APPENDIX F

Civil Engineering Services Report

Prepared by:

Pinnacle Engineering





ENGINEERING SERVICES REPORT

PROPOSED CENTRE DEVELOPMENT
Homestead Drive, Flagstone QLD

BLUEPOINT FLAGSTONE PTY LTD

JUNE 2025 REVISION 05



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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).

Bogdan Popa (RPEQ No. 12349)

B. Zya

Pinnacle Engineering Group P.O. Box 517 Paradise Point, QLD 4216

PH: +61 449 892 576

E: bogdan@pinnacleeng.com.au

www.pinnacleeng.com.au



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1 Introduction

Pinnacle Engineering Group (Pinnacle) was engaged by Bluepoint Flagstone Pty Ltd to undertake the preliminary engineering investigations to provide supporting documentation for the proposed development application for a commercial, retail and future residential development located at Homestead Drive, Flagstone QLD located in Logan City Council (LCC) under the authority of Economic Development Queensland (EDQ).

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
- Gas. Electrical and Telecommunications.

1.2 Site Description

1.2.1 Site Location

Street Address - Homestead Drive, Flagstone QLD

RP Description - Lot 25007 and 25009 on SP303120

Total Site Area - 6.5236 Hectares

Current Zoning - Priority Development Area

Proposed Use - Commercial, Retail, and Residential (Future) Development Precinct

Local Authority - Logan City Council (LCC)

Assessment Authority - Economic Development Queensland (EDQ)

Refer to Figure 1.1 for the site location.

1.2.2 Existing Site Conditions and Topography

The subject site is generally clear of significant structures and vegetation. As a result of previous earthworks operations, the site generally grades north, into an existing dam within the northeast corner of the site, and subsequently into the existing dam within the adjacent property to the northeast being Lot 905 on SP216472. The highest elevation of the site of RL50.50m AHD is reached at the southwest corner of the site while the lowest elevation of approximately RL36.25m AHD is reached along the northern property boundary adjacent to the future New Beith Road reserve. The site is currently burdened by an existing easement (EMT M on SP303120) which is aligned along the northern boundary of Lot 25007 on SP303120.

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 development will deliver commercial and retail tenancies across the two existing allotments, along with associated carparking and road infrastructure, and will be delivered in four stages. A residential development is planned for the site's northeastern corner, and is to be delivered as part of a future stage. Access to these developments will be facilitated via the proposed extensions of Hollows Road and New Beith Road.

A 'Reconfiguration of a Lot' (ROL) application is anticipated for Lot 25009 on SP303120 to subdivide the current parcel into eight lots. This subdivision will allocate individual lots to the commercial and retail tenancies T1-T5 and T10, the future residential development, and a road reserve lot for the proposed extension of Hollows Road which will be dedicated to Council. The remaining commercial and retail tenancies T6-9 will occupy a shared lot.

Stage 1 of the proposed development involves delivery of tenancies T4–T9, which includes three fast-food outlets, a car wash, a showroom, a retail store, and the Hollows Road extension. Stage 2 will deliver the remaining fast-food tenancy (T3). Stage 3 will encompass the construction of T1 and T2 showrooms and their associated carparking facilities, while Stage 4 will deliver tenancy T10 and the extension of New Beith Road. The residential development will be delivered separately as part of future works.

Plans detailing the proposed development are included within Appendix A.





Figure 1.1: Map View (Source: Google Maps)



Figure 1.2: Aerial View (Source: Queensland Globe)



2 Project History

2.1 Flagstone City Masterplan for Peet Limited

Ongoing consultation with Economic Development Queensland (EDQ) has confirmed that the subject site is part of a previously approved Masterplan Development by Peet Limited. A review of the relevant planning and engineering documentation indicates that EDQ has endorsed a Masterplan solution for managing stormwater quality, quantity, and flood mitigation across the broader Flagstone East area. A summary of previous reports and is provided below, with an objective discussion provided in Pinnacle's Site-Based Stormwater Management Plan which should be referred to for further details. These documents can be provided by Pinnacle, separate to this report.

2.1.1 Key Reference Reports

- Flagstone City Masterplan, Flooding Assessment, by Cardno Pty Ltd (now Stantec) for Peet Flagstone City Pty Ltd (report reference: 721743/032/V6, 2014).
- Flagstone City Stage 7, Stormwater Management Report, by Cardno Pty Ltd (now Stantec) for Peet Flagstone City Pty Ltd (report reference: 7217/43/R11/V1, 2015).
- Stormwater Management Plan at Flagstone Stage 7 North, by Bradlees Civil Consulting (now Meinhardt Australia) for Peet Flagstone City Pty Ltd (report reference: 15-891, Revision A, 2017).
- Stormwater Infrastructure Master Plan, by Meinhardt Australia (report reference: Stormwater IMP, version 1.4, 2018).
- Flagstone Stage 7A-G Stormwater Management Strategy Technical Memorandum by Peak Urban (now Colliers) for Peet Flagstone City Pty Ltd (report reference: 20-0178.TM02.DC.DOCX, 2020)
- Stormwater Management Plan, Flagstone Stages 7C/D/G by Peak Urban (now Colliers) for Peet Flagstone City Pty Ltd (report reference: 20-0178SMP01-V1, 2021).



3 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 (SMP) for the subject site prepared by Pinnacle for an in-depth analysis of the prevailing stormwater conditions.

The stormwater management strategy described in the following sections of this report has been developed with reference to, and is generally consistent with, previous design documentation prepared by Peak Urban in 2020 and 2021. Refer to Pinnacle's SMP for further details.

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

3.1 Existing Drainage System

Currently, stormwater generated within the subject site, and the external catchments to the south and east are conveyed north, into an existing dam within the site that is adjacent to the intersection of New Beith Road and Parkside Drive.

Adjacent to the site, a pit and pipe stormwater network beneath the Hollows Road and Allis Street Road reserves captures flows from surrounding developments, conveying them into an existing drainage channel within the site via a 750mm diameter pipe and culvert headwall. Similarly, flows generated within the adjacent Flagstone Early Learning Centre are discharged into the site's existing drainage channel via a 450mm diameter pipe and culvert headwall.

Additional stormwater pit and pipe systems are located beneath the Homestead Drive and the Wild Mint Drive road reserves to the south and east of the subject site, respectively.

3.2 Flood Assessment

A review of the LCC interactive online mapping system has identified that the subject site is partially located within the mapped flood affected zone as a result of adjacent tributaries. The defined 1% AEP flood level is 36.7m AHD which encroaches into the northern corner of the site.

However, we refer EDQ to the approved Masterplan flooding solution report, *Flagstone City – Masterplan, Flooding Assessment*, by Cardno Limited (now Stantec) for Peet Flagstone City Pty Ltd (report reference: 721743/032/V6, 2014). This report concludes that the implementation of catchment-wide culverts and detention basins results in negligible flood impact both upstream and downstream of the Flagstone City Masterplan development.

Analysis of TUFLOW peak water surface levels in Figure B1 confirms that the northern corner of the site is subject to flooding from adjacent tributaries during the 1% AEP storm event. Conversely, Figures C1 and D1 indicate that post-development, the site remains flood-free under the 1% AEP storm condition, attributed to enhanced routing and storage provided by the proposed culvert and basin system networks within the wider catchment.

The relevant LCC Planning Scheme maps are included within Appendix E.

3.3 External Catchments

Multiple upstream external catchments have been identified, including the existing commercial and retail development southeast of the site and the Flagstone Early Learning Centre to the east, at the corner of Allis



Street and Wild Mint Drive. Flows generated within these catchments are discharged into the subject site via piped and overland flow. The existing stormwater reticulation network beneath Allis Street and Hollows Road discharges into a drainage channel within the site via a 750mm diameter pipe and culvert. Similarly, flows generated by the childcare facility are discharged into the same drainage channel via a 450mm diameter pipe and culvert. These external catchments are incorporated into the stormwater analysis of the proposed development. It is noted that the quantity and quality of flows generated from these catchments will be mitigated by the regional bio-retention and detention basin proposed by Peak Urban. Refer to Section 2 Pinnacle's Site-Based Stormwater Management Plan for details.

3.4 Lawful Point of Discharge

The Lawful Point of Discharge for the subject site is taken as Lot 905 on SP216472, and subsequently the existing adjacent Sandy Creek as documented in previous approved reporting.

3.5 **Proposed Drainage Works**

Stormwater runoff from the post-development site will be managed using the combination of an off-site regional dual-use bio-retention/detention basin, a dual-use treatment/detention tank, and a treatment tank. This strategy is considered generally in accordance with the previously approved reporting by Peak Urban in 2020 and 2021.

The off-site basin is designed to will attenuate minor storm flows (from the 63.21% AEP up to and including the 10% AEP threshold) from the post development site (excluding Catchment B1); with major flows (such as those from a 1% AEP storm) to be managed by regional infrastructure described in the *Stormwater Infrastructure Master Plan*, by Meinhardt Australia (report reference: Stormwater IMP, version 1.4, 2018). Additionally, this basin will treat runoff from the broader post-development area (Catchments A, Ext 1, and Ext 2), with the remaining site areas (Catchment B) managed locally through an on-site treatment train that utilises gross pollutant traps and proprietary filter cartridges within an underground tank.

All stormwater management systems are configured to discharge at the designated Lawful Point of Discharge, being Lot 905 on SP216472, and ultimately the adjacent Sandy Creek. In accordance with QUDM, the minor 39.35% AEP storm discharge (Q_2) 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.



4 Water Reticulation

4.1 Existing Infrastructure

A review of the BYDA data, the topographic survey as well as Council records has identified existing 100mm and 150mm modified polyvinylchloride (PVC-M) water mains to the south of the subject site. A 150mm diameter main runs north-south beneath Hollows Road, terminating at a temporary end on the southern boundary to allow for future extension. Existing developments along Allis Street are serviced by this 150mm main via a 100mm diameter PVC-M main which branches west. Additionally, a 375mm diameter ductile iron cement-lined (DICL) water main follows the alignment of New Beith Road before diverging northeast adjacent to the boundary of the subject site.

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

4.2 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 current Logan City Council Planning Scheme (2015). These demands were used to determine the consumption rates for the proposed development.

Potable water demand factors and flow parameters have been taken from Part 4.4.1 of the LCC Planning Scheme to determine the potable water consumption rates for the proposed development. The design parameters and results are presented in Table 4.1.

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

Design Parameter	Potable Water Factors and Demands							
Catchment Description / Type	T1 & T2 Commercial	T3 Commercial	T4 Commercial	T5 Commercial	T6-9 Commercial	T10 Commercial	Future Residential	
Area of Land (Ha)	3.4162	0.2169	0.2284	0.2125	0.5684	0.5635	0.7768	
EP/Ha			3	0			30	
Equivalent Persons (EP)	102.49	6.51	6.85	6.38	17.05	16.91	23.30	
Estimated Non-Revenue Water (NRW)		30L/EP/day						
Average Day Flow (AD)			230 L/EF	P/day + NRW (30L	/EP/day)			
Mean Day Max Month (MDMM)		1.5 x AD						
Peak Day (PD)				2.0 x AD				
Peak Hour (PH)				2.8 x AD			4.0 x AD	
AD	26,646L/day or 0.309L/s	1,692L/day or 0.020L/s	1,782L/day or 0.021L/s	1,658L/day or 0.020L/s	4,434L/day or 0.051L/s	4,395L/day or 0.051L/s	6,059L/day or 0.070L/s	
MDMM	38,432L/day or 0.445L/s	2,440L/day or 0.029L/s	2,570L/day or 0.030L/s	2,391L/day or 0.028L/s	6,395L/day or 0.074L/s	6,339L/day or 0.074L/s	8,739L/day or 0.101L/s	
PD	50,218L/day or 0.582L/s	3,189L/day or 0.037L/s	3,358L/day or 0.039L/s	3,124L/day or 0.037L/s	8,356L/day or 0.097L/s	8,284L/day or 0.096L/s	11,419L/day or 0.132L/s	
PH (Maximum)	69,076L/day or 0.800L/s	4,386L/day or 0.051L/s	4,618L/day or 0.054L/s	4,297L/day or 0.050L/s	11,493L/day or 0.133L/s	11,394L/day or 0.132L/s	22,139L/day or 0.256L/s	
Fire Flow			30	L/s			15L/s	
Maximum Demand	30.800L/s	30.051L/s	30.054L/s	30.050L/s	30.133L/s	30.132L/s	15.256L/s	

Note: No peaking factors have been applied to NRW.



Based on the above assessment, the proposed development will place a maximum hour demand of 1.476L/s plus a fire flow demand of 30L/s for all commercial and retail areas and 15L/s for all residential areas.

The preliminary investigations above conclude that a 150mm diameter main will service the proposed development. Large water meters will be required for fire and domestic supply, subject to sizing during the detailed design phase of the project.

4.3 Proposed Water Reticulation Works

It is envisioned that the subject development will be serviced by extending the existing 150mm PVC main at the southern boundary north beneath the proposed Hollows Road Extension. This strategy will involve the construction of a new 150mm diameter PVC main to connect the temporary end arrangement at the southern site boundary to the existing main within the New Beith Road reserve to the north. Tenancies T2 and T10 are expected to connect directly into the existing main adjacent to the northeastern site boundary (size and material of this existing main are to be confirmed).

The detailed design for the water reticulation and connection is anticipated to be completed by Pinnacle as part of a future Operational Works application to Council. Additionally, the internal water infrastructure's design will be undertaken during the project's detailed design phase by a hydraulic consultant and submitted through a future Plumbing and Drainage application to Council.

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



5 Sewerage Reticulation

5.1 Existing Infrastructure

A review of the available data, the topographic survey and Council records has confirmed that existing an existing sewerage network consisting of 150mm PVC and ductile iron cement lined (DICL) sewers bisecting the subject site. This reticulation network is aligned south to north, connecting infrastructure beneath Hollows Road to the infrastructure beneath New Beith Road and Parkside Drive. The topographic survey is included in Appendix B with the BYDA and sewer design data included within Appendix D. As Constructed data for the above infrastructure is included within Appendix F.

5.2 **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 5.1 below.

Table 5.1: Sewerage Demand Factors and Consumption Rates (Proposed Development Only)

Design Parameter		Potable Water Factors and Demands							
Catchment Description / Type	T1 & T2 Commercial								
Area of Land (Ha)	3.4162	3.4162 0.2169 0.2284 0.2125 0.5684 0.5635							
EP/Ha			5	0			50		
Equivalent Persons (EP)	170.81	10.85	11.42	10.63	28.42	28.18	38.84		
Average Dry Weather Flow (ADWF)				210L/EP/Day					
C2 (= 4.7 x EP-0.105)	2.74	3.66	3.64	3.67	3.31	3.31	3.20		
ADWF	35.870kL/day or 0.415L/s	2.277kL/day or 0.026L/s	2.398kL/day or 0.028L/s	2.231kL/day or 0.026L/s	5.968kL/day or 0.069L/s	5.917kL/day or 0.068L/s	8.156kL/day or 0.094L/s		
PDWF (C2 x ADWF)	98.269kL/day or 1.137L/s	8.334kL/day or 0.096L/s	8.728kL/day or 0.101L/s	8.182kL/day or 0.095L/s	19.738kL/day or 0.228L/s	19.586kL/day or 0.227L/s	26.105kL/day or 0.302L/s		
PWWF (5 x ADWF)	179.351kL/day or 2.076L/s	11.387kL/day or 0.132L/s	11.991kL/day or 0.139L/s	11.156kL/day or 0.129L/s	29.841kL/day or 0.345L/s	29.584kL/day or 0.342L/s	40.782kL/day or 0.472L/s		
Design Flow	2.076L/s	0.132L/s	0.139L/s	0.129L/s	0.345L/s	0.342L/s	0.472L/s		

Based on the above assessment it is envisaged that the proposed development will place a total peak design flow demand of 3.635L/s based on the proposed commercial and retail tenancies as well as the future residential area. Engineering services layouts detailing the proposed sewerage infrastructure are included within Appendix C.

5.3 Proposed Works

The proposed development will connect to the existing sewerage infrastructure located within and adjacent to the site via multiple new 150mm PVC sewerage property connections and diversion mains. 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.



6 Bulk Earthworks

6.1 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).

6.2 General Site Earthworks

A soil assessment report was prepared by Pacific Geotech Consulting Geotechnical Engineers to provide guidance to the treatment of the site prior to and during the earthworks construction and suitability for building foundation construction. We refer Council to this report for further details on the underlying geotechnical conditions of the site. Furthermore, 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.

6.3 Retaining Structures

Where retaining structures are required they will be designed such that the maximum height will be limited to 5.00m in accordance LCC Planning Scheme and AS4678-2007. 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.

6.4 Acid Sulphate Soils

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

6.5 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.

6.6 Preliminary Site Grading

In accordance with the above requirements, Pinnacle has prepared a preliminary site grading for the site as well as preliminary road gradings of the Hollows Road extension. The preliminary site grading plan and cross sections and Hollows Road cross and longitudinal sections are included in Appendix C and should be referred to for further details. We note that the final bulk earthworks are subject to detailed design and an Operational Works application to Council prior to the commencement of construction works on site.



7 Roadworks

7.1 Hollows Road

Hollows Road is an urban collector road and currently comprises of a sealed median separated dual carriageway two lane standard along the site frontage.

The extension of Hollows Road will incorporate kerb and channel along the site frontage with line marking as required, as well as street lighting infrastructure. On-street car parking will be available from both northbound and southbound traffic lanes. The existing section of Hollows Road will be extended through to the existing intersection between New Beith Road and Parkside Drive to the north. Preliminary longitudinal and cross-sectional sketches are available in Appendix C.

7.2 Site Access

Connectivity and access for the proposed development will be provided through extensions to Hollows Road and New Beith Road. Heavy-duty vehicle crossings on the Hollows Road and New Beith Road extensions will accommodate the future residential development and commercial tenancy T10, respectively. A proposed roundabout along the Hollows Road extension will serve all other commercial tenancies, with a heavy-duty vehicle crossing on the New Beith Road extension providing a secondary access point for commercial tenancies T1 and T2. All vehicle cross-overs will be designed and constructed in accordance with IPWEA standard drawing RSD-102.



8 Gas, Electrical and Telecommunications

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

The BYDA investigation confirmed the location of underground telecommunications infrastructure, owned and operated by NBN, within the southern verge of the Homestead Drive road reserve to the south of the subject site. Additional underground communications infrastructure is located within the existing residential subdivision to the north of the subject site, as well as within the Wild Mint Drive road reserve to the east.

Similarly, underground powerlines, owned and operated by Energex, are located within the Homestead Drive New Beith Road and Hollows Road reserves to the south, north and east of the subject site respectively.

A gas main owned and operated by APA Gas is located within the Homestead Drive and Hollows Road reserve to the south and east of the subject site respectively.

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

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



9 Impacts on Local Infrastructure and Likely Upgrades

The proposed commercial and retail development will result in 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 9.1 below.

Table 9.1: Local Infrastructure Impacts and Requirements

Infrastructure Type	Service Provider	Impacts	Connection and/or Upgrade Requirements
Water Reticulation	Logan Water	Additional water demand due to the proposed development	A new 150mm PVC main will be constructed, extending from the existing infrastructure within Hollows Road to the New Beith Road reserve. Multiple connections will be provided to the proposed development site, utilising the newly constructed PVC main and surrounding existing mains.
Sewerage Reticulation	Logan Water	Additional Sewer loadings due to the proposed development	Provide multiple 150mm PVC (SN8) sewerage property connections for the subject development via the existing 150mm PVC and DICL main beneath the Hollows Road extension.
Stormwater Drainage	LCC	Increase runoff and pollutant loading	Provide treatment and attenuation of stormwater prior to discharge from site to the Lawful Point of Discharge. This strategy involves the combination of an off-site regional dual-use bioretention/detention basin, a dual-use treatment/detention tank, and a treatment tank as well as a stormwater reticulation network.
Telecommunications	Telstra	New connections	New connection to existing telecommunications infrastructure located within the adjacent road reserves as required.
Electrical	Energex	New Connections	New connection to existing electrical infrastructure located within the adjacent road reserves as required.
Gas	APA Gas	New Connections (If Required)	New connection to existing gas infrastructure located within the adjacent road reserves as required.



10 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

Flagstone City – Masterplan, Flooding Assessment, by Cardno Pty Ltd (now Stantec) for Peet Flagstone City Pty Ltd (report reference: 721743/032/V6, 2014).

Flagstone City – Stage 7, Stormwater Management Report, by Cardno Pty Ltd (now Stantec) for Peet Flagstone City Pty Ltd (report reference: 7217/43/R11/V1, 2015).

Stormwater Management Plan at Flagstone Stage 7 North, by Bradlees Civil Consulting (now Meinhardt Australia) for Peet Flagstone City Pty Ltd (report reference: 15-891, Revision A, 2017).

Stormwater Infrastructure Master Plan, by Meinhardt Australia (report reference: Stormwater IMP, version 1.4, 2018).

Flagstone Stage 7A-G – Stormwater Management Strategy Technical Memorandum by Peak Urban (now Colliers) for Peet Flagstone City Pty Ltd (report reference: 20-0178.TM02.DC.DOCX, 2020)

Stormwater Management Plan, Flagstone – Stages 7C/D/G by Peak Urban (now Colliers) for Peet Flagstone City Pty Ltd (report reference: 20-0178SMP01-V1, 2021).



Appendix A **Proposed Development Plans**



□ commercial /industrial/retail fast food restaurant design

Proposed MIXED USE DEVELOPMENT HOLLOWS ROAD, FLAGSTONE

24072-DA01

.... B2

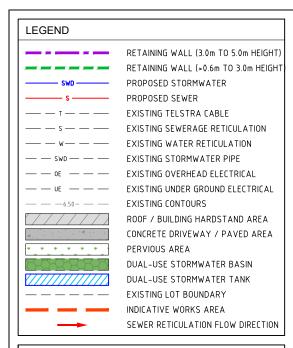


Appendix B **Topographic Survey**





Appendix C **Engineering Layouts**



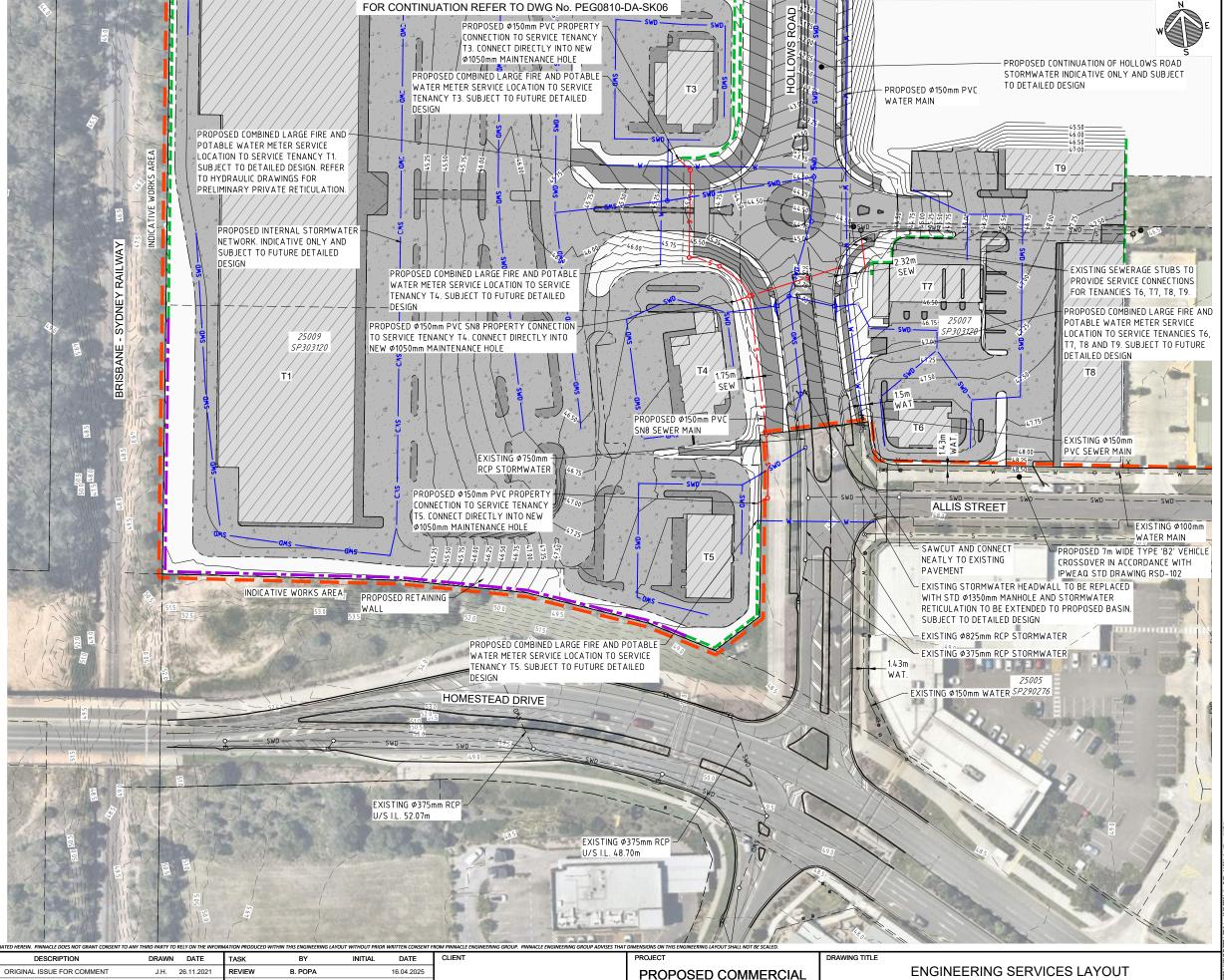
NOTES

- THE LOCATION OF THE EXISTING SERVICES HAS BEEN PLOTTED FROM SURVEY AND RECORDS AND IS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
- 2. THE FINAL ALIGNMENT AND SIZING OF THE SERVICES INTERNAL TO THE PROPOSED DEVELOPMENT IS PRELIMINARY ONLY AND SUBJECT TO DETAILED DESIGN AND FUTURE OPERATIONAL WORKS APPLICATIONS TO COUNCIL.



