



239-241 Ewing Road, Woodridge QLD 4114

CIVIL ENGINEERING REPORT
(Stormwater Management, Infrastructure & Civil Services)

CLIENT:	LI & HU Investment Pty Ltd
SITE ADDRESS:	239-241 Ewing Road, Woodridge
MCE No:	26008
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- *Site Based Stormwater Management Plan (SBSMP)*

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GLOSSARY

GENERAL

- LCC – Logan City Council
- CER – Civil Engineering Report
- BYDA – Before You Dig Australia
- ESR – Engineering Services Report
- NCC - National Construction Code
- AS/NZS - Australian Standards/New Zealand Standards
- QUDM - Queensland Urban Drainage Manual
- WSAA - Water Services Association of Australia
- SBSMP – Site Based Stormwater Management Plan
- SPP - The State Planning Policy (Queensland)
- CMP – Construction Management Plan
- ha - Hectare (10,000m²)
- kL - kilolitre (1,000L) or (1m³)

EARTHWORKS & ESC

- ASS – Acid Sulfate Soil
- ASSIR – Acid Sulfate Soil Investigation Report
- GWI - Ground Water Inflow
- E&SC – Erosion and Sediment Control

DRAINAGE

- AEP - Annual Exceedance Probability
- ARI - Average Recurrence Interval
- Hydrology – The movement (and impact) of water run-off in relation to the site and surrounds
- OSD – On-Site Detention (Detention Storage System)
- Bioretention system - A system that collects and infiltrates urban stormwater through a prescribed filter media covered with vegetation to improve discharge quality
- GPT - Gross Pollutant Trap – Collects gross pollutants from a catchment to improve stormwater quality
- t_c – ‘Time of Concentration’ for a drainage catchment
- MUSIC - Water quality modelling software; Acronym stands for ‘Model for Urban Stormwater Improvement Conceptualisation’
- Nitrogen - An important nutrient found in high concentrations in recycled waters, originating from human and domestic wastes. A useful plant nutrient that can also cause off-site problems of eutrophication in lakes, rivers and estuaries.
- Phosphorus - An important nutrient found in high concentrations in recycled waters, originating principally from detergents but also from other domestic wastes.
- WSUD – Acronym stands for ‘Water Sensitive Urban Design’. WSUD Provides a strategy for the conservation and management of water resources through better management of stormwater.

SEWER & WATER

- DF - Design Flow
- EP - Equivalent Persons
- IIF - Inflow & Infiltration Flow
- PDWF - Peak Dry Weather Flow
- PWWF - Peak Wet Weather Flow
- ADWF - Average Dry Weather Flow
- SF - Sanitary Flow



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1 EXECUTIVE SUMMARY

Meliora Engineering has been engaged by LI & HU Investment Pty Ltd to prepare a Civil Engineering Report suitable for submission to Logan City Council in support of a Development Application for a site located at 239-241 Ewing Road, Woodridge. The Application proposes a MCU (Multi-Unit Warehouses).

The purpose of this Engineering Report is to provide advice on the development proposal as detailed in the Okas Design architectural drawing which is shown within Appendix A – Architectural Drawings. Commentary and relevant calculations cover works required to service the proposed development including earthworks, roadworks, stormwater drainage management (quantity and quality), sewerage and water reticulation, electricity, communications and gas.

The assessment has been carried out in accordance with Logan City Council Planning Scheme Policies and the proposed works described herein will be subject to the Conditions attached to the Development Approval to be provided by Council and any nominated referral agencies.

Meliora Engineering civil schematic sketches addressing Stormwater, Infrastructure & Services are shown within Appendix B – Schematic Civil Drawings.

A summary of civil engineering advice is as follows:

- The site is not affected by any kind of flooding. Minimum habitable floor levels can be achieved, no further analysis is required.
- The application proposes earthworks to provide pads/access driveways as per architectural design intent. The site falls to the north-west corner direction.
- The development will require a 7.0m wide crossover. The existing shared vehicle crossover to the northern boundary will be extended to achieve 7m width. The site is also accessed via an existing access easement which runs along the southern boundary.
- The development will require in-ground pit & pipe drainage works to capture roof water from the future units and convey site runoff and discharge to existing drainage infrastructure on Ewings Road which is proposed as the site's lawful point of discharge.
- As there is no net increase of fraction impervious causing no increase in in post-development site flows, no detention is required nor proposed.
- The proposed MCU trigger the State Planning Policy's (SPP's) Post-Development Stormwater Management (Water Quality) Design Objectives but we will ask the client to pay the Council's Water Quality offset payment, in lieu of on-site treatment devices.
- The site appears to be adequately serviced by reticulated water, sewerage, gas, telecommunications, and electricity. These services will need to be connected via the associated authority works process during the development.

Information discussed in this report is inferred from several sources including authority databases, BYDA records, site survey and design documents received from the client.

All relevant standards and guidelines are addressed in this report including criteria from:

- [LCC Planning Scheme Policy](#)
- [Australian Rainfall and Runoff Guideline \(ARR\)](#)
- [Queensland Urban Drainage Manual \(QUDM\) 2013](#)
- [Plumbing and Drainage Code AS3500.3](#)



- [State Planning Policy \(SPP\)](#)
- [International Erosion Control Association of Australasia \(IECA\)](#)

This report has demonstrated that the proposed development does not present any civil related engineering issues which would prevent the development from proceeding as proposed.



2 INTRODUCTION & BACKGROUND

Meliora Engineering has been engaged by LI & HU Investment Pty Ltd to prepare a Civil Engineering Report suitable for submission to Logan City Council in support of a Development Application for a site located at 239-241 Ewing Road, Woodridge. The proposed development is for a MCU (Multi-Unit Warehouses).

The purpose of this Engineering Report is to provide advice on the development proposal as detailed in the Okas Design architectural drawings which is shown within Appendix A – Architectural Drawings. Commentary and relevant calculations cover works required to service the proposed development including earthworks, roadworks, stormwater drainage management (quantity and quality), sewerage and water reticulation, electricity, communications.

The assessment has been carried out in accordance with Logan City Council Planning Scheme Policies and the proposed works described herein will be subject to the Conditions attached to the Development Approval to be provided by Council and any nominated referral agencies.

2.1 BACKGROUND

Meliora is a civil engineering consultancy which specialises in residential and commercial projects within South East Queensland. We understand the commercial drivers behind projects whilst also having significant experience in compliance and construction of same.

This project presents an opportunity for urban densification in line with the current Council planning scheme, creating more dwellings to service the influx of residents and satisfy the growth of Logan.

This Civil Engineering Report has been supervised by a Registered Engineering of Queensland (RPEQ) and address the key civil engineering aspects in relation to the planning requirements relevant to the proposal. Section 4.4 & 4.5 of this Report forms a Site Based Stormwater Management Plan (an SBSMP), which outlines potential on and off-site impacts associated with stormwater for the proposed development. It also identifies a range of conceptual stormwater management strategies and actions for water quality, water quantity and environmental issues.

3 SITE CHARACTERISTICS

3.1 LOCATION & TITLES/EASEMENTS

Refer to below figures and tables for locality plan and specific title information for the property to be developed.

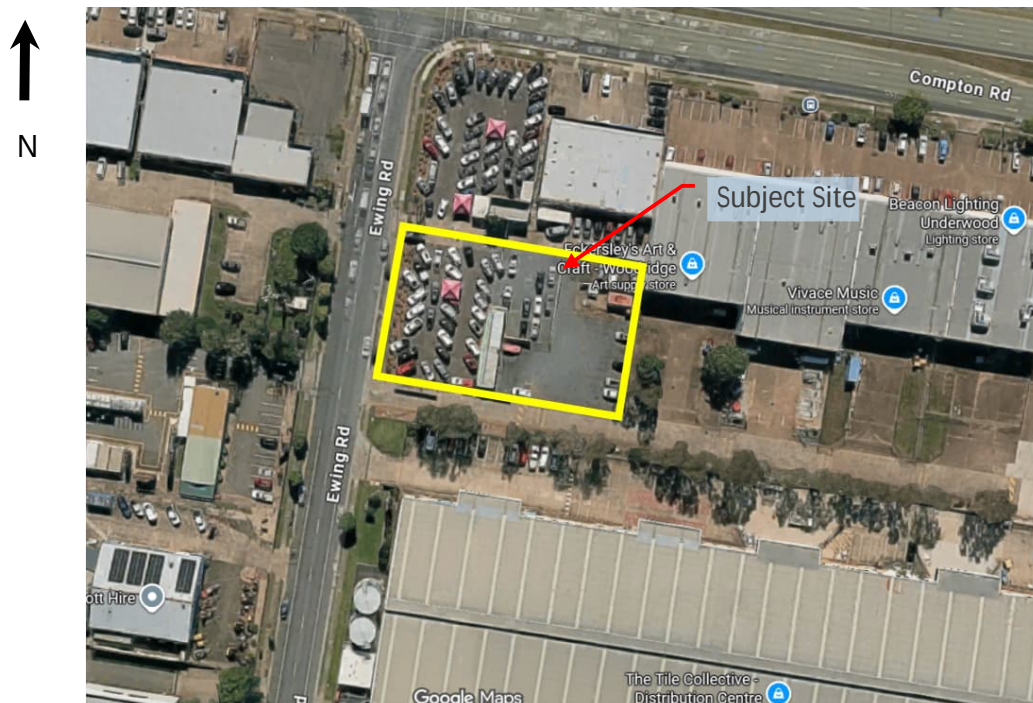


Figure 1 - Site Location (as accessed from Google Maps 1/06/2026)

Table 1 - Property Details

Lot Information	Lot 10 on RP221198
Street Address	239-241 Ewing Road, Woodridge
Site Area	2244m ²
Existing Easements	Yes

3.2 EXISTING FEATURES & TOPOGRAPHY

3.2.1 CONTEXT

The subject site is comprised with a car shed structure and surrounding area with highly compacted gravel surface. The site features Council Road reserve to the west, while the eastern and southern boundaries interface with neighbouring warehouses and their respective access road. Refer to Town Planning Report by Fountron Planning & Development for further planning related context.

3.2.2 GRADING & CONTRIBUTING CATCHMENTS

The site exhibits a minor northerly grade of approximately 1%. Adjoining lands are relatively level, with no such upstream catchments contributing external discharge to the site.

This report describes the upstream catchment in more details within section 4.4.2.

3.2.3 EXISTING FEATURES

The existing property boundaries, surface levels, site features and the location of the existing infrastructure & structures are identified on the survey plan drawing shown within Appendix C – Survey Plan within this report.

Appendix D – BYDA Results includes information as sourced from BYDA and Council Mapping.

It should be noted that site survey includes underground services ‘plotted from records’ ie from BYDA records. As per commentary within AS5488, BYDA and authority records are often Quality Level ‘D’. BYDA plans only give an approximate indication of the underground conduits that exist and cannot not be relied upon. It is strongly suggested that prior to the start of the detailed/developed design phase, and to avoid damaging buried assets when excavating the subsurface, information relating to the location of existing services must be located to minimum quality Level ‘B’ with the position of any underground cables or services thoroughly checked and marked by a trained service locator.

3.3 GEOTECHNICAL FEATURES

At the time of authoring this report, a Geotechnical Report with associated soil testing had not been received by Meliora Engineering. It is strongly recommended that appropriate geotechnical investigation and testing be completed for the site to inform detailed engineering for the proposed development.

3.3.1 POTENTIAL OR ACTUAL ACID SULFATE SOILS

The site is not impacted by Council's ‘Potential and Actual Acid Sulfate Soils’ overlay, and acid sulfate soils are not expected to be encountered during the earthworks.

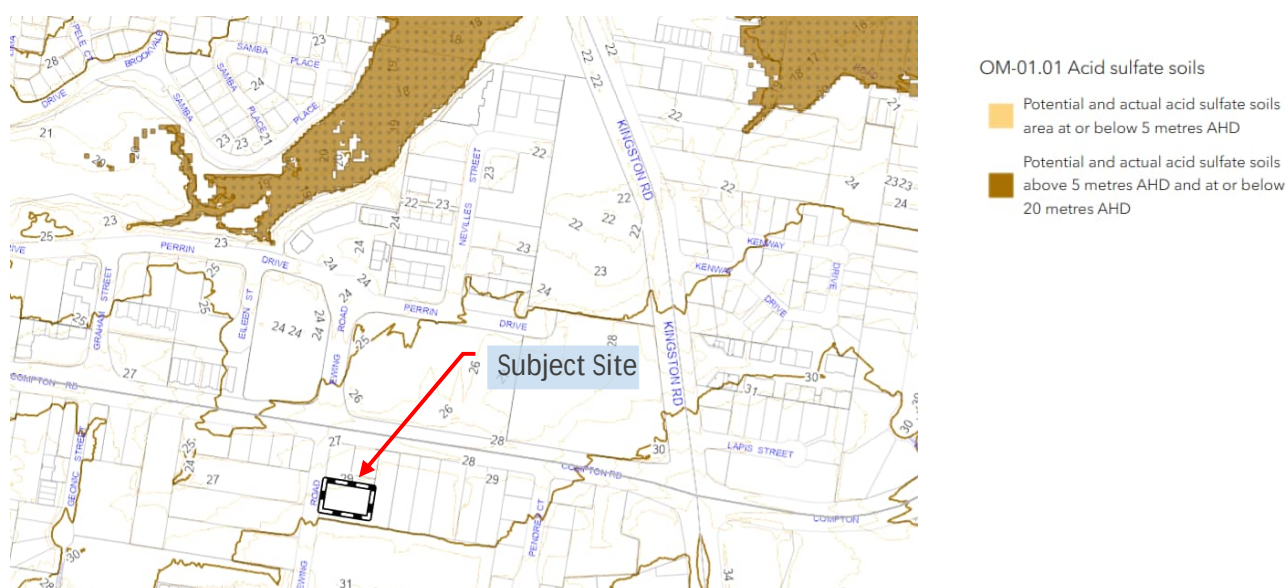


Figure 2 - Acid Sulfate Soil Overlay

3.3.2 FIRE ANT BIOSECURITY

Under the Biosecurity Act 2014, all Queenslanders have a general biosecurity obligation (GBO) to manage biosecurity risks and threats that are under their control, they know about or they are expected to know about. Anyone involved in the movement or storage of fire ant carriers in Queensland has a GBO to take all reasonable steps to ensure they do not spread fire ants.

The subject site falls within the list of suburbs that are within the biosecurity zone 2 for fire ants. Therefore, any earthworks associated with the development are subject to movement restrictions and may need a biosecurity instrument permit to move material that may contain fire ants. 'Material' also includes turf, potted plants, baled hay or straw, mulch and manure. Refer to the Queensland Government's website (business.qld.gov.au) for the biosecurity rules and legislation regarding fire ants, including biosecurity instrument permit application information.

3.4 FLOODING IMPACT

An authority Flooding Report has been generated and can be seen within Appendix E – Floodwise Report.

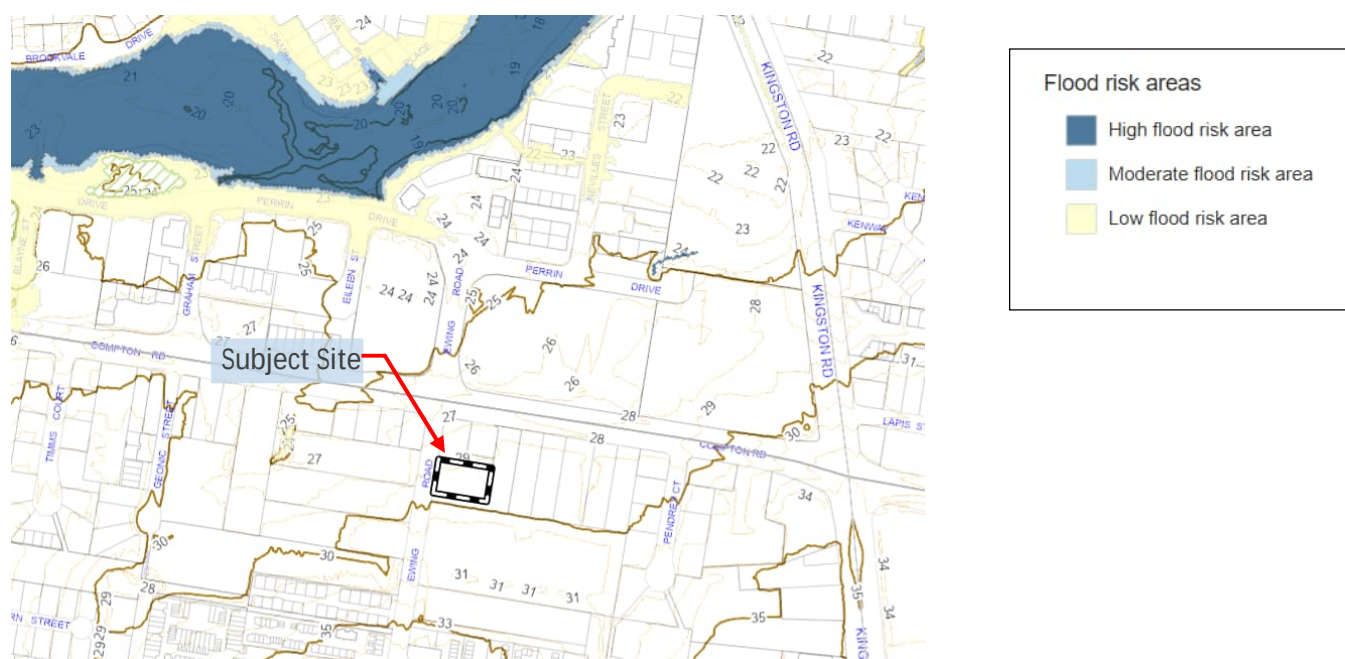


Figure 3 - Flooding Overlays from Council Mapping

The site is not subject to overland flow flooding. Consequently, no flood investigation or mitigation measures are required or proposed.

3.5 LOCAL GOVERNMENT INFRASTRUCTURE PLAN (LGIP)

Review of the Council Priority Infrastructure Plan Maps indicates that no priority infrastructure upgrades are planned within close proximity to the subject site.

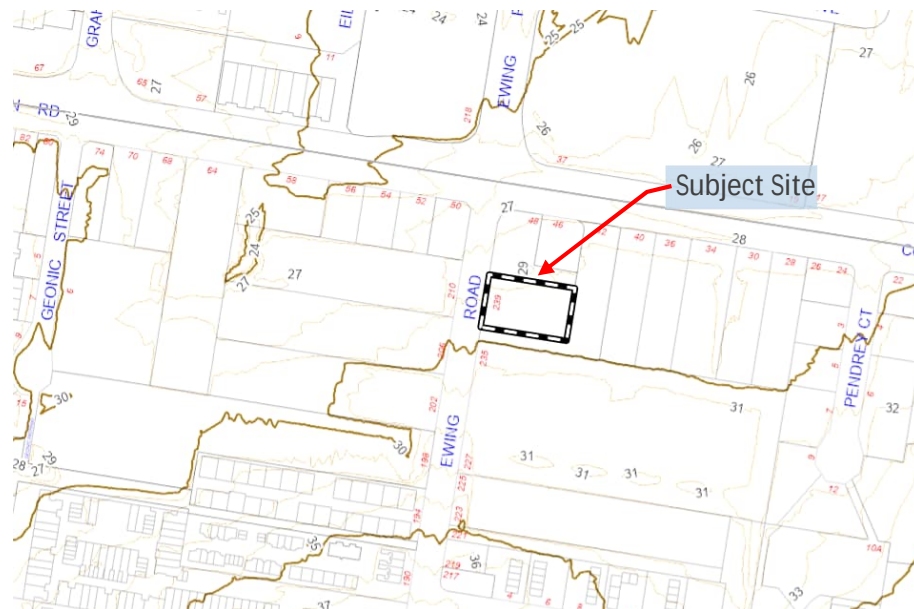


Figure 4 - Priority Infrastructure at Site



4 PROPOSED CIVIL ENGINEERING WORKS

Meliora Engineering accepts no responsibility for the accuracy of information supplied to them by second and third parties, including survey, authority mapping data and geotechnical testing information which may have been relied on to inform the civil engineering opinions and calculations presented within the advice below.

Consider that the assessment addresses the requirements for development of the subject site at the time the study was undertaken. If these conditions are known to change, the results of this assessment should be reviewed and amended as required.

The assessment has been carried out in accordance with the relevant Council Planning Scheme Policies and the proposed works described herein will be subject to the conditions attached to the Development Approval to be provided by Council and any nominated referral agencies.

