

Stormwater Management Report

Chevalier College Stage 1 Hospitality Precinct

Prepared for Maddison Property Pty Ltd / 8 April 2025

241904

Contents

1.0	Introduction	3
1.1	The Site.....	3
1.2	BYDA Existing Services.....	4
1.2.1	Potable Water	4
1.2.2	Sewer.....	4
1.2.3	Gas	4
1.2.4	Electricity.....	4
1.2.5	Communications.....	4
1.3	Reference Documents	4
2.0	Proposed Development	5
3.0	Stormwater Management.....	5
3.1	Stormwater Quantity	5
3.2	Stormwater Quality	5
3.2.1	Catchment Plan.....	6
3.2.2	Rainwater	8
3.2.3	S3QM NorBE Assessment	8
3.3	Erosion and Sediment Control	8
4.0	Conclusion	8
	Appendix A	9
	Appendix B	10
	Appendix C	11

Rev	Date	Prepared By	Approved By	Remarks
A	21/03/2025	KS	CR	DRAFT
B	31/03/2025	KS	CR	For Approval
C	8/04/2025	KS	CR	For Approval

1.0 Introduction

Taylor Thomson Whitting (TTW NSW) Pty Ltd has been engaged by Maddison Property Pty Ltd to complete the stormwater and civil engineering design to support the Development Application (DA) for the proposed hospitality precinct at Chevalier College (the site).

1.1 The Site

The site is located at 11 Charlotte Street, Burradoo NSW 2576 and is within the Local Government Area (LGA) of Wingecarribee Shire Council (WSC). The site lies within Lot 12/DP748370 and is approximately 1340 m² in area. A portion of the McGrath Hall building at Chevalier College is proposed to be redeveloped into a hospitality precinct. The redevelopment site is shown hatched in Figure 1.



Figure 1: Aerial Site Photo (Source: Nearmap)

1.2 BYDA Existing Services

A Before You Dig Australia (BYDA) search has been carried out and shows the following services in proximity to the site:

1.2.1 Potable Water

Review of BYDA information indicates that no Wingecarribee Shire Council owned water assets exist in proximity to the siteworks area.

1.2.2 Sewer

Review of BYDA information indicates that no Wingecarribee Shire Council owned sewer assets exist in proximity to the siteworks area.

1.2.3 Gas

Review of the BYDA information indicates that no Jemena Gas owned services exist in proximity to the siteworks area.

1.2.4 Electricity

Review of the BYDA information indicates that no Endeavour Energy owned services exist in proximity to the siteworks area.

1.2.5 Communications

BYDA information provided by NBN Co NSW indicates that a 20mm PVC conduit exists to the north of McGrath Hall

The BYDA plans have been provided in Appendix A

1.3 Reference Documents

The civil engineering components of the project are designed to comply with:

- The relevant current Australian Standards, Building Code of Australia and Design Codes;
- The requirements of all relevant statutory authorities and local regulations including Wingecarribee Shire Council's Requirements.

The following documents have informed the DA stormwater management design:

- Bowral Township Development Control Plan (DCP);
- Engineering Design Specifications by Wingecarribee Shire Council;
- Developments in the Sydney Drinking Water Catchment – Water Quality Information Requirements, February 2023
- Australian Standard AS3500.3 Plumbing and Drainage: Stormwater Drainage;
- Australian Rainfall & Runoff, Version 4.2
- Managing Urban Stormwater – Soils and Construction 'Blue Book,' Volume 1, 4th Edition, Landcom
- Architectural drawings by Leaf Architecture;
- Detail survey and services survey by Australian Survey Solutions.

2.0 Proposed Development

As part of this proposed development, a portion of the McGrath Hall building will be demolished and replaced with a hospitality precinct. A covered outdoor learning area (COLA) is proposed to be built adjacent to the hospitality precinct. A generator is proposed to be placed at the northeast of the site. Other refurbishments include a new stage in the main hall. The proposed ground floor plan is provided in Figure 2.

