PINNACLE
ENGINEERING GROUP

ENGINEERING SERVICES REPORT

PROPOSED COMMERCIAL/RETAIL REDEVELOPMENT
946-960 Greenbank Road, North MacLean QLD

SOOMAL PROPERTIES PTY LTD

SEPTEMBER 2023
REVISION 03

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV2023/1417
Date: 8 May 2024

Queensland Government

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In accordance with the requirements of the *Queensland Professional Engineers Act 2002*, this document was prepared under the supervision of, reviewed and approved by the following experienced Registered Professional Engineer of Queensland (RPEQ).



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1 Introduction

Pinnacle Engineering Group (Pinnacle) was engaged by Soomal Properties Pty Ltd to undertake the preliminary engineering investigations to provide supporting documentation for the proposed development application for a commercial and retail redevelopment located at 946-960 Greenbank Road, North MacLean QLD within the local authority of the Economic Development Queensland (EDQ) and Logan City Council (LCC).

The current version of this report (revision 03), has been updated in response to EDQ's Request for Further Information letter dated 17th July 2023.

1.1 Scope of Investigation

This report covers the following civil engineering elements associated with the proposed development including:

- Roadworks;
- Water Supply;
- Sewerage Reticulation;
- Stormwater Drainage;
- Bulk Earthworks; and
- Electrical and Telecommunications.

1.2 Site Description

1.2.1 Site Location

Street Address	-	946-960 Greenbank Road, North MacLean QLD
RP Description	-	Lot 1 on SP267252
Total Site Area	-	1.208 Hectares
Current Zoning	-	Priority Development Area
Proposed Use	-	Commercial and Retail Development
Local Authority	-	LCC

Refer to Figure 1.1 for the site location.

1.2.2 Existing Site Conditions and Topography

The subject site is currently occupied by an existing service station and food retail premise located within the southern portion of the subject site. The northern portion of the subject site is occupied by an existing detention/bio-retention as well as an onsite sewerage treatment system and associated irrigation area. The site is currently accessed via two existing heavy duty vehicular crossovers from Greenbank Road to the southwest.

The subject site generally grades towards the existing stormwater easement located adjacent to the subject site's northern property boundary. The highest elevation of the site of approximately RL28.90m AHD is reached within the central portion of the site adjacent to the existing buildings while the lowest elevation of approximately RL27.00m AHD is reached along the northern property boundary.

Refer to Figure 1.2 for the existing aerial view of the site with the topographic data of the site included in Appendix B.

1.2.1 Proposed Development

The proposed redevelopment will retain the existing service station and food retail premises and deliver two additional drive-thru food and drink outlets within the northern portion of the site. The proposed development will be accessed via the existing vehicular crossovers and car park from Greenbank Road to the southwest.

Plans detailing the proposed development are included within Appendix A.

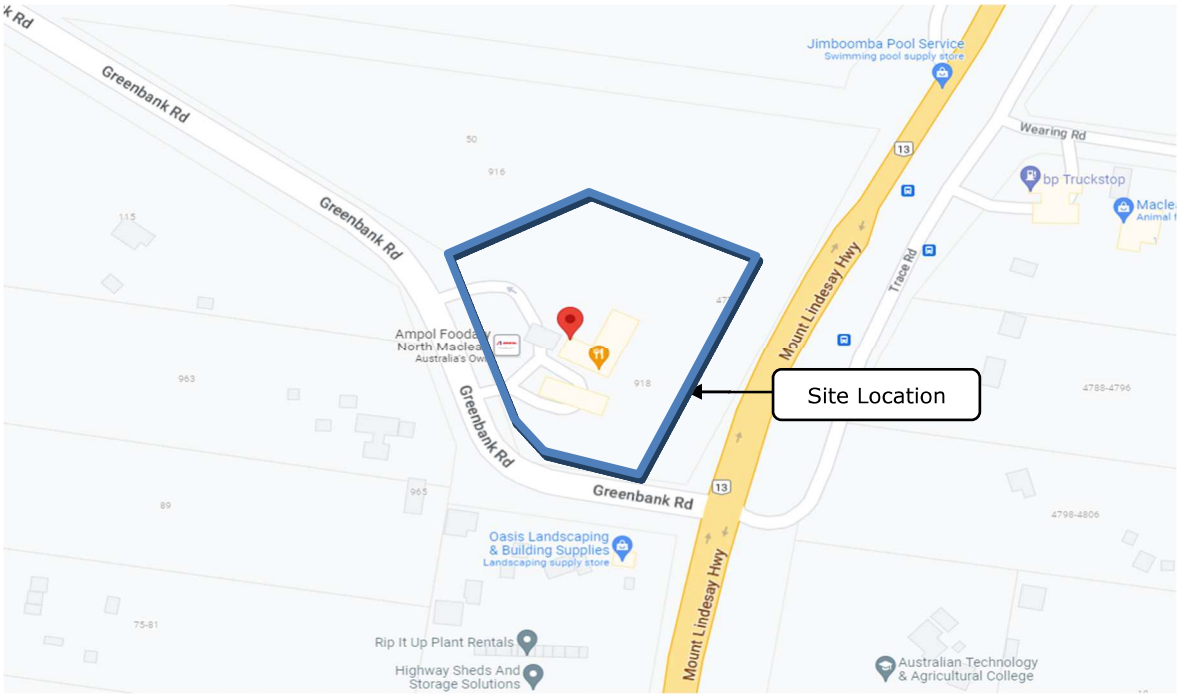


Figure 1.1: Map View (Source: Google Maps)



Figure 1.2: Aerial View (Source: Google Maps)

2 Stormwater Drainage

The strategy and constraints associated with stormwater drainage were assessed as part of a separate investigation by Pinnacle and are not covered in detail within this report. We refer Council to the Site Based Stormwater Management Plan for the subject site prepared by Pinnacle for an in-depth analysis of the prevailing stormwater conditions.

A brief summary of the stormwater drainage elements is provided in the following sections of this report.

2.1 Existing Drainage System

Currently, the stormwater runoff from the subject site is generally conveyed to four defined discharge locations. The majority of the 'developed' site is captured by an existing private drainage pit/pipe system and conveyed to combined bio-detention basin before discharging to the north-east corner of the subject site. The northern portion of the site is a vegetated sewerage treatment area, and discharges runoff as sheet flow over the entire northern boundary. The balance of the site is generally landscaping and discharges as overland sheet flow to the Greenbank Road and Mount Lindesay Highway road reserves.

Existing culverts and a stormwater gully pit/pipe system are located within the Greenbank Road road reserve and convey stormwater runoff east to the Mount Lindesay Highway road reserve.

2.2 Flood Assessment

A review of the LCC interactive online mapping system has identified that the subject site is now located inside the new revised mapped flood affected zone. The Defined Flood Level (DFL) for the subject site is RL27.50m. It is proposed to balance flood plain storage in the post-development case via the use of underground tanks, which shall be free draining. Please refer to preliminary sketch drawing PEG1046-DA-SK07 within Appendix C for further details. The relevant LCC Planning Scheme maps are included within Appendix E.

2.3 External Catchments

A review of the surrounding topography has not revealed any existing external catchments discharging through the subject site.

2.4 Lawful Point of Discharge

The primary Lawful Point of Discharge for the subject site is taken as the existing stormwater and sewer easement located within the adjacent property to the north of the subject site being 916-944 Greenbank Road, North MacLean (Lot 2 on SP267252). Secondary Lawful Points of discharge are taken as the Greenbank Road and Mount Lindesay Highway road reserves.

2.5 Proposed Drainage Works

It is intended to utilise a dual-use detention/treatment tank to treat the site's stormwater discharge during the post-development scenario prior to discharge to the Lawful point of Discharge. The underground tank will be located within the carparking area within the north-eastern portion of the subject site.

In accordance with QUDM, the minor 10% AEP storm discharge (Q_{10}) will be conveyed to the Lawful Point of Discharge via a piped drainage network with the major 1% AEP storm discharge (Q_{100}) being conveyed by piped and overland flow.

For additional details on the prevailing stormwater drainage conditions, strategy and constraints please refer to the Stormwater Management Plan for the site prepared by Pinnacle.

Engineering services layouts detailing the proposed services for the site is included in Appendix C.

3 Water Reticulation

3.1 Existing Infrastructure

A review of the DBYD data, the topographic survey as well as Council 'As Constructed' records has identified an existing 150mm modified polyvinylchloride (PVC-M) water main within the Greenbank Road reserve to the southwest of the subject site. The existing water main currently services the existing service station and food retail outlet operating within the subject site, via an above ground water meter service assembly.

The topographic survey is included in Appendix B with the DBYD data included in Appendix D and As Constructed data included within Appendix F.

3.2 Development Water Reticulation Demand

The proposed development's water reticulation demands on the existing potable water infrastructure were established using the methods described in the SEQ WS&S D&C Code. These demands were used to determine the consumption rates for the proposed development.

Potable water demand factors and flow parameters have been taken from Table 4.1 and Appendix A2 of the SEQ WS&S D&C Code, respectively, to determine the potable water consumption rates for the proposed development. The design parameters and results are presented in Table 3.1.

Table 3.1: Water Demand Factors and Consumption Rates

Design Parameter	Potable Water Factors and Demands	
	Existing Development	**Proposed extension/ Re-development**
Area of Land	0.8000 ha (approximate), 530m^2 GFA	0.3980 ha (approximate), 400m^2 GFA
Development Type	Retail/Commercial	Retail/Commercial
Unit	0.8000 ha	0.3980 ha
EP/Unit	50 EP/ha	50 EP/ha
Equivalent Persons (EP)	40.0	19.9
Estimated Non-Revenue Water (NRW)	30 L/EP/day	30 L/EP/day
Average Day Flow (AD)	230 L/EP/day + NRW (30L/EP/day)	230 L/EP/day + NRW (30L/EP/day)
Mean Day Max Month (MDMM)	1.50 x AD	1.50 x AD
Peak Day (PD)	1.40 x AD	1.40 x AD
Peak Hour (PH)	2.80 x AD	2.80 x AD
AD	10,400 L/day or 0.1203 L/sec	5,174 L/day or 0.0598 L/sec
MDMM	15,000 L/day or 0.1736 L/sec	7,462 L/day or 0.0863 L/sec
PD	19,600 L/day or 0.2268 L/sec	9,751 L/day or 0.1128 L/sec
PH (Maximum)	26,960 L/day or 0.3120 L/sec	13,412 L/day or 0.1552 L/sec
Fire Flow (Commercial)	30L/sec for 4 hours	30L/sec for 4 hours
Maximum Demand	30.3120 L/sec	30.1552 L/sec

Note: No peaking factors have been applied to NRW.

The maximum peak hour demand of 0.4672 L/sec plus the fire flow demand of 30L/sec means the proposed re-development portion of the commercial development will have an additional total flow demand of 30.4672L/sec.

3.3 Proposed Water Reticulation Works

The proposed development will be serviced by the existing 150mm diameter PVC-M water main located within the Greenbank Road reserve to the south of the subject site via the existing service and meter currently servicing the site.

It is envisaged that the internal water reticulation network will connect to the aforementioned water main via the existing site plumbing and drainage. The water reticulation and connection detailed design, if required, will be undertaken by Pinnacle as part of a future Operational Works application to Council. The internal water infrastructure will be designed by a hydraulic consultant during the detailed design phase of the project is subject to a future Plumbing and Drainage application to Council.

Engineering services layouts detailing the proposed services for the subject site are included in Appendix C.

4 Sewerage Reticulation

4.1 Existing Infrastructure

A review of the available data, the topographic survey and Council records has confirmed that there is no existing council owned sewerage infrastructure within or adjacent to the subject site. The site currently operates a private on-site sewage treatment system (effluent disposal). Preliminary discussions with Logan Council and EDQ have confirmed that there is a future sewer pump station ('NM2') location planned approximately 250m northwest of the subject site. The planned pump station would see a proposed gravity sewer main extended east down the unformed Scott Lane road reserve which would be capable or servicing the subject site.

Pre-lodgement meeting minutes with EDQ are included in Appendix G.

4.2 Proposed Demand

The demands on the existing sewer infrastructure were established using the methods described in SEQ WS&S D&C Code. These demands were used to determine the consumption rates for the proposed development. Potable sewer demand factors and flow parameters have been taken from Table 10 and Appendix A2 of the SEQ WS&S D&C Code, respectively, to determine the potable water consumption rates for the proposed development. The design parameters and results are presented in Table 4.1 below.

Table 4.1: Sewerage Demand Factors and Consumption Rates (Proposed Development Only)

Design Parameter	Sewer Factors and Demands	
	Existing Development	**Proposed extension/ Re-development**
Area of Land	0.8000 ha (approximate), 530m^2 GFA	0.3980 ha (approximate), 400m^2 GFA
Development Type	Retail/Commercial	Retail/Commercial
Unit	0.8000 ha	0.3980 ha
EP/Unit	50 EP/ha	50 EP/ha
Equivalent Persons (EP)	40.0	19.9
Average Dry Weather Flow (ADWF)	200 L/EP/Day	200 L/EP/Day
C2 (C_2 = 4.7 x EP$^{\wedge-1.05}$)	3.19	3.43
ADWF	8,000 L/day or 0.0926 L/sec	3,980 L/day or 0.0461 L/sec
PDWF (C_2 x ADWF)	25,525 L/day or 0.2954 L/sec	13,665 L/day or 0.1582 L/sec
PWWF (5 x ADWF)	40,000 L/day or 0.4630 L/sec	19,900 L/day or 0.2303 L/sec
Design Flow	0.4630 L/sec	0.2303 L/sec

Based on the above assessment it is envisaged that the proposed development will place an additional peak design flow demand of 0.6933 L/sec on the downstream sewerage network for the proposed redevelopment. Engineering services layouts detailing the proposed sewerage infrastructure are included within Appendix C.

4.3 Proposed Works

The proposed development will connect to the future sewerage infrastructure located within Scott Lane once it became available for connection. It is envisaged that the internal sewerage reticulation and connection detailed design will be undertaken as part of a future Operational Works application to Council. The internal sewerage infrastructure will be designed by a hydraulic consultant during the detailed design phase of the project is subject to a future Plumbing and Drainage application to Council. Engineering services layouts detailing the proposed services for the subject site are included within Appendix C.

5 Bulk Earthworks

5.1 Design Requirements

Earthworks for the site will be designed generally in accordance with the requirements of the LCC Planning Scheme and as appropriate to the regulatory control and the Australian Standard for Earthworks for Commercial and Residential Development (AS3798-2007).

5.2 General Site Earthworks

A soil assessment report will be required to provide guidance to the treatment of the site prior to and during the earthworks construction and suitability for building foundation construction. It is intended to accommodate any level differences with a series of maintainable batters and therefore mitigating the disturbance to the natural topography.

The site earthworks will aim to minimise any impacts on vegetation of concern. It is intended to utilise all of the suitable material won onsite in order to reduce the quantity of material spoil off site. The key variables associated with the site's earthworks are the depth and distribution of the existing materials and the strength and depth profile of the substrata material. It is advised that the soil report for the site investigates these key items in depth to ensure that suitable soil treatments, accurate cost estimation and building design can be facilitated.

5.3 Retaining Structures

Where retaining structures are required they will be designed such that the maximum height will be limited to 1.5m in accordance LCC Planning Scheme and AS4678-2007. Where retaining walls exceed 1.5m in height they will stepped as required. Retaining structures will not encroach onto any adjoining property or road reserve. Where services pass below retaining structures, appropriate bridging will be provided in order to ensure the integrity of the services.

5.4 Acid Sulphate Soils

The site is not located within an area affected by Acid Sulphate Soils.

5.5 Erosion and Sediment Management

Due to the expected highly erosive soil onsite, erosion protection measures will be incorporated during the construction phase with these measures being designed and documented as a part of the detailed civil works for the site.

Ultimately, during the operational phase of the project, the sediment management will be by the use of soft landscaping to ensure erosion is kept to a minimum. For a preliminary erosion and sediment control plan for the proposed development refer to the Stormwater Management Plan for the site prepared by Pinnacle.

5.6 Preliminary grading

A preliminary earthworks layout was prepared for the proposed development and is included within Appendix C. This layout should be referred to for further details on the proposed earthworks strategy for the site.

6 Electrical and Telecommunications

A DBYD investigation was undertaken to confirm the location of existing electrical and telecommunications within the vicinity of the subject site.

The DBYD investigation confirmed the location of underground telecommunications infrastructure, owned and operated by Telstra and Optus, within the southern verge of the Greenbank Road reserve to the south of the subject site as well as the western verge of the Mount Lindsay Highway.

Similarly, overhead and underground powerlines, owned and operated by Energex, are located within the southern verge of the Greenbank Road reserve to the south of the subject site as well as the western verge of the Mount Lindsay Highway.

It is envisaged that the proposed development will connect to the existing electrical and telecommunications services within the adjacent road reserves as outlined above. The connections to the electrical and telecommunications networks will be undertaken by specialist consultants during the detailed design phase of the project.

The DBYD data is included in Appendix D with the location of the existing telecommunications and electrical infrastructure shown on the engineering services layouts included in Appendix C.

7 Impacts on Local Infrastructure and Likely Upgrades

The proposed commercial and retail redevelopment will result in minor additional loads on the surrounding local infrastructure.

Additional discussions with the relevant authorities may be required during the subsequent phases of the project to ensure that there is sufficient capacity available within all existing systems to accept the additional demands from the proposed development.

The potential impacts on the local infrastructure and likely upgrades are summarised in Table 7.1 below.

Table 8.1: Local Infrastructure Impacts and Requirements

Infrastructure Type	Service Provider	Impacts	Connection and/or Upgrade Requirements
Water Reticulation	EDQ / Logan Water	Additional water demand due to the proposed development	Existing service connection from the existing 150mm watermain to be reused. If required at detailed design, water service size may require upgrading, which would be undertaken by Logan Water under a private works quote.
Sewerage Reticulation	EDQ / Logan Water	Additional Sewer loadings due to the proposed development	Extend and connect to the sewerage reticulation when it becomes available in Scott Lane.
Stormwater Drainage	EDQ / LCC	Increase runoff and pollutant loading	Provide treatment and attenuation of stormwater prior to discharge from site to the Lawful Point of Discharge.
Telecommunications	Telstra/Optus	New connections	New connection to existing telecommunications infrastructure located within the adjacent road reserves as required (extension of existing site services).
Electrical	Energex	New Connections	New connection to existing electrical infrastructure located within the adjacent road reserves as required (extension of existing site services).