4.1 DESCRIPTION OF WORKS

The proposed development is for MCU (Multi-Unit Warehouses).

Please refer to Appendix A – Architectural Drawings for architectural layout plans.

4.2 FILLING AND EXCAVATION

The application proposes earthworks to provide pads/access driveways as per architectural design intent. The site falls to the north-west corner direction.

Refer to Appendix B – Preliminary earthwork layout plan & sections for details.

Refer to Appendix F – Code Response Tables for the Logan City Council Filling and Excavation Code & responses.

4.3 ACCESS & ROADWORKS

The subject site is adjacent to the following roads:

- Ewing Road – access road, with kerb and channel drainage on both side and a two-way cross fall
- There is one (1) shared vehicle crossover along Ewing Road which connects to the site

The development will require a 7.0m wide crossover. The existing shared vehicle crossover to the northern boundary will be extended to achieve 7m width. The site is also accessed via an existing access easement which runs along the southern boundary.

Refer to Appendix F – Code Response Tables for the Logan City Council Infrastructure Code & responses.

4.4 SITE-BASED STORMWATER DRAINAGE MANAGEMENT - QUANTITY

Refer to Appendix F – Code Response Tables for the Logan City Council Stormwater Management Code & responses.

4.4.1 ON-SITE DRAINAGE & RUNOFF QUANTITY TREATMENT OBJECTIVE

The stormwater management objectives that apply to the site have been derived from QUDM, State Planning Policy (2017), LCC Planning Scheme Policy and LCC Land Development Guidelines. The key stormwater parameters and desired outcomes are:

- Minimisation of storm-related nuisance to the public;
- Minimisation of legal disputes between neighbouring landowners and communities;
- Flood control & resilience to flooding in excess of nominated design events;
- Pedestrian and vehicular safety
- Integrate stormwater management infrastructure carefully in the urban and natural landscape, promoting retention of natural drainage system and protection/restoration of environmental values

Subsequently, the objectives of Stormwater Runoff Quantity Management for the subject site are;

1. Provide a stormwater conveyance system for minor (10% AEP) and major (1% AEP) storm events to discharge to the nominated Lawful Point of Discharge
2. Reduce the peak post-development flows discharged from the site to be equal to (or below) the existing condition peak flows for each storm event AEP.
3. Limit flooding of public and private property, both within the catchment and downstream, to acceptable levels.
4. To provide convenience and safety for pedestrians and traffic in frequent stormwater flows by controlling those flows within prescribed velocity/depth limits.

4.4.2 EXISTING DRAINAGE REGIME

A site survey documenting existing services within and surrounding the development site was performed by Survlink Consulting and is shown within Appendix C – Survey Plan. The survey highlights the following existing features related to drainage:

- In-ground drainage infrastructure is available to the site road frontage
- The whole site discharges to the Ewing Road corridor as sheet flow
- 1% fall towards the north direction of the site

There is no existing upstream drainage connection that runs through the site which services upstream or adjacent lots.

4.4.2.1 EXISTING LAWFUL POINT OF DISCHARGE

The site discharges to the frontage Ewing Road corridor as sheet flow, which is the existing Lawful Point of Discharge.

Further information on existing Council Stormwater Infrastructure in the area of the site was received via a BYDA search and a Council Mapping search. Details are included in Appendix D – BYDA Results.

4.4.3 PROPOSED DRAINAGE REGIME

4.4.3.1 PROPOSED LAWFUL POINT OF DISCHARGE

The proposed development will modify the site's stormwater discharge characteristics; however, post-development peak flows will not increase due to no net increase in impervious area. Roof water & site runoff will be directed to the existing stormwater infrastructure on Ewing Road via roof water pit & pipe. Accordingly, the existing stormwater infrastructure on Ewing Road is designated as the new Lawful Point of Discharge (LPOD).

4.4.3.2 TAILWATER LEVELS

The tailwater level circumstance considered within the drainage analysis assumes water levels at the top of kerb level.

4.4.3.3 PROPOSED DRAINAGE NETWORK

Stormwater generated from the development will be conveyed through a pit and pipe network for minor stormwater events (10% AEP) and a combination of pits and pipes and overland flow swales for major storm events (1% AEP).

All stormwater drainage will be designed in accordance with the requirements of QUDM 2016.

Generally, the application proposes internal private pit and pipe infrastructure to capture all roof water of ware houses & site runoff and discharge flows to the existing stormwater drainage infrastructure on Ewing Road.

4.4.4 CATCHMENT HYDROLOGY

4.4.4.1 FLOW ESTIMATION METHODS & MODELLING

The choice of hydrologic method must be appropriate to the type of catchment and the required degree of accuracy.

As per Section 7.3 of BCC's current Infrastructure PSP, LCC allows flow estimations using Rational method. For this small-scale development Rational method was deemed suitable for use to estimate peak flows for catchments under existing and developed conditions. The Rational Method Calculations are summarised below.

4.4.4.2 RAINFALL DATA

Catchment hydrology has been estimated using rainfall specific for the site at 239-241 Ewing Road, Woodridge. This is derived from the Bureau of Meteorology (BOM) Design Rainfall Data System (2016) using the following Latitude, Longitude:

- Latitude -27.62033, Longitude 153.11130

4.4.4.3 EXISTING CATCHMENTS DESCRIPTION

The existing catchment EX1 discharges along the kerb line on Ewing Road as sheet flow.

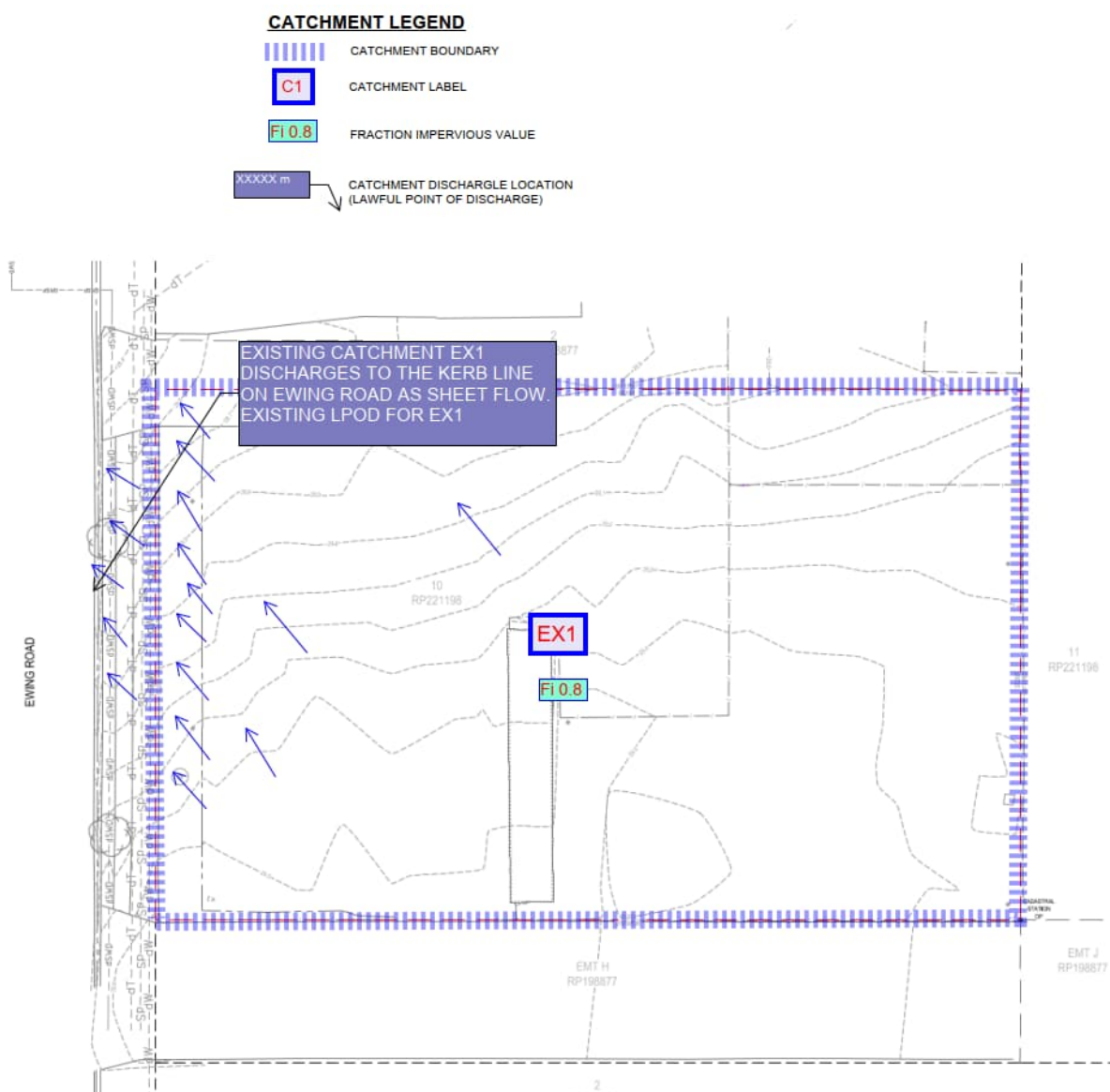


Figure 5 – Existing Catchment



4.4.4.5 CATCHMENT HYDROLOGY - RATIONAL METHOD CALCULATIONS

EX1 – The Existing Catchment discharges to the kerb line on Ewing Road Corridor as sheet flow

CATCHMENT NAME	EX1	Design Storm Event (AEP & ARI)						
RATIONAL METHOD PARAMETERS	(units)	63% (Q1)	38% (Q2)	18% (Q5)	10% (Q10)	5% (Q20)	2% (Q50)	1% (Q100)
Catchment Area	ha				0.224			
Time of Concentration	min				10.0			
Fraction Impervious					0.80			
Runoff Coefficient (Cy)		0.67	0.71	0.80	0.84	0.88	0.97	1.00
Rainfall Intensity (ly)	mm/hr	91.71	116.83	145.31	161.80	184.28	213.90	236.53
Peak Flow	L/s	38.4	52.0	72.3	84.7	101.3	128.8	147.4

C1 – Post-Development will discharge to the existing stormwater drainage infrastructure on Ewing Road via pit & pipe

CATCHMENT NAME	C1	Design Storm Event (AEP & ARI)						
RATIONAL METHOD PARAMETERS	(units)	63% (Q1)	38% (Q2)	18% (Q5)	10% (Q10)	5% (Q20)	2% (Q50)	1% (Q100)
Catchment Area	ha				0.224			
Time of Concentration	min				10.0			
Fraction Impervious					0.80			
Runoff Coefficient (Cy)		0.67	0.71	0.80	0.84	0.88	0.97	1.00
Rainfall Intensity (ly)	mm/hr	91.71	116.83	145.31	161.80	184.28	213.90	236.53
Peak Flow	L/s	38.4	52.0	72.3	84.7	101.3	128.8	147.4

4.4.4.6 PRE vs POST DEVELOPMENT (UNMITIGATED) – RESULTS SUMMARY

The existing catchment EX1 will contribute circa 147L/s (at 1% AEP event) to the kerb line on Ewing Road as sheet flow.

Post–development, catchments C1 will contribute circa 147L/s (at 1% AEP event) to the existing stormwater drainage infrastructure on Ewing Road. There is no net increase in flows due to development as there is no net change in impervious area.

Total Site Catchment - Unmitigated Discharge Summary				
AEP	Predeveloped Flow	Developed (Unmitigated) Flow	Difference	% Increase in Flow
	(m3/s)	(m3/s)	(m3/s)	
63% (Q1)	0.038	0.038	0.000	0
38% (Q2)	0.052	0.052	0.000	0
18% (Q5)	0.072	0.072	0.000	0
10% (Q10)	0.085	0.085	0.000	0
5% (Q20)	0.101	0.101	0.000	0
2% (Q50)	0.129	0.129	0.000	0
1% (Q100)	0.147	0.147	0.000	0

The above results indicate that the proposed development results no increase in the quantity of runoff to the lawful point of discharge.

The proposed development intends to discharge stormwater into the existing infrastructure located on Ewing Road. As the development results in no net change to the site's impervious area, there will be no net increase in stormwater runoff or peak flow rates compared to existing conditions. Hence, no detention is required nor proposed.



4.4.5 CONSTRUCTION PHASE DRAINAGE INFRASTRUCTURE

During the construction phase of the development, the stormwater management design objectives for temporary drainage and basin spillways are to reference the Queensland Government State Planning Policy (SPP) 2017 Appendix 2 Table A (Part 1, 2 & 3).

Refer to Section 4.7 for further details on Construction Phase Erosion & Sediment Control details.

4.5 SITE BASED STORMWATER DRAINAGE MANAGEMENT - QUALITY

Refer to Appendix F – Code Response Tables for the Logan City Council Stormwater Management Code & responses.

4.5.1 WATER QUALITY TREATMENT OBJECTIVE

Urban stormwater run-off potentially contributes to adverse water quality in waterways, which impact aquatic ecosystems health and limit human water uses. Unless well managed, urban stormwater can release contaminants such as nutrients, sediment and solid waste to waterways. For the post-construction phase, the SPP's stormwater management design objectives require minimum reductions in the mean annual load for key pollutants.

The SPP contains specific assessment benchmarks for the Water quality state interest. The Performance Outcomes (PO) of the SPP apply to the following applications:

- (1) a material changes of use for an urban purpose that involves premises 2500m² or greater in size *and*;
 - (a) will result in six or more dwellings; *or*
 - (b) will result in an impervious area greater than 25% of the net developable area; *or*
- (2) reconfiguring a lot for an urban purpose that involves premises 2500m² or greater in size and will result in six or more lots; *or*

The proposed MCU trigger the State Planning Policy's (SPP's) Post-Development Stormwater Management (Water Quality) Design Objectives but we will ask the client to pay the Council's Water Quality offset payment, in lieu of on-site treatment devices.

4.5.2 CONSTRUCTION PHASE STORMWATER QUALITY

During the construction phase of the development, the stormwater management design objectives for temporary water quality & ESC devices, including sediment basins, are to reference the Queensland Government State Planning Policy (SPP) 2017 Appendix 2 Table A (Part 1, 2 & 3).

Refer to Section 4.7 for further details on Construction Phase Erosion & Sediment Control details.

4.6 STORMWATER DRAINAGE INFRASTRUCTURE MAINTENANCE

The landowner is responsible for the ongoing operation and maintenance of all privately-owned stormwater management assets & devices to ensure the drainage facility continues to meet its design performance and are maintained for the life of the approved development and may be liable for damages as a result of drainage system malfunction caused by lack of proper maintenance.

Roof-water drainage systems are classified as private drains with the responsibility for maintenance lying with the property owners.

Any stormwater quality treatment devices located within the development are to be maintained at regular intervals after commencement of the use by a suitably qualified contractor. A certificate of compliance from the maintenance contractor is to be kept on site and made available to Council Officers upon successful completion of each maintenance procedure. Wording is to be included in the documentation/community management statement to bind the future owners and/or body corporate to undertaking the maintenance, repair and reporting for the on-site stormwater management devices.

4.7 SEDIMENT & EROSION CONTROL

Healthy Waterways have identified that the large and increasing amount of sediment entering our waterways is one of the major issues affecting waterway health across south-east Queensland. Sediment is a contaminant that can seriously degrade water quality and starve marine life of oxygen, leading to fish kills and damage to aquatic ecosystems.

During the construction phase of the development, the stormwater management design objectives for temporary water quality & ESC devices, including sediment basins, are to reference the Queensland Government State Planning Policy (SPP) 2017 Appendix 2 Table A (Part 1, 2 & 3).

IECA 2008 Best Practice Erosion and Sediment Control (as amended) is to be referenced for details on the application of the Construction Phase requirements.

For the construction phase, the SPP's stormwater management design objectives require that developments apply best practice erosion and sediment control. These objectives are derived from International Erosion Control Association of Australasia (IECA) 2008 Best Practice Erosion and Sediment Control.

All sediment and erosion controls will be designed in the detailed design phase to meet the relevant design objectives.

4.8 SEWERAGE RETICULATION

4.8.1 EXISTING SEWER INFRASTRUCTURE

The site is currently serviced by an existing 100mm sewer property connection from an existing DN150mm sewer reticulation which runs along the frontage the Ewing Road corridor.

Refer to the LCC Asset Plan provided within Appendix D – BYDA Results for further information.

4.8.2 PROPOSED SEWER WORKS

It is proposed to upgrade the existing 100mm sewer PC, to provide a 150mm uPVC PC for the development.

The details of this connection, including an analysis of the existing infrastructure capacity to cater for the proposed development sewer discharge will be subject to authority assessment via a future LCC Works Application.



Refer to Appendix F – Code Response Tables for the Logan City Council Infrastructure Code & responses.

4.9 WATER RETICULATION

4.9.1 EXISTING WATER INFRASTRUCTURE

The site is currently serviced by an existing water connection and meter located within the frontage of the site.

Refer to the LCC Asset Plan provided within Appendix D – BYDA Results for further information.

4.9.2 PROPOSED WATER WORKS

It is proposed to provide a new water service and meter (subject to hydraulics sizing) for the development. Existing water service & meter is to be removed.

The details of this connection, including an analysis of the existing infrastructure capacity to cater for the proposed development water demand will be subject to authority assessment via a future LCC Works Application.

Refer to Appendix F – Code Response Tables for the Logan City Council Infrastructure Code & responses.

4.10 ELECTRICITY, COMMUNICATIONS & GAS

4.10.1 ELECTRICITY INFRASTRUCTURE

Energex BYDA map suggests that the frontage road corridor at the site features existing overhead electrical infrastructure that connects directly to the site. Google Street view and the received site survey confirm existence of overhead electrical infrastructure available at the site.

Refer to the Energex Asset Plans (obtained from the 'Before You Dig Australia' service) within Appendix D – BYDA Results for further details.

Electricity services required for the proposed development will be designed by the electrical engineer and will be assessed by Energex during the detailed design phase of the development.

Refer to Appendix F – Code Response Tables for the Logan City Council Infrastructure Code & responses.

4.10.2 COMMUNICATIONS INFRASTRUCTURE

Telstra BYDA map suggests that the frontage road corridor at the site features existing telecommunications infrastructure that connects directly to the site. The received site survey confirms existence of telecommunications infrastructure available at the site.

Refer to the Telstra, Optus and NBN Asset Plans within Appendix D – BYDA Results for details.

All works required to provide communication services to the proposed development will be undertaken with the appropriate server's approval and coordination.



Refer to Appendix F – Code Response Tables for the Logan City Council Infrastructure Code & responses.

4.10.3 GAS INFRASTRUCTURE

Apa DBYD Group suggests that the frontage road corridor at the site features existing underground gas infrastructure of High-Pressure Natural Gas.

Refer to the APA Group within Appendix D – BYDA Results for details.

All works required to provide gas services to the proposed development will be undertaken by the appropriate consultant with APA Group's approval and coordination.

Refer to Appendix F – Code Response Tables for the Logan City Council Infrastructure Code & responses.

5 SUMMARY & CONCLUSIONS

5.1 WORKS SUMMARY AND ENGINEERING RECOMMENDATION

The purpose of this Civil Engineering Report is to provide engineering advice in support of the development proposal as detailed in the Okas Design architectural drawing which is shown within Appendix A – Architectural Drawings. Commentary and relevant calculations cover civil works required to service the proposed development including earthworks, roadworks, stormwater drainage management (quantity and quality), sewerage and water reticulation, electricity, communications and gas.

This Report relating to the Development Application proposing a MCU (Multi-Unit Warehouses) has shown the following in relation to the civil engineering elements:

- The site is not affected by any kind of flooding. Minimum habitable floor levels can be achieved, no further analysis is required.
- The application proposes earthworks to provide pads/access driveways as per architectural design intent. The site falls to the north-west corner direction.
- The development will require a 7.0m wide crossover. The existing shared vehicle crossover to the northern boundary will be extended to achieve 7m width. The site is also accessed via an existing access easement which runs along the southern boundary.
- The development will require in-ground pit & pipe drainage works to capture roofwater from the future units and convey site runoff and discharge to existing drainage infrastructure on Ewings Road which is proposed as the site's lawful point of discharge.
- As there is no net increase of fraction impervious causing no increase in in post-development site flows, no detention is required nor proposed.
- The proposed MCU trigger the State Planning Policy's (SPP's) Post-Development Stormwater Management (Water Quality) Design Objectives but we will ask the client to pay the Council's Water Quality offset payment, in lieu of on-site treatment devices.
- The site appears to be adequately serviced by reticulated water, sewerage, gas, telecommunications, and electricity. These services will need to be connected via the associated authority works process during the development.

