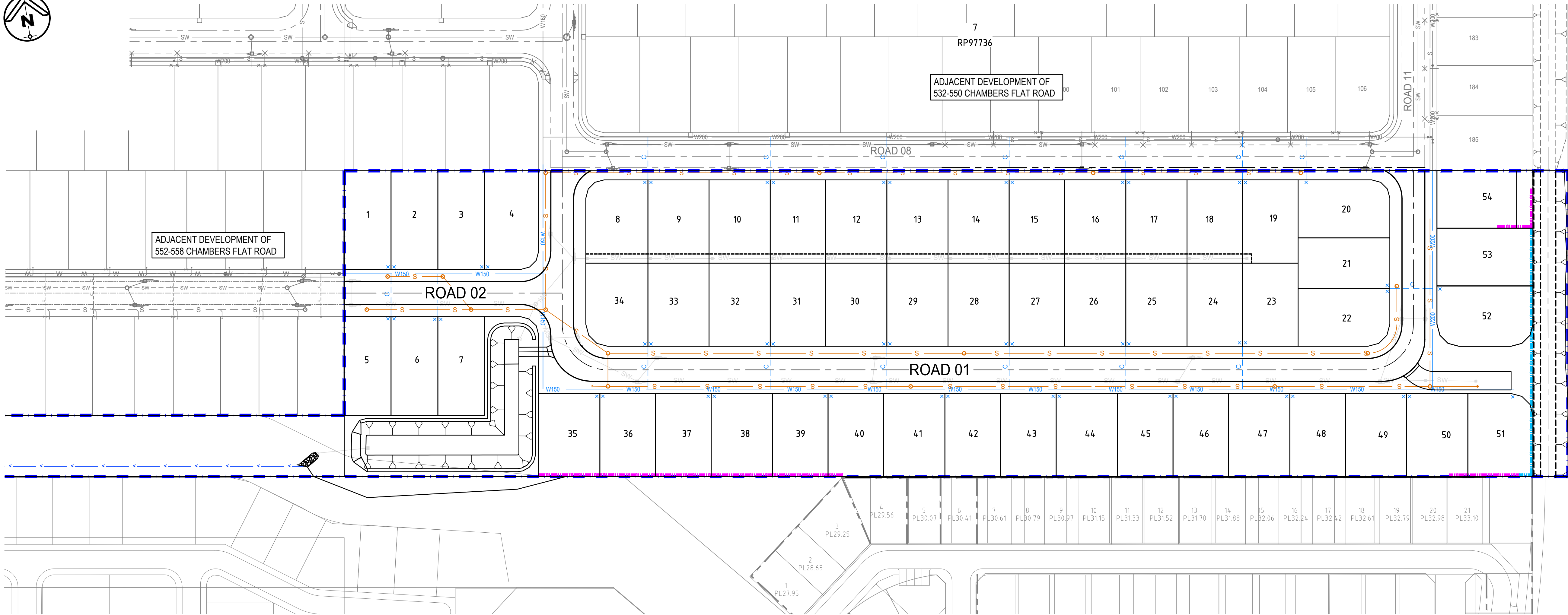
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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
**560 CHAMBER FLAT ROAD
PRELIMINARY CIVIL
ENGINEERING DESIGN**

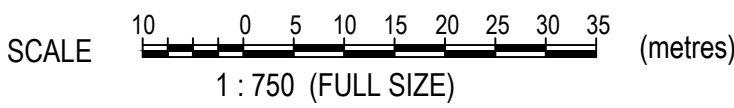
DRAWING TITLE :
**PRELIMINARY ROADWORKS
& DRAINAGE LAYOUT PLAN**

DEVEL. APPLIC. No. :		DATE : 23.04.2025
PROJECT LEADER : FRASER LUCAS	DESIGNER : TG	
DRAFTSPERSON : TN	CHECKED : FRASER LUCAS	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365		
RPEQ:		
SCALE :	DATUM : AHD	FULL SIZE : A1
PROJECT No. : BE230588	DRAWING No. : C300	VERSION : A





PRELIMINARY SEWER & WATER LAYOUT PLAN



LEGEND

- DEVELOPMENT BOUNDARY
- EXISTING LOT BOUNDARY
- EXISTING STORMWATER
- EXISTING WATER
- EXISTING SEWER
- EXISTING ROAD CONTROL LINE
- EXISTING KERB
- PROPOSED ROAD CONTROL LINE
- PROPOSED MOUNTABLE KERB AND CHANNEL (TYPE M3)
- PROPOSED BOULDER RETAINING WALL (1.5m MAX)
- PROPOSED SLEEPER RETAINING WALL (1.5m MAX)
- PROPOSED DN150 PVC-M WATER RETICULATION
- PROPOSED DN200 PVC-M WATER RETICULATION
- HYDRANT / VALVE
- WATER SERVICE LOCATION
- PROPOSED SEWER AND MANHOLE
- PROPOSED STORMWATER
- GULLY PIT / MANHOLE STORMWATER

PRELIMINARY

CHAMBERS FLAT ROAD LOGAN RESERVE
LOT 4 RP97736; 560 CHAMBERS FLAT ROAD
FOR



A1 ORIGINAL SIZE BEFORE REDUCTION

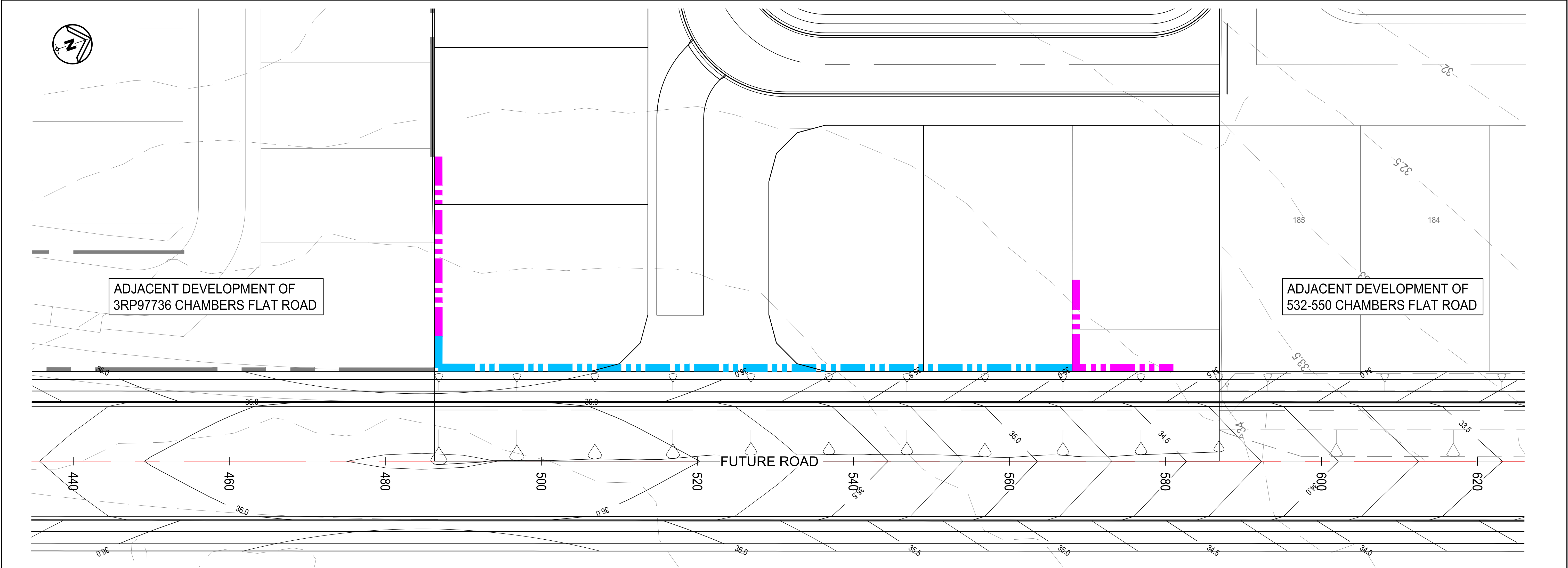
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Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
560 CHAMBER FLAT ROAD
PRELIMINARY CIVIL
ENGINEERING DESIGN

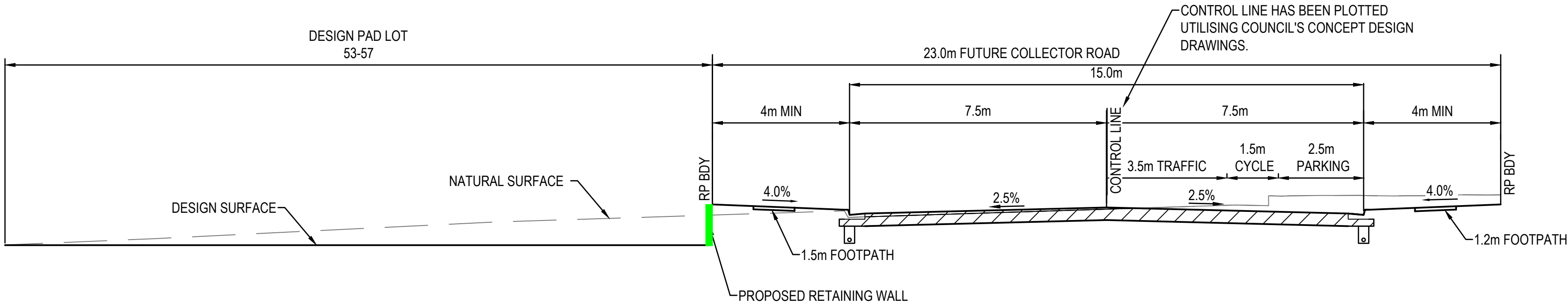
DRAWING TITLE :
PRELIMINARY SEWER & WATER LAYOUT PLAN

DEVEL. APPLIC. No. :		DATE : 23.04.2025
PROJECT LEADER : FRASER LUCAS	DESIGNER : TG	
DRAFTSPERSON : TN	CHECKED : FRASER LUCAS	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365		
RPEQ:		
SCALE :	DATUM : AHD	FULL SIZE : A1
PROJECT No. : BE230588	DRAWING No. : C400	VERSION: A



PRELIMINARY FUTURE COLLECTOR ROAD PLAN & TYPICAL DETAIL

SCALE 10 0 5 10 15 20 25 30 35 (metres)
1 : 750 (FULL SIZE)



FUTURE COLLECTOR TYPICAL SECTION

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

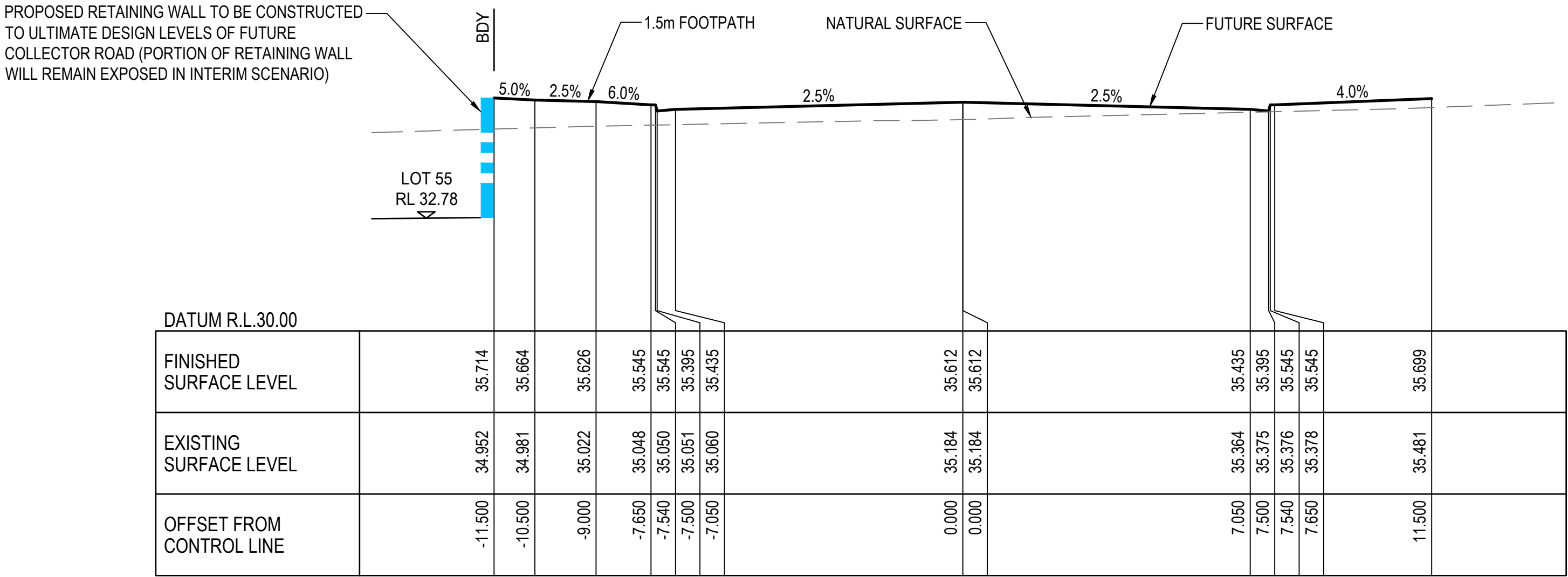
NOTE:
NOTE: DESIGN SURFACE HAS BEEN PLOTTED AT THE CONTROL LINE USING OVERLAY OF COUNCIL'S EXISTING CONCEPT DESIGN. BURCHILLS DOES NOT TAKE ANY OWNERSHIP OR RESPONSIBILITY, AS THE PURPOSE OF THIS DRAWING IS TO DEPICT FUTURE LEVEL INTERFACE OF THIS ROAD WITH THE PROPOSED DEVELOPMENT.

LEGEND

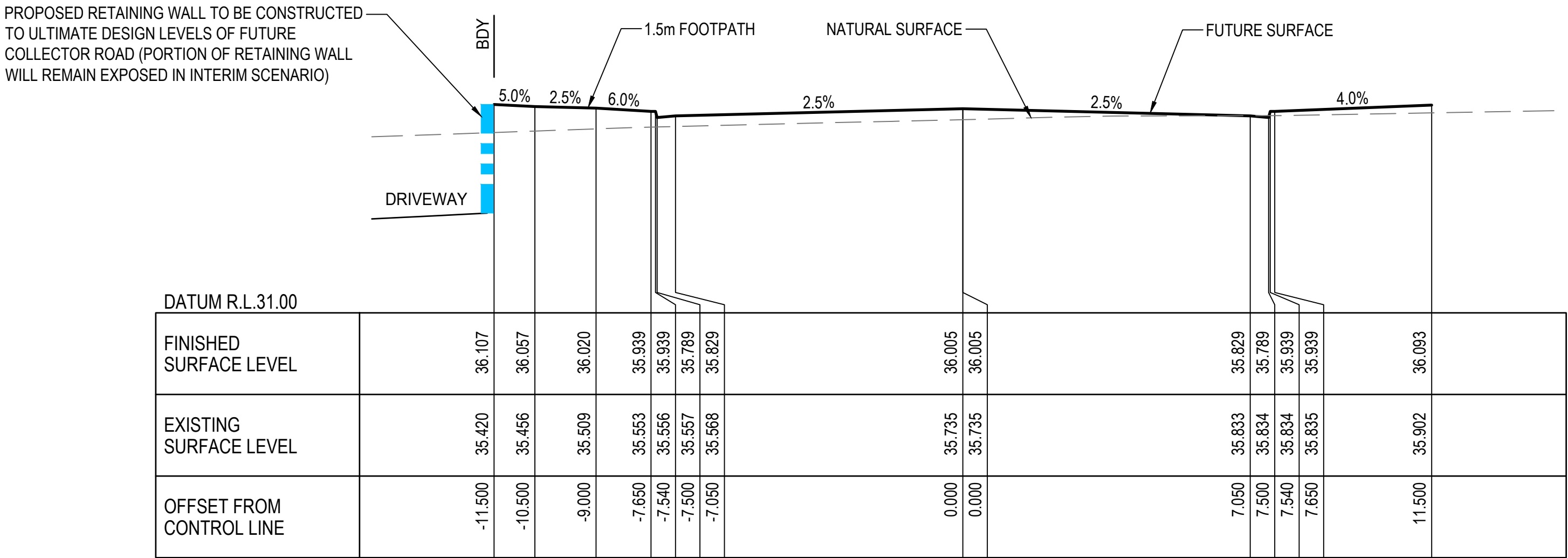
- PROPOSED ROAD CONTROL LINE
- PROPOSED MOUNTABLE KERB AND CHANNEL (TYPE M3)
- PROPOSED SLEEPER WALL (0.6m-1.5m)
- PROPOSED SLEEPER WALL (1.5m-3.0m)

PRELIMINARY

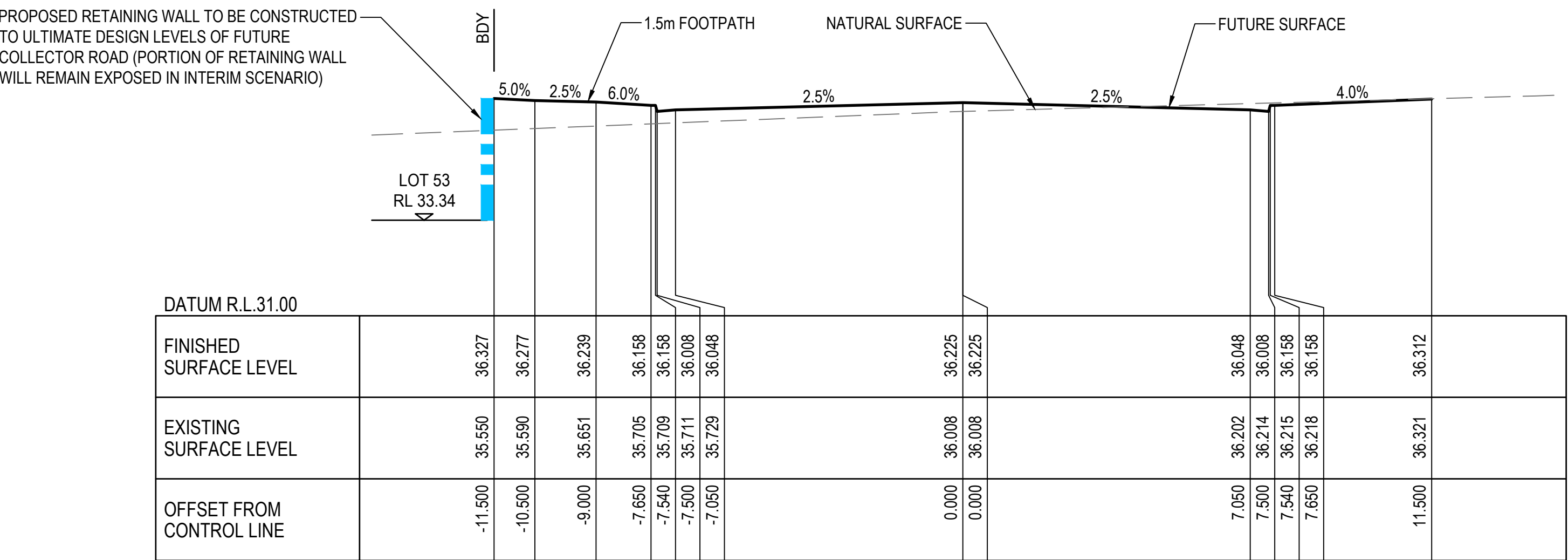
CHAMBERS FLAT ROAD LOGAN RESERVE LOT 4 RP97736; 560 CHAMBERS FLAT ROAD FOR 			COPYRIGHT © This drawing is copyright and the property of Burchills Engineering Solutions. If must not be retained, copied or used without the authority of Burchills Engineering Solutions. DISCLAIMER This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended. Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party. NOTE This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.			 Gold Coast Brisbane Toowoomba Ipswich Moreton Bay Phone: +61 7 5509 6400 Fax: +61 7 5509 6411 Email: admin@burchills.com.au Coote Burchills Engineering Pty Ltd ABN 76 166 942 365			PROJECT: 560 CHAMBER FLAT ROAD PRELIMINARY CIVIL ENGINEERING DESIGN			DRAWING TITLE : PRELIMINARY FUTURE COLLECTOR ROAD PLAN & TYPICAL DETAIL			DEVEL. APPLIC. No. : PROJECT LEADER : FRASER LUCAS DESIGNER : TG DRAFTSPERSON : TN CHECKED : FRASER LUCAS APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365 RPEQ: SCALE : PROJECT No.: BE230588 DATUM : AHD DRAWING No. : C500 FULL SIZE : A1 VERSION: A			DATE : 23.04.2025		
A1 ORIGINAL SIZE BEFORE REDUCTION			A ISSUE FOR INFORMATION 23.04.25																	
VER.			DESCRIPTION			DATE														



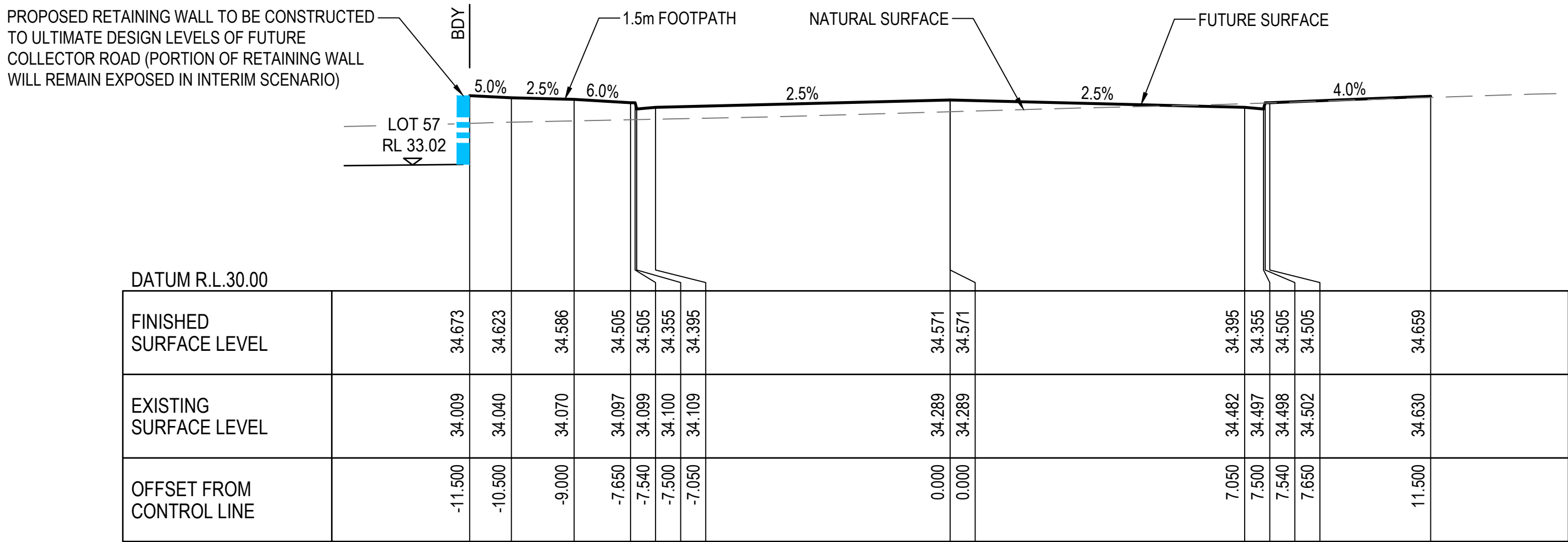
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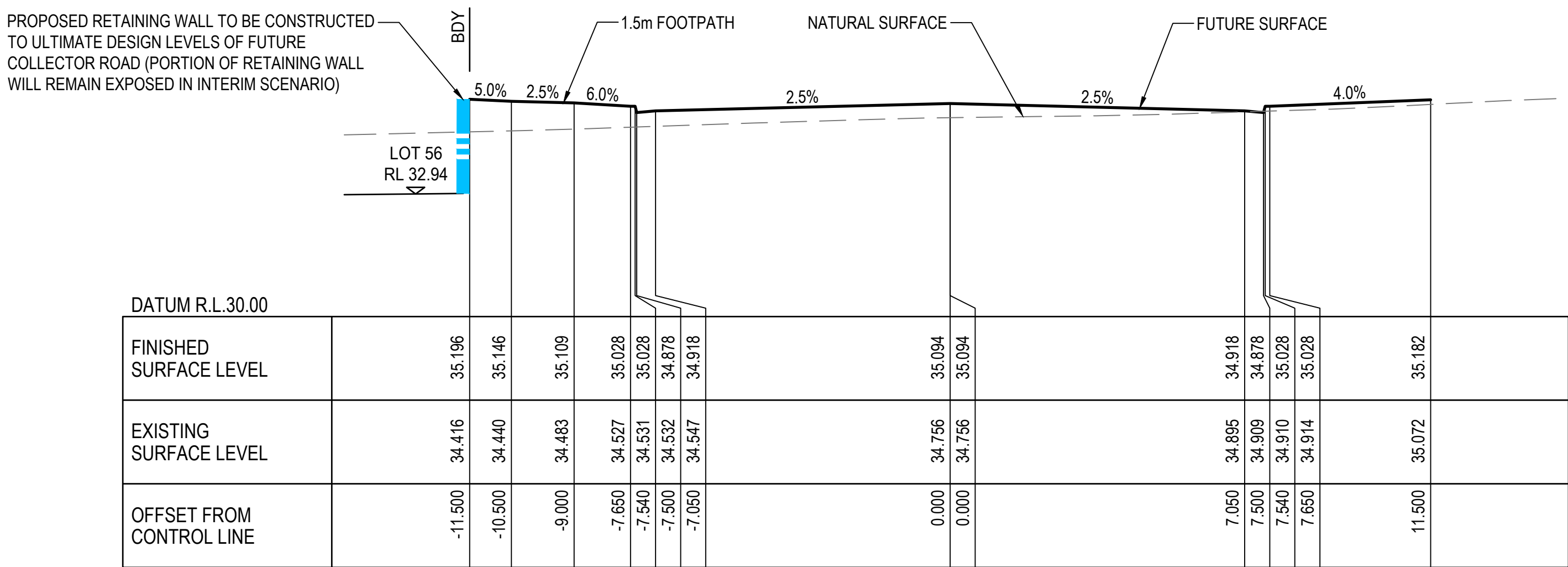
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CH 500.000



CH 580.000



CH 560.000

SCALE 1 : 100 (FULL SIZE)

PRELIMINARY

CHAMBERS FLAT ROAD LOGAN RESERVE
LOT 4 RP97736; 560 CHAMBERS FLAT ROAD

FOR



A1 ORIGINAL SIZE BEFORE REDUCTION

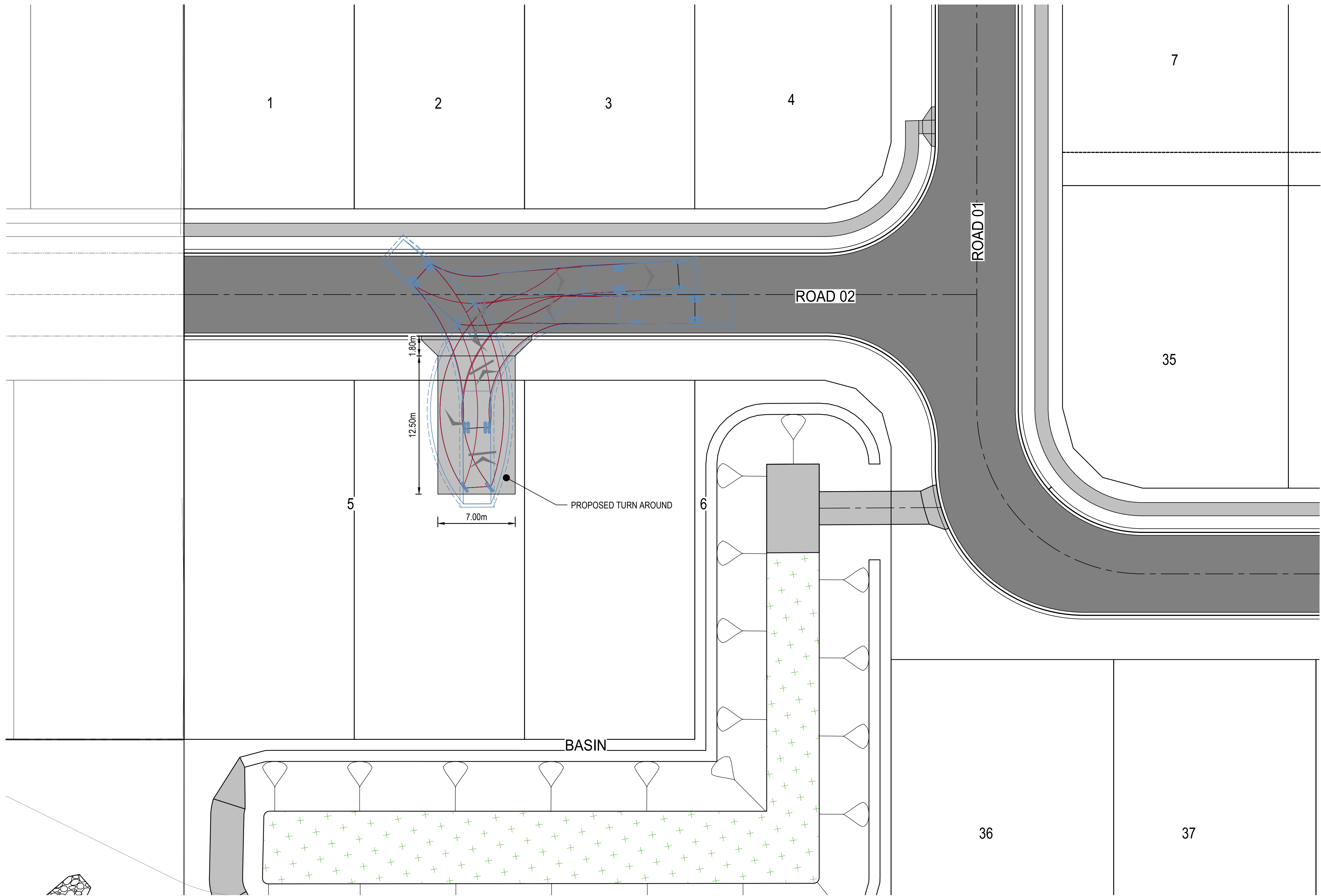
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ABN 76 166 942 365

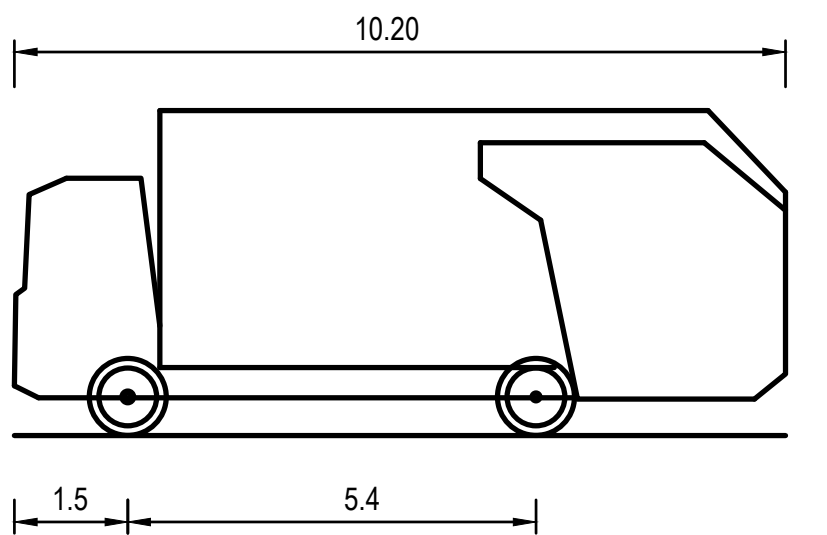
PROJECT:
560 CHAMBER FLAT ROAD
PRELIMINARY CIVIL
ENGINEERING DESIGN

DRAWING TITLE :
PRELIMINARY FUTURE
COLLECTOR ROAD CROSS
SECTIONS

DEVEL. APPLIC. No. :		DATE : 23.04.2025
PROJECT LEADER : FRASER LUCAS	DESIGNER : TG	
DRAFTSPERSON : TN	CHECKED : FRASER LUCAS	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365		
RPEQ:		
SCALE :	DATUM : AHD	FULL SIZE : A1
PROJECT No. : BE230588	DRAWING No. : C520	VERSION: A



 WHEEL PATH
 VEHICLE BODY ENVELOPE
 0.3m OVERHANG



WCV (10.2 m)	
OVERALL LENGTH	10.200m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.483m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	12.500m

SCALE  (metres)
1 : 200 (FULL SIZE)

A1 ORIGINAL SIZE BEFORE REDUCTION

A	ISSUE FOR INFORMATION	23.04.25
VER.	DESCRIPTION	DATE

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DRAWING TITLE :

PRELIMINARY VEHICLE
CHECKING LAYOUT PLAN

DEVEL. APPLIC. No.:		DATE : 23.04.2025	
PROJECT LEADER : FRASER LUCAS		DESIGNER : TG	
DRAFTSPERSON : TN		CHECKED : FRASER LUCAS	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365 RPEQ:			
SCALE :		FULL SIZE : A1	
PROJECT No.:		VERSION:	
BE230588		A	



Appendix C – DBYD



560 Chambers Flat Road



[Review responses online](#) ↗



Received 6 of 6 responses
All responses received

560 Chambers Flat Road, Logan Reserve
QLD 4133

Job dates
10/10/2024 → 11/10/2024

These plans expire on
7 Nov 2024

Lodged by
Ryan Saba

Authority	Status	Page
✉ BYDA Confirmation		2
🏠 APA Group Gas Networks (90073)	Received	4
🏠 Energex QLD	Received	58
🏠 Logan City Council	Received	78
🏠 NBN Co Qld	Received	84
🏠 OptiComm Ltd (QLD)	Received	103
🏠 Telstra QLD FA	Received	111



Contact Details

Contact	Contact number	Company	Enquirer ID
Ryan Saba	0402 009 602	Burchills Engineering Solutions	3534690
Email		Address	
ryan.saba@burchills.com.au		26 Marine Parade Southport QLD 4215	

Job Site and Enquiry Details

WARNING: The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

Enquiry date	Start date	End date	On behalf of	Job purpose	Locations	Onsite activities
10/10/2024	10/10/2024	11/10/2024	Private	Excavation	Road Reserve Road, Footpath	Mechanical Excavation



Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

User Reference	Address	Notes/description
560 Chambers Flat Road	560 Chambers Flat Road Logan Reserve QLD 4133	-

Your Responsibility and Duty of Care

- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the [Privacy Policy](#) and [Term of Use](#).
- For more information on safe digging practices, visit www.byda.com.au

Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

Referral ID (Seq. no)	Authority Name	Phone	Status
245811260	APA Group Gas Networks (90073)	1800 085 628	NOTIFIED
245811262	Energex QLD	13 12 53	NOTIFIED
245811259	Logan City Council	(07) 3412 3412	NOTIFIED
245811257	NBN Co Qld	1800 687 626	NOTIFIED
245811258	OptiComm Ltd (QLD)	1300 137 800	NOTIFIED
245811261	Telstra QLD FA	1800 653 935	NOTIFIED

END OF UTILITIES LIST



Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.