The Essential First Step.

UNDERGROUND PUBLIC UTILITY PLANT EXISTS IN THIS VICINITY. THE CONTRACTOR IS ADVISED TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM THE EXACT LOCATION OF PUBLIC UTILITY PLANT ON SITE PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR CONSTRUCTION WORKS.





REVISED LAYOUT AND DESIGN 16.04.2025 DESIGN J. WATERS 16.04.2025 REVISED LAYOUT AND DESIGN J.W. 26.05.2025 16.04.2025 SCALE REVISED LAYOUT AND DESIGN J.W. 13.06.2025

BLUEPOINT FLAGSTONE PTY LTD

DEVELOPMENT 'FLAGSTONE' - PRECINCT 1 (LOT 25007 & 25009 ON SP303120)

SHEET 1 OF 2

STATUS **PRELIMINARY**

(NOT TO BE USED FOR CONSTRUCTION)

PEG0810-DA-SK05 | D

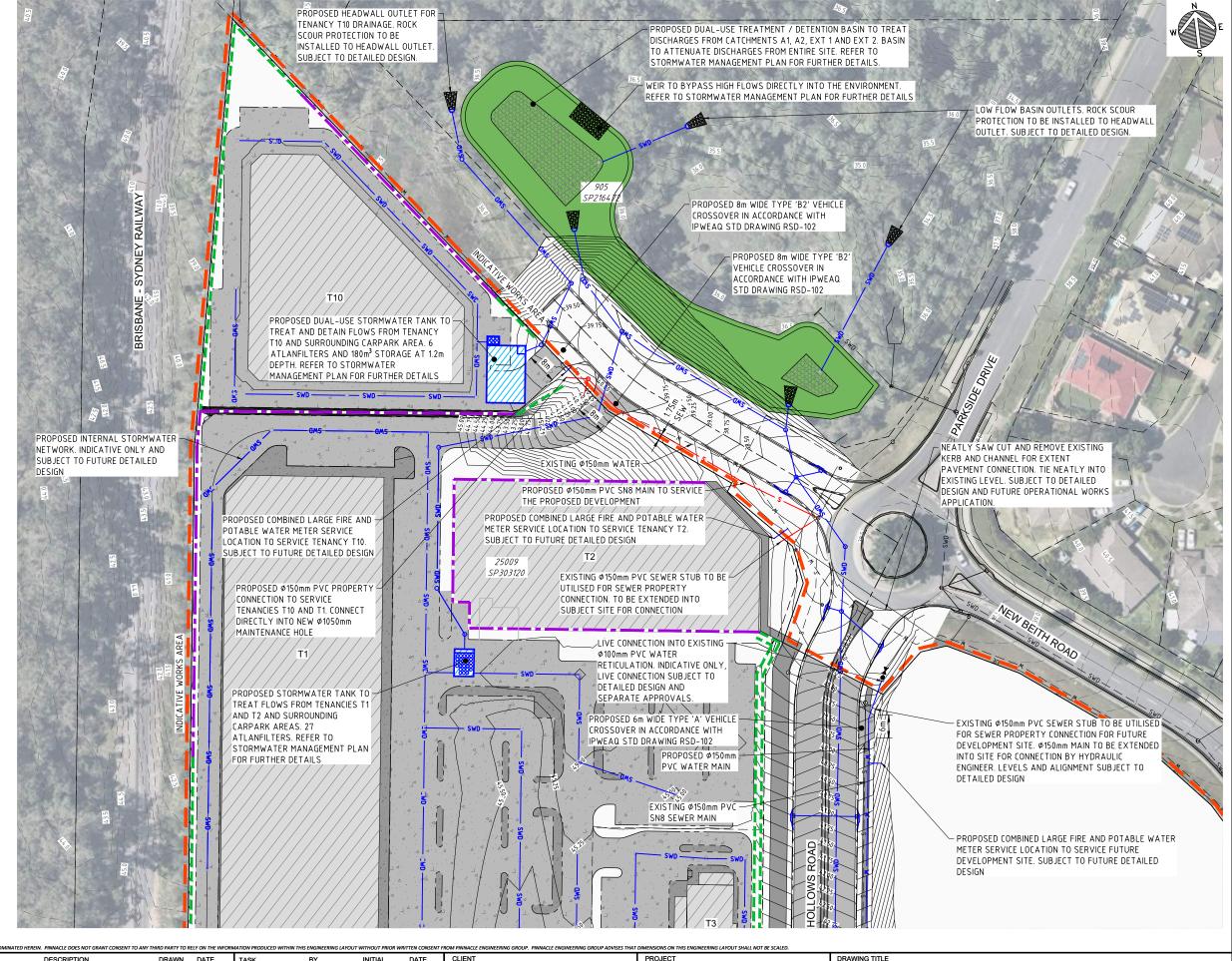
LEVEL 1 19 SHORT STREET, SOUTHPORT QLD 4215 (PO BOX 517, PARADISE POINT QLD 4216) WWW.PINNACLEENG.COM.AU

(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)



The Essential First Step.

UNDERGROUND PUBLIC UTILITY PLANT EXISTS IN THIS VICINITY. THE CONTRACTOR IS ADVISED TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM THE EXACT LOCATION OF PUBLIC UTILITY PLANT ON SITE PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR CONSTRUCTION WORKS.





	REV	DESCRIPTION	DRAWN	DATE	TASK	BY	INITIAL	DATE
۱	Α	ORIGINAL ISSUE FOR COMMENT	J.H.	26.11.2021	REVIEW	B. POPA		16.04.2025
	В	REVISED LAYOUT AND DESIGN	J.H.	16.04.2025	DESIGN	J. WATERS		16.04.2025
	С	REVISED LAYOUT AND DESIGN	J.W.	26.05.2025	DRAWN	J. HARDMAN		16.04.2025
	D	REVISED LAYOUT AND DESIGN	J.W.	13.06.2025	SCALE			
					SCALE	10 0	10	20 ■ 1:500
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BLUEPOINT FLAGSTONE PTY LTD PROPOSED COMMERCIAL DEVELOPMENT 'FLAGSTONE' - PRECINCT 1 (LOT 25007 & 25009 ON SP303120) DRAWING TITLE

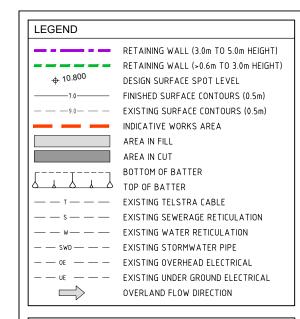
ENGINEERING SERVICES LAYOUT SHEET 2 OF 2

STATUS

) RPEQ

PRELIMINARY
(NOT TO BE USED FOR CONSTRUCTION)

PEG0810-DA-SK06 D



CUT & FILL VOLUMES

CUT TO FILL ON LEADS = 46,858 m³
IMPORT TO STRUCTURAL FILL = 44,933 m³

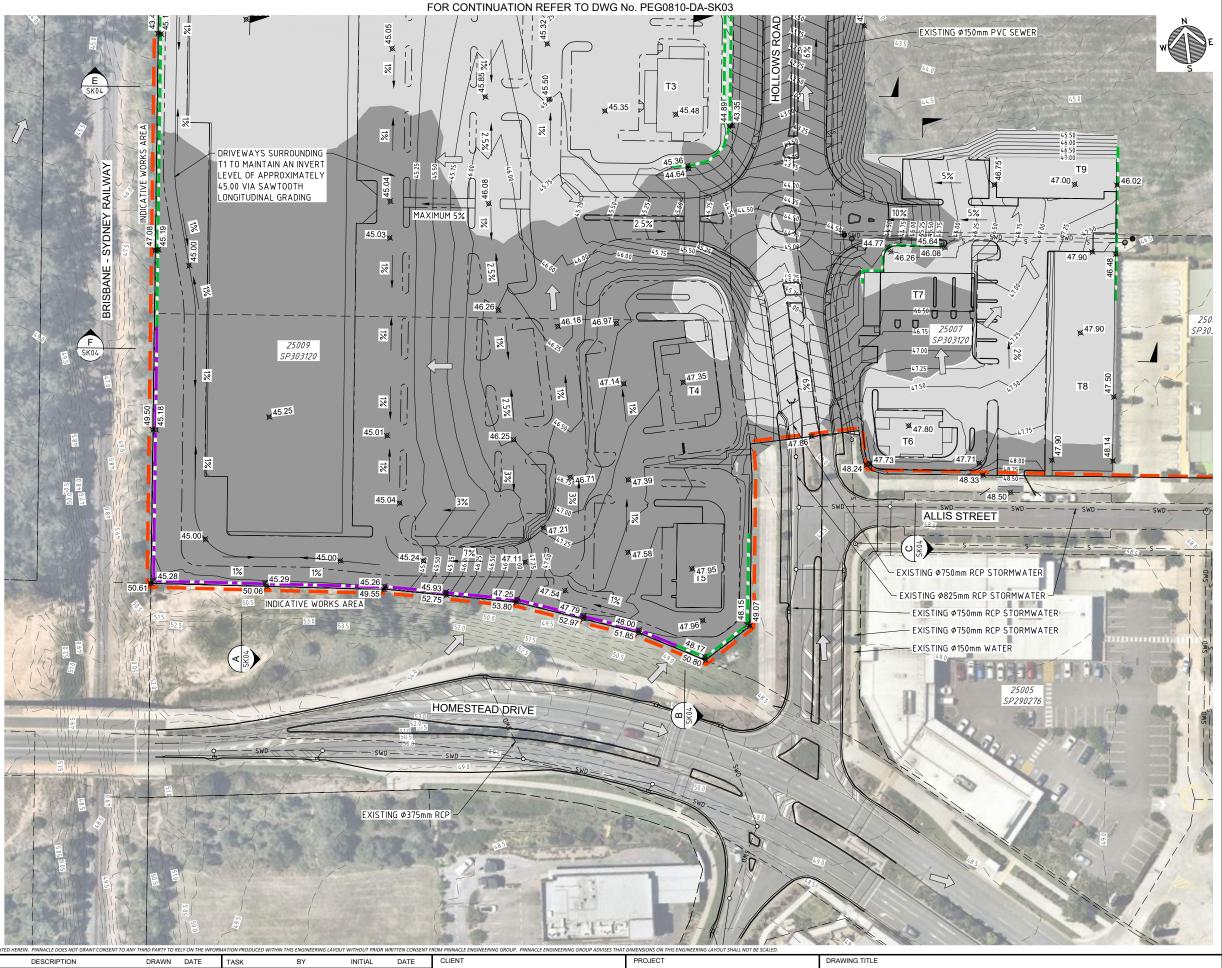
NOTE: 10% COMPACTION FACTOR APPLIED

NOTES

- THE LOCATION OF THE EXISTING SERVICES HAS BEEN PLOTTED FROM RECORDS AND IS TO BE CONFIRMED.
- 2. THE FINAL ALIGNMENT AND SIZING OF THE SERVICES IS PRELIMINARY ONLY AND SUBJECT TO DETAILED DESIGN AND FUTURE OPERATIONAL WORKS APPLICATIONS TO COUNCIL.
- PRELIMINARY EARTHWORK VOLUMES ARE CALCULATED FROM EXISTING NATURAL SURFACE TO PRELIMINARY DESIGN SURFACE, AND DO NOT ACCOUNT FOR STRIPPING, BOXING OR BUILDING PAD THICKNESS.



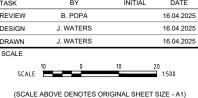
UNDERGROUND PUBLIC UTILITY PLANT EXISTS IN THIS VICINITY. THE CONTRACTOR IS ADVISED TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM THE EXACT LOCATION OF PUBLIC UTILITY PLANT ON SITE PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR CONSTRUCTION WORKS.





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

KEV	DESCRIPTION	DRAWN	DATE
Α	FOR COORDINATION	MGB	11.05.2021
В	ISSUE FOR COMMENT	J.H.	29.11.2021
С	FOR COORDINATION	J.W.	18.11.2024
D	FOR COORDINATION	H.W.	31.03.2025
E	REVISED LAYOUT AND DESIGN	J.H.	16.04.2025
F	REVISED LAYOUT AND DESIGN	J.W.	26.05.2025
G	REVISED LAYOUT AND DESIGN	J.W.	13.06.2025



BLUEPOINT FLAGSTONE PTY LTD PROPOSED COMMERCIAL DEVELOPMENT 'FLAGSTONE' - PRECINCT 1 (LOT 25007 & 25009 ON SP303120) PRELIMINARY BULK EARTHWORKS LAYOUT
SHEET 1 OF 2

PRELIMINA

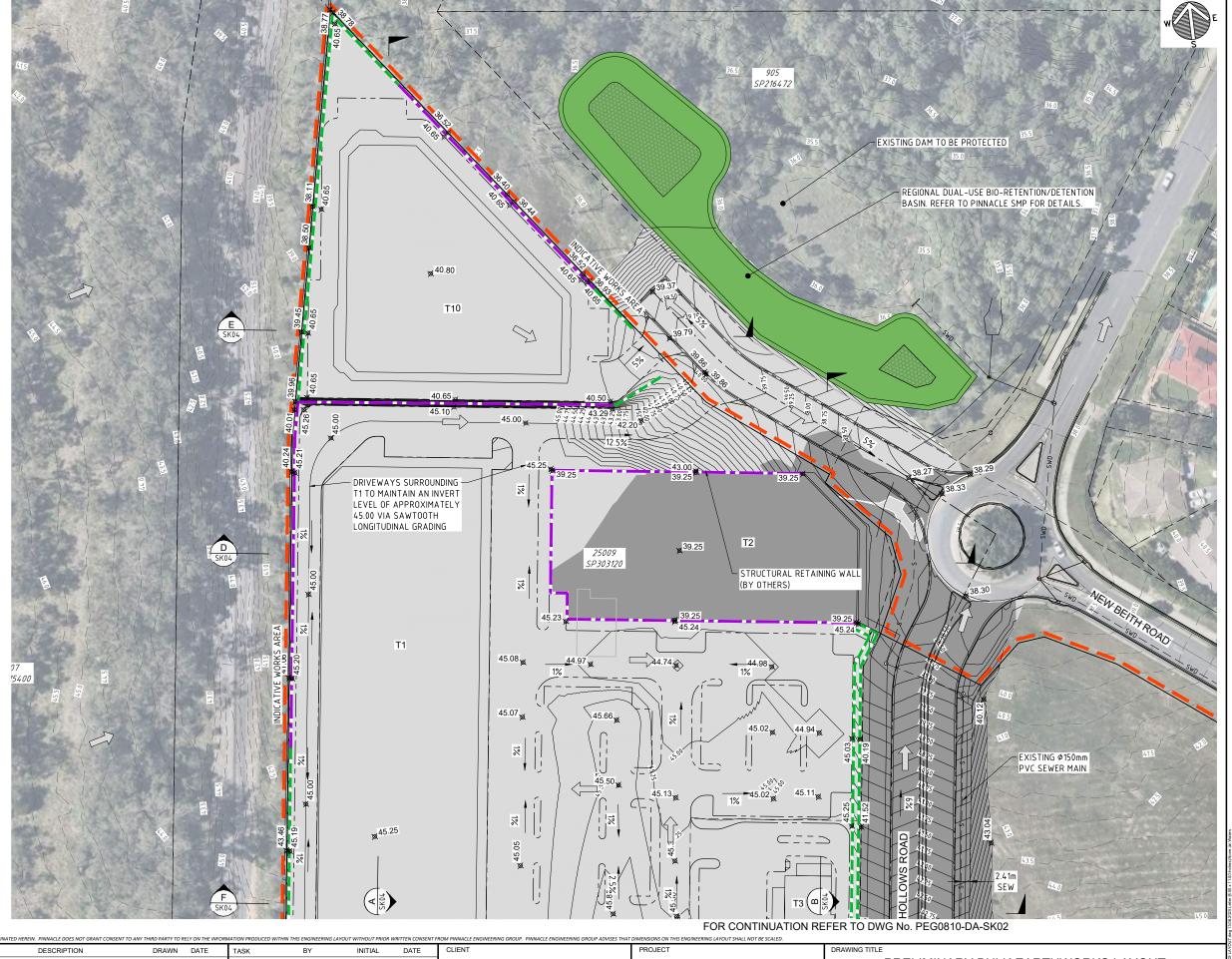
ED RPEQ N

PEG0810-DA-SK02 G

PRELIMINARY
(NOT TO BE USED FOR CONSTRUCTION)



UNDERGROUND PUBLIC UTILITY PLANT EXISTS IN THIS VICINITY. THE CONTRACTOR IS ADVISED TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM THE EXACT LOCATION OF PUBLIC UTILITY PLANT ON SITE PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR CONSTRUCTION WORKS.





 A
 FOR COORDINATION
 MGB
 11.05.2021

 B
 ISSUED FOR APPROVAL
 J.H.
 29.11.2021

 C
 FOR COORDINATION
 J.W.
 18.11.2024

 D
 FOR COORDINATION
 H.W.
 31.03.2025

 E
 REVISED LAYOUT AND DESIGN
 J.H.
 16.04.2025

 F
 REVISED LAYOUT AND DESIGN
 J.W.
 26.05.2025

 G
 REVISED LAYOUT AND DESIGN
 J.W.
 13.06.2025

 TASK
 BY
 INITIAL
 DATE

 REVIEW
 B. POPA
 16.04.2025

 DESIGN
 J. WATERS
 16.04.2025

 DRAWN
 J. HARDMAN
 16.04.2025

 SCALE

(SCALE ABOVE DENOTES ORIGINAL SHEET SIZE - A1)

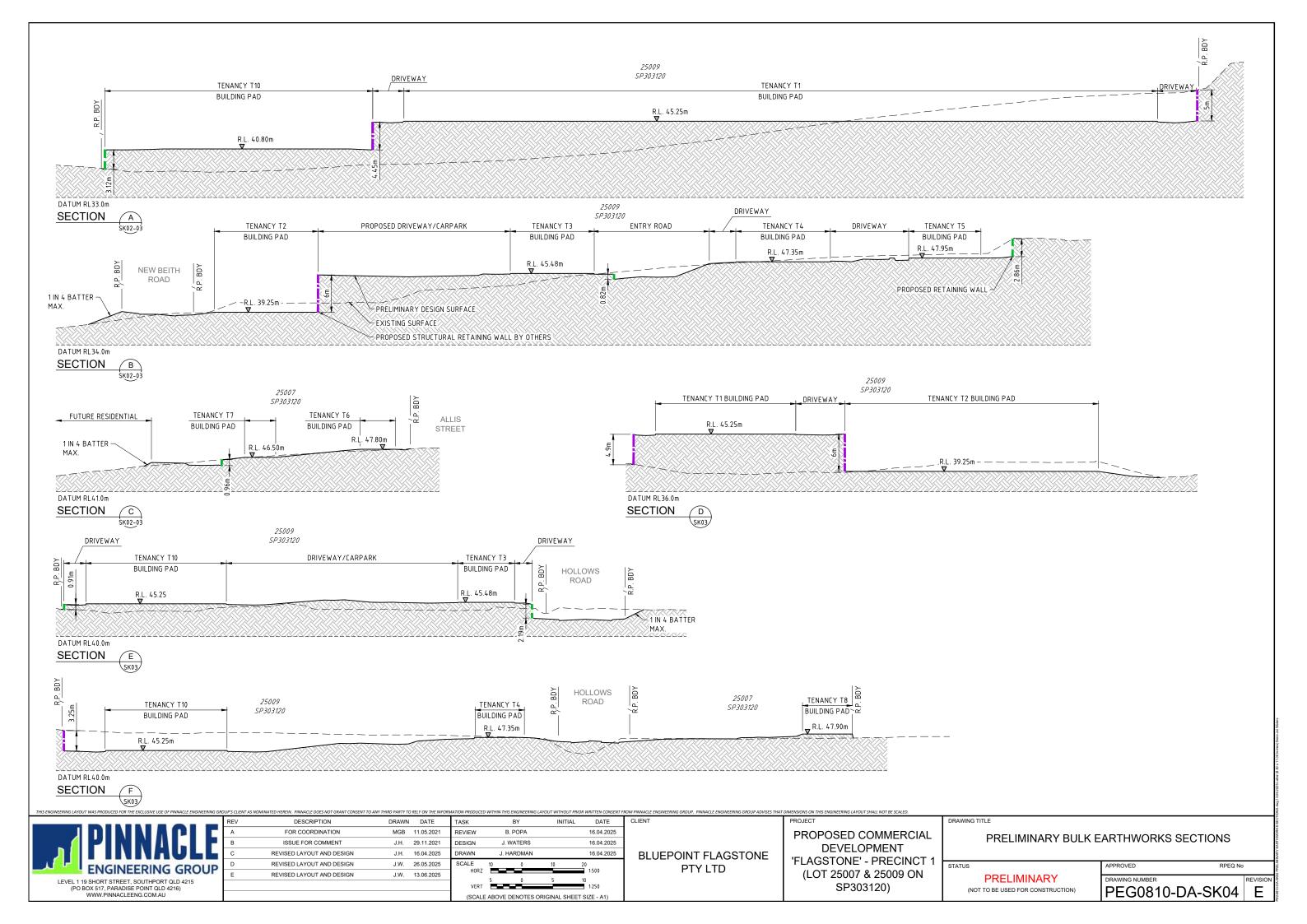
BLUEPOINT FLAGSTONE PTY LTD PROPOSED COMMERCIAL
DEVELOPMENT
'FLAGSTONE' - PRECINCT 1
(LOT 25007 & 25009 ON
SP303120)