8 Reference Documentation

Logan City Council Planning Scheme Policies Version 2.1 (LCC, 2015)

SEQ Water Supply and Sewerage Design & Construction Code – Version 2.0, Feb 2020

Water Services Association of Australia, 2014. "Sewerage Code of Australia. WSA 02-2014", Second Edition, Version 3.1

Water Services Association of Australia, 2011. "Water Supply Code of Australia. WSA 03-2011", Second Edition, Version 3.1

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Appendix A

Proposed Development Plans

DA ISSUE

THIS DRAWING IS NOT FOR CONSTRUCTION



PROPERTY DESCRIPTION

LOT 1 ON SP267252
LOCALITY: NORTH MACLEAN
COUNCIL: LOGAN CITY

DEVELOPMENT ASSESSMENT

TOTAL SITE AREA	- 12080m²
LANDSCAPE AREA	- 3040m²
BUILDING SITE COVER (INCLUDES ALL ROOFED AREAS)	- 15%

IMPERVIOUS AREAS

(CALCULATED OVER DELEVOPED SITE AREA)

· PRE SITE DEVELOPMENT (APPROX) (INCLUDES BUILDING ROOFED AREAS)	- 6130m²
· POST SITE DEVELOPMENT (INCLUDES BUILDING ROOFED AREAS)	- 9040m²

BUILDING AREAS - GFA

· EXISTING SERVICE STATION	- 280m²
· EXISTING FOOD & DRINK	- 250m²
· T1 - FOOD & DRINK OUTLET	- 200m²
· T2 - FOOD & DRINK OUTLET	- 200m²
TOTAL GFA	- 930m²

EXTERNAL STRUCTURE AREAS

· T1 ALFRESCO SEATING	- 30m²
· T2 ALFRESCO SEATING	- 30m²
· T1 REFUSE ENCLOSURE	- 7m²
· T2 REFUSE ENCLOSURE	- 11m²
TOTAL EXTERNAL STRUCTURES	- 78m²

CAR PARKING

· PARKING REQUIRED	- T.B.C
· PARKING PROVIDED	- 72
· T1 D/THRU QUEUING	- 12
· T2 D/THRU QUEUING	- 12

NOTE:

1. ALL EXTERNAL MATERIALS & FINISHES SHOWN INDICATIVE ONLY & SUBJECT TO FINAL TENANT STANDARDS
2. ALL DIMENSIONS MEASURED FROM FINISHED GROUND FLOOR LEVEL UNLESS NOTED OTHERWISE
3. ALL SIGNAGE INCLUDING LOCATIONS & HEIGHTS ARE SUBJECT TO A SEPARATE SIGNAGE APPLICATION & APPROVAL BY LOCAL AUTHORITY
4. LANDSCAPING IS SHOWN FOR "ARTIST IMPRESSION" PURPOSES ONLY. REFERENCE SHOULD BE MADE TO THE LANDSCAPE DRAWINGS PREPARED BY THE RELEVANT CONSULTANT

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2. SCHEDULED RATES AND AREAS ARE INTENDED FOR ASSISTANCE ONLY. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF QUANTITIES.
3. ANY DISCREPANCIES IN SCHEDULES SHOULD BE IDENTIFIED TO THE AUTHOR NOTED.
4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE

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imagine □ create □ deliver

□ commercial / industrial / retail
□ fast food restaurant design
□ travel centre / service stations
□ project concept to completion

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Revision and approvals

Rev	Date	Drn	Description	Appr
P1	26.05.2023	GN	PRELIMINARY ISSUE FOR COMMENT	
P2	14.06.2023	GN	PRELIMINARY ISSUE	
A	26.05.2023	LN	DA ISSUE	GN
B	29.08.2023	GN	ISSUE IN RESPONSE TO COUNCIL I.R	

Project Description
PROPOSED FOOD & DRINK OUTLETS
946-960 GREENBANK ROAD, NORTH MACLEAN

Scale @A1: As Indicated
Date: MARCH 2023
Drawn: Author
Approved By: GN

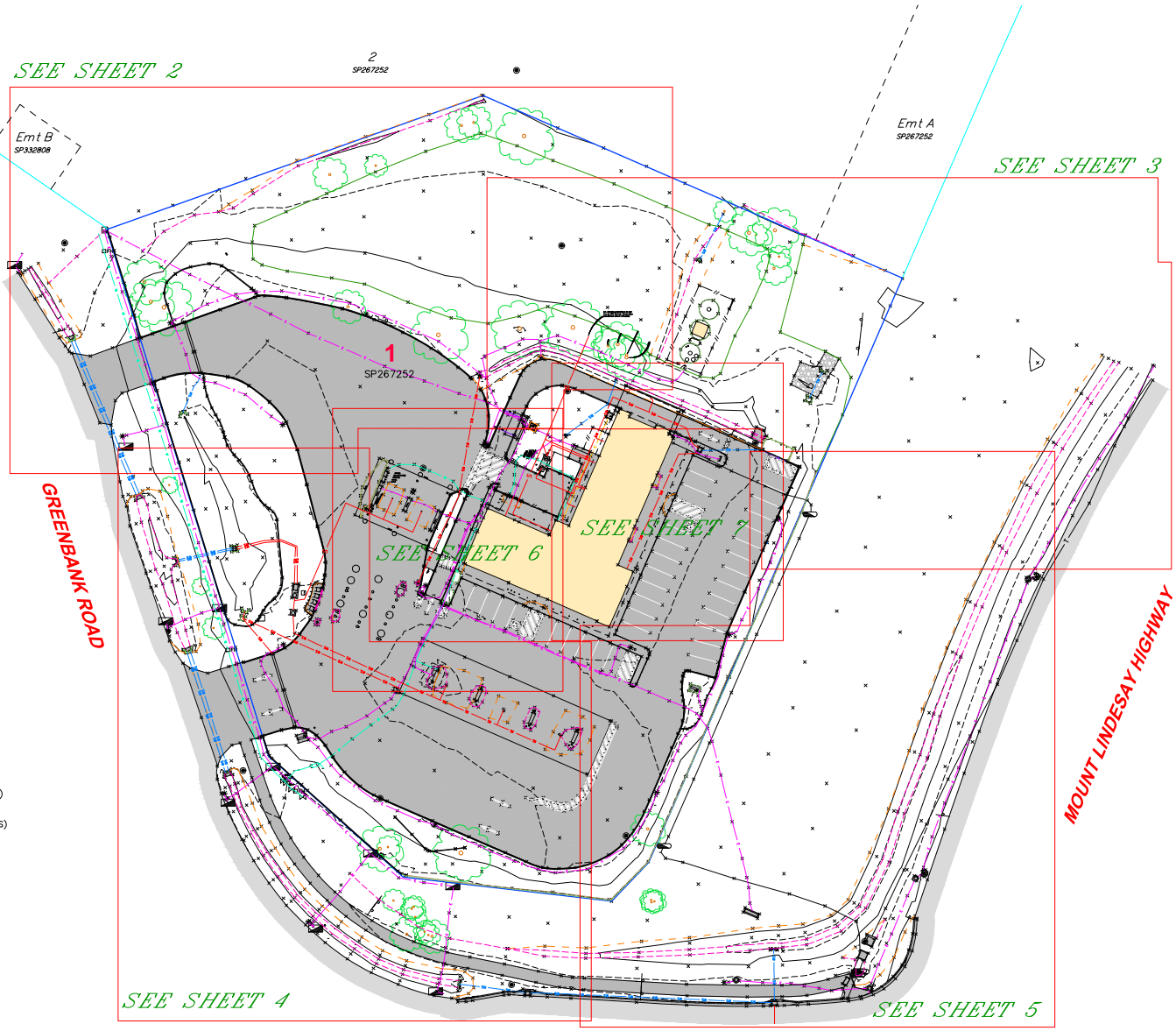
Drawing Title
PROP. SITE PLAN

Job Number - Drawing Number: 22181 DA02
Revision: B

PINNACLE ENGINEERING GROUP

Appendix B

Topographic Survey



N

IMPORTANT NOTE 2:
Fuel lines between filling points, tanks and bowsers have not been located as part of this survey or plotted from as–constructed data due to unclear plans.

AS–CONSTRUCTED LINETYPE LEGEND

- WATER (PLOTTED FROM AS–CONSTRUCTED RECORDS)
- ELECTRICITY (PLOTTED FROM AS–CONSTRUCTED RECORDS)
- SEWER (PLOTTED FROM AS–CONSTRUCTED RECORDS)
- STORMWATER (PLOTTED FROM AS–CONSTRUCTED RECORDS)

IMPORTANT NOTE:
This plan is presented at a scale of 1: 1. To convert to MGA2020 Coordinates scale all data around TBM A (501233.414, 6927483.377) by a scale factor of 0.99958930

Note 1:
This plan has been prepared for the exclusive use of our client, being the person or entity providing the instruction for the preparation of this document. This plan can be used only for this agreed purpose and can not be used by any other person or for any other purpose without the written consent of T J Kelly Surveys Pty Ltd.
Note 2:
The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey.
Note 3:
Exposed services (shown hereon) only, were located at the time of the survey. Underground services (where found) have been located by A.U.S. Locators Pty Ltd and are shown as part of this survey. Where such services exist, reference should be made to records at the relevant authority.
Note 4:
Depths shown on this plan are provided by a cable locating service and are approximate only.
Note 5:
All depths to services are indicative only and should not be relied upon for design or construction works without further investigation to fully locate identified services.
No guarantee can be given that the services shown on this plan are accurate, complete or in fact are the services identified.
Note 6:
Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

LINETYPE LEGEND

- STORM WATER
- WATER
- UNDERGROUND ELECTRICITY
- OVERHEAD ELECTRICITY
- TELECOMMUNICATIONS
- FENCE
- TOE OF BANK
- TOP OF BANK
- BOTTOM OF RETAINING WALL
- TOP OF RETAINING WALL
- HAND RAIL
- EDGE OF GARDEN
- KERB PROFILE (Back of Kerb, Top of Kerb, Edge of Concrete)
- BUILDING PROFILE (Guttering, Eave, Edge of Building)

HATCH LEGEND

- – Denotes Bitumen Surface
- – Denotes Concrete Surface
- – Denotes Building
- – Denotes Rock Protection

SYMBOL LEGEND

- – Denotes Light Pole
- – Denotes Water Valve
- WM – Denotes Water Meter
- FH – Denotes Fire Hydrant
- – Denotes Telstra Pit
- – Denotes Sign
- – Denotes Electricity Pit

GENERAL NOTES

1. Date of field survey: 6/3/23 RA
2. Lot dimensions compiled from SP267252
3. Contour interval 0.5m

PROPERTY DESCRIPTION

Lot 1 on SP267252

LOCALITY : North Maclean

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GRAPHIC SCALE (IN METRES)

8 0 8 16 24 32 40

1:400@A1 1:800@A3

AMENT	REVISION DETAILS	DATE	INIT
A	AMEND AS–CON LEGEND, ADD IMPORTANT NOTE 2	15/03/2023	AD
–	ORIGINAL ISSUE	14/03/2023	KO

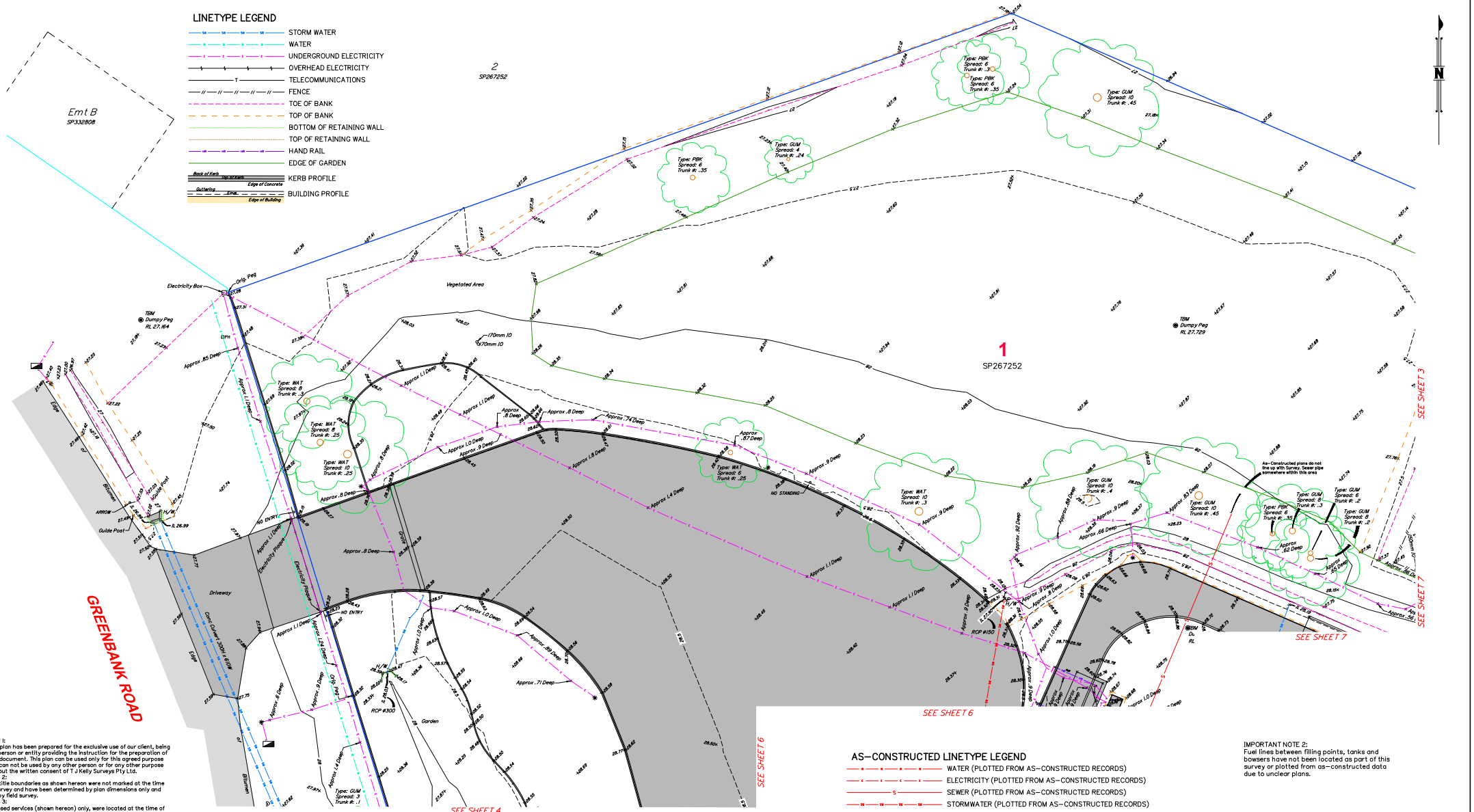
Greenbank Road North Maclean	DATE 14/03/2023 JOB NO 6600 DWG FILE 6600-01A DRAWN KO CHECKED AD
Singh Properties Pty Ltd	Scale 1:400
Detail & Level Survey	Drawing Number 4600-01 A

LEVEL DATUM AHD
FROM PSM 152294
R.L. 27.308m

MERIDIAN: MGA2020 Zone 56 vide SmartnetAus

LOCAL AUTHORITY : Logan C.C

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GENERAL NOTES

1. Date of field survey: 6/3/23 RA
2. Lot dimensions compiled from SP267252
3. Contour interval 0.5m

PROPERTY DESCRIPTION

Lot 1 on SP267252

LOCALITY : North Maclean

HATCH LEGEND

- Denotes Bitumen Surface
- Denotes Concrete Surface
- Denotes Building
- Denotes Rock Protection

SYMBOL LEGEND

- Denotes Light Pole
- Denotes Water Valve
- WM Denotes Water Meter
- FH Denotes Fire Hydrant
- Denotes Telstra Pit
- Denotes Sign
- Denotes Electricity Pit

AS-CONSTRUCTED LINETYPE LEGEND

- WATER (PLOTTED FROM AS-CONSTRUCTED RECORDS)
- ELECTRICITY (PLOTTED FROM AS-CONSTRUCTED RECORDS)
- SEWER (PLOTTED FROM AS-CONSTRUCTED RECORDS)
- STORMWATER (PLOTTED FROM AS-CONSTRUCTED RECORDS)

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GRAPHIC SCALE
(IN METRES)
3 0 3 6 9 12 15
1:150@A1 1:300@A3

AMENDMENT	REVISION DETAILS	DATE	INIT
A	AMEND AS-CON LEGEND, ADD IMPORTANT NOTE 2	15/03/2023	AD
–	ORIGINAL ISSUE	14/03/2023	KO

Greenbank Road
North Maclean

Singh Properties Pty Ltd

Detail & Level Survey

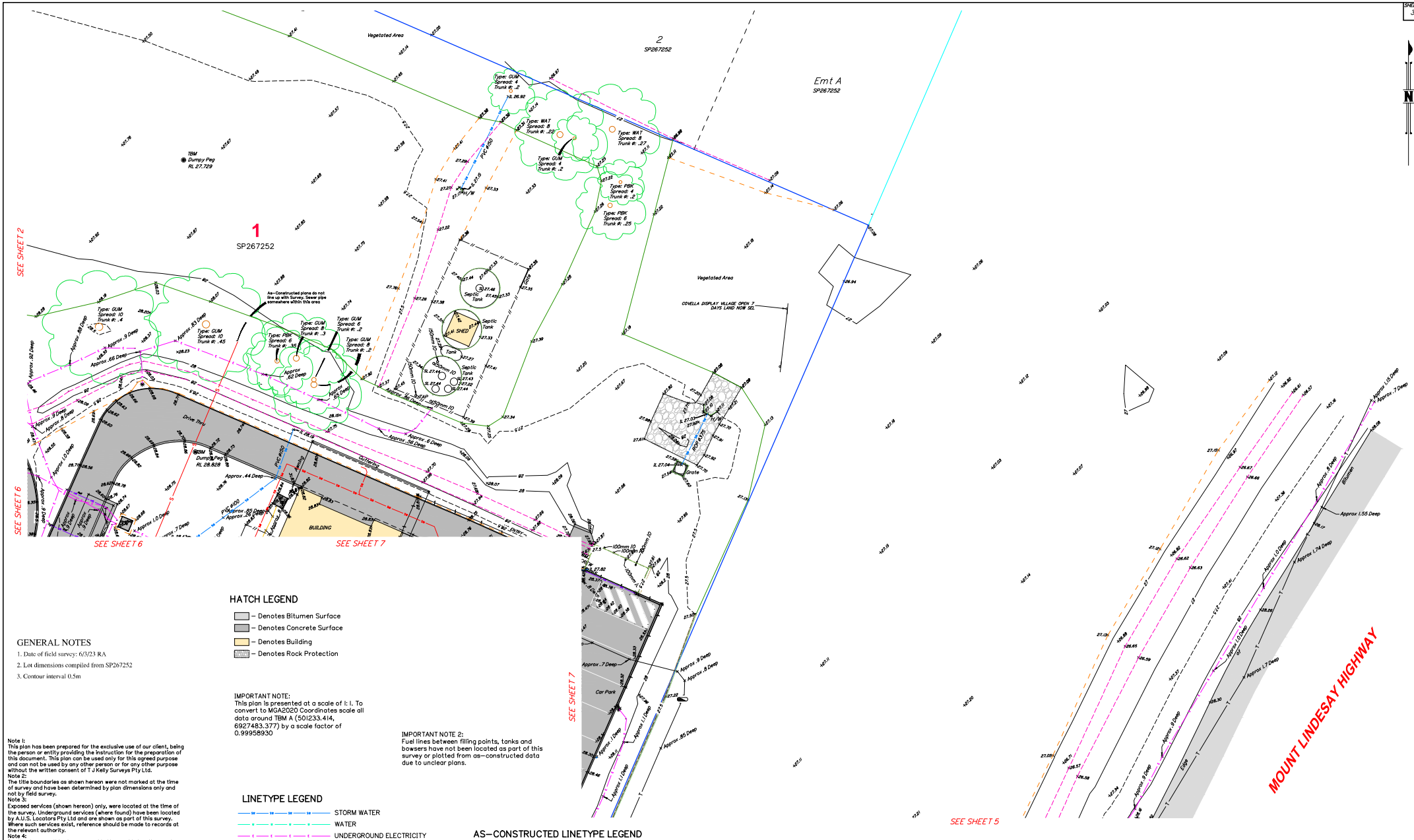
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JOB NO 4600
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DRAWN KO
CHECKED AD
Scale 1:150
Drawing Number 4600-01 A

LEVEL DATUM AHD
FROM GNSS
Vide Ausgeoid09

MERIDIAN: MGA2020 Zone 56 vide SmartnetAus

LOCAL AUTHORITY : Logan C.C

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- WATER
- UNDERGROUND ELECTRICITY
- OVERHEAD ELECTRICITY
- TELECOMMUNICATIONS
- FENCE
- TOE OF BANK
- TOP OF BANK
- BOTTOM OF RETAINING WALL
- TOP OF RETAINING WALL
- HAND RAIL
- EDGE OF GARDEN
- KERB PROFILE (Back of Kerb / Top of Kerb / Edge of Concrete)
- BUILDING PROFILE (Guttering / Eave / Edge of Building)

AS–CONSTRUCTED LINETYPE LEGEND

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- ELECTRICITY (PLOTTED FROM AS–CONSTRUCTED RECORDS)
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- STORMWATER (PLOTTED FROM AS–CONSTRUCTED RECORDS)

SYMBOL LEGEND

- – Denotes Light Pole
- – Denotes Water Valve
- WM – Denotes Water Meter
- FH – Denotes Fire Hydrant
- – Denotes Telstra Pit
- – Denotes Sign
- – Denotes Electricity Pit

AMENDMENT	REVISION DETAILS	DATE	INIT
A	AMEND AS–CON LEGEND, ADD IMPORTANT NOTE 2	15/03/2023	AD
–	ORIGINAL ISSUE	14/03/2023	KO

PROPERTY DESCRIPTION

Lot 1 on SP267252

LOCALITY : North Maclean

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GRAPHIC SCALE (IN METRES)