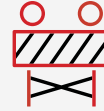
Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a skilled Locator.



Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.



Protect

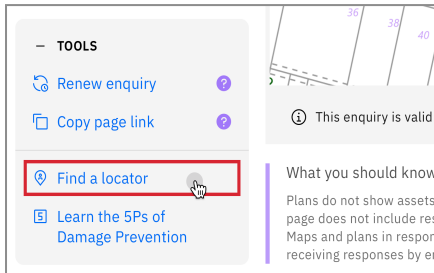
Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.



Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Engage a skilled Locator



When you lodge an enquiry you will see skilled Locators to contact

Visit the Certified Locator website directly and search for a locator near you

dbydlocator.com/certified-locating-organisation

Book a FREE BYDA Session



BYDA offers two different sessions to suit you and your organisation's needs. The free sessions are offered in two different formats - online and face-to-face:

1. **Awareness Session:** Understand the role of BYDA, safe excavation practices, complying with asset-owner instructions, and the consequences of damages. Learn how to mitigate and avoid potential damage and harm and ensure a safe work environment.
2. **Plan Reading Session:** Develop the skills to interpret asset owners' plans, legends, and symbols effectively. Understand the complexities of plan interpretation to ensure smooth project execution.

To book a session, visit:

byda.com.au/contact/education-awareness-enquiry-form/

BOOK NOW

APA Group Gas Networks (90073)

Referral
245811260

Member Phone
1800 085 628

Responses from this member

Response received Thu 10 Oct 2024 10.55am

File name	Page
Response Body	5
400-STD-AM-0001_2 Guidelines for Works Near Existing Gas Assets.pdf	7
245811260.pdf	48

PLEASE NOTE: This is an automated response. Please **DO NOT REPLY to this email**. If you require further information in relation to this Before You Dig response, please contact
BYDA_APA@apa.com.au

Enquiry Details:

Impact	affected
Sequence Number	245811260
Enquirer Id	3534690
Activity	Mechanical Excavation
Job Number	37782710
User Reference	560 Chambers Flat Road
Message	

Site Details:

Address	560 Chambers Flat Road Logan Reserve QLD 4133
---------	---

Enquirer's Details:

Contact	Ryan Saba
Company	Burchills Engineering Solutions
Email	ryan.saba@burchills.com.au
Phone	+61402009602
Address	26 Marine Parade Southport QLD 4215

APA Group

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Guidelines for Works Near Existing Gas Assets

400-STD-AM-0001

Revision 2

OWNER NAME:	Alan Creffield
OWNER TITLE:	Manager of Integrity
APPROVER NAME:	Anastasia Coutie
APPROVER TITLE:	Team Lead – 3 rd Party Engagement
APPROVAL SIGNATURE:	
APPROVAL DATE:	18/08/2023

always powering ahead

DOCUMENT CONTROL & APPROVAL INFORMATION

Summary of Changes

Below is a brief summary of the changes made to the document since the previous issued version.

Revision	Description	Date	Author
0.0	Issue for Use	29.06.2018	Matthew Read
1.0	Issued for Use – document periodic update / major overhaul	01.03.2022	Kahil Parsons
2.0	Removal of incorrect table 2 references to 1. proximity of HV cables 2. Updating separation distances to AS2885.3 BYDA reference update Table 4 Note	16.08.2023	Dale Russell

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TERMS OF USE

The “Guidelines for Works Near Existing Gas Assets Standard” is used for APA Networks excavations or third party excavations near APA Network operated assets. This guideline must only be used by the person or entity who received it directly from APA (“You”) to ensure the latest version is used.

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2. This Guidelines document is provided to You to assist in the development of design plans, construction and land use activities.
3. This Guidelines document does not override or supersede APA's Permit to Work (**PTW**) or Excavation policies and procedures.
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The purpose of this document is to provide guidelines for third parties planning to install new infrastructure or conduct works near existing APA Networks (**APA**) operated assets.

It is intended that this document will be provided to third parties proposing works around existing gas assets for their use during the design and planning phase following initial planning BYDA enquiries. This document does not provide authorisation to undertake the works but provides APA requirements to ensure that any review and acceptance of proposed works is completed as quickly as possible.

1 INTRODUCTION

1.1 Scope of this Document

This document addresses APA's requirements for considering how a third party's proposed works and APA managed works may impact APA Networks operated assets under the following parts:

Part 1 – APA Notification and Authorisation Requirements

Part 2 – Design and Asset Protection Requirements

Part 3 – Construction and Land Use Requirements

Part 4 – Alteration of Existing Gas Assets

APA Networks acts as the asset operator on behalf of entities Australian Gas Networks (**AGN**), Allgas, APA, Origin and Queensland Nitrates (**QNP**) and operates in New South Wales, Northern Territory, Queensland, South Australia and Victoria. The criteria provided in this document only applies to the assets managed by APA Networks on behalf of these companies.

APA also owns and operates natural gas transmission infrastructure on all mainland states and territories of Australia. These assets are operated by a separate APA entity and are out of scope for this document.

A glossary of all terms and abbreviations used in this document is contained in **Section 7**.

A list of all relevant external standards and APA reference documents is contained in **Section 8**.

1.2 Asset Types

APA Networks' operated gas assets include buried pipe, above and below ground stations (e.g. pressure regulation, valves, meters), electrical cables, cathodic protection systems (e.g. test points, anode beds), pits and electrical cabinets. Depending on the gas type and the operating pressure, gas assets are classified as natural gas transmission, natural gas distribution and Liquefied Petroleum Gas (**LPG**) distribution as shown in **Figure 1**.

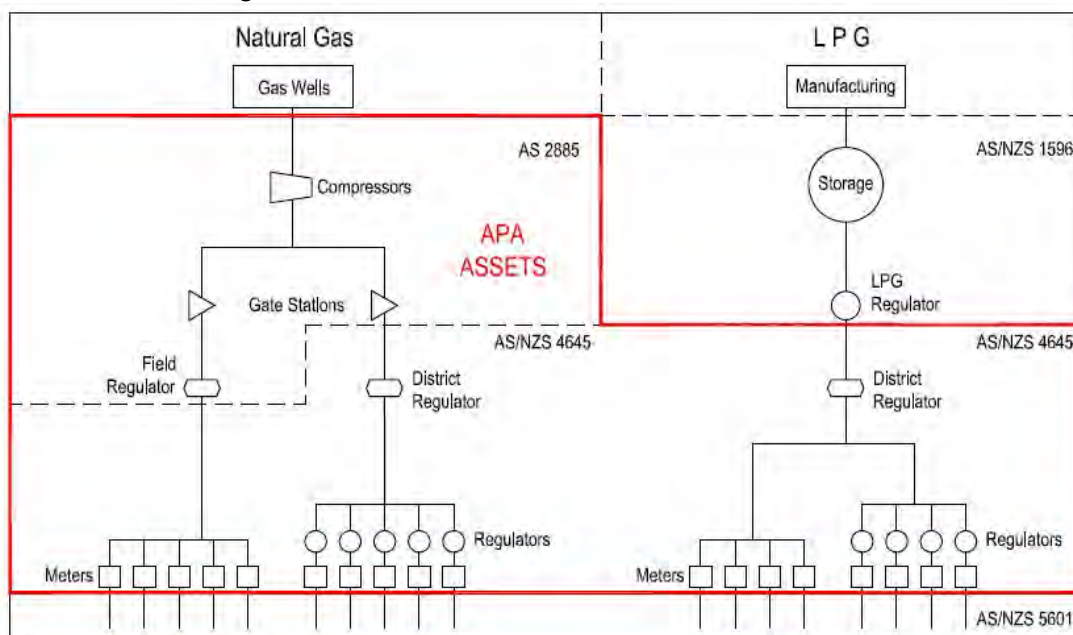


Figure 1 Asset Types and Standards Operated by APA Networks

1.2.1 Natural Gas Transmission

Natural gas transmission pressure assets operate at pressures above 1,050 kPag, and are generally used for transporting large quantities of gas across country. Design, construction and operation of these assets is governed by the AS 2885 suite of Australian Standards (**AS**).

Due to the higher pressure and energy density, there are severe safety, supply and environmental consequences which can result from third party interference. Hence, more stringent requirements and controls are applied to third party works in the vicinity of these assets.

Buried transmission pipelines are constructed from coated steel pipe where the appearance can vary depending on the year of construction, but will generally appear as yellow, black or grey when physically exposed.

1.2.2 Natural Gas Distribution

Natural gas distribution pressure assets operate at pressures below or equal to 1,050 kPag from offtakes of transmission pressure assets, and are generally used to supply consumers such as businesses and homes. Design, construction and operation of these assets is governed by the AS/NZS 4645 suite of Australian Standards.

Due to the lower energy density compared to transmission assets, less stringent requirements and controls are applied to distribution assets. Some distribution assets are deemed critical by APA Networks due to the safety and supply implications that may arise due to a third party strike. These critical distribution assets will be defined on BYDA responses, and some of the controls which are applied to transmission pressure assets (e.g. permit and site watch) will be required.

Buried distribution pressure pipes may be constructed from the following materials and physical appearances when exposed:

- Cast Iron (black);
- Polyethylene (PE) (yellow or black with yellow stripes);
- Steel coated or uncoated (generally yellow, black or grey); and
- Other plastic such as Polyvinyl Chloride (PVC) or nylon (yellow).

Some legacy materials such as cast iron and nylon may require additional protection during construction works due to the unpredictable nature of the materials.

1.2.3 LPG Distribution

LPG distribution pressure assets operate at pressures below 140 kPag from storage compounds and are generally used to supply consumers such as businesses and homes in parts of Queensland, South Australia and Northern Territory. Design, construction and operation of these assets is governed by the AS/NZS 4645 suite of Australian Standards.

Additional safety considerations are required in addition to the requirements for natural gas, as LPG is heavier than air and will pool at the leak point and can accumulate in a trench or excavation.

The same materials used for buried distribution pressure pipes (**Section 1.2.2**) may be used on LPG distribution networks.

1.3 Damage and Emergencies

If you smell gas or damage has occurred, or is suspected, on any gas asset call APA emergency number **1800 GAS LEAK (1800 427 532) or 1800 808 526 for LPG assets.**

Any unreported damage has the potential to escalate and endanger public safety.

Where damage has resulted in a release of gas, you are advised to take the following immediate action:

- Clear the area of all people. Do not under any circumstance re-enter the damage area;
- Where safe to do so, shut off or remove all ignition sources and devices in the area e.g. naked flames, vehicle engines, power tools, mobile phones;
- Do not attempt to stop the flow or repair the damage;
- Allow the gas to vent to air; and
- Once clear of the area, contact the emergency number **1800 427 532 or 1800 808 526 for LPG assets.**

The conditions in this document or as provided by APA Networks are intended to protect the gas assets as well as keep safe any construction crews or general public in the vicinity. Depending on the circumstances, some variation to the conditions in this document may be required or may be provided by an approved APA Networks site watch representative. It is legislated in all jurisdictions that the direction provided by APA is followed.

1.4 General Duty of Care and Responsibility to Obtain Information

Anybody working near a gas asset, or responsible for such work, has a duty of care to exercise caution, to maintain a safe working environment and to meet requirements of all relevant laws and Occupational Health and Safety legislation.

For general enquiries about results from BYDA please contact:

- DBYDNetworksAPA@apa.com.au for Northern Territory, South Australia, Southern New South Wales and Victoria, and;
- PermitsQLD@apa.com.au for Queensland and Northern NSW (incl. Tamworth).

The third party shall make contact with APA through the BYDA process if any clarification is required to determine the approval processes for any proposed land use changes (within the Measurement Length), design works and construction activities within 3 m of a gas asset or within a pipeline easement.

Any works proposed by the third party will only be authorised if APA is satisfied that the works will not affect the integrity of the APA Networks operated assets.

Any person undertaking work near an APA Networks operated asset, or responsible for such work, must ensure that they familiarise themselves with APA requirements.

Working around any gas asset, especially transmission pressure pipelines, without appropriate planning and controls as specified by APA Networks can be extremely dangerous. Damage to a gas asset could result in:

- Possible explosion and fire with the risk of loss of equipment, property, personal injury, and death;
- Loss of gas supply to thousands of customers;
- Substantial repair and gas restoration liability costs to the authority or principal responsible; and,
- Prosecution under the relevant laws governing pipeline and gas safety.

Prior to the commencement of any works within the Protected Zone of transmission pressure or critical gas assets, the Contractor performing the work must receive an Authority to Work Permit (ATWP).

Any works within the Protected Zone of critical assets must comply with any conditions attached to an ATWP and depending upon the nature of the asset and works supported by an approved construction methodology.

Written authorisation in the form of the ATWP must be kept on site at all times, and the holder of the authorisation must comply with all the conditions of the ATWP. The performance of any works near critical APA Networks operated assets without a valid ATWP and full compliance with its conditions will constitute a safety incident and may also result in an infringement notice and associated penalties issued by the regulator of the APA Networks asset.

1.4.1 Additional Transmission Pressure Pipeline Requirements

Where the works proposed by the third party may result in a change in land use within the Measurement Length for a transmission pressure pipeline (as defined in AS/NZS 2885.6 for Pipelines – Gas and Liquid Petroleum), such works may also be subject to formal approval requirements through APA Networks and applicable local and state government planning processes. This may also require a Safety Management Study (**SMS**) Report to be completed and approved by APA Networks. The SMS Report is generated from an SMS workshop involving an SMS facilitator, the third party and APA Networks. APA Networks is the owner of the SMS Report and any resulting recommendations/ actions must be implemented to the satisfaction of APA prior to the commencement of any physical works.

Certain categories of development/ land use change are not appropriate to be located within the Measurement Length of transmission pressure pipelines. In certain circumstances, the otherwise unacceptable risks associated with such developments may be alleviated with the aid of installing protective slabbing over the asset or undertaking other protection and mitigation measures.

2 PROTECTION PROCESS

APA is committed to working cooperatively with third parties to ensure that existing gas assets will be appropriately protected from any proposed works.

The process to be followed for any proposed works is outlined in **Table 1**. This table cross references the relevant section of this document which provides any specific requirements for each gas asset classification. The steps in this table are to be followed in conjunction with the process outlined by BYDA¹, a flow chart is also provided in **APPENDIX A**.

Table 1 Protection Process Summary

Section	Step	Purpose
3	Notification and Authorisation	Identify and locate existing gas assets in the vicinity of any proposed works. Submit BYDA requests to obtain indicative plans of gas assets. Notify APA Networks and obtain approval to verify the exact position by physically proving the position of gas assets at the cost of the third party.
4	Design and Protection Requirements	Review APA Networks design and protection requirements for any proposed infrastructure near gas assets. If acceptable clearance is available in accordance with this section review impact of construction methodology on existing gas assets. If acceptable clearance is not available in accordance with this section and the proposed infrastructure cannot be modified, alteration or protection of the existing gas assets will be required at the cost of the third party.
5	Construction and Land Use Requirements	Review construction methodology for adverse impact to existing gas assets. Some additional protection measures may be required depending on the existing gas assets, the construction methodology and whether land use changes are required. If works meet the requirements of this document, submit work package to APA Networks for review and approval. If approval is given, then undertake works in accordance with APA Networks conditions/ permits. If approval is not given modify work package accordingly. If works do not meet the requirements of this document or APA Networks approval cannot be reached, alteration or protection of the existing gas assets will be required.
6	Alteration	Request alteration of existing gas infrastructure if there is insufficient clearance or construction methods will adversely impact existing gas assets. Alteration of existing gas assets are fully recoverable and may result in delays if not identified early.

2.1 Assessment Information

Throughout the protection process, APA Networks assessment may be required to determine if the proposed works/ installation has sufficient separation or if work can be undertaken with a suitable construction methodology. If APA Networks assessment is required, the following information must be provided to enable an efficient and comprehensive review.

- Due dates or a work program;
- The location / address and extent of proposed works;

¹ BYDA process is available at <https://www.1100.com.au/safety-information/digging-safely/>

- Scope / description of the work impacting APA assets;
- A work package containing detailed design or construction issue drawings with the location of APA assets and the extent of works marked and / or georeferenced. Sufficient details must be provided on the plans to verify locations against APA information, which is typically measured from property boundaries. Plan and cross sectional drawings are typically required, including any proving locations;
- The proposed construction methodology (if available); and
- For critical assets only, a completed permit request form. This form is automatically provided in response to a BYDA enquiry when it is required, with direction for this form included in the BYDA response (refer to **Section 5.2**).

If the information provided is incomplete, or irrelevant information is provided, it may result in a delay of the assessment process and provision of a response. Due to the varying nature of potential works, it is not possible to develop a comprehensive listing of information that will be required for each work type, but the above is provided as a general guideline for what will normally be required.

3 PART 1 - APA NOTIFICATION AND AUTHORISATION REQUIREMENTS

3.1 BYDA Request

The fastest method for obtaining APA Network gas asset locations is to lodge a BYDA request. A response can be expected from APA within two business days, and may include one of three responses as outlined in **APPENDIX A**, depending on the location of the works in relation to existing APA operated gas assets in the vicinity.

For some BYDA requests, APA Networks may provide different responses to different assets affected by the proposed works. In all instances it is the responsibility of the third party to review and follow the direction of all BYDA responses.

The information provided by APA Networks in response to a BYDA request, along with any other plans or subsequent information provided by APA, show only the indicative location of the asset at the time and are a guide only. In most instances it will be necessary to prove the location of all buried assets within the proposed work area.

The following items must be considered when using asset information provided by APA Networks:

- Gas service lines from buried distribution pressure supply mains to consumers may not be shown on plans. Service lines are usually laid at right angles from main to a meter position, except where road conduits are provided; and
- Plans become rapidly outdated and so should be used within 30 days and then destroyed. It is the responsibility of the third party to contact APA Networks to seek the updated or renewal of any information after this time.

APA shall not be liable or responsible for the accuracy of any information supplied.

3.2 Provings and Site Identification

Electronic location (e.g. ground penetrating radar, pipe locators) of gas assets is required to verify the onsite locations and any plans that have been provided.

Physical proving of existing gas assets is required at key locations to verify that the separation and protection criteria provided in this document have been achieved. The location and quantity of provings will depend on the scope of proposed work, but provings will at least be required at infrastructure crossing points or where changes to surface level condition are planned.

Additional verifications are required for works parallel and in close vicinity to existing gas assets. Physical provings at maximum 10 m intervals along straight sections of pipe, along with all bends, branch lines and customer service offtakes to verify asset locations.

Note: Live service offtakes which no longer supply consumers may protrude from the gas asset and are not traceable or identifiable from records.

Note: The maximum physical proving intervals for straight sections of pipe may be adjusted based upon the discretion of APA personnel for extenuating circumstances.

The following items must be considered when proving the location of an existing gas asset:

- Provings must be conducted safely and in accordance with the requirements of **Section 5.5.2**. If damage to a gas asset does occur it should be reported immediately to APA as described in **Section 1.3**.
- Permit and site watch by an APA Networks representative may be required for some proving activities in accordance with **Section 5.2**.

3.3 APA Notification and Authorisation Process

Prior to the third party undertaking any works/ activities or as part of the planning and design phase, the third party shall ensure a BYDA request is submitted. The automated response received from the BYDA system will be tailored based on the criticality of the assets.

For assets operated at distribution pressures and not considered critical mains, a Duty of Care Notice is provided with the BYDA response for the third party to consider. Site watch may be necessary under a duty of care notice where additional protection or other integrity concerns require it.

In the event that works are conducted within the Protected Zone of a transmission pipeline and/ or critical distribution main, these works will require a review approval received from APA prior to commencement of works. Works subject to this requirement are deemed to include, but not limited to, the following activities that fall under **Table 3**;

- Non Destructive Digging (**NDD**);
- Mechanical excavation including trenchless excavation i.e. drilling (boring, horizontal direction drilling (**HDD**), pipeline bursting and tunnelling) for installing infrastructure such as the following;
 - o Roadways, driveways, railways, pavements;
 - o Electrical equipment (cables, overhead transmission lines, telecommunication cable or power poles);
 - o Installation of culverts/ pipes (water, drainage, sewer or reticulation);
 - o Landscaping.

APA will not approve certain activities and structures in the transmission pipeline easement (if applicable), including the following;

- Permanent storage;
- Installation of billboard structures;
- Use and storage for explosives, flammables or corrosives;
- Blasting;
- Structures forming part of any house, house extensions, carports or entertainment areas;
- Dams and other manmade water features. Locations of dams off the pipeline easement/ protected zone must not create run off or drainage towards the pipeline easement;
- Chemically treated effluent coming in contact with the pipeline easement/ protected zone;
- Garbage, sand fill, refuse disposal;
- Airstrips.

The Third Party must submit an enquiry to APA at the earliest possible stage to allow sufficient time for assessment. Submissions should include the following information;

- Land description and map identifying location of the proposed works;
- Types of works to be carried out;
- Intended future use of the land (where relating to change in land use)
- Type and weight of machinery that will be used;
- Any plans or diagrams of the works;
- Timeframe for the works.

The sequence of obtaining APA approval is as follows;

- a) Submit enquiry for Initial Review – The Third Party submits the request prior to works commencing and APA Networks will complete an 'Initial Review'. The third party must not progress any works on site until they receive a response from APA Networks. The two possible outcomes of this stage are a 'No Impact' response or;
- b) Enquiry Escalated for Standard Assessment – The request will be forwarded to APA Networks Field or System Operations personnel for a more detailed appraisal, which may involve contacting the third party, site visits, locating of assets of site, and/or request for additional information. The third party must not progress any work on site until they receive a response from APA Networks. The two possible outcomes of this stage are a 'No Objection under standard conditions' response or;
- c) Enquiry Escalated for Engineering Assessment – The request has been forwarded to the Integrity Third Party Engagement team for additional appraisal and determination of specific conditions. The third party must not progress any works on site until they receive a response from APA Networks. The two possible outcomes of this stage are a 'No Objection under special conditions response' or;

- d) Enquiry Escalated for Alteration – The Integrity Third Party Engagement team triggers the alteration process for this enquiry. The third party will be contacted for additional information and must not progress any work on site until they receive a response from APA Networks.
- e) No Impact – The third party receives a 'No Impact' response and can proceed with the works under appropriate APA Networks requirements e.g. Duty of Care, Authority to Work Permit and/or Site Watch.
- f) No Objection Under Conditions – The third party will receive a No Objection under standard or special conditions response and can progress with the planning of the works under the conditions specified in the response and appropriate APA Networks requirements e.g. Duty of Care, Authority to Work Permit and/or Site Watch.

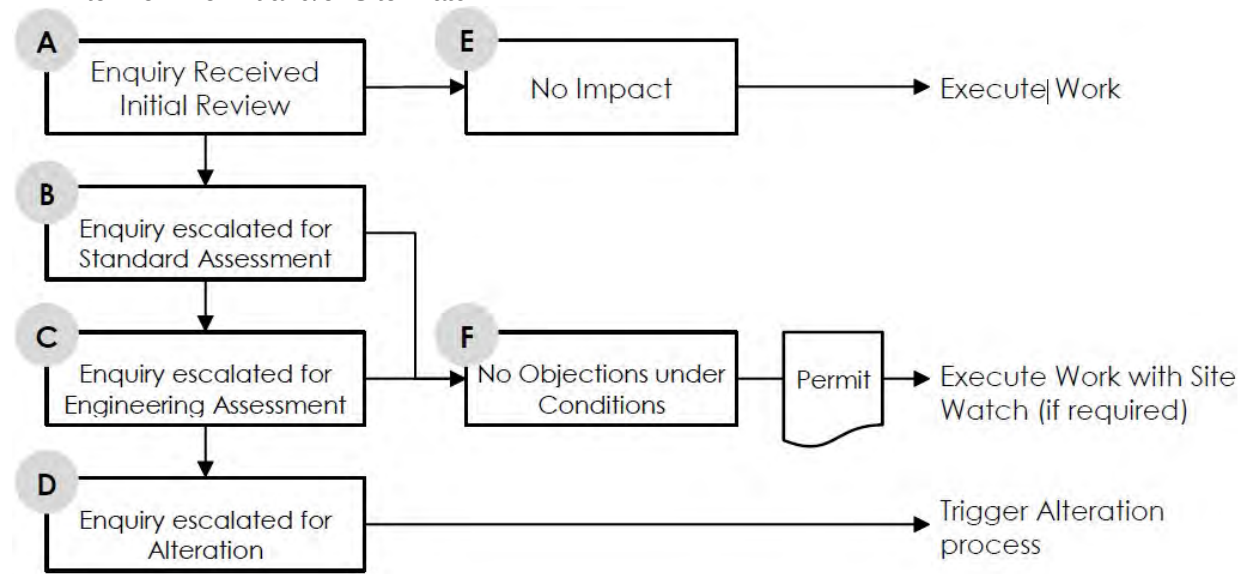


Figure 2 Stages for Third Party Works Authorisation Request

For works around APA Networks transmission pipelines or critical mains the documents take precedence in the following order;

- APA Authority to Work Permit (**ATWP**)
- APA accepted Third Party Construction Drawings
- APA accepted Third Party Construction Methodology
- APA Networks Guidelines for Works Near Existing Gas Assets (this document)
- APA accepted Third Party Safe Work Method Statement (**SWMS**) (if applicable)

3.4 Commercial Agreement and Service Delivery

APA will undertake a review of Third Party Works, as required. At APA's discretion cost recovery for these works may be required. Where APA Networks requires cost recovery a commercial service agreement in the form of a Works Agreement will be required.

Note: Any third party works requiring blasting, seismic and/or tunnelling work near APA Networks operated assets will not be considered "low risk" and cost recovery for detailed review maybe required.

3.5 Decommissioned Gas Assets

Decommissioned gas assets that remain in the ground are not always shown on BYDA plans.

Where unknown assets are identified or suspected on site but are not on APA plans, they must be treated as being live. In this instance, the third party must contact all utility owners and operators in the area of the BYDA and notify them of the findings.

Following review, if APA accepts that it is a decommissioned gas asset, the asset must be treated as per the requirements of this document. APA will take no further action where it is not considered to be a decommissioned gas asset.

In some cases, decommissioned gas assets are required for future use by APA (sometimes noted as “Idle” on APA plans). These assets must be treated as live using the same criteria outlined in this document, and must not be removed or altered without APA’s express written approval.