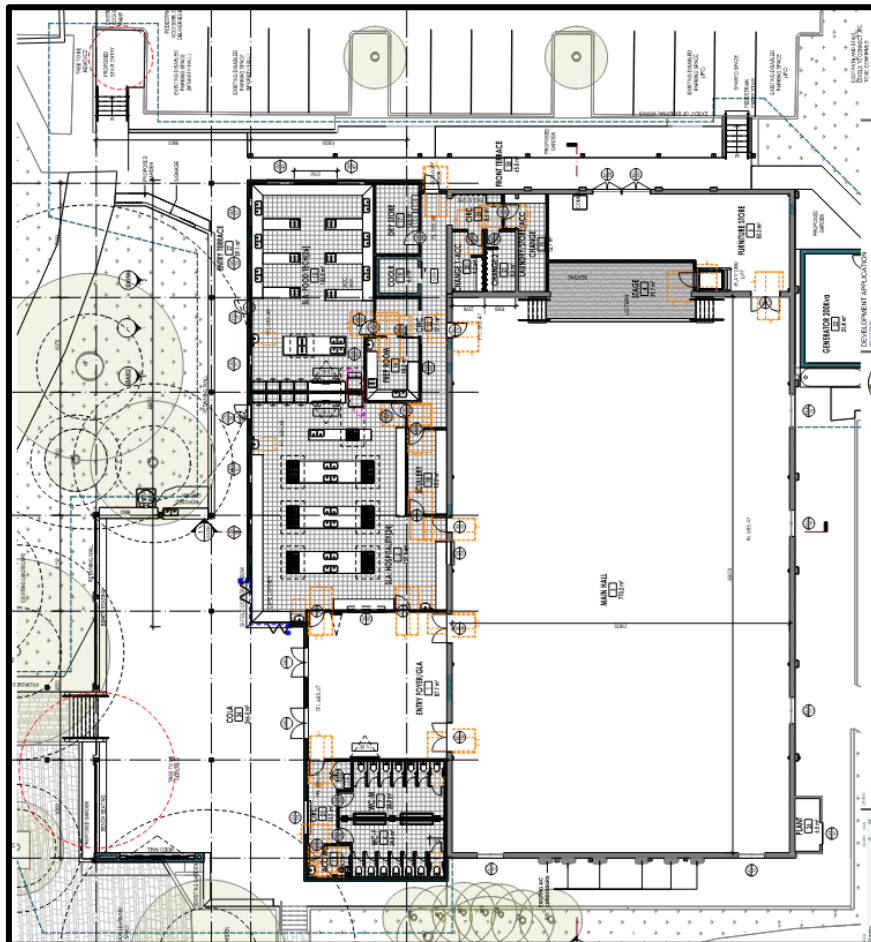


Figure 2: Ground floor plan (Source: Leaf Architecture)

3.0 Stormwater Management

3.1 Stormwater Quantity

Council's Engineering Design Specification – D09 Stormwater Drainage (Design) specifies that on-site stormwater detention is not required for demolish and rebuild where there is no more than a 10% increase in imperviousness. The increase in imperviousness caused by the proposed development is no greater than 10%. As such, it is understood that stormwater detention is not required for this development.

3.2 Stormwater Quality

As outlined in Section 3.9.7 of 'Engineering Design Specification – D09 Stormwater Drainage (Design)', developments which propose to re-develop an existing, developed site, must demonstrate that the runoff from the site post-development achieves a neutral or beneficial effect (NorBE) in comparison to pre-development runoff water quality. Stormwater quality modelling for NorBE assessment has been performed using the small-scale stormwater quality model (S3QM), as approved by WaterNSW for Module 5 developments where the total proposed impervious area is less than 2500 square meters.

3.2.1 Catchment Plan

A catchment plan for the existing case has been provided in Figure 3.