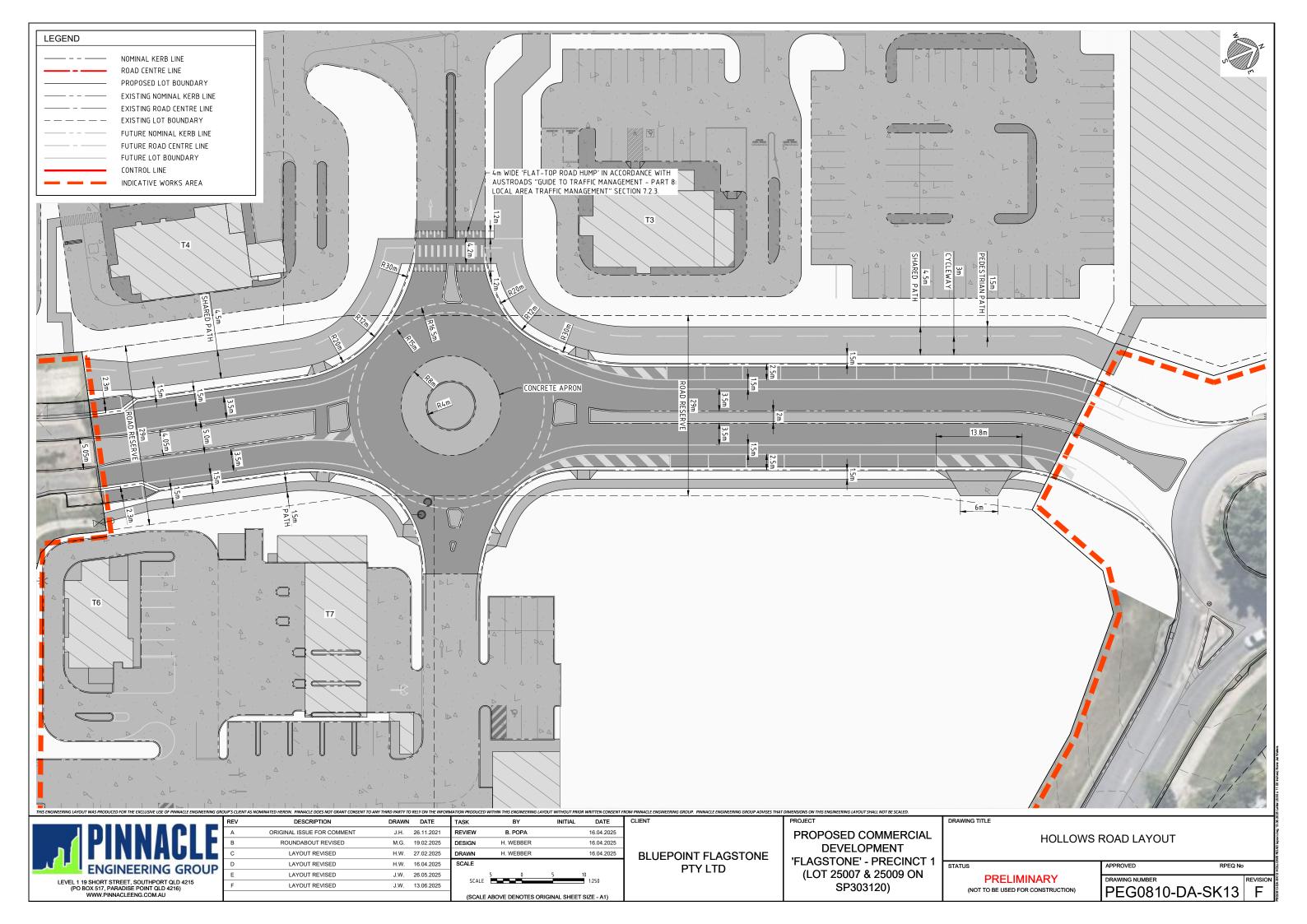
PRELIMINARY BULK EARTHWORKS LAYOUT
SHEET 2 OF 2

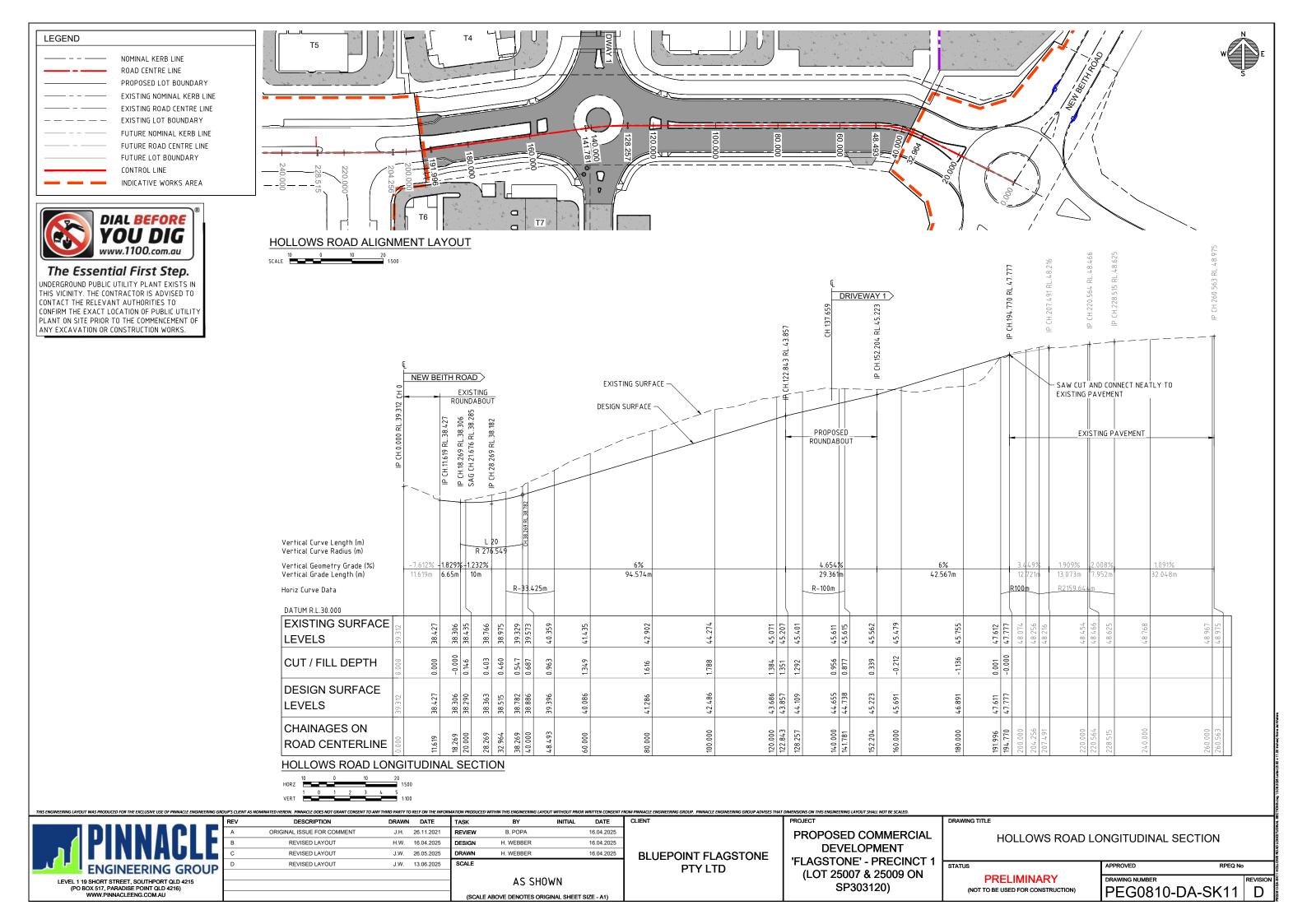
PRELIMINARY DR

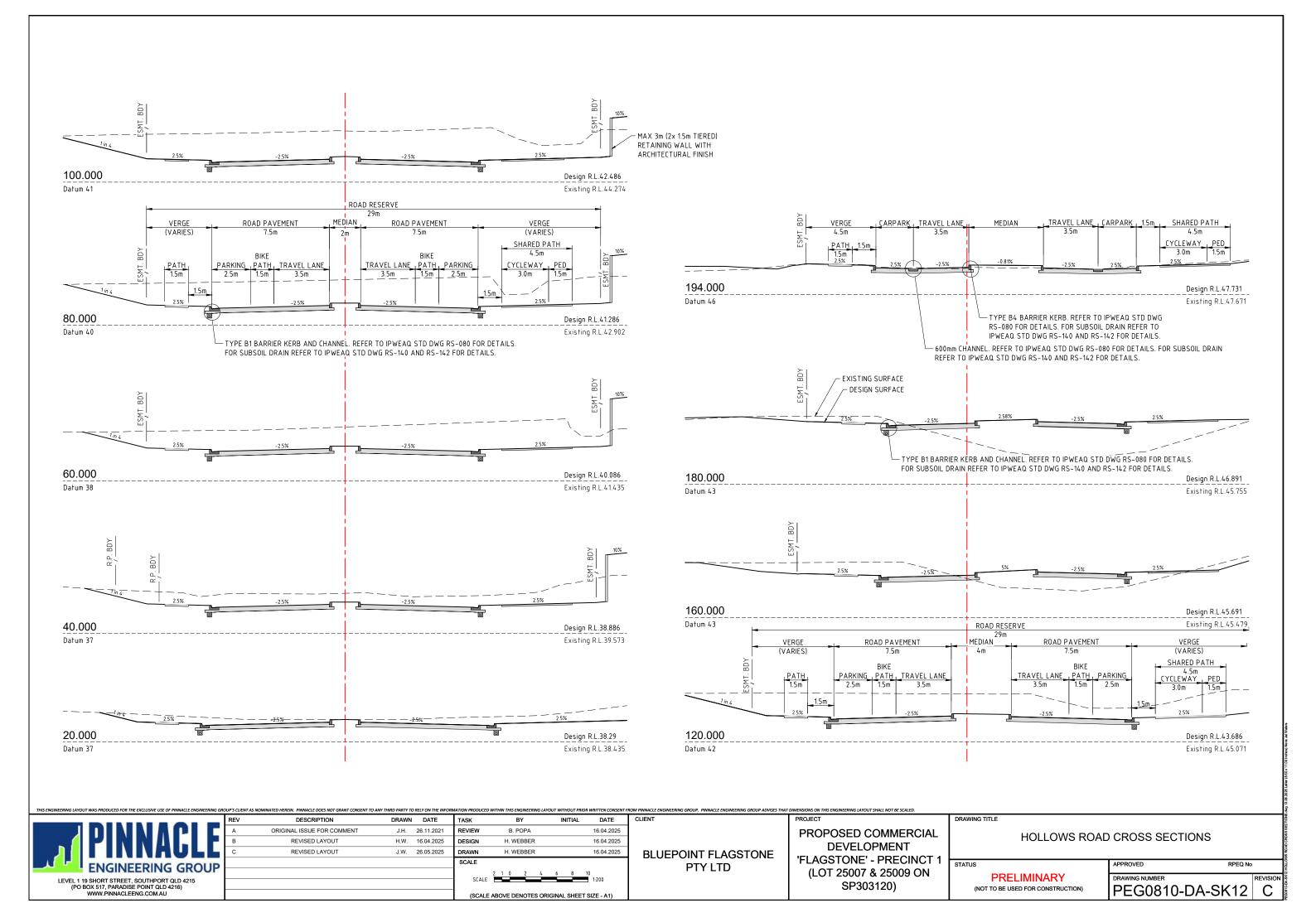
(NOT TO BE USED FOR CONSTRUCTION)

DRAWING NUMBER PEG0810-DA-SK03 G











Appendix D

BYDA Data

PEG0810 Flagstone BYDA



Review responses online >



Received 8 of 8 responses All responses received

14 Wild Mint Drive, Flagstone QLD 4280

Job dates 15/04/2025 → 15/04/2025

These plans expire on 13 May 2025

Lodged by Jai Waters

Authority	Status	Page
		2
⊞ APA Group Gas Networks (70710)	Received	4
⊞ APA Group Gas Networks (90073)	Received	63
III Australian Rail & Track Corporation (ARTC)	Received	122
iii) Energex QLD	Received	125
iii Logan City Council	Received	174
iii) National Fire Ant Eradication Program	Received	182
III NBN Co Qld	Received	185
III Telstra QLD FA	Received	203

Contact Details

ContactContact numberCompanyEnquirer IDJai Waters0455 996 516Pinnacle Engineering Group3309841

Email

jai@pinnacleeng.com.au

Address

19 Short Street 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
15/04/2025	15/04/2025	15/04/2025	Private	Design	Both Road, Nature Strip,	Planning & Design



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 PEG0810 Flagstone BYDA Address

14 Wild Mint Drive
Flagstone QLD 4280

Notes/description

-

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
253790915	APA Group Gas Networks (70710)	1800 085 628	NOTIFIED
253790910	APA Group Gas Networks (90073)	1800 085 628	NOTIFIED
253790911	Australian Rail & Track Corporation (ARTC)	(08) 8217 4366	NOTIFIED
253790913	Energex QLD	13 12 53	NOTIFIED
253790907	Logan City Council	(07) 3412 3412	NOTIFIED
253790919	National Fire Ant Eradication Program	-	NOTIFIED
253790906	NBN Co Qld	1800 687 626	NOTIFIED
253790917	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

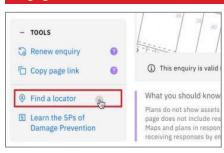
Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.



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

certloc.com.au/locators

Get FREE Quotes for Contractors & Equipment Fast



Use iseekplant's FREE marketplace to get quotes for the equipment or services you need on your project. Compare quotes from trusted local contractors and get your project done on time and in budget.

- 1. Fill out your job details in our FREE quick quote form.
- 2. We send the request to trusted local contractors.
- 3. The local contractors will contact you directly with quotes

Use iseekplant to find trusted contractors near you today, visit: blog.iseekplant.com.au/byda-isp-get-quotes

Book a FREE BYDA Session

GET QUOTE



BYDA offers free training sessions to suit you and your organisation's needs covering safe work practices when working near essential infrastructure assets. The free sessions are offered in two different formats online and face-to-face.

To book a session, visit:

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

BOOK NOW

APA Group Gas Networks (70710)

Referral 253790915

Member Phone 1800 085 628

Responses from this member

Response received Tue 15 Apr 2025 7.01pm

File name	Page
Response Body	5
253790915.pdf	6
400-STD-AM-0001_2 Guidelines for Works Near Existing Gas Assets.pdf	22

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 253790915 Enquirer Id 3309841

Activity Planning and Design

Job Number 39116646

User Reference PEG0810 Flagstone BYDA

Message

Site Details:

Address 14 Wild Mint Drive

Flagstone QLD 4280

Enquirers Details:

Contact Jai Waters

Company Pinnacle Engineering Group jai@pinnacleeng.com.au Email

+61455996516 Phone Address 19 Short Street Southport

QLD 4215

APA Group

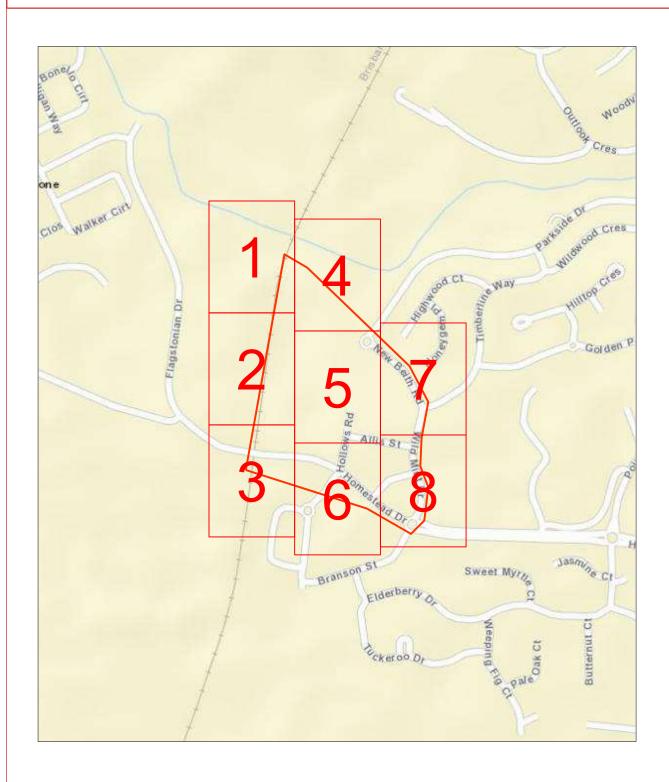


Site Address 14 Wild Mint Drive

Flagstone

QLD 4280

Sequence No 253790915



Scale 1: 6000

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



Enquiry Area

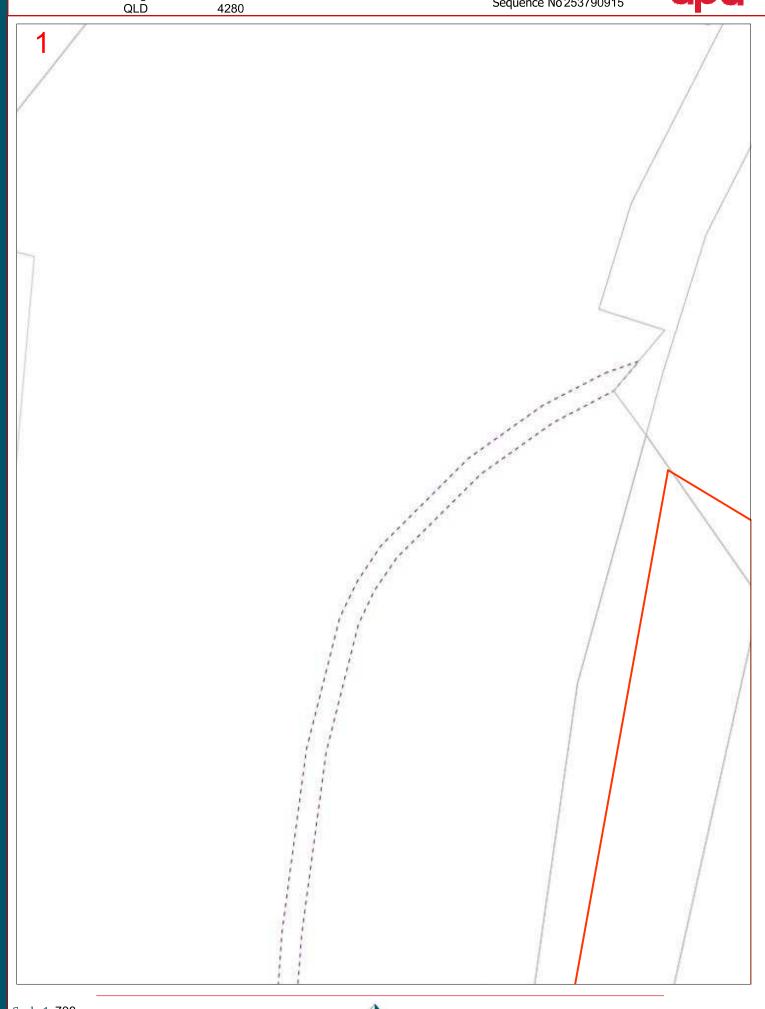




14 Wild Mint Drive Flagstone QLD 4

Sequence No 253790915





Scale 1:700 map

Map Sources: Esri, Garmin, 1ERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

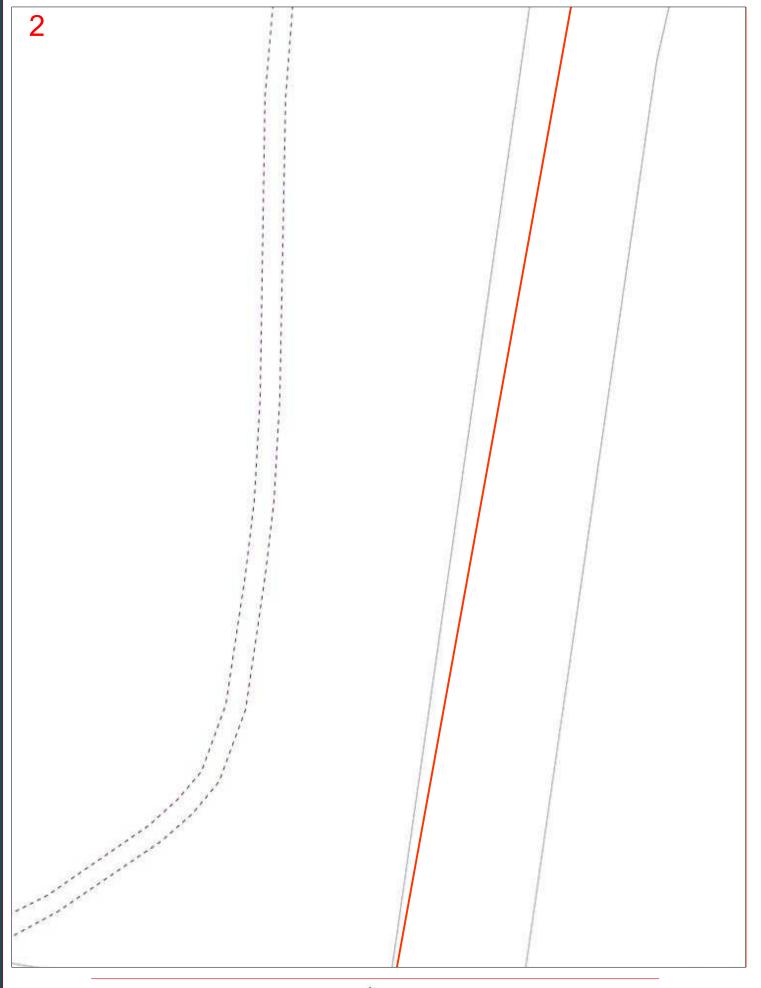
Enquiry Area





4280





Scale 1:700 map

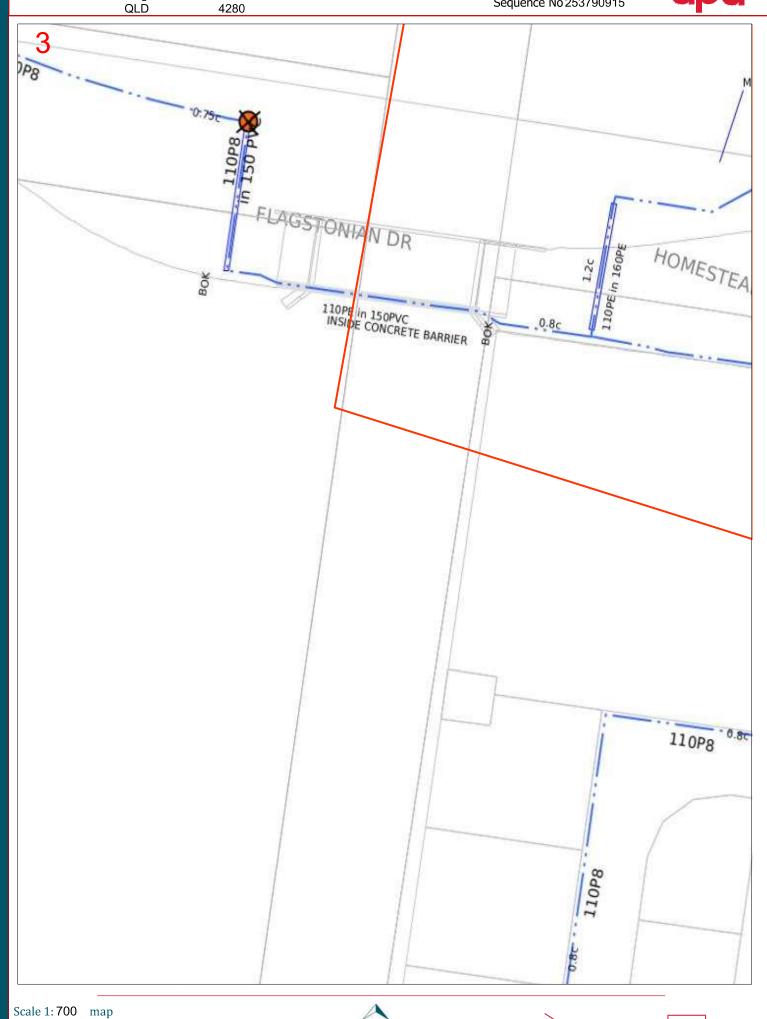
Map Sources: Esri, Garmin, HERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Enquiry Area









14 Wild Mint Drive Flagstone QLD 4

Sequence No 253790915





Scale 1:700 map

Map Sources: Esri, Garmin, 1ERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Enquiry Area



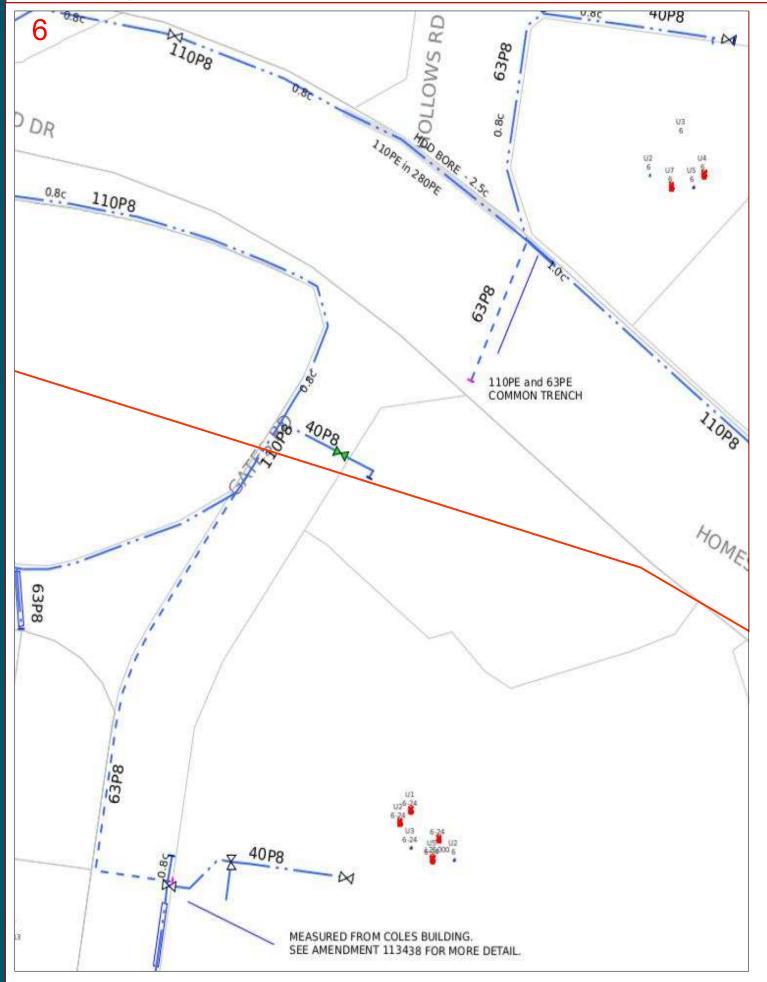


14 Wild Mint Drive Flagstone QLD 4

Sequence No 253790915







Scale 1:700 map

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



Enquiry Area

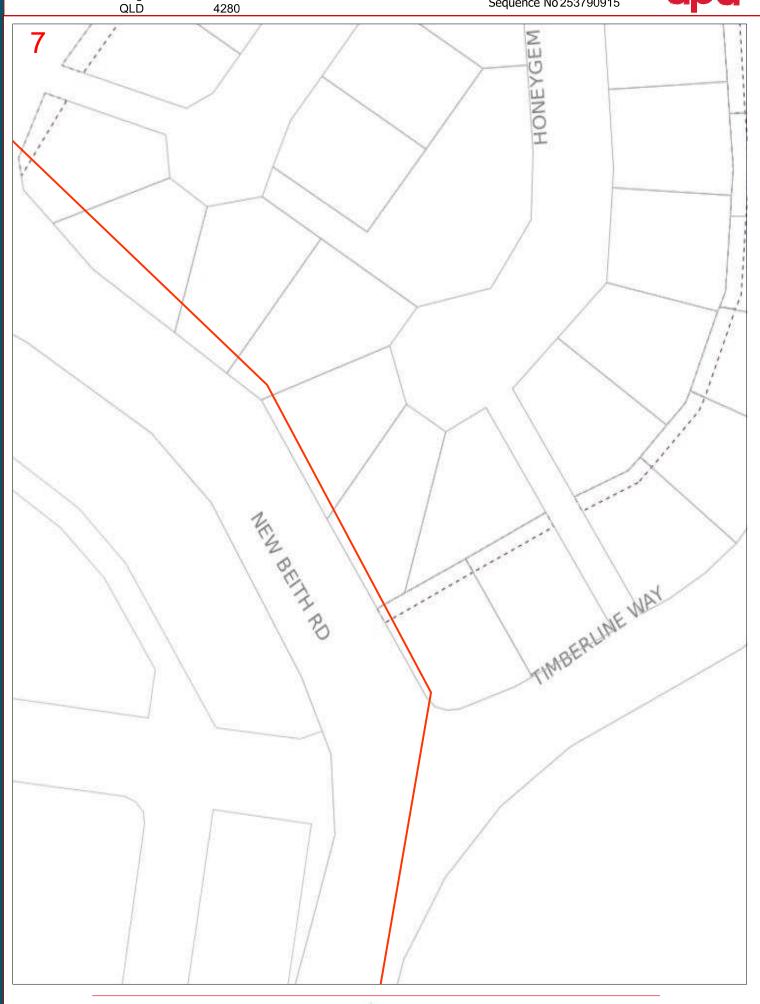




14 Wild Mint Drive Flagstone QLD 4

Sequence No 253790915





Scale 1:700 map

Map Sources: Esri, Garmin, 1ERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Enquiry Area