Where APA confirms there is no future use of a decommissioned gas asset (sometimes noted as “Abandoned” on APA plans), removal of the asset can be undertaken by the third party under the following conditions:

- For assets considered by APA to be decommissioned gas assets, APA must be engaged to verify that the asset is gas free;
- End caps must be permanently sealed, using an APA approved methodology, on any decommissioned sections that are to be left in place to prevent future water ingress into the remaining sections of the decommissioned gas asset;
- An as-built drawing must be submitted by the third party for any section(s) of a decommissioned gas asset removed by the third party or its sub-contractors to ensure BYDA can be updated accordingly; and
- Payment for costs associated with any verification or alteration activities must be provided prior to APA undertaking works.

4 PART 2 - DESIGN AND ASSET PROTECTION REQUIREMENTS

4.1 Standard Clearances

Minimum clearance dimensions outlined in this section must be met to allow for safe future maintainability and protection of existing gas assets. If separation clearances cannot be achieved, APA will review the proposed infrastructure on a case-by-case basis to determine whether a resolution can be achieved before alteration of any existing gas assets is considered. Authorisation of works by APA is still required, regardless of being able to achieve the required separation distances.

Clearances specified in **Table 2** are measured from the closest edges of the existing gas asset to the proposed infrastructure. Depending on the exact nature of proposed infrastructure, additional clearance may be required.

Note: Clearances specified herein are from gas assets, third party utilities may have their own standard separations that exceed APA's minimums specified in **Table 2**.

The future access zone required around a gas asset depends upon a number of factors such as size, operating pressure, depth and soil conditions, but typically this access zone is at least 1000 mm either side and 700 mm below the gas asset. As an aid for design and / or installation, the minimum clearances presented in **Table 2** are provided to allow for safe future access to gas assets. These minimum clearances assume that the asset have been proven and the location verified. There may be circumstances where additional clearances are required.

Table 2 Minimum Clearances

Clearance Type (Note 2, 9)	Minimum Transmission Pressure Asset Clearance	Minimum Distribution Pressure Asset Clearance
Any installation up to 0.6 metres wide which is crossing the gas asset	500 mm Vertical (Note 2)	300 mm Vertical (Note 2)
Any installation over 0.6 metres wide which is crossing the gas asset	500 mm Vertical	300 mm Vertical (Note 2)
Any installation laid by trenchless excavation e.g. HDD, boring, etc.	3000 mm Vertical	600 mm Vertical
	Refer to Section 5.6 for minimum horizontal separation distances	
Any installation laid parallel to a steel gas asset	600 mm Horizontal (Note 2, 3)	
Any installation laid parallel to any gas asset other than steel	N/A	300 mm Horizontal (Note 2, 3)
Trenching separation from edge of gas asset to edge of trench (Note 4)	500 mm Horizontal	300 mm Horizontal
Underground electrical cables laid parallel to any gas asset other than steel	N/A	300 mm Horizontal
Electrical conduits and cables (<11 kV) laid parallel to a steel gas asset	Engineering assessment required (Note 2, 3)	
Electrical conduits and cables (≥ 11 kV) laid parallel to a steel gas asset	(Note 2, 3) Engineering assessment required (Note 7)	

Electrical earthing systems near a steel gas asset	High Voltage: Engineering Assessment Required Low Voltage: 300 mm Horizontal (Note 7)	
Electrical earthing system near any gas asset other than steel	N/A	300 mm Horizontal
Clearance Type (Note 2, 9)	Minimum Transmission Pressure Asset Clearance	Minimum Distribution Pressure Asset Clearance
Undisturbed cover from the top of the gas asset to the underside of trenching or road pavement boxing	500 mm Vertical	300 mm Vertical (Note 1)
Distance from predominant building line	3000 mm Horizontal Where applicable outside pipeline easement	Refer to Section 4.2
Distance from Sensitive Use Locations (Refer Section 7 for Glossary of Terms and Abbreviations)	APA Engineering Assessment Required (Note 8)	N/A
Canopies longer than 15 m parallel to the edge of the gas asset	3000 mm Horizontal (Note 10)	Refer to Table 4 (Note 10)
Any installation that could add excessive loads to the gas asset or restrict access to the gas asset	3000 mm Horizontal (Note 2)	
Any installations that may need require underpinning were APA to expose the gas asset	3000 mm Horizontal	
Any temporary stake, e.g. star picket	300 mm Horizontal	
Electrical poles including street lighting and traffic signals	3000 mm Horizontal Where applicable outside pipeline easement	1000 mm (Note 3, 5, 6, 7)
Fence post, including road safety barriers	3000 mm Horizontal when installed per APA requirements	500 mm Horizontal when installed per APA requirements
Pile or pier	3000 mm Horizontal when installed per APA requirements	500 mm Horizontal when installed per APA requirements
Permanent Heavy Vehicle Loads (Greater than 4.5T)	Refer to Section 4.7 Temporary and Permanent Vehicle Loads	
Tree Root Barrier	3000 mm Horizontal	1000 mm Horizontal Refer to Section 4.3 Landscaping Plans
Separation distances for vegetation	Refer to Section 4.3 Landscaping Plans	

Note 1: For distribution main crossings, where the vertical separation distance is less than 300 mm physical protective slabbing, e.g. HDPE or concrete, shall be installed where the other utility is crossing beneath the APA pipeline/distribution main.

HDPE or concrete, shall be installed where the other utility is crossing above the APA pipeline/distribution main.

No protective slabbing is required for utility crossings greater than 500 mm separation.

Note 2: Structures and large utilities crossing APA Networks operated assets need to be self-supporting so that future repairs or maintenance of the asset can occur as per **Section 4.2 Third Party Assets and Structures**.

Note 3: Horizontal separation includes utility surface access pits, thrust blocks and/ or footings.

Note 4: Additional horizontal separation may be required depending on the extent of the planned works, local soil conditions and trench stability of the existing gas asset. This is particularly relevant where works occur within the angle of repose of the existing gas asset (e.g. parallel trenching that is deeper than the existing gas asset) and may result in undermining.

Note 5: In accordance with 'AS/NZS 4853 – Electrical hazards on metallic pipelines' without further information and APA engineering assessment, no electrical power poles for 66kV or above are permitted within the following separation distances of steel gas assets;

- If the power line has an Overhead Earth Wire (**OHEW**) – 15 m;
- If power line does not have an OHEW – 100 m;

Note 6: Where electrical poles (including street lighting and traffic signals) are proposed which place the gas asset within the no dig zone specified by the electrical authority either of the following shall occur;

- a) The poles shall be designed with deeper foundations to be self-supporting if the gas asset needs to be excavated. Or;
- b) For non-metallic assets relocated into a conduit that extends past the no dig zone.

Note 7: Clearance for electrical cables and earthing systems from steel gas assets must be reviewed in accordance with **Section 4.6 Earthing and Electrical Effects**. Electrical cables, substations and/or earthing systems installed in the vicinity of steel gas assets require an Earth Potential Risk (**EPR**) and Low Frequency Induction (**LFI**) assessment to AS/NZS 4853.

Note 8: Requires a setback distance to stay away from the Measurement Length (refer to **Table 14 Glossary of Terms and Abbreviations**). Alternatively, the setback distance may be reduced if protection slabbing is installed along the Sensitive Use Location where interaction with the Measurement Length occurs. This may also be limited to the development area subject to APA engineering assessment.

Note 9: Pipeline protection needs to be assessed and shown on the design plans with design clearances. This includes recoating, bridge slab or asset strike protection slab.

Note 10: Clearance may be dependent on demonstrating that there is sufficient continuous ventilation.

For construction and land use activities around gas assets the minimum horizontal clearances referenced in **Table 3** must be followed.

Table 3 Minimum Clearances for Construction Works and Land Use Activities

Construction and Land Use Activities	Minimum Horizontal Clearance	
	Transmission Pressure & Critical Distribution Mains	Non-Critical Distribution Pressure Mains
Excavation without APA representative present (Note 1)	3000 mm	N/A
Trenchless Excavation (Note 1)	3000 mm Refer to Section 5.6	1000 mm Refer to Section 5.6
Temporary Heavy Vehicle Traffic (greater than 4.5T)	If the load has not been assessed, maintain a Horizontal separation of 3000 mm. APA engineering assessment must be completed if crossing asset. Refer to Section 4.7 Temporary and Permanent Vehicle Crossings	Refer to Section 4.7 Temporary and Permanent Vehicle Crossings
Installation of Piles, Piers or Poles	Refer to Table 2 and Section 5.7	
Hot Works from Construction Activities	Any hot works within 5000 mm of an open trench containing gas asset or where cover is less than 300 mm. Refer to Section 5.8. (Note 2)	
Compaction	Section 5.10 for Compaction Limits Maximum Compaction Limits	
Vibration Limits	No vibration within 3000 mm of the pipeline and greater distance to comply with Section 5.9	
Blasting, Seismic Survey or the use of Explosives	Approval required for works within 100m. Refer to Section 5.11.	
Lifting over exposed gas asset	Not permitted over the gas asset. Refer to Section 5.12 for Suspended Materials above Gas Assets and No Go Zones for Cranes.	
Clearance of crane outriggers to gas assets	Not permitted within 3000 mm of gas asset. Refer to Section 5.12 for Suspended Materials above Gas Assets and No Go Zones for Cranes.	
Clearance of temporary material from pipeline	Not permitted within 3000 mm of gas assets. Refer to Section 5.13 for Temporary Materials.	

Note 1: Excavation covers NDD, mechanical excavation and trenchless excavation (boring, HDD, pipeline bursting and tunnelling).

Note 2: Horizontal separation distance also applies to any pits or valve covers.

4.2 Third Party Assets and Structures

Structures, including but not limited to buildings, walls, canopies, footings, pile caps or retaining walls, must not transfer any load to or be installed over any gas asset.

The design of any third party asset or structure must take into account future safe access of any gas assets in the vicinity. The proposed third party asset or structure must be installed in a way that prevents the angle of repose from encroaching into the future access zone as specified in **Section 4.1** around the existing gas asset.

Any third party asset or structure installed within proximity to a transmission pipeline or critical distribution pressure main must be designed to be self-supporting and allow for a minimum excavation window 1m on either side of the asset and 700 mm below the edge of the asset, for maintenance of the asset. This self-supporting design information is required to be shown on the construction drawings supported by geotechnical data and calculations. Construction of structures on pipeline easements are not permitted without explicit consent from APA.

Distribution pressure gas mains must be offset from the expected predominant building line at a distance in accordance with **Table 4**. Transmission pressure gas assets shall be per **Table 2**.

Table 4 Minimum Building Offset Distances for Distribution Pressure Gas Mains

Diameter (DN)	MAOP (kPag)			
	≤210	>210 ≤ 420	>420 ≤ 600	>600
≤110	0.5 m	0.5 m	1.0m	3 m
>110 ≤ 160	0.5 m	0.5 m	3 m	5 m
>160	0.5 m	3 m	3 m	8 m

Gas assets may be located underneath curbing or strip footings for road safety barriers for short sections up to 10 m to allow for tapers. The integrity of the gas asset to be located underneath the curbing or strip footing may require inspection, repair, recoating and / or slabbing depending on the existing condition and extent of proposed works.

Posts or poles which are located in road reserve, or otherwise exposed to vehicle impact, must be designed such that there will be no damage to the gas asset in the event of a vehicle impact.

For works in Victoria, consent from the relevant State Minister is required under Section 120 of the *Pipelines Act 2005* (VIC) for the erection of structures or buildings within 3,000 mm of a transmission pressure asset. Ministerial consent must be arranged through Energy Safe Victoria (**ESV**) following review and acceptance of the proposed designs by APA Networks.

4.3 Landscaping Plans

Vegetation may limit line of site, access and passage along an existing gas asset alignment, while the associated roots may damage existing buried pipe, coating or other ancillary equipment (e.g. cables). Above ground gas infrastructure may also be exposed to hazards from falling vegetation and increased fire risk. Additionally, trees and tree roots may limit access to the gas asset in an emergency, during normal operations and when make new connections or modifications.

Landscaping plans which include vegetation should select tree species which do not have vigorous root activity and do not exceed above 5m in height when fully mature when planted within 3m of gas assets. The pre-selection of trees considered suitable for planting within road reserves and near gas assets should also consider interference with, or damage to, other underground and overhead services.

For all landscaping works within 3 m of transmission pressure or critical distribution pressure gas assets the following details must submitted to APA for review and approval prior to planting.

- Tree species – botanical and common name
- Mature tree buttress and canopy diameter
- Mature tree height

- Maximum root ball diameter
- Offset from gas asset
- Method of protection to gas asset

Trees to be planted within 3 m of transmission pressure or critical distribution pressure gas assets, should also adhere to **Table 5** below.

Note: Horizontal separation is measured from pipe edge to edge of mature trunk or mature drip line, whichever is the greater.

Strata cells are not considered an appropriate protection from tree roots. If strata cells are to be installed in the vicinity of existing buried gas assets, the controls identified in **Table 5** must be used for protection.

Table 5 Protection of Distribution Gas Assets from Vegetation

Vegetation Types	Requirements	Horizontal Separation from Pipe Edge to Vegetation			
		Greater than 3 m	1.5 to 3m	1.5 to 0.5 m	<0.5 m
Trees or Large Shrubs	Min. separation of 3 m is required between trees and pipe if no protection methods are utilised.				
Medium and Small Shrubs	Within 1.5 m – 0.5 m protection methods must be utilised.				
Ground cover and grasses	No protection methods required.				
Gas Protection Methods					
	No protection methods required, provided separation limits are followed.				
	Within 3 m, tree species which have mature buttress diameters less than 0.15 m and do not have invasive or deep roots may be accommodated without protection methods after consultation with APA Networks (Note 1). For trees with mature buttress diameters greater than 0.15 m one of the following gas protection methods must be implemented; 1. Lowering or relocation of the gas asset to a minimum of 1.2 m cover. 2. Installation of new gas conduit beyond the structural root zone (SRZ) of the mature tree species for future use. (Note 2) 3. Installation of a root barrier system. System to be 1 m deep or extend 250mm below the gas asset, whichever is the greater.				
	Within 1.5 m installation of a root barriers system is mandatory and gas protection methods are as follows; 1. Installation of a robust root barrier system. System to be 1 m deep or extend 250 mm below the gas asset, whichever is the greater. AND 2. Lowering or relocation of the gas asset to a minimum of 1.2 m cover. OR 3. Installation of new gas conduit beyond the SRZ of the mature tree species for future use. (Note 2)				
	Planting directly over gas assets is not permitted in any location, as it prevents emergency and maintenance access. Tree roots can damage gas asset resulting in gas leaks.				

Note 1: Refers to the minimum 1.5 m structural root zone for a mature buttress diameter less than 0.15 m mandated under AS 4970 – Protection of trees on development sites.

Note 2: Suitable protection method for PE mains only. Conduits to be recorded in Geographic Information System (GIS) for future referencing.

Note 3: On transmission pressure assets vegetation must not limit line of site along the buried gas assets alignment, all signage must remain each in sight of the other.

4.4 Surface Levels and Conditions

Decreases or increases to surface levels must consider depth of cover requirements for gas assets specified in **Table 6**. This is in addition to maintaining a minimum working cover from the top of the gas asset to the underside of trenching or road box out works during construction as specified in **Table 2**. Vehicles must not cross gas assets at covers less than those specified in **Table 6** unless in accordance with **Section 5.10** for Compaction Limits or **Section 4.7** for Temporary and Permanent Vehicle Crossings.

Where existing surfaces are to be modified, finished cover levels are not to be reduced to less than existing levels, unless meeting the minimum requirements of **Table 6**. The requirement for, and the extent of, protective slabbing over any APA Networks operated asset will be determined by APA at its sole discretion with adherence to minimum depth of cover without physical protection as the preference. Depending on the location, local councils and relevant road/ rail authorities may have minimum depth of cover requirements that APA are required to meet which are more stringent than those listed in **Table 6**. Depth of cover requirements for individual consumer offtakes (service connections) are also provided in **Table 7**.

Details of any additional fill proposed to be placed on or within 3 metres of a gas asset, or within any applicable easement, must be clearly shown on plans and must be approved by APA Networks in writing. A maximum depth of cover of 2,500 mm for transmission pressure assets and 2000 mm for distribution assets apply in all locations; however, it is preferred not to exceed 1500 mm for both types of assets.

Table 6 Minimum Depth of Cover Requirements for Pipelines and Mains

Asset Location	Minimum Depth of Cover (Note 3)	
	Transmission Pressure Asset	Distribution Pressure Asset
Under Minor Road Pavement (Note 1)	1,200 mm 1,200 mm to 1,000 mm with physical protection slabbing and APA engineering load assessment	750 mm 750 mm to 600 mm with physical protection slabbing and APA engineering load assessment
Under Major Road Pavement (Note 2)	1,200 mm 1200 mm to 1,000 mm with bridging slabs (Note 4)	1,200 mm 1200 mm to 750 mm with bridging slabs (Note 4)
In Road Reserve but not Under Road Pavement	900 mm 900 mm to 750 mm with protective slabbing contingent upon pipeline location class	750 mm 750 mm to 600 mm with protective slabbing
Not in Road Reserve	900 mm 750 mm with protective slabbing contingent upon pipeline location class	750 mm for > 210 kPa 600 mm for ≤ 210 kPa
Railway Reserve	2000 mm (Note 5)	
Large Open Drain or Major Water Crossing	2000 mm (Note 6)	

Note 1: Minor road pavements typically are owned by local councils.

Note 2: All roads owned by state and federal authorities are major roads. Roads owned by council may be major or minor roads. Covers less than 1200 mm may require dispensation from the relevant road authority.

Note 3: Protective slabbing must be installed where minimum depth of cover requirements cannot be met or are required to meet specific safety requirements. Bridging slabbing for transmission pressure assets may be replaced with protection slabbing following APA engineering assessment.

Note 4: The requirement for bridging slabs can be downgrade to physical protection slabbing where APA engineering assessment is completed and approved.

Note 5: Installation within railway reserve shall be in accordance with both AS 4799 and the respective operating standard for the gas assets i.e. AS 2885 and AS 4645.

Note 6: The minimum depth of cover of 2,000 mm shall consider future scour of the drain or waterway crossing. For man-made drains the depth of cover can be reduced to 1200 mm if sealed (i.e. concreted) and appropriately designed. For transmission pressure assets, waterway crossings shall be designed in accordance with AS 2885.1 – 2018 Clause 5.8.6.2. For all assets, as a minimum the following shall be considered;

- a) A hydrological investigation to determine the stream power under peak stream, watercourse or waterway flows. The investigation shall determine the 1 in 100 year flood and the probable maximum flood and intermediate (optional) flood conditions.
- b) A geotechnical investigation to determine the physical parameters of the crossings, and using the information from the hydrological investigation, the erosion potential. This assessment should also consider the meander potential of the watercourse so that the limits of special construction can be defined.

Table 7 Minimum Depth of Cover Requirements for Customer Offtakes (Services)

Asset Location	Customer Offtake size	
	≤ DN50	> DN50 and ≤ DN110 (Note 1)
Roadway	450 mm	600 mm
Private Property	300 mm	450 mm

Note 1: Customer oftakes (services) with diameters greater than DN110 shall have depth of cover in accordance with **Table 6**.

Changes to surface conditions (e.g. changing from nature strip to road pavement) or which place the gas asset in an inaccessible position (e.g. with excessive cover) may require slabbing, recoating and / or relocation. Changes to surrounding surface levels or conditions must also consider drainage and the potential to result in erosion of cover for gas assets. Additionally, gas fittings such as valves, stopple fittings or flanges must not be located underneath road pavement. An APA Engineering assessment will be required if this is not feasible, refer to **Section 6**.

Where a new hardstand surface is installed on non-metallic distribution pressure mains (e.g. a painted concrete driveway), consideration should be given to including a casing or enveloper pipe to APA requirements for insertion of future gas assets. This will ensure that the new hardstand surface is not modified as part of the future gas installation. Where a casing or enveloper pipe is installed for future insertion works surveyed as-constructed records are to be provided to APA Networks for incorporation into the GIS records.

For transmission pressure gas assets, any landscaping material should be level within the easement or a minimum of 3 m (but preferably 6 m) to each side of the pipeline, to permit excavating equipment to operate without having to destroy the adjacent landscaping.

4.5 Casings Vent Stacks

Casings provide mechanical protection and protection to gas assets from external loadings. Some cased crossings are sealed and fitted with a casing vent stack, which gas leaks are identified via.

The following APA requirements are to be applied for works near casing vent stacks:

- Casing vent stacks cannot be removed unless an alternative arrangement has been approved by APA Networks or they have been assessed as being redundant;
- Unfettered access is to be maintained to casing vent stacks; and
- Minimum distance from casing vent stack discharge point to any electrical installation or overhead structure must be 1000 mm.

4.6 Earthing and Electrical Effects

Steel gas assets are susceptible to adverse effects from electrical sources such as above and below ground cables, substations, transformers, earth rods, cathodic protection systems or electrified tram / train lines.

Without any further information or engineering assessment, earthing systems for distribution ($\geq 11\text{kV}$) and transmission ($\geq 66\text{kV}$) power lines must satisfy the Earth Potential Rise (EPR) Level 1 (Conservative) compliance of AS/NZS 4853 – 2012 Table 4.3 & 4.5 which specifies separation distances from pipe appurtenances (e.g. valves, regulators, isolation joints), access points or earth points (including cathodic protection test points). For the potential hazards to be accepted as low risk on the basis of a Level 1 assessment the separation between a conductive structure or substation and pipeline subject to EPR shall be greater than the values given in **Table 8** below.

Table 8 Separation Distances for Pipeline Subject to EPR from Power Lines (Level 1 Assessment)

Fault Current or Actual Current (A) (Note 2, 3)	Separation Required (m) - Note 1			
	Distribution ($\geq 11\text{kV}$)	Power Line	Transmission ($\geq 66\text{kV}$)	Power Line
	100 $\Omega\cdot\text{m}$	500 $\Omega\cdot\text{m}$	100 $\Omega\cdot\text{m}$	500 $\Omega\cdot\text{m}$
150	40	190	N/A	N/A
300	80	390	N/A	N/A
500	130	660	N/A	N/A
750	200	1,000	N/A	N/A
1,000	270	1,300	60	310
3,000	N/A	N/A	190	940
6,000	N/A	N/A	380	1,900
10,000	N/A	N/A	635	>3,500

Note 1: Earth resistivity of 500 $\Omega\cdot\text{m}$ shall be used for dry sand or rock and 100 $\Omega\cdot\text{m}$ for all other cases.

Note 2: If the fault current is unknown for a distribution power line ($\geq 11\text{kV}$), a fault current of 1000 A shall be used for the first pass assessment.

Note 3: If the transmission power line ($\geq 66\text{kV}$) uses an OHEW, uses values up to 3,000 A (this assumes a current split of 30% of 10 kA). For lines without an OHEW, use values up to 10,000 A for current going down the structure.

Without any further information or engineering assessment, distribution (≥ 11 kV) and transmission (≥ 66 kV) power lines parallel to steel gas assets must satisfy the Low Frequency Induction (**LFI**) Level 1 (Conservative) compliance of AS/NZS 4853 – 2012 Table 4.2 & 4.4 which specifies maximum acceptable power line to pipeline exposure length.

Per AS/NZS 4853 – 2012 the pipeline expose length (average separation for the parallel section) under LFI conditions shall be less than the values given in **Table 9** below.

Table 9 Exposure Length for Pipeline Subject to LFI from Power Lines (Level 1 Assessment)

Power line to pipeline separation (m)	Exposure Length (m) – Note 1		
	Distribution Power Line (≥ 11 kV) – 100 Ω .m	Transmission Power Line (≥ 66 kV) – 100 Ω .m	
5	180	95	
10	210	110	
20	240	127	
50	310	165	
100	400	210	
200	550	290	
500	950	500	

Note 1: Without soil resistivity data, assessments are to be completed assuming 100 Ω .m. If soil resistivity data is available refer to AS/NZS 4853 – 2012.

Where AS/NZS 4853 Level 1 EPR or LFI requirements cannot be achieved a Level 2 and/or 3 assessment will be required.

The third party must provide to APA detailed plans of any source(s) of earthing and/ or electrical effects proposed to be located in the vicinity of steel gas assets, with an assessment report compliant with AS/NZS 4853 Electrical Hazards on Metallic Pipelines. This assessment report is to determine any effects to existing cathodic protection or induced voltage mitigation systems from these types of installations. The third party must address any relevant requirements and any recommendations and/or actions must be implemented to the satisfaction of APA Networks. All cost association with the study, and implementing its recommendations and/ or actions are to be borne by the third party. The third party must also complete validation testing upon completion of construction and provide all findings/ reports to APA Networks.

Hazards which may arise due to electrical systems located in the vicinity of steel gas assets include the following:

- Accidental contact between gas assets and electrical systems;
- Capacitive coupling;
- Conductive coupling;
- Electromagnetic induction;
- Low Frequency Induction (LFI);
- Earth Potential Rise (EPR), including due to fault current or lightning discharge; and,
- Adverse cathodic protection interference in excess of those allowed under AS 2832.1 or relevant state regulations

4.7 Temporary and Permanent Vehicle Crossings

Vehicle crossings over existing gas assets are limited to light vehicles (Gross Vehicle Mass not greater than 4.5 tonnes unless advised otherwise by APA Networks in writing) on unsealed surfaces or Heavy Vehicles (compliant General Access Vehicles) on established road pavements.

Any proposed new crossings must be assessed and authorised in writing by APA Networks.

A maximum surface pressure of 400 kPa is allowable directly above buried gas assets. However, any surface pressure exceeding this limit or where cover over the gas asset has been reduced from **Table 6** will require an APA Engineering Assessment and approval.

Where soil conditions exhibit poor compaction and load bearing characteristics, such as wet soil conditions, equipment is not permitted to cross the gas asset irrespective of weight without establishing a stable sealed surface or road plates.

Crane footings or bog mats must not be placed where the angle of repose can influence an existing gas asset without express written approval by APA. Where the existing gas asset is within the angle of response, the maximum surface pressure due to the crane must be provided.

5 PART 3 - CONSTRUCTION AND LAND USE REQUIREMENTS

Extreme care should be exercised at all times when working around existing gas assets, as repair works will be fully chargeable and may result in delays to any works. Refer to the duty of care outlined in **Section 1.4** and the requirements of this section when selecting construction methods.

5.1 Land Use Change

Where works proposed by a third party may result in a change in land use within the Measurement Length (as defined in AS/NZS 2885.6 for Pipelines – Gas and Liquid Petroleum) of transmission assets, such works may also be subject to formal approval requirements through APA Networks and applicable local and state government planning processes.

This may also require a Safety Management Study (SMS) report be completed and approved by APA Networks. This SMS report is generated from an SMS workshop involving an independent SMS facilitator, third party and APA Networks. APA Networks is the owner of the SMS report and any resulting recommendation/ actions must be implemented to the satisfaction of APA Networks prior to the commencement of any physical works.

Certain categories of development, such as Sensitive Use Locations (refer to **Table 14 Glossary of Terms and Abbreviations**), are not appropriate to be located with the Measurement Length. In certain circumstances, the otherwise unacceptable risks associated with such developments may be alleviated with the aid of installing protective slabbing over the transmission pipeline or undertaking other protection and mitigation measures.

Sensitive Use Locations near transmission pipelines are designated under AS/NZS 2885.6 and identify land where the consequences of a Failure Event may be increased because it is developed for use by sectors of the community who may be unable to protect themselves from the consequences of a pipeline Failure Event.

Sensitive uses are defined as follows;

- Schools, which includes colleges
- Hospitals and aged care facilities such as nursing homes, elderly people's homes
- Prisons and jails
- Sheltered housing
- Buildings with five or more stories
- Large community and leisure facilities, large open air gatherings
- Day care facilities
- Other potentially difficult to evacuate facilities
- Other structures as defined by relevant local councils.

For further information regarding the SMS process, refer to APA Networks Encroachment and Land Use Change SMS Trigger Procedure, **400-PR-L-0003**.

5.2 Permits and Site Watch

Transmission pressure assets and critical distribution pressure assets, must have a permit issued prior to proposed works in the vicinity of the existing assets, including any proving activities. Following the issue of a permit, a site watch inspector may be required to verify that the activities are carried out appropriately.

Other distribution pressure assets not considered critical will only require site watch as determined by APA Networks.

Where a permit is required, the response provided to the BYDA enquiry will include the relevant forms and process to be followed for submitting a permit request.

While BYDA recommends completing the request two business days prior to undertaking works, this is to ensure that the location information is obtained. This may not allow sufficient time for APA Networks to supply site watch. Further delays may be experienced if the proposed works are significantly complicated, do not meet the requirements of this document or if insufficient information is provided.

It is an offence in all jurisdictions to undertake activities in the vicinity of transmission pipelines without prior authorisation by the operator.

5.3 Coating Surveys and Leakage Surveys

Where proposed works have potential to indirectly damage pipe coating (i.e. due to compaction) or result in a leak of the gas asset (e.g. vibration of cast iron pipes), additional monitoring activities such as Direct Current Voltage Gradient (DCVG) or leakage surveys may be required.

If required, chargeable DCVG surveys will be conducted prior to works to establish any existing coating faults which exist on the gas asset. A subsequent DCVG survey will be conducted at the conclusion of works, and where new faults have developed on the gas asset, repairs shall be made with costs charged to the works owner. Surveys can be conducted prior to finalising road surfaces to avoid costly repairs.

A similar chargeable survey program can be applied where leakage surveys are required. However, additional surveys may be necessary throughout works to ensure work crews do not operate in a gaseous environment once leaks are caused.

5.4 Pipeline Repairs, Recoating and Slabbing

Buried steel assets operated by APA Networks are coated to provide protection from corrosion.

Where the surface conditions above a buried steel pipe are changed which may limit future access to the existing gas asset an assessment of the coating condition will likely be triggered.

The requirement for pipeline recoating is assessed by APA Networks on a case by case basis, based on the proposed works, but will generally be dependent on the following:

- The asset class;
- The existing coating type, age and condition;
- Increase in loading that can bring forward any pipeline anomalies; and,
- Changes limiting access to the existing asset(s), such as the installation of slabbing, road pavement, culverts, embankment ramps or any other feature.

A chargeable coating survey carried out in accordance with **Section 5.3** may be required to assess the condition of the existing gas asset coating.

Recoating and/ or associated slabbing works over any gas asset will be determined by APA Networks Engineering Assessments and any applicable risk assessments (Safety Management Study or Formal Safety Assessment).

Pipeline repairs, recoating and slabbing that form part of any third party commercial agreement will be charged to the third party.

The requirement for, and the extent of, slabbing over any APA Networks operated asset will be determined by APA at its sole discretion and may depend on factors other than only changes in depth of cover discussed in **Section 4.4**. Slabbing may be required for the following reasons:

- Removable protective slab to provide protection from third party mechanical excavation;
- Bridging slab to provide protection from external loadings e.g. insufficient depth of cover combined with vehicle traffic.

Slabbing must be installed with adequate separation from the pipe, which may impact the undisturbed cover requirement, and cannot be installed directly underneath road pavement or at surface level.

Any bridging slab designs prepared by a third party must be accompanied by certification from the registered practising structural engineer (Registered Professional Engineer Queensland (**RPEQ**) required for works in Queensland, and so on as required for other States and Territories) confirming that the design is adequate to prevent pipeline loading.