Information discussed in this report is inferred from several sources including authority databases, BYDA records, site survey and design documents received from the client.

Meliora Engineering civil schematic sketches addressing Stormwater and Services are shown within Appendix B – Schematic Civil Drawings.

The assessment has been carried out in accordance with the relevant Council Planning Scheme Policies and the proposed works described herein will be subject to the conditions attached to the Development Approval to be provided by Council and any nominated referral agencies.

This report has demonstrated that the proposed development does not present any civil related engineering issues which would prevent the development from proceeding as proposed.

5.2 COUNCIL CODE RESPONSES

The proposed development will trigger design & construction that will need to be assessed against the following Council Codes:



- [Filling and Excavation Code](#)
- [Infrastructure Design Code](#)

To aid in Council's Decision, Meliora Engineering has provided an RPEQ certified response to the engineering aspects of the above codes. The codes with associated responses can be found attached in Appendix F – Code Response Tables.

5.3 LIMITATIONS

Meliora Engineering accept no responsibility for the accuracy of information supplied to them by second and third parties, including survey, authority mapping data and geotechnical testing information which may have been relied on to inform the civil engineering opinions and calculations presented within this report.

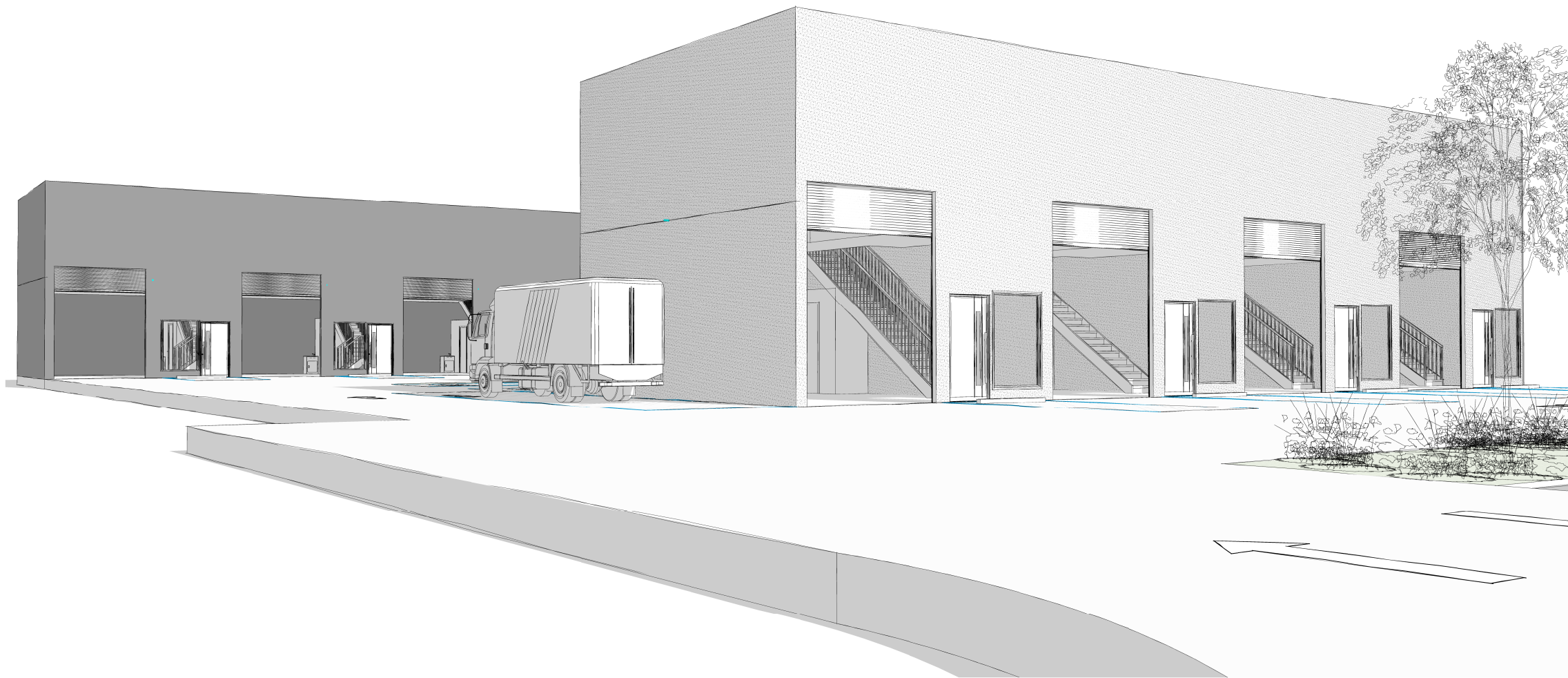
We consider that the study addresses the requirements for development of the subject site at the time the study was undertaken. If these conditions are known to change, the results of this study should be reviewed.

This Civil Engineering Report has been prepared under the direct supervision of a Registered Professional Engineer of Queensland generally in accordance relevant guidelines and standards.



6 APPENDIX

6.1 APPENDIX A – ARCHITECTURAL DRAWINGS

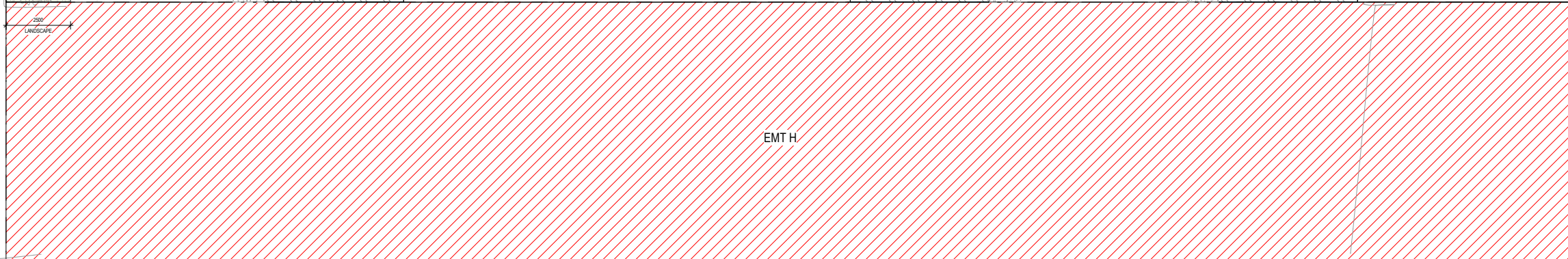
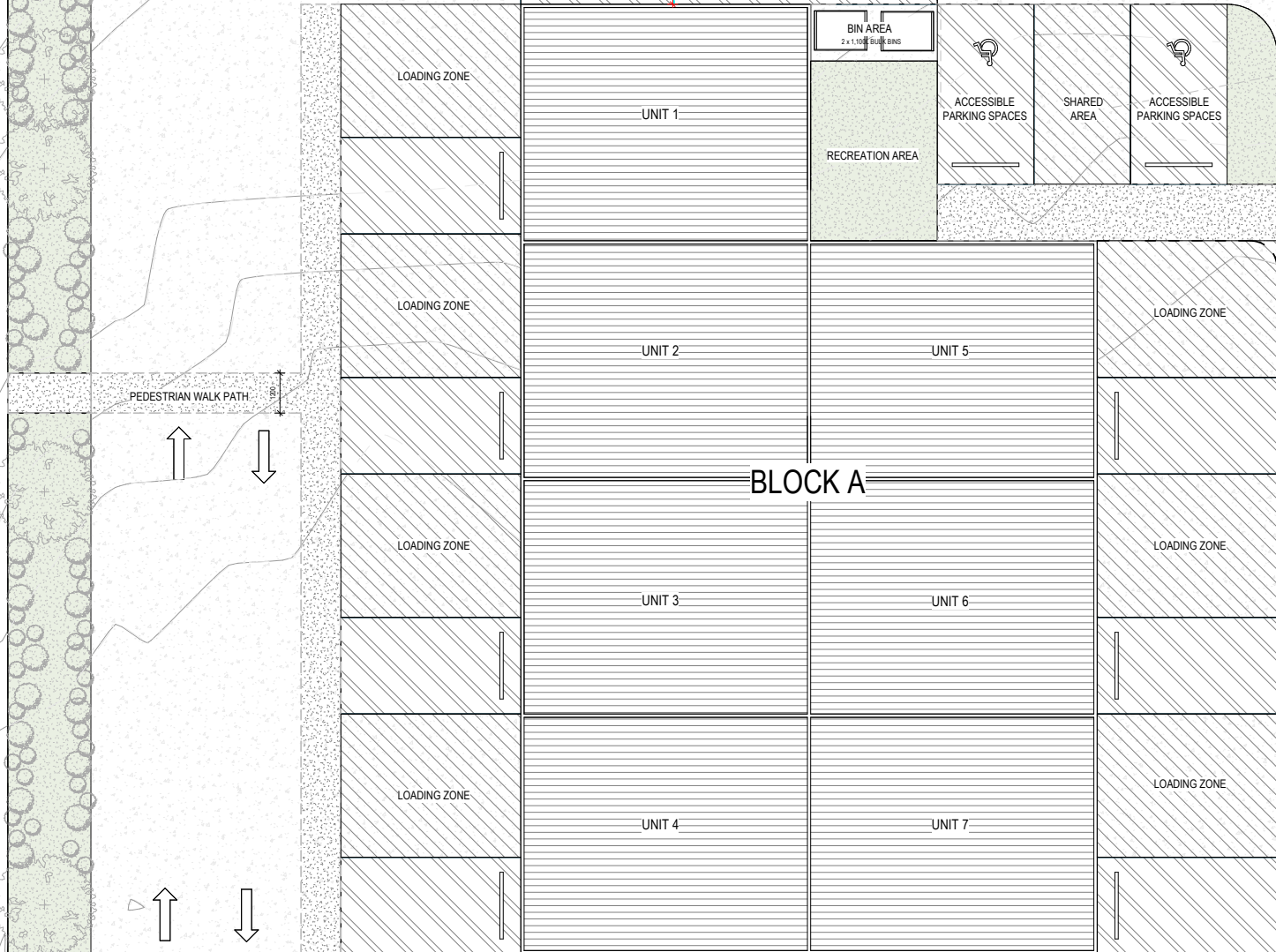
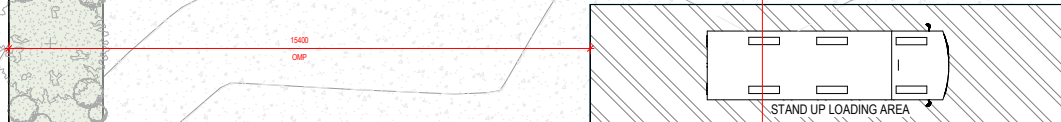
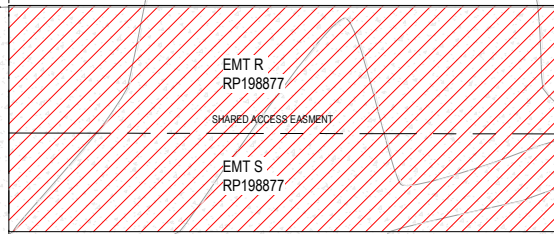


PROPOSED WAREHOUSE
239-241 EWING RD, WOODRIDGE

DRAWING LIST		
NO.	DRAWING NAME	REV
A0.0	COVER PAGE	C
A0.1	NOTES	C
A1.0	PROPOSED SITE PLAN	C
A2.0	PROPOSED GROUND FLOOR PLAN	C
A2.1	PROPOSED FIRST FLOOR PLAN	C
A2.2	PROPOSED TYPICAL FLOOR PLAN	C
A3.0	PROPOSED ROOF PLAN	C
A4.0	ELEVATIONS	C
A4.1	ELEVATIONS	C

CROSSOVER WIDTH EXTEND, TO
BE CONFIRM BY ENGINEER

EWING RD



R.P.D

UNIT AREA SCHEDULE

Name	LEVEL	AREA
UNIT 1	PROPOSED GROUND FLOOR	62.2 m ²
UNIT 1	PROPOSED FIRST FLOOR	43.4 m ²
		105.6 m ²
UNIT 2	PROPOSED GROUND FLOOR	61.4 m ²
UNIT 2	PROPOSED FIRST FLOOR	42.7 m ²
		104.1 m ²
UNIT 3	PROPOSED GROUND FLOOR	61.4 m ²
UNIT 3	PROPOSED FIRST FLOOR	42.7 m ²
		104.1 m ²
UNIT 4	PROPOSED GROUND FLOOR	61.8 m ²
UNIT 4	PROPOSED FIRST FLOOR	43.1 m ²
		105.0 m ²
UNIT 5	Not Placed	Not Placed
UNIT 5	PROPOSED GROUND FLOOR	61.8 m ²
UNIT 5	PROPOSED FIRST FLOOR	42.7 m ²
		104.6 m ²
UNIT 6	PROPOSED FIRST FLOOR	42.8 m ²
UNIT 6	PROPOSED GROUND FLOOR	61.4 m ²
		104.2 m ²
UNIT 7	PROPOSED GROUND FLOOR	61.8 m ²
UNIT 7	PROPOSED FIRST FLOOR	43.2 m ²
		105.1 m ²
UNIT 8	PROPOSED GROUND FLOOR	60.2 m ²
UNIT 8	PROPOSED FIRST FLOOR	43.7 m ²
		103.9 m ²
UNIT 9	PROPOSED GROUND FLOOR	60.2 m ²
UNIT 9	PROPOSED FIRST FLOOR	43.4 m ²
		103.6 m ²
UNIT 10	PROPOSED GROUND FLOOR	60.2 m ²
UNIT 10	PROPOSED FIRST FLOOR	43.4 m ²
		103.6 m ²
UNIT 11	PROPOSED GROUND FLOOR	60.2 m ²
UNIT 11	PROPOSED FIRST FLOOR	43.4 m ²
		103.6 m ²
UNIT 12	PROPOSED GROUND FLOOR	61.8 m ²
UNIT 12	PROPOSED FIRST FLOOR	45.0 m ²
		106.7 m ²

LEGEND & ABBREVIATIONS

A/C	AIR CONDITIONER UNIT
HWU	HOT WATER UNIT
WT	WATER TAP
L	LETTER BOX
CL	CLOTHESLINES
GB	GARDEN BED
MB	METER BOARD(ELECTRIC)
- - -	EXTENT OF GROUND FLOOR WALL
- - -	EXTENT OF FIRST FLOOR WALL

SITE LAYOUT NOTES:

- All boundary clearances shown are to be verified by builder at setout and prior to any construction commencing.
- It is recommended that a licensed surveyor check all level and building setback prior to any construction commencing.
- Any variation to setout dimensions must remain within council minimum requirements.
- All levels are approximate only and must be checked before any construction commencing.
- Termite protection: Protect against the ingress of subterranean termites according to AS 3660-1-1995. Protection of buildings from subterranean termites part 1: (New buildings) The poisoning agent used shall be applied. Termimesh stainless-steel mesh by licensed operator with the manufacturer's directions. Contractor to obtain all necessary certificates upon completion of the operation to satisfaction of the local authority.

1 PROPOSED SITE PLAN
A1.0 1:100

OKAS DESIGN

242 Mains Road,
Surreybank
QLD 4189
MOBILE: 0434 482 945
EMAIL: eric.ma@okas.com.au

• THESE DESIGNS AND PLANS ARE THE COPYRIGHT OF OKAS ARCHITECTURAL
STUDIO AND CANNOT BE REPRODUCED WITHOUT WRITTEN PERMISSION.
• VERIFY ALL DIMENSIONS ON SITE PRIOR TO THE COMMENCEMENT OF WORK.
• DO NOT SCALE OFF THESE DRAWINGS.
• REPORT DISCREPANCIES TO THE ARCHITECT BEFORE CARRYING OUT WORK.

PROJECT
PROPOSED WAREHOUSE

CLIENT
TBC
ADDRESS
239-241 EWING RD, WOODRIDGE

DRAWING TITLE
PROPOSED SITE PLAN

DRAWN
SY
DATE
21/01/2026

CHECK
EM

JOB NO.
RD2602
SCALE
1:100

ISSUE
C

Rev	Date	Description
1	21/01/2026	ISSUED FOR PERMIT
2		
3		
4		
5		



DWG NO
A1.0

GENERAL NOTES

LEGEND

BS
SK
WC

BASIN
SINK
WATER CLOSET



1 PROPOSED GROUND FLOOR PLAN
A2.0 1 : 100

- NOTES:
1. REFER TO BUILDER'S SPECIFICATION FOR FLOOR FINISHED.
 2. 30MM SET DOWN TO WET AREAS.
 3. ALL WET AREA COMPLIES WITH AB08 HOUSING PROVISIONS SECTION 10.2
 4. ALL WET AREA COMPLIES WITH LIVABLE HOUSING DESIGN GUIDELINES.

OKAS DESIGN

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Sunnybank
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PROJECT
PROPOSED WAREHOUSE

CLIENT
TBC
ADDRESS
239-241 EWING RD, WOODRIDGE

DRAWING TITLE
PROPOSED GROUND FLOOR
PLAN

DRAWN
SY
DATE
21/01/2026

CHECK
EM

JOB NO.
RD2602
SCALE
1 : 100

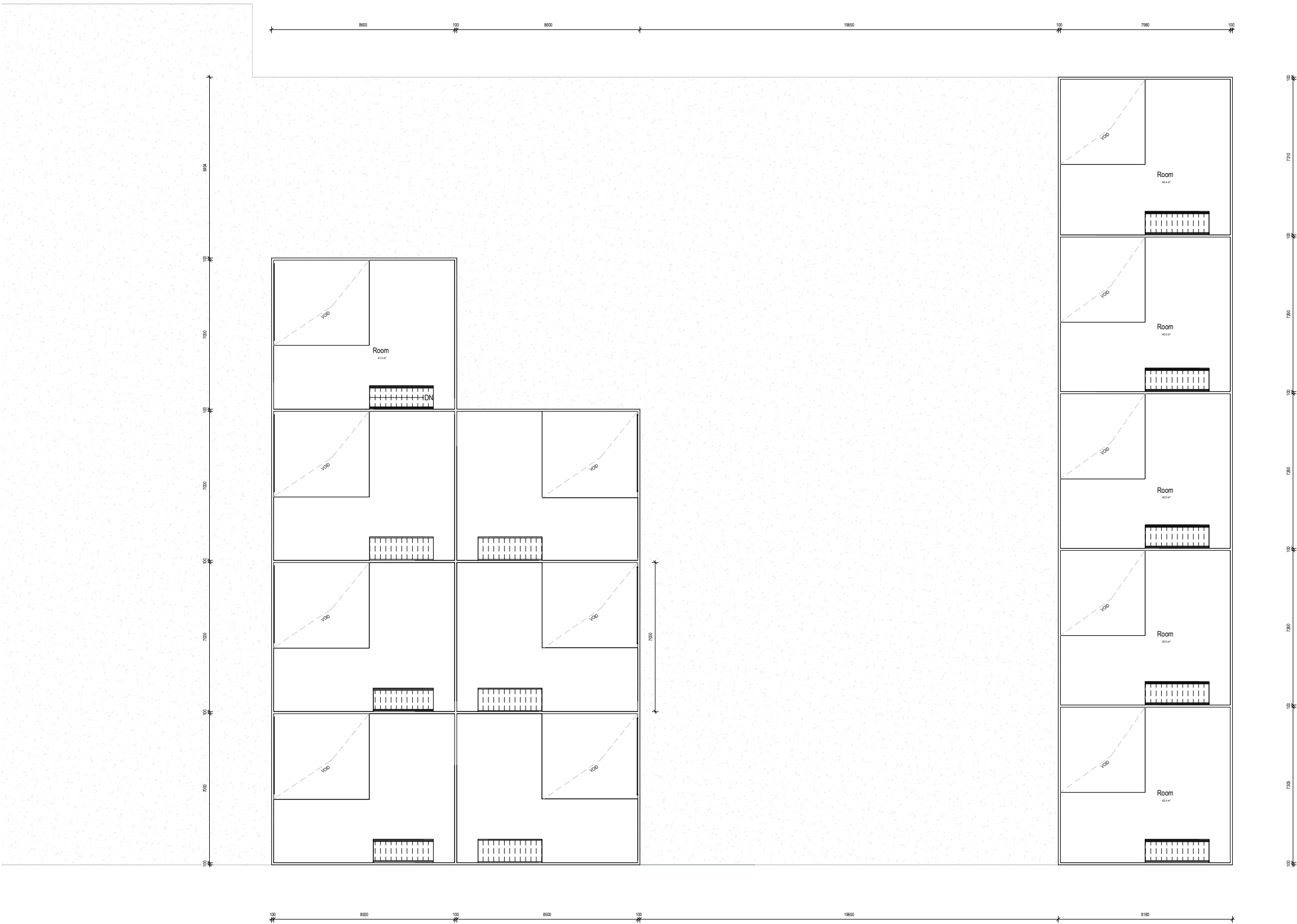
ISSUE
C

Rev	Date	Description
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2	21/01/2026	PROPOSED GROUND FLOOR PLAN
3	21/01/2026	PROPOSED GROUND FLOOR PLAN



DWG NO
A2.0

GENERAL NOTES



NOTES:

1. REFER TO BUILDER'S SPECIFICATION FOR FLOOR FINISHED.
2. 30MM SET DOWN TO WET AREAS.
3. ALL WET AREA COMPLIES WITH ABCB HOUSING PROVISIONS SECTION 10.2.
4. ALL WET AREA COMPLIES WITH LIVABLE HOUSING DESIGN GUIDELINES.