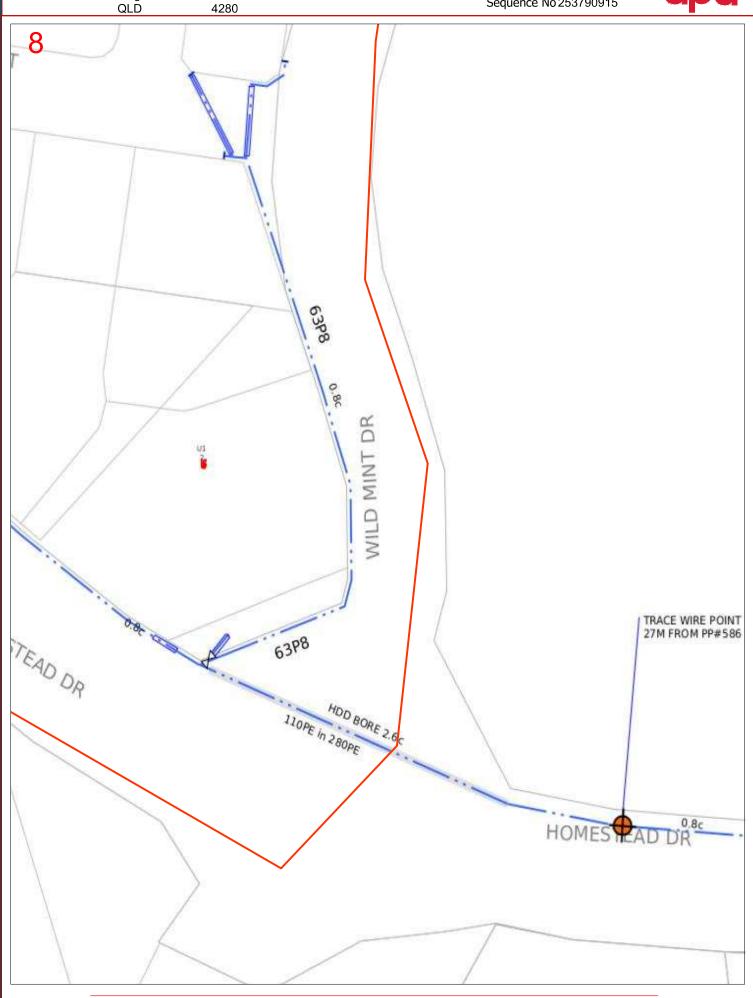




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Scale 1:700 map

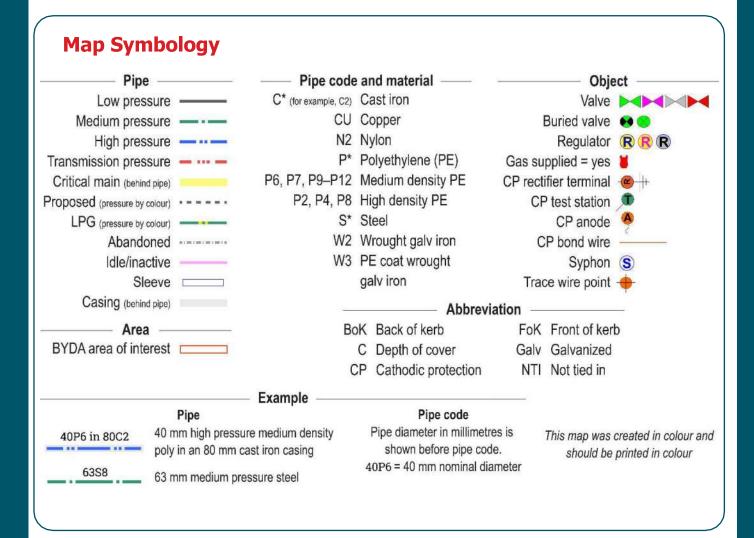
Map Sources: Esri, Garmin, 1ERE, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Enquiry Area









Australian Rail & Track Corporation (ARTC)

Referral 253790911

Member Phone (08) 8217 4366

Responses from this member

Response received Tue 15 Apr 2025 7.00pm	
File name	Page
Response Body	123
253790911.pdf	124

We acknowledge your Before You Dig Australia search as per above.

If your proposed works are in/under/over/immediately adjacent to, you are unsure of how to identify the rail corridor boundary, or the proposed works have the potential to effect the ARTC rail corridor, please complete the Third Party Works Application Form, which can be found at: https://www.artc.com.au/work/external-parties/ and email it to the appropriate email address on the last page of the form.

If your Before You Dig Australia search area is outside the ARTC Rail Corridor then please disregard this email.

Regards,

Dear Sir/Madam,

ARTC Before You Dig



11 Sir Donald Bradman Drive Keswick Terminal, SA 5035 PO Box 10343 Gouger Street Adelaide, SA 5000

F. 08 8217 4578
E. info@artc.com.au
W. artc.com.au

P. 08 8217 4366

WARNING

If your proposed works are in/under/over/immediately adjacent to, you are unsure of how to identify the rail corridor boundary, or the proposed works have the potential to effect the ARTC rail corridor, please complete the Third Party Works Application Form, which can be found at: https://www.artc.com.au/work/external-parties/ and email it to the appropriate email address on the last page of the form.

If your Before You Dig Australia search area is outside the ARTC Rail Corridor then please disregard this email.
Regards,
ARTC Before You Dig



Energex QLD

Referral Member Phone 253790913 13 12 53

Responses from this member

Response received Tue 15 Apr 2025 7.02pm

File name	Page
Response Body	126
Working Near Overhead and Underground Electric Lines.pdf	129
Energex BYDA Terms and Conditions.pdf	157
253790913 - Energex Plan.pdf	162

Assets and Planned Assets found Before You Dig Australia (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 Assets 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:

Jai Waters 253790913

Company: Date of Response:

Pinnacle Engineering Group 15 Apr 2025

Search Location: Period of Plan Validity:

14 Wild Mint Drive

Flagstone, QLD 4280 4 Weeks

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 **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 <u>BYDA</u>.
- 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 Assets.
- 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 Assets caused by works pursuant to or in any way connected with this BYDA Request.
- 8. In addition to Assets marked on attached plan, there could be underground earth conductors, underground substation earth conductors, Multiple Earthed Network (MEN) conductors, Single Wire Earth Return (SWER) Substation Earth Conductors, Air Break Switch (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.
- Independent underground cable locators can be found via the <u>Certified Locator</u> <u>website</u> with LV Cable (up to 1kV), HV Cable (1kV-<33kV) & HV cable (33kV and over) displayed.
- 10. The ENERGEX Before You Dig Australia (BYDA) 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 must be obtained.
- 12. The ENERGEX BYDA map (named maps.pdf) may contain shaded area(s), indicating the location of planned work(s). Should You find planned works 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 any Assets, for example conduits, cables, pits or cabinets.
- 15. Your work will need to comply with:
 - Working near overhead and underground electric lines Electrical safety code of practice 2020
 - Managing Electrical Risk in Workplace Electrical Safety Code of Practice (2013)
 - Excavation Work Code of Practice (2021)
- 16. NOTE: Where Your proposed work location contains ENERGEX 33kV or greater Underground cables please access the <u>Energex before you dig Website</u> 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 **BYDA.com.au**

E: custserve@energex.com.au

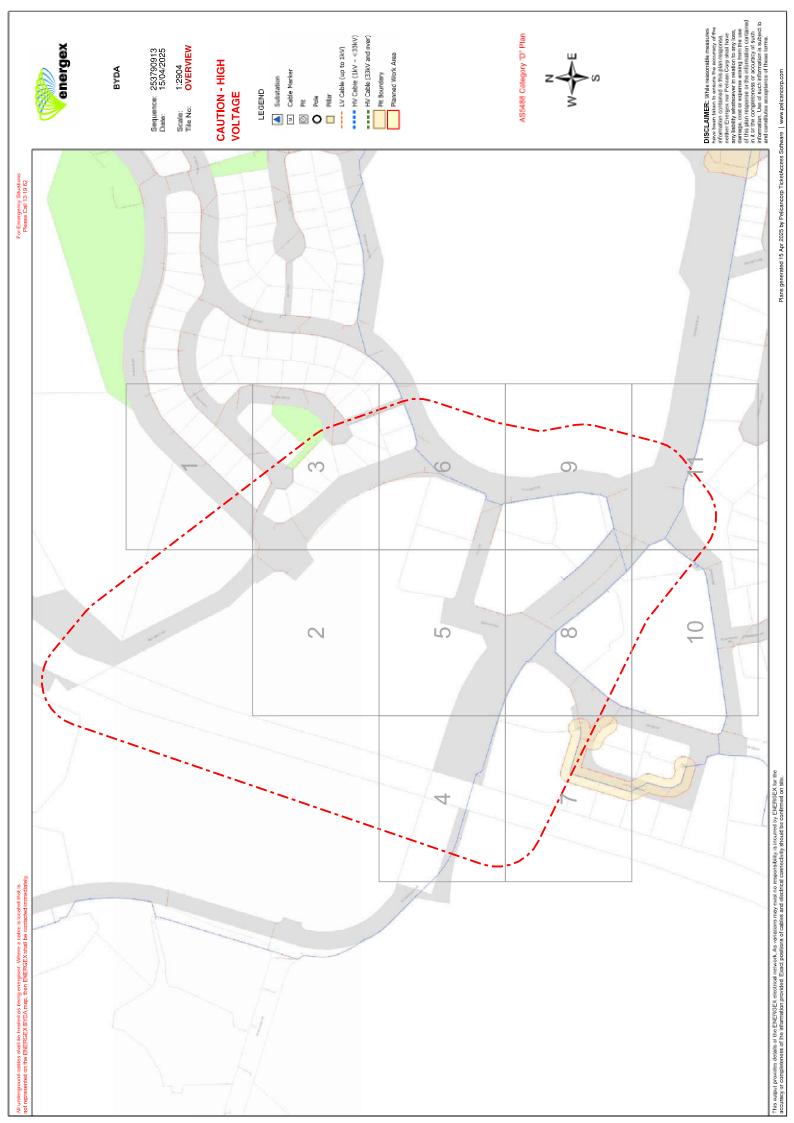
E: <u>byda@energyq.com.au</u> ABN: 40 078 849 055

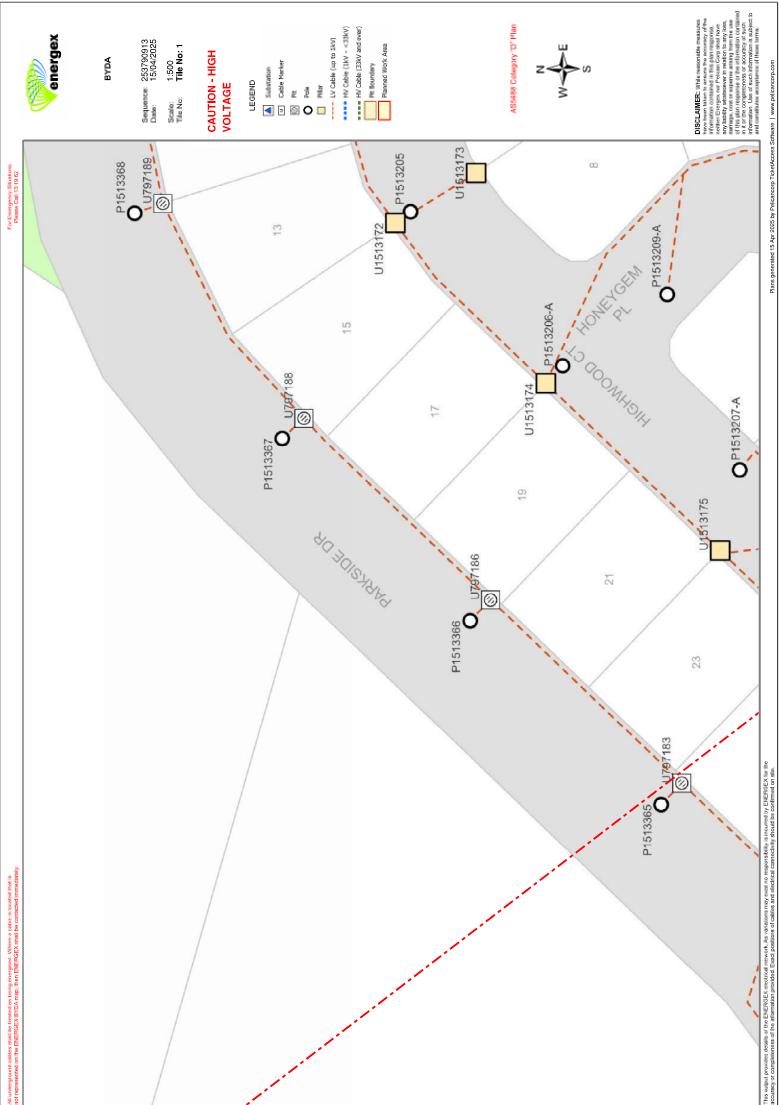


Disclaimer: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information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







For Emergency Situations Please Call 13 19 52

energex 1795930 - 17959363

BYDA

Sequence: 253790913 Date: 15/04/2025

Scale: 1:500 Tile No: **Tile No: 2**

CAUTION - HIGH VOLTAGE

LEGEND

P1513362 O

AC 3CISNAPA

Substation

Catle Marker

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Pit

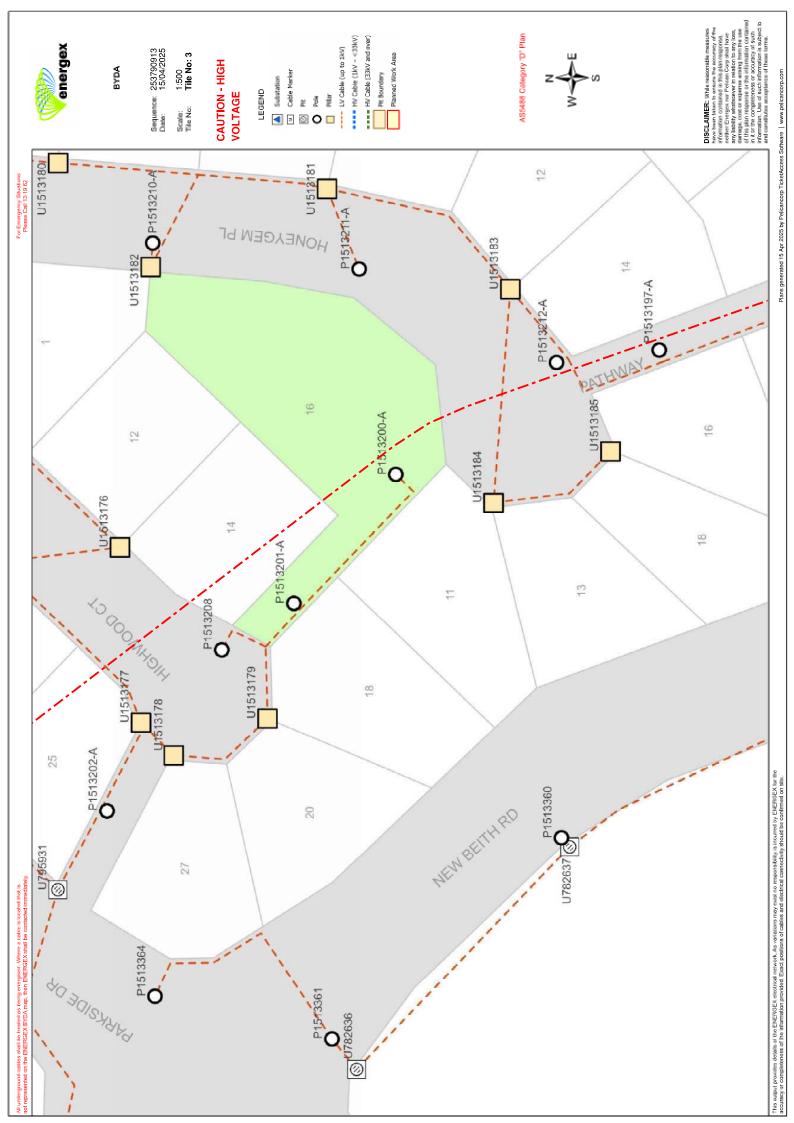
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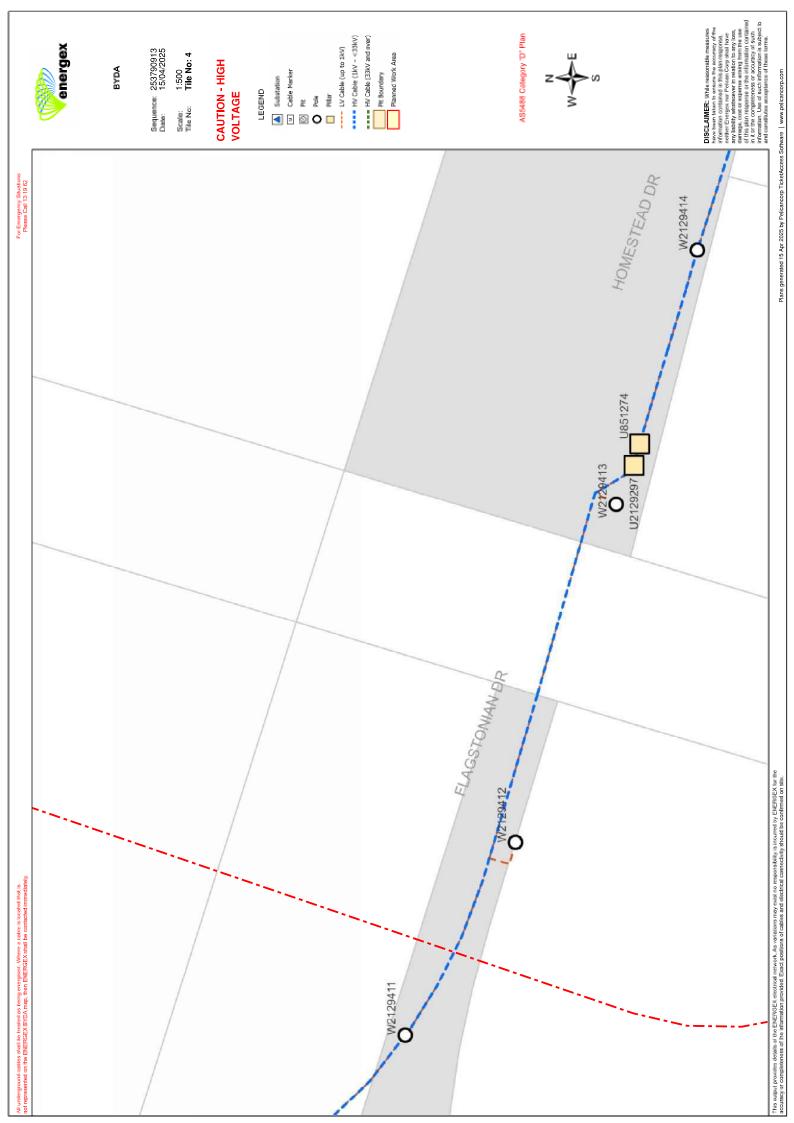
HV Cable (33kV and over)
 Rt Boundary
 Prinned Work Area

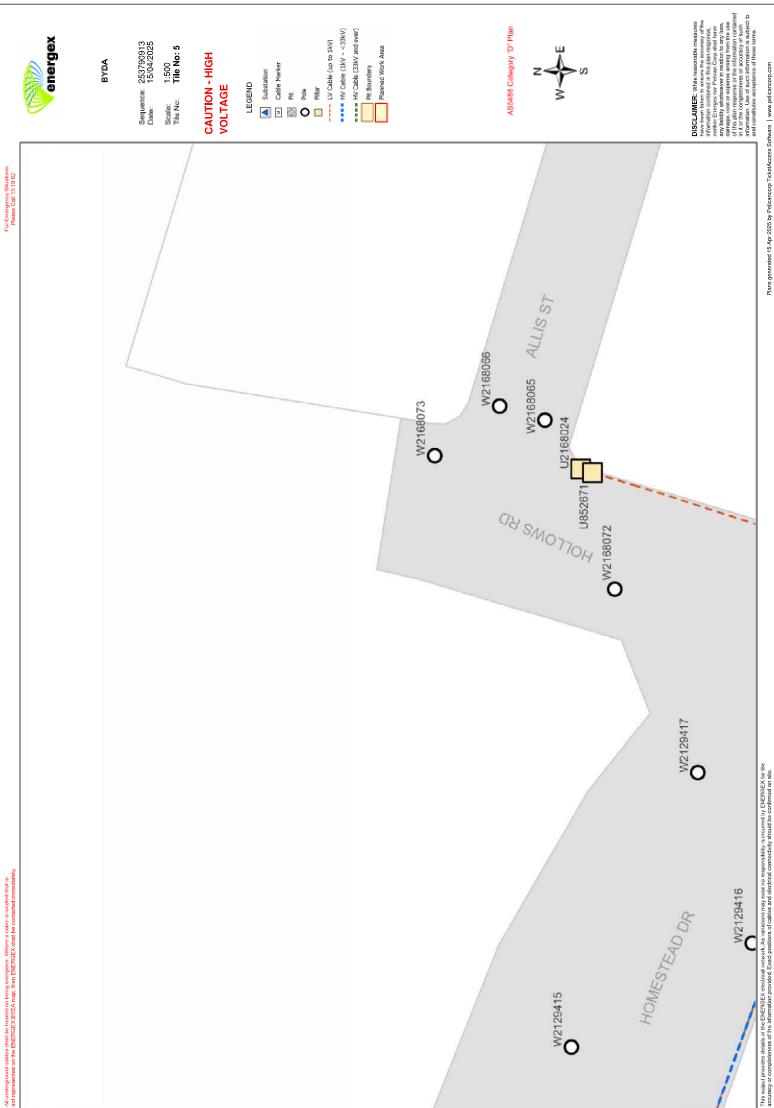
---- HV Cable (1kV - <31kV) ---- LV Cable (up to 1kV)