5.5 Exposure of Buried Gas Assets

5.5.1 General

Excavation works covers Non-Destructive Digging (**NDD**) and mechanical excavation. All such excavations must be completed in accordance with APA's direction.

The Third Party or its Contractor can perform exposure works on APA Networks operated assets via NDD using vacuum excavation and subsequent mechanical excavation works under the following conditions:

- **A current BYDA request is available for the works.**
- An approved Authority to Work Permit (**ATWP**) is issued for works near transmission pipelines or critical mains.
- APA Site Watch Officer is present for works near transmission pipelines or critical mains as outlined on the ATWP.
- The Third Party (or its Contractor) shall ensure they have their own SWMS, Risk Assessment, Environmental Management Plan, Tool Box Talk, Traffic Management and Pre-Start in line with their own corporate policy in place prior to works commencing.
- All underground assets have been identified by surface marking where within or close to the excavation area prior to proceeding with planned proving works (i.e. hand or NDD (e.g. Hydro-Vacuum Excavation). Any non-recorded assets should be identified prior to breaking ground (e.g. excavation or cutting).
- A check for gas leaks has been conducted prior to the commencement of work.
- If the mechanical excavation operator cannot see the spotter (where applicable, APA Site Watch Officer), he or she must stop moving immediately and not resume movement until contact has been established. Spotters must be aware of their surroundings and should never walk into the path of a vehicle, moving equipment or a swinging load. They need to scan the ground to become aware of any trip or fall hazards.
- If excavations are greater than 1.5 m or ground conditions are considered unstable benching/ battering/ shoring must be utilised. Additionally, appropriate ladders/ ramps or steps must be utilised to ensure safe access and egress.
- **Under no circumstances is mechanical equipment to be used within 300 mm of any gas asset.**

5.5.2 Physically Proving Gas Assets

Prior to mechanical excavation of the gas assets, the asset shall be physically proven by NDD or through the use of hand excavation. The method used will vary based on the criticality of the asset. The requirements in **Section 5.5.1** shall be implemented prior to physically proving the gas asset.

Technique 1 – Vacuum Excavation (Critical and Non-Critical Gas Assets)

A vacuum truck can be used to prove and expose the gas asset. Please ensure the requirements detailed in **Section 5.5.3** are adhered to.

Technique 2 – Hand Excavation (Critical and Non-Critical Gas Assets)

If the anticipated depth of cover of the gas asset is less than 1m (measured from the top of pipe) then hand excavation shall be used to expose the gas asset. The use of round edge shovels should be used to avoid damage to the pipe or coating. In the event that the anticipated depth of cover of the gas asset is greater than 1m then mechanical excavation can be undertaken in accordance with the requirements of **Section 5.5.4** but must stop when within 1m of the gas asset (i.e. 1.3m anticipated depth means that 300 mm of cover can be removed by mechanical excavation and the

remainder by hand excavation as described above. The anticipated depth shall be based on the shallowest result from BYDA or pipe locator.

Technique 3 – Hand + Excavation (Non-Critical Gas Assets ONLY)

If the gas asset is deemed non-critical then a combination of hand digging and excavation can be used. This technique requires the third party to hand excavate 300 mm then mechanically excavate the first 150 mm. In this technique the hand excavation shall always lead the mechanical excavation by 150 mm. Once within 300 mm of the gas asset then only hand excavation is allowed.

5.5.3 Hydro-Vacuum Excavation

Where hydro-vacuum excavation is used in the vicinity or to expose existing gas assets, the following conditions must be applied:

- Ensure the general requirements in **Section 5.5.1** are adhered to prior to the works commencing.
- Root cutting heads shall not be used at any time.
- When locating pipelines and mains, a maximum water pressure of 2500 PSI (17200 kPa) may be used to a depth no greater than 450 mm. Below this depth, the maximum water pressure shall be set in accordance with **Table 10** for the asset type in the vicinity.
- When locating customer offtakes (services), a maximum water pressure of 2500 PSI (17200 kPa) may be used to a depth no greater than 300 mm. Below this depth, the maximum water pressure shall be set in accordance with **Table 10** for the asset type in the vicinity.
- Where air is used in place of water the air pressure shall not exceed 175 PSI (1200 kPa).
- A minimum distance of 200 mm shall be maintained between the nozzle tip and subsoil and vertical movements avoided (i.e. nozzle shall not touch or be inserted into soil).
- The wand shall never remain motionless during excavation. Aiming directly at the gas asset shall be avoided at all times.
- NDD vacuum equipment must not come into contact (impact) with the pipe or coating.
- Once a gas asset has been exposed via hydro-vacuum methods, a visual check must be undertaken to ensure no damage has occurred to the pipe or its coating. Damage caused to the pipe coating by the third party will be chargeable.
- A dead man trigger or similar, shall be installed and used on the wand.
- If conduits are to be installed for identification of the gas assets location the conduit shall be offset to one side and recorded or a flexible conduit installed over the gas asset. The placement of PVC pipes directly on the gas asset may cause damage to the pipe coating and require repair at the contractor's expense.
- Vacuum excavated holes shall be cleaned of any rocks and debris and backfilled with a minimum 300 mm of sand.

Personnel operating NDD equipment shall monitor ground conditions to determine and adjust for the lowest water pressure setting and vacuum used to adequately expose the gas asset. The objective shall be to use the lowest possible pressure and vacuum required to adequately excavate in order to minimise risk of coating and/or pipe damage. **Table 10** provides the maximum water pressure to be used for various pipe and coating types.

Table 10 Maximum Water Pressure for Hydro-Vacuum Excavation

Pipe / Coating Type		Max. Water Pressure (PSI)	Pipe / Coating Type	Max. Water Pressure (PSI)
Steel	Coal Tar Enamel Coated	1,000	Steel – Mummified fittings (e.g. valves, flanges)	Not Permitted
	Polyethylene Tape Coated	1,000	Cast Iron	1,000
	Polyethylene Coated	2,000	Polyethylene	2,000
	Trilaminate Coated	2,000	Nylon or PVC	1,500
	FBE or HBE Coated	2,000	Unknown Material or Steel Pipe Coating	1,000
	Uncoated	2,500		

5.5.4 Mechanical Excavation

Prior to commencing any excavation works the general requirements in **Section 5.5.1** must be adhered to.

Where works are to be carried out within 3 m of the gas alignment and to 1 m of the known gas main depth, the contractor is required to pothole and expose the gas asset as outlined in **Section 5.5.5**.

Prior to the mechanical excavation commencing ensure the excavator is in working order and all pre-start equipment checks are completed.

Excavators with general purpose buckets (e.g. mud bucket, general purpose teeth) up to 30 tonnes are permitted to conduct mechanical excavations in the vicinity of existing APA gas assets in accordance with APA requirements. Any variation of excavator size or bucket type will require assessment and approval by APA Networks. Buckets with any type of tiger or penetration teeth are not permitted unless explicitly approved by APA Networks.

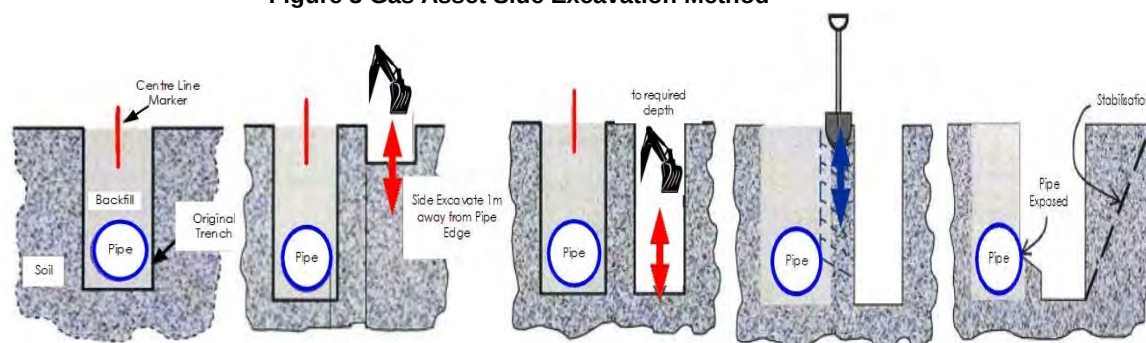
Critical Gas Assets

No mechanical equipment shall be used within 1 m of the potholed depth of the critical gas asset, except under explicit on site direction from an APA representative (i.e. APA Site Watch).

Under no circumstances is mechanical equipment to be used within 300 mm of any gas asset.

Once the gas asset has been positively proven, as outlined in **Section 5.5.2**, mechanical excavations can commence at a minimum of 300 mm offset from the outer edge of the pipe. The third party shall not mechanical excavate directly over a critical gas asset, with hand excavation only directly over the alignment or to expose the asset.

Figure 3 Gas Asset Side Excavation Method



Non-Critical Gas Assets

Mechanical excavation is permitted directly over the top of non-critical gas assets however **under no circumstances is mechanical excavation equipment to be used within 300 mm of any gas asset**. If the third party is in doubt with regards to the criticality of the gas asset, then the excavation method outlined for critical gas assets shall be used.

Prior to the mechanical excavation commencing, the asset shall be physically proved as outlined in **Section 5.5.2**. Once the depth has been physically proven the third party can proceed with excavating around the gas asset until within 300 mm. From this point hand excavation or NDD is required.

5.5.6 Protection During Exposure

Additional protection measures are required where an exposed gas asset may be subject to impact from construction activities, sagging of exposed pipe and trench instability. Any works requiring exposure and protection of the gas asset should have an accompanying methodology and approval by APA Networks.

Physical protection (e.g. structural steel protection, sandbags, wrapped with split PVC pipe) should be installed around the exposed gas asset when exposed, particularly when new infrastructure is planned to be installed crossing below the gas asset. If the gas asset is to be exposed for longer than one day or otherwise left unattended, suitable barricades, security fencing and/ or steel plates will be required to provide protection from vehicles, dropped objects (such as construction materials) or vandalism.

Unsupported exposed pipe lengths require protection from sagging by using suitable supports such as sandbags or slings. Where slings or other support types come into contact with the gas asset, protection methods must be employed (e.g. wrapped with split PVC pipe) to prevent damage to the existing pipe or coating. Exposed unsupported joints must also be identified and supported during works. The maximum allowable length of exposed pipe without support is provided in **Table 11**.

Table 11 Maximum Unsupported Lengths of Exposed Pipe

Table 12 Maximum Unsupported Lengths of Pipe by Type			
Gas Asset Diameter (mm)	Steel Maximum Unsupported Length (mm)	Polyethylene Maximum Unsupported Length (mm)	Other Material Maximum Unsupported Length (mm)
≤20	2,000	1,500	1,500 (Note 1)
>20 & ≤63	2,800	2,000	
>63 & ≤100	3,600	3,000	
>100 & ≤150	4,200		
>150 & ≤250	5,000		
>250	5,700		

Note 1: Particular care should be taken for other materials include cast iron, PVC or nylon due to the unpredictable nature of the joints.

Additional protection and support during trench or bell-hole excavation works to minimise ground instability may also be necessary to protect the integrity of existing gas assets during exposure works. Trenches are to be inspected prior to commencing works each day and monitored by the onsite party responsible for the excavation. APA shall be notified of any condition likely to affect the stability of trench.

Any deep excavations, within 3 m of a gas asset, shall be designed and constructed such that the effects of subsidence, collapse or extreme weather will not affect the gas asset. Any such excavations prepared by a third party must be accompanied by certification from a registered practising engineer (RPEQ required for works in Queensland, and so on as required for other States and Territories) confirming that the design is adequate to protect the gas asset.

5.5.7 Backfill and Reinstatement

Prior to backfilling, a minimum of 150 mm of bedding sand must be placed around all gas assets. Bedding sand shall be in accordance with APA specification **400-SP-L-0002**, which can be provided to third parties upon request. The bedding must be compacted in accordance with **Section 5.10**, including suitable compaction and backfill of the underside of the gas asset to prevent any further vertical movement during subsequent layers above the asset. APA may require geo-fabric installation between different trench reinstatement products to prevent sand migration in which nonwoven fabric is required and needs to extend 1000 mm past either side of the utility crossing.

The bedding material shall be clean, free from all sharp objects, sandbags, clay material, vegetable matter, building debris and disused road paving material to the specification provided by APA. Recycled bedding material and stabilised sand must not be used unless explicitly approved by APA.

The remainder of the excavation shall be backfilled and compacted in accordance with **Section 5.10**, at maximum increments of 300 mm to a density which is similar to the surrounding sub-grade material. Only clean fill material shall be used, preferably the same as the natural soil in the area, and free from ash, weeds and pest plants, salt or any chemicals which could harm the gas assets. Where required, concrete slabbing shall be installed in accordance with **Section 5.4**.

In all circumstances gas warning tape / marker board shall be installed in accordance with the following requirements:

- Gas warning tape installed at 300 mm below finished surface level.
- Gas marker board installed 300 mm above the top of the pipe.

Note, where gas warning tape cannot be installed 300 mm below the finished surface level due to road pavement box out, marker board is to be installed 50 mm below the box out work zone.

In situations where a physical protection slab or bridging slab has been utilised an additional layer of gas marker board must be installed 50 mm above the slabbing.

The excavated area is to be reinstated to the original condition or as approved by APA and the relevant local council, road authority or landowner as applicable. Any marker signs removed during excavation works must also be reinstated in original positions. Additional marker signs may be required at new infrastructure crossings as directed by APA.

5.6 Trenchless Excavation

Trenchless excavation covers horizontal directional drilling (**HDD**), boring, pipe bursting and tunnelling. These activities are considered high risk that require additional controls to prevent damage to existing gas assets. This includes proving the existing gas asset location and depth for all horizontal bores, as well as providing a witness trench to verify that the bore will pass the asset with sufficient separation.

A witness trench must be used in addition to live electronic tracking of the bore head. The witness trench must be prepared to the specification provided in **Table 12**. The progressive measurement of the length of the bore must also be made and plotted along its proposed direction to ensure the bore head has not missed the witness trench. The bore head must be exposed in the witness trench, when the crossing is above the existing gas asset.

For all assets installed via trenchless excavation a vertical separation aligning with the maximum borehole diameter (e.g. reamed diameter) shall be demonstrated. For transmission pressure and distribution pressure assets this vertical separation distance is 1000 mm and 600 mm, respectively.

If the works run parallel to a transmission pressure or critical gas assets a minimum separation distance of 3 m must be maintained. For non-critical gas assets, the minimum separation distance of 1 m must be maintained. For works running parallel to gas assets, proving of the actual location of the gas asset must occur every 4 m.

Note: It is expected that HDD operators working near gas assets hold the national competency RIICCM202 – Identify, location and protect underground service.

Table 12 Minimum Witness Trench Dimensions

Crossing Type	Witness Trench Depth	Witness Trench Dimensions
Crossing Above Existing Gas Asset	To bottom (invert) of gas asset	Witness trench shall be 1000 mm to 2000 mm in front of the gas asset on the approach side.
Crossing Below Existing Gas Asset	To bottom (invert) of gas asset plus 500 mm	Witness trench shall be min. 1500 mm long and 300 mm wide centred on bore centre line.

Dispensation may be considered where detailed long sections are provided for assessment by APA and where depths of existing gas assets or separation to the bore are greater than 2500 mm.

Pipe bursting is not permitted within 1000 mm of an existing gas asset.

5.7 Piles, Piers or Poles

No piling such as pile-driving, sheet-piling or hammer-piling is permitted within 15 m of an existing gas asset unless explicit consent has been provided by APA. In all instances, vertical bored (augured) piles, piers or poles are preferred.

Where installation of piles, piers or poles are proposed between 500 mm and 1000 mm clearance from a gas asset (distribution and transmission pressures, respectively), the area directly below the proposed pile, pier or post location must be excavated to a level equivalent to the bottom (invert) of the existing gas asset, and works started from that depth.

Note: Proving of the gas asset must be completed in accordance with the requirements set out in **Section 5.5.2** prior to the commencement of any works.

Temporary steel plates may also be installed between the gas asset and the proposed pile, pier or post used for vertical bore methods within this clearance to provide extra protection.

Note: Direct vibration monitoring on the gas main may be required depending upon the installation method utilised. Refer to **Section 5.9** for APA Networks vibration limits.

5.8 Hot Works for Construction Activities

Typical hot works include grinding, welding, thermal or oxygen cutting or heating, and other related heat producing or spark-producing operations. Heat sources or hot works must not impact gas assets, taking into consideration that the ground or adjacent structures may also be capable of transmitting heat.

In order to safely undertake hot works, response procedures in the event of fire or flammable gas detection must be prepared and monitoring for flammable gases must be undertaken during works.

APA must approve any hot works where there is less than 300 mm ground cover to buried gas assets, or within 5,000 mm of any exposed gas assets (including any pits or valve covers). A heat shield or barrier may be required to provide protection if it cannot be demonstrated that works can be undertaken without impacting the gas asset.

5.9 Vibration Limits

Significant vibration may arise from activities such as blasting, piling, tunnelling and HDD/boring.

To avoid damage to existing APA Networks operated pipes and coatings, the following vibration limits must not be exceeded at any point on the pipe:

- For cast iron mains: 5 mm/s maximum Peak Particle Velocity (**PPV**) measured on the pipe.
- For steel pipe with a coal tar enamel (**CTE**) coating or with poor coating health: 10 mm/s maximum PPV measured on the pipe.
- For non-coal tar enamel pipe coatings and other pipe materials (i.e. steel, PE, PVC or Nylon): 20 mm/s maximum PPV measured on the pipe.

- d) For blasting, the above vibration limits can be increased if supported by calculations in accordance with Design Guidelines for Buried Steel Pipeline – American Lifelines Alliance American Society of Civil Engineers (**ASCE**) and approved in writing by an APA Networks Integrity Engineer.

Note: Cast iron mains are particularly susceptible to damage by vibration. The PPV limit may not prevent leaks from cast iron and may require additional gas leakage survey activities during works in accordance with **Section 5.3**.

For vibration monitoring adopt an alarm at 80% of the acceptable PPV value and when the alarm is activated, the work must stop and be re-assessed. Short incursions up to 100% are acceptable, for sustained periods of vibration longer than 5 minutes, works must be stopped.

The zone of influence for vibration assessment undertaken by the third party is shown below;

- For compaction, refer to **Table 13**.
- For trenchless excavation (HDD/ boring), refer to **Section 5.6**.
- For piling refer to **Section 5.7**.
- For blasting refer to **Section 5.11**.

5.10 Compaction Limits

Compaction activities such as establishing a base course for a road pavement may result in damage to the pipes and coatings of existing gas assets. Compaction limits in the vicinity of existing gas assets are summarised in **Table 13**.

Table 13 Maximum Compaction Limits

Horizontal Separation (m)	Minimum Cover to Top of Gas Asset (mm)	Compaction Limits
≤3 (Note 1)	300	Small handheld compactor only
	500	Large handheld compactor Maximum 4 tonne tandem drum static roller
	750	Maximum 8 tonne tandem drum static roller
	1200	Maximum 10 tonne tandem drum static roller subject to APA approval
>3 & ≤10	All	Maximum 8 tonne tandem drum vibrating roller
>10 & ≤15	All	Maximum 10 tonne tandem drum vibrating roller
>15	All	Any compaction method

Note 1: Compaction within 3 m of gas assets is limited to static rollers. If vibration compaction is necessary a robust vibration assessment and construction methodology signed off by an RPEQ for works in Queensland, and so on as required for other States and Territories, will need to be produced by the third party for review and approval by an APA Networks Integrity Engineer.

5.11 Blasting / Seismic Survey / Explosives

Blasting, seismic survey or the use of explosives is not permitted within 100 m of a gas asset unless explicit approval is provided by APA Networks. The size and quantity of the explosives to be used will determine how close to the pipeline blasting will be permitted. In all cases, blasting methods must be arranged to limit ground vibrations so that the peak particle velocity does not exceed acceptable limits. At no stages will blasting be permitted within 3 m of the pipeline.

5.12 Suspended Materials above Gas Assets and No Go Zones for Cranes

Where gas assets are exposed, no cranes, excavators or backhoes are permitted to carry or suspend materials directly over or across a gas asset without an APA Networks approved lifting plan and SWMS.

Outriggers must be set up outside a 3 m radius from gas assets unless otherwise approved by APA Networks in writing.

5.13 Temporary Materials

In all instances it is preferred that temporary materials (e.g. soil, shipping containers) are not stored on top of transmission pressure and critical gas assets. Temporary material must not restrict access and should be placed at least 1,500 mm from the alignment of these assets unless otherwise approved by APA Networks.

6 PART 4 - ALTERATION OF EXISTING GAS ASSETS

Where the proposed third party works do not comply with the requirements of this document, and adequate additional controls or a specialised engineering solutions cannot be developed, alteration of the existing gas assets will be required.

Gas asset alterations will only be undertaken under a Recoverable Works Agreement (**RWA**) appropriate to the scope and extent of the works required.

An Early Works Agreement (**EWA**) may also be required where works are proposed which require proving, engineering design activities or purchase of long lead items. This will allow for completion of these items prior to execution of a RWA and avoid delaying works.

If either or both these agreements are required, then APA Networks will enter negotiations with the relevant third party and any costs will be payable by that third party.

7 GLOSSARY OF TERMS AND ABBREVIATIONS

Table 14 Glossary of Terms and Abbreviations

Term/ Abbreviation	Meaning
AGN	Australian Gas Networks
APA	Each entity that forms part of the APA Group
APA Engineering Assessment	Covers technical assessments which may involve field integrity assessments that may or may not include the use of specialist Consultants managed by APA.
APA Networks Operated Assets	APA Networks acts as the asset operator on behalf of entities Australian Gas Networks (AGN), Allgas, APA, Origin and Queensland Nitrates (QNP) and operates in New South Wales, Northern Territory, Queensland, South Australia and Victoria.
APA Permit Issuing Officer	The APA Permit Issuing Officer is responsible for opening the Permit To Work, validating APA Networks assets have been located and being the Site Watch for works within the gas Easement or Protected Zone.
AS	Australian Standard
ASCE	American Society of Civil Engineers
ATWP	Authority to Work Permit
CTE	Coal Tar Enamel
Damage	Physical damage to and interference with APA's assets. Damage includes reducing design life, coating damage, dents, scratches, rupture, cutting of cathodic protection cables. Damage can also include potential impacts that APA pipelines can have on third party assets.
BYDA	Before You Dig Australia (previously known as Dial Before You Dig (DBYD))
DCVG	Direct Current Voltage Gradient
Depth of Cover	Vertical distance from the existing natural ground surface to the top of the buried gas asset
EPR	Earth Potential Rise
ESV	Energy Safe Victoria
EWA	Early Works Agreement

Excavation	Excavation refers to manual digging or mechanised digging operation with plant or equipment which involves trenching and trenchless excavation. Trenchless excavation covers boring, Horizontal Directional Drilling (HDD), pipe bursting and tunnelling.
FBE	Fusion Bonded Epoxy
GIS	Geographic Information System
HBE	High Build Epoxy
HDD	Horizontal Directional Drilling
Hot Works	Hot works are defined as grinding, welding, thermal or oxygen cutting or heating, and other related heat-producing or spark-producing operations. Heat sources or hot works must not impact pipelines, taking into consideration that the ground or adjacent structures may also be capable of transmitting heat.
LFI	Low Frequency Induction
LPG	Liquefied Petroleum Gas
MAOP	Maximum Allowable Operating Pressure
Measurement Length	The maximum length of pipeline route which presents an extended source of hazard on the basis that an event of failure could affect any part of the development or specific location relevant to the development. The maximum length corresponds to the heat radiation hazard associated with a 4.7 kW/m² heat radiation contour for an ignited full bore rupture calculated in accordance with AS/NZS 2885.6. If the pipeline is designed as a no rupture pipe, then the measurement length corresponds to a credible leak size.
NDD	Non-Destructive Digging (NDD) refers to either hand digging or Non-Destructive Pot Holing using a vacuum pipe connected to a vacuum truck with either a water lance or air lance. Hydro-Vacuum Excavation consists of a water lance and vacuum truck and is used to physically prove existing assets.
OHEW	Overhead Earth Wire
PE	Polyethylene
Pipe Bursting	Pipe bursting refers to a pipe being inserted to a larger pipe that results in the larger pipe being damaged. For an example of pipe bursting, refer to the following You-Tube video: https://www.youtube.com/watch?v=HX5beh0ubGY
Pipeline Easement	The pipeline area shown on a survey plan and referenced on the property title.
Predominate Building Line	The expected predominate building line relates to the façade of the building, not necessarily the property boundary.
Protected Zone	A Protected Zone is an area extending both horizontally and longitudinally along a gas asset. It is the area where loads and/or any hot works may potentially cause damage to the gas asset.

	The Protected Zone refers to works near APA Networks gas assets or works within the vicinity of the gas assets that may cause an unacceptable risk to the asset in accordance with Table 2 Minimum Clearances or Table 3 Minimum Clearances for Construction Works and Land Use Activities
PTW	Permit to Work
PPV	Peak Particle Velocity
PVC	Polyvinyl Chloride
QNP	Queensland Nitrates Plant
RPEQ	Registered Profession Engineer Queensland
RWA	Recoverable Works Agreement
Sensitive Use Locations	This is designated as Class “S” as per AS/NZS 2885.6 Pipelines - Gas and liquid petroleum - Pipeline safety management and refers to the sub location class. Sensitive Use Location Class (S) identifies land where the consequences of a FAILURE EVENT may be increased because it is developed for use by sectors of the community who may be unable to protect themselves from the consequences of a pipeline FAILURE EVENT. Sensitive uses are defined as follows: • Schools which includes colleges • Hospitals • Aged care facilities such as nursing homes, elderly people’s homes • Prisons and jails • Convalescent homes • Sheltered housing • Buildings with five or more stories • Large community and leisure facilities, large open air gatherings • Day care facilities • Other potentially difficult to evacuate facilities • Other structures as defined by relevant local councils. The Sensitive Use Location Class “S” must be assigned to any section of a gas transmission pipeline where there is a sensitive development within the applicable Measurement Length.

Site Watch	An APA Site Watch representative can be the Permit Issuing Officer for excavation work within a gas Easement or Protected Zone and is referred to as the primary spotter for excavation works. The secondary spotter is provided by the Contractor. The primary spotter has the ultimate decision regarding works within the gas Easement or Protected Zone which includes the method of excavation, starting and stopping excavation work. The APA Site Watch representative is the nominated competent person responsible for the following; • Making themselves highly visible and everyone on the job site should be aware of the Site Watch's role; • Communication to personnel operating mobile plant and equipment ensuring minimum clearance to above and below ground assets is maintained and the construction methodology is adhered to and complies with APA Networks requirements. Ensuring personnel do not encroach within the swing radius of the operating machinery.
SMS	Safety Management Study
SMWS	Safe Work Method Statement used by APA or Contractors to execute field work. The risks and associated control measures risk assessments should be transferred to SWMS.
SRZ	Structural Root Zone
Structures	Structures refer to third party structures which includes, but is not limited to; temporary or permanent buildings, walls, canopies, footings, pile caps or retaining walls
Third Party	The person or entity and their agents or Contractors that propose to undertake work near APA assets.
Third Party Assets	Third Party Assets include roads, utilities and structures.
Third Party Excavation	Third Party Excavation which is not associated with APA (e.g. road works, utility installation, private development, fencing).
Third Party Works Classification	The Third Party Work Classification as shown in Section 3.3 covers the following three work classifications: 1. No Impact to gas assets 2. No Objection Under Conditions 3. Enquiry Escalated for Alteration
Transmission Pipeline	Gas transmission pipeline which includes all associated equipment such as cathodic protection, earthing grid, instrumentation and electrical cables.
Utilities	Includes water, wastewater, drainage, telecommunications cables, power poles and cables owned by individuals or organisations other than APA Networks.
Voltage	Difference of potential normally between conductors or between conductors and earth as follows: a) Extra-low voltage – Not exceeding 50V a.c. or 120 V ripple-free d.c. b) Low voltage – Exceeding extra-low voltage, but not exceeding 1000 V a.c. or 1500 V d.c.

	c) High voltage – Exceeding low voltage.
Works	The development of any type of buildings, structures and other obstructions (including residential buildings, pools, sheds, carports, major developments, transport infrastructure, services, stockpiles, trees), and any work that causes changes to the ground (including movement of heavy vehicles, blasting, tunnelling, pile driving, ground compaction, earthworks, open and trenchless excavations)

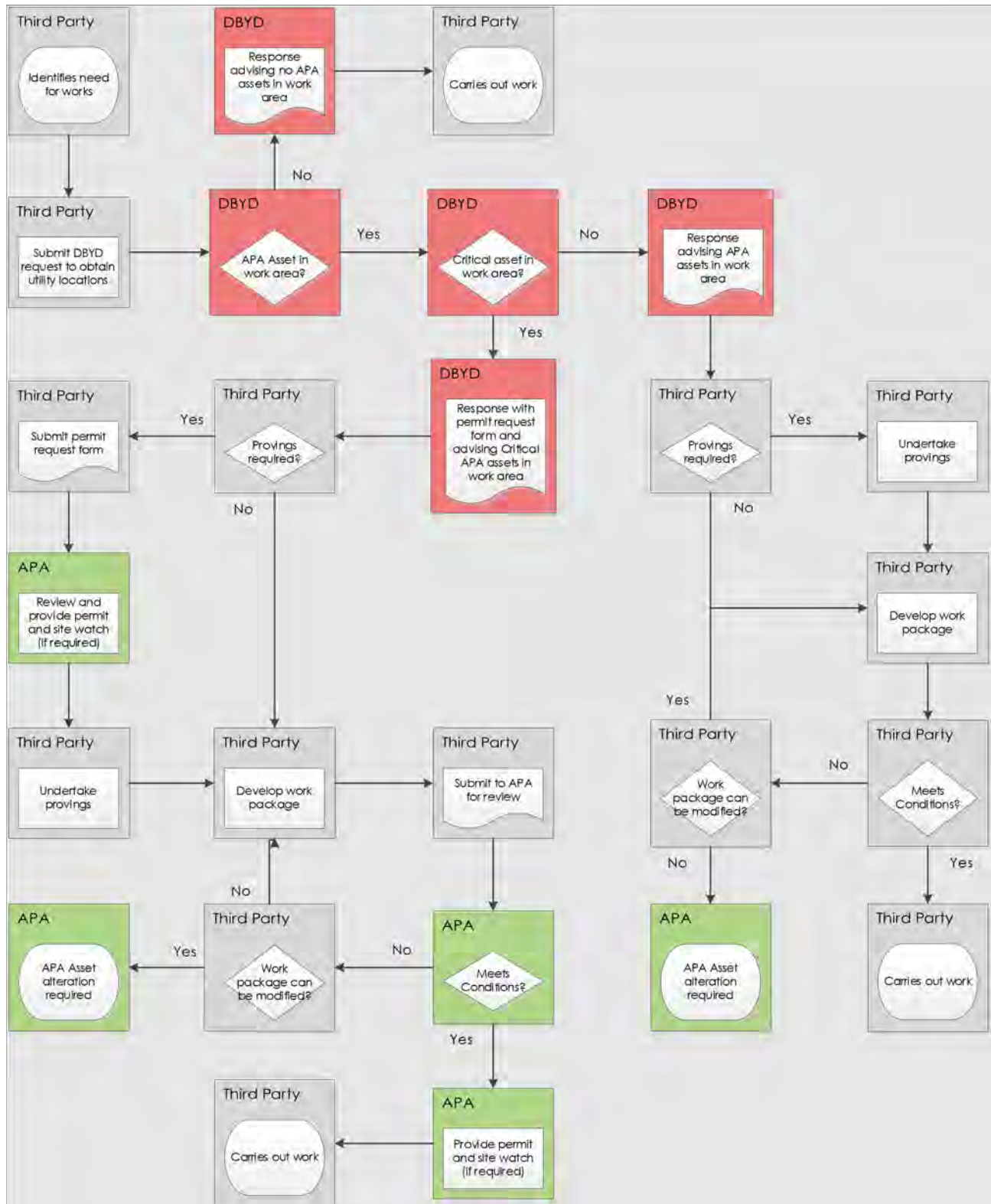
8 DOCUMENT REFERENCES

Table 15 Document References

External Standards	
API RP 1102	Steel Pipeline Crossing Railroads and Highways
AS 2832.1	Cathodic protection of metals: Pipes and cables
AS 2885.0	Pipelines – Gas and liquid petroleum: General requirements
AS/NZS 2885.1	Pipelines – Gas and liquid petroleum: Design and Construction
AS/NZS 2885.2	Pipelines – Gas and liquid petroleum: Welding
AS 2885.3	Pipelines – Gas and liquid petroleum: Operations and Maintenance
AS 2885.5	Pipelines – Gas and liquid petroleum: Field Pressure Testing
AS/NZS 2885.6	Pipelines – Gas and liquid petroleum: Pipeline safety management
AS/NZS 4645.1	Gas Distribution Networks - Network Management
AS/NZS 4645.2	Gas Distribution Networks - Steel Pipe Systems
AS/NZS 4645.3	Gas Distribution Networks - Plastics Pipe Systems
AS 4799	Installation of Underground Utility Services and Pipelines Within Railway Boundaries
AS 4827.1	Coating defect surveys for buried pipelines Part 1: Direct current voltage gradient (DCVG)
AS/NZS 4853	Electrical Hazards on Metallic Pipelines
AS 4970	Protection of trees on development sites
Standard Policies, Procedures, Specifications, Guidelines, Forms and Templates	
400-SP-L-0002	Networks Bedding Material Specification
400-PR-L-0003	Encroachment and Land Use Change SMS Trigger Procedure

APPENDIX A

GENERAL DBYD RESPONSE PROCESS



Before You Dig Australia

Classification: Networks

Enquiry Date: 10/10/2024
Sequence Number: 245811260
Work Site Address: 560 Chambers Flat Road
Logan Reserve
QLD 4133





For your immediate information **THERE IS A GAS PIPELINE OR INFRASTRUCTURE (Gas Assets)** located in close vicinity to your works.