1 PROPOSED FIRST FLOOR PLAN
A2.1 1 : 100

OKAS DESIGN

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Sunnybank
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• DO NOT SCALE OFF THESE DRAWINGS
• REPORT DISCREPANCIES TO THE ARCHITECT BEFORE CARRYING OUT WORK

PROJECT
PROPOSED WAREHOUSE

CLIENT
TBC
ADDRESS
239-241 EWING RD, WOODRIDGE

DRAWING TITLE
PROPOSED FIRST FLOOR
PLAN

DRAWN
SY
DATE
21/01/2026

CHECK
EM

JOB NO.
RD2602
SCALE
1 : 100

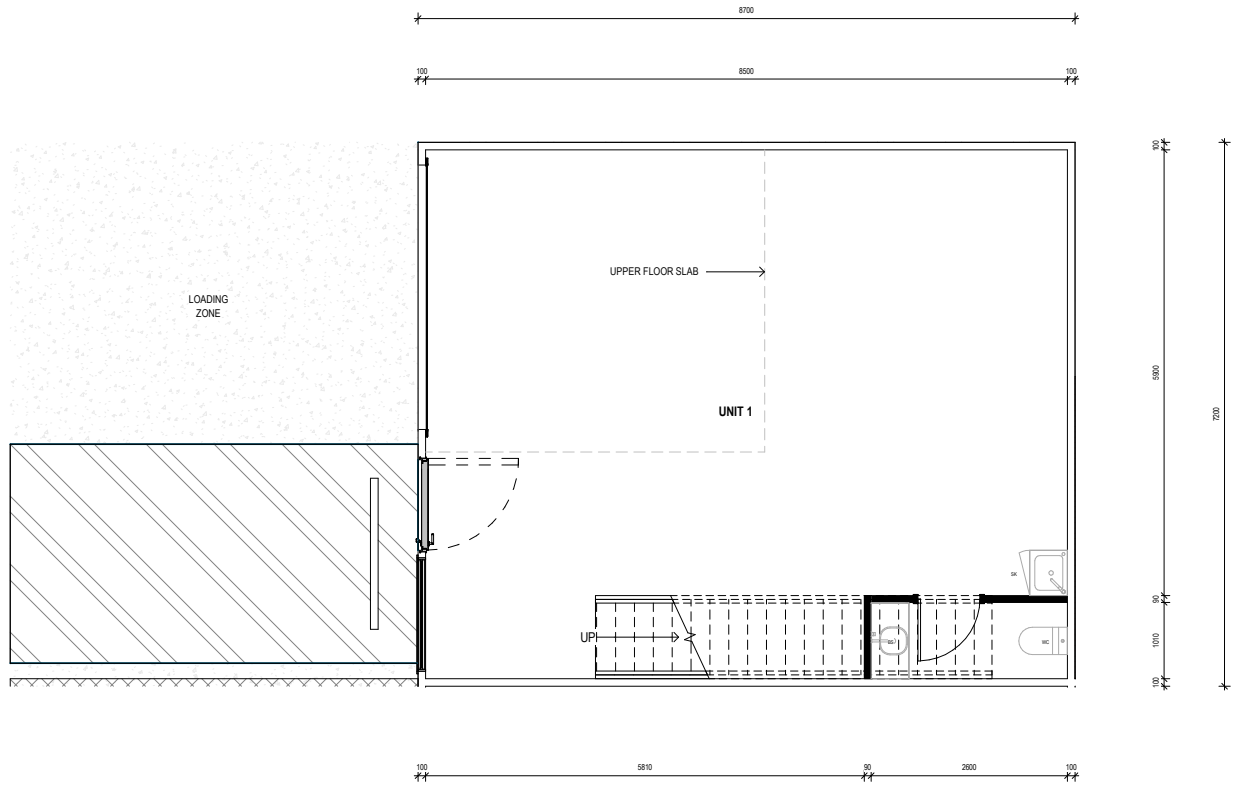
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Rev	Date	Description
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2	2025/01/21	REVISIONS
3	2025/01/21	REVISIONS
4	2025/01/21	REVISIONS

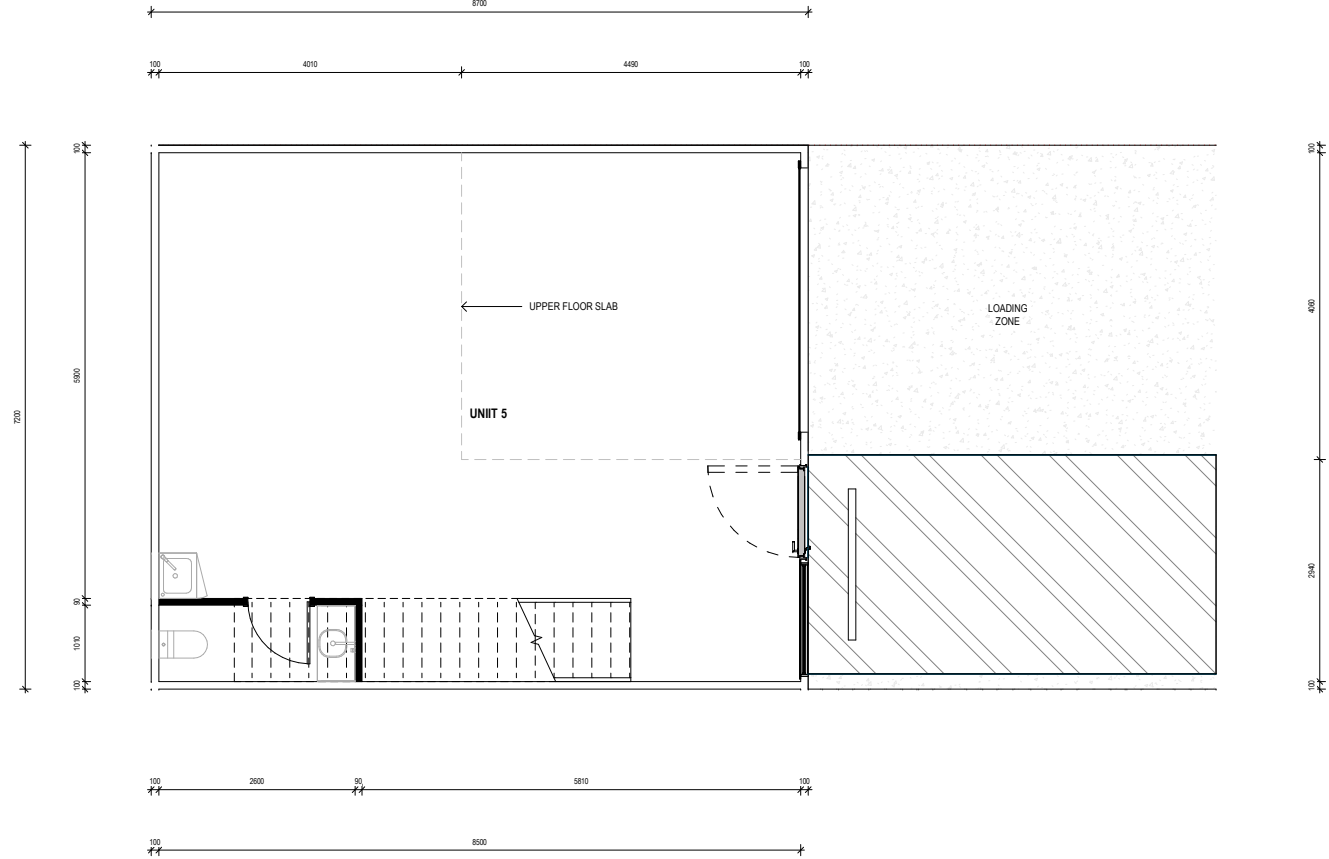


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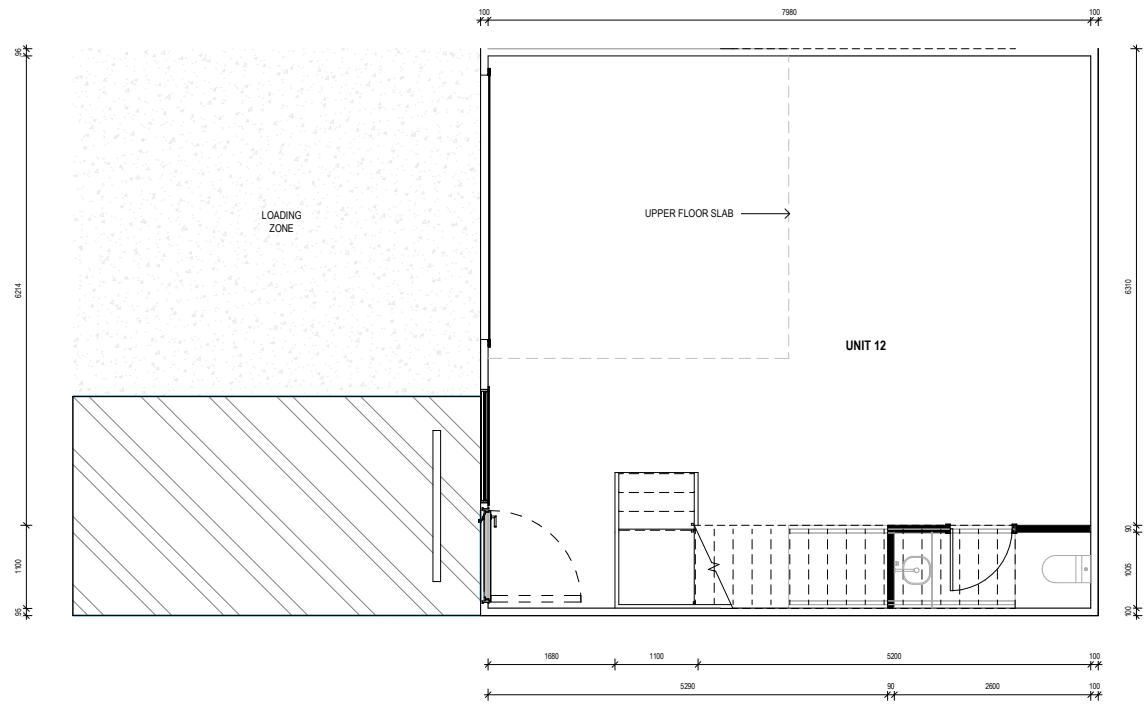
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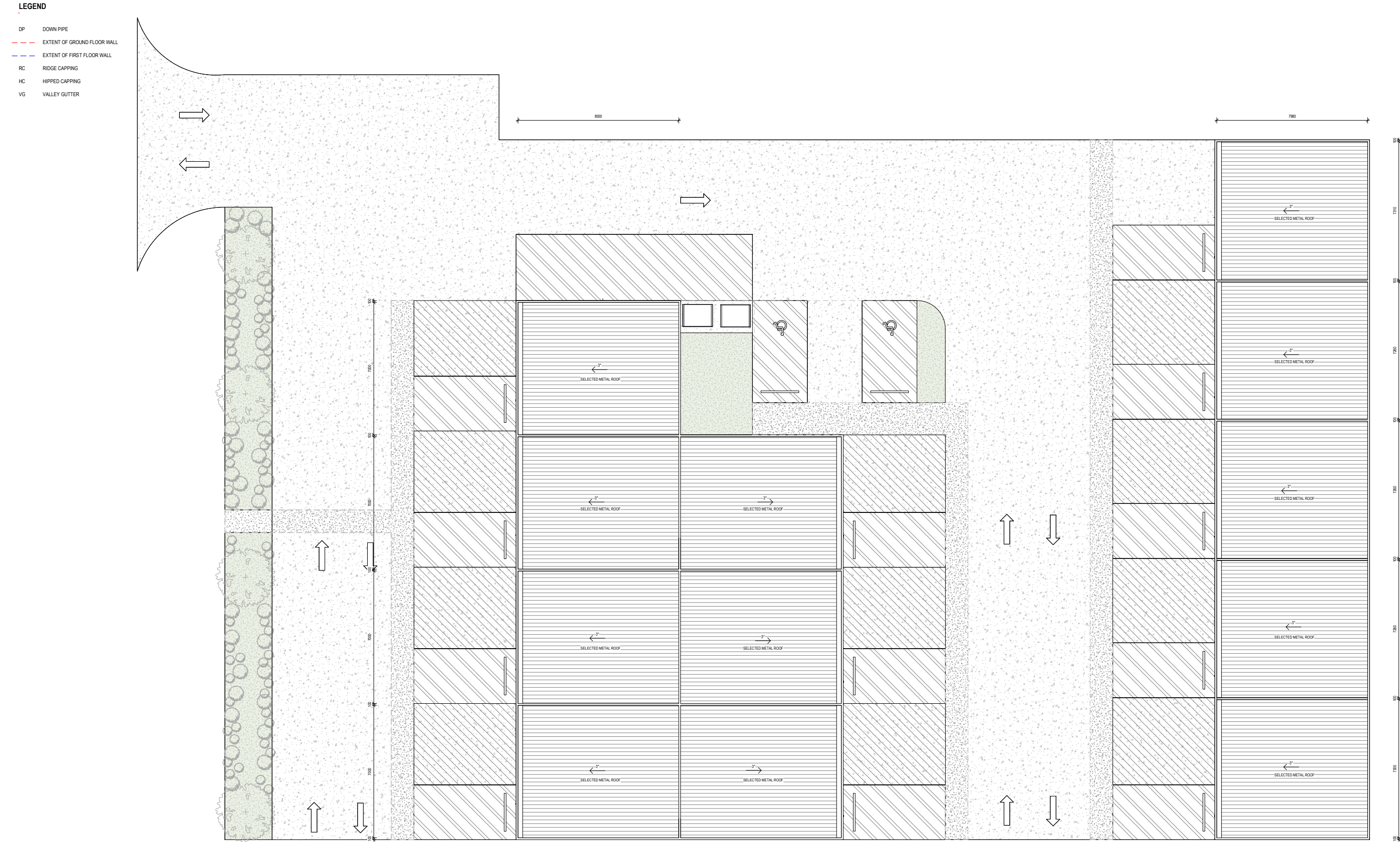
1 PROPOSED TYPICAL LAYOUT PLAN (UNIT 1-4)
A2.2 1: 50



2 PROPOSED TYPICAL LAYOUT PLAN (UNIT 5-7)
A2.2 1: 50



3 PROPOSED TYPICAL LAYOUT PLAN (UNIT 8-12)
A2.2 1: 50



1 PROPOSED ROOF PLAN
A3.0 1 : 100

- NOTES:**
- REFER TO MANUFACTURER'S DETAILS FOR ROOF STRUCTURE DESIGN.
 - REFER TO BUILDER'S SPECIFICATION FOR SELECTION OF ROOF SHEET PROFILE AND COLOR, AND RELEVANT FLASHING, FASGIA AND DOWNSPIPE.
 - GUTTERS& DOWNSPIPES REFER TO HYDRAULIC SPECIFICATION.

OKAS DESIGN

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• VERIFY ALL DIMENSIONS ON SITE PRIOR TO THE COMMENCEMENT OF WORK.
• DO NOT SCALE OFF THESE DRAWINGS.
• REPORT DISCREPANCIES TO THE ARCHITECT BEFORE CARRYING OUT WORK.

PROJECT
PROPOSED WAREHOUSE

CLIENT
TBC
ADDRESS
239-241 EWING RD, WOODRIDGE

DRAWING TITLE
PROPOSED ROOF PLAN

DRAWN
SY
DATE
21/01/2026

CHECK
EM

JOB NO.
RD2602
SCALE
1 : 100

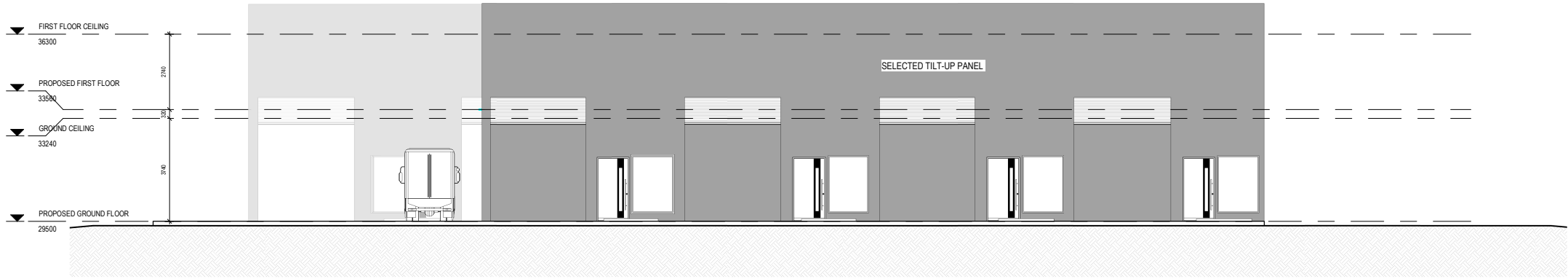
ISSUE
C

REVISIONS		
Rev	Date	Description
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3	2025/01/21	REVISIONS
4	2025/01/21	REVISIONS
5	2025/01/21	REVISIONS
6	2025/01/21	REVISIONS
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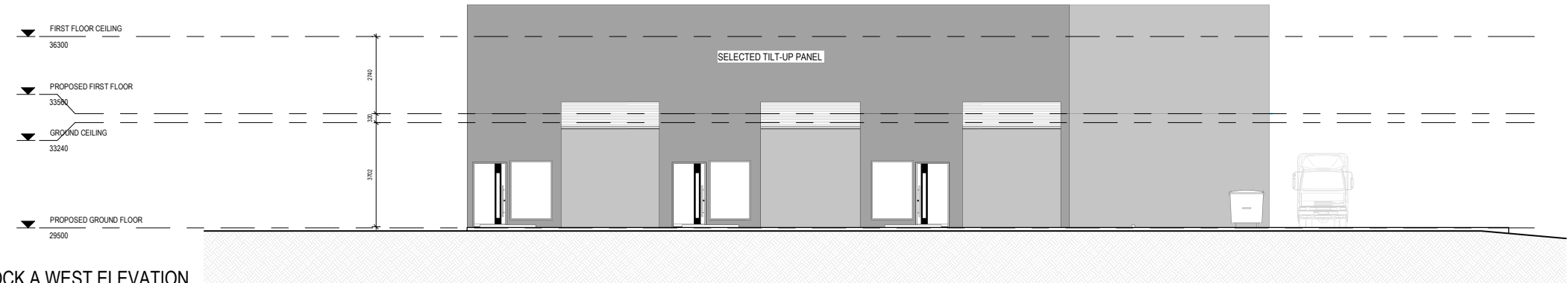


DWG NO
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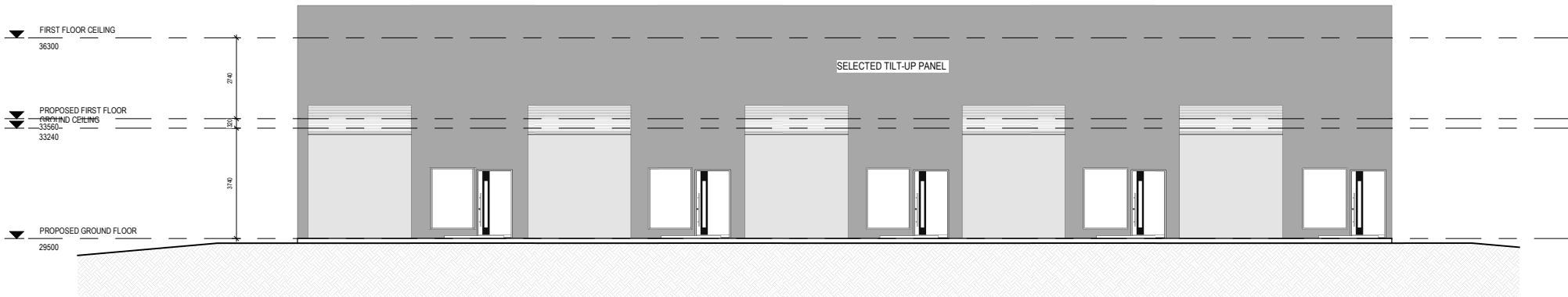
GENERAL NOTES