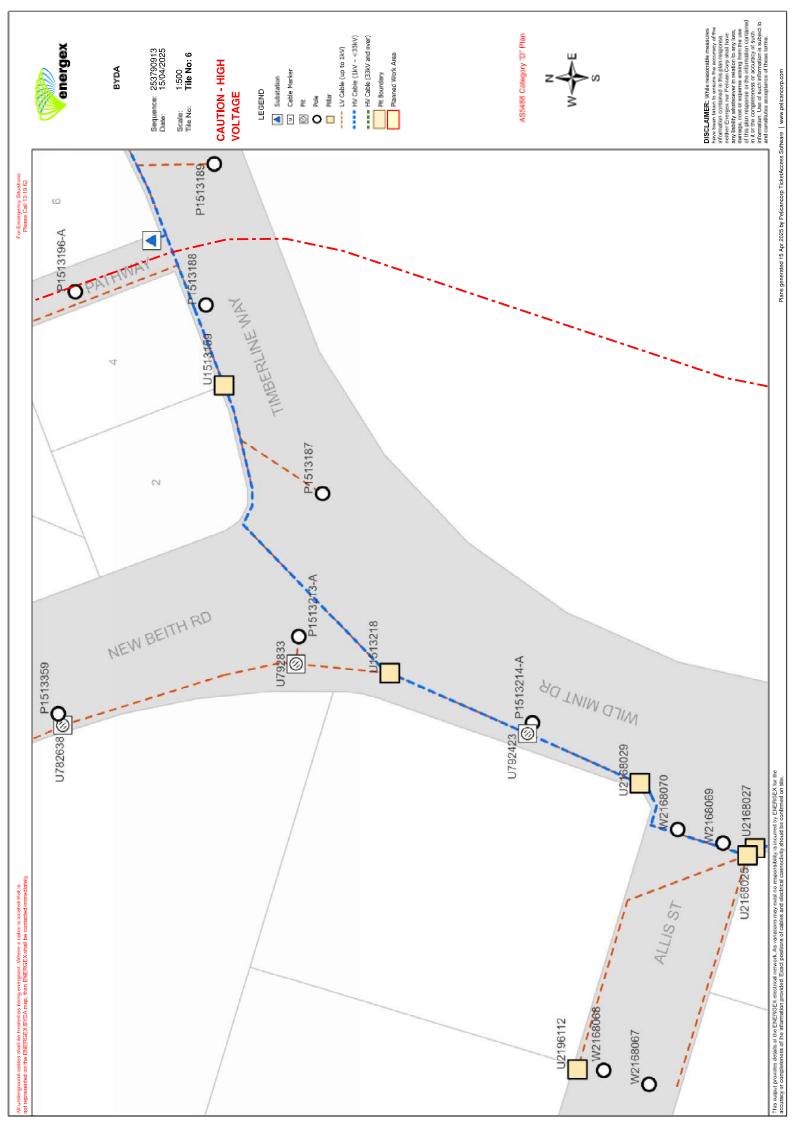
ASS488 Category 'D' Plan

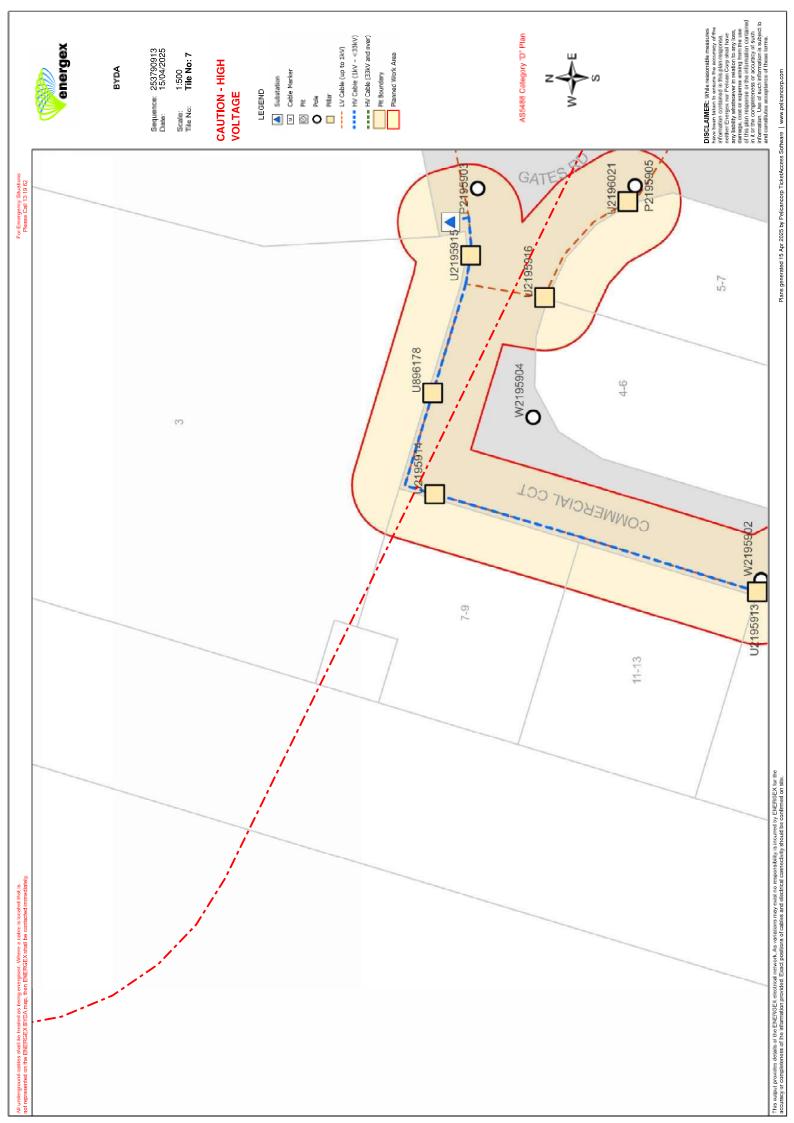
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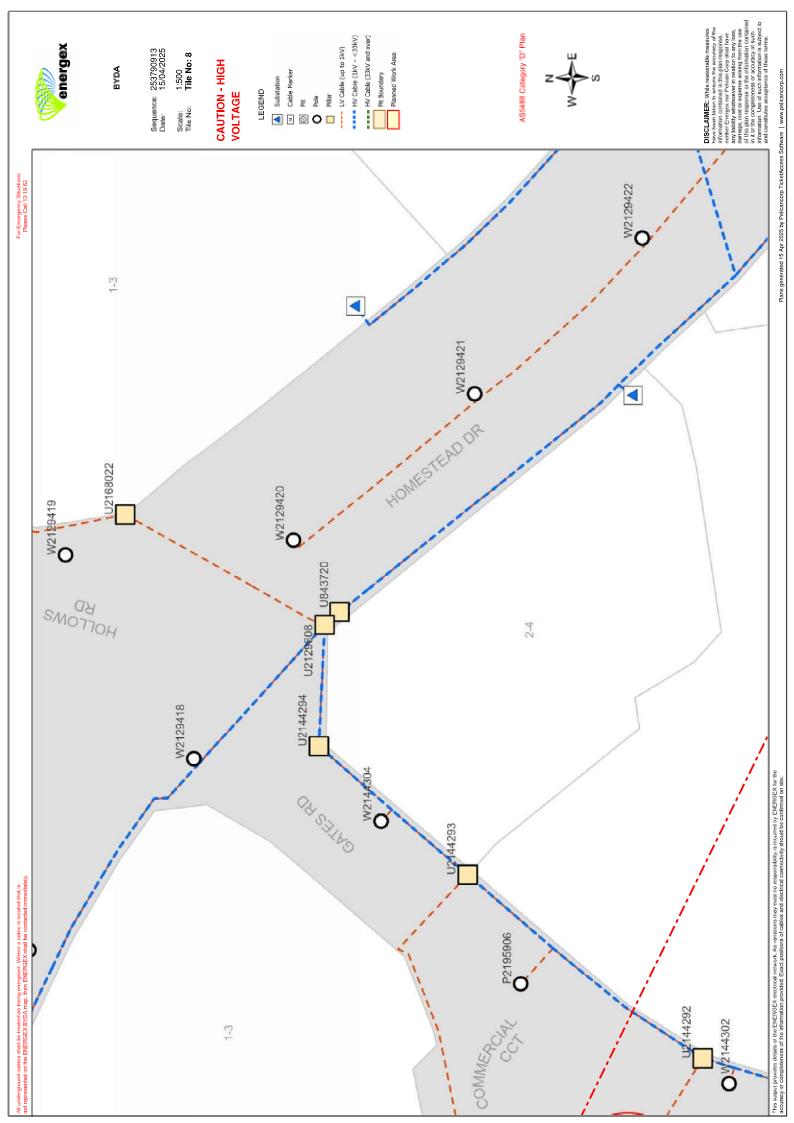


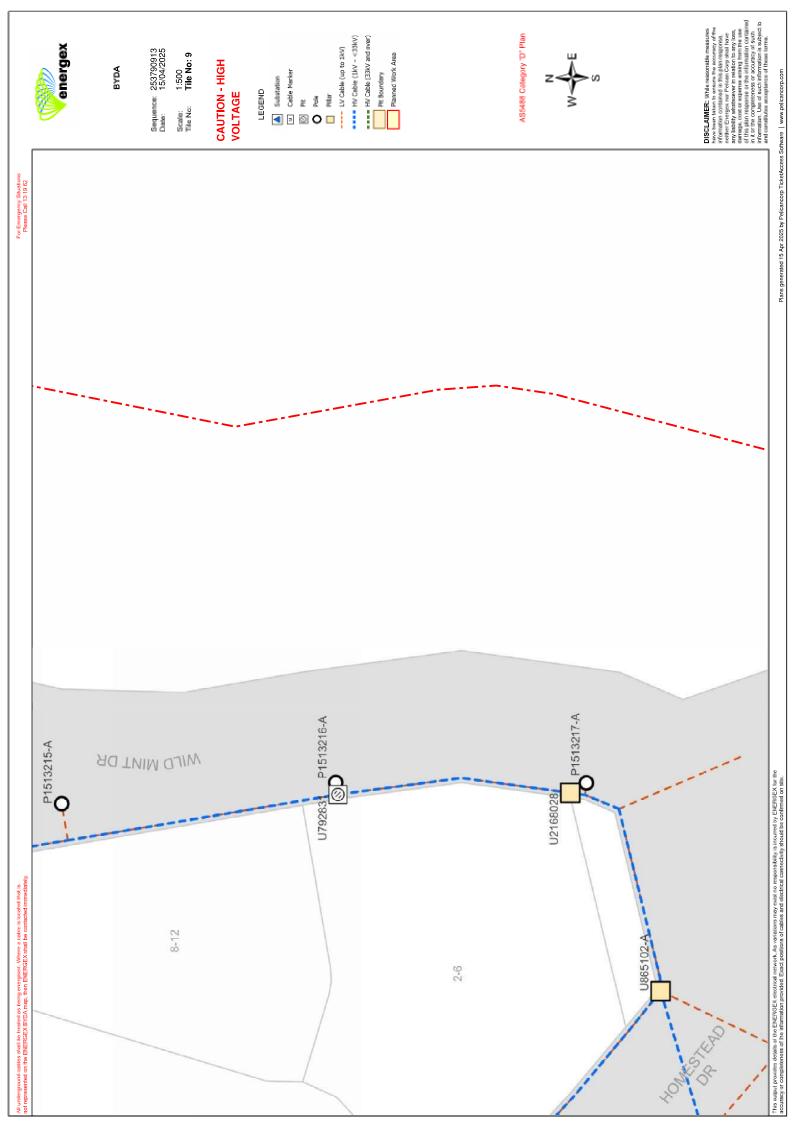


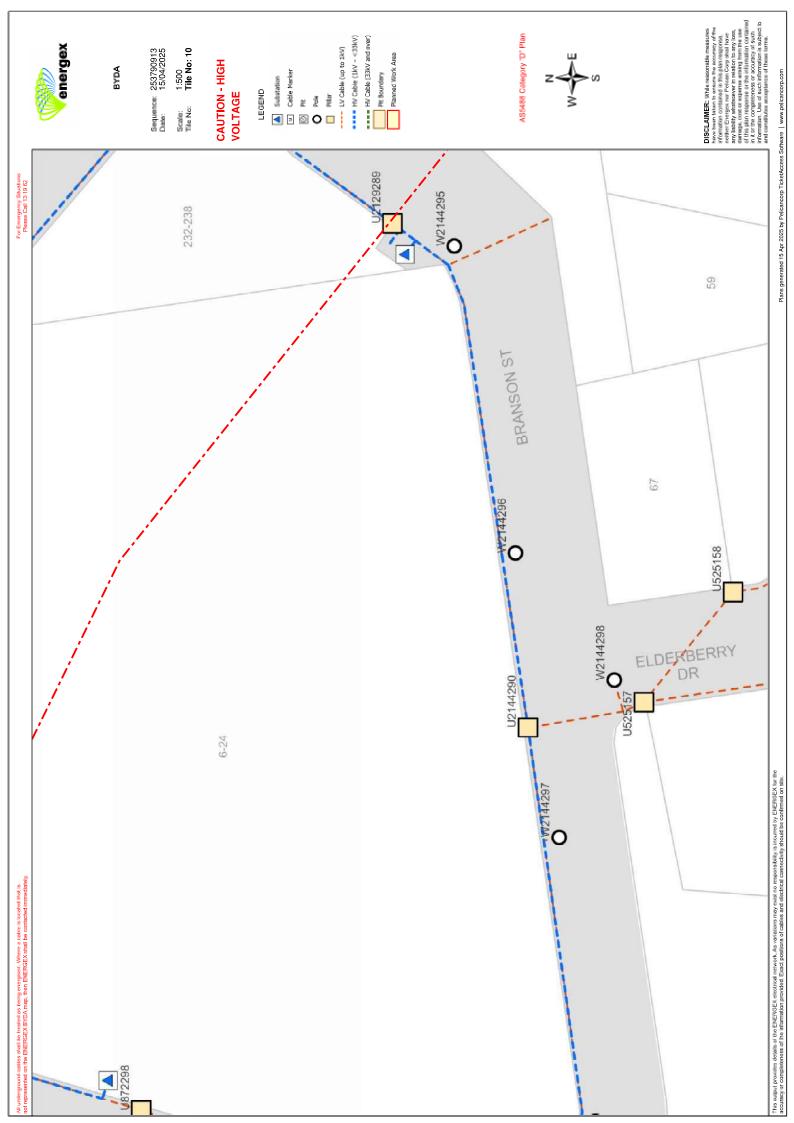


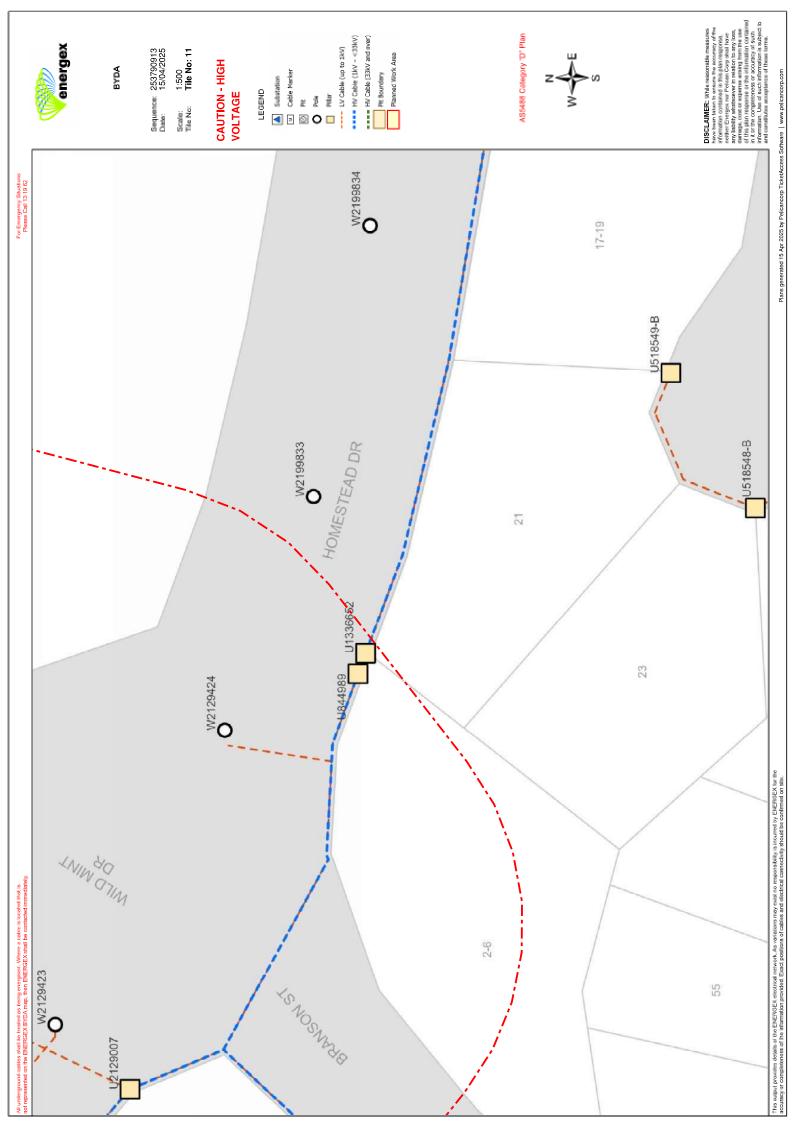












Logan City Council

Referral 253790907

Member Phone (07) 3412 3412

Responses from this member

Response received Tue 15 Apr 2025 7.00pm	
File name	Page
Response Body	175
253790907.pdf	176

Request: 253790907 Enquirer: Pinnacle Engineering Group - 3309841 Contact: Jai Waters Email: jai@pinnacleeng.com.au Phone: +61455996516 Address: 19 Short Street Southport QLD 4215 Site Address: 14 Wild Mint Drive Flagstone QLD 4280 Activity: Planning and Design Job Number: 39116646

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.gov.au • ABN 21-627-796 435





Pinnacle Engineering Group - Jai Waters 19 Short Street Southport QLD

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).

4215

Enquiry Details		
Sequence Number	253790907	
Enquiry Date	15/04/2025 19:00	
Response	AFFECTED	
Address	14 Wild Mint Drive Flagstone	
Location in Road	Road,Nature Strip,Footpath	
Activity	Planning and Design	

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**

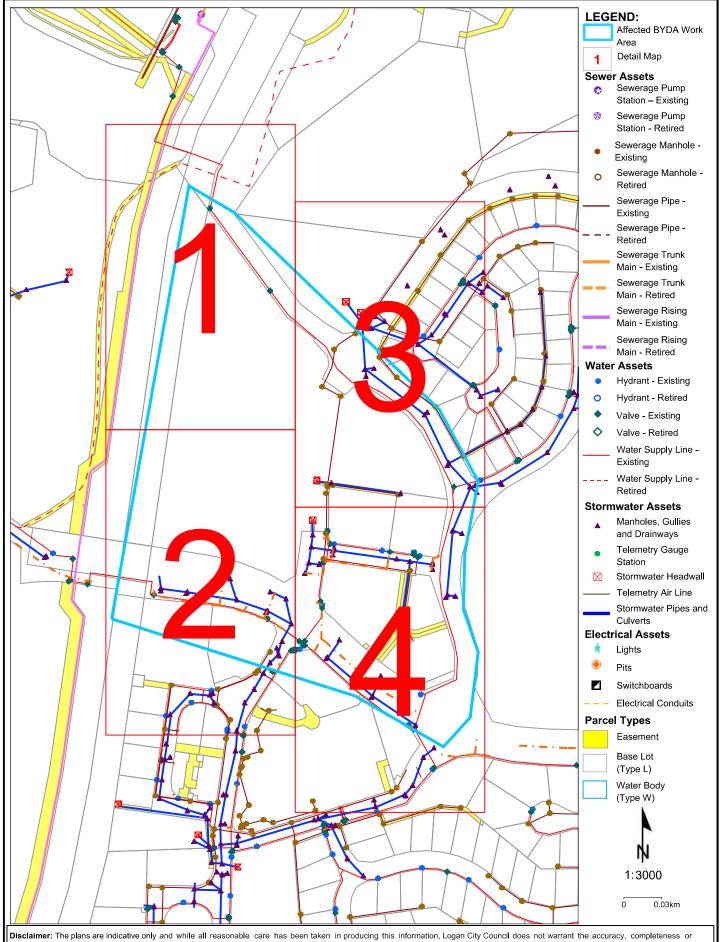
If you need more assistance please call us on 07 3412 3412 or email us at council@logan.qld.gov.au.

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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".

Sequence No: 253790907

14 Wild Mint Drive Flagstone

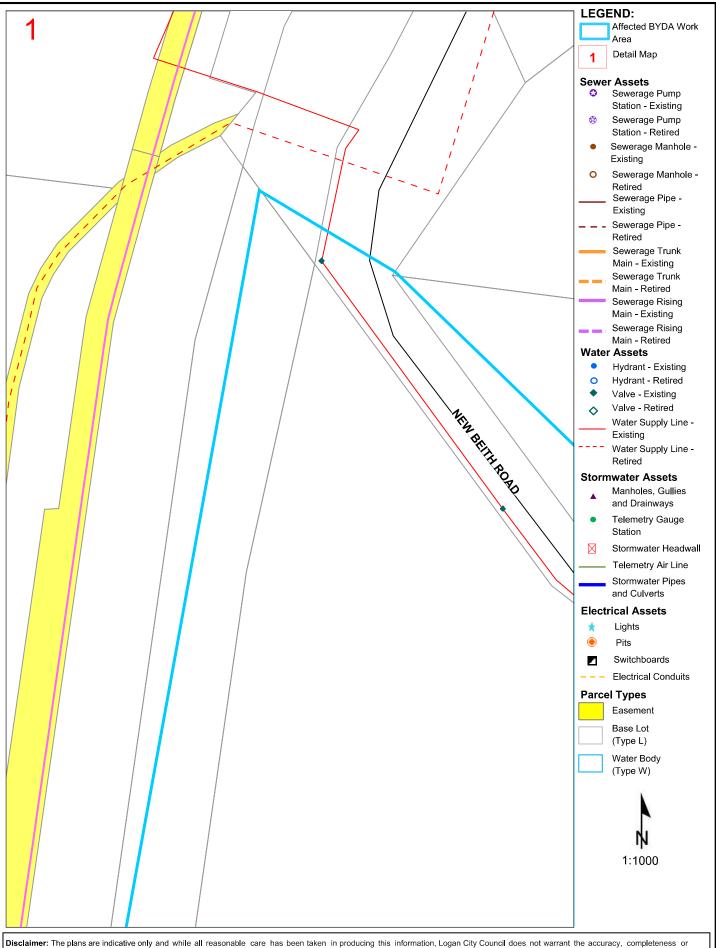


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Logan City Council's infrastructure dates back over many years and may include manufactured materials containing asbestos. You are solely responsible for ensuring that appropriate care is taken at all times and that you comply with all mandatory requirements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



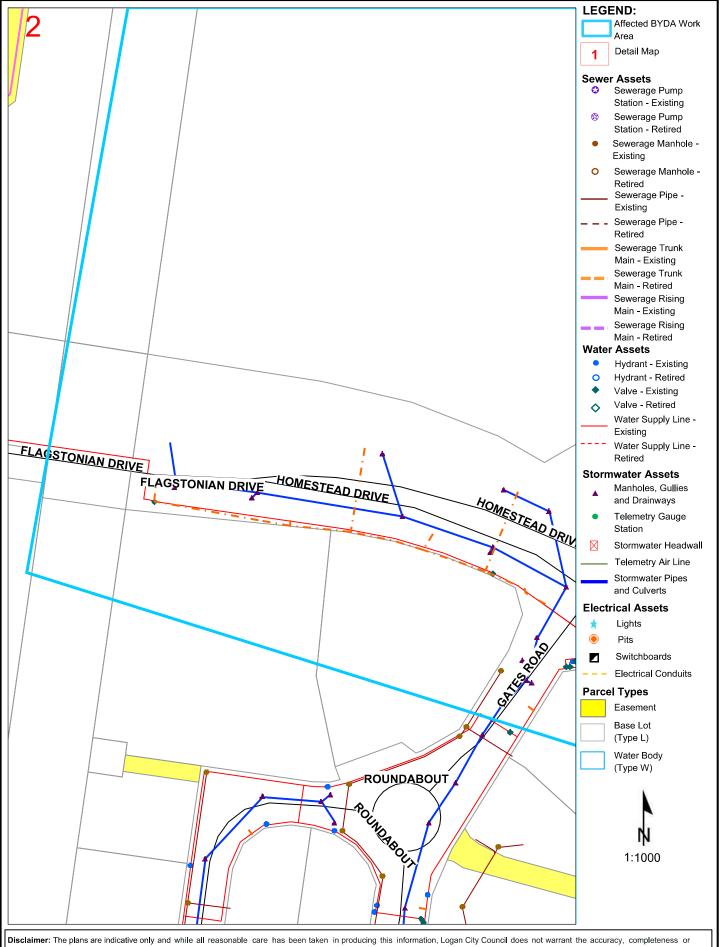
14 Wild Mint Drive Flagstone



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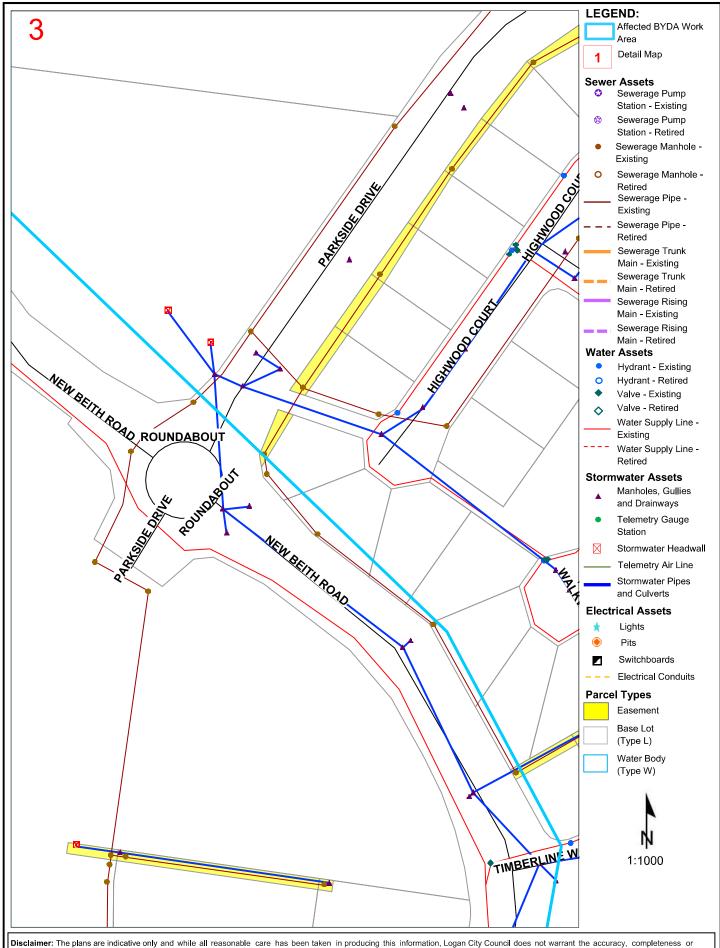
14 Wild Mint Drive Flagstone



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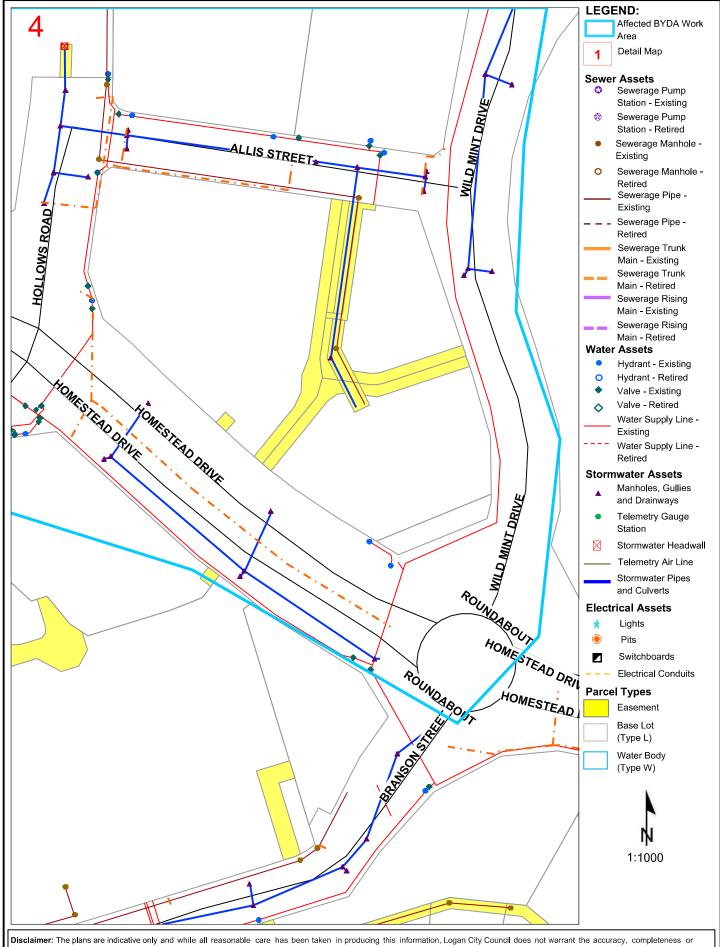
14 Wild Mint Drive Flagstone



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14 Wild Mint Drive Flagstone



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National Fire Ant Eradication Program

Referral 253790919

Member Phone

_

Responses from this member

Response received Tue 15 Apr 2025 7.01pm	
File name	Page
Response Body	183

BYDA members

Your property and/or business is located in the <u>fire ant suppression treatment area</u>. You're legally required to follow your biosecurity requirements and understand how you can help prevent the spread of fire ants.