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1:150@A1 1:300@A3

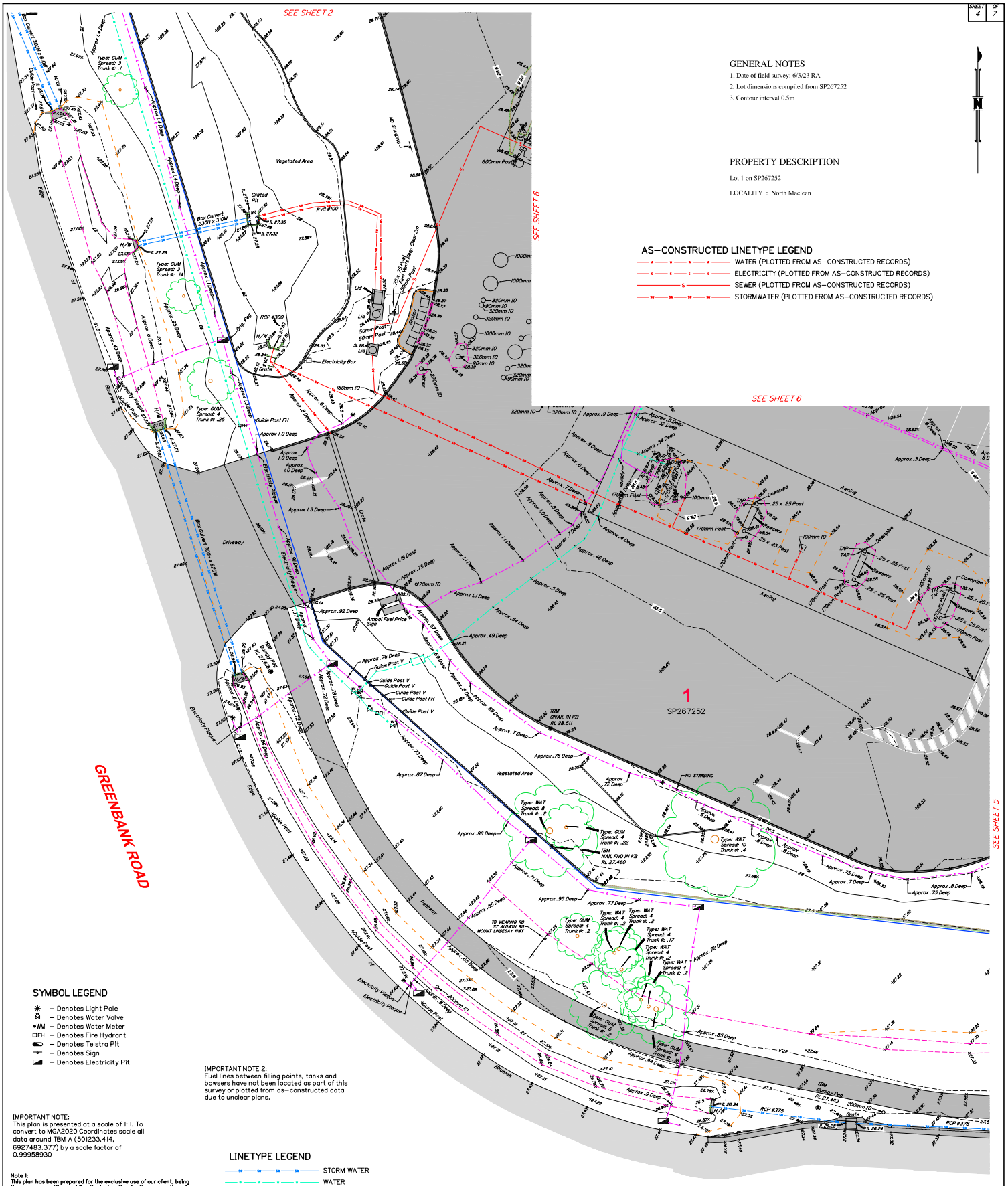
Greenbank Road North Maclean	DATE	14/03/2023	
	JOB NO	4600	
	DWG FILE	4600-01A	
	DRAWN	KO	
	CHECKED	AD	
Singh Properties Pty Ltd	Scale	1:150	
Detail & Level Survey	Drawing Number	4600-01	A

LEVEL DATUM: AHD
FROM PSM 152294
R.L. 27.308m

MERIDIAN: MGA2020 Zone 56 vide SmartnetAus

LOCAL AUTHORITY : Logan C.C

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SYMBOL LEGEND

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- ⋈ – Denotes Water Valve
- •WM – Denotes Water Meter
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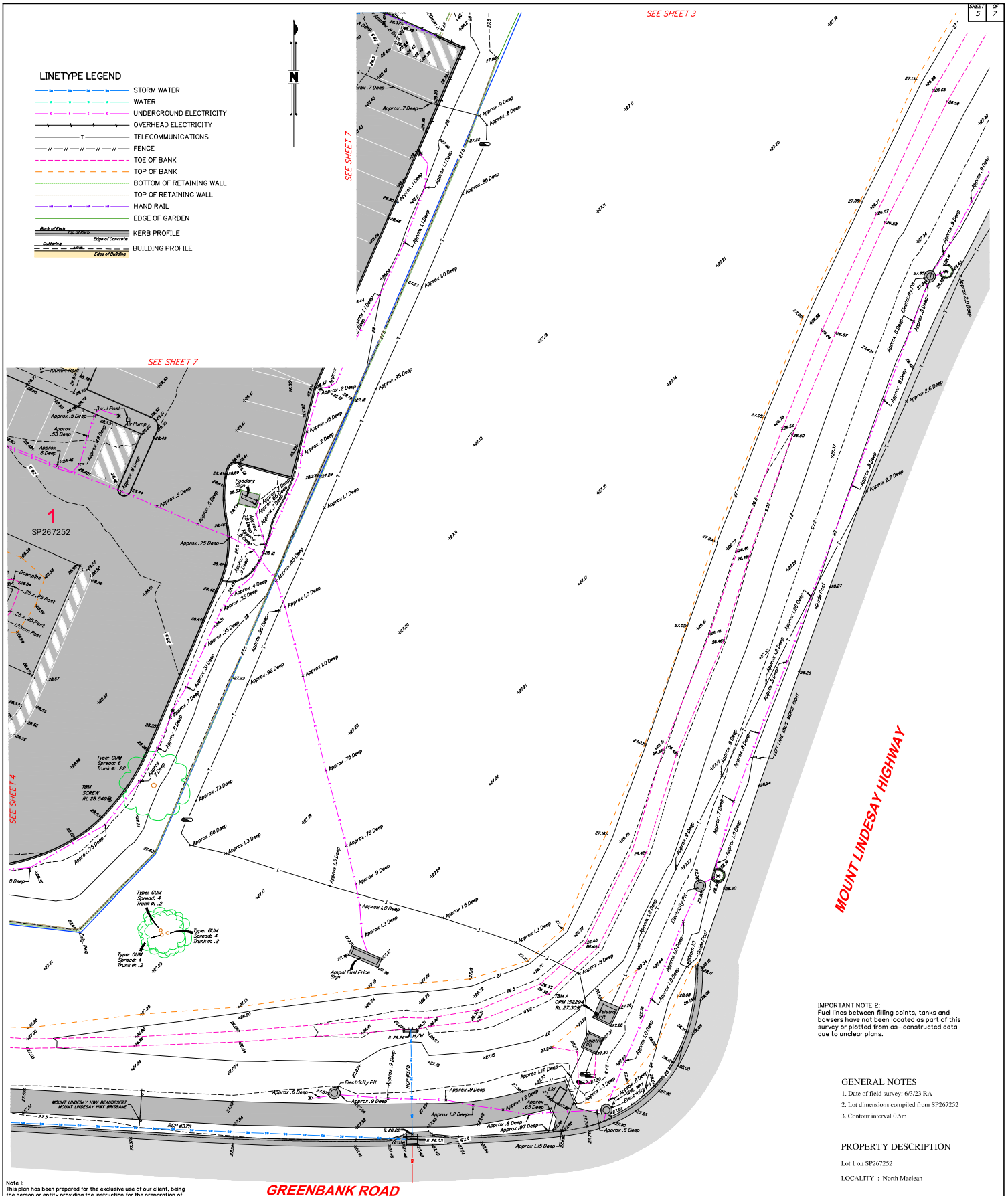
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GRAPHIC SCALE
(IN METRES)
3 0 3 6 9 12 15
1:150@A1 1:300@A3

AMENT	REVISION DETAILS	DATE	INIT
A	AMEND AS–CON LEGEND, ADD IMPORTANT NOTE 2	15/03/2023	AD
–	ORIGINAL ISSUE	14/03/2023	KO

Greenbank Road North Maclean	DATE 14/03/2023 JOB NO 4600 DWG FILE 4600-01A DRAWN KO CHECKED AD Scale 1:150 Drawing Number 4600-01 A
Singh Properties Pty Ltd	LEVEL DATUM AHD FROM PSM 152294 R.L. 27.308m
Detail & Level Survey	MERIDIAN: MGA2020 Zone 56 vide SmartnetAus LOCAL AUTHORITY : Logan C.C

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1:150@A1 1:300@A3

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–	ORIGINAL ISSUE	14/03/2023	KO

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Greenbank Road
North Maclean

Singh Properties Pty Ltd

Detail & Level Survey

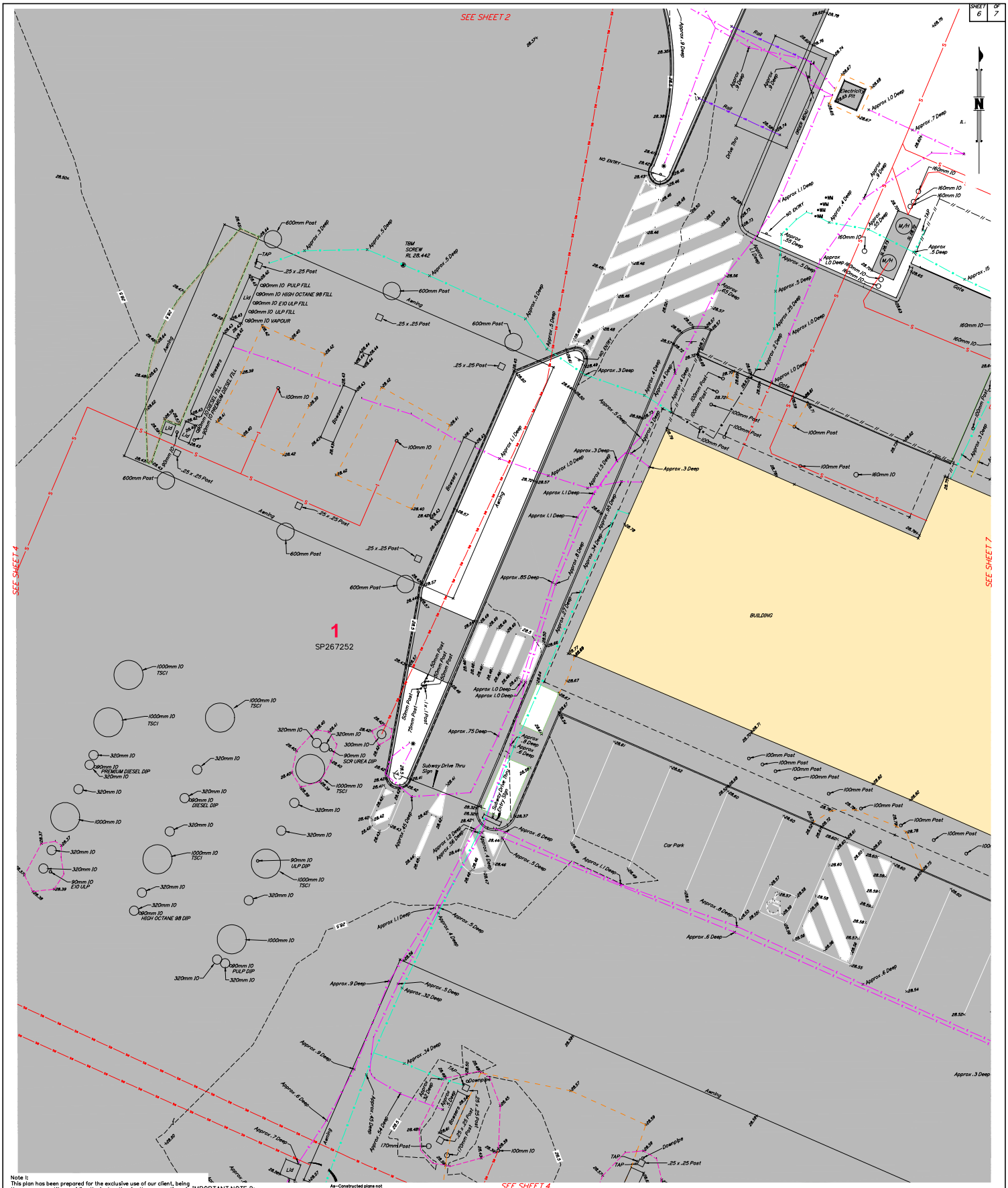
DATE 14/03/2023
JOB NO 4600
DWG FILE 4600-01A
DRAWN KO
CHECKED AD
Scale 1:150
Drawing Number 4600-01 A

LEVEL DATUM AHD
FROM PSM 152294
R.L. 27.308m

MERIDIAN: MGA2020 Zone 56 vide SmartnetAus

LOCAL AUTHORITY : Logan C.C

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PROPERTY DESCRIPTION

Lot 1 on SP267252

LOCALITY : North Maclean

GENERAL NOTES

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3. Contour interval 0.5m

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GRAPHIC SCALE (IN METRES)

1.5 0 1.5 3 4.5 6 7.5

1:75@A1 1:150@A3

AMENDMENT	REVISION DETAILS	DATE	INIT
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–	ORIGINAL ISSUE	14/03/2023	KO

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North Maclean

Singh Properties Pty Ltd

Detail & Level Survey

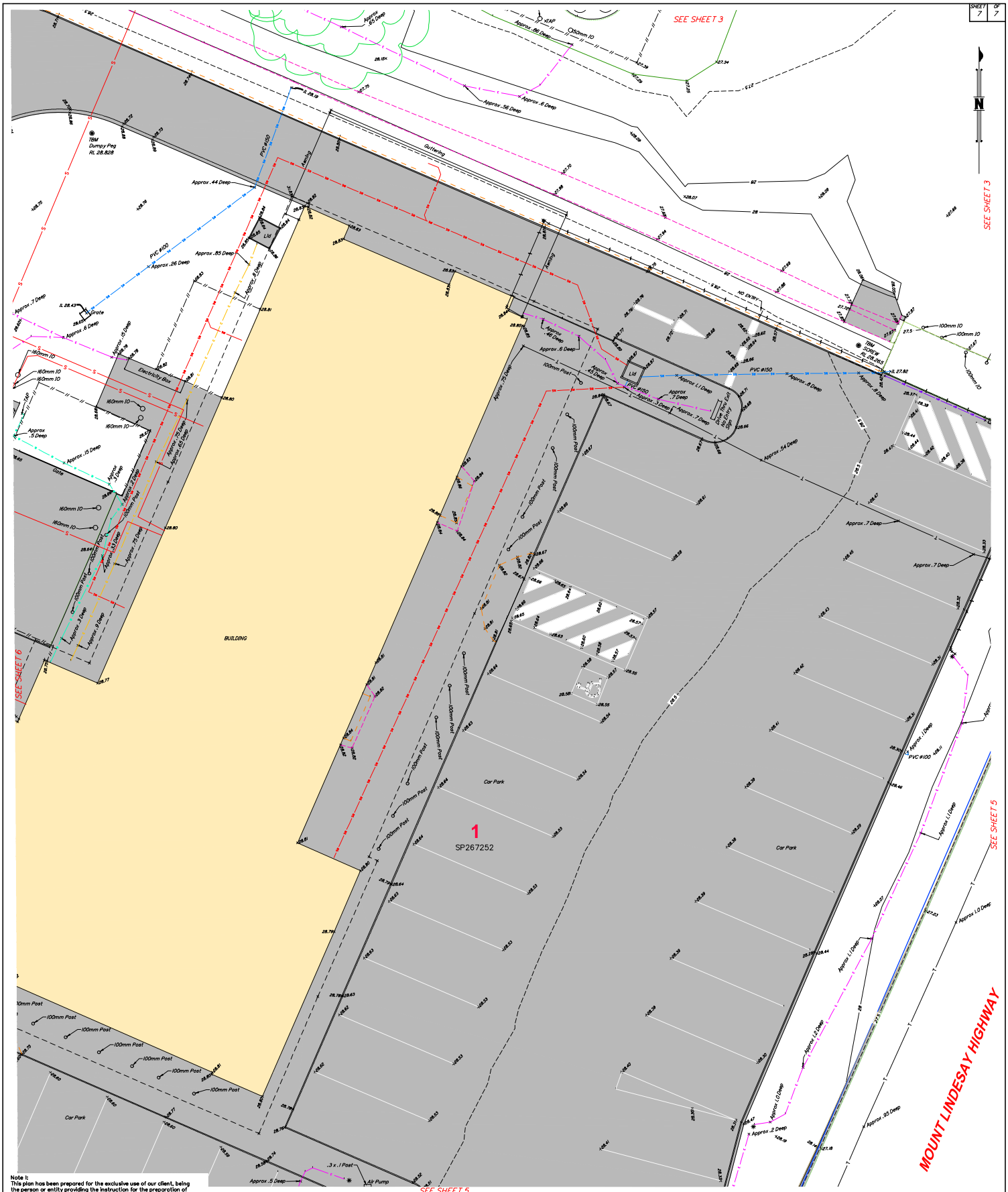
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JOB NO	4600
DWG FILE	4600-01A
DRAWN	KO
CHECKED	AD
Scale	1:75
Drawing Number	4600-01 A

LEVEL DATUM AHD
FROM PSM 152294
R.L. 27.308m

MERIDIAN: MGA2020 Zone 56 vide SmartnetAus

LOCAL AUTHORITY : Logan C.C

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SEE SHEET 3
SEE SHEET 3
SEE SHEET 6
SEE SHEET 5
SEE SHEET 5
N
TBM Dumpy Peg RL 28.828
TBM SCREW RL 28.265
Gutter
Kerb
Fence
PVC #150
PVC #100
Approx .44 Deep
Approx .85 Deep
Approx .26 Deep
Approx .6 Deep
Approx .7 Deep
Approx .15 Deep
Approx .5 Deep
Approx .3 Deep
Approx .75 Deep
Approx .65 Deep
Approx .54 Deep
Approx .1 Deep
Approx .2 Deep
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Approx 1.0 Deep
Approx 1.5 Deep
Approx 1.1 Deep
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Approx .6 Deep
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Approx .4 Deep
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Approx .6 Deep
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Approx .46 Deep
Approx .43 Deep
Approx .73 Deep
Approx .1 Deep
Approx .7 Deep
Approx .2 Deep
Approx .5 Deep
Approx .3 Deep
Approx .1

Appendix C

Engineering Layouts

PROPOSED FLOOD BALANCE STORAGE TANK. 284m³ MINIMUM STORAGE VOLUME BETWEEN R.L 27.1m AND 27.5m. PROPOSED 755m² OF 'ATLANTIS FLO-VAULT' OR APPROVED EQUIVALENT. REFER TO PEG01046-DA-SK07 FOR DETAILS

ONLY ONCE THE FUTURE SCOTT LANE GRAVITY SEWER IS AVAILABLE FOR CONNECTION SHALL THE PROPOSED RE-DEVELOPMENT EXTEND COUNCILS SEWER NETWORK TO THE SUBJECT SITE. THE PROPOSED GRAVITY SEWER SHALL BE EXTENDED FROM SCOTT LANE WITHIN THE EXISTING SERVICES EASEMENT TERMINATING AT THE SUBJECT SITE.
ALIGNMENT THROUGH EXISTING EASEMENT SHOWN IS INDICATIVE ONLY AND SUBJECT TO DETAIL DESIGN AND APPROVAL.

PROPOSED LEVEL SPREADER TO BE USED TO EVENLY DISTRIBUTE STORMWATER OUTFLOW ACROSS THE EXISTING STORMWATER EASEMENT

2 SP267252

INDICATIVE WORKS AREA

EXISTING Ø150mm PVC-M WATER MAIN

EXISTING UNDERGROUND ELECTRICAL CABLE

EMT A SP267252

16.2m

GREENBANK ROAD

PROPOSED DRAINAGE SHOWN INDICATIVELY AND IS SUBJECT TO DETAILED DESIGN

PRIVATE INTERNAL SEWER SHOWN INDICATIVELY ONLY AND IS SUBJECT TO FUTURE DETAILED DESIGN AND PLUMBING AND DRAINAGE APPROVAL

CONSTRUCT SEWER MANHOLE OVER EXISTING SEWER MAIN. LOCATION SHOWN IS INDICATIVE ONLY AND SUBJECT TO DETAIL DESIGN AND APPROVAL.