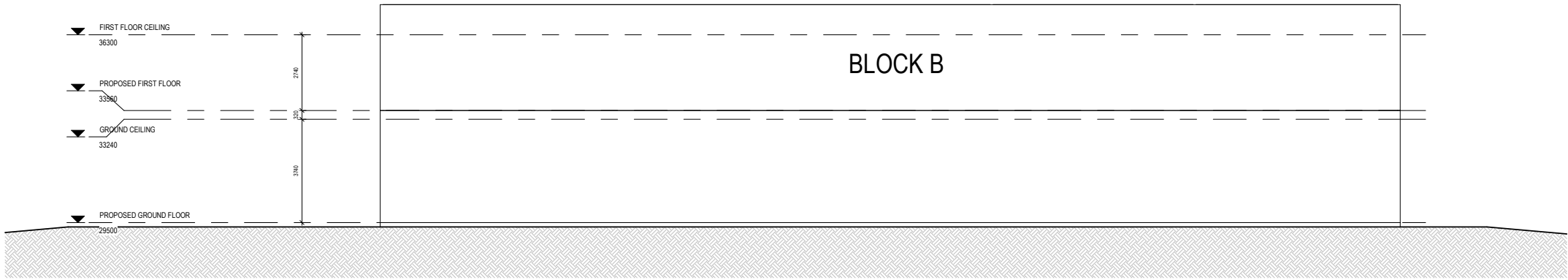
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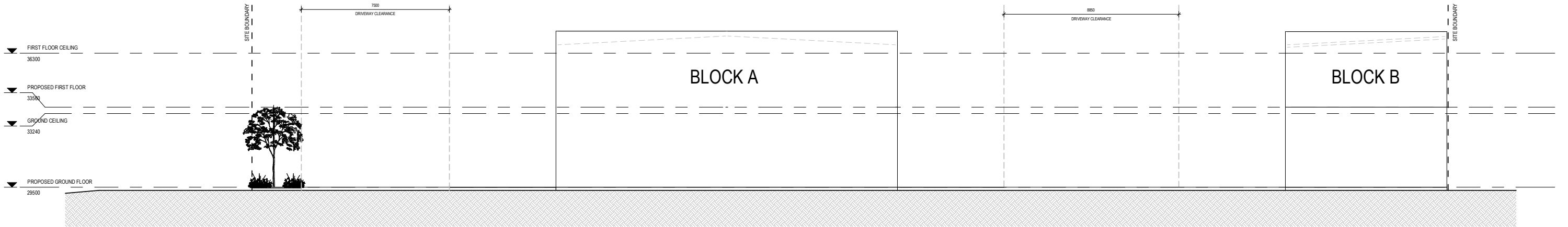
2 BLOCK A WEST ELEVATION
1 : 100



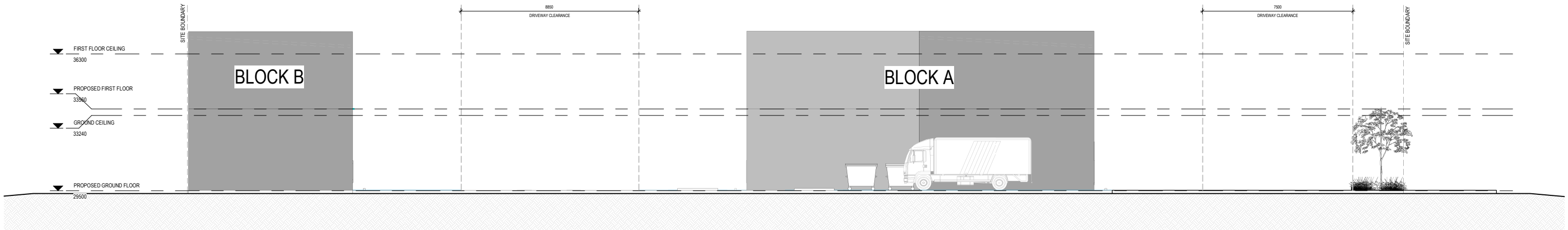
3 BLOCK B EAST ELEVATION
1 : 100



1 SOUTH EAST ELEVATION
1 : 100



2 SOUTH WEST ELEVATION
1 : 100



3 NORTH EAST ELEVATION
1 : 100



6.2 APPENDIX B – SCHEMATIC CIVIL DRAWINGS

PROPOSED WAREHOUSES

239-241 EWING RD, WOODRIDGE

DA CIVIL ENGINEERING PACKAGE FOR LI & HU INVESTMENTS PTY LTD



LOCALITY PLAN

EXTRACTED FROM GOOGLE MAPS © 2026
NOT TO SCALE

LOT DATA

10	RP 221198
----	-----------

MELIORA ENGINEERING ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UNDERGROUND SERVICES WHICH ARE PLOTTED FROM AUTHORITY RECORDS BY THE SURVEYOR. DOCUMENTED DESIGNS MAY BE SUBJECT TO ONGOING CHANGES UNTIL RECEIPT AND REVIEW OF MINIMUM QUALITY 'LEVEL A' EXISTING SERVICE LOCATION RESULTS ALONG FULL LENGTH OF PROPOSED MAIN ALIGNMENTS. MELIORA WILL NOT BE HELD LIABLE FOR COST INCREASES OR TIME EXTENSION RESULTING FROM NECESSARY DESIGN CHANGES TO ACHIEVE AUTHORITY CODE COMPLIANCE.

DRAWING SCHEDULE

DRAWING No.	DRAWING TITLE
SK00	COVER, LOCALITY, SCHEDULE & GENERAL NOTES
SK05	PRELIMINARY CIVIL SERVICES LAYOUT PLAN
SK07	PRELIMINARY CIVIL DRAINAGE CATCHMENT PLAN

MANDATORY REFERENCE DOCUMENTATION

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT COUNCIL (LOCAL AUTHORITY) DEVELOPMENT (DA) CONDITIONS), AS WELL AS THE WATER AUTHORITY CONDITIONS. ALL RELEVANT AUTHORITY APPROVALS AND CONDITIONS ARE TO BE REVIEWED (AND REQUESTED IF NOT ALREADY RECEIVED) BY CONTRACTOR PRIOR TO CONSTRUCTION.

READ THESE DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL AND OTHER ENGINEERING DRAWING, SPECIFICATIONS AND WITH ALL OTHER WRITTEN INSTRUCTIONS ISSUED. REFER TO ARCHITECTURAL DRAWINGS FOR SETTING OUT AND DETAIL DIMENSIONS. IN CASE OF DISCREPANCY, PRECEDENCE IS GIVEN TO DRAWINGS, THEN NOTES, THEN SPECIFICATION. REFER DISCREPANCIES TO SUPERINTENDENT BEFORE PROCEEDING WITH WORK.

FURTHER, ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH

- COUNCIL (LOCAL AUTHORITY) GUIDELINES, PLANNING SCHEME POLICIES (PSPs), SPECIFICATIONS AND STANDARD DRAWINGS
- RELEVANT LEGISLATION INCLUDING (BUT NOT LIMITED TO):
 - WORK HEALTH & SAFETY ACT 2011
 - ENVIRONMENTAL PROTECTION & BIODIVERSITY CONSERVATION ACT 1999 (AS AMENDED)
 - BIOSECURITY ACT 2015. REFER TO WWW.DAF.QLD.GOV.AU
 - PLANNING ACT 2016
- RELEVANT AUSTRALIAN STANDARDS INCLUDING (BUT NOT LIMITED TO):
 - AS3500.3-2018 (PLUMBING & DRAINAGE)
 - AS2865-2009 (CONFINED SPACES)
 - AS3798-2007 (EARTHWORKS)
 - AS/NZS 2890.1-2004 (PARKING FACILITIES)
 - AS1742.3-2019 (SIGNAGE & LINE MARKING) - SS BY MUTCD
 - AS4049.2-2005 (PAVEMENT MARKING MATERIALS)
- INTERNATIONAL EROSION CONTROL AUTHORITY (IECA) & STANDARD DRAWINGS
- AUSTROADS DESIGN MANUALS & STANDARD DRAWINGS
- MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- SOUTH EAST QUEENSLAND WATER SUPPLY AND SEWERAGE DESIGN AND CONSTRUCTION CODE (OR THE SEQ CODE)

PRELIMINARY!

ALL CIVIL WORKS AS SHOWN ON MELIORA DA PLANS IS PRELIMINARY AND IS SUBJECT TO FURTHER DETAILED DESIGN AND COORDINATION POST DEVELOPMENT APPLICATION APPROVAL AND PRIOR TO CONSTRUCTION COMMENCING

CONTOURS LEGEND

DESIGN/FINISHED SURFACE CONTOURS ----- 18.0 -----
EXISTING SURFACE CONTOURS ----- 18.0 -----

BOUNDARIES LEGEND

PROPOSED LOT BOUNDARIES -----
PROPOSED EASEMENT -----

EXISTING FEATURES LEGEND

EXISTING PROPERTY BOUNDARY -----
EXISTING BOUNDARY ADJACENT -----
EXISTING EASEMENT -----
EARTHWORKS EXISTING BATTER TOE -----
EARTHWORKS EXISTING BATTER TOP -----
BUILDING EXISTING -----
BUILDING EXISTING ROOF/EAVE -----
MISC FENCE / GATE EXISTING -----
ROAD EXISTING KERB -----
ROAD EXISTING CENTERLINE -----
ROAD EXISTING EDGE BITUMEN -----
COMMUNICATIONS EXISTING ----- C ----- C -----
DRAINAGE EXISTING CENTERLINE ----- SWD -----
DRAINAGE EXISTING TEXT ----- dSWD ----- dSWD -----
ELECTRICAL EXISTING OVERHEAD ----- OE ----- OE -----
ELECTRICAL EXISTING UNDERGROUND ----- E ----- E -----
ELECTRICAL EXISTING CENTERLINE DBYD ----- dE ----- dE ----- dE -----
GAS EXISTING ----- G ----- G -----
GAS EXISTING CENTERLINE DBYD ----- dG ----- dG ----- dG -----
SEWER EXISTING CENTERLINE ----- S ----- S -----
SEWER EXISTING RISING MAIN ----- RM ----- RM -----
SEWER EXISTING CENTERLINE DBYD ----- dS ----- dS ----- dS -----
SEWER RISING MAIN EXISTING CENTERLINE DBYD ----- dSRM ----- dSRM -----
TELECOMMUNICATIONS EXISTING ----- T ----- T -----
TELECOMMUNICATIONS EXISTING CENTERLINE DBYD ----- dT ----- dT ----- dT -----
FIBER OPTIC CABLES EXISTING CENTERLINE DBYD ----- dOF ----- dOF -----
WATER EXISTING CENTERLINE ----- W ----- W -----
WATER EXISTING CENTERLINE DBYD ----- dW ----- dW ----- dW -----
ABANDONED SERVICES ----- * * * * *
EXISTING RETAINING WALL - BOULDER -----
EXISTING RETAINING WALL - BLOCK -----
EARTHWORKS EXISTING DRAIN ----->----->-----
EARTHWORKS EXISTING DRAIN CONCRETE ----->----->-----

EXISTING VEGETATION



NOTE

ALL PLANS TO BE READ IN CONJUNCTION WITH ALL INFORMATION AND NOTES ON DRG. No. SK00 AND ALL RELEVANT SPECIFICATIONS



NORTH POINT				SCALE BAR(S)		DRAWN: APRIL 2026		CLIENT/DEVELOPER: LI & HU INVESTMENTS PTY LTD		PROJECT: 239-241 EWING RD WOODRIDGE		DRAWING TITLE: LOCALITY, SCHEDULE & GENERAL NOTES EXISTING FEATURES LEGEND		26008	
						DESIGNED: APRIL 2026		CLIENT/DEVELOPER LOGO:						MELIORA JOB No.	
						APPROVED: MITCHELL BLYTH RPEQ No. 21258 DATE: APRIL 2026		RPEQ SIGNATURE 		ARCHITECT: X		BUILDER:		SK00	
01				ISSUE FOR APPROVAL		25.05.26		SD		MB				DWG No	
REV				DESCRIPTION		DATE		DRAWN		APPR.				01	
														REVISION	



LEGEND	
PROPOSED KERB LINE	BOK FOK LOK
PROPOSED DRAINAGE (PIPE)	SWD
PROPOSED SEWER MAIN/CONNECTIONS	S S
PROPOSED WATER MAIN/SERVICE AND METERS	W
PROPOSED ROOFWATER	RWD
PROPOSED ELEC (UG) BY OTHERS	E E
PROPOSED GAS BY OTHERS	G G
PROPOSED SEWER HOUSE CONNECTION	HD HD
PROPOSED SEWER RISING MAIN	RM RM
PROPOSED TELSTRA/COMMS BY OTHERS	T T

PROPOSED FIELD INLET PIT	
PROPOSED KERB ADAPTOR	
PROPOSED CONCRETE ROAD/CROSSOVER	
PROPOSED FOOTPATHS	
PROPOSED BUILDINGS	
PROPOSED TURF OR LANDSCAPING AREA	
PROPOSED DEMOLITION EXTENT	
EXISTING EXTERNAL ROAD PAVEMENT	
EXISTING BUILDINGS	

NOTE: FOR CONTOURS, BOUNDARIES & EXISTING FEATURES LEGEND REFER TO DRG No. SK00

PRELIMINARY ROADWORKS AND DRAINAGE NOTES

- ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH CURRENT COUNCIL STANDARD SPECIFICATIONS AND DRAWINGS, UNLESS NOTED OTHERWISE
- CONTRACTOR TO CONDUCT A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF WORKS AND CONFIRM THE LOCATION OF ALL EXISTING SERVICES PRIOR TO ANY EXCAVATION, SHOULD ANY OF THE PROPOSED SERVICES CLASH WITH THE IDENTIFIED EXISTING SERVICES, CONSULT ENGINEER FOR ADVICE
- CONTRACTOR TO ENSURE ALL EXISTING SERVICES ARE PROTECTED DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS. ANY DAMAGE TO EXISTING SERVICES IS TO BE REINSTATED AT THE CONTRACTORS EXPENSE.
- ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH COUNCILS EROSION AND SEDIMENT CONTROL GUIDELINES
- ALL TRENCH EXCAVATION AND CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 2011
- CONTRACTOR TO REINSTATE DAMAGE TO ANY EXISTING INFRASTRUCTURE (KERB AND CHANNEL, ASPHALT, FOOTPATH, VERGE ETC) TO COUNCIL SATISFACTION
- CONTRACTOR TO ENSURE ADJOINING PROPERTIES AND ROADS ARE PROTECTED FROM PONDING OR NUISANCE FROM STORMWATER RUNOFF AS A RESULT OF THE PROPOSED WORKS
- CONTRACTOR TO REMOVE ANY REDUNDANT DRAINAGE OUTLETS FROM THE KERB AND CHANNEL INCLUDING ANY ASSOCIATED PIPEWORK ACROSS THE FOOTWAY AND REINSTATE THE KERB AND CHANNEL AND THE FOOTWAY AREA IN ACCORDANCE WITH COUNCIL'S INFRASTRUCTURE GUIDELINES

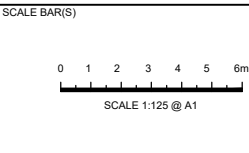
PRELIMINARY GENERAL CIVIL WORKS NOTES

- ALL PROPOSED WORK IS TO BE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH REQUIREMENTS OF ALL RELEVANT DEVELOPMENT APPROVAL CONDITIONS
- RETAIN AND PROTECT TREES ON SITE OR WITHIN STREET AS PER N.A.L.L. (OR ANY OTHER RELEVANT VEGETATION MANAGEMENT PLAN) REQUIREMENTS U.N.O.
- MINIMISE ON SITE EROSION AND RELEASE OF SEDIMENT AND SEDIMENT LADEN STORMWATER FROM THE SITE AT ALL TIMES IN ACCORDANCE WITH BEST PRACTICE ESC METHODS.
- SERVICES AUTHORITIES (INCLUDING ELECTRICITY, COMMUNICATIONS, GAS, NBN) CONNECTION APPLICATIONS TO BE FACILITATED BY OTHERS WITH CONDUIT/ CONNECTION DESIGNS TO BE COORDINATED WITH CIVIL INFRASTRUCTURE AS REQUIRED
- ENSURE SEWER AND WATER WORKS APPROVAL IS GRANTED BY THE RELEVANT WATER AUTHORITY PRIOR TO COMMENCING CONSTRUCTION OF CIVIL WORKS
- NEW WORK MUST NOT DAMAGE OR COMPROMISE THE WORKING ABILITY OF EXISTING INFRASTRUCTURE, PROTECT EXISTING INFRASTRUCTURE AT ALL TIMES DURING CONSTRUCTION



NOTE
ALL PLANS TO BE READ IN CONJUNCTION WITH ALL INFORMATION AND NOTES ON DRG. No. SK00 AND ALL RELEVANT SPECIFICATIONS

REV	DESCRIPTION	DATE	DRAWN	APPR.
01	ISSUE FOR APPROVAL	25.05.26	SD	MB



DRAWN: APRIL 2026	
DESIGNED: APRIL 2026	
APPROVED: MITCHELL BLYTH RPEQ No. 21258 DATE: APRIL 2026	RPEQ SIGNATURE



MELIORA ENGINEERING
INFO@MELIORACE.COM
ABN 46 153 772 813

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CLIENT/DEVELOPER:
LI & HU INVESTMENTS PTY LTD
CLIENT/DEVELOPER LOGO:

PROJECT:
239-241 EWING RD
WOODRIDGE

ARCHITECT:
X
BUILDER:

DRAWING TITLE:
PRELIMINARY CIVIL SERVICES
LAYOUT PLAN

FOR APPROVAL

MELIORA JOB No.
26008

SK05
DWG No

01
REVISION

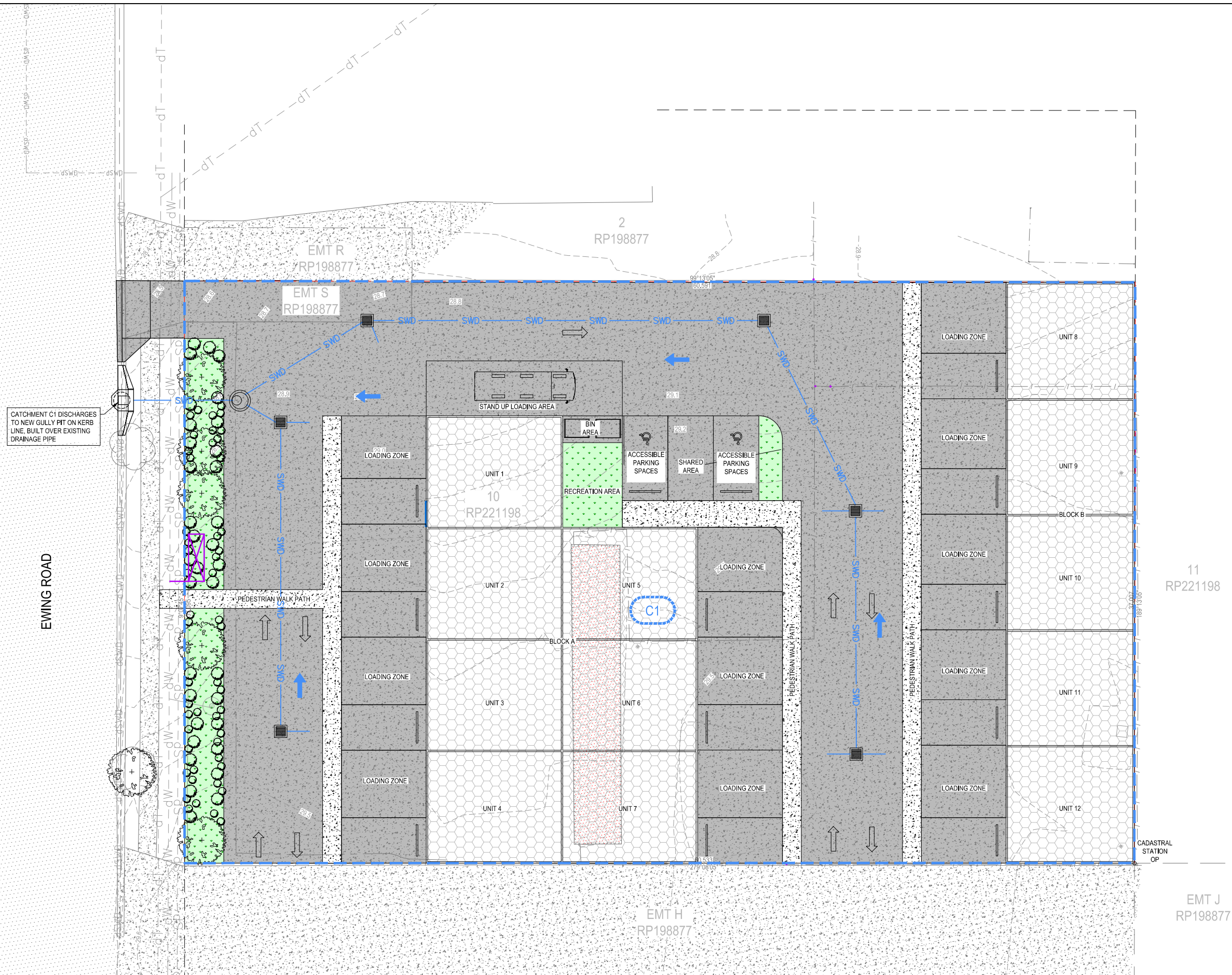
LEGEND

--- POST DEVELOPMENT CATCHMENT BOUNDARY

→ PROPOSED CATCHMENT FLOW DIRECTION

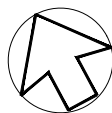
C1 CATCHMENT LABEL

NOTE: FOR CONTOURS, BOUNDARIES & EXISTING FEATURES LEGEND REFER TO DRG No. SK00



NOTE
ALL PLANS TO BE READ IN CONJUNCTION WITH ALL INFORMATION
AND NOTES ON DRG. No. SK00 AND ALL RELEVANT SPECIFICATIONS

NORTH POINT



SCALE BAR(S)

0 1 2 3 4 5 6m

SCALE 1:125 @ A1

DRAWN:
APRIL 2026

DESIGNED:
APRIL 2026

APPROVED:
MITCHELL BLYTH

RPEQ No. 21258
DATE: APRIL 2026

RPEQ SIGNATURE



MELIORA ENGINEERING
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ABN 46 153 772 813

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CLIENT/DEVELOPER:
LI & HU INVESTMENTS PTY LTD

CLIENT/DEVELOPER LOGO:

PROJECT:
239-241 EWING RD
WOODRIDGE

ARCHITECT:
X

BUILDER:

DRAWING TITLE:
PRELIMINARY CIVIL DRAINAGE
CATCHMENT PLAN

MELIORA JOB No.