Fire ants are a super pest, threatening Australia's health, environment, economy, and outdoor way of life. Eradicating them is a national priority, with all states, territories, and the Australian Government committed to the National Fire Ant Eradication Program (NFAEP) – the world's largest ant eradication effort.

<u>Fire ant biosecurity zones</u> are essential for containing and controlling fire ants in the suppression treatment area until the NFAEP eradication treatment reaches the area. Suppression efforts focus on reducing nest numbers, limiting spread, and preparing for eradication treatment. This includes self-treatment, containment, and prevention to minimise the impact of these pests.

Strict rules for managing soil, including fill, clay, and scrapings within the zones, are outlined in the <u>Biosecurity Regulation</u> 2016 and <u>Soil movement guidelines</u> under the <u>Biosecurity Act 2014</u> (Qld).

Materials that can carry fire ants

Here's what you need to know, whether you're a resident or a business, and how to manage <u>materials that can carry fire</u> <u>ants</u> like soil, baled materials, mulch, manure, quarry products, turf, and potted plants.

For residents:

- look for and report any suspect fire ants or nests within 24 hours
- ensure any materials you buy within the fire ant biosecurity zones are handled using fire ant-safe practices
- use the NFAEP's Material movement advice tool
- apply Australian Pesticides and Veterinary Medicines Authority approved fire ant treatment products to areas before starting any excavation work
- keep records for up to 2 years of your fire ant management actions.

For businesses:

If your business handles materials, you must follow these requirements:

- Look for and report: inspect your site regularly, especially high-risk areas. Sightings of suspect fire ants and nests must be reported within 24 hours to the NFAEP, either online or by calling 132 ANT (13 22 68). Fire ant training is recommended.
- **Fire ant-safe practices**: ensure materials are processed, stored, treated, and transported in compliance with the <u>Biosecurity Regulation 2016</u>. Use the NFAEP's <u>Fire ant compliance tool</u>.
 - Handling soil: <u>fire ant nests</u> are often found within the top metre of soil. After excavation, replace or keep this
 top layer separate from other soil being moved. It should stay on-site or be taken to a waste facility within
 the <u>fire ant biosecurity zones</u> (restrictions apply). Avoid this method in areas with loamy or sandy soil, as nests
 may extend deeper.
 - **Disturbance and storing:** before moving untreated soil off-site, disturb it using machinery turning, crushing, washing, or screening. Disturb stockpiles every 21 days and 24 hours before movement.
 - **Treatment:** look for and report any suspect nests immediately. Mark them so workers on-site know their locations. Treat or engage a licensed pest manager to carry out broadscale fire ant treatment and/or nest treatment before excavation continues. No live fire ants must leave the site.
 - **Recordkeeping:** keep a written record of all activities, including chemical treatments and disturbance actions, for at least 2 years.

Soil movement

Soil can be transported between or outside fire ant biosecurity zones if you follow these measures:

- Movements within the same zone or between zone 1 to zone 2 must follow the <u>Soil movement guidelines</u>.
- A biosecurity instrument permit (BIP) is required to:
 - move soil from any zone to outside the zone
 - o move soil from zone 2 to zone 1
 - o move soil when none of the approved options allow to your situation.

Other biosecurity measures

In addition to managing soil movement, there are further biosecurity measures you, your business, and employees can take to support the eradication of fire ants:

- Fire ant training the NFAEP offers free online <u>training and tools</u> for residents, primary producers, worksites, and pest managers. These resources help you identify, treat, and prevent fire ant spread. Proactive training is a cost-effective risk mitigation strategy and can help you avoid penalties for breaching your <u>general biosecurity obligation</u>.
- Health and safety fire ants can have devastating impacts, including inflicting <u>painful</u>, <u>fiery stings</u>, which can trigger a severe allergic reaction in humans. If you're digging or starting work, please wear personal protective equipment, including a long-sleeve shirt, long pants, boots, and gloves.

Eradicating fire ants is a shared responsibility. We all play a role in eradicating fire ants from Queensland, and ultimately Australia, by 2032.

Visit fireants.org.au or call 13 22 68 for more information.

NBN Co Qld

Referral 253790906 Member Phone 1800 687 626

Responses from this member

Response received Tue 15 Apr 2025 7.05pm

File name	Page
Response Body	186
253790906_20250415_090439122608_1.pdf	187
Disclaimer_253790906_20250415_090439122608.pdf	197
4678_NBN_Dial_Before_You_Dig_Poster_20170517.pdf	201

Hi Jai Waters,

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: Jai Waters
Phone: Not Supplied
Fax: Not Supplied

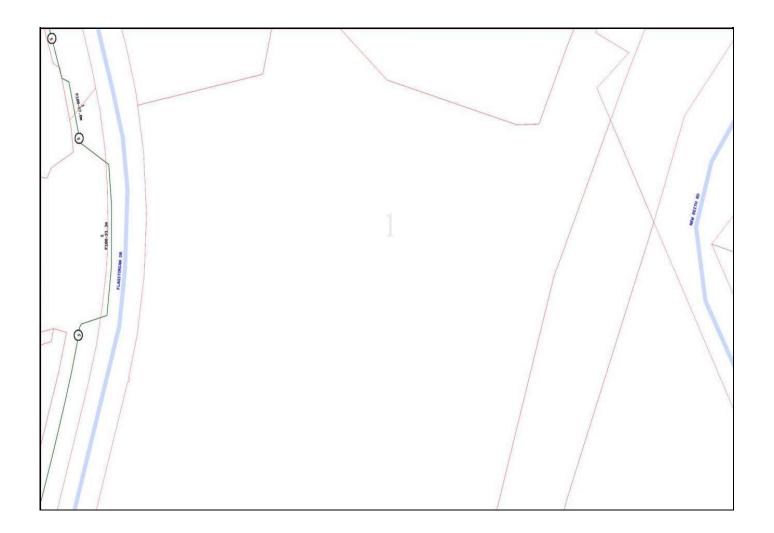
Email: jai@pinnacleeng.com.au

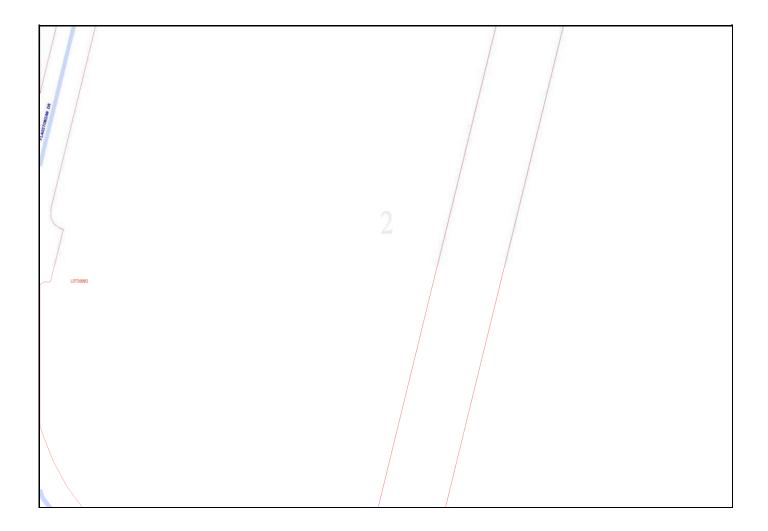
Dial before you dig Job #:		BEFORE
Sequence #	253790906	YOU DIG
Issue Date:	15/04/2025	Zero Damage - Zero Harm
Location:	14 Wild Mint Drive , Flagstone , QLD , 4280	00000000000000000000000000000000000000

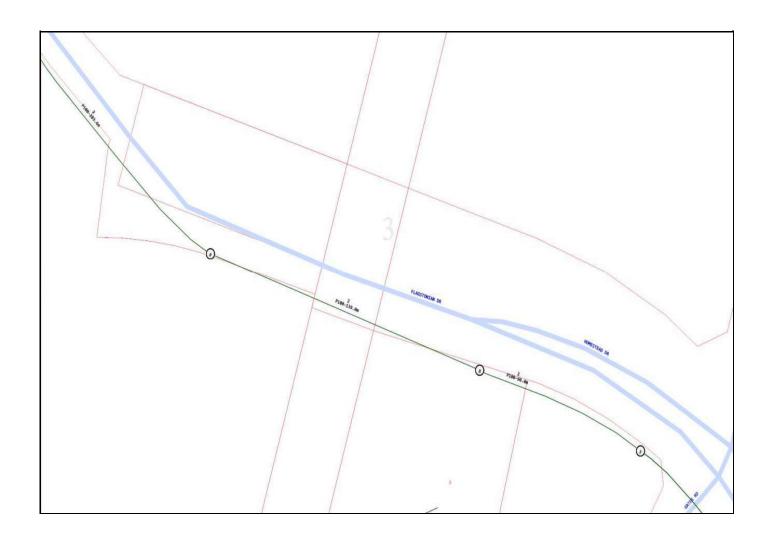
Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

1	5
2	6
3	7
4	8

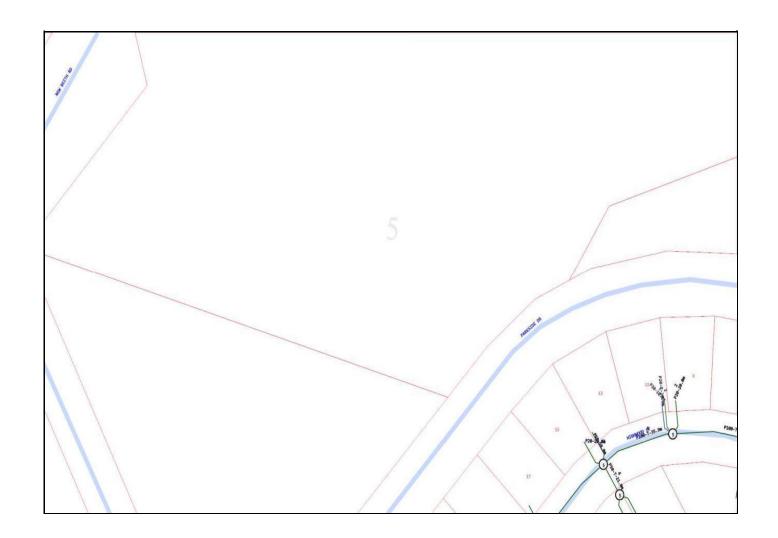
- -	LEGEND nbn (6)
34.	Parcel and the location
(3)	Pit with size "5"
(28)	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
\otimes	Pillar
PO - T- 25.0m P40 - 20.0m	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of 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.
-0 10.0m	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
-00-	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
-0-0-	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
- 00-	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m

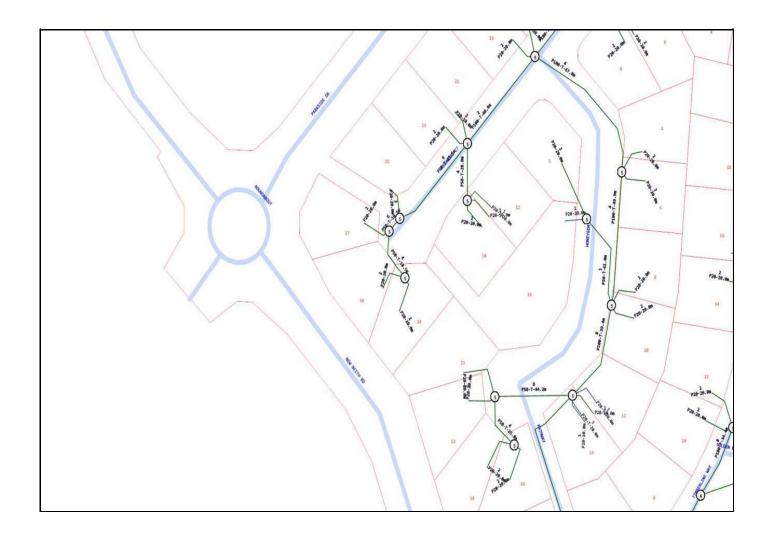




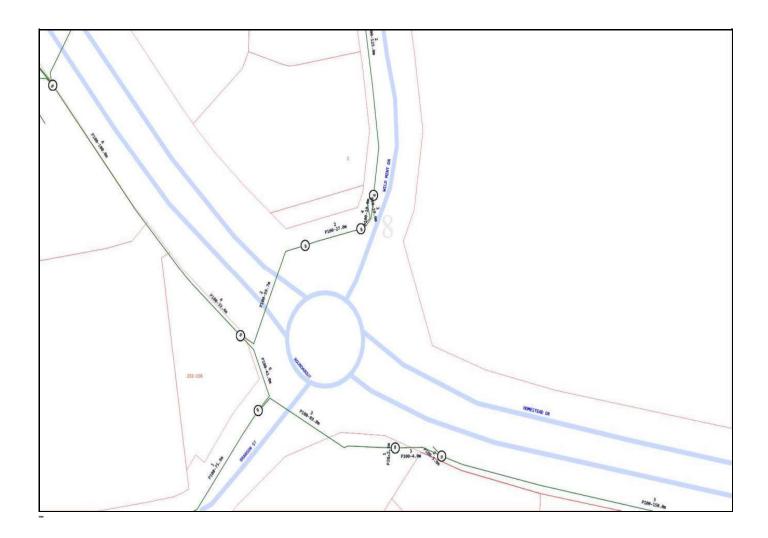












Emergency Contacts

You must immediately report any damage to the ${\bf nbn}^{\,{\rm m}}$ network that you are/become aware of. Notification may be by telephone - 1800 626 329.

To: Jai Waters
Phone: Not Supplied
Fax: Not Supplied

Email: jai@pinnacleeng.com.au

Before You Dig Australia Job #:	39116646	BEFORE
Sequence #	253790906	YOU DIG
Issue Date:	15/04/2025	Zero Damage - Zero Harm
Location:	14 Wild Mint Drive , Flagstone , QLD , 4280	Outer 24 Sept. Manage Sec. Outer Management

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 $\mathbf{nbn}^{\mathsf{m}}$ Facilities means underground fibre optic, telecommunications and/or power facilities, including but not limited to cables, owned and controlled by $\mathbf{nbn}^{\mathsf{m}}$

Location of **nbn™** Underground Assets

Referral 253790917 Member Phone 1800 653 935

Responses from this member

Response received Tue 15 Apr 2025 7.03pm

File name	Page
Response Body	204
Telstra Duty of Care v32.0c.pdf	206
Telstra Map Legend 4.0b.pdf	208
AccreditedPlantLocators 2025-01-08a.pdf	209
253790917.pdf	210



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

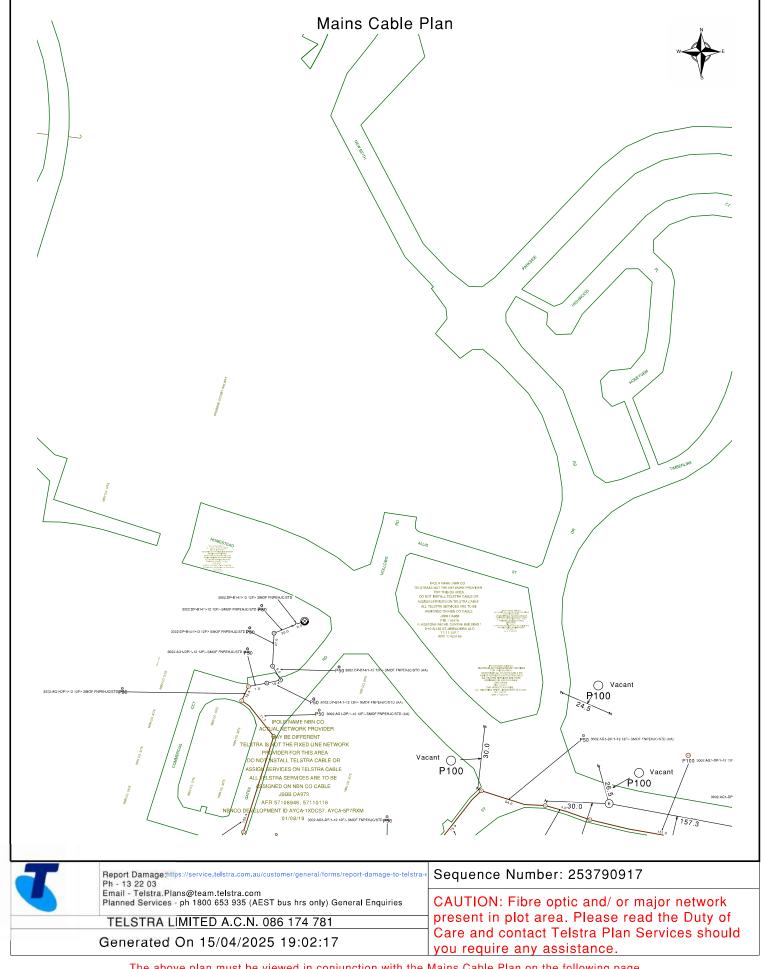
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.

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.



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

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.

PEG0810 Flagstone BYDA





End of document

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

This document was automatically generated at a point-in-time. Be aware that the source information from which this document was created may have changed since it was produced. This document may contain incomplete or out-of-date information. Always check your enquiry details in the BYDA Referral Service for the most recent information. For copyright information refer to individual responses.



Appendix E **LCC Mapping**



PROPERTY FLOOD REPORT



Property Details

Address: Lot 25009 Hollows Road FLAGSTONE QLD 4280

Lot/Plan: Lot 25009 SP 303120

Size/Area: 61,402 m² **Property Key:** 390590

Catchment(s): Logan River, Sandy Creek

View Logan's <u>catchments and waterways map</u> (PDF)



Summary Flood Assessment

The table below presents the flood risks applicable to the selected property. There may be multiple studies and flood scenarios affecting the property, particularly for larger sites.

Assessment	Details
Other information	GREATER FLAGSTONE - This property is in the Greater Flagstone Priority Development Area (PDA). Please contact Economic Development Queensland Development for advice about development. This report is for flood risk awareness only. <u>EDO PDA - Greater Flagstone</u>
Risk area(s)	Moderate, Low
Investigation area	Not applicable
Isolation risk	Not applicable
River flooding	Not applicable
Creek flooding	1% chance of a flood this size or larger happening in any given year
Overland flow	Applies. It is possible that flooding from a local waterway which has not yet been studied may also impact the property. Please contact Council for further advice. Overland flow is water (stormwater run-off) that travels over land during heavy rainfall events. It generally occurs quickly and for short durations.



Latest Flood Risk

The extract below comes from the flood risk map based on the latest (most recent) flood studies accepted by Council applicable for this property.



LEGEND



Floodwaters may be deep or fast flowing, or have a relatively high chance of occurrence (e.g. 80% chance in 30 years). Conditions may pose a risk to life and cause damage to buildings, possibly severe. Limited development may be considered if not increasing the flood risk exposure for people or property. These areas are generally better suited to environmental, recreational and some agricultural uses.

Moderate Moderate

Less frequently affected by flooding or if more frequent, with shallow or slower moving floodwater. Conditions may pose an unacceptable risk to people or property if not mitigated. Development may be tolerable if measures are taken to address flood impacts, protect people and limit damage.

Lov

Extremely unlikely chance of flooding (1% chance or less over a 30 year period) and/or relatively shallow or benign flooding conditions. Development is generally acceptable except for essential community infrastructure (e.g. emergency services). Vulnerable uses (e.g. childcare, aged care) may be ok subject to building, site access and safe shelter mitigation measures. Shows the full floodplain under the largest flood that could conceivably occur.

Investigation area

Locations where a current flood study has not been delivered and information to determine flood risk is not available. The approximation of the floodplain in these areas is based on a citywide overland flow study. Development should avoid these areas until further investigation (updated flood study or localised risk assessment) is completed.



The flood studies this map is based on consider the impacts of climate change, as required by Queensland's planning legislation and policies. The map considers the whole floodplain for Logan and reflects a risk-based approach that takes into account:

- How likely a flood of a given size is in any given year, and
- What the impact or level of danger of that flood is.



Flood Levels

The table below displays flood levels from the most recently accepted flood studies affecting this property. To view the flood study documents please see the Flood page on Council's website.

The levels are measured in Australian Height Datum (AHD), where sea level is approximately zero (0) metres. The level displayed in the table below is the maximum flood level on the property for that event (likelihood). For some properties, particularly large properties or those on a significant slope, flood levels can vary significantly.

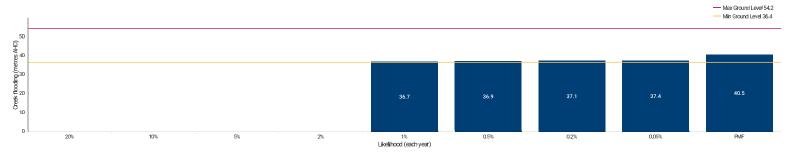
The most likely flood scenarios is shown at the top of the table, with the Probable Maximum Flood (PMF) at the bottom, being the least likely but most serious flood scenario.

Some properties may be impacted by only river flooding or only creek flooding, and some may be impacted by both. There may also be other sources of inundation that may impact the property and affect flood levels, based on overland flow or local creeks where studies have not yet been completed.

Study: Flagstone & Sandy Creeks Flood Study 2025

Likelihood (each year)	Creek flooding
20% chance	Not applicable
10% chance	Not applicable
5% chance	Not applicable
2% chance	Not applicable
1% chance	36.7 metres AHD
0.5% chance	36.9 metres AHD
0.2% chance	37.1 metres AHD
0.05% chance	37.4 metres AHD
PMF	40.5 metres AHD

Flood and Ground Levels in metres AHD



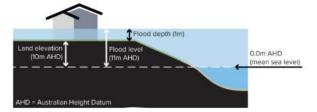
Ground Levels

Ground levels are based on an aerial LiDAR (Light Detection and Ranging) survey, which uses millions of laser point measurements to build a model of the ground surface. The source of the data is displayed in the table below so that you know when the survey was conducted.

Ground level	Details
Minimum ground level	36.4 metres AHD
Maximum ground level	54.2 metres AHD

Source: 2021 Digital elevation model (1 metre grid)

The projected flood depth (how deep the water may be above ground, in metres) is the difference between the flood levels in the section above and the ground levels in this table. The diagram below provides an example (land elevation is ground level).





Overland Flow

Overland flow is water (stormwater/rainfall run-off) that exceeds the capacity of drains, pipes and channels during heavy rainfall events and travels over land towards waterways. It generally occurs quickly and for shorter periods of time. The impact of overland flow is dependent on local conditions, so the mapping is a guide only. It is possible that flooding from a local waterway which has not yet been studied may also impact the property. Please contact Council for further advice.







Future Climate Scenarios

This extract comes from the map showing the projected extent of flooding (affected areas) for multiple flood scenarios for all relevant flood studies, including the projected impacts of climate change. This map corresponds with the flood levels provided in the table above for the 5%, 2%, 1%, 0.5%, 0.05% and Probable Maximum Flood (PMF) scenarios.



LEGEND

5% chance

The areas modelled to be impacted by a flood that has a 5% (or 1 in 20) chance of happening in any given year, or 80% chance over a 30 year period, which is the common term of a mortgage. This modelling **includes the impacts of climate change** and represents our understanding of future risk.

2% chance

The areas modelled to be impacted by a flood that has a 2% (or 1 in 50) chance of happening in any given year, or 45% chance over a 30 year period, which is the common term of a mortgage. This modelling **includes the impacts of climate change** and represents our understanding of future risk.

1% chance

The areas modelled to be impacted by a flood that has a 1% (or 1 in 100) chance of happening in any given year, or 25% chance over a 30 year period, which is the common term of a mortgage. This modelling **includes the impacts of climate change** and represents our understanding of future risk.

0.5% chance

The areas modelled to be impacted by a flood that has a 0.5% (or 1 in 200) chance of happening in any given year, or 15% chance over a 30 year period, which is the common term of a mortgage. This modelling **includes the impacts of climate change** and represents our understanding of future risk.

0.05% chance

The areas modelled to be impacted by a flood that has a 0.05% (or 1 in 2000) chance of happening in any given year. This is an extremely unlikely flood event with a 1% chance of happening over a 30 year period, not including the impacts of climate change.

PMF

The PMF or probable maximum flood scenario represents the full extent of the floodplain, or the most serious flood that could be expected to occur. This is usually estimated based on the probable maximum rainfall, not including the impacts of climate change.