EXISTING STORMWATER DRAINAGE OUTLETS TO BE RECONFIGURED TO CONVEY RUNOFF TO THE PROPOSED TREATMENT TANK

1 SP267252

35x 7kL PRECAST CONCRETE TANKS FOR DETENTION COMPONENT (OR APPROVED EQUIVALENT)

3x 7kL PRECAST CONCRETE TANKS FOR TREATMENT CHAMBERS (OR APPROVED EQUIVALENT)

OUTLET PIPE TO DISCHARGE TO 'LPoD C' VIA LEVEL SPREADER

ALL 'CATCHMENT C' STORMWATER RUNOFF TO BE CONVEYED TO TREATMENT TANK

EXISTING TELSTRA CABLE

EXISTING SERVICE STATION AND SURROUNDING HARDSTAND TO REMAIN

EXISTING STORMWATER DRAINAGE PIPE

LEGEND

- EXISTING TELSTRA CABLE
- EXISTING SEWERAGE RETICULATION
- EXISTING WATER RETICULATION
- EXISTING STORMWATER PIPE
- EXISTING OVERHEAD ELECTRICAL
- EXISTING UNDER GROUND ELECTRICAL
- EXISTING CONTOURS
- PROPOSED SEWERAGE RETICULATION
- PROPOSED WATER RETICULATION
- PROPOSED STORMWATER PIPE
- ROOF / BUILDING HARDSTAND AREA
- CONCRETE DRIVEWAY / PAVED AREA
- PERVIOUS AREA
- EXISTING LOT BOUNDARY
- INDICATIVE WORKS AREA
- SEWER RETICULATION FLOW DIRECTION

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NOTES

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PINNACLE ENGINEERING GROUP
LEVEL 1 19 SHORT STREET, SOUTHPORT QLD 4215
(PO BOX 517, PARADISE POINT QLD 4216)
WWW.PINNACLEENG.COM.AU

REV	DESCRIPTION	DRAWN	DATE
A	PRELIMINARY ISSUE FOR COMMENT	M.G.	21.04.2023
B	RESPONSE TO COUNCIL RFI	M.G.	31.08.2023

TASK	BY	INITIAL	DATE
REVIEW	B. POPA		31.08.2023
DESIGN	J. LAMB		31.08.2023
DRAWN	M. GLASSON		31.08.2023

SCALE 2 1 0 2 4 6 8 10 1:200

(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)

CLIENT: SOOMAL PROPERTIES

PROJECT: PROPOSED SERVICE STATION DEVELOPMENT 946-960 GREENBANK ROAD NORTH MCLEAN QLD 4280 (LOT 1 ON SP267252)

DRAWING TITLE: ENGINEERING SERVICES LAYOUT

STATUS: PRELIMINARY (NOT TO BE USED FOR CONSTRUCTION)

APPROVED

RPEQ No

DRAWING NUMBER: PEG1064-DA-SK05

REVISION: B

© G:\Jobs\DA-SKM\Files\PEG1064-SERVICES LAYOUT.dwg 04 Sep 2023 Letter (8.50 x 11.00 Inches) None Jason Lamb

LEGEND

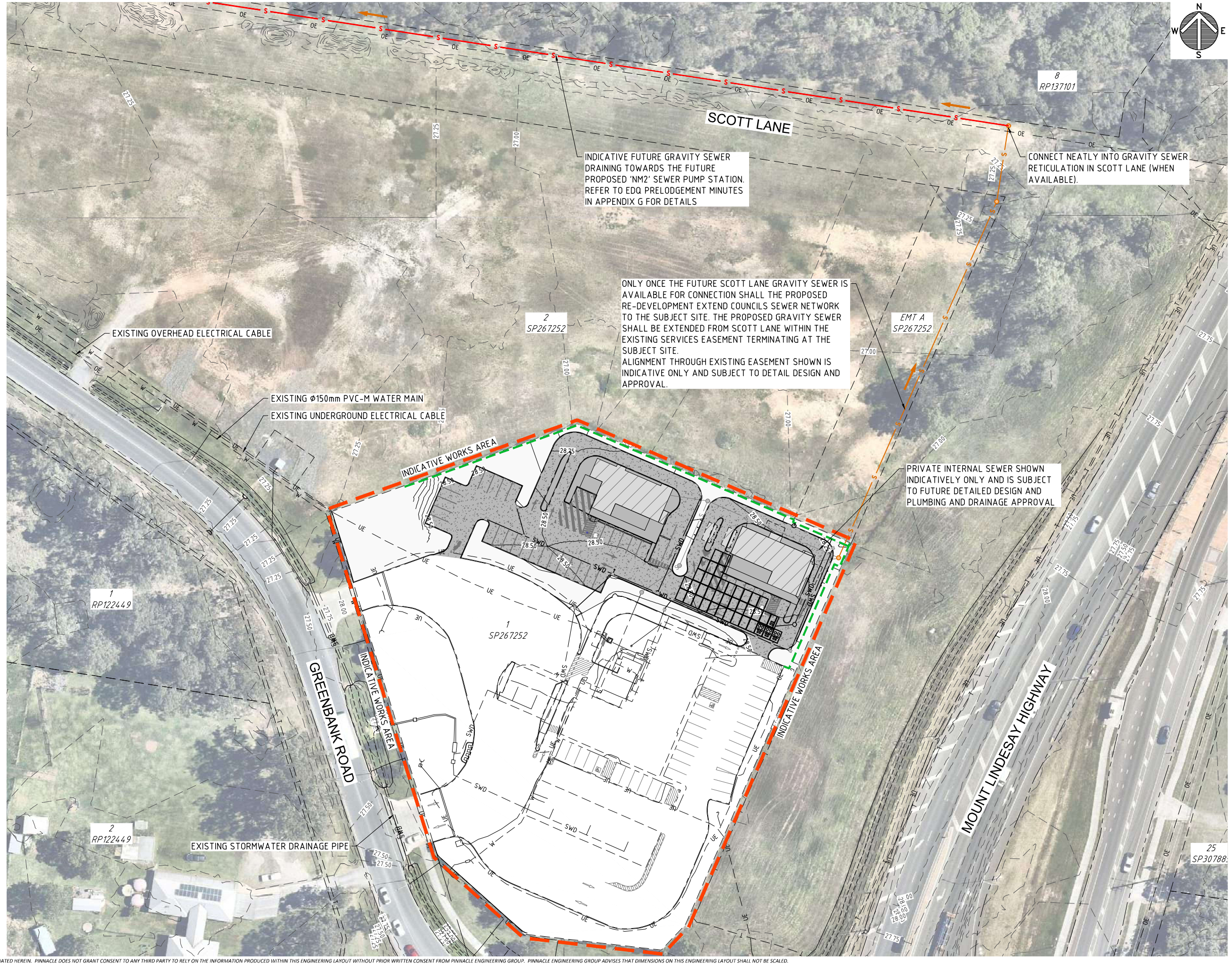
- EXISTING TELSTRA CABLE
- EXISTING SEWERAGE RETICULATION
- EXISTING WATER RETICULATION
- EXISTING STORMWATER PIPE
- EXISTING OVERHEAD ELECTRICAL
- EXISTING UNDER GROUND ELECTRICAL
- EXISTING CONTOURS
- PROPOSED SEWERAGE RETICULATION
- PROPOSED WATER RETICULATION
- PROPOSED STORMWATER PIPE
- ROOF / BUILDING HARDSTAND AREA
- CONCRETE DRIVEWAY / PAVED AREA
- PERVIOUS AREA
- EXISTING LOT BOUNDARY
- INDICATIVE WORKS AREA
- SEWER RETICULATION FLOW DIRECTION

NOTES

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REVIEW	B. POPA		31.08.2023
DESIGN	J. LAMB		31.08.2023
DRAWN	M. GLASSON		31.08.2023

SCALE 10 0 10 20 1:500

(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)

CLIENT: SOOMAL PROPERTIES

PROJECT: PROPOSED SERVICE STATION DEVELOPMENT 946-960 GREENBANK ROAD NORTH MCLEAN QLD 4280 (LOT 1 ON SP267252)

DRAWING TITLE: EXTERNAL SEWER WORKS LAYOUT

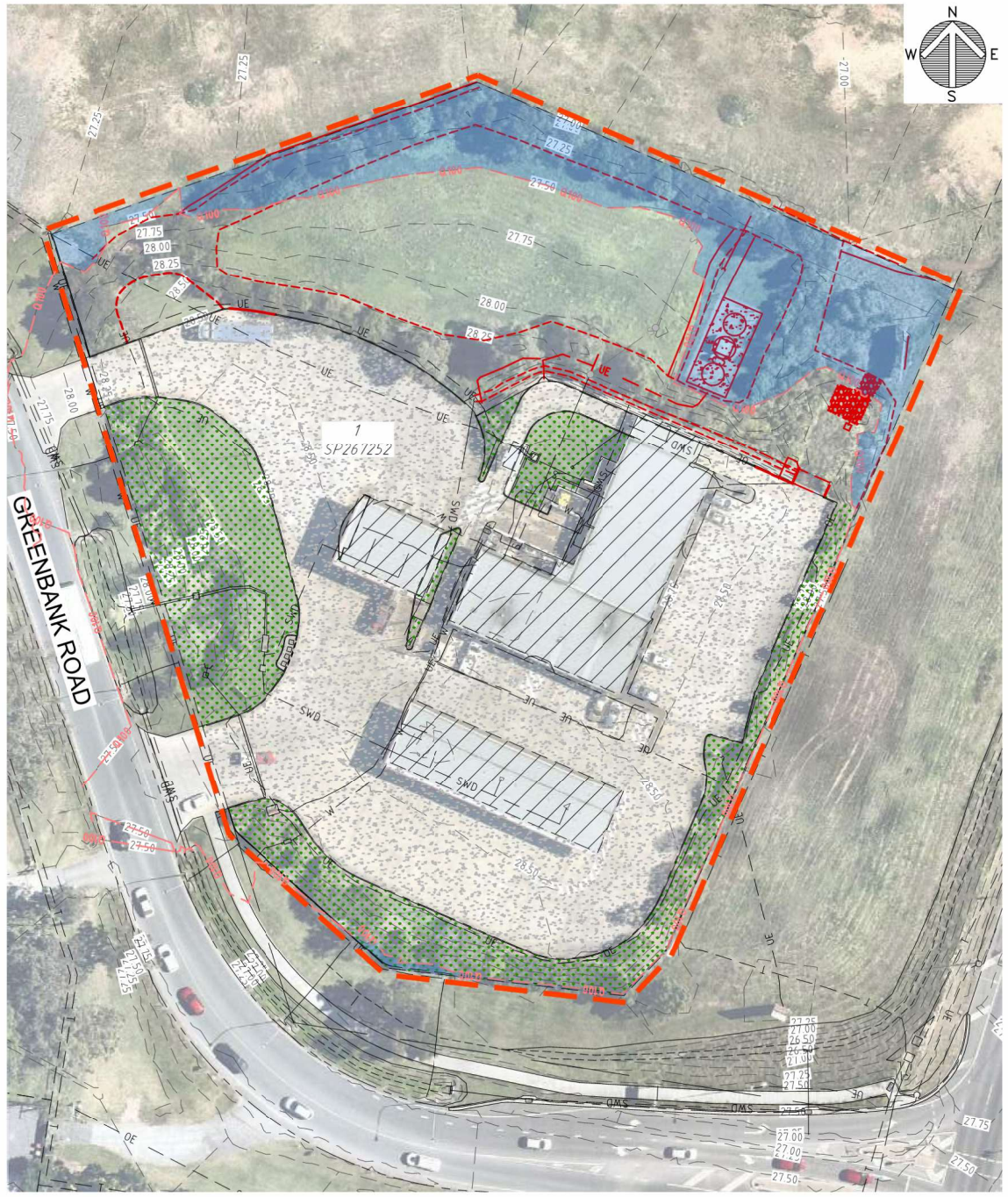
STATUS: PRELIMINARY (NOT TO BE USED FOR CONSTRUCTION)

APPROVED RPEQ No

DRAWING NUMBER: PEG1064-DA-SK06

REVISION: B

P:\EG\1064\DA\SK06 EXTERNAL SEWER\SK06 EXTERNAL SEWER LAYOUT.dwg 31/08/2023 Letter (8.50 x 11.00 inches) Mateo Jaime Landa



FLOOD STORAGE LAYOUT - PRE DEVELOPMENT

LEGEND

- EXISTING TELSTRA CABLE
- EXISTING SEWERAGE RETICULATION
- EXISTING WATER RETICULATION
- EXISTING UNDERGROUND ELECTRICAL
- EXISTING OVERHEAD ELECTRICAL
- PROPOSED STORMWATER DRAINAGE
- PROPOSED SEWER RETICULATION
- FINISHED SURFACE CONTOURS (0.10m)
- EXISTING SURFACE CONTOURS (0.10m)
- ROOF / BUILDING HARDSTAND AREA
- CONCRETE DRIVEWAY / PAVED AREA
- PERVIOUS AREA
- SUSPENDED DECKING
- PROPOSED VEHICLE CROSSOVER
- PROPOSED LOT BOUNDARY
- EXISTING LOT BOUNDARY
- INDICATIVE WORKS AREA
- 1% AEP (Q_{100}) FLOOD LEVEL = RL 27.5m AHD
- 1% AEP (Q_{100}) FLOOD EXTENT
- 1% AEP (Q_{100}) FLOOD BALANCE TANK
- R.L 1.00 — PROPOSED SURFACE LEVEL
- F.F.L 1.00 — PROPOSED FINISHED FLOOR LEVEL

NOTES

1. FLOODING OCCURS ON ADJACENT PROPERTIES. FLOODING EXTERNAL TO THE SITE HAS BEEN OMITTED TO CLEARLY DELINEATE FLOODING ON THE SUBJECT SITE. REFER TO COUNCIL FLOOD AFFECTED AREAS MAPPING FOR FURTHER INFORMATION.
2. HABITABLE FINISHED FLOOR LEVELS TO BE 300mm ABOVE 1% AEP EVENT (Q_{100}) OF RL 27.50m AHD.
3. AERIAL IMAGERY COURTESY OF NEARMAP.COM.

FLOOD STORAGE - PRE AND POST DEVELOPMENT

PRE-DEVELOPMENT FLOOD STORAGE VOLUME

EVENT	DFL (m AHD)	FLOOD STORAGE TO DFL (m^3)
1% AEP (Q_{100})	27.50m	402m^3

POST-DEVELOPMENT FLOOD STORAGE VOLUME

EVENT	DFL (mAHD)	FFL MIN. (m AHD)	FLOOD STORAGE TO DFL (m^3)
1% AEP (Q_{100})	27.50m	27.80m	39m^3

POST-DEVELOPMENT COMPENSATORY STORAGE REQUIRED (VIA TANK)

COMPENSATORY FLOOD STORAGE REQUIRED (m^3)
363m^3

FLOOD STORAGE WITHIN FLOOD STORAGE TANK (m^3)
284m^3 MIN

FLOOD STORAGE AVAILABLE WITHIN DETENTION TANK TO DFL (m^3)
79m^3

FLOOD STORAGE LEVELS

IT IS THE PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE FINISHED SURFACE LEVELS NOMINATED ON THIS DRAWING ARE ACHIEVED TO ENSURE NO LOSS OF FLOODPLAIN STORAGE POST-DEVELOPMENT.



FLOOD STORAGE LAYOUT - POST DEVELOPMENT

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TASK	BY	INITIAL	DATE
REVIEW	B. POPA		31.08.2023
DESIGN	J. LAMB		31.08.2023
DRAWN	M. GLASSON		31.08.2023

SCALE 10 0 10 20 SCALE 1:500

(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)

CLIENT: SOOMAL PROPERTIES

PROJECT: PROPOSED SERVICE STATION DEVELOPMENT 946-960 GREENBANK ROAD NORTH MCLEAN QLD 4280 (LOT 1 ON SP267252)

DRAWING TITLE: FLOOD STORAGE LAYOUT

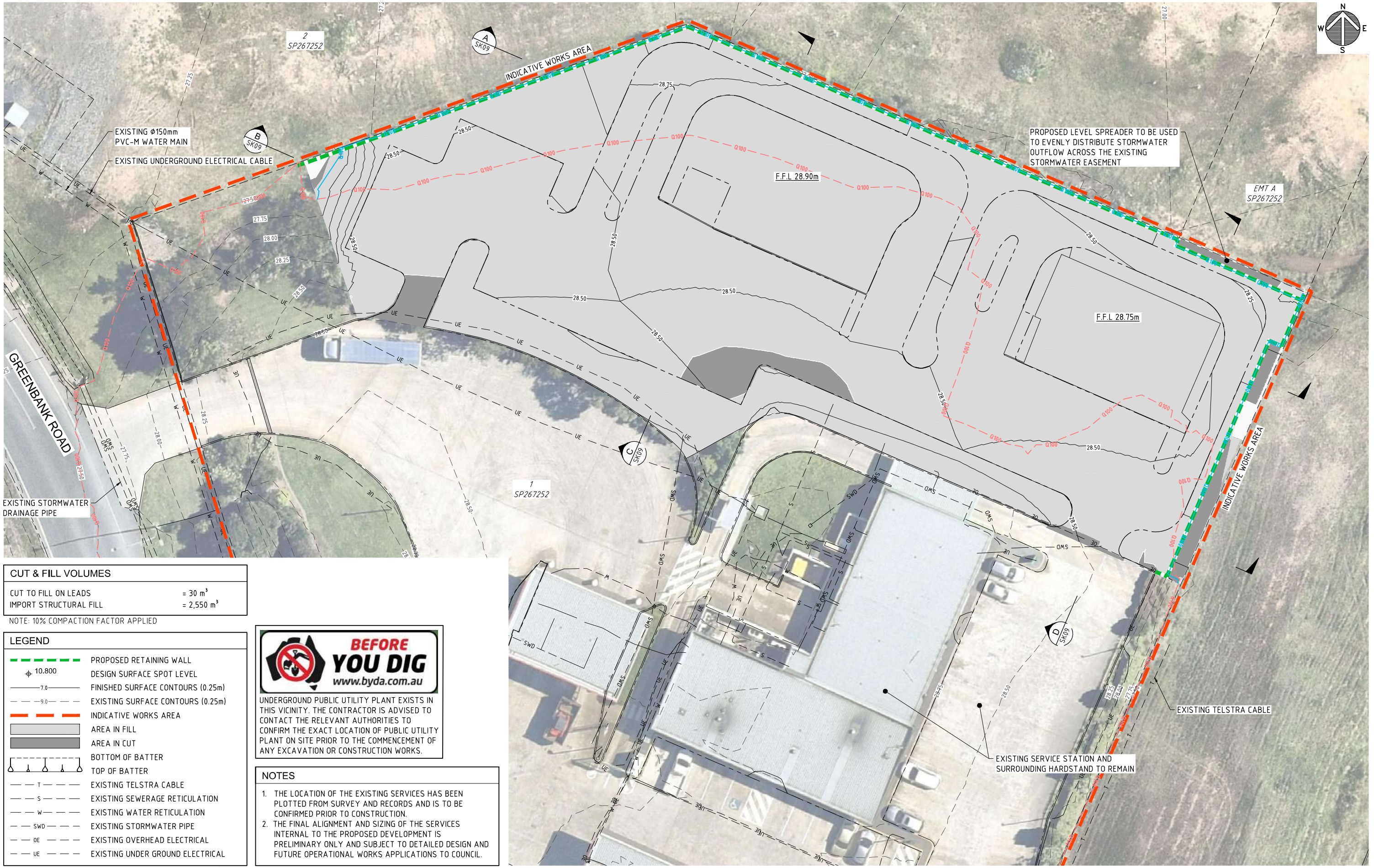
STATUS: PRELIMINARY (NOT TO BE USED FOR CONSTRUCTION)

APPROVED RPEQ No

DRAWING NUMBER: PEG1046-DA-SK07

REVISION: A

PEG1046-DA-SK07 FLOOD STORAGE LAYOUT.dwg 06.09.2023 | ePlot (A3).pc3 | A3 (420.00 x 297.00 mm) | Monochrome.ctb | Jamin Lamb



CUT & FILL VOLUMES

CUT TO FILL ON LEADS	= 30 m³
IMPORT STRUCTURAL FILL	= 2,550 m³

NOTE: 10% COMPACTION FACTOR APPLIED

LEGEND

- PROPOSED RETAINING WALL
- 10.800 — DESIGN SURFACE SPOT LEVEL
- 7.0 — FINISHED SURFACE CONTOURS (0.25m)
- 9.0 — EXISTING SURFACE CONTOURS (0.25m)
- INDICATIVE WORKS AREA
- AREA IN FILL
- AREA IN CUT
- BOTTOM OF BATTER
- TOP OF BATTER
- T — EXISTING TELSTRA CABLE
- S — EXISTING SEWERAGE RETICULATION
- W — EXISTING WATER RETICULATION
- SWD — EXISTING STORMWATER PIPE
- OE — EXISTING OVERHEAD ELECTRICAL
- UE — EXISTING UNDER GROUND ELECTRICAL

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SCALE 2 1 0 2 4 6 8 10 1:200

(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)

CLIENT: SOOMAL PROPERTIES

PROJECT: PROPOSED SERVICE STATION DEVELOPMENT 946-960 GREENBANK ROAD NORTH MCLEAN QLD 4280 (LOT 1 ON SP267252)

DRAWING TITLE: PRELIMINARY BULK EARTHWORKS LAYOUT

STATUS: PRELIMINARY (NOT TO BE USED FOR CONSTRUCTION)