SK07
DWG No

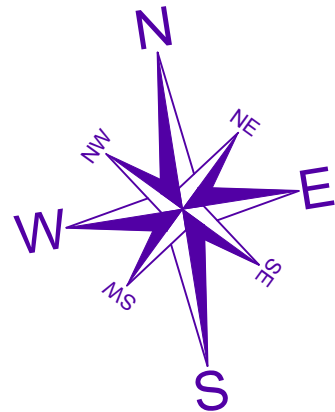
26008

01
REVISION

FOR APPROVAL



6.3 APPENDIX C – SURVEY PLAN

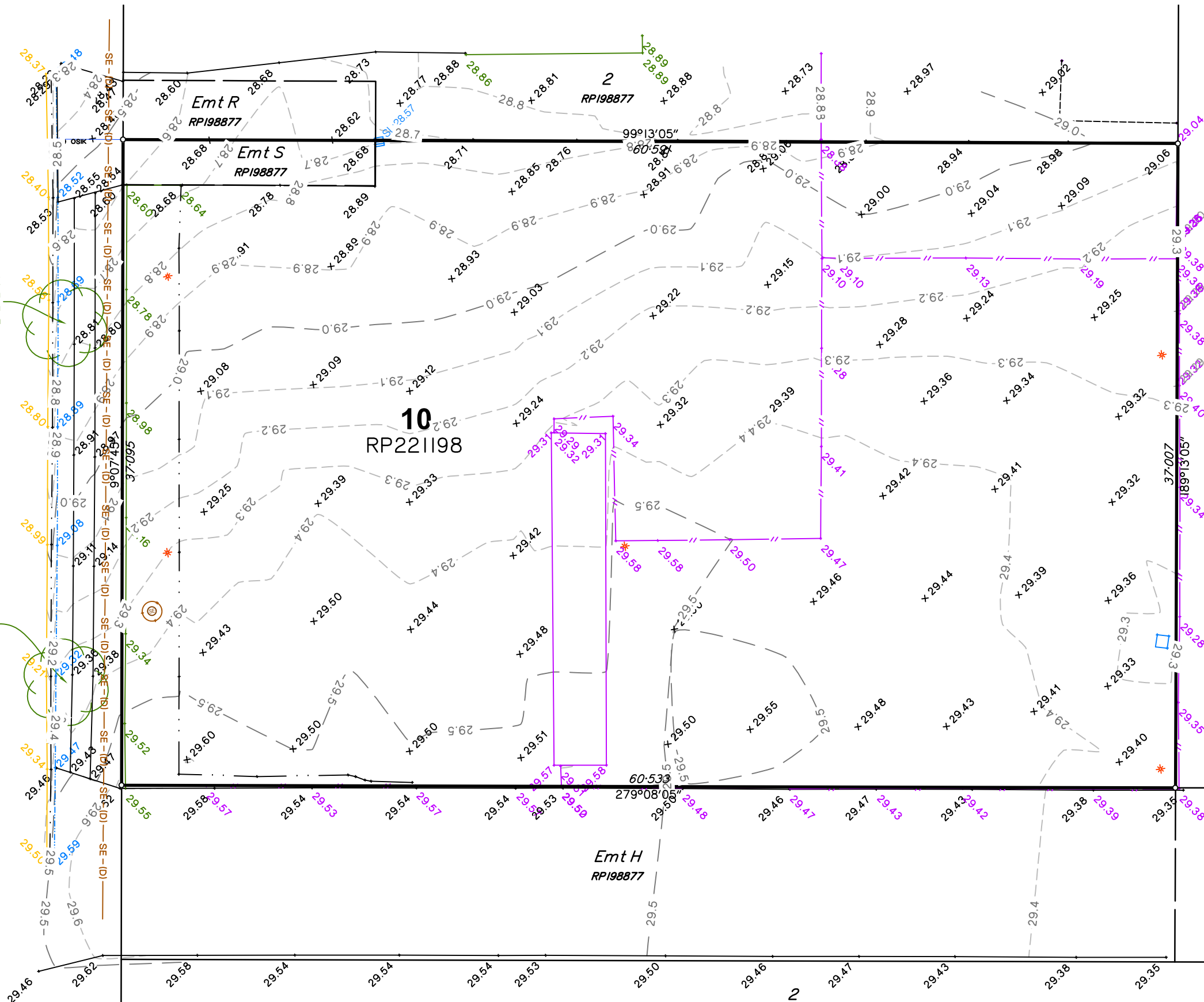


ROAD

EWING

TREE
Height=4m
Dia=100mm
Spread=3m

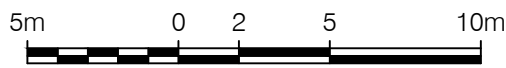
TREE
Height=4m
Dia=100mm
Spread=3m



REAL PROPERTY DESCRIPTION

Alert: AREA ONLY CAN BE CONFIRMED BY BOUNDARY IDENTIFICATION SURVEY

PROJECT ADDRESS:
239-241 Ewing Rd Woodridge Qld 4114
LOT/PLAN: 10/RP221198
DEED AREA: 2244 m²
LOCAL AUTHORITY: Logan City
LOCALITY: Woodridge



SCALE 1:250 (A3)

DETAIL & CONTOUR SURVEY PLAN



Land Surveyor | Development Consultant
Phone: 0468 468 006
E-mail: Admin@SurvLink.com.au
Website: www.SurvLink.com.au

CLIENT
LI & HU INVESTMENTS PTY LTD
WARNING: This plan is protected under Copyright Act 1968 (Cth), Regulations and international treaties. No reproduction or copies, in any form or by any means, in part or whole, shall be made without PRIOR written permission of SurvLink Consulting. Copyright © SurvLink Consulting. All rights reserved.

HORIZONTAL DATUM
BCSG2020, by GNSS
VERTICAL DATUM
AHD, Derived by GNSS

SURVEYED BY
AM 28/01/2026
DRAFTED BY
DX 08/02/2026

JOB REF. TYPE DGN. NO. REV.
260115 - DS - 001 - B

DISCLAIMERS

- This plan is prepared solely for the client named hereon and only for showing existing features & surface contours to assist the proposed development. It must not be relied upon by third parties or for other purposes without the written consent of SurvLink Consulting.
- Boundaries shown are compiled from RP221198 and are subject to confirmation by further surveys. Bearings may not reflect true north, and no boundary markers were placed. Where works are proposed in proximity to property boundaries, a Boundary Identification Survey by a licensed cadastral surveyor (free quote available on request) is strongly recommended for verification, determination, and reinstatement of the relevant boundaries.
- No investigation has been made into the existence of any registered, unregistered or statutory easements, covenants, or encumbrances. A current title search is recommended.
- All levels shown are in meters on Australian Height Datum (AHD) and derived by GNSS, unless mentioned otherwise. Contours at interval of 0.1m have been interpolated from spot height points and are a general representation of ground terrain/topography only, and does not represent Local Authority's definition of Natural Ground Level (NGL).
- Features and services shown on this plan are prepared with a combination of field survey and public records. Only surface visible pits and service evidences are shown. The existence and position of underground services has not been investigated. Before You Dig Australia (BYDA) enquiries must be made before excavation to avoid damage to underground services.
- Tree heights, spreads & trunk diameters are estimated by visual sighting and therefore are indicative only.
- These notes form part of this plan and apply to all sheets. To the maximum extent permitted by law, SurvLink Consulting disclaims liability for any loss or damage arising from reliance contrary to the above conditions.



6.4 APPENDIX D – BYDA RESULTS

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



Meliora Engineering - Kousik De

Wesley Street

Lutwyche

QLD

4030

admin@meliorace.com

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

Enquiry Details	
Sequence Number	270575040
Enquiry Date	31/03/2026 02:55
Response	AFFECTED
Address	239-241 Ewing Rd Woodridge
Location in Road	
Activity	Manual Excavation

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

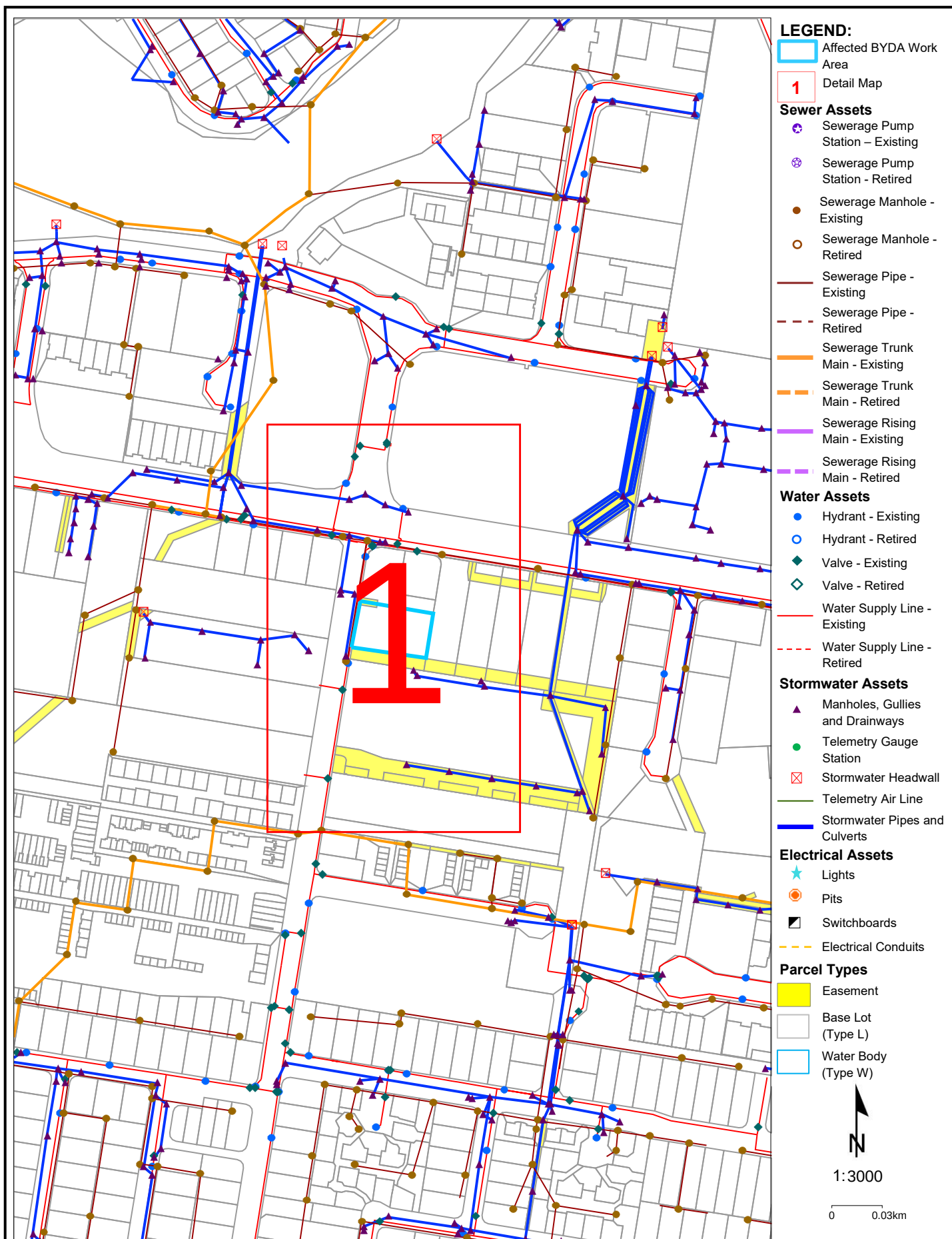
Logan City Council now provides a limited amount of As-Constructed and Drainage Plans on-line, click on the [Logan City As-Constructed Plans](#) link and type in the property address you are seeking. Unfortunately, not all properties will have plan records accessible on-line. The following options are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

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

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

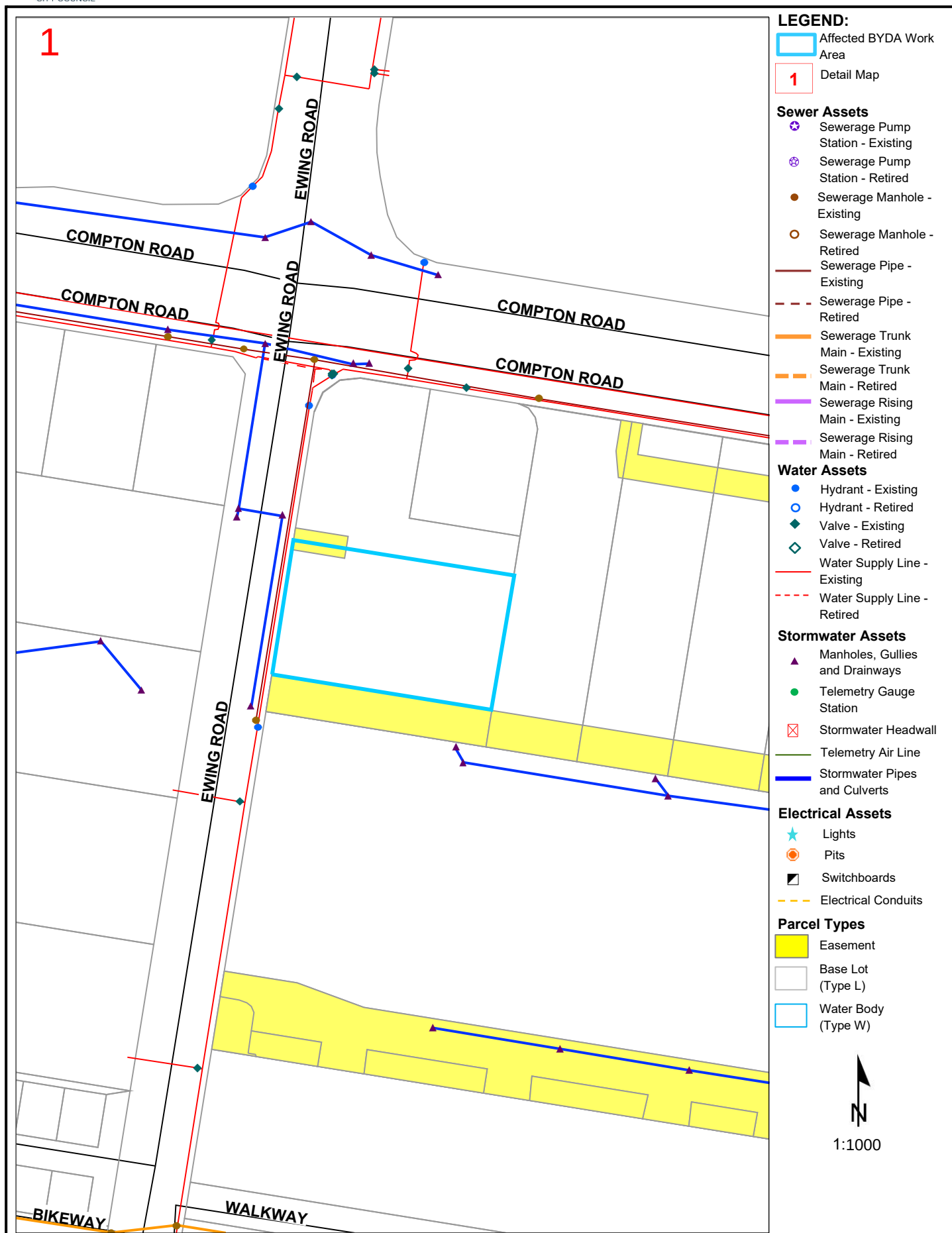
Disclaimer: This document is confidential to the addressee and may also be privileged, and neither confidentiality nor privilege is waived, lost or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information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

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



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

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



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

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".

APA

Australia's energy
infrastructure partner



Before You Dig Australia

Classification: Networks

Enquiry date	31/03/2026
Sequence number	270575042
Work site address	239-241 Ewing Rd Woodridge QLD 4114





For your immediate information

THERE IS A GAS PIPELINE OR GAS ASSETS

located in close vicinity to your works.

Enquiry Date: 31/03/2026
Enquirer: Kousik De
Sequence Number: 270575042
Work Site Address: 239-241 Ewing Rd
Woodridge
QLD 4114

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

We confirm there are Gas Assets located in close vicinity of the above location.

Caution: Damage to gas assets may result in explosion, fire and personal injury.

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

If you have any queries relating to this information, or you are unable to comply with requirements of the APA Guidelines for Works Near Existing Gas Assets contact the APA Before You Dig Officer

- Phone 1800 085 628
- Email BYDA_APA@apa.com.au

for clarification before proceeding with any work.