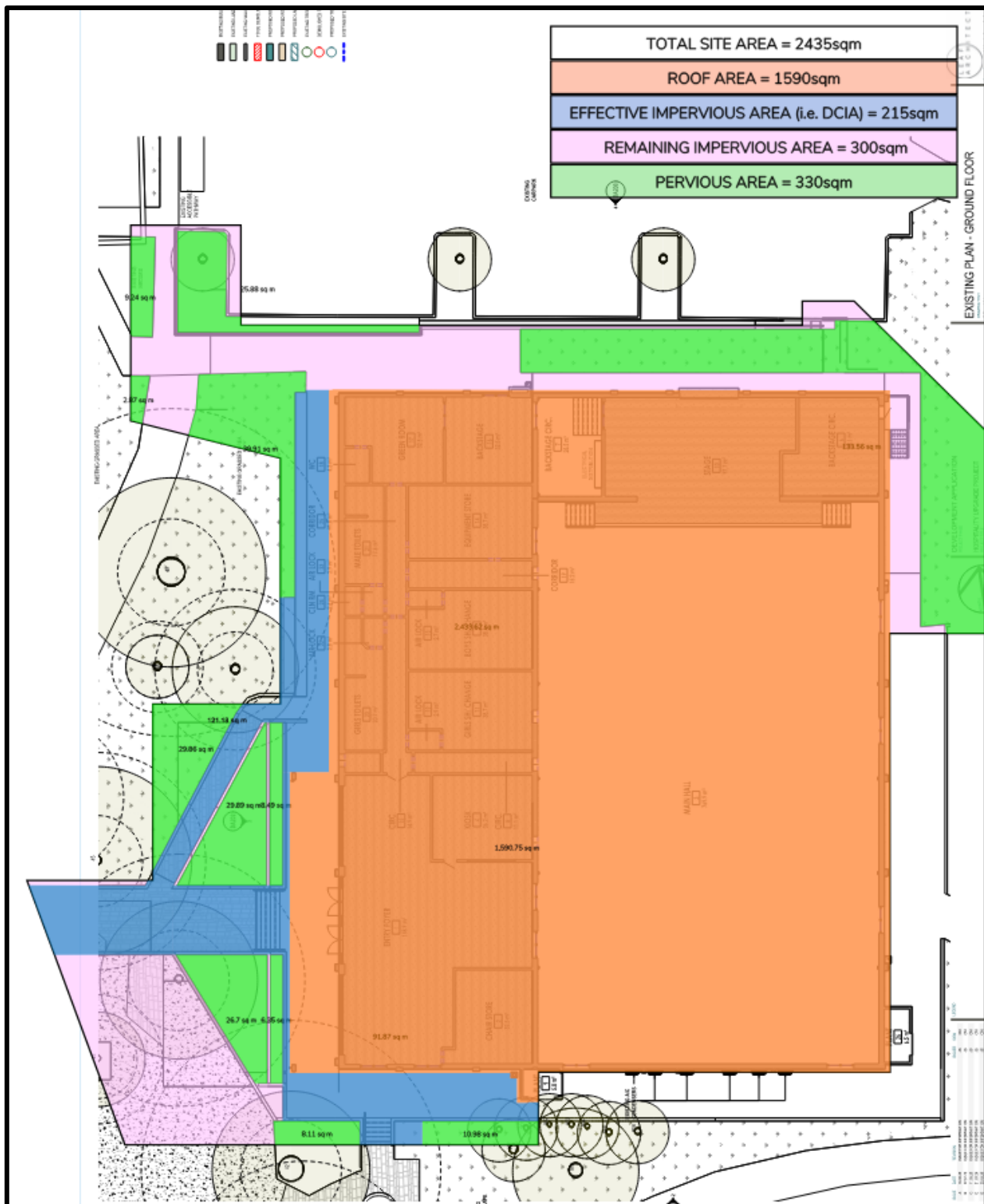


Figure 3: Catchment Plan (Existing)

A catchment plan for the developed case is has been provided in Figure 4.