Investigation area

Locations where a current flood study has not been delivered and information to determine flood risk is not available. The approximation of the floodplain in these areas is based on a citywide overland flow study. Further investigation is needed.



Current Climate Scenarios

This extract comes from the map showing flood affected areas **without** considering the impacts of climate change. This map represents modelled flooding under current conditions, and can be used for insurance purposes.



LEGEND

5% chance

The areas modelled to be impacted by a flood that has a 5% (or 1 in 20) chance of happening in any given year, or 80% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

2% chance

The areas modelled to be impacted by a flood that has a 2% (or 1 in 50) chance of happening in any given year, or 45% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

1% chance

The areas modelled to be impacted by a flood that has a 1% (or 1 in 100) chance of happening in any given year, or 25% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

0.5% chance

The areas modelled to be impacted by a flood that has a 0.5% (or 1 in 200) chance of happening in any given year, or 15% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

0.05% chance

The areas modelled to be impacted by a flood that has a 0.05% (or 1 in 2000) chance of happening in any given year. This is an extremely unlikely flood event with a 1% chance of happening over a 30 year period, not including the impacts of climate change.

PMF

The PMF or probable maximum flood scenario represents the full extent of the floodplain, or the most serious flood that could be expected to occur. This is usually estimated based on the probable maximum rainfall, not including the impacts of climate change

Investigation area

Locations where a current flood study has not been delivered and information to determine flood risk is not available. The approximation of the floodplain in these areas is based on a citywide overland flow study. Further investigation is needed.

Historic Flood Events

Based on the best information available to Council, the table below indicates whether or not the selected property may have been impacted by significant historic flood events. It is possible that other creek flooding or overland flow, which is not included in Council's mapping of these events, may have impacted the property.

Flood event	Property impacted
1974	No
2017 (after ex Tropical Cyclone Debbie)	No
2022 (late February / early March)	No



Planning Scheme Maps

The selected property is shown below on an extract of the Flood Overlay Maps from the Logan Planning Scheme 2015 V9.1 with TLPI No. 1/2024. Various provisions of the planning scheme which refer to properties affected by the Flood Overlay Maps will apply to the flood affected areas for the purposes of planning and development. This may include, for example, raised building floor levels and achieving safe vehicle access to the road network.

OM-05.01 Isolated islands



OM-05.02 High flow area



OM-05.04 Flood risk areas



High Floodwaters may be deep or fast flowing, or have a relatively high chance of occurrence (e.g. 80% chance in 30 years). Conditions may pose a risk to life and cause damage to buildings, possibly severe. Limited development may be considered if not increasing the flood risk exposure for people or property. These areas are generally better suited to environmental, recreational and some agricultural uses. Moderate Less frequently affected by flooding or if more frequent, with shallow or slower moving floodwater. Conditions may pose an unacceptable risk to people or property if not mitigated. Development may be tolerable if measures are taken to address flood impacts, protect people and limit damage. Low Extremely unlikely chance of flooding (1% chance or less over a 30 year period) and/or relatively shallow or benign flooding conditions. Development is generally acceptable except for essential community infrastructure (e.g. emergency services). Vulnerable uses (e.g. childcare, aged care) may be ok subject to building, site access and safe shelter mitigation measures. Shows the full floodplain under the largest flood that could conceivably occur. Investigation area Locations where a current flood study has not been delivered and information to determine flood risk is not available. The approximation of the floodplain in these areas is based on a citywide overland flow study. Development should avoid these areas until further investigation (updated flood study or localised risk assessment) is completed.



MAP LEGEND
High flow area High hazard areas of flooding where significant (deeper, faster) flow of water occurs and in which a building is vulnerable to structural damage or failure from floodwater. Classified as H5 or H6 in the Australian Institute of Disaster Resilience (AIDR) Guideline 7-3 'Flood Hazard'.
High flood island Areas which are isolated from flood-free land (surrounded by floodwater) but retain a portion of the area as flood free in a probable maximum flood (PMF).
Low flood island Areas which are surrounded by floodwater and at first isolated from flood-free land, then completely inundated by floodwater (submerged) as the flood continues to rise.
Meadowbrook flood assessment area Area where the function of important community infrastructure needs to be maintained. Flood mitigation measures and comprehensive emergency management planning is required to adequately manage the risk for flood events.



If more recent flood studies have been completed and accepted by Council, the Latest Flood Risk Map shown at the top of this report may be different from the planning scheme map. The latest flood information should be used to inform development decisions and will be incorporated into the planning scheme in a future amendment.

Further Information

- 1. Floods are highly unpredictable and variable, and properties may be affected by other sources of potential flooding. Each flood and its impact is different. Areas that were not flooded previously may be affected by future events. Areas that have been previously flooded may be impacted in different ways. This online report cannot take all of this into account.
- 2. The flood mapping and levels in this report are based on data from flood studies undertaken at a particular time and are subject to change. For example, if the method for calculating flood levels is updated, industry guidelines are updated or more recent information becomes available, this may result in changes to the information in this report. In areas where development is ongoing, the flood mapping and levels may not reflect developed conditions.
- 3. Flood studies do not create risk. They help us to understand the risk, based on relevant legislation and Queensland Government policies and guidelines. Flood studies also consider a range of other factors such as rainfall and river level information from recent events, climate change and trends, the impacts of development, changes to catchment conditions, new technologies and industry best practice (which help to improve accuracy).
- 4. Flood studies and models are developed from the best information available at the time. They do not tell you how the flood waters might behave, how quickly they may rise, or how dangerous the flooding will be. The models also cannot represent changes that have occurred since they were developed which may impact flood behaviour, such as earthworks, new developments or road infrastructure.
- 5. This report is not a substitute for independent professional advice. You should engage the services of a Registered Professional Engineer of Queensland (RPEQ) to get site specific information regarding the flood risk to your property, and how that might affect any proposed building or development work.
- 6. While Logan City Council takes reasonable care in producing this report, it does not guarantee that the information is accurate, complete or current. Logan City Council does not accept any responsibility for any loss or damage (however it was caused) in connection with the use of or reliance on the information in this report.

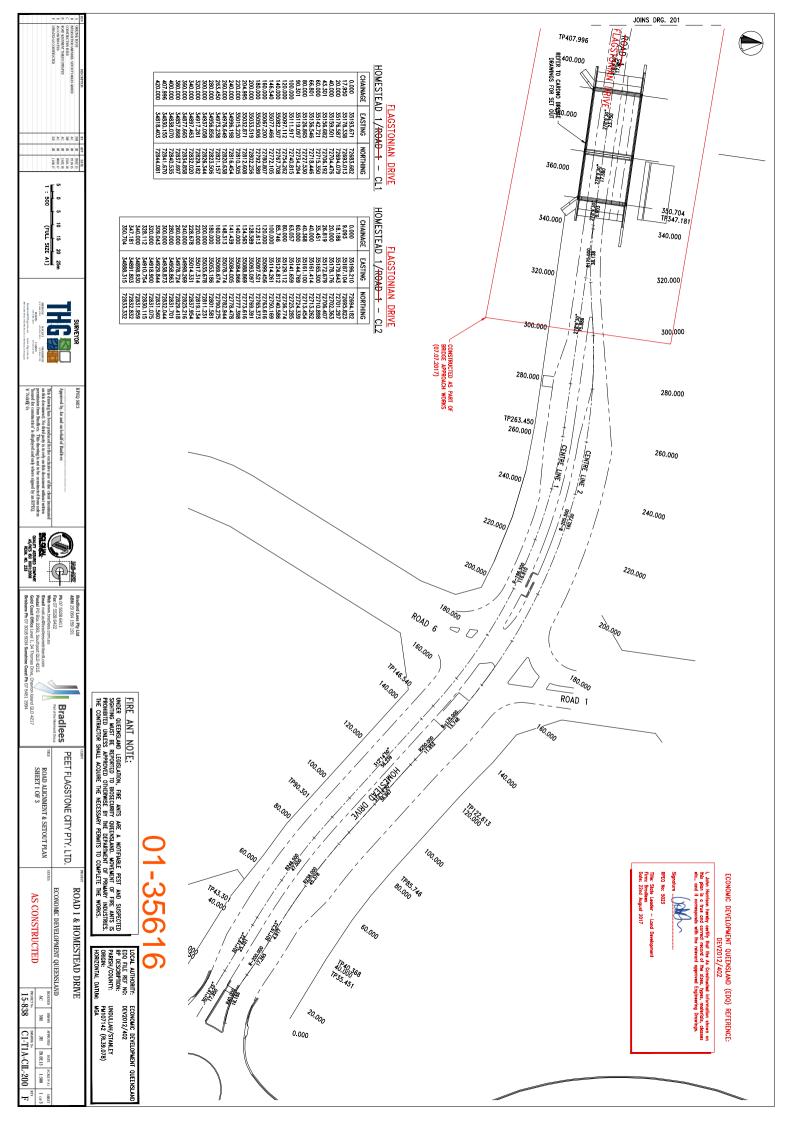
Contact Information

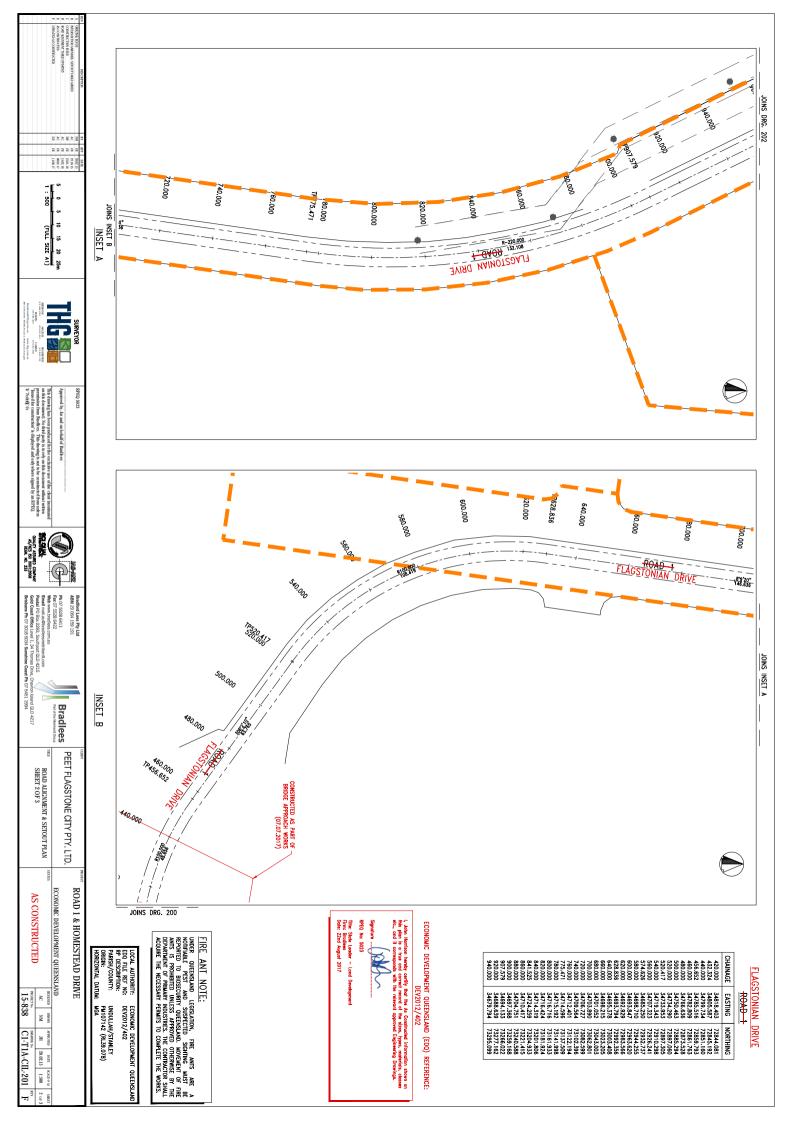
Where to go for further information depends on the type of information you need. Please refer to the Flood Risk Fact Sheet or contact Council using the details below.

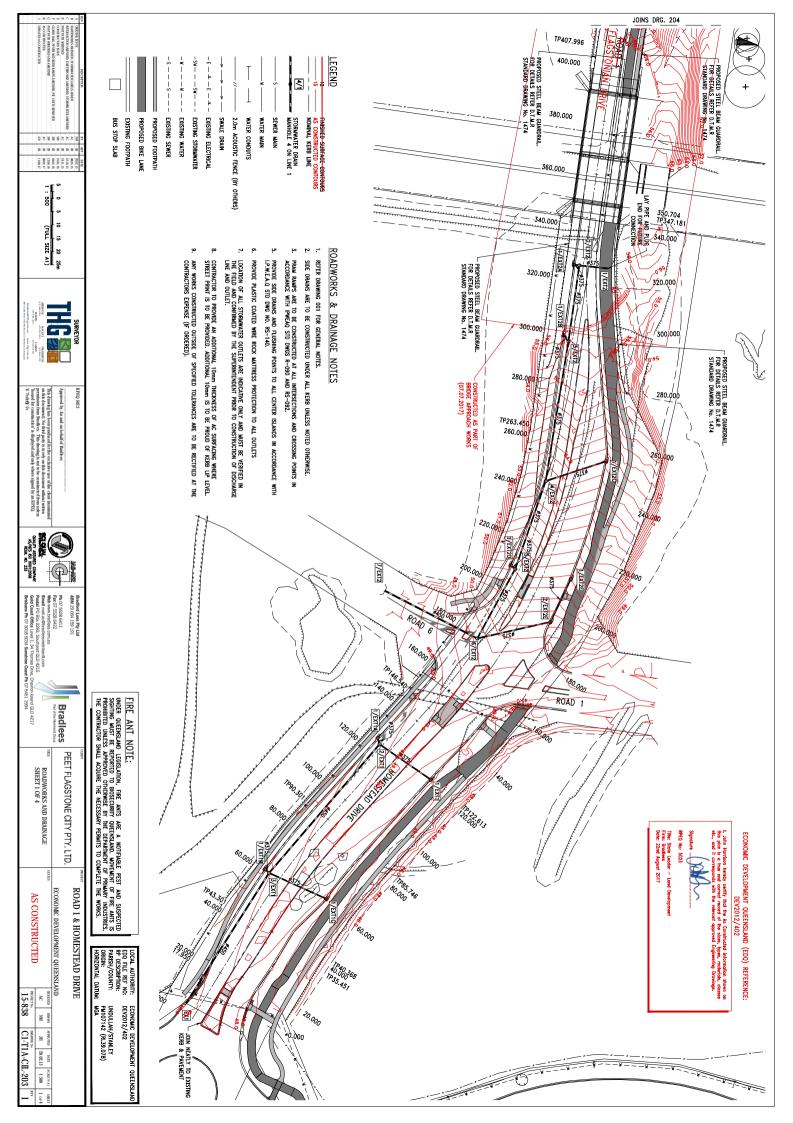
Topic	Contact Details
Flood studies and modelling information, and the flood risk on your property	Contact Council on <u>07 3412 3412</u> or email <u>council@logan.qld.gov.au</u> . Further information about flooding and flood studies is available on the <u>Flood page</u> on Council's website.
Planning and development enquiries or proposals	Contact Council on <u>07 3412 3412</u> or email <u>development@logan.qld.gov.au</u> . Before lodging a development application, <u>pre-lodgement advice</u> is recommended.
Building information	Contact Council on <u>07 3412 3412</u> or email <u>council@logan.qld.gov.au</u> . You can also contact a <u>private building certifier</u> .
Properties in Priority Development Areas	Contact Economic Development Queensland. Council is not the planning authority for these properties.
Independent advice about flooding on your property	Contact a registered engineer through the Board of Professional Engineers of Queensland: Phone: <u>07 3210 3100</u> Email: <u>admin@bpeq.qld.gov.au</u> Web: <u>Home - Board of Professional Engineers Queensland (bpeq.qld.gov.au)</u>

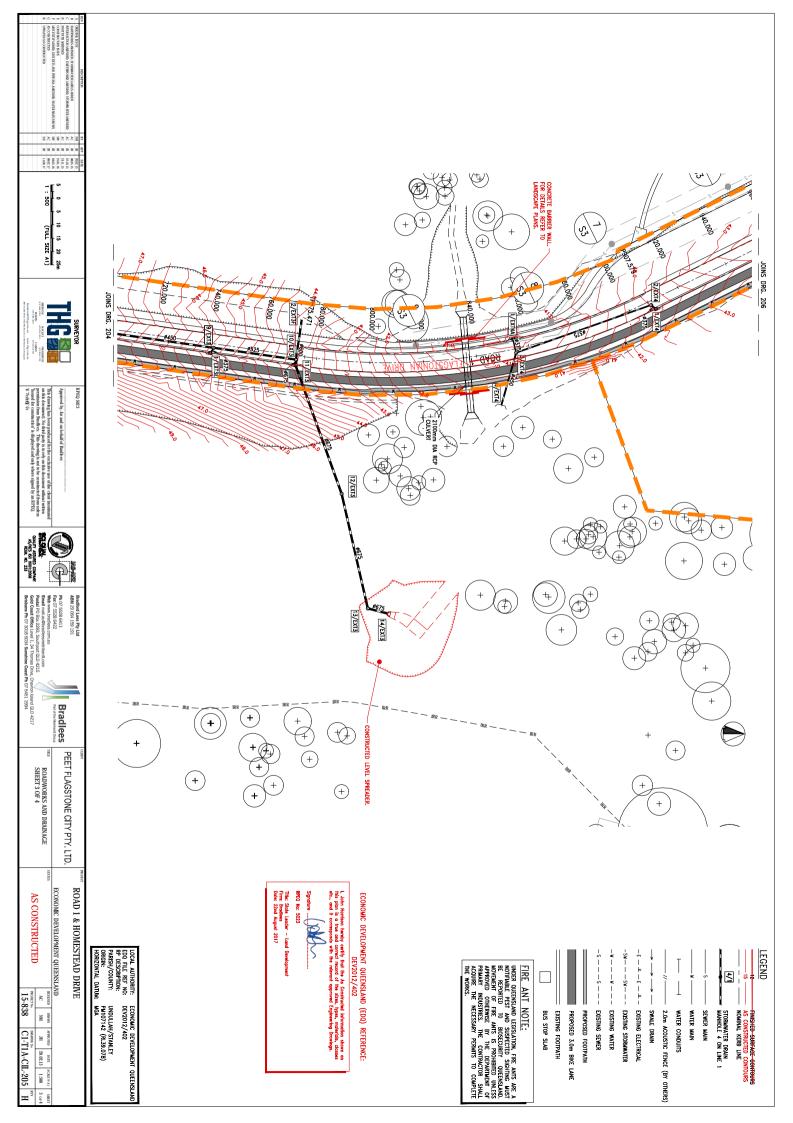


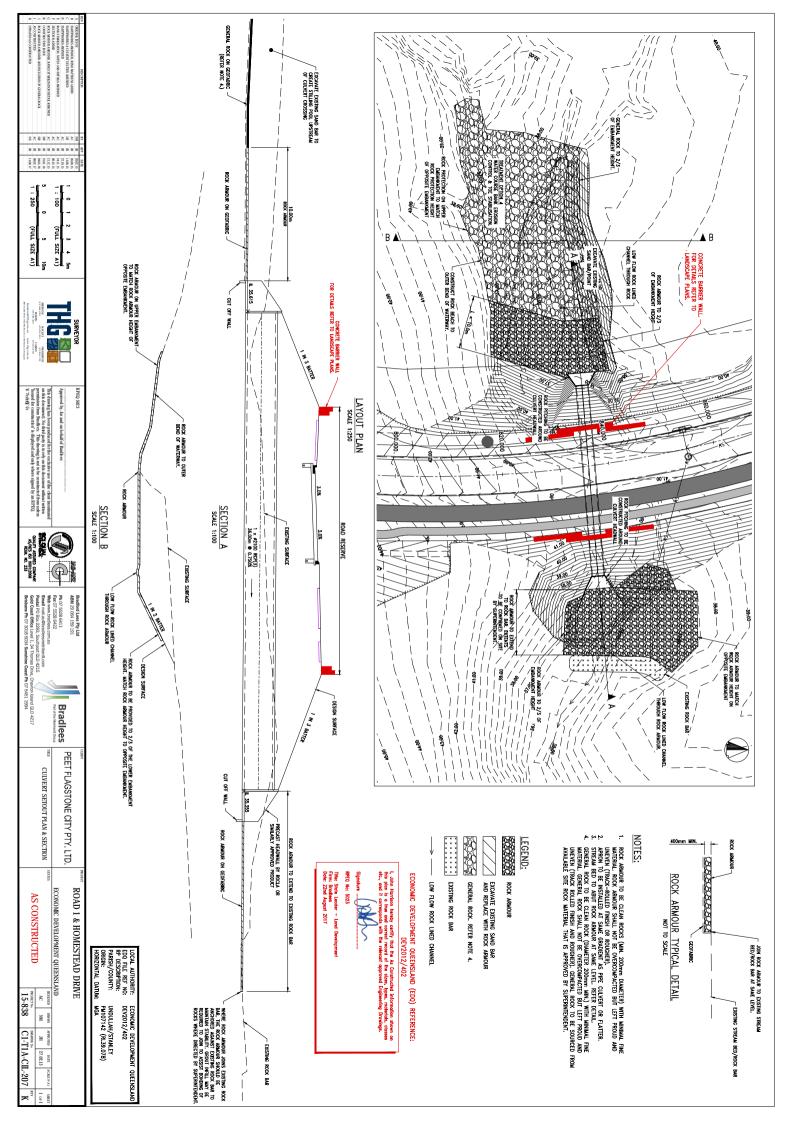
Appendix F LCC 'As Con' Layouts











PRELIMINARY PAVEMENT DESIGN
HOMESTEAD DRIVE & ROAD-4 FLAGSTONIAN DRIVE - CL 1
SUBJECT TO IN FEID GEOTECHNICAL RESULTS AND CONFIRMATION
BY THE SUPERIMENDENT. Horizontal Curve Radius (m)

CL EXT1

SCALE: HORIZONTAL - 1:1000

VERTICAL - 1:100 CHAINAGE LIMITS SURFACE
TYPE EXISTING SURFACE LEVEL CHANNEL LIP LEVELS RHS Vertical Curve Length (m)
Vertical Curve Radius (m)
Vertical Grade (%)
Vertical Curve (1 in ...) PAVEMENT LEVEL
ON PEGGED CENTRELINE CHANNEL LIP LEVELS LHS CUT / FILL DEPTH DATUM41.000 SUPER ELEVATION PEGGED CHAINAGE PRIMER 48.065 48.038 48.065 48.038 125 6.569 47.913 48.143 IP RL 48.038 0.000 20.02.15 08.05.15 22.10.15 25.01.16 09.02.17 17.950 48.046 48.066 48.108 48.121 0.063 48.213 48.226 48.015 48.029 125 125 48.183 48.168 48.245 48.266 0.062 48.103 48.109 40.000 43.301 48.35 48.371 150 051 1 : 100 YERT. (FULL SIZE) 0.178 BLANKET COURSE CBR15 WATERIAL TBC TBC **150** (mm) HEPTAL 48.453 48.557 0.104 48.375 48.662 48.515 48.617 0.102 SURVEYOR

SURVEYOR

WANAVA

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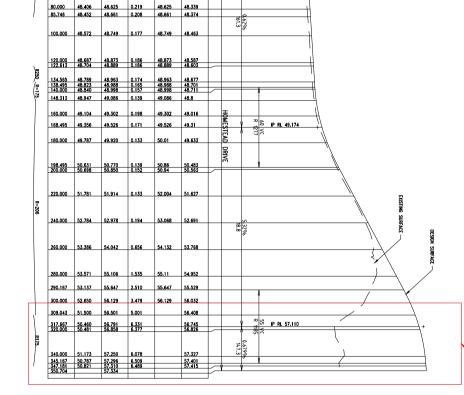
CHARACT

CHARACT 140.000 48.867 141.544 48.871 146.540 48.892 48.865 48.875 48.916 -0.002 0.003 0.024 48.684 48.693 48.734 48.97 48.98 49.021 -0.070 49.532 49.497 49.427 49.278 -0.028 49.743 49.715 49.584 HOMESTEAD This drawing has been produced for the exclusive use of the client (nominate on this document). No third party is to rely on this document without written permission from Baddees. This downing is not to be constanted of from under the comparison from the construction of the displayed and only where signed by an RPEQ. Approved by, for and on behalf of Budde es KPEQ SOZE 200.000 50.061 201.544 50.087 50.627 50.711 0.566 0.624 50.535 50.619 50.732 50.816 DRIVE 1.217 18.2 260.000 49.888 263.450 49.670 53.926 54.116 4.038 4.446 53.834 54.024 54.031 54.221 55.534 49.729 55.443 319.241 50.329 56.809 320.000 50.345 56.832 6.480 6.486 56.717 56.74 57.334 CREST 366.821 RL 57.420 57.387 360.000 390.571 51.925 57.300 5.375 57.211 52.104 57 236 5.131 57.19 57.291 407.996 52.264 57,155 4.891 57.145 57.167 FOR BRIDGE DETAILS & LEVELS Bradlees Part of the Mainhard Group 52.683 52.699 4.305 4.279 57.04 57.033 420.000 420.571 56.988 56.978 56.943 56.931 PEET FLAGSTONE CITY PTY. LTD. HOMESTEAD DRIVE & ROAD I-LONGITUDINAL SECTION SHEET 1 OF 3 -1.283 54.161 53.949 53.933 520.000 55.610 520.417 55.615 54.040 54.025 -1.570 -1.590 54.145 54.13 53.294 -Title: State Leader – Land Development Firm: Bradlees Date: 22nd August 2017 ECONOMIC DEVELOPMENT QUEENSLAND (EDQ) REFERENCE: DEV2012/402 ROAD 1 & HOMESTEAD DRIVE ECONOMIC DEVELOPMENT QUEENSLAND AS CONSTRUCTED -26.8 LOCAL AUTHORITY: ECONOMIC DEVELOPMENT
EDO FILE REF NO: DEVZO12/402
RP DESCRIPTION: UNDULLAH/STANLEY
ORIGIN: PM 107 142 (RL39.078)
HORIZONTAL DATUM: MGA 15-838 AC SESSES 49.564 49.669 ECONOMIC DEVELOPMENT QUEENSLAND DEV2012/402 MN C1-T1A-CIL-220 Hf 20.02.15

PRELIMINARY PAVEMENT DESIGN HOMESTEAD DRIVE - CL 2 SUBJECT TO IN FELD DECTECHNICAL RESULTS AND CONTRMATION BY THE SUPERINTENDENT. CHAINAGE LIMITS SURFACE
TYPE PRIMER 150 BLANKET COURSE CBR15 MATERIAL TBC

(mm) DEPIA

CONSTRUCTED AS PART OF BRIDGE APPROACH WORKS (07.07.2017)



Vertical Curve Length (m)
Vertical Curve Radius (m)
Vertical Grade (%)
Vertical Curve (1 in ...)