Before You Dig Checklist



1. Plan

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



2. Prepare

- Electronically locate gas assets and mark locations.
 - Note: Look for visible evidence of gas assets at the worksite which may not be shown on plans.
-



3. Pothole

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



4. Protect

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



5. Proceed

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

Contacts

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

Site Watch

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

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

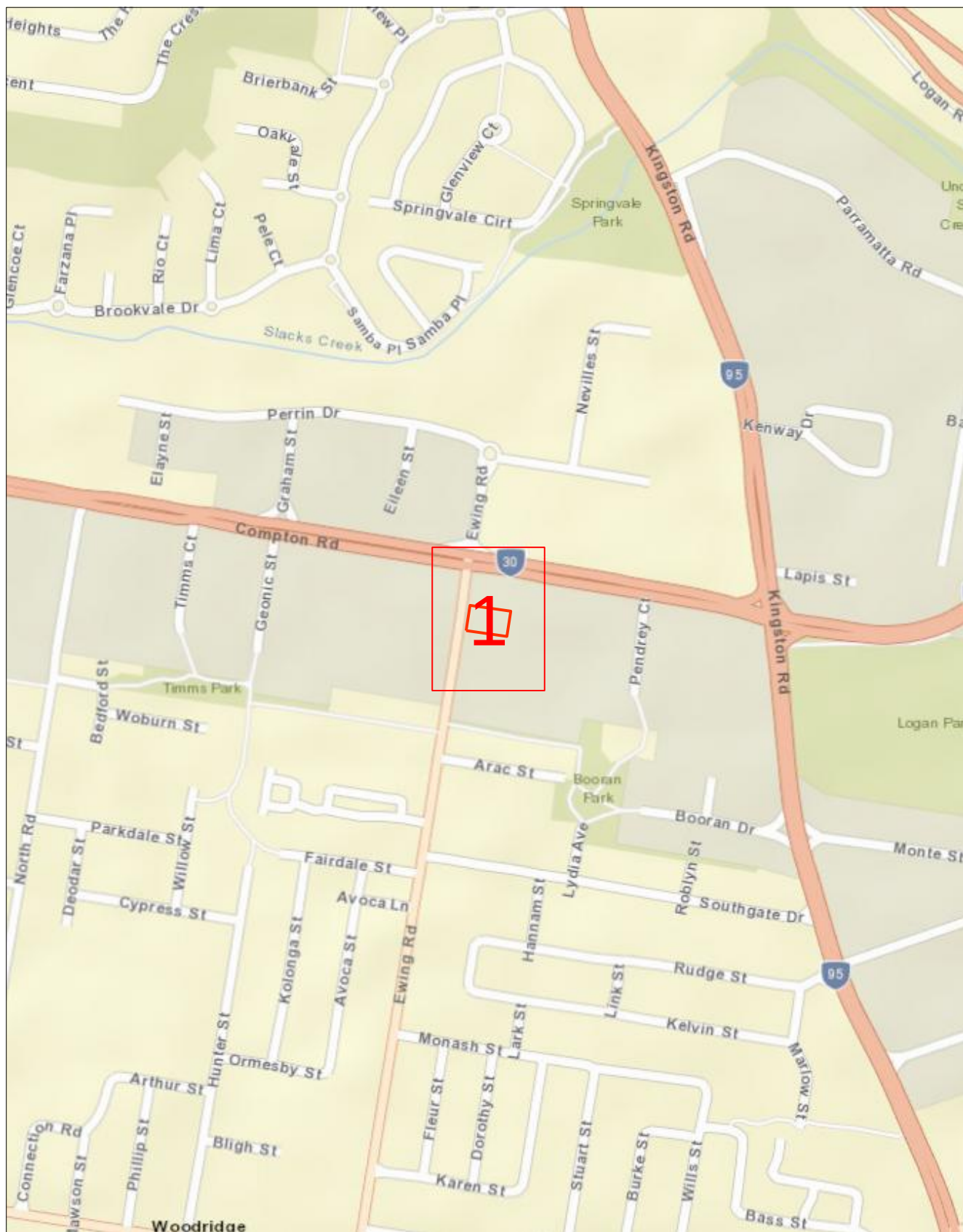
Item	Rate (excl. gst)
Site Watch – Business Hours	\$143.42 per hour
Site Watch – After Hours	\$175.06 per hour
Cancellation Fee	\$286.84
<i>Fee applies where cancelations received after 12pm (midday), 1 business day prior to the booking.</i>	

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

**The specified rates do not apply to Origin Energy LPG assets. All charges and invoicing related to these assets will be administered directly by Origin Energy. For further information contact Origin Energy.*

Site 239-241 Ewing Rd
Address: Woodridge
QLD 4114

Sequence 270575042
Number:



Scale 1: 6000

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



Enquiry Area

Map Key Area





Scale 1: 700

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



Enquiry Area



Map Key Area



Legend

PIPE LEGEND: GAS TYPE AND PRESSURE

	Low pressure	Medium pressure	High pressure	Transmission
Natural gas				
Natural gas – proposed				
LPG (yellow dash)	not applicable			not applicable
Hydrogen blended (aqua dash)	not applicable			not applicable

PIPE LEGEND: SPECIAL DESIGNATION

	Low pressure	Medium pressure	High pressure	Transmission
Critical main (yellow highlight)				
Casing (grey highlight)				not applicable

These designations typically apply to any pipe type and pressure

PIPE LEGEND: OTHER STATUS

Abandoned pipe	
Idle or inactive pipe	

ABBREVIATION

BoK	Back of kerb	FoK	Front of kerb
C	Depth of cover	NTI	Not tied in
CP	Cathodic protection		

OBJECT SYMBOLS

Valve		CP test station		Syphon	
Buried valve		CP anode		Marker	
Regulator station		CP bond wire		Part service ^A	
Gas connected property		CP rectifier terminal			

^AA live gas service terminated underground within the property boundary, available for future extension to the gas meter.

PIPE CODE AND MATERIAL

P*	Polyethylene (PE)	CU	Copper
P3	Polyvinyl chloride (PVC)	N2	Nylon
S*	Steel	W2	Wrought galv iron
C*	Cast iron	W3	PE coat wrought galv iron

INTERPRETATION EXAMPLE

	High pressure, 40 mm polyethylene in an 80 mm cast iron casing
	Medium pressure, 63 mm steel

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

This map was created in colour and should be printed in colour

Important information

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

Free Gas Pipeline Awareness Training and Information

PROFESSIONALS

APA offers online and in-person toolbox forums to support safe work near underground gas assets. Topics include distribution and transmission pipelines, the permit process, and gas emergencies, with content suited for companies of all sizes. A Continuing Professional Development certificate is available upon completion.

Scan the QR code to register for an online toolbox, or email damageprevention@apa.com.au to request an in-person presentation.

HOMEOWNERS

If you're working near your home's gas pipes stay safe and view APA's video guide '**Working Safely Near Gas Lines: A DIY Homeowner's Guide**' which offers simple tips to avoid damaging gas pipes.

Scan the QR code to view the video, or for more information email damageprevention@apa.com.au



Disclaimer and legal details

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



To: Kousik De
Phone: Not Supplied
Fax: Not Supplied
Email: admin@meliorace.com

Dial before you dig Job #:	52764421	
Sequence #	270575038	
Issue Date:	30/03/2026	
Location:	239-241 Ewing Rd , Woodridge , QLD , 4114	

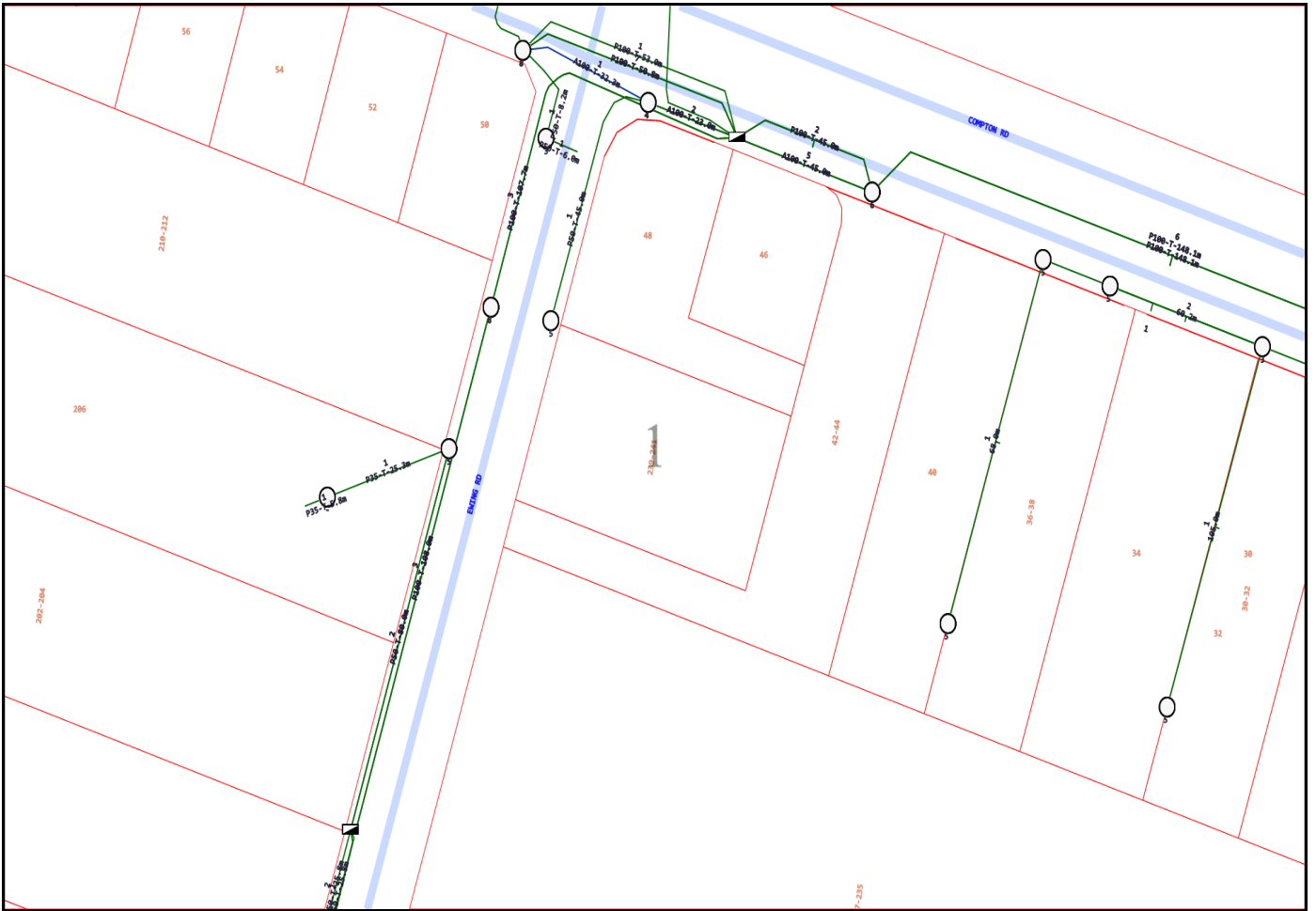
Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans



LEGEND



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



Emergency Contacts

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

Date: 31/03/2026

Enquirer Name: Kousik De
Enquirer Address: Wesley Street
Email: admin@meliorace.com
Phone: +61429970345

Dear Kousik De

The following is our response on behalf of each of the carriers (listed below) to your Before You Dig Australia enquiry – Sequence 270575041
It is provided to you on a confidential basis under the following conditions and must be shredded or securely disposed of after use.

Assets Affected: 239-241 Ewing Rd Woodridge

Carriers (each a "Pipe Networks carrier") and assets affected:

PIPE Networks

Location:

According to our records, the underground assets in the vicinity of the location stated in your enquiry are **AFFECTED**. Please read the below information and disclaimers in addition to the any attached plans provided prior to any construction activities.

IMPORTANT INFORMATION

- The information provided is valid for 30 days from the date of this response. If your work site area changes or your construction activity is beyond 30 days please contact Before You Dig Australia on 1100 or www.1100.com.au to re-submit a new enquiry.
- Due to the nature of underground assets and the age of some assets and records, our plans are indicative of the general location only and may not show all assets in the location. You should not solely rely on these plans when undertaking construction works. It is also inaccurate to assume depth or that underground network conduit and cables follow straight lines, and careful on-site investigations are essential to locate an asset's exact position prior to excavation. It is your responsibility to locate and confirm the exact location of our infrastructure using non-destructive techniques. We make no warranty or guarantee that our plans are complete, current or error free, and to the maximum extent permitted by law we exclude all liability to you, your employees, agents and contractors for any loss, damage or claim arising out of or in connection with using our plans.
- Please note that some of our conduits carry electrical cables and gas pipes. Please exercise extreme care when working within the vicinity of these conduit and take into account the minimum clearance distances under Duty Of Care below.
- You (and your employee and contractors) must not open, move, interfere, alter or relocate any of our assets without our prior approval.
- **Note** It is a criminal offence under the *Criminal Code Act 1995 (Cth)* to tamper or interfere with communication facilities owned by a carrier. Heavy penalties may apply for breach of this prohibition, and any damages suffered, or costs incurred by us as a result of such unauthorised works may be claimed against you.

DAMAGE

- You must report immediately any damage to our network on **1800 786 306** (24hrs). We will hold you liable and seek compensation for any loss or damage to our network, our property and our customers that is caused by or arises out of your activities.

DUTY OF CARE

You have a duty of care to carefully locate, validate and protect our assets when carrying out works near our infrastructure. For construction activities that may impact on or interfere with our network, you will need to call us on **1800 786 306** to discuss a suitable engineering solution, lead time and cost involved. The below precautions must be taken when working in the vicinity of our network:

- Contact us on **1800 786 306** to discuss and obtain relevant information and plans on our infrastructure in a particular location if the information provided in this response is insufficient.
- Physically locate and mark on-site our network infrastructure using non-destructive techniques i.e. pot holing or hand digging every 5 metres prior to commencing any construction activities. Assets located must be marked to AS5488 standard. **NO CONSTRUCTION WORK IS ALLOWED UNTIL THIS STEP IS COMPLETED.** You must use an approved telecommunications accredited locator, or we can provide a locator for you at your expense. If we provide you with a locator, and this locator attended the site and is proven to be grossly negligent in physically locating and marking our infrastructure, then to the extent any Pipe Networks carrier is liable for this locator's negligence, acts and omissions, the total liability aggregated for all Pipe Networks carriers is limited, at our option, to attend the site and re-mark the infrastructure or to pay for a third party to re-mark the infrastructure.
- If you require us to locate or monitor our infrastructure, please allow five business days' notice for us to respond.
- Ensure all information, including our network requirements and any associated plans provided by us are kept confidential and remain on-site throughout your construction works.

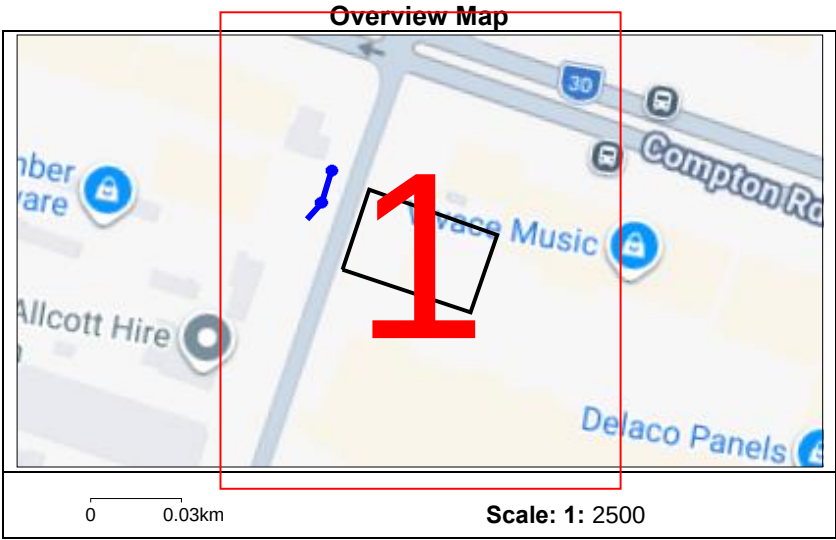
- Use suitably qualified and supervised professionals, particularly if you are working near assets that contain electricity cables or gas pipes.
- Ensure the below minimum clearance distances between the construction activities and the actual location of our assets are met. If you need clearance distances for our above ground assets, or if the below distances cannot be met, call **1800 786 306** to discuss.

Minimum assets clearance distances.

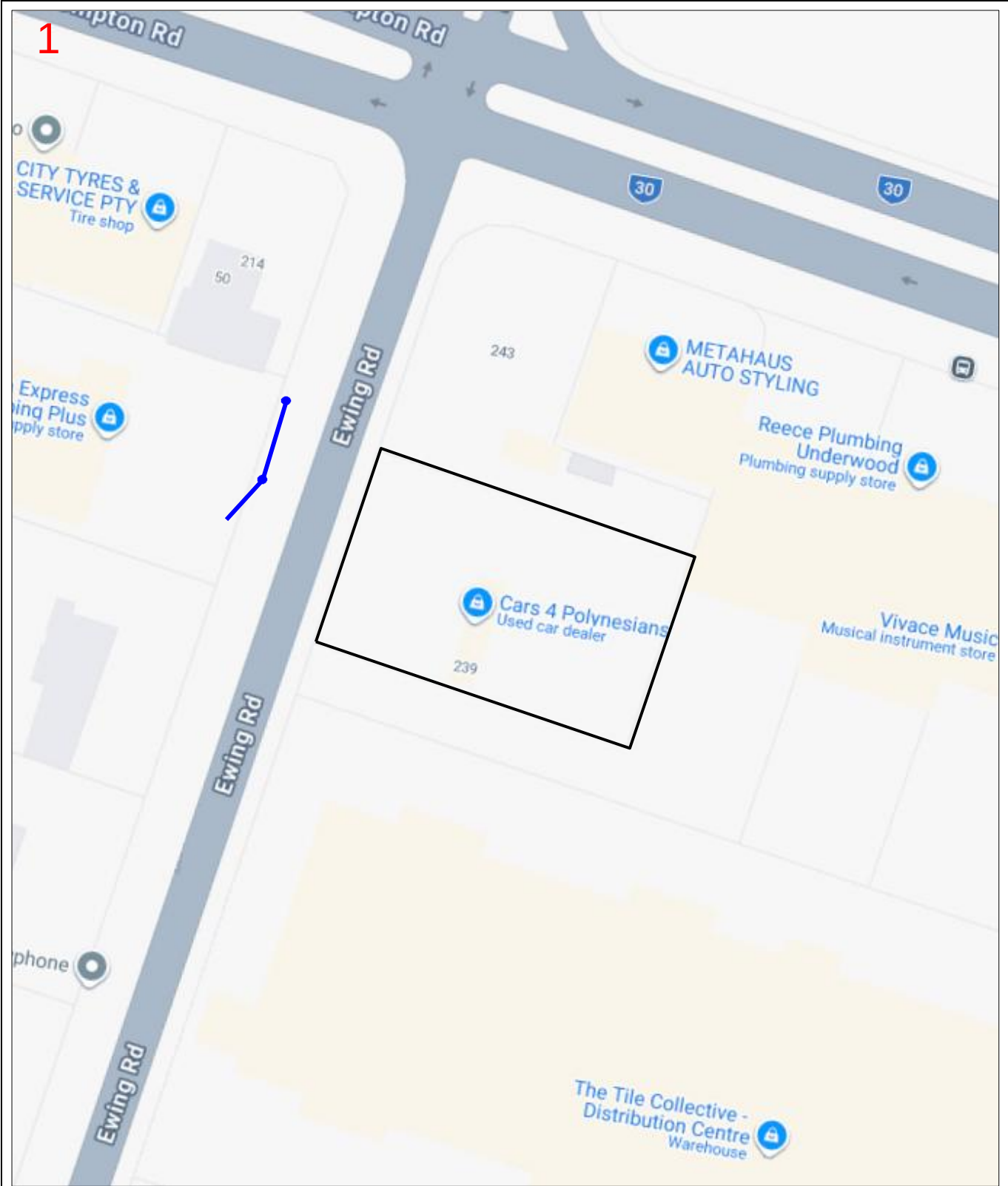
- 300mm when laying asset inline, horizontal or vertical.
 - 1000mm when operating vibrating equipment. Eg: vibrating plates. No vibrating equipment on top of asset.
 - 1000mm when operating mechanical excavators or jackhammers/pneumatic breakers.
 - 2000mm when performing directional bore in-line, horizontal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

PRIVACY & CONFIDENTIALITY

- Privacy Notice – Your information has been provided to us by Before You Dig Australia to respond to your Before You Dig Australia enquiry. We will keep your personal information in accordance with Pipe Networks's privacy policy.
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Pipe Networks Pty Limited



Enquiry Number: 270575041

Map Sheet: 1

Scale: 1: 750

0 0.008km

N

LEGEND

BYDA Work Area

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

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BYDA

Sequence: 270575043
Date: 31/03/2026

Scale: 1:1025
Tile No: **OVERVIEW**

**CAUTION - HIGH
VOLTAGE**

LEGEND

- Substation
- Cable Marker
- Pit
- Pole
- Pillar
- LV Cable (up to 1kV)
- HV Cable (1kV – <33kV)
- HV Cable (33kV and over)
- Pit Boundary
- Planned Work Area

AS5488 Category “D” Plan



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BYDA

Sequence: 270575043
Date: 31/03/2026
Scale: 1:500
Tile No: **Tile No: 1**

**CAUTION - HIGH
VOLTAGE**

LEGEND

- Substation
- Cable Marker
- Pit
- Pole
- Pillar
- LV Cable (up to 1kV)
- HV Cable (1kV – <33kV)
- HV Cable (33kV and over)
- Pit Boundary
- Planned Work Area