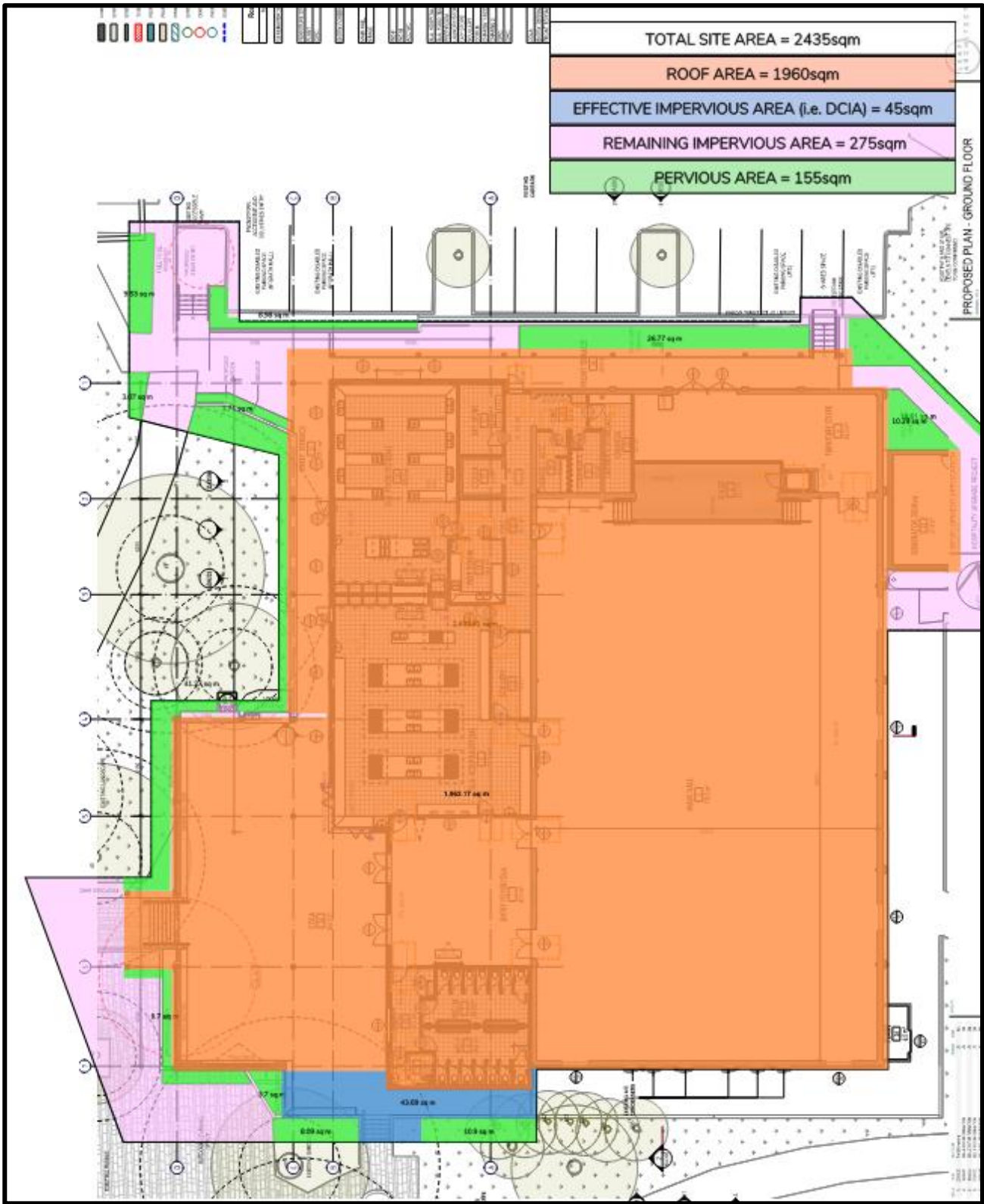


Figure 4: Catchment Plan (Developed)

3.2.2 Rainwater

As outlined in Section 3.1.3 of 'Engineering Design Specification – D09 Stormwater Drainage (Design),' developments should design for reuse of locally generated roof water. As such, a 10kL rainwater tank has been proposed as part of the development. This rainwater tank is proposed to be utilised for toilet flushing.

3.2.3 S3QM NorBE Assessment

The existing and proposed sites have been modelled using the S3QM. It is understood that there is no rainwater reuse in the existing case. It has been assumed that there are 15 toilets in the existing case. As shown in Figure 5, the proposed development satisfies the NorBE requirements.

Constituent	Existing		Developed		OK?
	Residual Load	TTE (%)	Residual Load	TTE (%)	
Q (ML/yr)	1.63	0.0	1.48	16.9	✓
Total Suspended Solids (TSS) (%)	64.12	0.0	41.70	12.6	✓
Total Phosphorus (TP) (%)	0.24	0.0	0.20	16.0	✓
Total Nitrogen (TN) (%)	3.25	0.0	2.95	16.9	✓
Gross Pollutants (GP) (%)	7.16	0.0	1.67	0.0	✓

Figure 5: S3QM NorBE Assessment Results

The S3QM certificate has been provided in Appendix B.

3.3 Erosion and Sediment Control

During construction, while the site is being disturbed, erosion prevention and sediment control measures will be required. Erosion and sediment control measures will be required to comply with Managing Urban Stormwater-Soils and Construction 'Blue Book,' Volume 1, 4th Edition, Landcom. A sediment and erosion control plan has been provided as part of the Civil Engineering Drawings in Appendix C.

4.0 Conclusion

The proposed development is understood not to require on-site stormwater detention as there is no more than a 10% increase in imperviousness as a result of the proposed development. The S3QM tool has been used to demonstrate that the proposed development satisfies NorBE requirements. Erosion and sediment control measures have been proposed.

Prepared by
TTW (NSW) PTY LTD



KIRUSAN SUBAKARAN
Engineer

Authorised By
TTW (NSW) PTY LTD



COLIN ROPE
Associate Director

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Appendix A

BYDA Plans

[Review responses online](#) ↗



Received 5 of 5 responses
All responses received
24 Charlotte Street, Burradoo NSW 2576
Job dates
10/03/2025 → 11/03/2025
These plans expire on
6 Apr 2025
Lodged by
Kirusan Subakaran

Authority	Status	Page
 BYDA Confirmation		2
 Endeavour Energy	Received	4
 Jemena Gas Country	Received	14
 NBN Co NswAct	Received	20
 Telstra NSW Central	Received	31
 Wingecarribee Shire Council	Received	40



Contact Details

Contact	Contact number	Company	Enquirer ID
Kirusan Subakaran	(02) 9067 5064	-	3325297
Email	Address		
kirusan.subakaran@ttw.com.au	Level 6 73 Miller Street North Sydney NSW 2060		