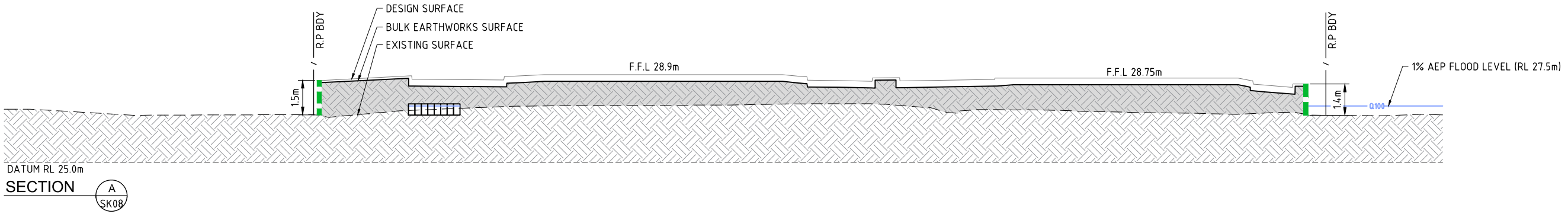
APPROVED

RPEQ No

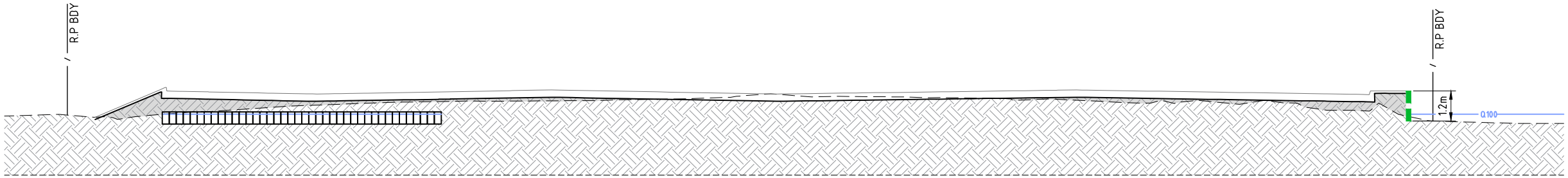
DRAWING NUMBER: PEG1046-DA-SK08

REVISION: A

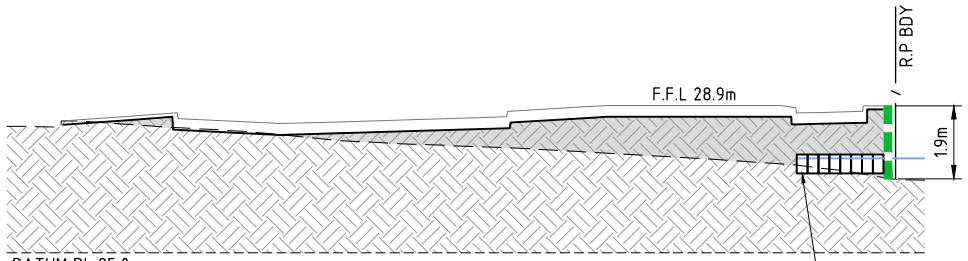
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SECTION A SK08

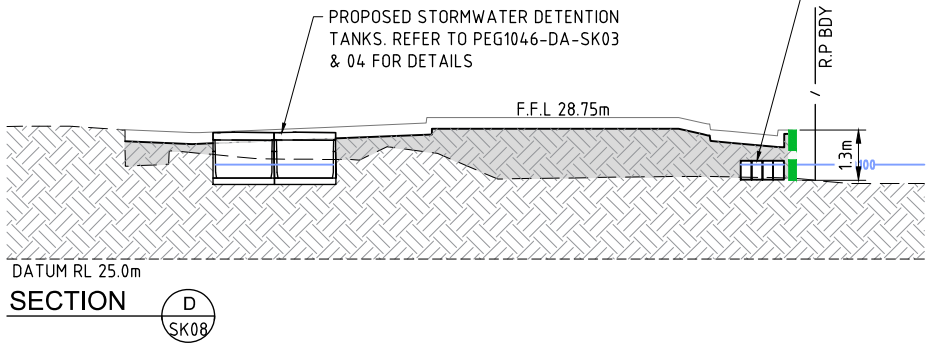


SECTION B SK08

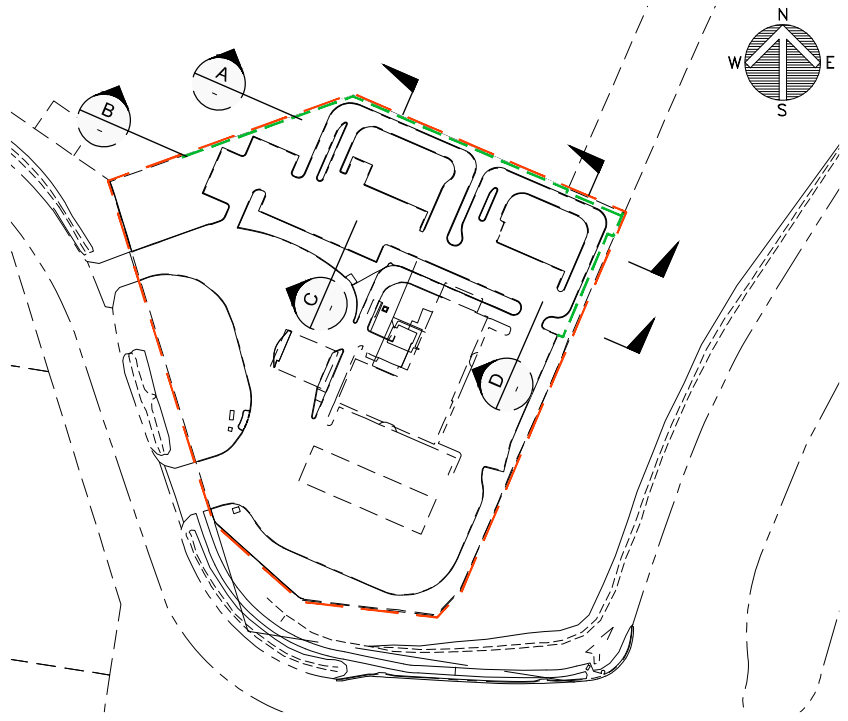


SECTION C SK08

PROPOSED FLOOD BALANCE STORAGE TANK. 284m³ MINIMUM STORAGE VOLUME BETWEEN R.L 27.1m AND 27.5m. PROPOSED 755m² OF 'ATLANTIS FLO-VAULT' OR APPROVED EQUIVALENT.



SECTION D SK08



KEY PLAN - EARTHWORKS SECTIONS

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SCALE
HORZ 2 1 0 2 4 6 8 10 1:200
VERT 1 0 1 2 3 4 5 1:100
(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)

CLIENT
SOOMAL PROPERTIES

PROJECT
PROPOSED SERVICE STATION DEVELOPMENT
946-960 GREENBANK ROAD
NORTH MCLEAN QLD 4280
(LOT 1 ON SP267252)

DRAWING TITLE
PRELIMINARY BULK EARTHWORKS SECTIONS

STATUS
PRELIMINARY
(NOT TO BE USED FOR CONSTRUCTION)

APPROVED
RPEQ No

DRAWING NUMBER
PEG1046-DA-SK09

REVISION
A

P:\Projects\PEG1046-2060 PRELIMINARY BULK EARTHWORKS SECTIONS.dwg 14.09.2023 Letter (8.5in) - 1.00 (Inches) Xrefs: Xrefs Labels

PINNACLE ENGINEERING GROUP

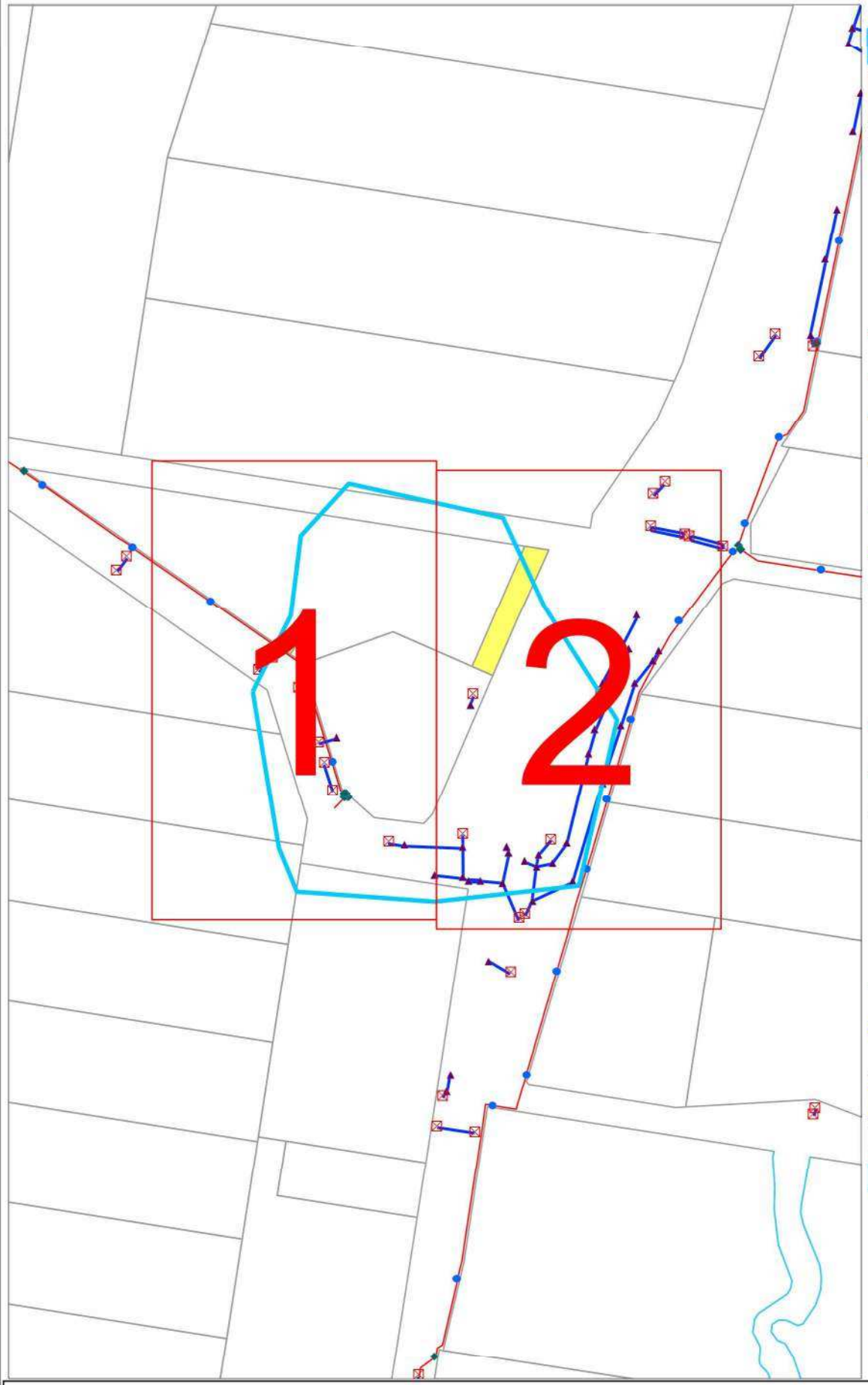
Appendix D

BYDA Data

Overview Map

Sequence No: 222679735

946-960 Greenbank Road North Maclean



LEGEND:

- Affected BYDA Work Area
- 1 Detail Map

Sewer Assets

- Sewerage Pump Station - Existing
- Sewerage Pump Station - Retired
- Sewerage Manhole - Existing
- Sewerage Manhole - Retired
- Sewerage Pipe - Existing
- Sewerage Pipe - Retired
- Sewerage Trunk Main - Existing
- Sewerage Trunk Main - Retired
- Sewerage Rising Main - Existing
- Sewerage Rising Main - Retired

Water Assets

- Hydrant - Existing
- Hydrant - Retired
- Valve - Existing
- Valve - Retired
- Water Supply Line - Existing
- Water Supply Line - Retired

Stormwater Assets

- Manholes, Gullies and Drainways
- Telemetry Gauge Station
- Stormwater Headwall
- Telemetry Air Line
- Stormwater Pipes and Culverts

Parcel Types

- Easement
- Base Lot (Type L)
- Water Body (Type W)

N

1:3000

0 0.03km

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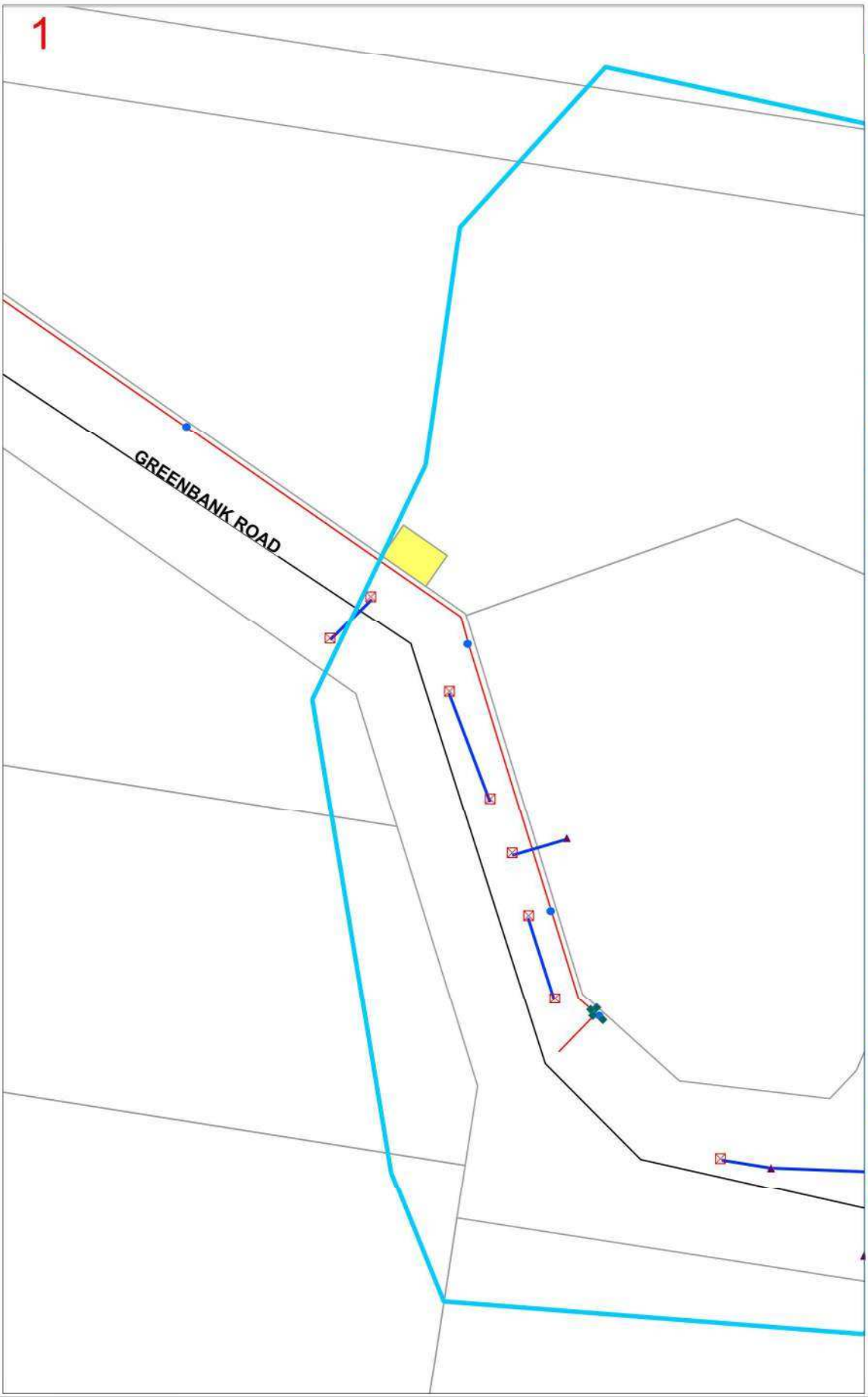
Logan City Council's infrastructure dates back over many years and may include manufactured materials containing asbestos. You are solely responsible for ensuring that appropriate care is taken at all times and that you comply with all mandatory requirements relating to such matters, including but not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

LOGAN CITY COUNCIL

Map 1

Sequence No: 222679735

946-960 Greenbank Road North Maclean



LEGEND:

- Affected BYDA Work Area
- 1 Detail Map

Sewer Assets

- Sewerage Pump Station - Existing
- Sewerage Pump Station - Retired
- Sewerage Manhole - Existing
- Sewerage Manhole - Retired
- Sewerage Pipe - Existing
- Sewerage Pipe - Retired
- Sewerage Trunk Main - Existing
- Sewerage Trunk Main - Retired
- Sewerage Rising Main - Existing
- Sewerage Rising Main - Retired

Water Assets

- Hydrant - Existing
- Hydrant - Retired
- Valve - Existing
- Valve - Retired
- Water Supply Line - Existing
- Water Supply Line - Retired

Stormwater Assets

- Manholes, Gullies and Drainways
- Telemetry Gauge Station
- Stormwater Headwall
- Telemetry Air Line
- Stormwater Pipes and Culverts

Parcel Types

- Easement
- Base Lot (Type L)
- Water Body (Type W)

N

1:1000

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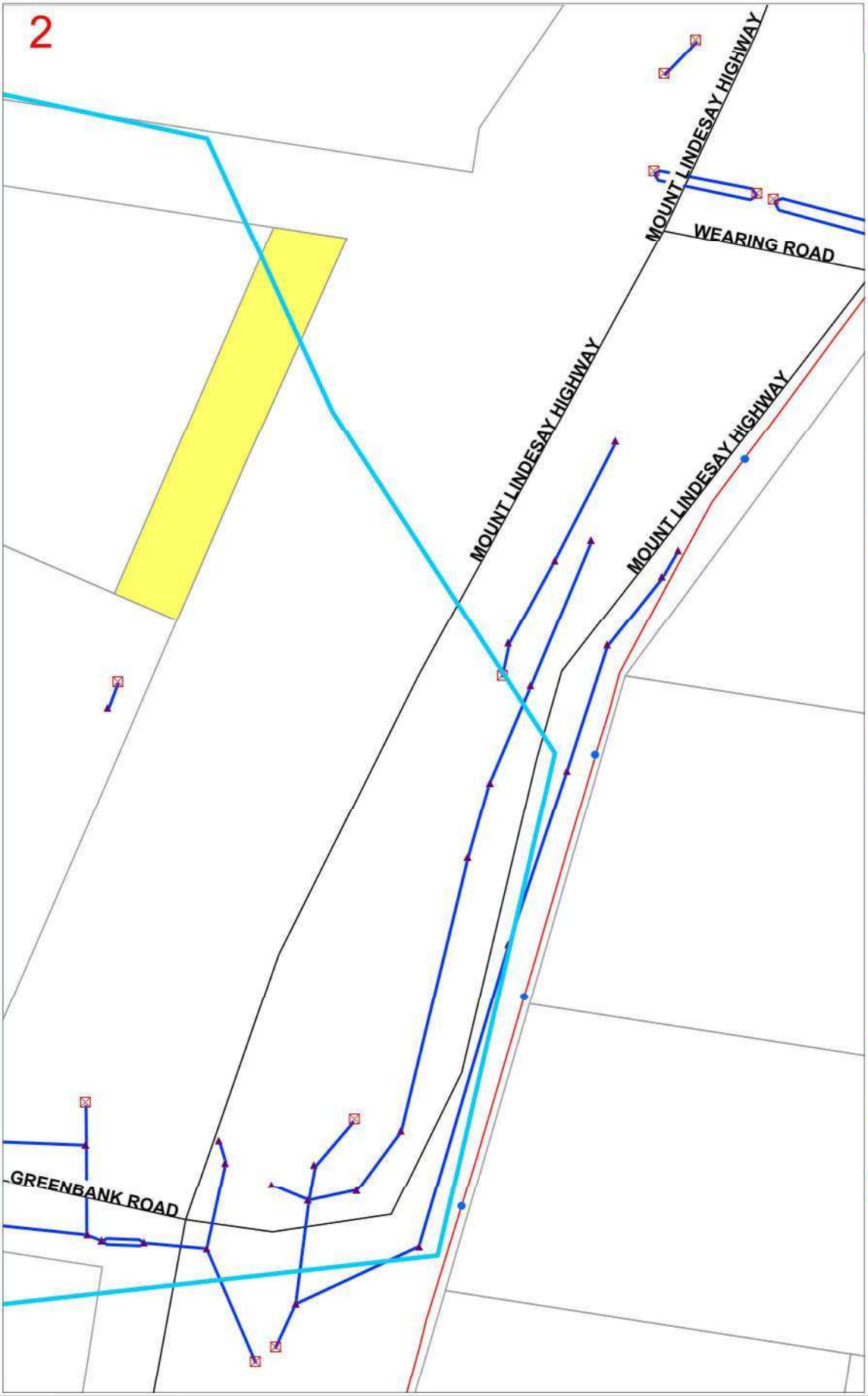
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LOGAN CITY COUNCIL

Map 2

Sequence No: 222679735

946-960 Greenbank Road North Maclean



LEGEND:

- Affected BYDA Work Area
- 1 Detail Map

Sewer Assets

- Sewerage Pump Station - Existing
- Sewerage Pump Station - Retired
- Sewerage Manhole - Existing
- Sewerage Manhole - Retired
- Sewerage Pipe - Existing
- Sewerage Pipe - Retired
- Sewerage Trunk Main - Existing
- Sewerage Trunk Main - Retired
- Sewerage Rising Main - Existing
- Sewerage Rising Main - Retired

Water Assets

- Hydrant - Existing
- Hydrant - Retired
- Valve - Existing
- Valve - Retired
- Water Supply Line - Existing
- Water Supply Line - Retired

Stormwater Assets

- Manholes, Gullies and Drainways
- Telemetry Gauge Station
- Stormwater Headwall
- Telemetry Air Line
- Stormwater Pipes and Culverts