Enquiry Date: 10/10/2024
Enquirer: Ryan Saba

Sequence Number: 245811260
Worksite Address: 560 Chambers Flat Road
Logan Reserve
QLD 4133

Thank you for your Before You Dig enquiry regarding the location of gas assets.

We confirm there are Gas Assets located in close vicinity of the above location. Damage to gas assets may result in explosion, fire and personal injury.

Please ensure you read all the relevant information contained in this response to your BYDA enquiry including reviewing the **APA Guidelines for Works Near Existing Gas Assets** and clearly understand and comply with all requirements relating to your scope of work.

If you have any queries relating to this information, contact the APA Before You Dig Officer for clarification. Refer to contact points listed on the following pages.

Before You Dig Checklist



1. Plan

- Review maps provided with this BYDA response and confirm the location of your work site is correct.
- Review the **APA Guidelines for Works Near Existing Gas Assets** and clearly understand requirements relating to my scope of work.



2. Prepare

- Electronically locate gas assets and mark locations.
- Note: Enquirers should still look for visible evidence of gas assets at the worksite not shown on plans.



3. Pothole

- Physically confirm ('prove') the location of gas assets by potholing by hand excavation or non- destructive vacuum excavation methods in accordance with **APA Guidelines for Works Near Existing Gas Assets**.
- Road authorities, councils, utilities and their authorised contractors and agents are responsible to pothole or use other suitable methods to verify the location and depth of all gas assets, including gas (inlet) services, prior to commencing any works.



4. Protect

- Protect gas assets by maintaining clearances whilst excavating and following conditions provided by APA.
- Where required by APA, only conducting work in proximity to gas assets while Site Watch is on site.
- Where applicable, APA Authority To Work permit conditions are clearly understood and complied with.
- Strap and support exposed mains and inlet services. Cover exposed mains to prevent damage until the excavation can be restored permanently.



5. Proceed

- Only proceed with your work once you have completed all the planning, preparation, potholing and protection requirements.
- APA BYDA response (including maps) are on site for reference at all times, and less than 30 days old.

Site Address 560 Chambers Flat Road
Logan Reserve
QLD 4133

Sequence No 245811260



Scale 1: 6500

Map Sources: Esri, Garmin, HERE, FAO, NOAA, USGS,
© OpenStreetMap contributors, and the GIS User Community

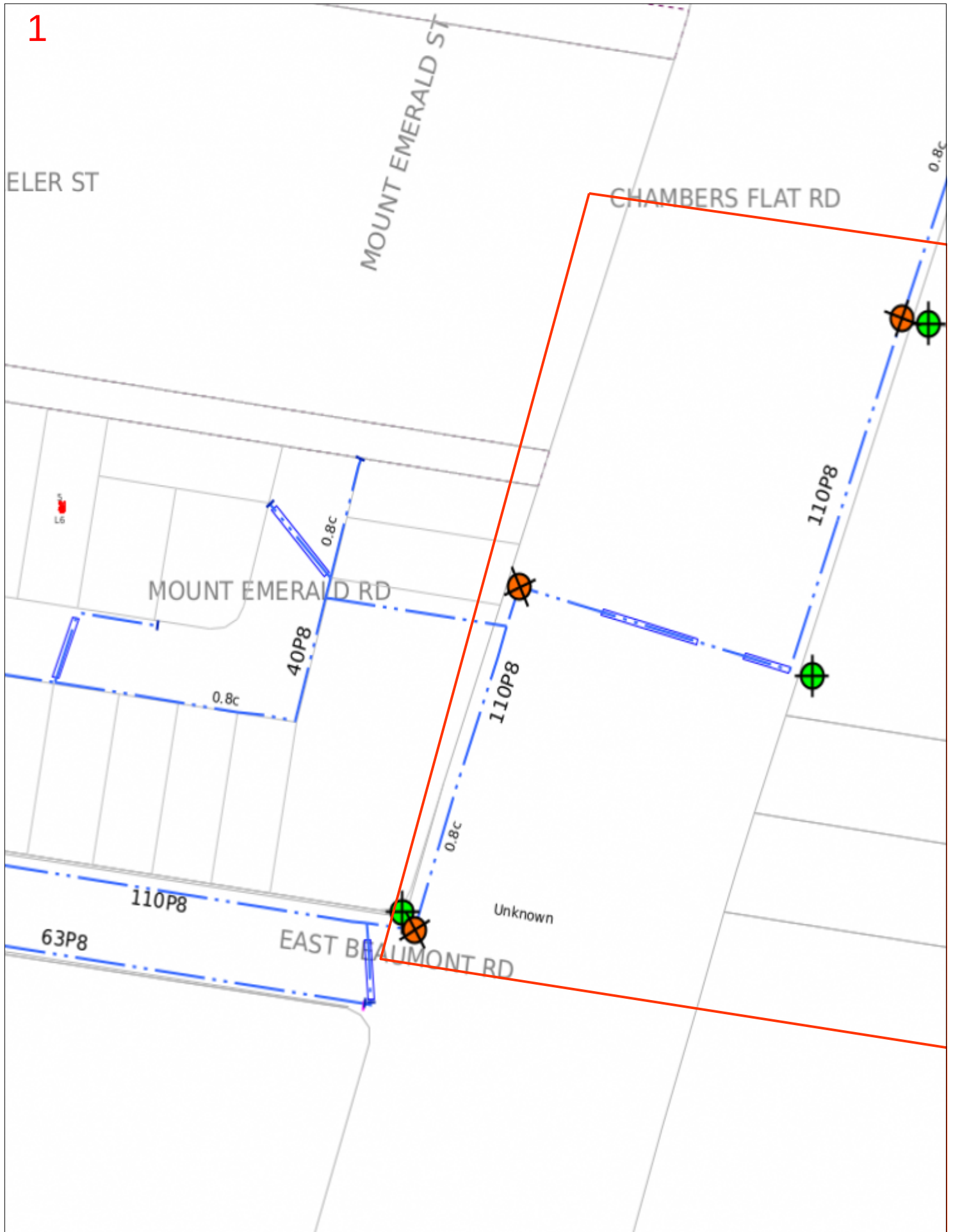


Enquiry Area

Map Key Area



1



Scale 1: 700 map

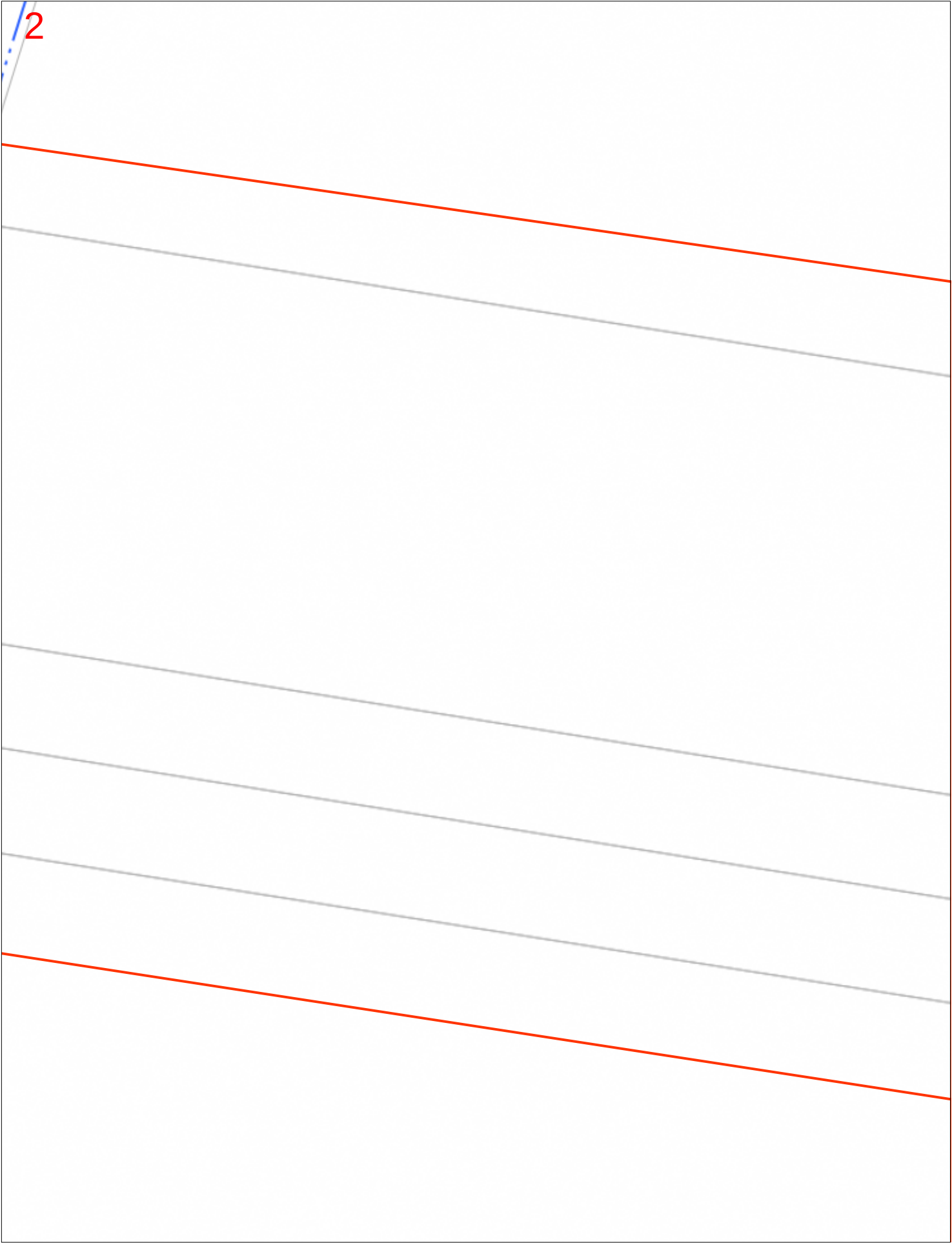
Map Sources: Esri, Garmin, HERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



Enquiry Area

Map Key Area





Scale 1: 700 map

Map Sources: Esri, Garmin, HERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



Enquiry Area

Map Key Area



Map Symbology

Pipe	Pipe code and material	Object
Low pressure	C* (for example, C2) Cast iron	Valve
Medium pressure	CU Copper	Buried valve
High pressure	N2 Nylon	Regulator
Transmission pressure	P* Polyethylene (PE)	Gas supplied = yes
Critical main (behind pipe)	P6, P7, P9–P12 Medium density PE	CP rectifier terminal
Proposed (pressure by colour)	P2, P4, P8 High density PE	CP test station
LPG (pressure by colour)	S* Steel	CP anode
Abandoned	W2 Wrought galv iron	CP bond wire
Idle/inactive	W3 PE coat wrought galv iron	Syphon
Sleeve		Trace wire point
Casing (behind pipe)		
Area	Abbreviation	
BYDA area of interest	BoK Back of kerb	FoK Front of kerb
	C Depth of cover	Galv Galvanized
	CP Cathodic protection	NTI Not tied in

Example

Pipe	Pipe code	This map was created in colour and should be printed in colour
40P6 in 80C2	40 mm high pressure medium density poly in an 80 mm cast iron casing	
63S8	63 mm medium pressure steel	

Pipe diameter in millimetres is shown before pipe code.
40P6 = 40 mm nominal diameter

Site Watch

Site Watch is where an APA field officer attends your work site to monitor and ensure controls are in place to protect critical gas assets from damage during work.

The following rates apply for this service (1 hour minimum charge):

Item	Rate (excl. gst)
Site Watch - Business Hours	\$143.42 per hour
Site Watch - After Hours	\$175.06 per hour
Cancellation Fee Fee applies where cancellations received after 12pm (midday) 1 business day prior to the booking	\$286.84

- Contact APA - Before You Dig officer for state specific hours of business.

Contacts

Contacts APA Group	
Enquiry	Contact Numbers
General enquiries or feedback regarding this information or gas assets.	APA - Before You Dig Officer Phone: 1800 085 628 Email: BYDA_APA@apa.com.au
Gas Emergencies	Phone: 1800 GAS LEAK (1800 427 532)

Important Information

- Refer to requirements relating to construction, excavation and other work activities in the APA **Guidelines for Works Near Existing Gas Assets** document with this BYDA response.
- BYDA enquiries are valid for 30 days. If your works commence after 30 days from the date of this response a new enquiry is required to validate location information.
- For some BYDA enquiries, you may receive two (2) responses from APA. Please read both responses carefully as they relate to different assets.
- Gas (inlet) services connecting Gas Assets in the street to the gas meter on the property are not marked on the map. South Australia Only - if a meter box is installed on the property, a sketch of the gas service location may be found inside the gas meter box. APA does not guarantee the accuracy or completeness of these sketches.

Disclaimer and legal details

- This information is valid for 30 days from the date of this response.
- This information has been generated by an automated system based on the area highlighted in your BYDA request and has not been independently verified.
- Map location information is provided as AS5488-2022 Quality Level D, as such supplied location information is indicative only.
- Whilst APA has taken reasonable steps to ensure that the information supplied is accurate, the information is provided strictly on the condition that no assurance, representation, warranty or guarantee (express or implied) is given by APA in relation to the information (including without limitation quality, accuracy, reliability, completeness, currency, sustainability, or suitability for any particular purpose) except that the information has been disclosed in good faith.
- Any party who undertakes activities in the vicinity of APA operated assets has a legal duty of care that must be observed. This legal obligation requires all parties to adhere to a standard of reasonable care while performing any acts that could foreseeably harm these assets.

The background consists of several large, overlapping geometric shapes in red and white. A large red shape occupies the top right, while a white shape with a pointed top is on the left. Another red shape is at the bottom left, and a white shape is at the bottom right. The text 'apa' is positioned in the red area on the right side.

apa

Referral
245811262

Member Phone
13 12 53

Responses from this member

Response received Thu 10 Oct 2024 12.43pm

File name	Page
Response Body	59
245811262 - Energex Detailed Plan.pdf	62
BYDA Symbology Legend.pdf	72
Energex BYDA Terms and Conditions.pdf	73

Assets and planned assets found

BYDA Request

Please **DO NOT SEND A REPLY** to this email as it has been automatically generated and replies are not monitored.

Our search has revealed there is existing and planned Energex underground electrical equipment within the defined search area

They are shown on the attached plan

There is a possibility the planned assets may have been installed prior to your enquiry

You: **BYDA Enquiry No:**

Ryan Saba 245811262

Company: **Date of Response:**

Burchills Engineering Solutions 10 Oct 2024

Search Location: **Period of Plan
Validity:**

560 Chambers Flat Road 4 Weeks
Logan Reserve,
QLD 4133

External Comments (if any):

WARNING: When working in the vicinity of Energex's assets you have a legal Duty of Care that must be observed.

It is important that You note:

1. Immediately report life threatening emergencies to Emergency Services on **000** or to ENERGEX on on **13 19 62**.
2. Please read and understand all the information and disclaimers provided - including the Terms and Conditions on the attached pages.
3. We have only searched the area which has been nominated in the request. If this nominated area is not what You require, please resubmit another enquiry with BYDA.
4. Plans provided by ENERGEX are only an indication of the presence of underground assets within the nominated area. Locations provided are approximate and the plans are not suitable for scaling purposes, as exact ground cover and alignments cannot be provided. You must confirm the exact location of underground electrical equipment by use of an electronic cable locator followed by careful, non-mechanical excavation (ie, potholing).
5. Plans provided by ENERGEX do not encompass Energex's overhead Network.

6. Energex, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and details supplied pursuant to the BYDA Request and You agree to indemnify ENERGEX against any claim or demand for any such loss or damage to You, your servants or your agents.
7. You are responsible for any damage to underground electrical equipment caused by works pursuant to or in any way connected with this BYDA Request.
8. In addition to underground cables marked on attached plan, there could be underground earth conductors, underground substation earth conductors, M.E.N conductors, S.W.E.R Substation Earth Conductors, ABS Earth Mats or Consumer Mains in the vicinity or private underground cables (inc. consumers' mains that may run from ENERGEX mains onto private property) in the vicinity of the nominated work area(s) that are not marked on the plans.
9. Independent underground cable locators can be found via the [BYDA Certified Locator website](#)
10. The ENERGEX Before You Dig Australia information map(s) provide the vicinity of underground cable and will not be adequate for conveyancing purposes. A Request for Search (Property Search) can be arranged through ENERGEX.
11. The attached plans are only valid for a period of four weeks from receipt. If excavation does not commence within four weeks, a new plan should be obtained.
12. The Energex BYDA map (named maps.pdf) may contain shaded area(s), indicating the location of planned work(s). This polygon will note the planned work project number in the centre of the shaded area(s). This number will correspond with additional pdf attachments, if they have been included. Should you find a planned works plan not attached that You believe may affect your planned work(s), please contact the Energex BYDA team on the details listed below.
13. ENERGEX may contact You to discuss your proposed excavation in the vicinity of feeders identified on the attached plan(s).
14. Do not access or enter the exclusion zone of any underground electrical assets. For example, conduits, cables, pits, cabinets.
15. Your work will need to comply with the [Working near overhead and underground electric lines - Electrical safety code of practice 2020](#).

NOTE: Where your proposed work location contains Energex 33kV or greater Underground cables please access the Energex [Working Near Underground Cables 33kV or Higher web page](#) for more information.

General enquiries (7:00am - 5:30pm Mon to Fri)

13 12 53

Life threatening emergencies only triple zero (000) or

13 19 62

To re-submit or change the nominated search area please visit smarterwx.BYDA.com.au

E: custserve@energex.com.au **W:** energex.com.au/lualmap

E: BYDA@energex.com.au ABN: 40 078 849 055



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.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as [Adobe Acrobat Reader \(for PDF files\)](#).

PelicanCorp

Compiled with TicketAccess by PelicanCorp



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



BYDA

Sequence: 245811262

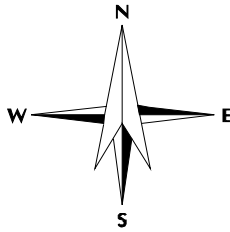
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OVERVIEW

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

AS5488 Category “D” Plan



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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.

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

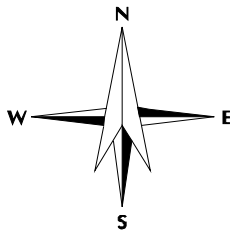


BYDA

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Date: 10/10/2024
Scale: 1:500
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For a full list of Map
Symbols, please
refer to the supplied
BYDA Symbology
Legend page

AS5488 Category “D” Plan



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For Emergency Situations
please call 13 19 62

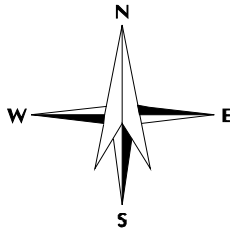


BYDA

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Scale: 1:500
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For a full list of Map
Symbols, please
refer to the supplied
BYDA Symbology
Legend page

AS5488 Category “D” Plan



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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

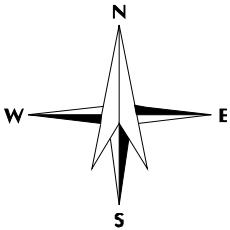


BYDA

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Date: 10/10/2024
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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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

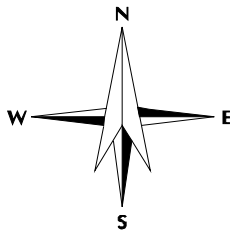


BYDA

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Date: 10/10/2024
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



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.

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.

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

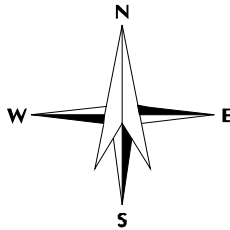


BYDA

Sequence: 245811262
Date: 10/10/2024
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



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.

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.

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

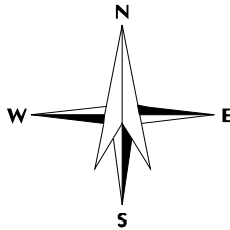


BYDA

Sequence: 245811262
Date: 10/10/2024
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



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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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

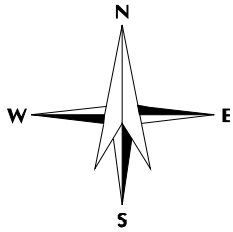


BYDA

Sequence: 245811262
Date: 10/10/2024
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.

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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

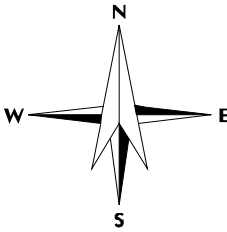


BYDA

Sequence: 245811262
Date: 10/10/2024
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



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

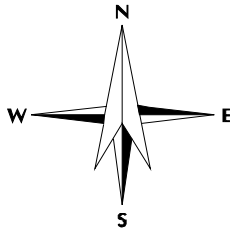


BYDA

Sequence: 245811262
Date: 10/10/2024
Scale: 1:500
Tile No: 9

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.

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 SYMBOLOLOGY LEGEND

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

BYDA terms and conditions

Duty of care for everyone



Responsibilities – (When Working in the Vicinity of Energex Electrical Equipment)

Extreme care must be taken during non-mechanical or mechanical excavation as damage to Energex underground electrical equipment can lead to injury or death of workers or members of the public. Electrical equipment includes underground cables, conduits and other associated underground electrical equipment used for controlling, generating, supplying, transforming or transmitting electricity.

A person conducting a business or undertaking (PCBU) must ensure the person's business or undertaking is conducted in a way that is electrically safe. This includes:

- a) ensuring that all electrical equipment used in the conduct of the person's business or undertaking is electrically safe;
- b) if the person's business or undertaking includes the performance of electrical work, ensuring the electrical safety of all persons and property likely to be affected by the electrical work; and
- c) if the person's business or undertaking includes the performance of work, whether or not electrical work, involving contact with, or being near to, exposed parts, ensuring persons performing the work are electrically safe.

In addition, a PCBU at a workplace must ensure, so far as is reasonably practicable, that no person, plant or thing at the workplace comes within an unsafe distance of an underground electric line.

Workers and other persons must also take reasonable care for their own and other person's electrical safety. This includes complying, so far as is reasonably able, with any reasonable instructions given by Energex to ensure compliance with the [Electrical Safety Act 2002](#)

BYDA terms and conditions

Duty of care for everyone

The following matters must be considered when working near Energex electrical equipment:

The PCBU must ensure, so far as is reasonably practicable, that no person, plant or thing at the workplace comes within an unsafe distance of an underground electric line (see section 68 of the [Electrical Safety Regulation 2013](#))

1. It is the responsibility of the architect, consulting engineer, developer, and head contractor in the project planning stages to design for minimal impact and protection of Energex electrical equipment.
2. It is the constructor's responsibility to:
 - a) Anticipate and request plans of Energex electrical equipment for a location at a reasonable time before construction begins.
 - b) Visually locate Energex electrical equipment by hand or vacuum excavation where construction activities may damage or interfere with Energex electrical equipment.
 - c) To notify Energex if the information provided is found to be not accurate or assets are found on site that are not recorded on the Energex BYDA plans.
 - d) Read and understand all the information and disclaimers provided.

Note: A constructor may include but not limited to a PCBU, Designer, Project Manager, Installer, Contractor or a Civil Contractor

3. Comply with applicable work health and safety and electrical safety codes of practice including but not limited to:
 - a) Working near overhead and underground electric lines – [Electrical safety codes of practice 2020](#)
 - b) Managing electrical risk in the workplace – [Electrical safety code of practice 2013](#)
 - c) Managing the risks of plant in the workplace – [Electrical safety code of practice 2013](#)
 - d) Excavation work – [Electrical safety code of practice 2013](#)

IMPORTANT NOTES:

- As the alignment and boundaries of roadways with other properties (and roads within roadways) frequently change, the alignments and boundaries contained within Energex plans and maps will frequently differ from present alignments and boundaries "on the ground". Accordingly, in every case where it appears that alignments and boundaries have shifted, or new roadways have been added, the constructor should obtain confirmation of the actual position of Energex cables and pipelines under the roadways. In no case should the constructor rely on statements of third parties in relation to the position of Energex cables and pipelines. It is the applicant's responsibility to accurately locate all services as part of the design and/or prior to excavation.
- Energex does not provide information on private underground installations, including consumers' mains that may run from Energex mains onto private property. Assets located on private property are the responsibility of the owner for identification and location.
- Energex plans are circuit diagrams or pipe indication diagrams only and indicate the presence of plant in the general vicinity of the geographical area shown. Exact ground cover and alignments cannot be given with any certainty; as such levels can change over time.
- All underground conduits are presumed to contain asbestos. Refer to "Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)] - https://www.safeworkaustralia.gov.au/system/files/documents/1702/codeofpracticeformanagementcontrolofasbestosintheworkplace_nohsc2018-2005
- Plans provided by Energex do not show the presence of any Overhead Network
- In addition to underground cables marked on attached plan there may be underground Earth Conductors in the vicinity of the nominated work area(s) that are not marked on the plans.
- There may also be other buried assets such as tanks for fluid filled cables that do not appear on GIS plots but are shown on detailed as constructed drawings.
- Being aware of your obligations in [s 304] Excavation work— underground essential services information under the [Work Health and Safety Regulation 2011](#), Chapter 6 Construction work, Part 6.3 Duties of person conducting business or undertaking. This includes but is not limited to taking reasonable steps to obtain the current information & providing this information to persons engaged to carry out the excavation work. For further information please refer to: - <http://www.legislation.qld.gov.au/LEGISLTN/SL/S/2011/11SL240.pdf>
- Energex plans are designed to be printed in colour and as an A4 Landscape orientation

BYDA terms and conditions

Duty of care for everyone

Conditions – (When Working in the Vicinity of Energex Electrical Equipment)

Records:

The first step before any excavation commences is to obtain records of Energex plant in the vicinity of the work. For new work, records should be obtained during the planning and design stage. The records provided by Energex must be made available to all construction groups on site. Where plant information is transferred to plans for the proposed work, care must be exercised to ensure that important detail is not lost in the process.

Plans and or details provided by Energex are current for four weeks from the date of dispatch and should be disposed of by shredding or any other secure disposal method after use. A new BYDA enquiry must be made for proposed works/activities to be undertaken outside of the four-week period.

Energex retains copyright of all plans and details provided in connection with your request. Energex plans or other details are provided for the use of the applicant, its servants, or agents, and shall not be used for any unauthorised purpose. On receipt of BYDA plans and before commencing excavation work or similar activities near Energex's plant, check to see that it relates to the area you have requested and carefully locate this plant first to avoid damage. If you are unclear about any information contained in the plan, please contact Energex on the General Enquiries number listed above for further advice.

Energex, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Energex against any claim or demand for any such loss or damage.

The constructor is responsible for all plant damages when works commence prior to obtaining Energex plans, or failure to follow agreed instructions, or failure to demonstrate all reasonable measures were taken to prevent the damage once plans were received from Energex. Energex reserves all rights to recover compensation for loss or damage caused by interference or damage, including consequential loss and damages to its cable network, or other property.

NOTE: Where your proposed work location contains Energex 33kV or greater Underground cables please access the [Energex Working Near Underground Cables 33kV or Higher web page](#) for more information.

Location of Cables:

Examining the records is not sufficient, as reference points may change from the time of installation. Records must also be physically proven when working in close proximity to them. The exact location of plant likely to be affected shall be confirmed by use of an electronic cable and pipe locator followed by **careful hand or vacuum excavation to the level of cable protection cover strips or conduits**. When conducting locations, please be aware that **no** unauthorised access is permitted to Energex Assets– including Pits, Low Voltage Disconnection Boxes, Low Voltage Pillars or High Voltage Link Boxes.

Hand or vacuum excavation must be used in advance of excavators. In any case, where any doubt exists with respect to interpretation of cable records, contact Energex on the General Enquires number listed above for further advice.

If the constructor is unable to locate Energex underground assets within 5 metres of nominal plan locations, they should contact the Energex General Enquires number listed above for further advice.