Job Site and Enquiry Details

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

Enquiry date	Start date	End date	On behalf of	Job purpose	Locations	Onsite activities
10/03/2025	10/03/2025	11/03/2025	Private	Design	Both Road, Nature Strip, Footpath	Conveyancing, Planning & Design, Subdivision, Tendering



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

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

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

User Reference	Address	Notes/description
24 Charlotte Street	24 Charlotte Street Burradoo NSW 2576	-

Your Responsibility and Duty of Care

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

Asset Owner Details

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

Referral ID (Seq. no)	Authority Name	Phone	Status
252031753	Endeavour Energy	(02) 9853 4161	NOTIFIED
252031754	Jemena Gas Country	1300 880 906	NOTIFIED
252031752	NBN Co NswAct	1800 687 626	NOTIFIED
252031756	Telstra NSW Central	1800 653 935	NOTIFIED
252031755	Wingecarribee Shire Council	(02) 4868 0888	NOTIFIED

END OF UTILITIES LIST



Plan

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



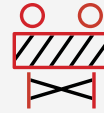
Prepare

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



Pothole

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



Protect

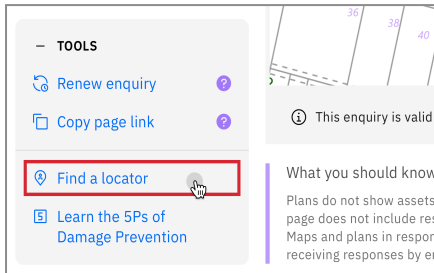
Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.



Proceed

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

Engage a skilled Locator



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

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

certloc.com.au/locators

Book a FREE BYDA Session



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

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

To book a session, visit:

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

BOOK NOW

Referral

252031753

Member Phone

(02) 9853 4161

Responses from this member

Response received Mon 10 Mar 2025 10.45am

File name	Page
Response Body	5
BYDA Excavation Disclaimer.pdf	6
252031753_CoverLetter - Affected.pdf	10
252031753_Low Risk.pdf	11

DIGSAFE PRO BEFORE YOU DIG AUSTRALIA - REFERRAL NOTIFICATION

This referral has been successfully processed and the results are contained in the attached files.

If you have any queries please contact:

Ph: 02 9853 4161

Email: mocs@endeavourenergy.com.au

The information contained in this e-mail and/or attachments to it may contain confidential or privileged information. If you are not the intended recipient, any dissemination, use, review, distribution, printing or copying of the information contained in this e-mail message and/or attachments to it is strictly prohibited. If you have received this communication in error, please notify us by reply e-mail and permanently delete the message and any attachments. Endeavour Energy respectfully acknowledges the Traditional Custodians on whose lands we live, work, and operate and their Elders past and present..

**BEFORE COMMENCING EXCAVATION YOU MUST READ AND UNDERSTAND ALL INFORMATION
PROVIDED IN THE BYDA RESPONSE AND LISTED BELOW**

BACKGROUND

Endeavour Energy is able to make available plans of its underground assets to persons who intend to undertake excavation works in Endeavour Energy's distribution area. Any plans provided to you are made available subject to the provisions set out below, in the provided plans, and in the Endeavour Energy BYDA response Cover Letter.

We have set out below important information regarding the recommended procedures that should be followed when using this service and also the extent of our responsibility in respect of any plans provided. It is very important that you read and understand all the information and disclaimers provided below before excavating.

Information Provided by Endeavour Energy:

- Any plans provided pursuant to this service are intended to show the approximate location of underground assets relative to road boundaries, property fences and other structures at the time of installation.
- Underground assets may be congested at the approach to bridges and other structures. Typical asset depths and alignment may vary substantially, rising and falling sharply and at much shallower depths than elsewhere as they are channeled into shared allocated spaces on bridges and other structures. Additional precautions and underground asset location methods will be required in proximity to bridges and other structures.
- Depth of underground assets may vary significantly from information provided on plans as a result of changes to road, footpath or surface levels subsequent to installation.
- Such plans have been prepared solely for use by Endeavour Energy staff for design, construction and maintenance purposes.
- All enquiry details and results are kept in a register.