Parcel Types

- Easement
- Base Lot (Type L)
- Water Body (Type W)

N

1:1000

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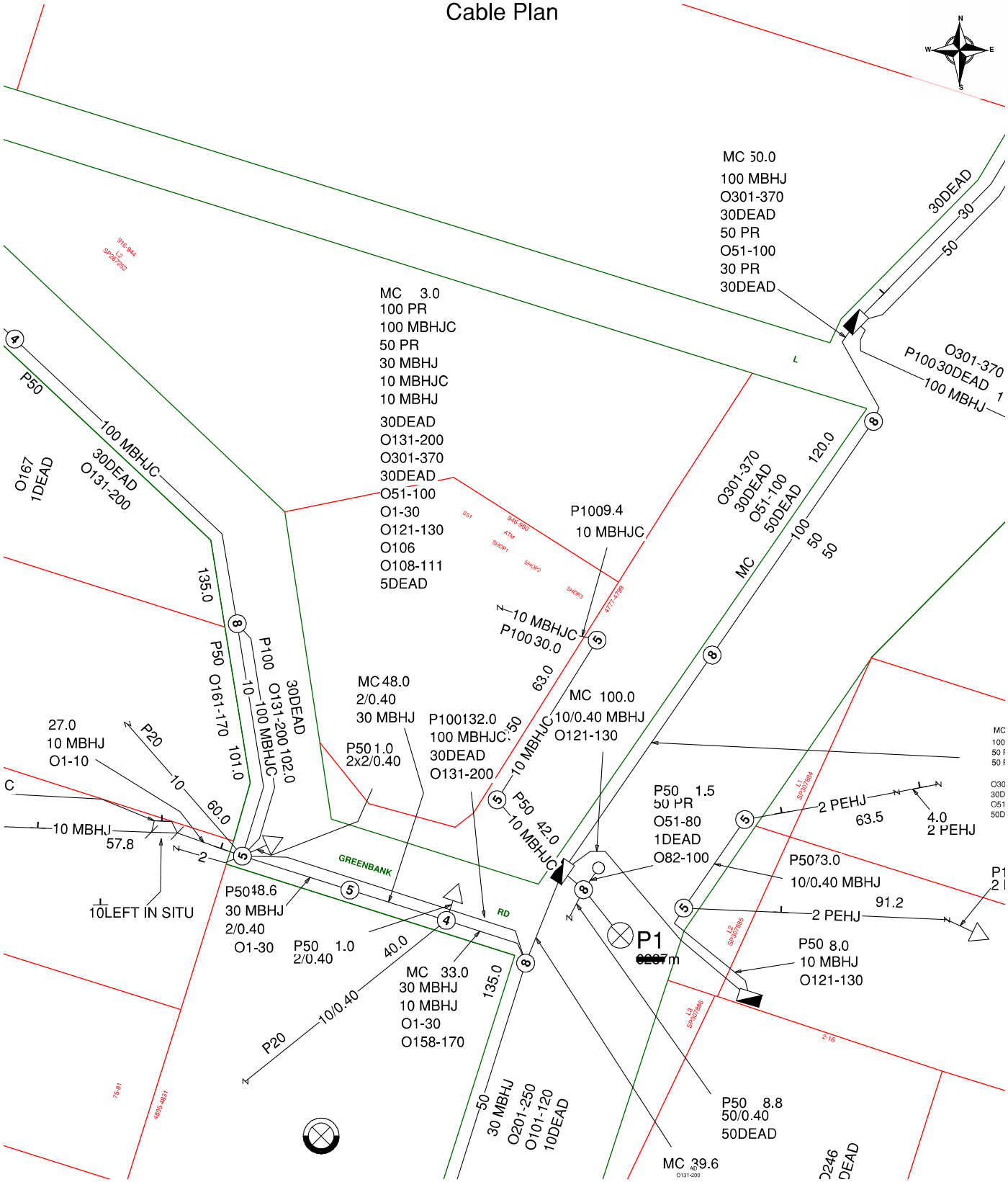
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Sequence Number: 222679732

Date Generated: 23 Mar 2023

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

Cable Plan



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

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 23/03/2023 14:30:43

Sequence Number: 222679733

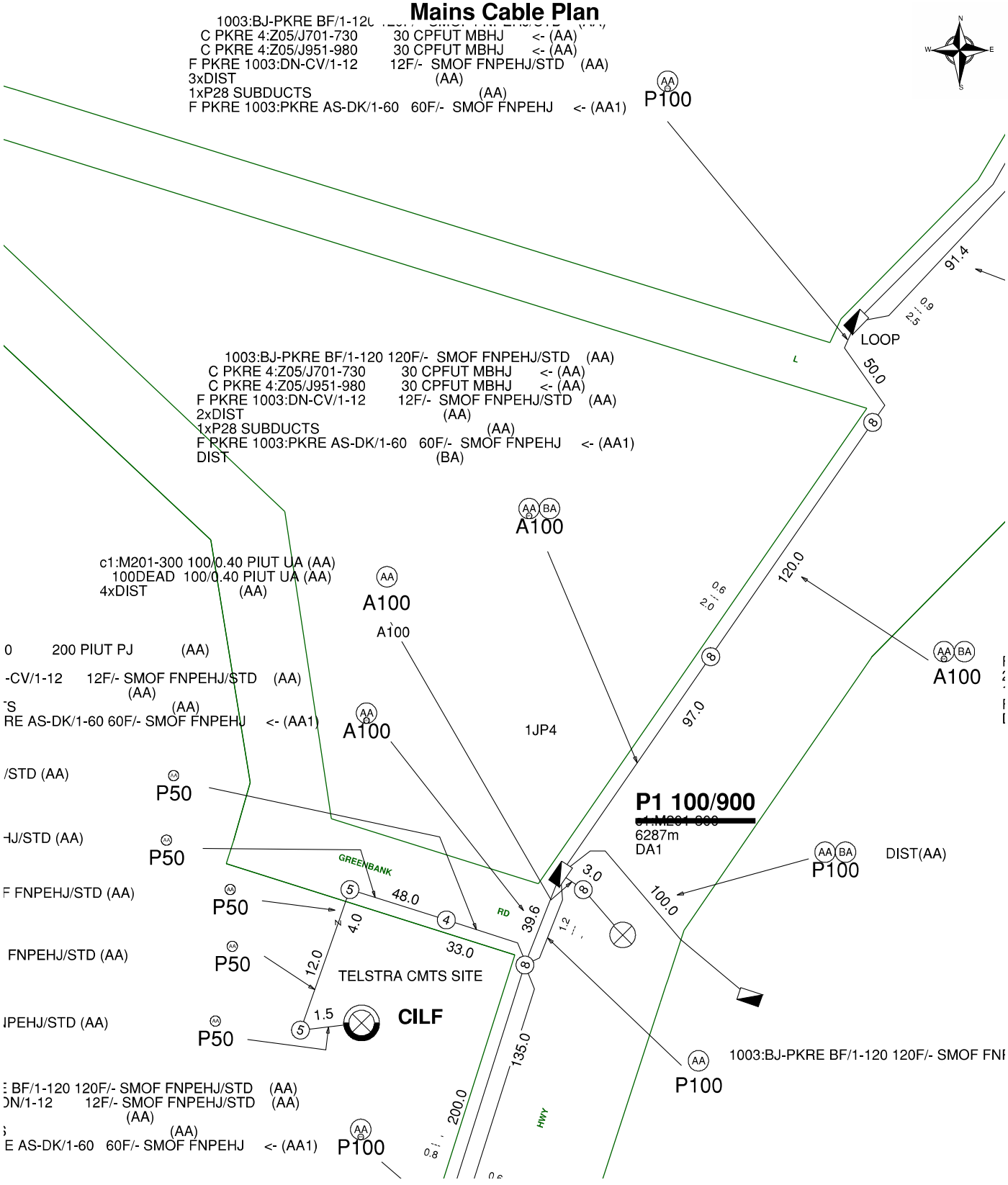
CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

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

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

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

Mains Cable Plan



Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 222679733
TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
Generated On 23/03/2023 14:30:45	

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

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

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: 222679734
Date: 23/03/2023

Scale: 1:2050

OVERVIEW

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

AS5488 Category "D" Plan

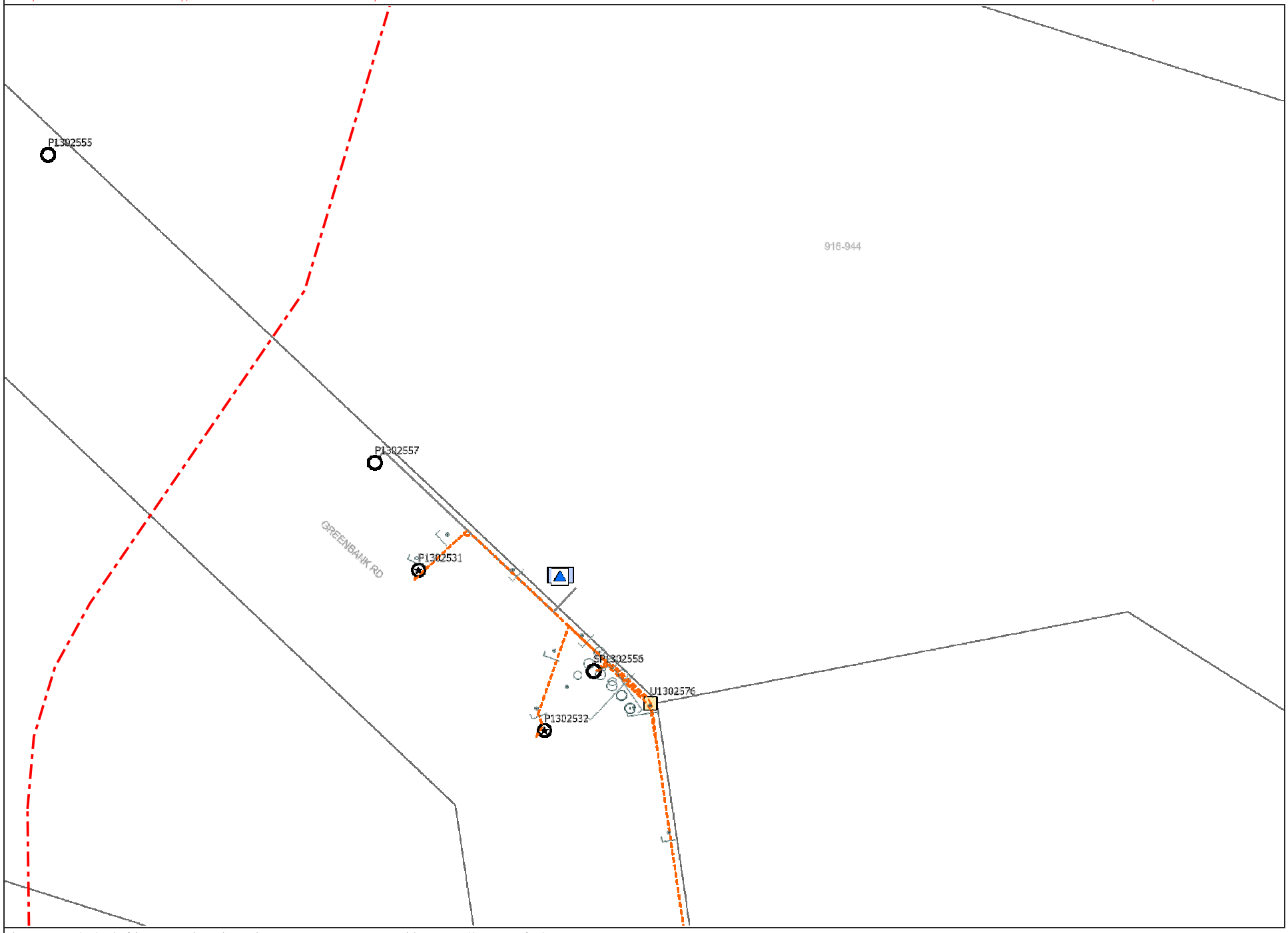
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W E
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DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever 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.

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energex

BYDA

Sequence: 222679734
Date: 23/03/2023

Scale: 1:500
Tile No: 3

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

AS5488 Category "D" Plan

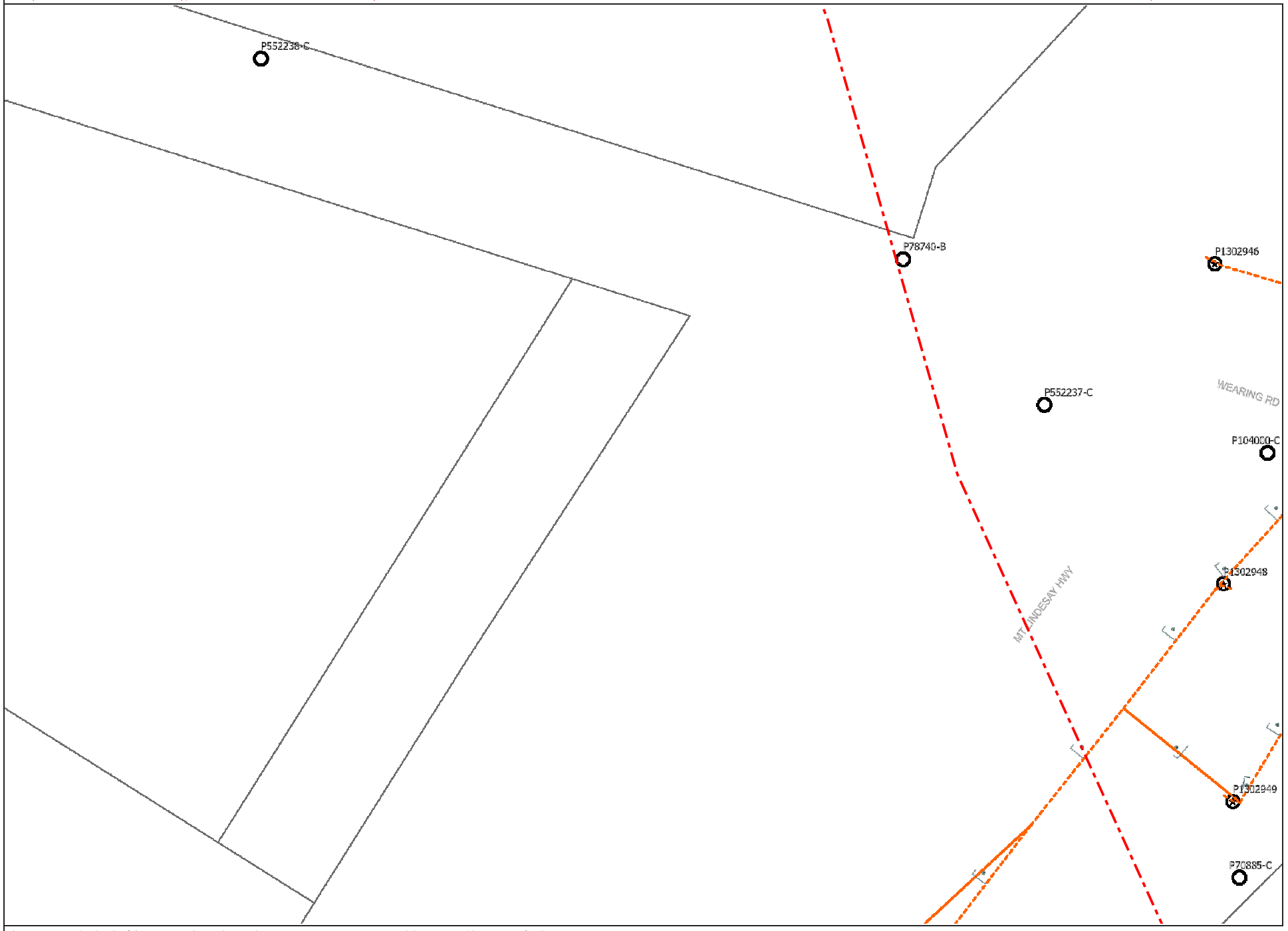
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BYDA

Sequence: 222679734
Date: 23/03/2023

Scale: 1:500
Tile No: 4

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

AS5488 Category "D" Plan

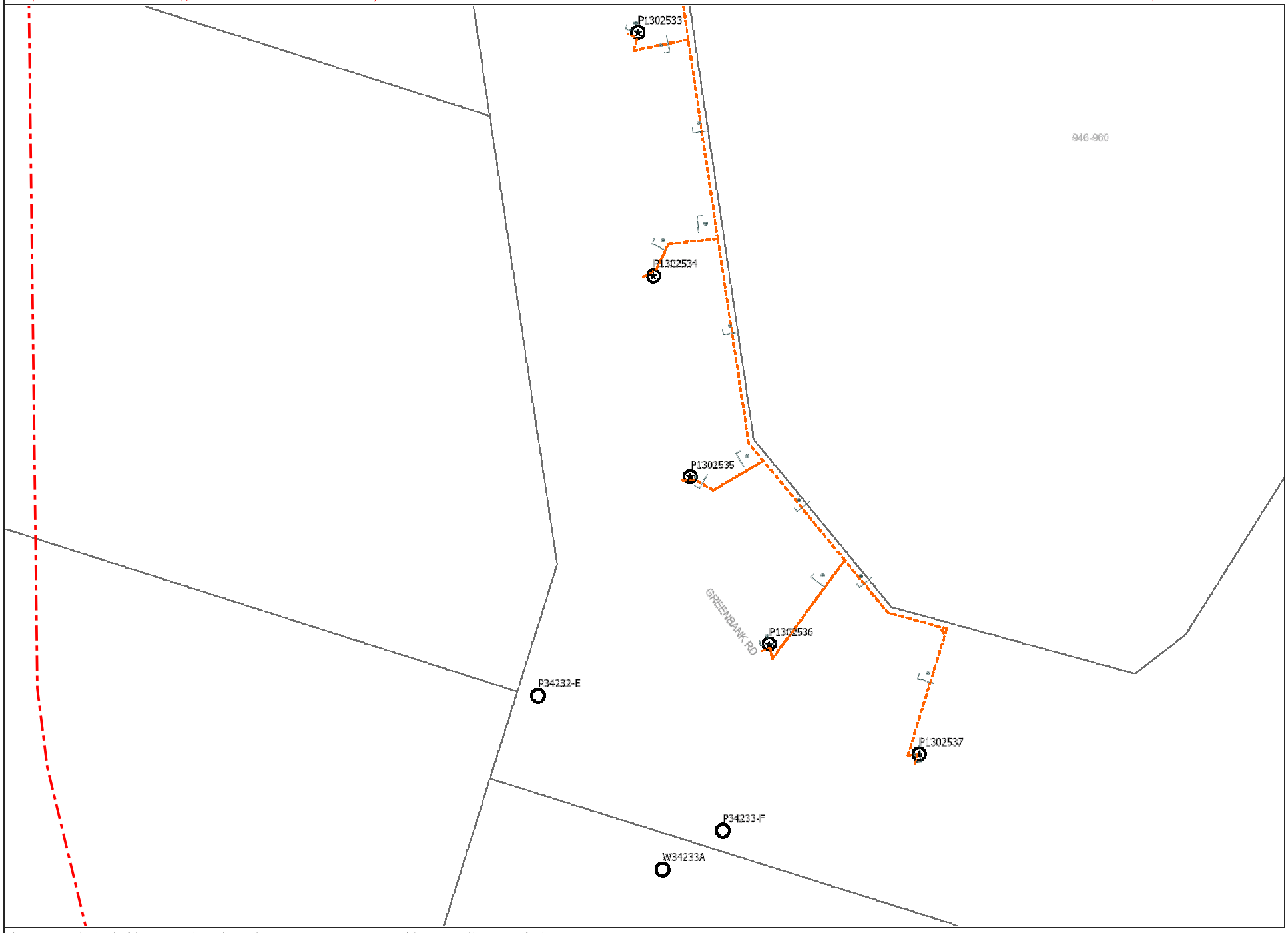
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DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising 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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BYDA

Sequence: 222679734
Date: 23/03/2023

Scale: 1:500
Tile No: 5

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

AS5488 Category "D" Plan

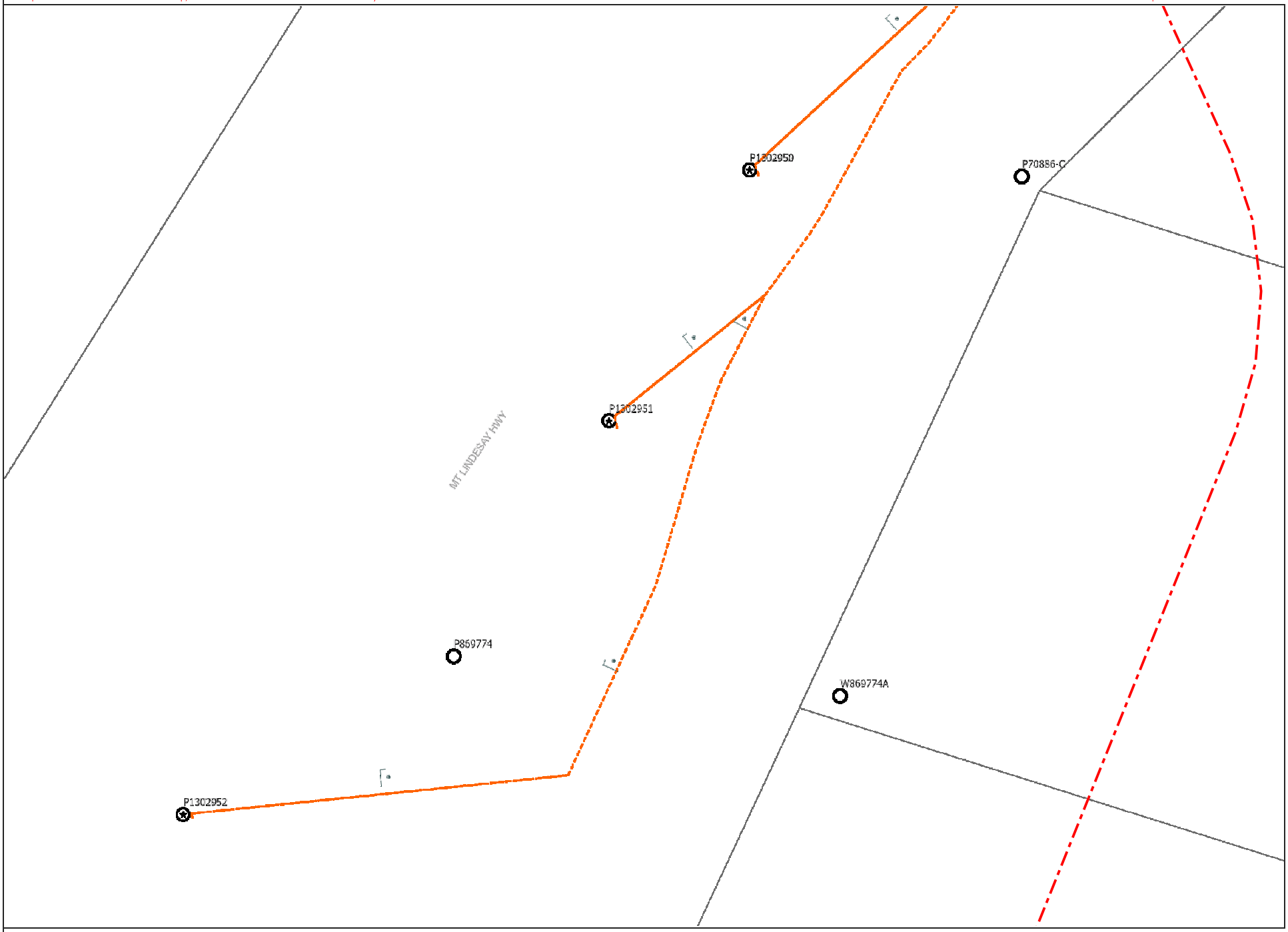
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For Emergency Situations please call 13 19 62



energex

BYDA

Sequence: 222679734
Date: 23/03/2023

Scale: 1:500
Tile No: 6

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

AS5488 Category "D" Plan

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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.