If unknown cables or conduits (i.e. not shown on issued BYDA plans) are located during excavation:

1. Call the ELECTRICITY EMERGENCIES number listed above
2. Treat cables as if alive, post a person to keep all others clear of the excavation until Energex crew attend to make safe.
3. All work in the vicinity of damaged plant should cease and the area should be vacated until a clearance to continue work has been obtained from an Energex officer.

Electrical Cable Installation Methods:

Energex cables are installed with a variety of protection devices including:

- | | |
|---|---------------------------------------|
| 1. Clay paving bricks or tiles marked "Electricity" or similar (also unmarked) | 2. Concrete or PVC cover slabs |
| 3. PVC, A/C or fibro conduit, fibre reinforced concrete, iron or steel pipe | 4. Concrete encased PVC or steel pipe |
| 5. Thin plastic marker tape | 6. Large pipes housing multiple ducts |
| 7. Multiple duct systems, including earthenware or concrete 2-, 4-, and 6-way ducts and shamrocks | |

Note: Some cables are known to be buried without covers and cables may change depth or alignment along the route.

Excavating Near Cables:

For all work within 2.5 m of nominal location, the constructor is required to hand or vacuum excavate (pothole) and expose the plant, hence proving its exact location before work can commence.

Cable protection cover strips shall not be disturbed. Excavation below these cover strips, or into the surrounding backfill material is not permitted.

BYDA terms and conditions

Duty of care for everyone

Excavating Parallel to Cables:

If construction work is parallel to Energex cables, then hand or vacuum excavation (potholing) at least every 4 m is required to establish the location of all cables, hence confirming nominal locations before work can commence. *Generally, there is no restriction to excavations parallel to Energex cables to a depth not exceeding that of the cable. **Note: Cable depths & alignment may change suddenly.***

Separation from Cables:

Any service(s) must be located at the minimum separation as per the tables below:

Table 1. Minimum Separation Requirements for Underground Services Running Parallel with Energex Assets

(Minimum Separation required in mm)							
Voltage Level	Gas	Communication or TV	Water		Sanitary drainage		Storm Water
			≤DN 200	>DN200	≤DN 200	>DN 200	
LV	250	100	500	*1000	500	1000	500
HV		300					
*Contact Energex/council to obtain specific separation distances							

Table 2. Minimum Separation Requirements for Underground Services Crossing Energex Assets

(Minimum Separation required in mm)					
Voltage Level	Gas	Communication or TV	Water	Sanitary drainage	Storm Water
LV & HV	100	100	300	300	100

Where the above table does not list a separation requirement for a particular underground service then 300mm shall be used.

Excavating Across Cables:

The standard clearance between services shall be maintained as set down in Table 2 above. If the width or depth of the excavation is such that the cables will be exposed or unsupported, then Energex shall be contacted to determine whether the cables should be taken out of service, or whether they need to be protected or supported. In no case shall a cable cover be removed without approval. A cable cover may only be removed under the supervision of an Energex authorised representative. Protective cover strips when removed must be replaced under Energex supervision. Under no circumstances shall they be omitted to allow separation between Energex cables and other services.

Heavy Machinery Operation Over Cables:

Where heavy "Crawler" or "Vibration" type machinery is operated over the top of cables, a minimum cover of 450 mm to the cable protective cover mains must be maintained using load bearing protection whilst the machinery is in operation. For sensitive cables (i.e. 33 and 110kV fluid and gas filled cables), there may be additional constraints placed on vibration and settlement by Energex.

Directional Boring Near Cables:

When boring parallel to cables, it is essential that trial holes are carefully hand or vacuum excavated at regular intervals to prove the actual location of the conduits/cables before using boring machinery. Where it is required to bore across the line of cables, the actual location of the cables shall first be proven by hand or vacuum excavation. A trench shall be excavated one metre from the side of the cables where the auger will approach to ensure a minimum clearance of 500mm above and below all LV, 11kV, 33kV & 110/132kV cables shall be maintained.

Explosives:

Explosives must not be used within 10 metres of cables, unless an engineering report is provided indicating that no damage will be sustained. Clearances should be obtained from Energex's Planning Engineer for use of explosives in the vicinity of Energex cables.

Damage Reporting:

All damage to cables, conduits and pipes must be reported no matter how insignificant the damage appears to be. Even very minor damage to cable protective coverings can lead to eventual failure of cables through corrosion of metal sheaths and moisture ingress.

If any Damaged conductor is found:

1. Call the ELECTRICITY EMERGENCIES number listed above
2. Treat cables as if alive, post a person to keep all others clear of the excavation until Energex crew attend to make safe.
3. All work in the vicinity of damaged plant should cease and the area should be vacated until a clearance to continue work has been obtained from an Energex officer.

BYDA terms and conditions

Duty of care for everyone

Plant Solutions and Assistance:

If plant location plans or visual location of Energex plant by hand or vacuum excavation reveals that the location of Energex plant is situated wholly or partly where the developer or constructor plans to work, then Energex shall be contacted to assist with your development of possible engineering solutions.

If Energex relocation or protection works are part of the agreed solution, then payment to Energex for the cost of this work shall be the responsibility of the principal developer or constructor. Energex will provide an estimated quotation for work on receipt of the developer's or constructor's order number before work proceeds.

It will be necessary for the developer or constructor to provide Energex with a written Work Method Statement for all works in the vicinity of or involving Energex plant. This Work Method Statement should form part of the tendering documentation and work instruction.

Vacuum Excavations (Hydro Vac)

When operating hydro vac equipment to excavate in vicinity of underground electrical assets (cables/conduits):

Fitted with:

- Nonconductive (neoprene rubber or equivalent) vacuum (suction) hose.
- Oscillating nozzle on pressure wand with water pressure adjusted to not exceeding 2000 psi.

Maintain a minimum distance of 200mm between end of pressure wand and underground electrical assets. DO NOT insert the pressure wand jet directly into subsoil.

Ensure pressure wand is not directly aimed at underground electrical assets (cables/conduits).

Safety Notices (Underground Work)

There is no exclusion zone applicable for underground electrical assets – conduits, cables (unless cable is damaged, or conductors or terminations have been exposed) therefore there is **no requirement for a written Safety Advice** to be obtained provided the work location does not contain overhead electric lines or other exposed live parts.

Further information on Working Safely around Energex assets:

https://www.energex.com.au/_data/assets/pdf_file/0010/211231/Working-near-OH-UG-lines-BS001405R107ver2.pdf

Thank you for your interest in maintaining a safe and secure Electricity Distribution network. Energex welcomes your feedback on this document via email to dbyd@energex.com.au.

General enquiries (7am - 5pm Mon to Fri)

13 12 53

Life threatening emergencies only triple zero (000) or

13 19 62

E: custserve@energex.com.au

W: energex.com.au/lualmap

E: dbyd@energex.com.au

ABN: 40 078 849 055

To re-submit or change the nominated search area please visit www.BYDA.com.au



Referral

245811259

Member Phone

(07) 3412 3412

Responses from this member

Response received Thu 10 Oct 2024 10.53am

File name	Page
Response Body	79
245811259.pdf	80

Request: 245811259 Enquirer: Burchills Engineering Solutions - 3534690 Contact: Ryan Saba Email: ryan.saba@burchills.com.au Phone: +61402009602 Address: 26 Marine Parade Southport QLD 4215 Site Address: 560 Chambers Flat Road Logan Reserve QLD 4133 Activity: Mechanical Excavation Job Number: 37782710

Before You Dig Australia (BYDA)

Asset Location Response



PO Box 3226 Logan City DC QLD 4114 • 150 Wembley Road, Logan Central
p (07) 3412 3412 • e council@logan.qld.gov.au • www.logan.qld.qov.au • ABN 21-627-796 435



Burchills Engineering Solutions - Ryan Saba
26 Marine Parade
Southport QLD 4215
ryan.saba@burchills.com.au

Logan City Council has been advised that you have placed an enquiry through the Before You Dig Australia service. Our records indicate the enquiry with the following details are affecting Logan City Council asset(s).

Enquiry Details	
Sequence Number	245811259
Enquiry Date	10/10/2024 10:53
Response	AFFECTED
Address	560 Chambers Flat Road Logan Reserve
Location in Road	Road, Footpath
Activity	Mechanical Excavation

Please review plans attached and contact Logan City Council prior to commencing works:

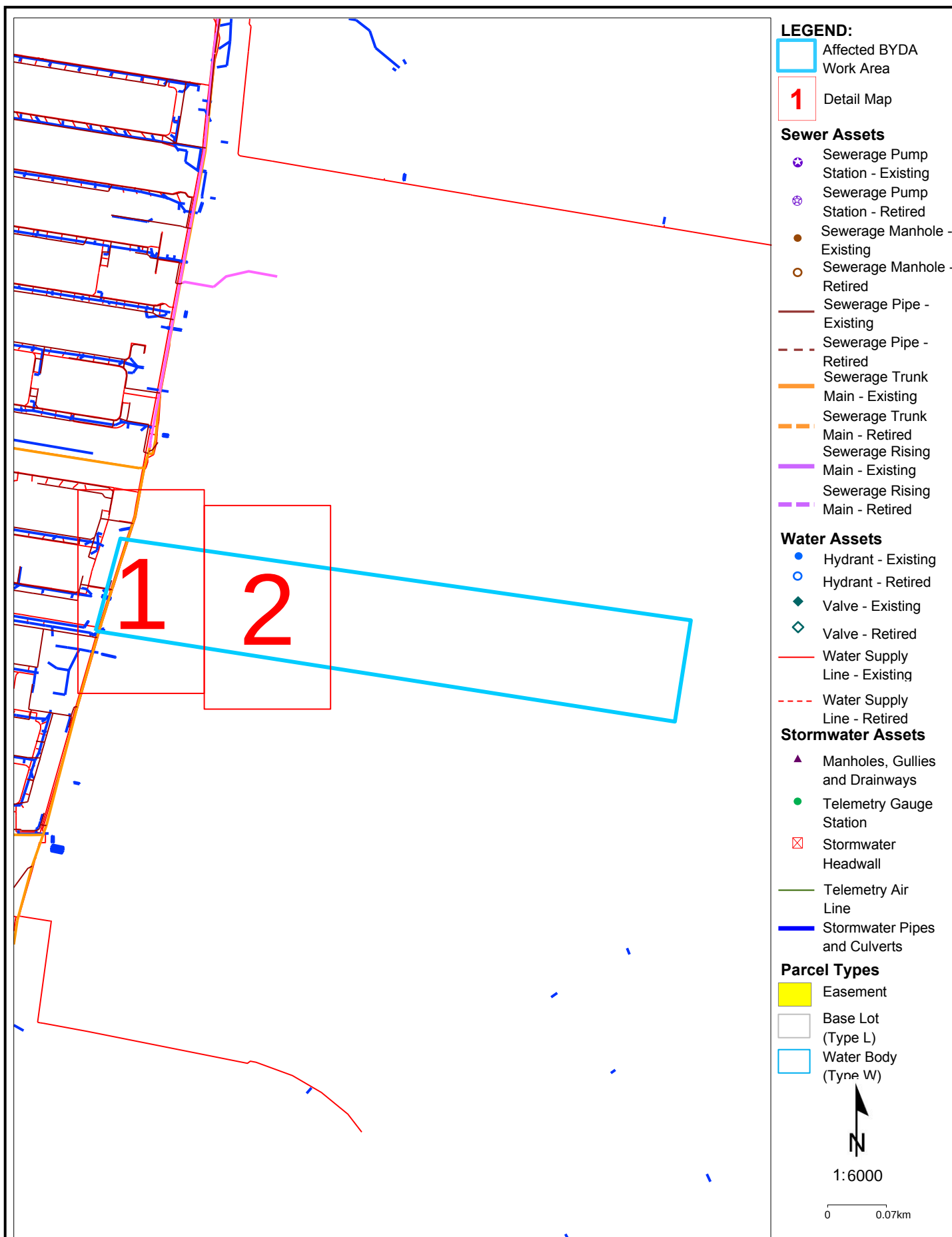
Logan City Council now provides a limited amount of As-Constructed and Drainage Plans on-line, click on the [Logan City As-Constructed Plans](#) link and type in the property address you are seeking. Unfortunately, not all properties will have plan records accessible on-line. The following options are available to customers should a record not be available:

- For **As Constructed Private Sewer/Roofwater (Inside Properties)**
Contact *Development Assessment, Building & Plumbing*
p: (07) 3412 5269
Alternatively visit our Website *Link to the relevant PS1 or PS2 forms:*
[Logan City As-Constructed Plans](#)
- For **As Constructed Private Sewer/Water/Stormwater (Outside Properties)**
Contact *Road Infrastructure Planning*
p: (07) 3412 5282
Alternatively visit our Website *Link for PS3 forms:*
[Logan City As-Constructed Plans](#)

If you need more assistance please call us on 07 3412 3412 or email us at council@logan.qld.gov.au.

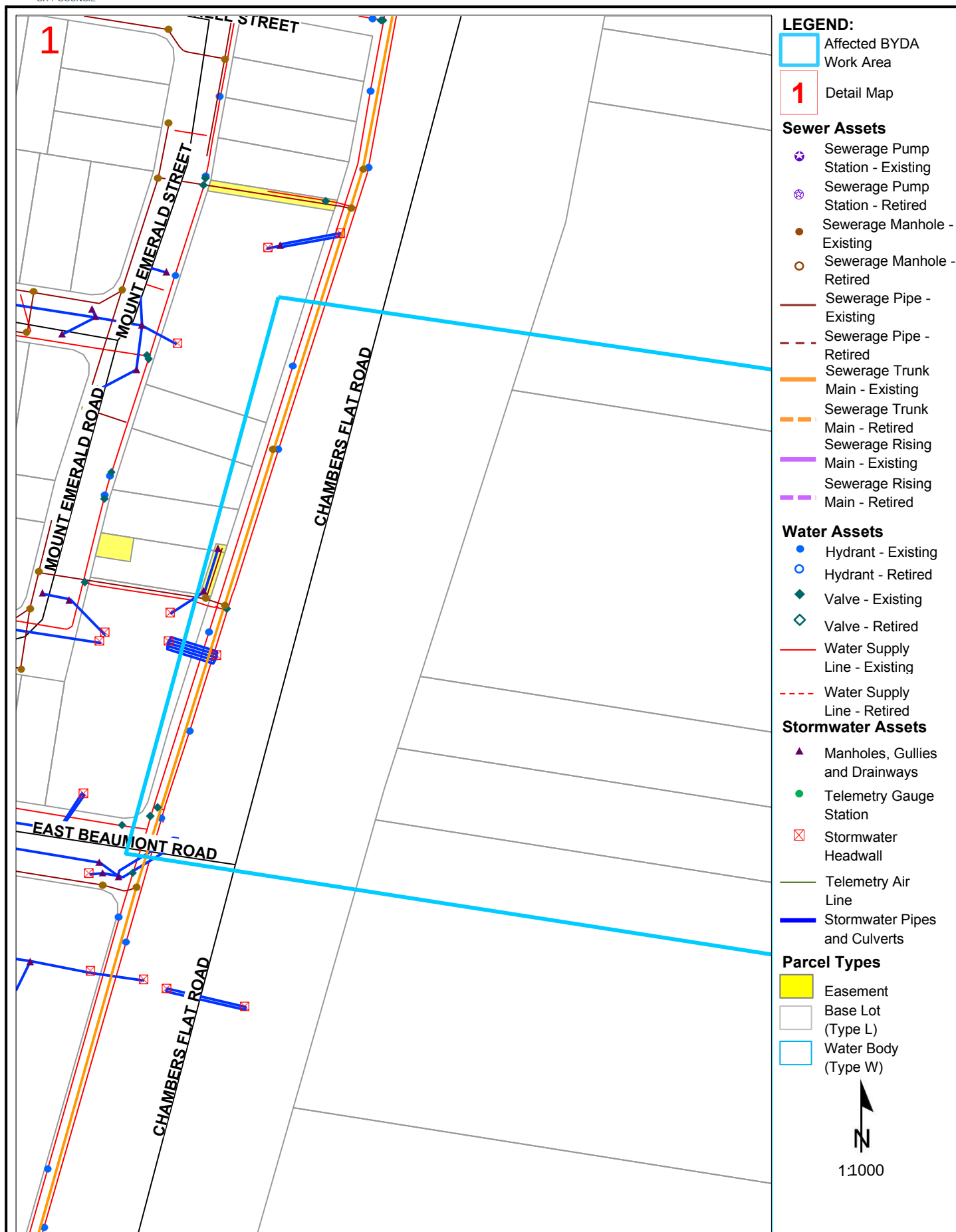
Disclaimer: This document is confidential to the addressee and may also be privileged, and neither confidentiality nor privilege is waived, lost or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from Council's records is believed to be accurate, but no responsibility is assumed for any error or omission. Council will only accept responsibility for information contained under official letterhead and duly signed by, or on behalf of, Chief Executive Officer.

Logan City Council's infrastructure dates back over many years and may include manufactured materials containing asbestos. You are solely responsible for ensuring that appropriate care is taken at all times and that you comply with all mandatory requirements relating to such matters, including but not limited to "workplace health and safety".



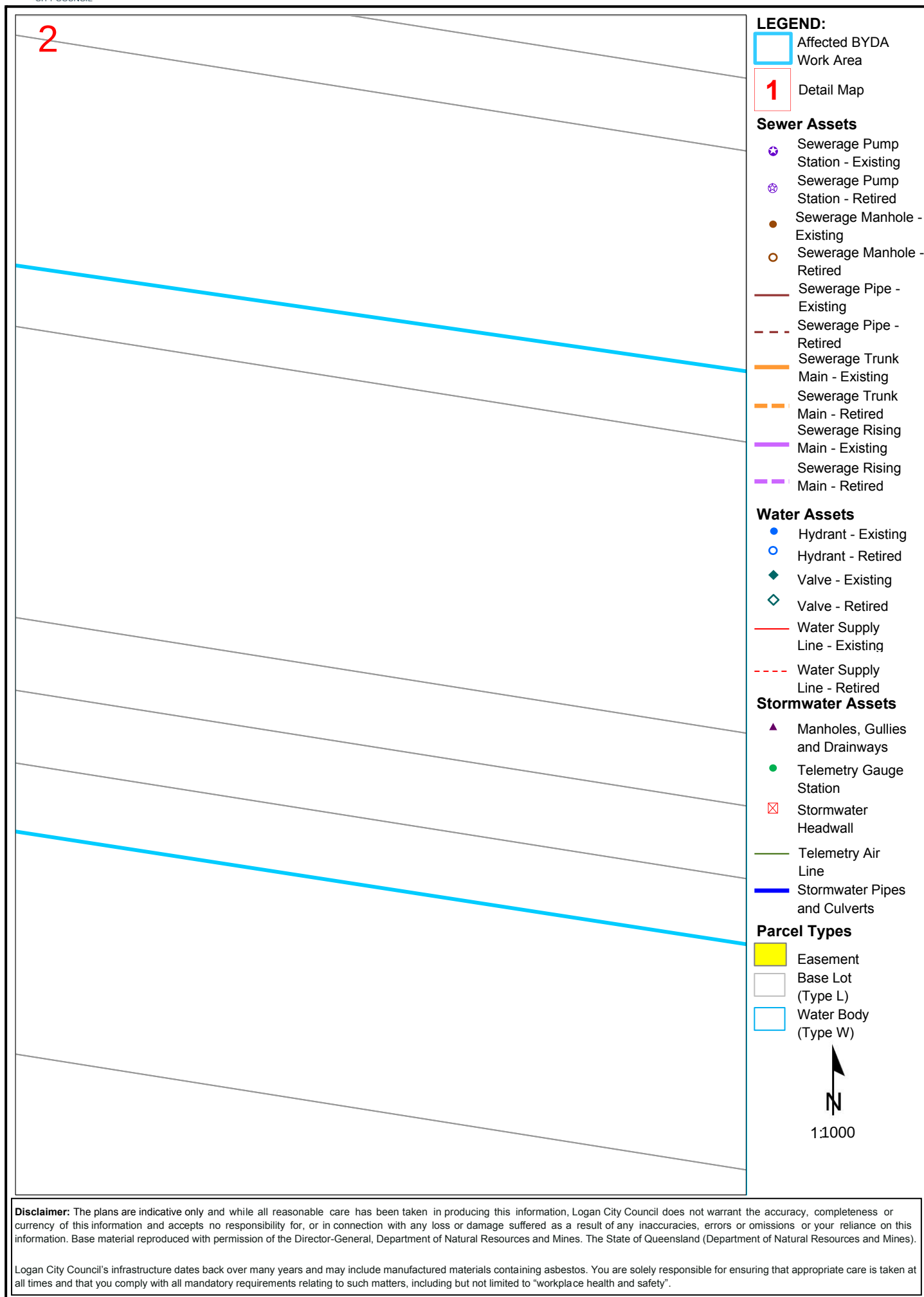
Disclaimer: The plans are indicative only and while all reasonable care has been taken in producing this information, Logan City Council does not warrant the accuracy, completeness or currency of this information and accepts no responsibility for, or in connection with any loss or damage suffered as a result of any inaccuracies, errors or omissions or your reliance on this information. Base material reproduced with permission of the Director-General, Department of Natural Resources and Mines. The State of Queensland (Department of Natural Resources and Mines).

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Referral
245811257

Member Phone
1800 687 626

Responses from this member

Response received Thu 10 Oct 2024 1.46pm

File name	Page
Response Body	85
Disclaimer_245811257_20241010_034539853456.pdf	86
4678_NBN_Dial_Before_You_Dig_Poster_20170517.pdf	90
245811257_20241010_034539853456_1.pdf	92

Hi Ryan Saba,

Please find attached the response to your DBYD referral for the address mentioned in the subject line. The location shown in our DBYD response is assumed based off the information you have provided. If the location shown is different to the location of the excavation then this response will consequently be rendered invalid.

Take the time to read the response carefully and note that this information is only valid for 28 days after the date of issue.

If you have any further enquiries, please do not hesitate to contact us.

Regards,
Network Services and Operations
NBN Co Limited
P: 1800626329
E: dbyd@nbnco.com.au
www.nbnco.com.au

Confidentiality and Privilege Notice

This e-mail is intended only to be read or used by the addressee. It is confidential and may contain legally privileged information. If you are not the addressee indicated in this message (or responsible for delivery of the message to such person), you may not copy or deliver this message to anyone, and you should destroy this message and kindly notify the sender by reply e-mail. Confidentiality and legal privilege are not waived or lost by reason of mistaken delivery to you. Any views expressed in this message are those of the individual sender, except where the sender specifically states them to be the views of NBN Co Limited

Please Do Not Reply To This Mail

To: Ryan Saba
Phone: Not Supplied
Fax: Not Supplied
Email: ryan.saba@burchills.com.au

Dial before you dig Job #:	37782710	
Sequence #	245811257	
Issue Date:	10/10/2024	
Location:	560 Chambers Flat Road , Logan Reserve , QLD , 4133	

Information

The area of interest requested by you contains one or more assets.

nbn™ Assets	Search Results
Communications	Asset identified
Electricity	No assets

In this notice **nbn™ Facilities** means *underground fibre optic, telecommunications and/or power facilities, including but not limited to cables, owned and controlled by nbn™*

Location of nbn™ Underground Assets

We thank you for your enquiry. In relation to your enquiry at the above address:

- **nbn's** records indicate that there **ARE nbn™** Facilities in the vicinity of the location identified above ("Location").
- **nbn** indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plan/s show general depth and alignment information only and are not an exact, scale or accurate depiction of the location, depth and alignment of **nbn™** Facilities shown on the Plan/s.
- In particular, the fact that the Indicative Plans show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- You should note that, at the present time, the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables. As such, consistent with the notes below, particular care must be taken by you to make your own enquiries and investigations to precisely locate any power cables and manage the risk arising from such cables accordingly.
- The information contained in the Indicative Plan/s is valid for 28 days from the date of issue set out above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. For any enquiries related to moving assets or Planning and Design activities, please visit the **nbn Commercial Works** website to complete the online application form. If you are planning to excavate and require further information, please email dbyd@nbnco.com.au or call 1800 626 329.

Notes:

1. You are now aware that there are **nbn™** Facilities in the vicinity of the above property that could be damaged as a result activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
2. You should have regard to section 474.6 and 474.7 of the *Criminal Code Act 1995* (CoA) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by **nbn** can interact with **nbn's** network facilities.
3. Any information provided is valid only for **28 days** from the date of issue set out above.

Referral Conditions

The following are conditions on which **nbn** provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in addition, and not in replacement of, any duties and obligations you have under applicable law.

1. **nbn** does not accept any responsibility for any inaccuracies of its plans including the Indicative Plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).
2. You acknowledge that **nbn** has specifically notified you above that the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables.
3. You should not assume that **nbn™** Facilities follow straight lines or are installed at uniform depths

along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.

4. In carrying out any works in the vicinity of **nbn**™ Facilities, you must maintain the following minimum clearances:
 - 300mm when laying assets inline, horizontally or vertically.
 - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates.
 - 1000mm when operating mechanical excavators.
 - Adherence to clearances as directed by other asset owner's instructions and take into account any uncertainty for power cables.
5. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as **nbn**™ fibre optic, copper and coaxial cables, and power cable feed to **nbn**™ assets). Damage to underground electric cables may result in:
 - Injury from electric shock or severe burns, with the possibility of death.
 - Interruption of the electricity supply to wide areas of the city.
 - Damage to your excavating plant.
 - Responsibility for the cost of repairs.
6. You must take all reasonable precautions to avoid damaging **nbn**™ Facilities. These precautions may include but not limited to the following:
 - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likelihood of damage to the cable, for example: the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.
 - If any undisclosed underground cables are located, notify **nbn** immediately.
 - All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
 - The safety of the public and other workers must be ensured.
 - All excavations must be undertaken in accordance with all relevant legislation and regulations.
7. You will be responsible for all damage to **nbn**™ Facilities that are connected whether directly, or indirectly with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include, without limitation, all losses expenses incurred by **nbn** as a result of any such damage.
8. You must immediately report any damage to the **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.
9. Except to the extent that liability may not be capable of lawful exclusion, **nbn** and its servants and agents and the related bodies corporate of **nbn** and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any plans (including Indicative Plans) attached hereto. Except as expressly provided to the contrary in this information sheet or the attached plans (including Indicative Plans), all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

All works undertaken shall be in accordance with all relevant legislations, acts and regulations applicable to the particular state or territory of the Location. The following table lists all relevant documents that shall be considered and adhered to.

State/Territory	Documents
National	Work Health and Safety Act 2011
	Work Health and Safety Regulations 2011
	Safe Work Australia - Working in the Vicinity of Overhead and Underground Electric Lines (Draft)

	Occupational Health and Safety Act 1991
NSW	Electricity Supply Act 1995
	Work Cover NSW - Work Near Underground Assets Guide
	Work Cover NSW - Excavation Work: Code of Practice
VIC	Electricity Safety Act 1998
	Electricity Safety (Network Asset) Regulations 1999
QLD	Electrical Safety Act 2002
	Code of Practice for Working Near Exposed Live Parts
SA	Electricity Act 1996
TAS	Tasmanian Electricity Supply Industry Act 1995
WA	Electricity Act 1945
	Electricity Regulations 1947
NT	Electricity Reform Act 2005
	Electricity Reform (Safety and Technical) Regulations 2005
ACT	Electricity Act 1971

Thank You,

nbn DBYD

Date: 10/10/2024

This document is provided for information purposes only. This document is subject to the information classification set out on this page. If no information classification has been included, this document must be treated as UNCLASSIFIED, SENSITIVE and must not be disclosed other than with the consent of nbn co. The recipient (including third parties) must make and rely on their own inquiries as to the currency, accuracy and completeness of the information contained herein and must not use this document other than with the consent of nbn co.

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Working near **nbn**TM cables

nbn has partnered with Dial Before You Dig to give you a single point of contact to get information about **nbn** underground services owned by **nbn** and other utility/service providers in your area including communications, electricity, gas and other services. Contact with underground power cables and gas services can result in serious injury to the worker, and damage and costly repairs. You must familiarise yourself with all of the Referral Conditions (meaning the referral conditions referred to in the DBYD Notice provided by **nbn**).

Practice safe work habits

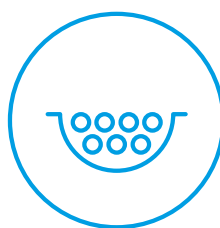
Once the DBYD plans are reviewed, the Five P's of Excavation should be adopted in conjunction with your safe work practices (which must be compliant with the relevant state Electrical Safety Act and Safe Work Australia "Excavation Work Code of Practice", as a minimum) to ensure the risk of any contact with underground **nbn** assets are minimised.



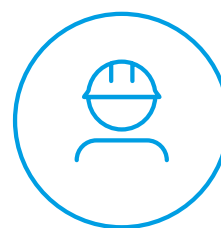
Plan: Plan your job by ensuring the plans received are current and apply to the work to be performed. Also check for any visual cues that may indicate the presence of services not covered in the DBYD plans.



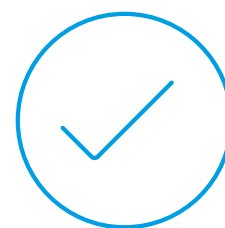
Prepare: Prepare for your job by engaging a DBYD Certified Plant Locator to help interpret plans and identify on-site assets. Contact **nbn** should you require further assistance.



Pothole: Non-destructive potholing (i.e. hand digging or hydro excavation) should be used to positively locate **nbn** underground assets with minimal risk of contact and service damage.

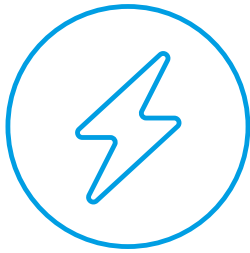


Protect: Protecting and supporting the exposed **nbn** underground asset is the responsibility of the worker. Exclusion zones for **nbn** assets are clearly stated in the plan and appropriate controls must be implemented to ensure that encroachment into the exclusion zone by machinery or activities with the potential to damage the asset is prevented.

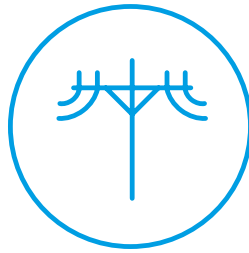


Proceed: Proceed only when the appropriate planning, preparation, potholing and protective measures are in place.

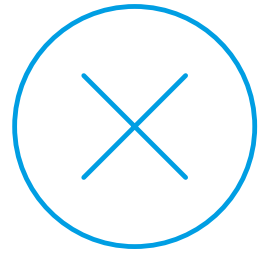
Working near **nbn**[™] cables



Identify all electrical hazards, assess the risks and establish control measures.



When using excavators and other machinery, also check the location of overhead power lines.



Workers and equipment must maintain safety exclusion zones around power lines.