DISCLAIMER

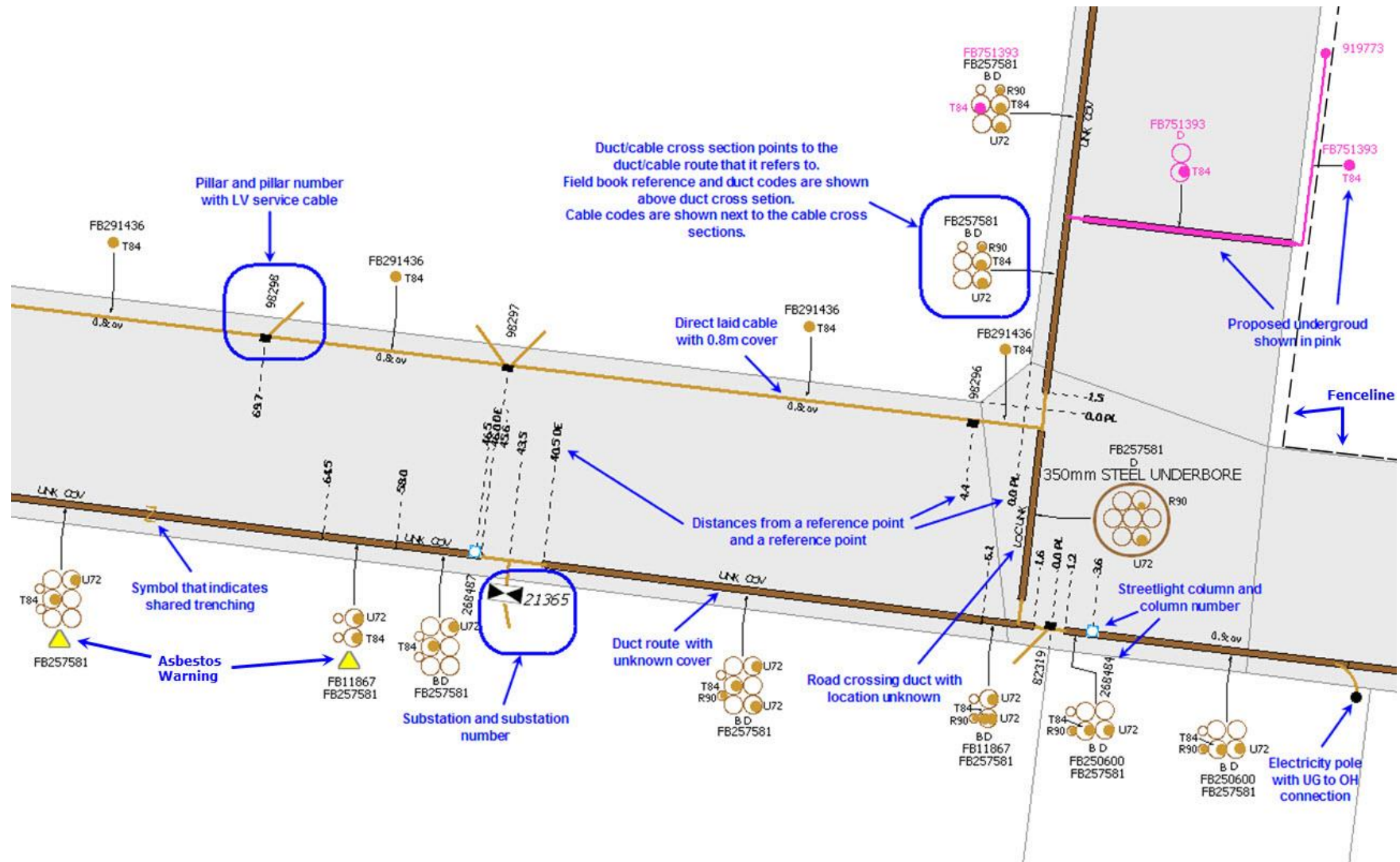
Whilst Endeavour Energy has taken all reasonable steps to ensure that the information contained in any plan is as accurate as possible at the time of installation, the location of underground assets depicted on a plan is approximate and it will accept no liability for inaccuracies in the information shown on such plans.

CUSTOMER REQUESTS AND RESPONSIBILITIES

- Endeavour Energy expects to be able to provide relevant plans within 48 hours after a request is made.
- If the enquiry falls within the Transmission Mains area, additional notification requirements shall be complied with as per the instructions in the response Cover Letter.
- Endeavour Energy retains copyright over all plans and details provided in response to a customer's request.
- Persons excavating are expected to exercise all due care in the vicinity where underground assets are indicated and will be held responsible for any damage to any underground assets (including any Endeavour Energy property) or any other loss caused (including consequential losses) as a result of such excavations.
- All underground assets should be visually located by soft digging (pot holing) or hand digging.
- A person who undertakes excavation work is subject to duties and responsibilities under the [Work Health and Safety Act 2011](#) and [Work Health and Safety Regulation 2011](#). Please refer to the Work Cover NSW "[Work near underground assets: Guide](#)" and "[Excavation work: Code of practice](#)" which contain practical advice for working near underground utility services.
- Any damage to Endeavour Energy's assets must be immediately reported on **131 003**.
- In all cases of electric shock or suspected electric shock the victim shall immediately be transported to hospital or medical centre for treatment.
- If conduit material cannot be identified, it should be assumed to contain asbestos material.
- Endeavour Energy plans are frequently updated to record changes to underground assets. All plans are valid for **20** working days from the date of issue.