IP RL 48.191

CHANNEL LIP
LEVELS RHS

47.973

48.181 48.183

48.216

DATUM41.000

CHANNEL LIP

돐

48.242 48.253 48.04 48.056

48.501

CUT / FILL DEPTH

EXISTING SURFACE LEVEL

48.191 48.191

48.356 48.357

PAVEMENT LEVEL ON PEGGED CENTRELINE

48.377 48.379 0.021

48.501 0.105

Horizontal Curve Radius (m)_B40____R-200_

CL EXT2

SCALE: HORIZONTAL - 1:1000 VERTICAL - 1:100

PEGGED CHAINAGE

10.028

18.186 20.000 48.178 48.192 48.242 48.253 0.063

> Title: State Leader - Land Development Firm: Bradlees
> Date: 22nd August 2017 I, John Harrison hereby certify that the As Constructed information shown on this plan is a true and correct record of the sizes, types, materials, classes etc., and it corresponds with the relevant approved Engineering Drawings. RPEQ No: 5023

ECONOMIC DEVELOPMENT QUEENSLAND (EDQ) REFERENCE:

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SURVEYOR

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Bradlees
Part of the Meinhardt Group

PEET FLAGSTONE CITY PTY LTD. HOMESTEAD DRIVE & ROAD 1-LONGITUDINAL SECTION SHEET 3 OF 3

ECONOMIC DEVELOPMENT QUEENSLAND

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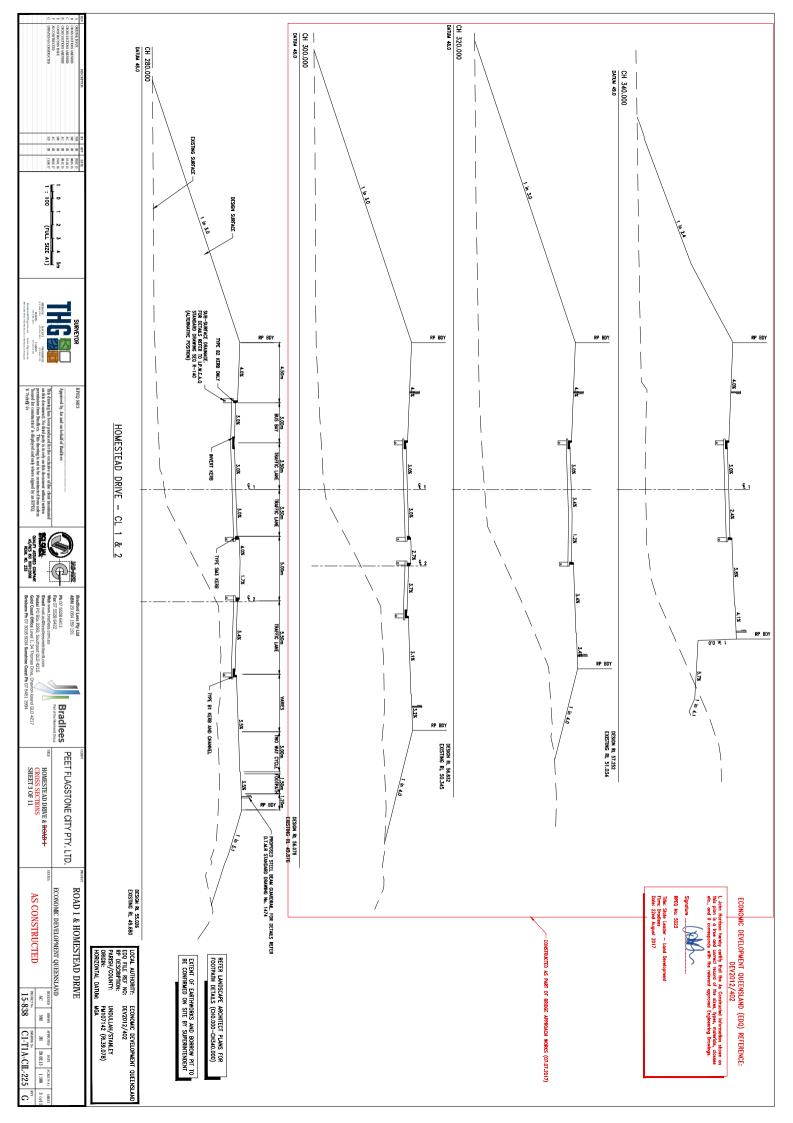
ROAD 1 & HOMESTEAD DRIVE

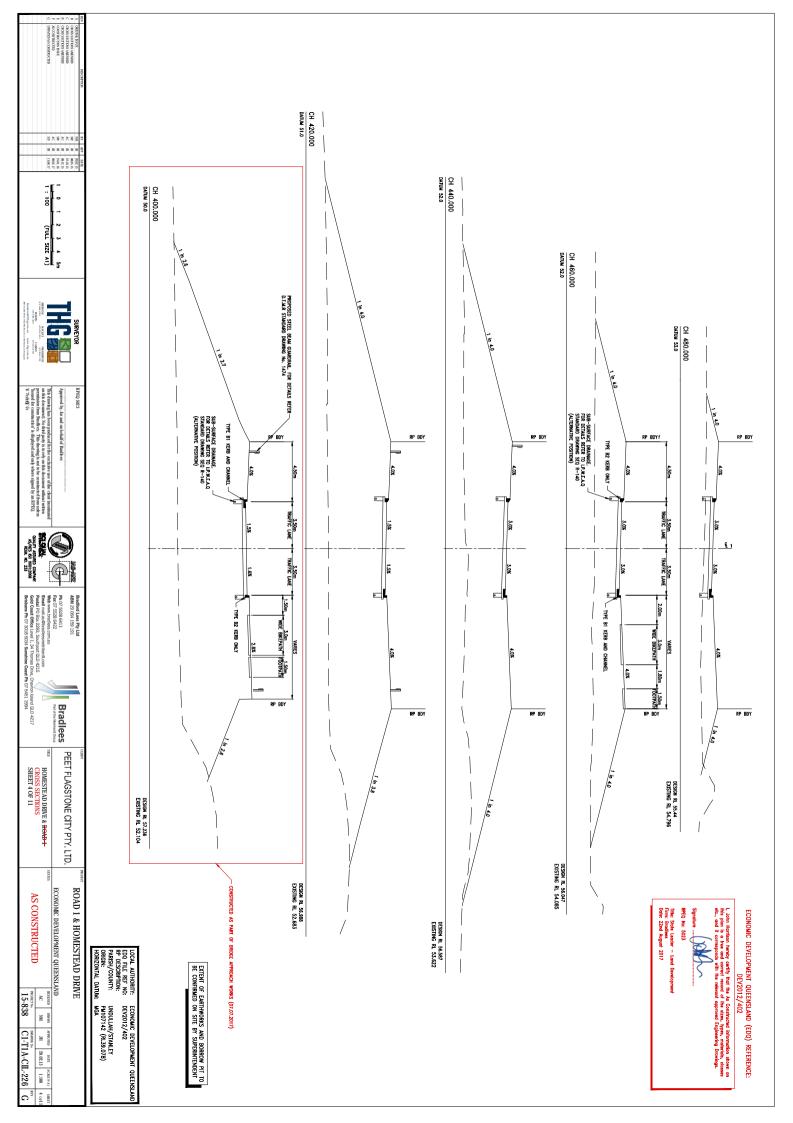
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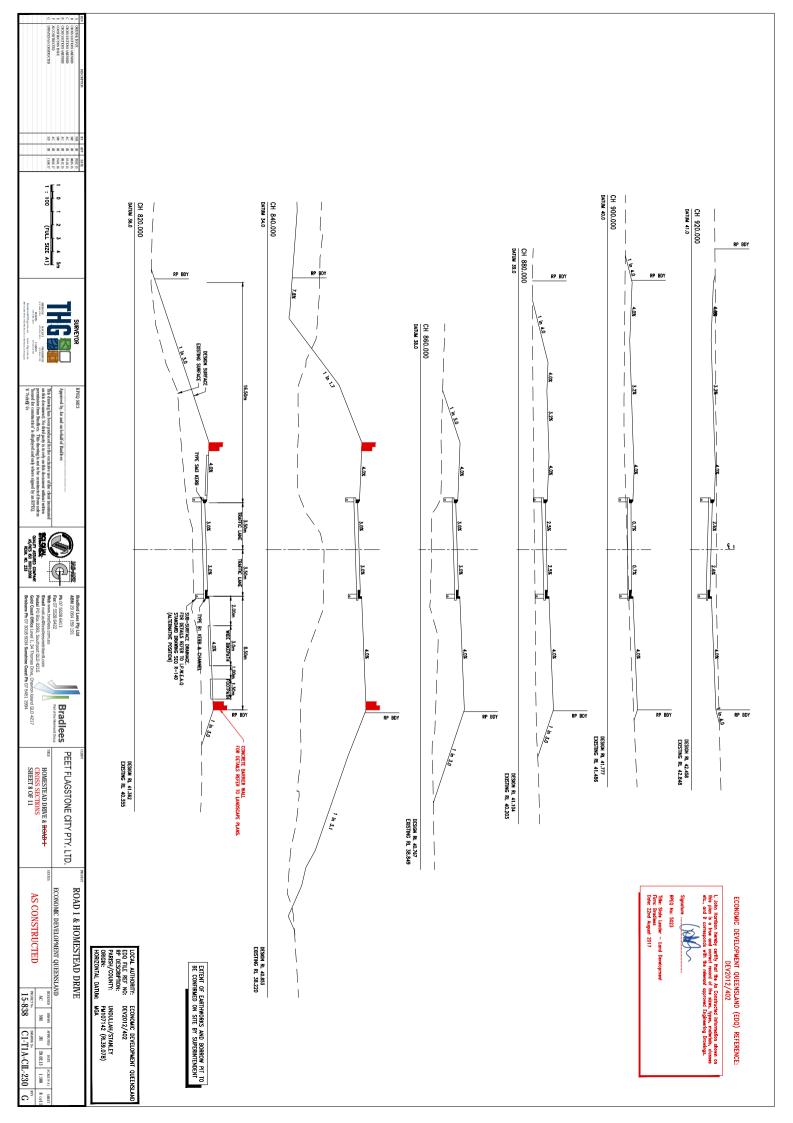
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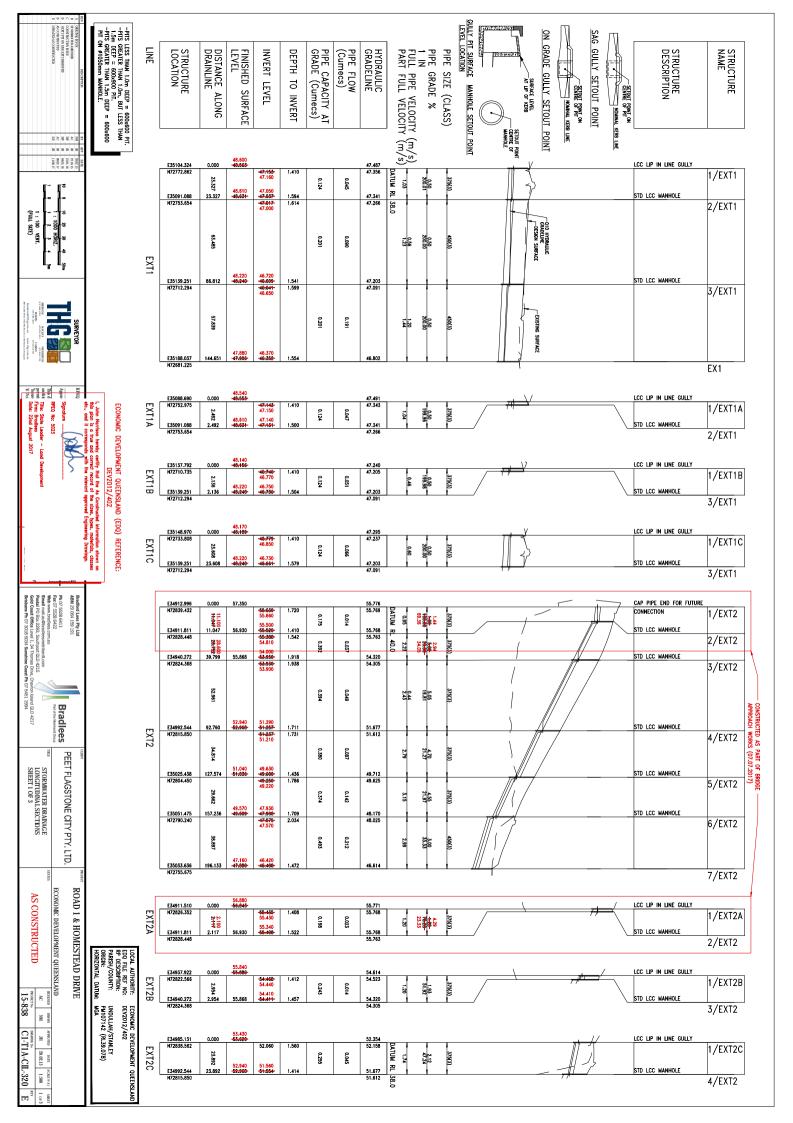
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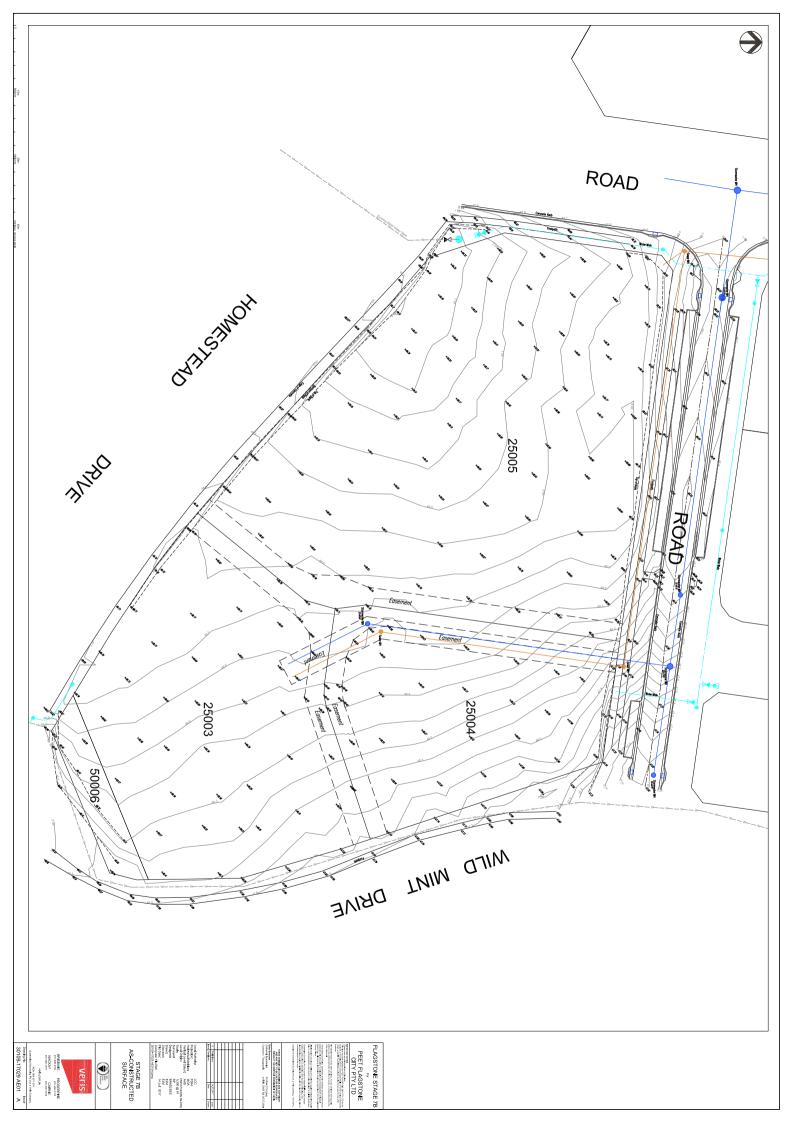
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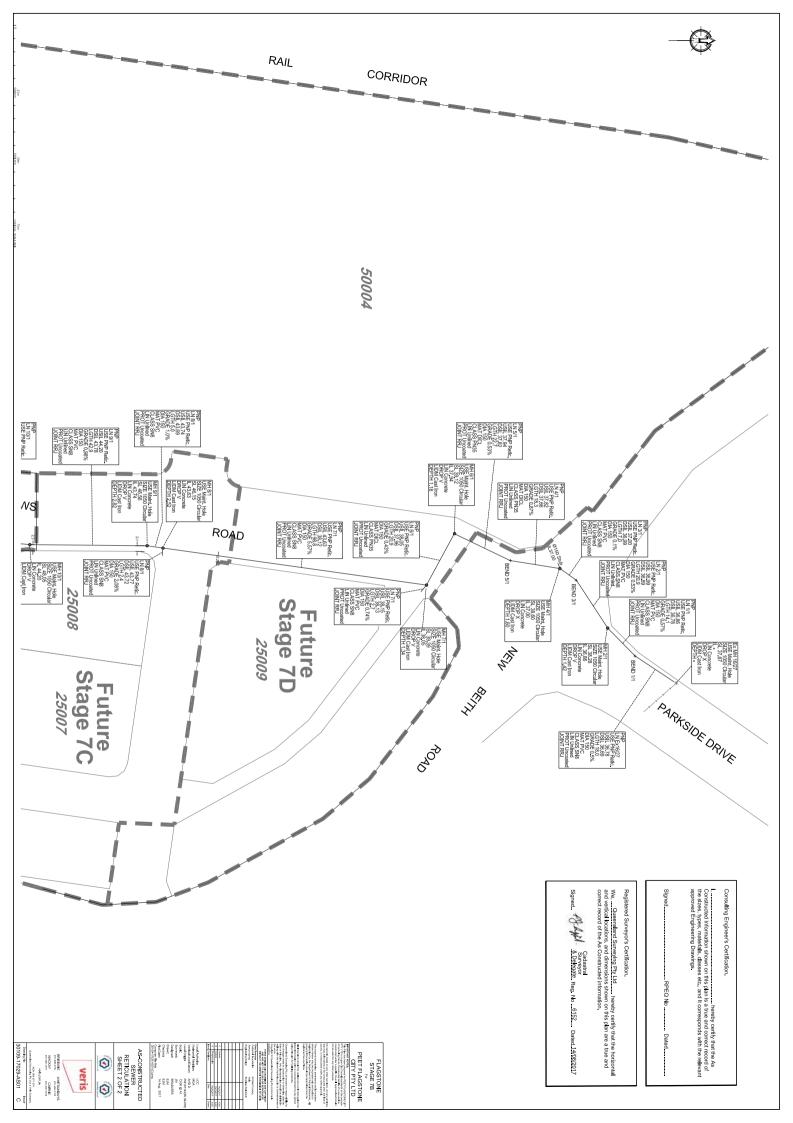


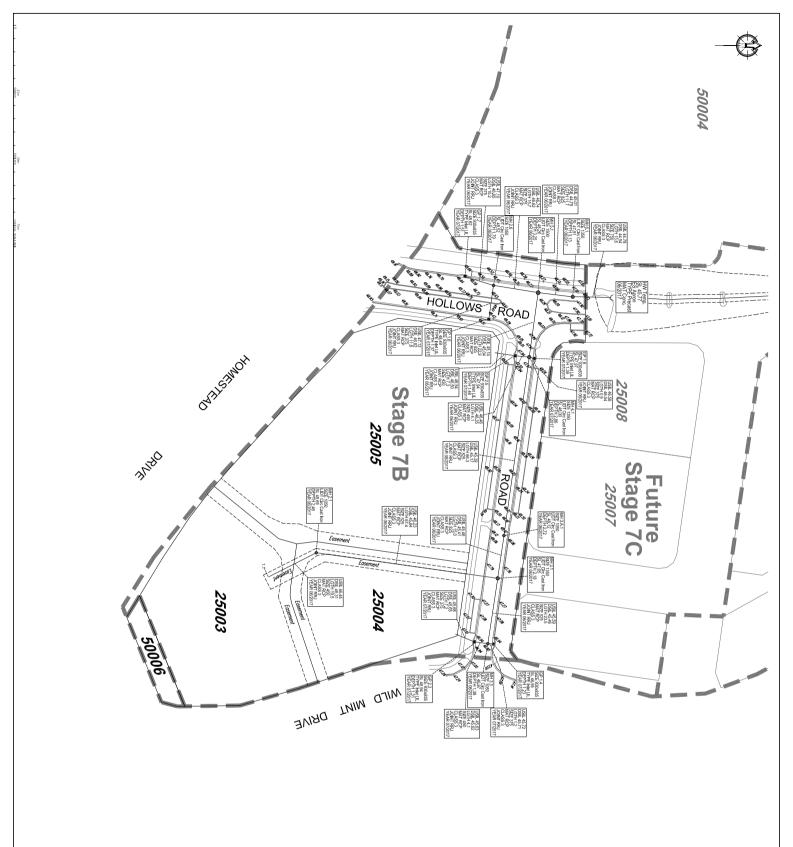
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14 Aug. 2017

BRISAME WHITISHOUN'S DOZBOTO D

AS-CONSTRUCTED SEWER RETICULATION SHEET 1 OF 2

veris





Consulting Engineer's Certification.

RPEQ No

Dated

Registered Surveyor's Certification.

We. Queensland Surreying Py. Ltd hereby certify that the horizontal and vertical locations, and dimensions shown on this plan are a true and correct record of the As Constructed information.

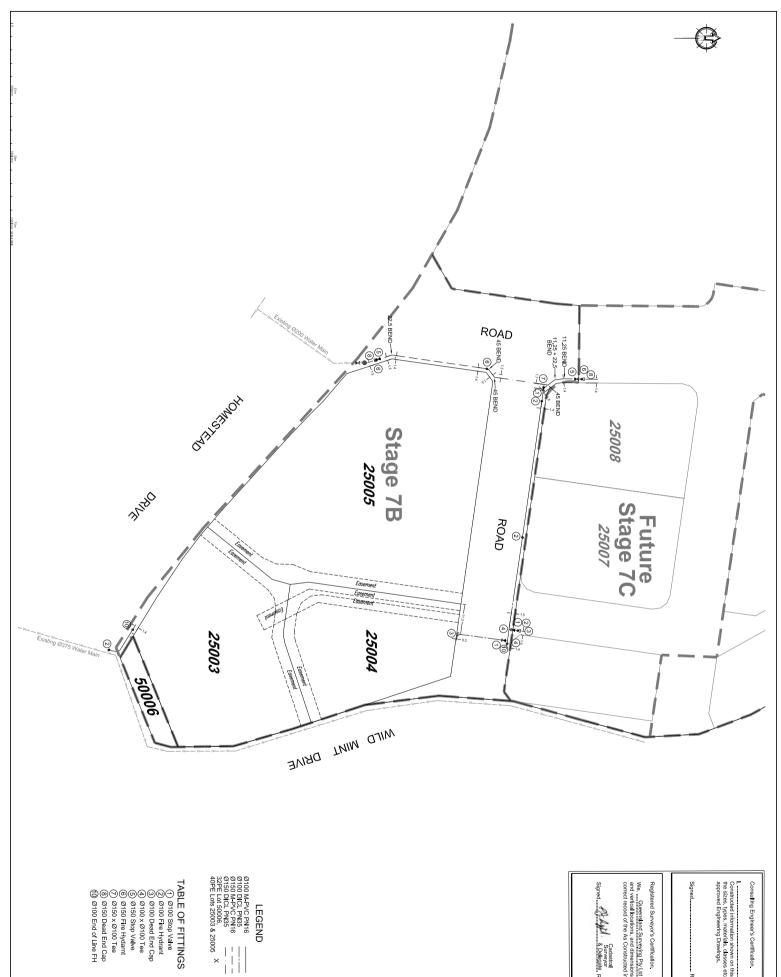
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Consulting Engineer's Certification.

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LEGEND

FLAGSTONE STAGE 7B For PEET FLAGSTONE CITY PTY LTD

LCC MGA AHD D PM107142/RLI 1500 @ A1 JM BRADLEES EJM EJM 24 Aug. 2017

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AS-CONSTRUCTED
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PINNACLE ENGINEERING GROUP

ABN: 80 608 431 625 Level 1, 19 Short Street, Southport QLD 4215 (PO Box 517, Paradise Point QLD 4216) www.pinnacleeng.com.au