Once all work is completed, the excavation should be re-instated with the same type of excavated material unless specified by **nbn**. Please note:

- Construction Partners of **nbn** may require additional controls to be in place when performing excavation activities.
- The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

Contact

All **nbn**[™] network facility damages must be reported online [here](#).
For enquiries related to your DBYD request please call 1800 626 329.

Disclaimer

This brochure is a guide only. It does not address all the matters you need to consider when working near our cables. You must familiarise yourself with other material provided (including the Referral Conditions) and make your own inquiries as appropriate.

nbn will not be liable or responsible for any loss, damage or costs incurred as a result of reliance on this brochure.

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To:

Phone:

Fax:

Email:

Ryan Saba

Not Supplied

Not Supplied

ryan.saba@burchills.com.au

Dial before you dig Job #:	37782710	
Sequence #	245811257	
Issue Date:	10/10/2024	
Location:	560 Chambers Flat Road , Logan Reserve , QLD , 4133	

Indicative Plans

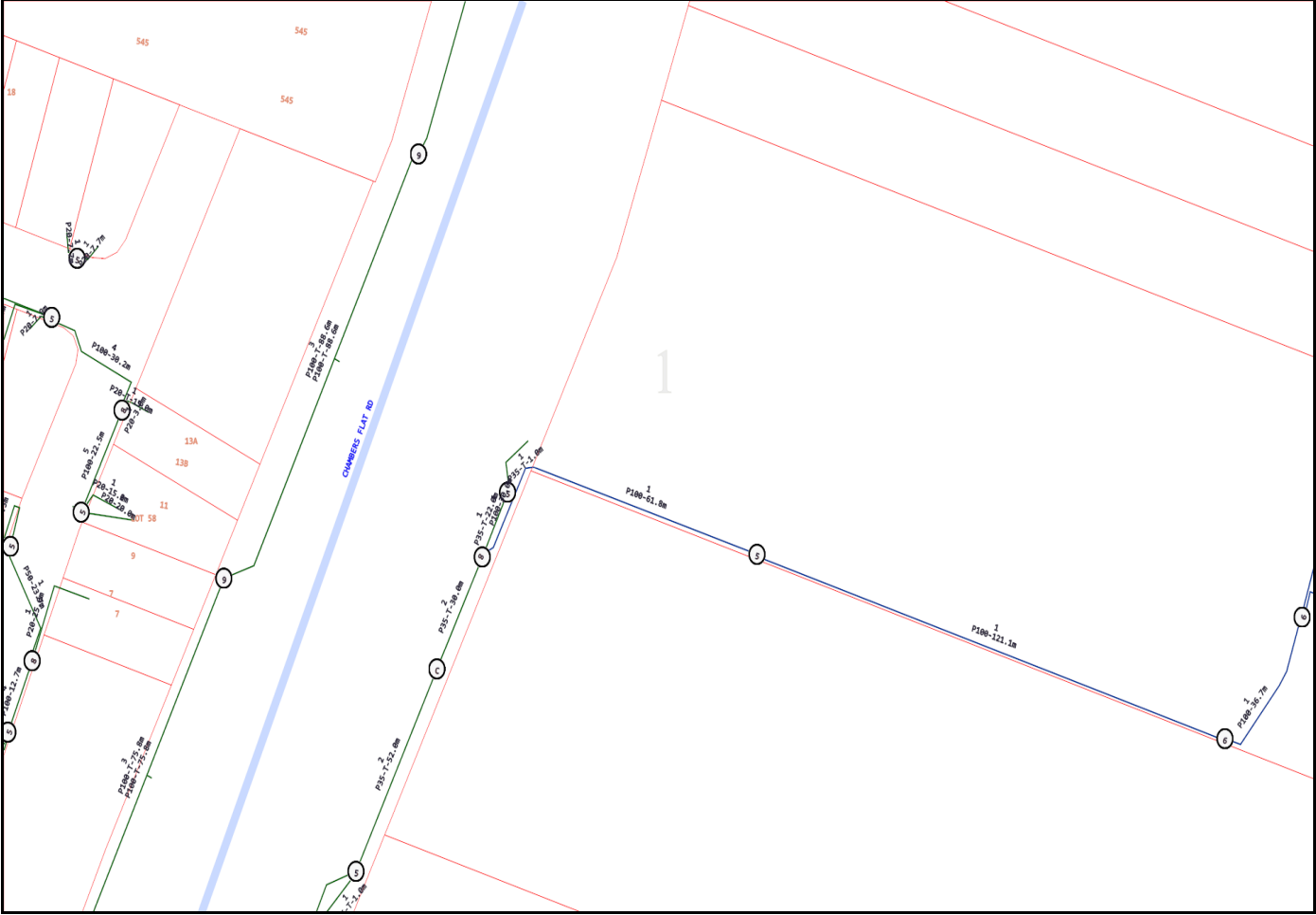
1	4	7
2	5	8
3	6	9

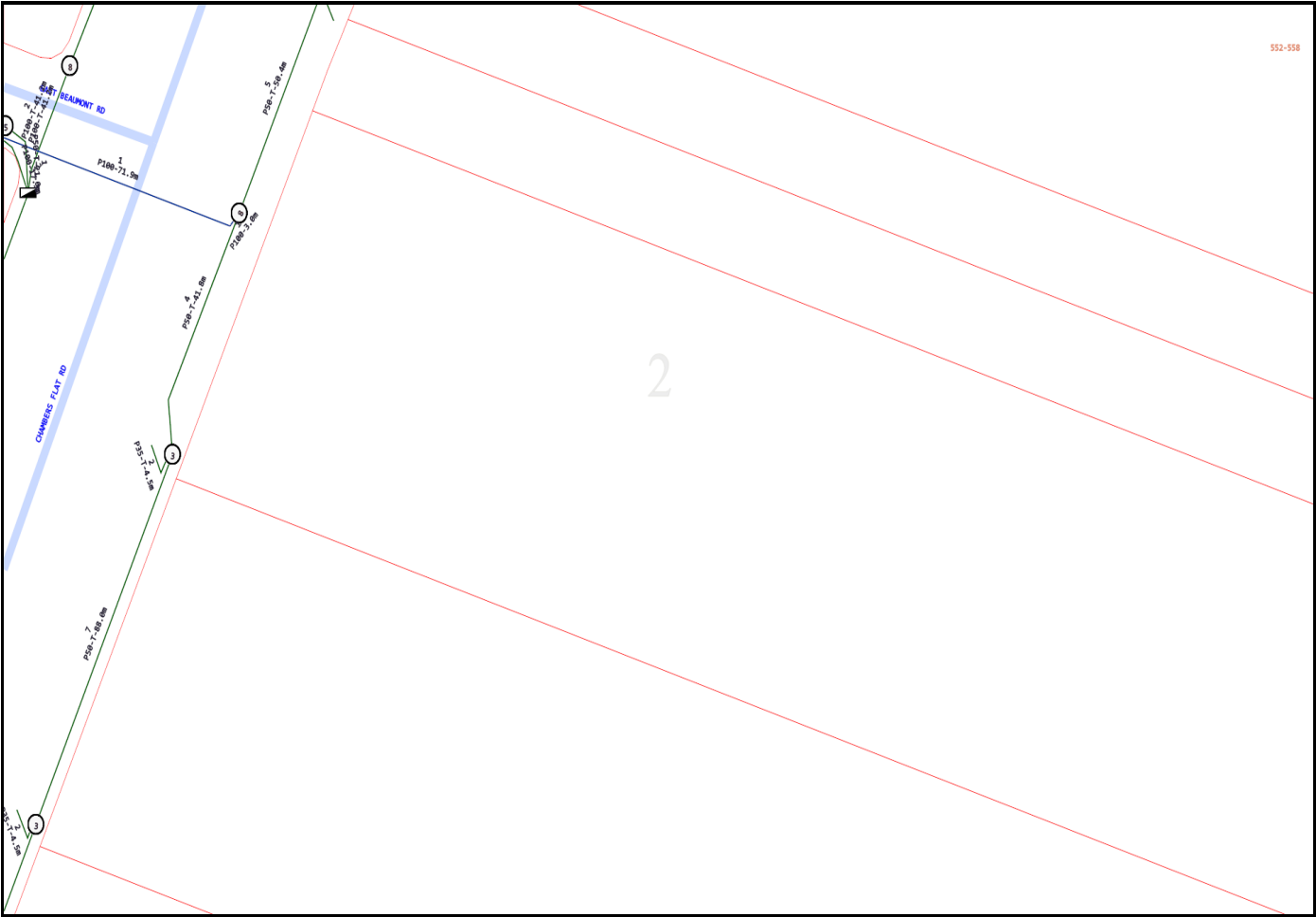


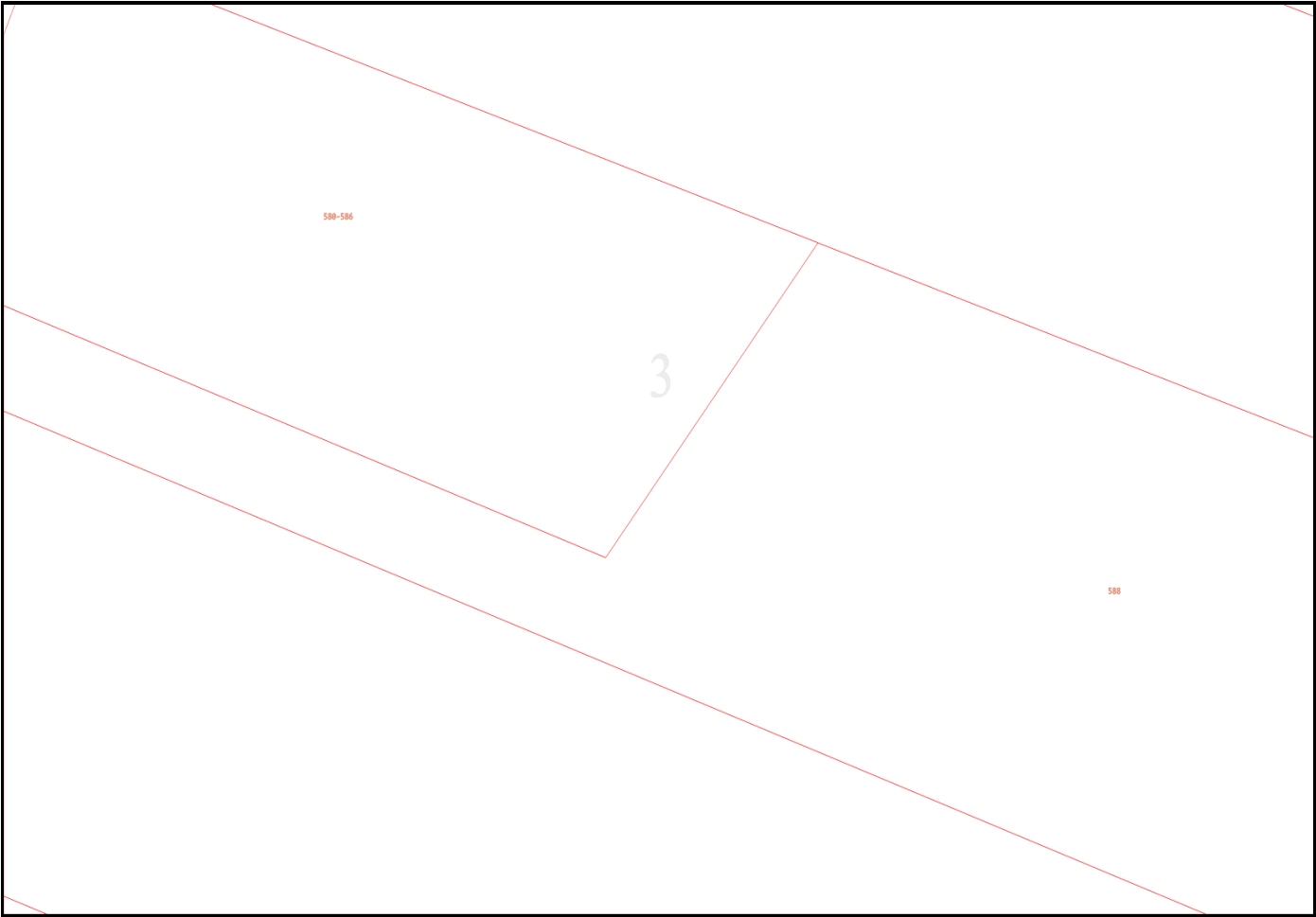
LEGEND

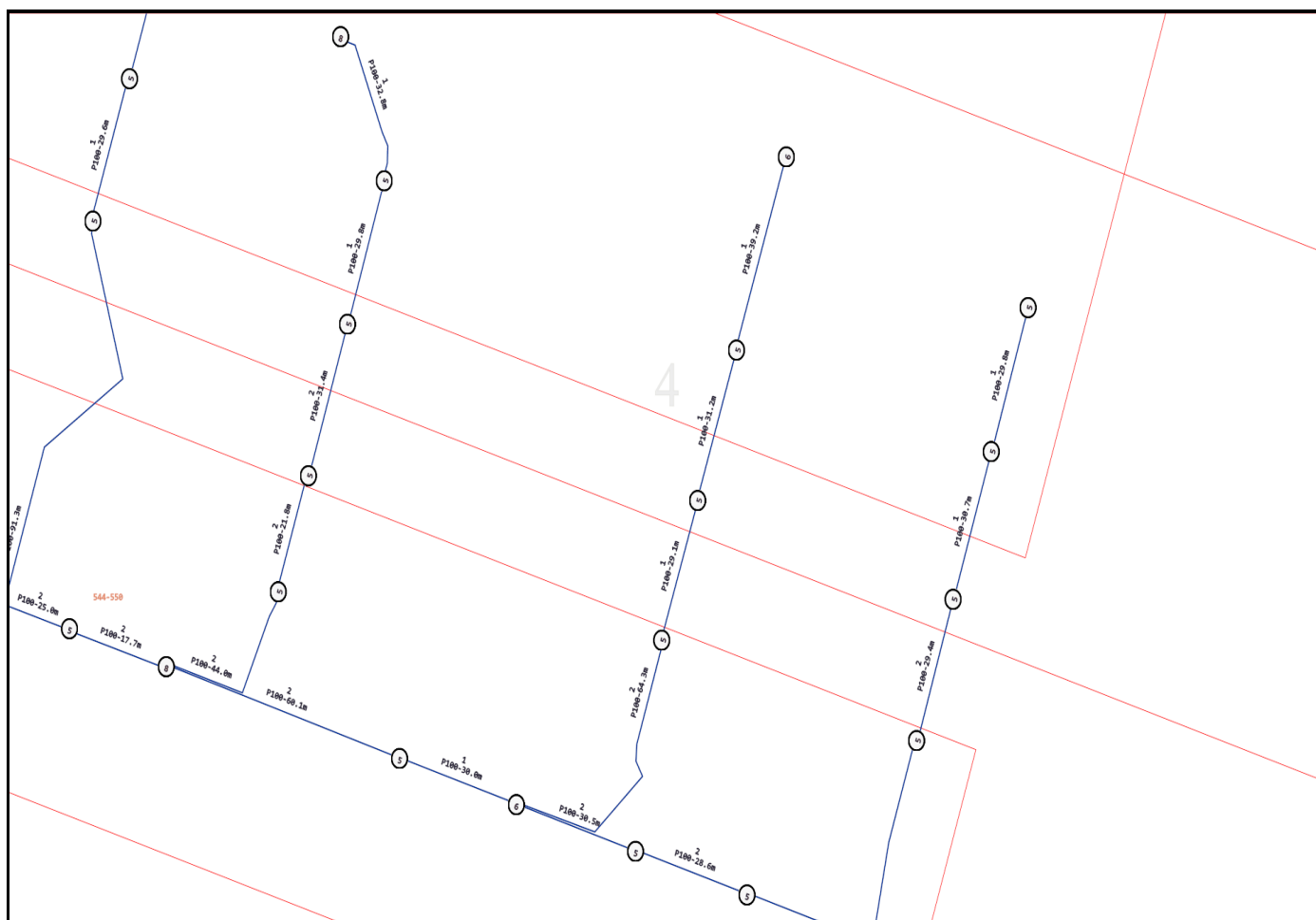


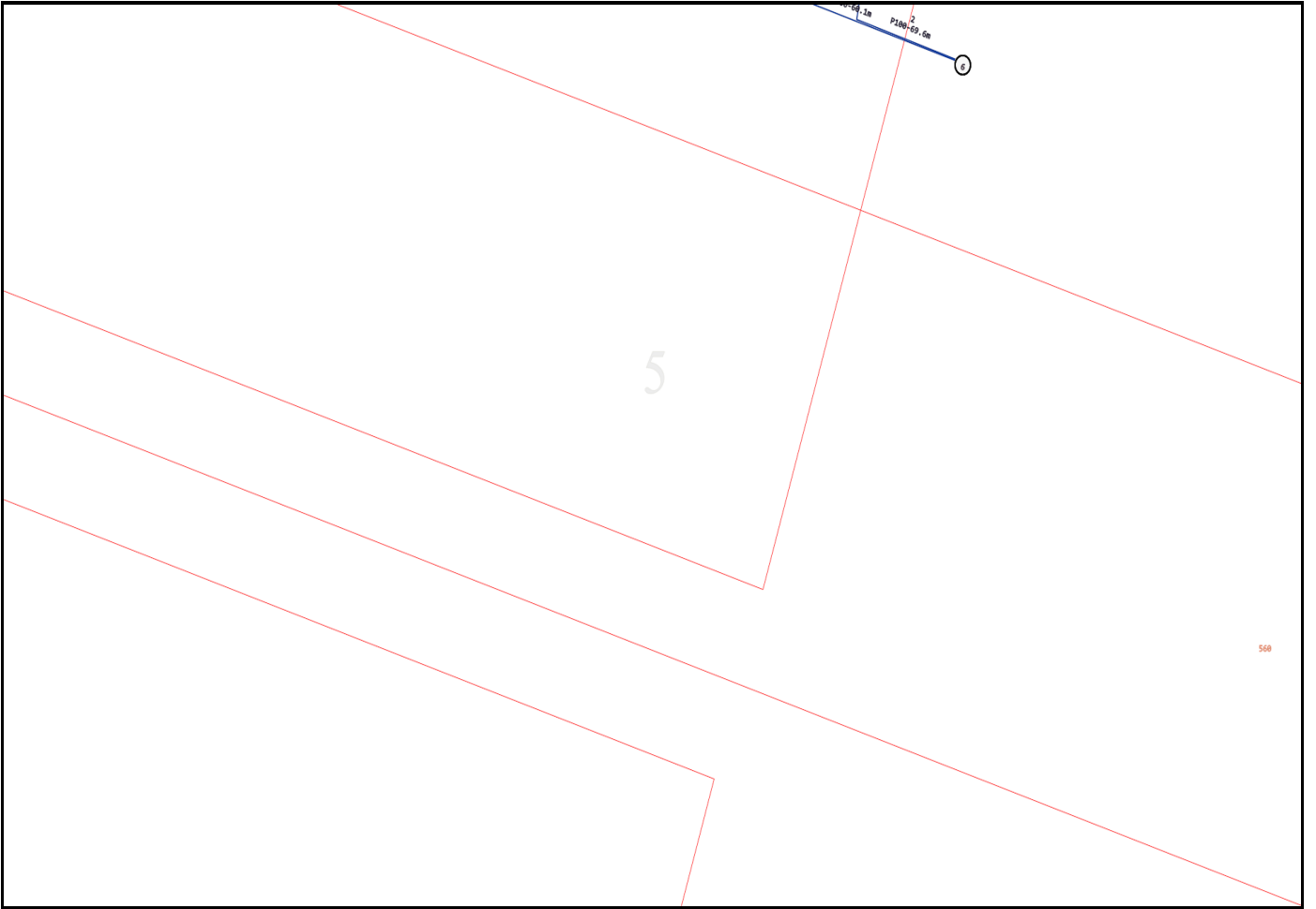
	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40)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

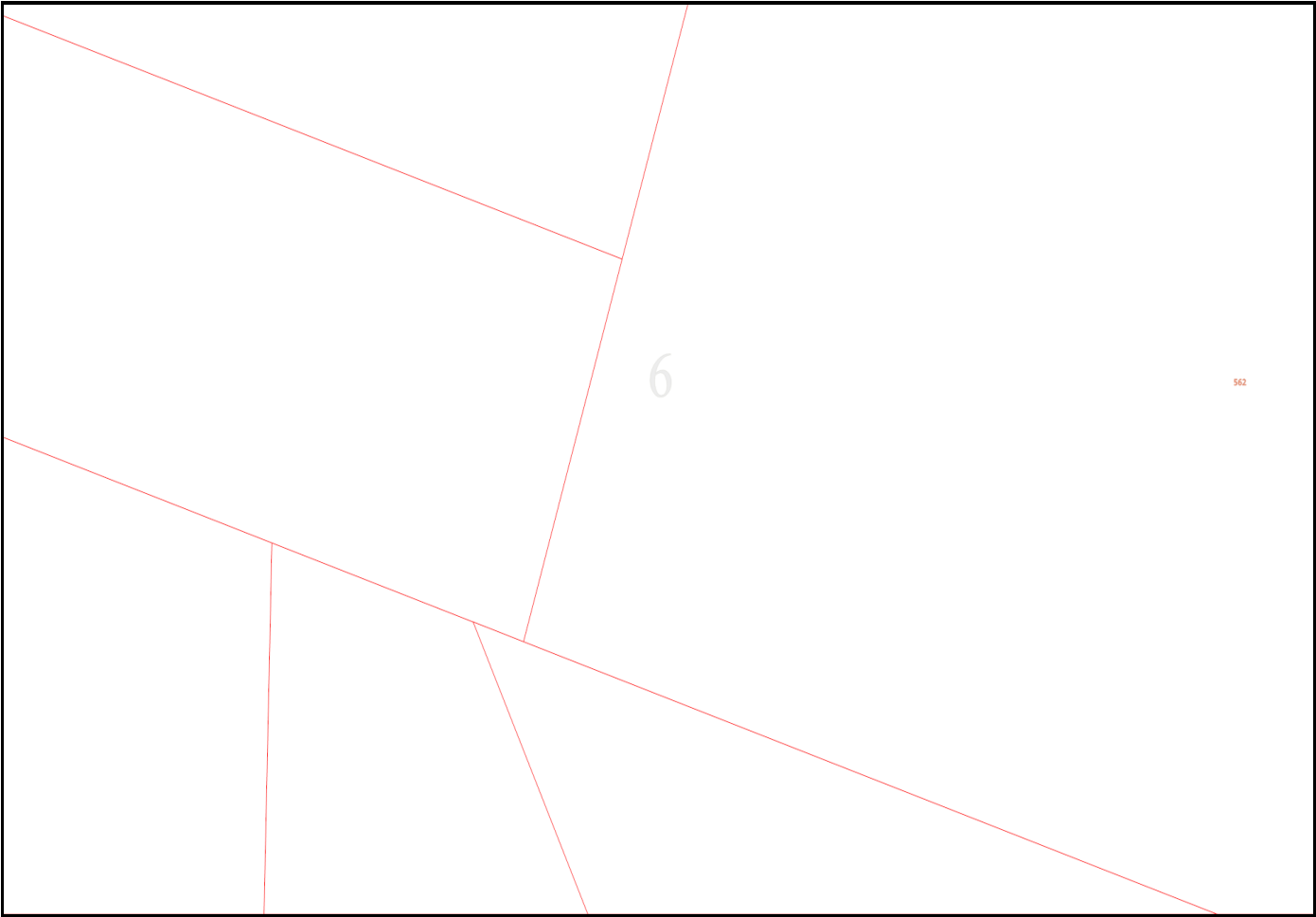


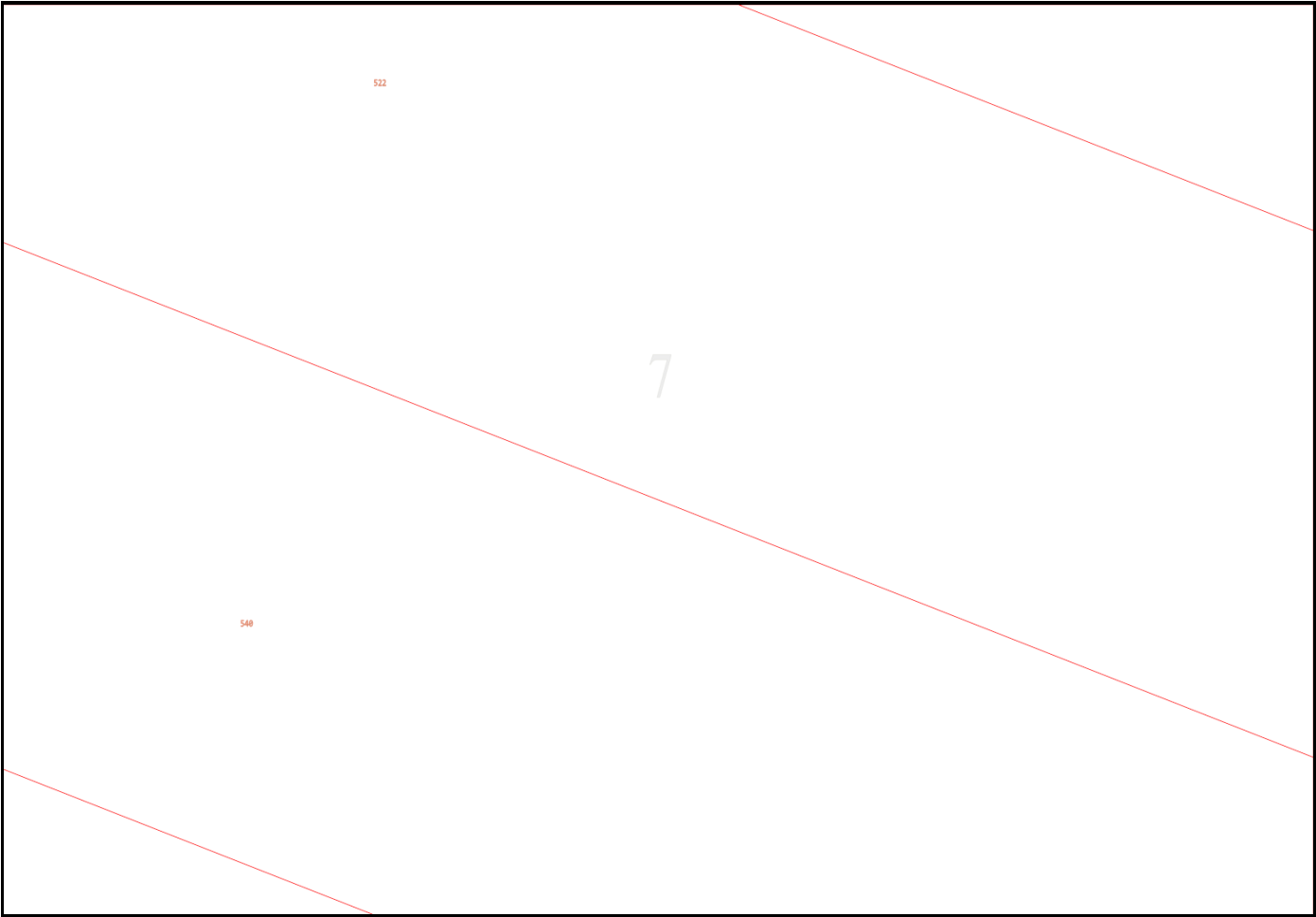


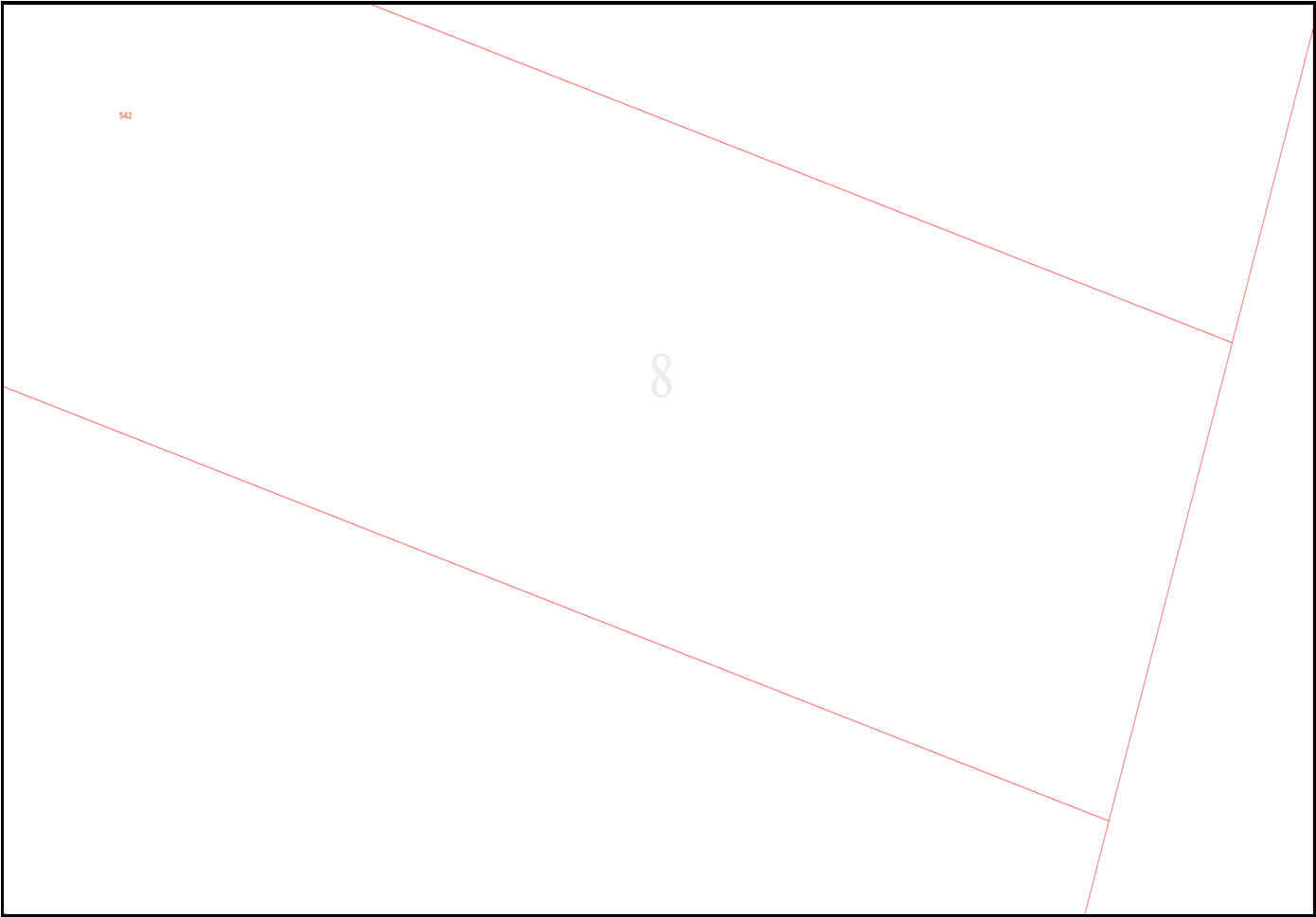


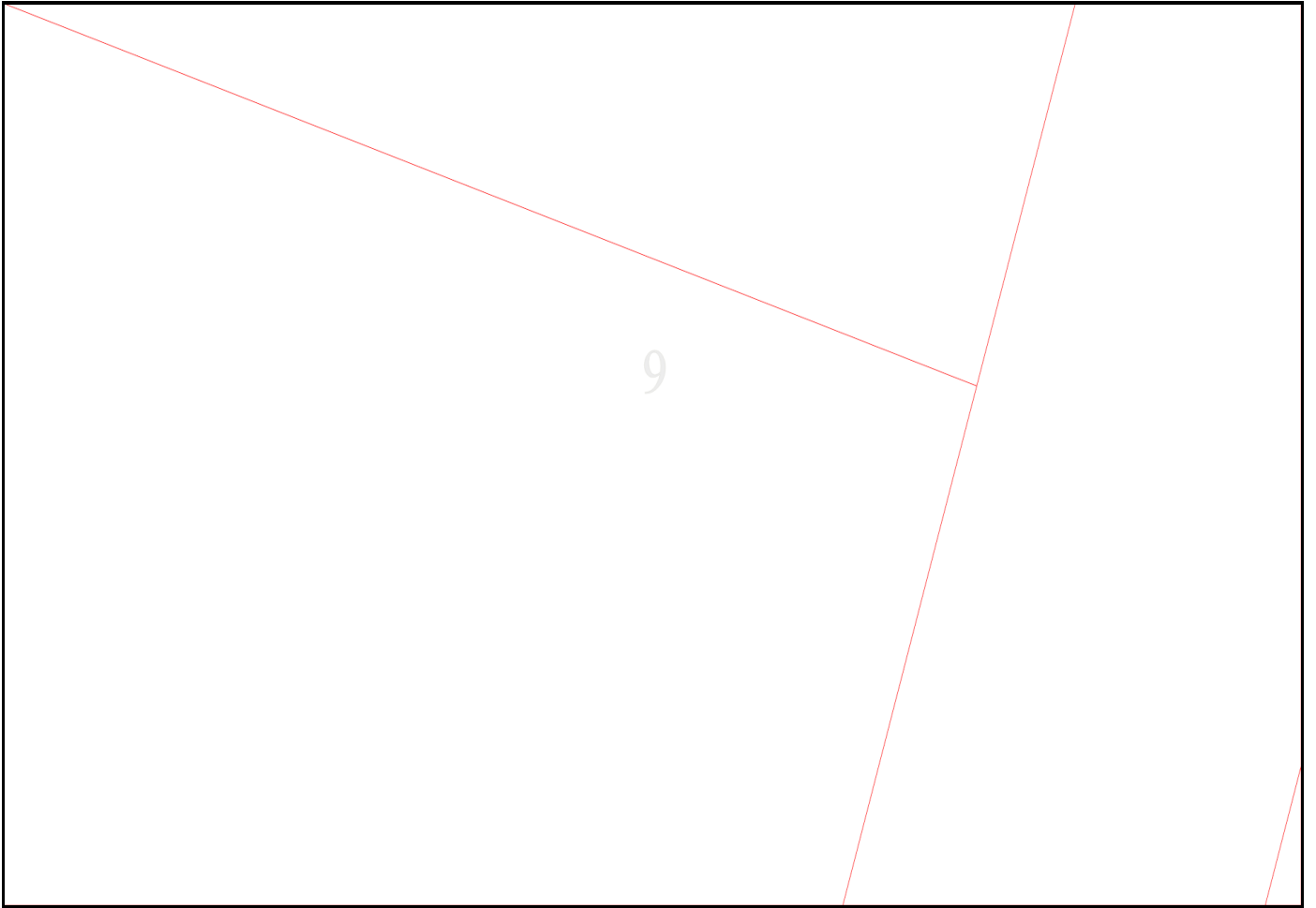












Emergency Contacts

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

Referral

245811258

Member Phone

1300 137 800

Responses from this member

Response received Thu 10 Oct 2024 10.56am

File name	Page
Response Body	104
245811258 - OptiComm Response letter.pdf	105
OptiComm - Duty of Care.pdf	106
245811258 - OptiComm Plan.pdf	107

ATTENTION: Ryan Saba

Please DO NOT SEND A REPLY to this email as it has been automatically generated and replies are not monitored.