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Appendix E

LCC Mapping

Your Ref:
Enquiry Phone: Miss Megan Gould (07) 3412 5282
Please Quote File: 918043-1
Document Reference: 16837544

28 July 2023

Wolter Consulting
gsavins@wolterconsulting.com.au

Dear Sir/Madam

APPLICATION FOR PROPERTY INFORMATION - FLOODING
LOCATED AT: 946-960 GREENBANK ROAD, NORTH MACLEAN
PROPERTY DESCRIPTION: LOT 1 SP 267252

Thank you for your enquiry requesting information on the above property. Investigation shows that the property is identified as being at risk of flooding in a one percent Annual Exceedance Probability (AEP) flood event. This flood event has a one percent (1 in 100) chance of being equalled or exceeded in any given year.

Table 1: 1% Annual Exceedance Probability (AEP) Flood Level for Property

Flood Event	Flood level (m) Australian Height Datum
one percent AEP	27.5

The flood level provided above includes an allowance for future climate change.

The information provided is based on flood modelling undertaken by Council. Flood modelling references available rainfall and river level data to estimate the magnitude of flood events with a certain probability. The flood levels and maps do not represent particular historic flood events but these events are used to ensure the accuracy of the flood models.

Please be aware it is possible that local flooding from overland flow or minor tributaries may not have been captured in the flood modelling but could still be experienced.

Flood models are developed from the best available information at the time to estimate flood extents. To ensure Council continues to provide the best available information to the public, flood models may be reviewed in the future to take advantage of updated topographic and rainfall data and improved flood modelling technology. Consequently, there is no warranty given to the accuracy of this information.

If you have any further enquiries on this matter or require clarification, please do not hesitate to contact Council's River and Catchment Engineering Program, on (07) 3412 5282.

Yours faithfully

Kylie Drapala
Acting River & Catchment Engineering Program Leader

Important Warning – Updated Flood Hazard

1. **Flood hazard is being remodelled across the city**
   Logan City Council is remodelling flood hazard across the city in accordance with the endorsed Flood Studies Review Program.

2. **Logan Planning Scheme Flood hazard overlay does not reflect the updated flood hazard**
   The Logan Planning Scheme 2015 Flood hazard overlay map OM-05.00 does not reflect the updated flood hazard and should not be relied upon as accurately reflecting the current extent of properties affected by flood hazard.

3. **Existing approvals do not reflect the updated flood hazard**
   Any existing approvals may not be based on the updated extent of flood hazard likely to affect a property.

4. **There are substantial changes to the extent of properties affected by flood hazard and increases in flood level heights**
   Based on updated flood data it is expected there will be substantial changes to the extent and flood levels of properties affected by a flood hazard.

5. **You must obtain the latest flood information from Council**
   Any person undertaking development, including building work, must contact Council's River and Catchment Engineering Program (phone: 07 3412 3412) to find out the status of the flood hazard remodelling affecting their property. For information on how it may impact development or building work, please contact the Development Assessment Branch on 07 3412 5269 or by emailing council@logan.qld.gov.au

   As flood studies are completed the updated extent of flood hazard and the updated flood levels will be included in the online flood report available on Council's PDHub.

   Completed flood studies [and the progress status of others] are available from Council's River and Catchment Engineering Program.

   The Planning Scheme will be amended once all the flood studies are completed to reflect the State Planning Policy and in line with best practice in flood risk management for the City of Logan.

6. **You must take responsibility for ensuring your development avoids serious harm to persons and property from the updated flood hazard**
   Any person undertaking development is responsible for ensuring they obtain the latest information on flood hazard affecting the property and that the development is located and designed based on the updated flood hazard. This is important to ensure that the risks associated with flood hazard are avoided or mitigated to protect people and property.

Logan City Council - Logan Planning Scheme 2015

ASS Map



.Printed: March 21, 2023

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Appendix F

LCC 'As Con' Layouts

FOR CONTINUATION REFER TO DWG 13547-C112

ALL WATER AND SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING WATER MAIN
- EXISTING ELECTRICAL UNDERGROUND
- EXISTING ELECTRICAL OVERHEAD
- EXISTING COMMUNICATIONS
- EXISTING FIBRE OPTIC COMMUNICATIONS
- PROPERTY BOUNDARY
- BUILDING
- ROAD CONTROL LINE
- EDGE OF BITUMEN
- SHOULDER
- WATER MAIN
- EXISTING, PROPOSED VALVE
- EXISTING, PROPOSED FIRE HYDRANT
- EXISTING, PROPOSED END CAP
- EXISTING, PROPOSED REDUCER
- EXISTING, PROPOSED SCOUR VALVE
- WATER METER

GREENBANK ROAD

MAIN BEND 22.5 USE POT SIZE 150 MAT PVC-M CLASS 16

MAIN BEND 11.25 USE POT SIZE 150 MAT PVC-M CLASS 16

HYDRANT USE POT SIZE 80 MAT DICL LEVEL 27.10

1.5m WIDE REMOVABLE SLAB OVER PROPOSED WATER MAIN TO DWG No. C105

MAIN USE POT SIZE 150 MAT PVC-M CLASS 16

PROPERTY BOUNDARY

DN150 PVC-M

DEFLECT WATER MAIN TO ENSURE MINIMUM 150mm VERTICAL CLEARANCE UNDER PROPOSED STORMWATER MAIN

HYDRANT USE POT SIZE 80 MAT DICL LEVEL 27.27

1,5m WIDE REMOVABLE SLAB OVER PROPOSED WATER MAIN TO DWG No. C105

VALVE USE POT SIZE 150 MAT DICL LEVEL 27.38

WATER METER TO HYDRAULIC ENGINEERS DETAILS

WATER SUPPLY TO PROPOSED LOT 1

TEE USE POT SIZE 150 MAT DICL LEVEL -

END CAP USE POT SIZE 150 MAT DICL LEVEL 26.38

MAIN BEND 11.25 USE POT SIZE 150 MAT PVC-M CLASS 16

MAIN BEND 22.5 USE POT SIZE 150 MAT PVC-M CLASS 16

VALVE USE POT SIZE 150 MAT DICL LEVEL 27.40

TEE USE POT SIZE 150 MAT DICL LEVEL -

VALVE USE POT SIZE 150 MAT DICL LEVEL 27.39

VALVE USE POT SIZE 150 MAT DICL LEVEL 27.34

HYDRANT USE POT SIZE 80 MAT DICL LEVEL 27.32

VALVE USE POT SIZE 150 MAT DICL LEVEL 27.29

Valve Discharge Pipe

PROPERTY BOUNDARY

LOT 1 BUILDING 1

RTW

Logan City Council
PARTIAL AS CONSTRUCTED APPROVAL
For WATERMAIN CONNECTIC purposes only
Alan Rutherfoord on 03/03/2015
Ref # 677

N

0 5 10 12.5 metres
SCALE 1:250
scales quoted apply to original drawing scale

LAYOUT PLAN
SCALE 1:250

04-05010

AS CONSTRUCTED DETAILS

1. I STATE THE THE WORKS DESCRIBED ON THIS DRAWING HAVE BEEN CONSTRUCTED UNDER MY SUPERVISION, AND I OR MY AUTHORISED REPRESENTATIVES HAVE INSPECTED THE WORKS AT ALL STAGES OF CONSTRUCTION.

2. I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED TO MY SATISFACTION AND IN ACCORDANCE WITH THE DEVELOPMENT APPROVAL, THE APPROVED DRAWINGS, THE *LOGAN PLANNING SCHEME 2006* AND ANY RELEVANT PLANNING SCHEME POLICIES AND STANDARD SPECIFICATIONS.

3. I CERTIFY THE APPROVED DRAWINGS HAVE BEEN CAREFULLY COMPARED WITH THE WORKS SITE AS TO LINE, LEVELS AND DIMENSIONS, AND THIS DRAWING HAS BEEN ACCURATELY AMENDED IN ALL RESPECTS AS TO CONSTITUTE A TRUE RECORD OF THE WORKS.

PROJECT NAME	SERVICE STATION - NORTH MACLEAN		
COMPANY NAME	Infinitec Solutions Pty Ltd		
CONSULTANT	P Cavallucci		
RPEQ NUMBER	6324		
SIGNED		DATE	12.02.15

Rev	Description		Date
6	AS CONSTRUCTED	AvT	12.02.15
5	FOR CONSTRUCTION - CROSSOVERS REVISED	AvT	21.10.14
4	FOR CONSTRUCTION - SWD NOTE ADDED	AvT	21.10.14
3	FOR CONSTRUCTION - CROSSOVERS REVISED	AvT	07.10.14
2	WATER CONNECTION REVISED	AvT	06.08.14

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all horizontal information is to AMG
all vertical information is to AHD
DO NOT SCALE FROM DRAWING

Client: evansbuilt

infinitec
LEVEL 1, 230 LUTWYCHE ROAD, WINDSOR QLD 4030
P: 07 3857 8577 F: 07 3857 8577

Drawn	A.v.T.
Checked	P.J.C.
Signed	
RPEQ	No.: 6324 P Cavallucci

Project: 916-980 GREENBANK ROAD, NORTH MACLEAN

Title: WATER RETICULATION LAYOUT PLAN - SHEET 1

Drawing Number: 13547-C111

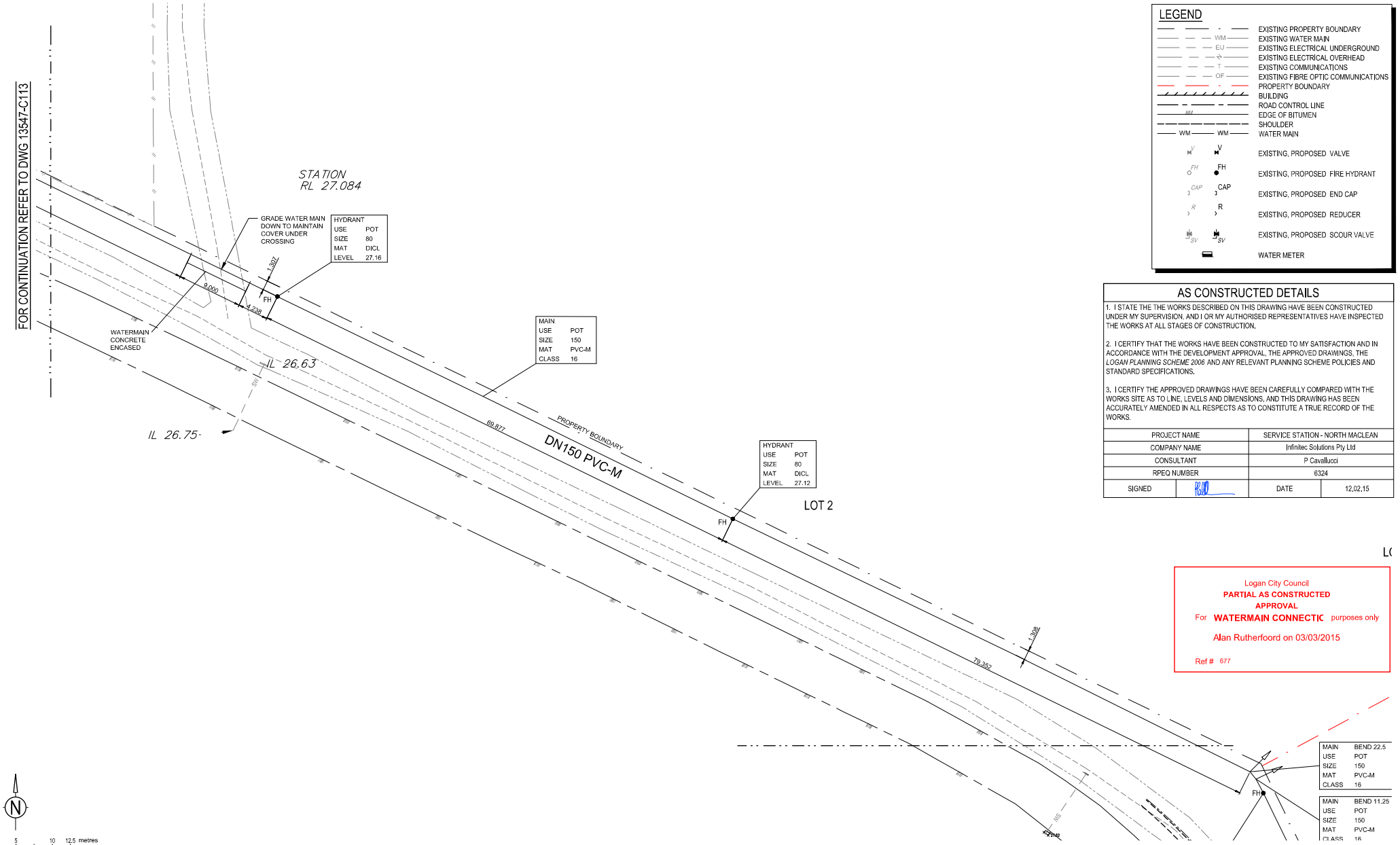
Scale: 1:250

Rev: 6

ALL WATER AND SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION

LEGEND

- EXISTING PROPERTY BOUNDARY
- WM — EXISTING WATER MAIN
- EU — EXISTING ELECTRICAL UNDERGROUND
- E — EXISTING ELECTRICAL OVERHEAD
- T — EXISTING COMMUNICATIONS
- OF — EXISTING FIBRE OPTIC COMMUNICATIONS
- PROPERTY BOUNDARY
- BUILDING
- ROAD CONTROL LINE
- EDGE OF BITUMEN
- SHOULDER
- WM — WM — WATER MAIN
- V — EXISTING, PROPOSED VALVE
- FH — EXISTING, PROPOSED FIRE HYDRANT
- CAP — EXISTING, PROPOSED END CAP
- R — EXISTING, PROPOSED REDUCER
- SV — EXISTING, PROPOSED SCOUR VALVE
- WATER METER



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2. I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED TO MY SATISFACTION AND IN ACCORDANCE WITH THE DEVELOPMENT APPROVAL, THE APPROVED DRAWINGS, THE *LOGAN PLANNING SCHEME 2006* AND ANY RELEVANT PLANNING SCHEME POLICIES AND STANDARD SPECIFICATIONS.

3. I CERTIFY THE APPROVED DRAWINGS HAVE BEEN CAREFULLY COMPARED WITH THE WORKS SITE AS TO LINE, LEVELS AND DIMENSIONS, AND THIS DRAWING HAS BEEN ACCURATELY AMENDED IN ALL RESPECTS AS TO CONSTITUTE A TRUE RECORD OF THE WORKS.

PROJECT NAME		SERVICE STATION - NORTH MACLEAN	
COMPANY NAME		Infinitec Solutions Pty Ltd	
CONSULTANT		P Cavallucci	
RPEQ NUMBER		6324	
SIGNED		DATE	12.02.15

Logan City Council
PARTIAL AS CONSTRUCTED APPROVAL
For **WATERMAIN CONNECTIC** purposes only
Alan Rutherfoord on 03/03/2015
Ref # 677

LAYOUT PLAN
SCALE 1:250

FOR CONTINUATION REFER TO DWG 13547-C111

04-05011

Rev	Description		Date
3	AS CONSTRUCTED	AvT	12.02.15
2	FOR CONSTRUCTION - ROAD REVISED	AvT	07.10.14
1	FOR CONSTRUCTION	AvT	15.07.14

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all horizontal information is to AMG
all vertical information is to AHD
DO NOT SCALE FROM DRAWING

Client: evansbuilt

infinitec
LEVEL 1, 230 LUTWYCHE ROAD, WINDSOR QLD 4030
P: 07 3857 8577 F: 07 3857 8577

Drawn	A.v.T.
Checked	P.J.C.
Signed	
RPEQ	No.: 6324 P Cavallucci

Project: 916-980 GREENBANK ROAD, NORTH MACLEAN

Title: WATER RETICULATION LAYOUT PLAN - SHEET 2

Drawing Number: 13547-C112

Scale: 1:250

Rev: 3

Appendix G

EDQ Pre-lodgement Meeting Minutes

PRE2022/633 - 946 to 960 Greenbank Rd, North Maclean

14 December 2022, 10:30AM – Microsoft teams

ATTENDEES

Name	Role
Brandon Bouda	EDQ DA, Manager (Planning)
Marco Bonotto	EDQ IS. Director (Engineering)
Jake Pitt	EDQ DA, Planner
Jake Morrison	DTMR Development integration, Senior Planner
Gary Savins	Wolter Consulting, Associate Director
Daniel Jeon	Wolter Consulting, Planner
Sammy Singh	Singh Properties, Landowner

MEETING MINUTES

1.	**Discussion for the application/client to provide context and rationale for the proposed development.** The applicant provided an overview of the Fast food premises project (Figure 1 and Figure 2).