AS5488 Category "D" Plan



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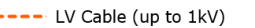
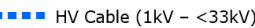
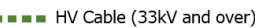


BYDA

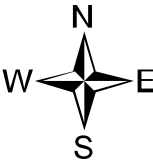
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Date: 31/03/2026
Scale: 1:500
Tile No: **Tile No: 2**

**CAUTION - HIGH
VOLTAGE**

LEGEND

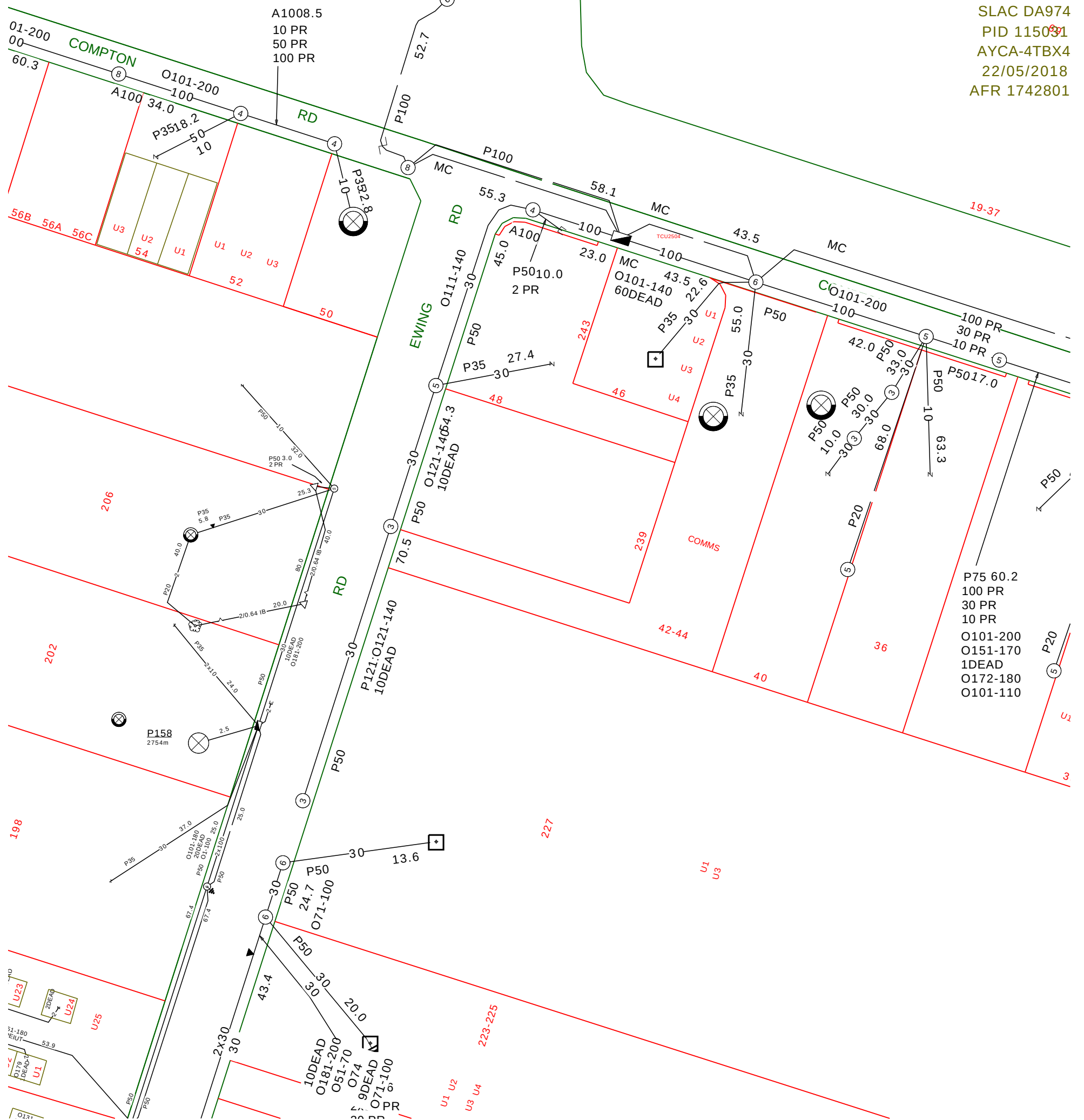
-  Substation
-  Cable Marker
-  Pit
-  Pole
-  Pillar
-  LV Cable (up to 1kV)
-  HV Cable (1kV - <33kV)
-  HV Cable (33kV and over)
-  Pit Boundary
-  Planned Work Area

AS5488 Category "D" Plan



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PID 115031
AYCA-4TBX4
22/05/2018
AFR 1742801



Sequence Number: 270575044

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

Generated On 31/03/2026 03:58:41

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.



6.5 APPENDIX E – FLOODWISE REPORT

Lot 10 RP 221198

Address: 239-241 Ewing Road WOODRIDGE
QLD 4114

Area: 2244 m² (survey plan area)

Zone: Mixed Use

Precinct: Retail and Commerce

Note: Property, road and watercourse boundaries may be adjusted as result of subdivisions, surveys and cadastre updates from the Queensland Government. Planning scheme maps may not be aligned with updated boundaries until future amendments are adopted.

 Zoom to

NO FLOOD IMPACT

100 m



6.6 APPENDIX F – CODE RESPONSE TABLES

9.4.2 Filling and excavation code

9.4.2.1 Application

1. This code applies to accepted development (subject to requirements) and code assessable operational work—filling or excavation for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.8.1—Operational work.
2. When using this code, reference should be made to section 5.3.2—Determining the category of development and category of assessment and, where applicable, section 5.3.3—Determining the 'assessment benchmarks for assessable development and requirements for accepted development' located in Part 5—Tables of assessment.

9.4.2.2 Purpose

1. The purpose of the code is to protect premises, people and natural processes from adverse impacts associated with filling or excavation.
2. The purpose of the code will be achieved through the following overall outcomes:
 - a. development protects:
 - i. natural physical processes and ecosystems;
 - ii. existing and planned infrastructure;
 - iii. personal health and safety and premises;
 - iv. visual amenity.

9.4.2.3 Assessment benchmarks for assessable development and requirements for accepted development

Part A—Requirements for accepted development (subject to requirements) and assessment benchmarks for assessable development

Table 9.4.2.3.1—Filling and excavation code: accepted development (subject to requirements) and assessable development

Performance outcomes	Acceptable outcomes	Comments
For accepted development (subject to requirements) and assessable development		
Protection of natural processes and ecosystems		
PO1 The discharge of sediments and pollutants from filling or excavation does not adversely affect a waterway or the stormwater network.	AO1 The discharge of sediments and pollutants to a waterway or stormwater network complies with part 3.3—Filling and excavation standards in planning scheme policy 5—Infrastructure.	Complies with PO1 & AO1 To be detailed in future E&SC detailed designs.
PO2 Topsoil and spoil stockpiled on the premises do not	AO2 Topsoil and spoil is stockpiled to comply with part 3.3—	Complies with PO2 & AO2 To be detailed in future earthworks detailed designs.

adversely affect natural processes and ecosystems.	Filling and excavation standards in planning scheme policy 5–Infrastructure.	
PO3 Filling is carried out using stable, solid and clean earth, free of organic and putrescible waste, rubbish and refuse material.	AO3 Filling complies with part 3.3–Filling and excavation standards in planning scheme policy 5–Infrastructure.	Complies with PO3 & AO3 Will be detailed in future earthworks drawings.
Protection of existing and planned infrastructure		
PO4 Filling or excavation works do not adversely affect infrastructure, including any services.	AO4 Filling or excavation works comply with part 3.3–Filling and excavation standards in planning scheme policy 5–Infrastructure.	Complies with PO4 & AO4
Protection and enhancement of personal health and safety and premises		
PO5 Filling or excavation works do not adversely affect personal health and safety.	AO5 Filling or excavation works comply with part 3.3–Filling and excavation standards in planning scheme policy 5–Infrastructure.	Complies with PO5 & AO5 Will be detailed in future earthworks drawings.
Surface water flow		
PO6 Surface water drainage does not cause any of the following: a. ponding on any premises; or b. a hazard or adversely affect personal health and safety and premises; or c. diversion or concentration of flow from or onto adjoining premises or infrastructure.	AO6 Surface water drainage complies with part 3.3–Filling or excavation standards in planning scheme policy 5–Infrastructure.	Complies with PO6 & AO6 Will be detailed in future earthworks drawings. Refer to stormwater management schematic.
Batters		
PO7 A batter: a. does not adversely affect the natural physical processes and ecosystems; b. protects existing and planned infrastructure; c. is safe, stable and easily maintained; d. is landscaped to enhance visual amenity.	AO7 A batter is designed and constructed to comply with the standards specified in 3.3.6–Batters and retaining walls in planning scheme policy 5–Infrastructure.	Complies with PO7 & AO7 Will be detailed in future earthworks drawings.

Retaining walls		
PO8 A retaining wall: a. is not constructed of timber and are not located on existing or proposed lot boundaries, or movement networks; b. does not adversely affect the natural physical processes and ecosystems; c. is located to avoid conflict with adjoining premises; d. is located such that existing and planned infrastructure is not adversely affected; e. protects the visual amenity of adjoining premises or a public open space; f. is located within the premises that is being filled; g. is located within the premises that is cut and is designed to take any surcharge loading allowable on the uphill lot; h. is safe and stable; i. enables easy access for maintenance.	AO8 A retaining wall is designed and constructed to comply with the standards specified in section 3.3.6.2–Retaining walls in planning scheme policy 5–Infrastructure.	Complies with PO8 & AO8 Will be detailed in future earthworks drawings.
Filling of a dam		
PO9 The filling of a dam: a. does not adversely affect the natural physical processes and ecosystems; b. creates a safe and stable surface; c. is integrated into the landscape.	AO9 The filling of a dam complies with part 3.3–Filling and excavation standards in planning scheme policy 5–Infrastructure.	NA

9.4.3 Infrastructure code

9.4.3.1 Application

1. This code applies to:
 - a. material change of use:
 - i. that is accepted development (subject to requirements) or code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in a table of assessment in section 5.5–Categories of development and assessment–Material change of use in Part 5–Tables of assessment;
 - ii. that is made impact assessment in a table of assessment in section 5.5–Categories of development and assessment–Material change of use or section 5.9–Categories of development and assessment–Local plans in Part 5–Tables of assessment;
 - b. reconfiguring a lot:
 - i. that is code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.6.1–Reconfiguring a lot in Part 5–Tables of assessment;
 - ii. made impact assessment in Table 5.6.1–Reconfiguring a lot in Part 5–Tables of assessment;
 - c. operational work that is infrastructure work:
 - i. that is accepted development (subject to requirements) or code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column Table 5.8.1–Operational work in Part 5–Tables of assessment.
2. When using this code, reference should be made to section 5.3.2–Determining the category of development and category of assessment and, where applicable, section 5.3.3–Determining the 'assessment benchmarks for assessable development and requirements for accepted development' located in Part 5–Tables of assessment.

9.4.3.2 Purpose

1. The purpose of the code is to ensure that infrastructure is provided to service development.
2. The purpose of the code will be achieved through the following overall outcomes:
 - a. development protects the existing infrastructure and planned infrastructure networks being the:
 - i. movement network;
 - ii. park network;
 - iii. water network;
 - iv. sewerage network;
 - v. stormwater network;
 - vi. other networks including electricity, gas and telecommunications;
 - vii. land for community facilities network;
 - b. development other than operational work provides infrastructure that is necessary to service the development, including elements of:
 - i. a safe, efficient and legible road network;
 - ii. a safe, efficient and legible public transport network;
 - iii. a safe, efficient and legible cycle network;
 - iv. a safe, efficient and legible pedestrian network;

- v. a safe, efficient and legible parks network;
- vi. a safe and efficient water network;
- vii. a safe and efficient sewerage network;
- viii. a safe and efficient stormwater network;
- ix. safe and efficient other networks including electricity, gas and telecommunications;
- x. a safe and efficient road lighting network;
- xi. land for a community facilities network;
- c. development integrates with existing and planned infrastructure networks;
- d. infrastructure is designed and constructed to deliver a standard of service that is efficient and equitable;
- e. the cost to the community for the life of the infrastructure is minimised by providing for a suitable design life, ease of maintenance and ease of replacement;
- f. infrastructure protects personal health and safety and premises;
- g. infrastructure protects environmental values.

9.4.3.3 Assessment benchmarks for assessable development and requirements for accepted development

Part A—Requirements for accepted development (subject to requirements) and assessment benchmarks for assessable development

Table 9.4.3.3.1—Infrastructure code: accepted development (subject to requirements) and assessable development

Performance outcomes	Acceptable outcomes	Comments
For accepted development (subject to requirements) and assessable development		
Provision, design, construction and location of infrastructure		
PO1 Development is demonstrated to be capable of being serviced by necessary infrastructure.	AO1 Reports, plans and drawings are provided in accordance with part 2 of planning scheme policy 5—Infrastructure.	Complies with PO1 & AO1 Refer Civil Engineering Report & associated Appendices.
PO2 Development: a. provides necessary infrastructure to service the development; b. provides that the design, construction and location of necessary infrastructure: i. protects existing and planned infrastructure networks; ii. services proposed development; iii. integrates with existing and planned infrastructure networks; iv. delivers a standard of service that is efficient and equitable;	AO2 Development: a. in a water supply service area connects to the water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; b. not in a water supply service area provides a tank with a minimum storage capacity of 45,000 litres; c. in a sewerage supply service area connects to the waste water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code;	Complies with PO2 & AO2 Refer Civil Works Schematic within Report. Final format subject to detailed design.

v. minimises the cost to the community for the life of the infrastructure by providing a suitable design life, ease of maintenance and ease of replacement; vi. protects personal health, safety and premises; vii. protects environmental values.	d. not in a sewerage supply service area complies with part 1 of the Queensland Plumbing and Wastewater Code; e. provides stormwater infrastructure in accordance with part 3.6 of planning scheme policy 5—Infrastructure; f. provides a movement network infrastructure in accordance with part 3.4 of planning scheme policy 5—Infrastructure; g. provides parks in accordance with part 3.12 of planning scheme policy 5—Infrastructure; h. provides road lighting in accordance with part 3.5 of planning scheme policy 5—Infrastructure; i. provides electricity reticulation in accordance with part 3.8 of planning scheme policy 5—Infrastructure; j. provides gas and telecommunications reticulation in accordance with part 3.9 of planning scheme policy 5—Infrastructure. Editor's note—The delivery of any part of a network identified in the plans for trunk infrastructure is governed by Part 4—Local government infrastructure plan.	
Location of development		
PO3 Development is located to protect existing and planned infrastructure networks.	AO3 Development is located outside: a. planned widening of a road or a new road identified in Table 7.3.1.1—Road encroachment maps of planning scheme policy 5—Infrastructure; b. planned public transport network identified on Figure 3.4.1.3.1—Public transport network in planning scheme policy 5—Infrastructure; c. a planned cycle network identified on Figure 3.4.1.2.1—Cycle network in planning scheme policy 5—Infrastructure; d. a planned network identified in Local government infrastructure plan map—LGIP-07.00 Plan for trunk parks infrastructure in Schedule 3—Local	Complies with PO3 & AO3 Refer Civil Works Schematic within Report. Final format subject to detailed design.

	government infrastructure plan mapping and tables.	
Fire fighting		
PO4 Development in a water service area accessed by common private title provides: a. fire hydrant infrastructure; b. unimpeded access for emergency services vehicles. Editor's note—The term common private title refers to areas such as access roads in community title developments or strata title unit access, which are private and under group or body corporate control.	AO4 Development in a water service area accessed by common private title complies with the Acceptable outcomes of the SPP code: Fire services in developments accessed by common private title in Appendix 1 of the state planning policy.	Complies with PO4 & AO4 Refer Civil Works Schematic within Report. Final format subject to detailed design.
PO5 Development not in a water service area provides sufficient water storage with adequate pressure, volume and flow to service development for fire fighting purposes.	AO5 Development: a. is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or b. has an on-site water storage in accordance with Table 9.4.3.3.2—Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is: i. a separate tank; or ii. a reserve section in the bottom part of the main water supply tankwater tank . Editor's note—The requirement in AO5 is; - in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.1—Infrastructure code: accepted development (subject to requirements) and assessable development; - reflected in AO5 in Table 8.2.3.3.1—Bushfire hazard overlay code: accepted development (subject to requirements) and assessable development.	NA - is within water service area

Disposal of trade waste		
PO6 The disposal of trade waste in a sewerage supply service area does not adversely affect the sewerage network.	AO6 The disposal of trade waste in a sewerage supply service area complies with the sewer admission standards in section 3.2.6–Sewer admission standards in planning scheme policy 3–Environmental management.	Complies with PO6 & AO6 Final format subject to detailed design.
Roof water drainage and surface water drainage		
PO7 Development provides stormwater infrastructure for the drainage of the premises so as not to cause any of the following: a. ponding of stormwater on the premises; b. a hazard to personal health and safety; c. damage to premises; d. an increased risk of flooding to premises within the catchment.	AO7 Development complies with the standards for stormwater infrastructure specified in part 3.6 of planning scheme policy 5–Infrastructure.	Complies with PO7 & AO7 Refer Civil Works Schematic within Report. Final format subject to detailed design.
Natural flow of surface water		
PO8 Development provides that the natural flow of surface water is: a. not altered so as to cause a risk to personal health and safety or damage to property; b. not increased in intensity, velocity or frequency; c. not concentrated onto adjoining premises.	AO8 Development complies with the standards for stormwater infrastructure specified in part 3.6 of planning scheme policy 5–Infrastructure.	Complies with PO8 & AO8 Refer Civil Works Schematic within Report. Final format subject to detailed design.
Water sensitive urban design		
PO9 Development which provides stormwater infrastructure incorporates water sensitive urban design principles having regard to: a. protecting existing natural features and	AO9 Development complies with the standards for stormwater infrastructure specified in part 3.6 of planning scheme policy 5–Infrastructure.	Complies with PO9 & AO9 Refer Civil Works Schematic within Report. Final format subject to detailed design.

- ecological processes; b. protecting the natural hydrologic behaviour of catchments; c. protecting the existing natural flow and water quality regimes of waterways; d. protecting water quality of surface and ground waters; e. minimising demand on the water network; f. minimising sewage discharges to the natural environment; g. integrating water into the landscape to enhance visual and ecological values.		
Movement network		
PO10 The projected traffic levels for a use do not adversely affect the planned standards of service for a road or intersection.	AO10 Development does not cause or contribute to projected traffic levels: a. exceeding the maximum vehicle trips per day in Table 3.4.1.4.2 in planning scheme policy 5—Infrastructure; or b. exceeding the maximum control delays through intersections in peak periods in Table 3.4.1.4.3 in planning scheme policy 5—Infrastructure.	Complies with PO10 & AO10 Does not exceed the maximum VPD.
Integrated movement concept report		
PO11 Development which generates more than 3,000 vehicle trips per average weekday is designed to integrate the movement network to minimise the transportation costs required to service the use.	AO11 Development which generates more than 3,000 vehicle trips per average weekday provides an integrated movement concept report which integrates the planning of the movement network in accordance with part 2 and 3 of planning scheme policy 5—Infrastructure.	NA - does not generate enough trips
For assessable development only		
Land use and transport integration		
PO12 Development within 400 metres of existing or future	AO12 No acceptable outcome provided.	NA - does not trigger

public passenger transport facilities where the total site area is 5,000m² or more: a. supports a road hierarchy which facilitates efficient, safe and accessible bus services connecting to existing and future public passenger transport facilities; b. enhances connectivity between existing and future public passenger transport facilities and other transport modes; c. optimises the walkable catchment to existing and future public passenger transport facilities; d. provides for direct and safe access to and use of existing or future public passenger transport facilities. Note—SPP code: Land use and transport integration in Appendix 4 of the state planning policy provides guidance to achieve this outcome.		
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Table 9.4.3.3.2—Water storage for fire fighting

Column 1 Lot size / use type	Column 2 Water requirement
For each residential lot:	
a. less than 1,000m ²	5,000 litres
b. between 1,000m ² and less than 1 hectare	10,000 litres
c. greater than 1 hectare	20,000 litres
Multiple dwelling	5,000 litres per dwelling up to a maximum of 20,000 litres
A use other than Multiple dwelling	5,000 litres or the prevailing rural fire brigade standard



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