Thank you for your DBYD enquiry.

Job No: 37782710
Sequence No: 245811258
Enquiry location:
560 Chambers Flat Road
Logan Reserve
QLD 4133

Attached are the files containing information relating to your recent DBYD request. Please read and understand all the attached documentation. If you have any queries, you may contact OptiComm on 1300 743 462 or DBYD@OptiComm.net.au.

Note: If you have received this email in error, please advise by calling 1300 743 462 and quote the Sequence Number listed above.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as:

Adobe Acrobat Reader (for PDF files) - <http://get.adobe.com/reader>

Response Cover Letter

OptiComm
Level 1/22 Salmon Street
Port Melbourne
VIC 3207

Date: 10/10/2024

To:
Ryan Saba
Burchills Engineering Solutions
26 Marine Parade
Southport QLD 4215

Please find attached our response regarding your enquiry (as detailed below). Ensure you review all other documents included with this response to identify any OptiComm assets in the vicinity of your enquiry.

Sequence No: 245811258

Job No: 37782710

Location: 560 Chambers Flat Road
Logan Reserve QLD 4133

If you require further information, please contact the OptiComm on 1300 743 462 or DBYD@OptiComm.net.au

Important Notice: This enquiry response, including any associated documentation, has been assessed and compiled from the information detailed within the DBYD enquiry outlined above. Please ensure that the DBYD enquiry details and this response accurately reflect your proposed works.

This response is intended for use only by the addressee. If you have received the enquiry response in error, please let us know by telephone and delete all copies; you are advised that copying, distributing, disclosing or otherwise acting in reliance on the response is expressly prohibited.



While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither OptiComm 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.

Duty of Care

Our plans indicate that OptiComm owns or operates telecommunications network infrastructure within the area that you have enquired about.

The indicative location of the infrastructure can be found on OptiComm's attached network plan.

This network is vital to OptiComm's operations. It is therefore critical that no works commence within the area of OptiComm's infrastructure until you have put in place measures to locate and prevent damage to OptiComm's infrastructure. This is particularly important regarding underground infrastructure as you will need to locate the exact position of the infrastructure before commencing work.

When working in areas containing telecommunications infrastructure you have a legal obligation to take all necessary steps to avoid damage to the infrastructure, this is referred to as your 'duty of care'.

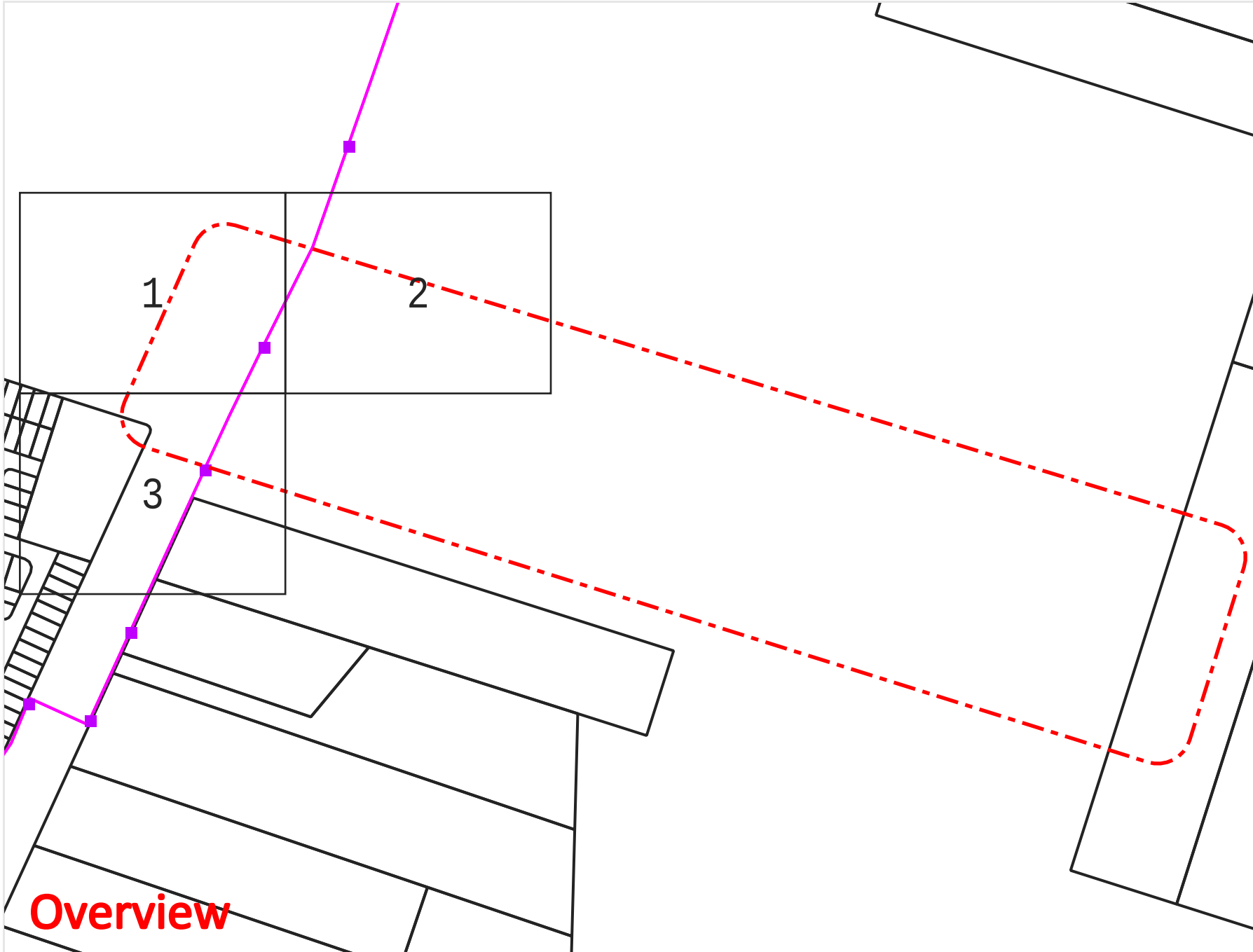
It is the responsibility of the owner of the affected land and any person undertaking work on the land to perform the work in a manner that minimises the likelihood of damage to the existing infrastructure, including visually locating underground infrastructure such as cables and ducts by hand digging or using non-destructive methods such as water jet excavation where construction may interfere with OptiComm's underground infrastructure.

If you are uncertain about the exact location of underground infrastructure, we strongly recommend that you engage a plant locator.

OptiComm will seek compensation for any damage to its network through negligence or ignorance of your duty of care to avoid damage to our infrastructure.

DISCLAIMER: No responsibility or liability is accepted by OptiComm for any inaccuracy, error, omission or action based on the information supplied in this correspondence. OptiComm's network plans indicate the presence of telecommunications infrastructure in the general vicinity of the location shown, however they are not intended to be exact. The depth of ground cover, alignments, roads, paths and title boundaries can change over time. Underground cables and ducts seldom follow straight lines because of issues that arise during installation. It is therefore important that careful and regular visual location of underground infrastructure is carried out along the length of cable and duct routes and adjacent to cable and duct routes to avoid damage.

Due to continued network expansion, this network information can only be considered valid and accurate for 28 days from its issue.



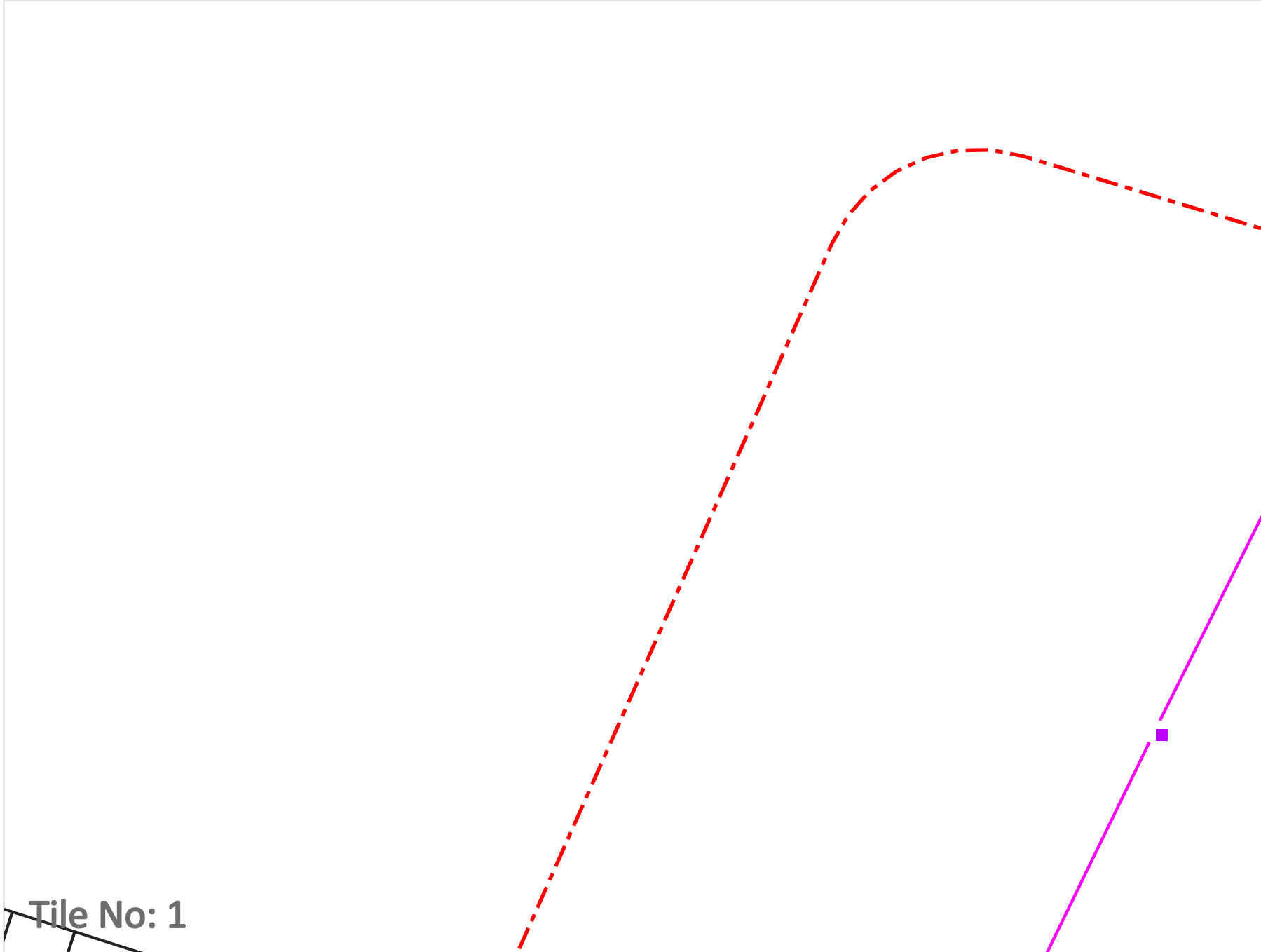
Legend

-  Pipes
-  Pits



Scale: 1:4732
Expires: 07 Nov 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither OptiComm 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

-  Pipes
-  Pits



Scale: 1:1000
 Expires: 07 Nov 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither OptiComm 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.

Tile No: 1

Legend

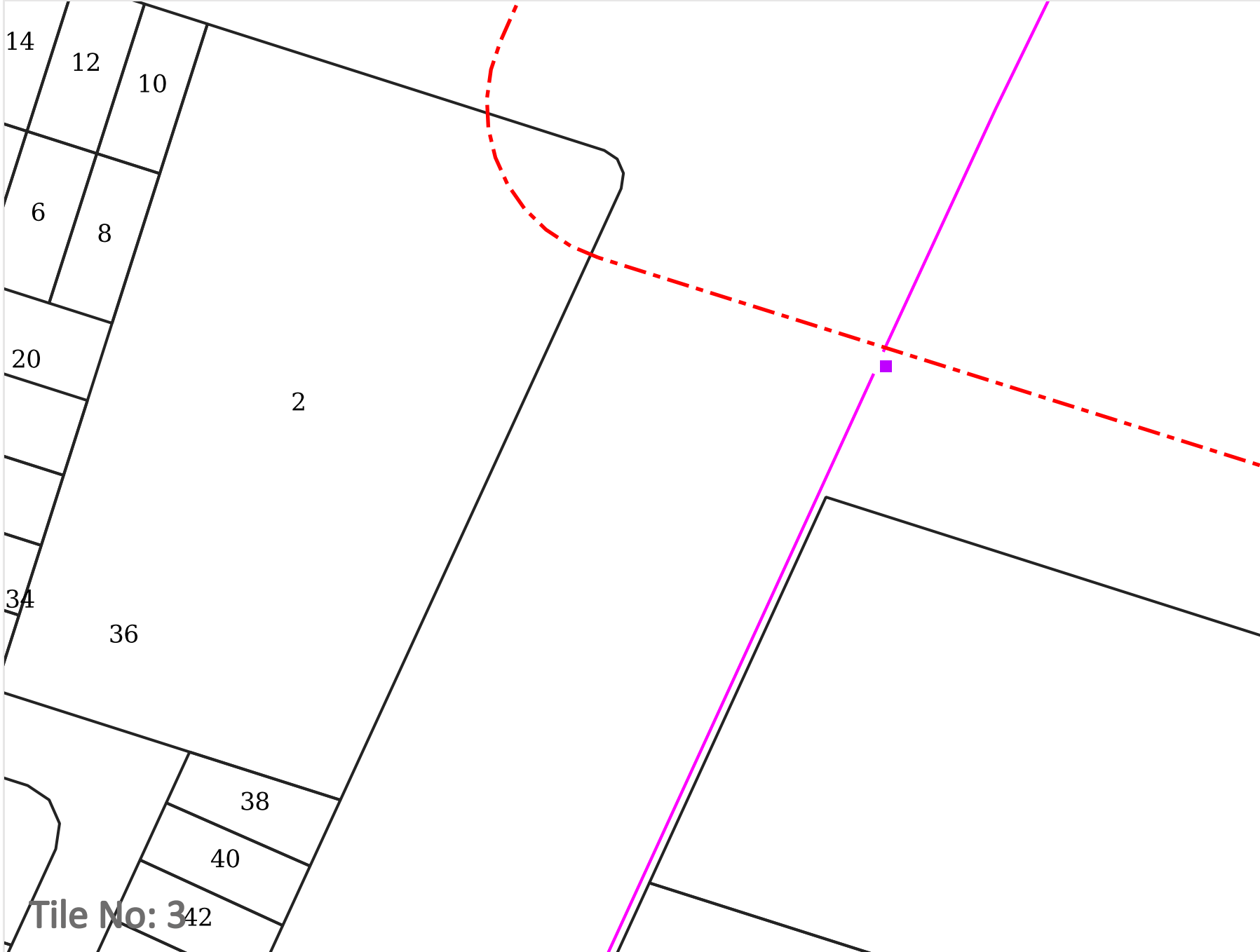
-  Pipes
-  Pits



Scale: 1:1000
Expires: 07 Nov 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither OptiComm 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.

Tile No: 2



Legend

-  Pipes
-  Pits



Scale: 1:1000
 Expires: 07 Nov 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither OptiComm 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.

Referral

245811261

Member Phone

1800 653 935

Responses from this member

Response received Thu 10 Oct 2024 10.59am

File name	Page
Response Body	112
AccreditedPlantLocators 2024-09-13a.pdf	114
Telstra Map Legend 4.0b.pdf	115
Telstra Duty of Care v32.0b.pdf	116
245811261.dwf	Excluded

Attention: Ryan Saba

Site Location: 560 Chambers Flat Road, Logan Reserve, QLD 4133

Your Job Reference: 560 Chambers Flat Road

Please do not reply to this email, this is an automated message -



Important - this site is within or in the vicinity of a **RED IMPORTED FIRE ANT RESTRICTED AREA**. Movement controls apply. Penalties of up to \$220,000 for individuals and \$1.1 million for corporations may apply. Call **13 25 23** or visit www.daff.qld.gov.au/fireants for further information.

Thank you for requesting Telstra information via Before You Dig Australia (BYDA).

This response contains Telstra information relating to your recent BYDA request.

Information for opening Telstra Asset Plans as well as some other useful contact information is listed in the attached **Telstra Map Legend attached.**

Please refer to all enclosed attachments for more information.

Please Report Damage to Telstra Equipment: [Report damages to Telstra equipment - Telstra](#)

Please note:

When working in the vicinity of telecommunications plant you have a 'Duty of Care' that must be observed. Please ensure you read the 'Telstra Duty of Care' document (attached) - it contains important information including essential steps that must be undertaken prior to commencing construction activities.

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 them. 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 assets prior to commencing work. A Certified Locating Organisation 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. See the [Steps - Working Near Telecommunications Assets \(attached Telstra Duty of Care\)](#).

Please note that:

- it is a criminal offence under the *Criminal Code Act 1995* (Cth) to tamper or interfere with telecommunications infrastructure.
- Telstra will take action to recover compensation for damage caused to property and assets, and for interference with the operation of Telstra's networks and customers' services.

Telstra's plans contain Telstra's confidential information and are provided on the basis that they are used solely for identifying the location or vicinity of Telstra's infrastructure to avoid damage to this infrastructure occurring as part of any digging or other excavation activity. You must not use Telstra's plans for any other purpose or in a way that will cause Telstra loss or damage and you must comply with any other terms of access to the data that have been provided to you by Telstra (including Conditions of Use or Access).

(See attached file: *Telstra Duty of Care v32.0b.pdf*)

(See attached file: *Telstra Map Legend 4.0b.pdf*)

(See attached file: AccreditedPlantLocators 2024-09-13a.pdf)

(See attached file: 245811261.dwf)

OPENING ELECTRONIC MAP ATTACHMENTS –

Telstra Cable Plans are generated automatically in either PDF or DWF file types.
Dependent on the site address and the size of area selected.
You may need to download and install free viewing software from the internet e.g.



DWF Map Files (all sizes over A3)
Autodesk Viewer (Internet Browser) <https://viewer.autodesk.com/> or
Autodesk Design Review <http://usa.autodesk.com/design-review/> for
DWF files. (Windows PC)



PDF Map Files (max size A3)
Adobe Acrobat Reader <http://get.adobe.com/reader/>



Telstra BYDA map related enquiries email
Telstra.Plans@team.telstra.com
1800 653 935 (AEST Business Hours only)



REPORT ANY DAMAGE TO THE TELSTRA NETWORK IMMEDIATELY
Report online - <https://www.telstra.com.au/forms/report-damage-to-telstra-equipment>
Ph: 13 22 03
If you receive a message asking for a phone or account number say:
“I don’t have one” then say “Report Damage” then press 1 to speak
to an operator.



Telstra New Connections / Disconnections
13 22 00



Telstra asset relocation enquiries: 1800 810 443 (AEST business
hours only).
NetworkIntegrity@team.telstra.com
<https://www.telstra.com.au/consumer-advice/digging-construction>

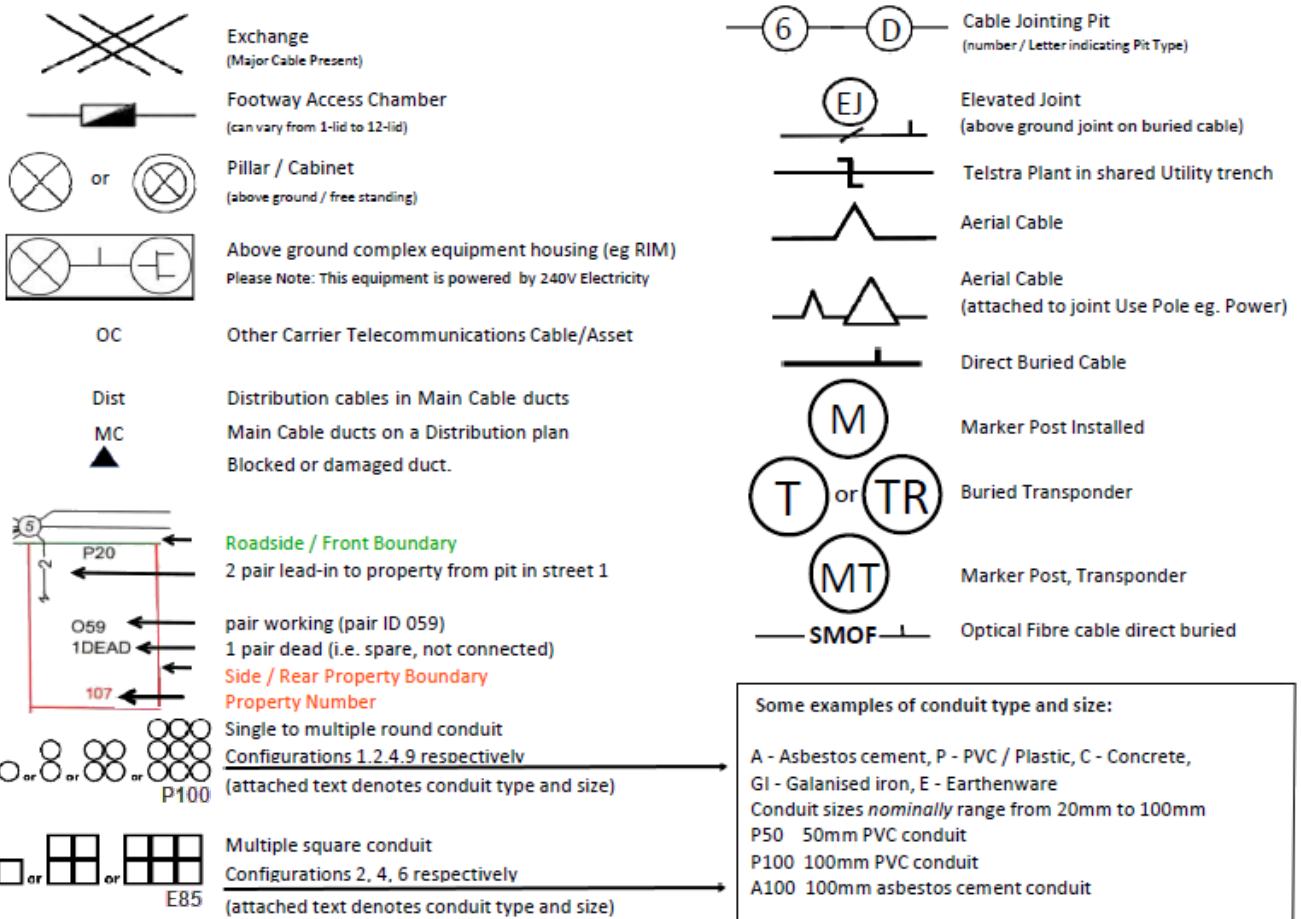


Telstra Aerial Assets Group (overhead network)
1800 047 909

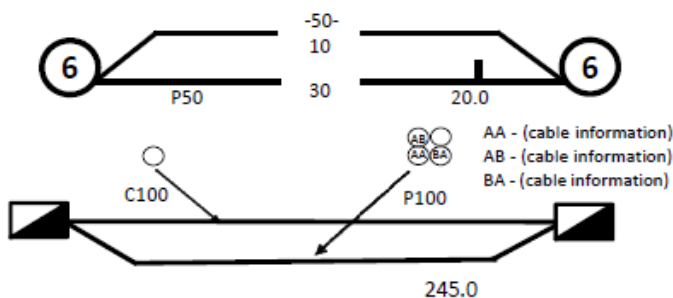


CERTLOC Certified Locating Organisation (CLO)
certloc.com.au/locators/

LEGEND



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) along

Protect our Network:

by maintaining the following distances from our assets:

- 1.0m Mechanical Excavators, Farm Ploughing, Tree Removal
- 500mm Vibrating Plate or Wacker Packer Compactor
- 600mm Heavy Vehicle Traffic (over 3 tonnes) not to be driven across Telstra ducts or plant.
- 1.0m Jackhammers/Pneumatic Breakers
- 2.0m Boring Equipment (in-line, horizontal and vertical)

For more info contact a [CERTLOC Certified Locating Organisation \(CLO\)](#) or Telstra Location Intelligence Team 1800 653 935

Before You Dig Australia

Think before you dig

This document has been sent to you because you requested plans of the Telstra network through Before You Dig Australia (BYDA).

If you are working or excavating near telecommunications cables, or there is a chance that cables are located near your site, you are responsible to avoid causing damage to the Telstra network.

Please read this document carefully. Taking your time now and following the steps below can help you avoid damaging our network, interrupting services, and potentially incurring civil and criminal penalties.

Our network is complex and working near it requires expert knowledge. Do not attempt these activities if you are not qualified to do so.

Disclaimer and legal details



*Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013.

It is a criminal offence under the Criminal Code Act 1995 (Cth) to tamper or interfere with telecommunications infrastructure.

Telstra will also take action to recover costs and damages from persons who damage assets or interfere with the operation of Telstra's networks.

By receiving this information including the indicative plans that are provided as part of this information package you confirm that you understand and accept the risks of working near Telstra's network and the importance of taking all the necessary steps to confirm the presence, alignments and various depths of Telstra's network. This in addition to, and not in replacement of, any duties and obligations you have under applicable law.

When working in the vicinity of a telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

The Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project, it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

This Notice has been provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of interest. You will also need to collate and understand all information received from other Utilities and understand that some Utilities are not a part of the BYDA program and make your own enquiries as appropriate. It is the responsibility of the entities undertaking the works to protect Telstra's network during excavation / construction works.

Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.

Telstra plans or other details are provided only for the use of the applicant, its servants, agents, or CERTLOC Certified Locating Organisation (CLO). The applicant must not give the plans or details to any parties other than these and must not generate profit from commercialising the plans or details.

Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.

Please ensure Telstra plans and information provided always remains on-site throughout the inspection, location, and construction phase of any works.

Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.

Data Extraction Fees

In some instances, a data extraction fee may be applicable for the supply of Telstra information. Typically, a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Planned Services.

Telstra does not accept any liability or responsibility for the performance of or advice given by a CERTLOC Certified Locating Organisation (CLO). Certification is an initiative taken by Telstra towards the establishment and maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

Neither the Certified Locating Organisation nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Certified Locating Organisation or its employees.

Once all work is completed, the excavation should be reinstated with the same type of excavated material unless specified by Telstra.

The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

When using excavators and other machinery, also check the location of overhead power lines.

Workers and equipment must maintain safety exclusion zones around power lines

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.

Privacy Note

Your information has been provided to Telstra by BYDA to enable Telstra to respond to your BYDA request. Telstra keeps your information in accordance with its privacy statement. You can obtain a copy at www.telstra.com.au/privacy or by calling us at 1800 039 059 (business hours only).



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i This document may exclude some files (eg. DWF or ZIP files)

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