Figure 1: *Proposal plan*

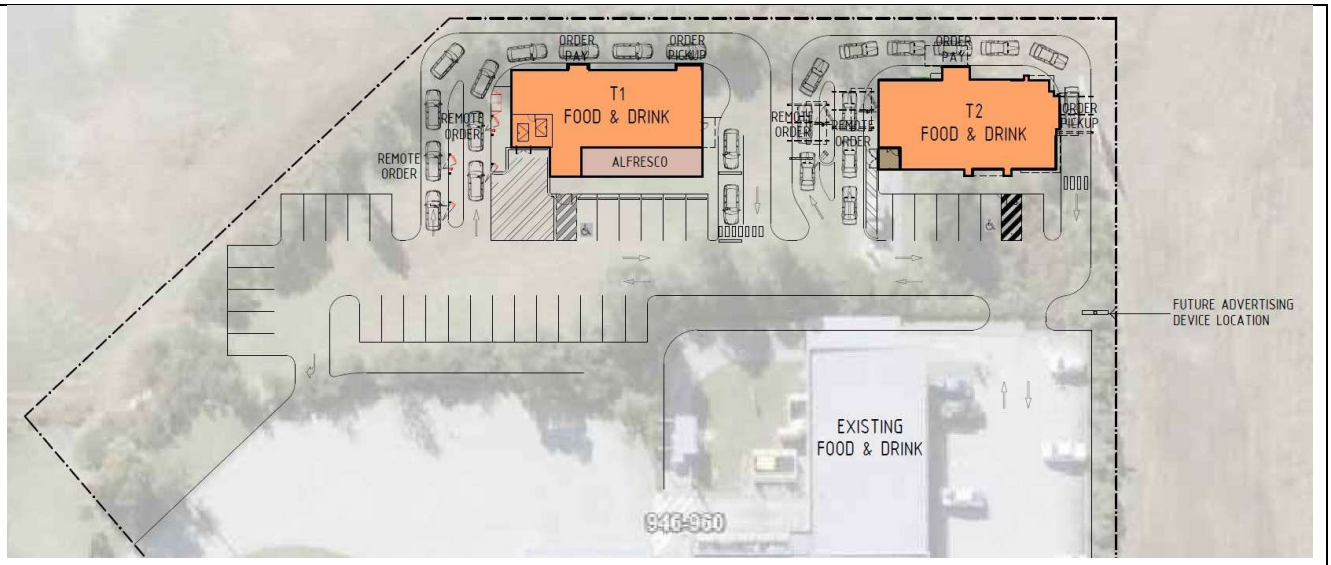


Figure 2: *Proposal plan*

2. Discussion regarding the level of assessment and confirmation of the assessment benchmark.

Level of assessment (Figure 3):

- Map 8 - Zones: Industry & business
- Schedule 2: Retail use category – Fast food premises
- Table 2 – Levels of assessment: Permissible development (MCU were Column 1, 2, and 3b do not apply)

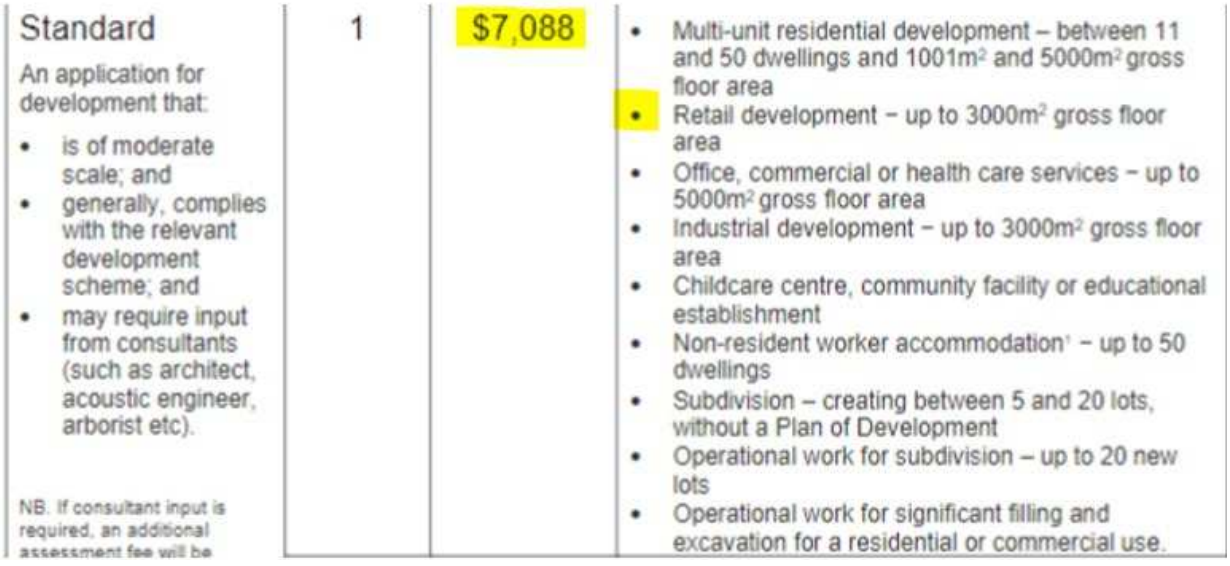
Column 1 Exempt development	Column 2 UDA self-assessable development	Column 3 – UDA assessable development	
		Column 3A Permissible development	Column 3B Prohibited development
In the Industry and business zone			
1. An environmentally relevant activity if: (i) a code of environmental compliance has been made for that activity under the *Environmental Protection Regulation 2008*, and (ii) the activity complies with that code. 2. If the land is not on the Environmental Management Register or Contaminated Land Register: (i) development specified in schedule 1 (ii) making a material change of use where complying with the car parking rates in the planning scheme and not involving building work (other than minor building work) or operational work for: (a) Emergency services (b) Low impact industry (c) Research and technology facility (d) Service industry (e) Showroom (f) Warehouse.	Nil.	1. Reconfiguring a lot that is not mentioned in schedule 1 2. Making a material change of use if (i) the use is not defined in schedule 2, or (ii) the change of use is not mentioned in columns 1, 2, or 3B. 3. Operational work or building work if the work is not mentioned in columns 1, 2, or 3B.	Development for: 1. Extractive industry 2. High impact industry 3. Noxious and hazardous industry 4. Residential 5. Rural 6. Tourist park.

Figure 3: *Levels of assessment*

Assessment benchmarks

Section 87 of the ED Act, specifically:

- Main purpose of the Act
- State Interest (i.e., any identified by DAMS mapping or SPP IMS mapping, and associated benchmarks such as SDAP state codes for State transport triggers under Planning Regulation 2017).
- Greater Flagstone UDA Development Scheme

	○ Vision ○ PDA wide criteria ○ Zone intent (including consideration for the GFA yield limitations under Table 1) ○ Footnotes supporting any of the criteria that link to sections of the Logan Planning Scheme, EDQ guidelines, EDQ practice notes etc. The development scheme references sections, codes, and policies from the old planning scheme of Beaudesert Shire, this is superseded and only equivalent sections of the current version of the Logan planning scheme should be assessed. ○ Suggested guidelines include: EDQ Guideline 7 - Low rise buildings; EDQ Guideline 10 - Industry and business areas; EDQ Guideline 13 - Engineering standards (Link). - Endorsed North Maclean Context Plan (Link) - Greater Flagstone PDA Development Charges and Offset Plan (DCOP)
3.	***Discussion and confirmation on relevant State referral triggers. It is noted that the subject site is within 25m of a state-controlled road and within 100m of a state-controlled road intersection.*** Advice provided by Department of Transport and Main Roads on 14 December 2022: • The applicant should provide a traffic impact assessment in compliance with TMR's Guide to Traffic Impact Assessment. • The applicant can review TMR's Roadside Advertising Manual here. • Further information about the Mount Lindesay Highway—North Maclean safety improvements, including the Greenbank Road and the Mount Lindesay Highway intersection upgrade, is available here.
4.	***Assessment fees & estimated timeframe.*** The Greater Flagstone PDA Scheme category for a Fast Food Premises is Retail. The proposal provides a GFA yield of 440m2. In accordance with EDQ's *2022–2023 Development Assessment Fees andCharges Schedule* the applicable fee for Retail uses up to 3,000m2 is **$7,088** (Figure 4).  Standard An application for development that: • is of moderate scale; and • generally, complies with the relevant development scheme; and • may require input from consultants (such as architect, acoustic engineer, arborist etc). NB. If consultant input is required, an additional assessment fee will be 1 $7,088 • Multi-unit residential development – between 11 and 50 dwellings and 1001m² and 5000m² gross floor area • Retail development – up to 3000m² gross floor area • Office, commercial or health care services – up to 5000m² gross floor area • Industrial development – up to 3000m² gross floor area • Childcare centre, community facility or educational establishment • Non-resident worker accommodation[1] – up to 50 dwellings • Subdivision – creating between 5 and 20 lots, without a Plan of Development • Operational work for subdivision – up to 20 new lots • Operational work for significant filling and excavation for a residential or commercial use. ***Figure 4:*** *Relevant fee* The estimated timeframe for an MCU not requiring public notification is 40 business days plus any time required for the Applicant to address any issues identified.
5.	***Discussion on required specialist reports.*** - Traffic impact assessment, in particular assessing impact to State Controlled intersection and suitability of existing access on Greenbank Rd and internal movement/parking. - Engineering services report - Earthwork's plan including remediation of effluent disposal area

- Site-based stormwater management plan (quantity and quality) – assessing existing basin capacity to be retained or for storage under pavement. No net worsening on state network
- Landscape concept plan
- Planning assessment report against criteria mentioned in item 2.
- Architectural plans

6. ***Discussion on planned sewer upgrades within the PDA area and potential to provide sewer connections outside of the PDA area, specifically to the east of the Mt Lindesay Hwy.***

Sewer is currently off-grid and a key issue for the proposed development. As illustrated on the North Maclean PDA context plan, a municipal sewer pump is planned to service the site (ref: NM2). This is further confirmed in the DCOP (ref: SPS002). For timing, it is expected that the sub-regional sewer pump NM1 and rising main (shown in Figure 6a) will be delivered by Council in Mid-2024.. Marco advised there are a number of proposed developments on the south of the North Maclean area that require the NM2 pump station. It is noted that NM2 pump station and its rising main (injecting to the NM1 rising main) form part of the Municipal Infrastructure under the DCOP and it is expected to be delivered by developers (as opposed to Sub-Regional Infrastructure that are delivered by Council). In order to facilitate the delivery of the NM2 pumps station, EDQ is engaging Council to undertake a siting study for the NM2 pump station and it is expected to have confirmation of the site in March 2023. Once, the site is confirmed, EDQ will commence discussions with relevant developers to explore delivery options.

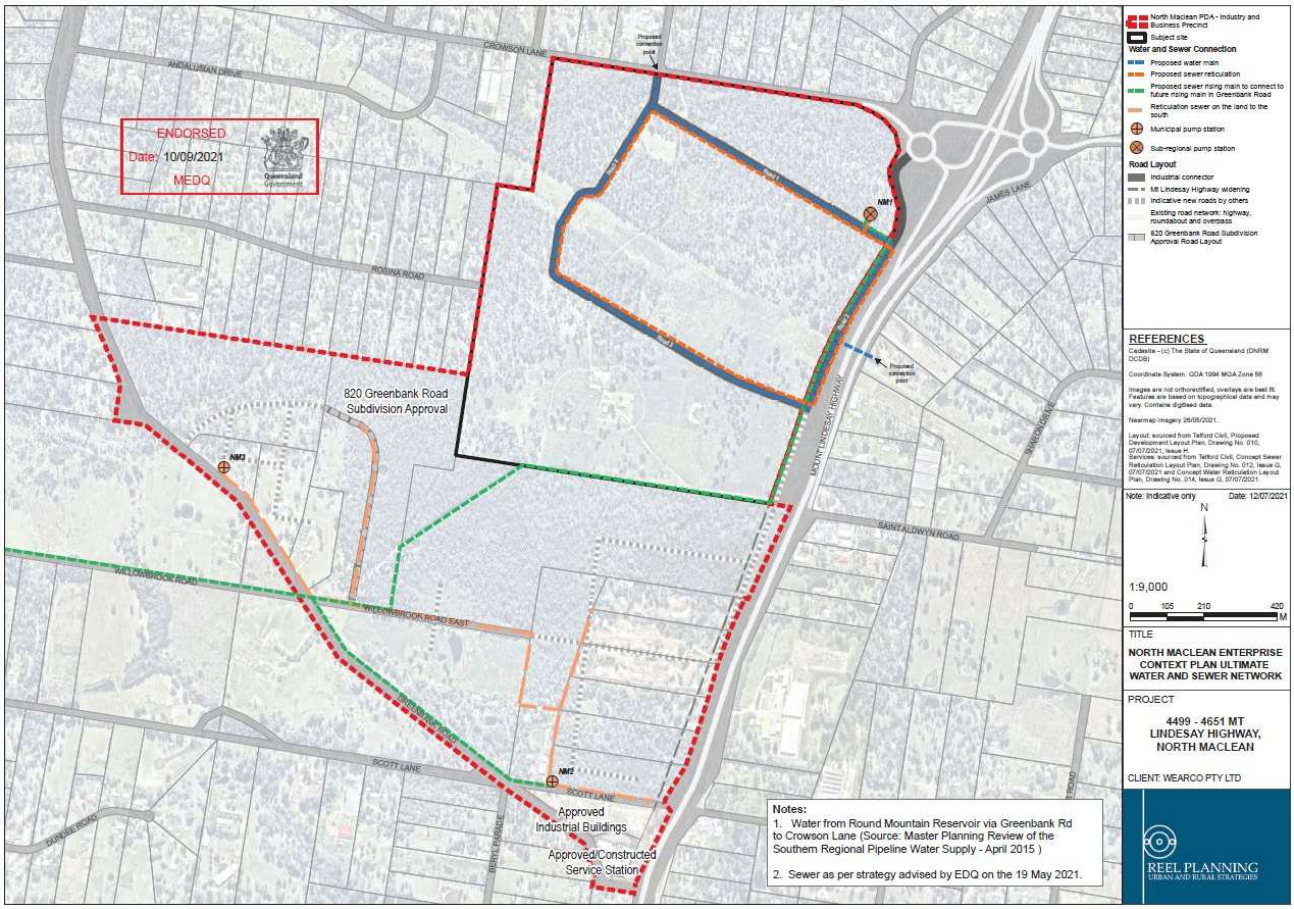


Figure 5: *Context plan*

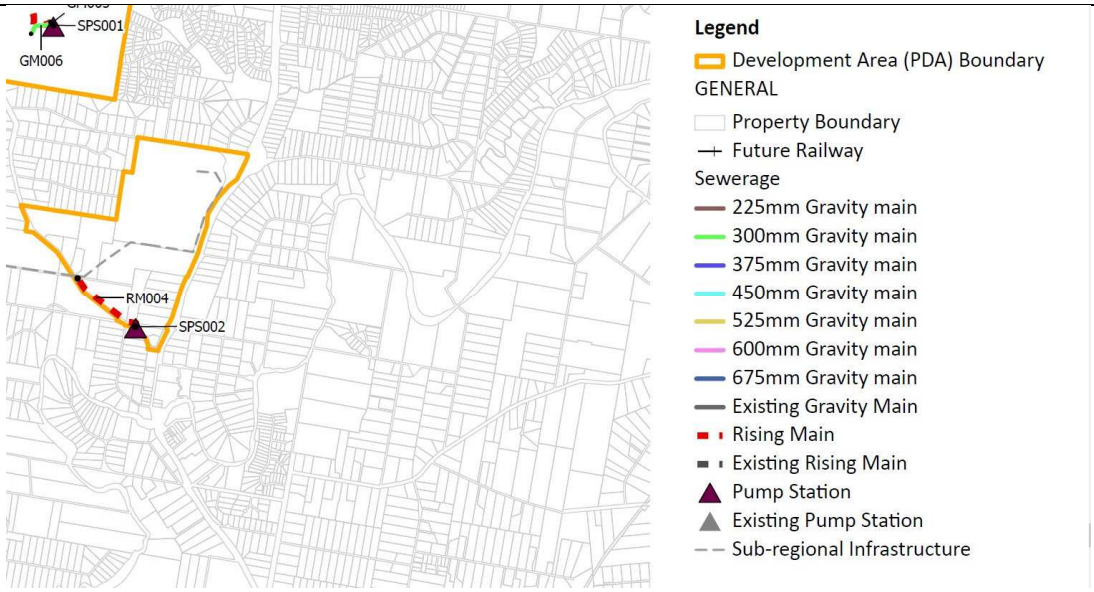


Figure 6: *DCOP*



Figure 6a: *Current Sewerage Strategy Staging*

Referring to Figure 6, the proposed development removes the current effluent disposal system and wet weather storage (and a stormwater basin). This sewer solution was required by conditions on the previous development approval (ref: *COM/60/2008/C*). The proposal does not offer an alternative interim solution until the municipal pump is delivered.

Condition 5.15

a. *Provide documentation for written approval from Council that there is sufficient area on site to accommodate the wet weather storage system as per ERA 63-1(a)(i) - Sewage Treatment permit.*

Advice Note: The on-site effluent treatment and disposal system must be in accordance with the 'Queensland Plumbing and Wastewater Code (3/11/2008)'; AS/NZS 1547:2000 On-site domestic-wastewater management; and Council's Planning Scheme and Policies.

Note: the above 'documentation' would sit with Council if sought.

Section 7 of the historic plan of development approval details Land irrigation design and modelling to support the ERA 63, in summary:

- Wet weather storage for 25,000L – licenced removal contractor to attend if reaching capacity
- 2450m2 irrigation area
- Irrigation area amelioration
- Separation distance from disposal area ranges for built form up-slope/down-slope, proximity to potable water, watercourses, dams etc.
- Stormwater diversion/retention away from disposal area
- Grease trap requirements

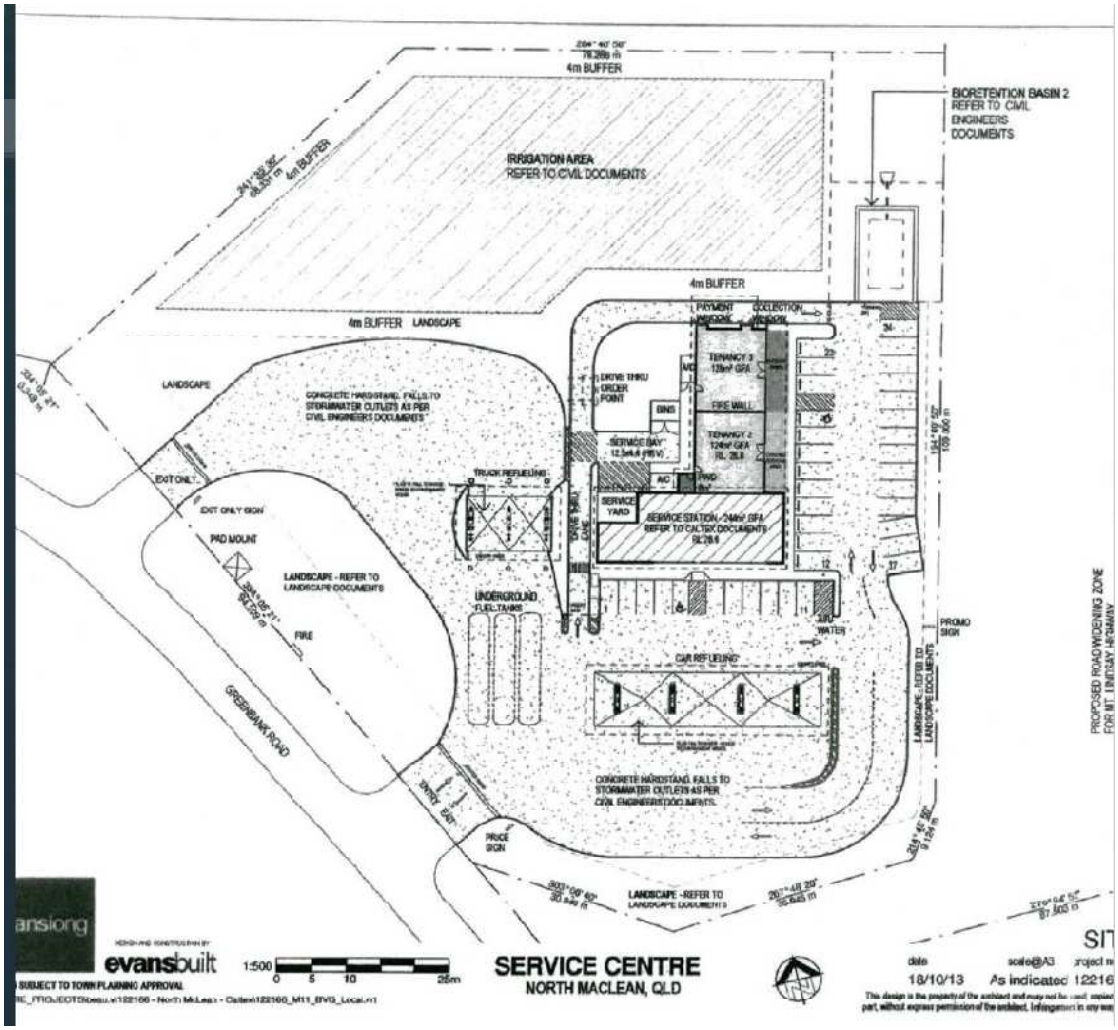


Figure 6: *Historic plan of development (Logan City Council ref: COM/60/2008/C)*



Figure 7: *Arial image of subject site*

7. ***Discussion on suitability of proposed Gross Floor Area***

The Development Scheme sets a maximum GFA for retail activity of 500sqm. It is noted that this proposal has an indicative GFA of 440sqm, thereby leaving around 60sqm of GFA for other activities. EDQ noted that as part of an industrial precent, small scall food premises (such as tuck shops, pie shops, carverys etc) are generally located in these areas (either stand-alone or as part of an industrial building) to provide for the immediate needs to of the workers. Given the size of the Industrial precinct EDQ suggested that it would like to see around 100sqm of GFA available for these small scale food premises, thereby provide around 3-4 other options for workers. This would require the reduction in the GFA of these two food and drink outlets proposed.

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