If further clarification is required, please contact:
Endeavour Energy
Phone: (02) 9853 4161 (8:00am-4:30pm Mon-Fri)
Emergency Phone Number: 131 003

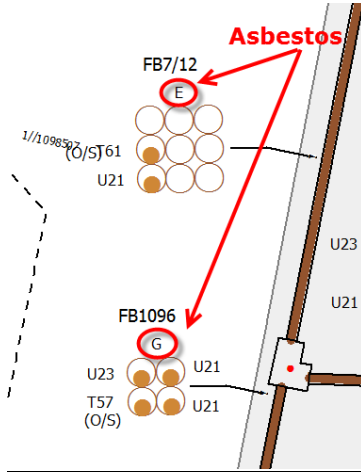
EXAMPLE OF HOW TO READ ENDEAVOUR ENERGY PLANS



If further clarification is required, please contact:
 Endeavour Energy
 Phone: (02) 9853 4161 (8:00am-4:30pm Mon-Fri)
Emergency Phone Number: 131 003

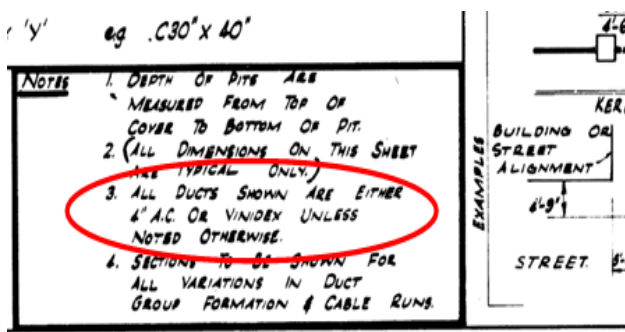
IDENTIFYING ASBESTOS DUCTS

1. Duct codes **E, F** and **G** identify Fibro Conduits

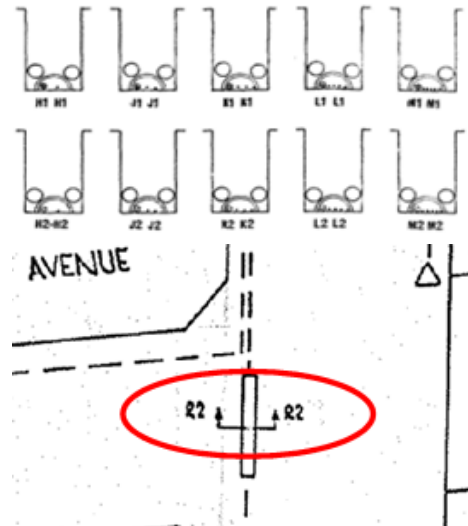
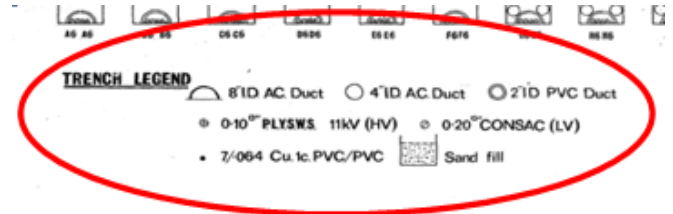


If underground details have not been captured and drawings are used, the method for identifying asbestos ducts and standards are different for the different utilities that amalgamated with Endeavour Energy. Using Reticulation Drawings, there are numerous ways to determine if a duct route has asbestos ducts, refer to following examples:

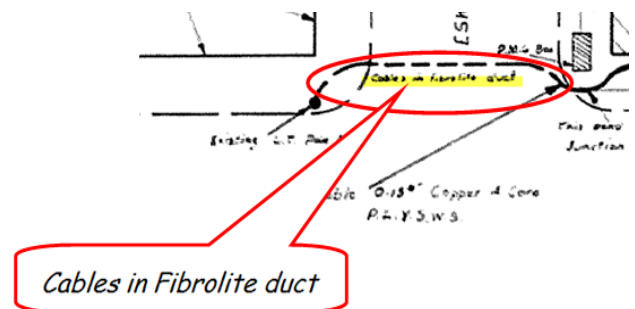
3. **AC** (Asbestos Cement) acronym



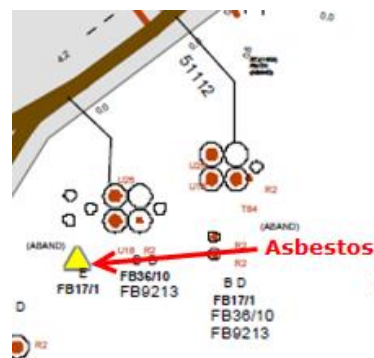
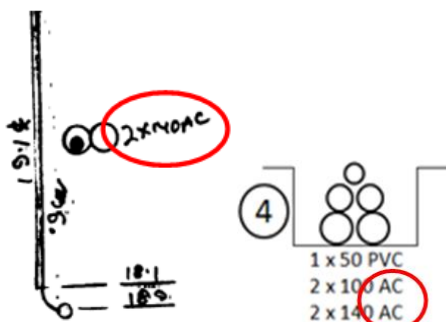
2. The duct codes **G,H,J,K,L,M Q,R,S,T,U,V,W & X** under each configuration are used on old Blue Mountains drawings to identify Asbestos



4. **Fibrolite** (asbestos) ducts



5. Yellow **triangle** identifies Fibro Conduits

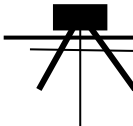


If further clarification is required, please contact:
Endeavour Energy
Phone: (02) 9853 4161 (8:00am-4:30pm Mon-Fri)
Emergency Phone Number: 131 003

STANDARD UNDERGROUND SYMBOLS / LABELS

NOTE: If symbology has not been provided on the plan use symbols as shown below.

SYMBOLS & ACRONYMS

 or 	Street light column
	Padmount substation
 or 	Overground pillar (O.G.Box)
	Underground pit
	Duct run
	Cable run
	Typical duct section
	Typical underbore section
	Blocked duct
	Cable section
	Asbestos warning
	STJ, PBJ, TTJ
STJ	Straight through joint
PBJ	Parallel branch joint
TTJ	Transition through joint
	Underground to overhead pole
SL	Streetlight conductor
SC	Service cable
SE	Cable sealed end
SF	Service Feeder
OS	Out of Service
O.A.M.	Over awning main
U.A.M.	Under awning main
N.I.S.	Not in service
	Fence/dimensioning
	Shared trenching
	Service point of attachment

DUCT CODE LABELS

B	= 50 mm PVC
D	= 125mm PVC
E	= 100mm Fibro Conduit (Asbestos)
F	= 140mm Fibro Conduit (Asbestos)
G	= 150mm Fibro Conduit (Asbestos)

DEPTH & LOCATION LABELS

0.5- 0.7 COV	= 0.5m – 0.7m
0.9 COV	= 0.9m Depth
UNK COV	= Depth Unknown
LOC UNK	= Location Unknown
0.9 PL	= Located 0.9m from Property Line

BYDA Underground Search Report

Date: 10/03/2025

BYDA Sequence No: 252031753

BYDA Job No: 38823795

ENDEAVOUR ENERGY ASSETS AFFECTED

To:	Kirusan Subakaran	Company:	Not Supplied
Address:	Level 6,73 Miller Street, North Sydney, NSW 2060		
Cust. ID:	3325297	Email:	a45jrztswf5v31.1g1d4jfn13k1xe@smarterwx-mail.byda.com.au
Phone:	+61290675064		
Enquiry Location:	24 Charlotte Street, Burradoo, NSW 2576		

Our Search has shown that **UNDERGROUND ASSETS ARE PRESENT** on our plans within the nominated enquiry location. This search is based on the graphical position of the excavation site as denoted in the BYDA customer confirmation sheet.

WARNING

- **All electrical apparatus shall be regarded as live until proved de-energised.** Contact with live electrical apparatus will cause severe injury or death.
- Underground assets may be congested at the approach to bridges and other structures. Typical asset depths and alignment may vary substantially, rising and falling sharply and at much shallower depths than elsewhere as they are channelled into shared allocated spaces on bridges and other structures. Additional precautions and underground asset location methods will be required in proximity to bridges and other structures.
- In accordance with the *Electricity Supply Act 1995*, you are obliged to report any damage to Endeavour Energy Assets immediately by calling **131 003**.
- The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
- The customer must contact Endeavour Energy if any of the plans provided have blank pages, as some underground asset information may be incomplete.
- Endeavour Energy underground earth grids may exist and their location **may not** be shown on plans. Persons excavating are expected to exercise all due care, especially in the vicinity of padmount substations, pole mounted substations, pole mounted switches, transmission poles and towers.
- Endeavour Energy plans **do not** show any underground customer service mains or information relating to service mains within private property.
- Asbestos or asbestos-containing material may be present on or near Endeavour Energy's underground assets.
- Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.
- All plans must be made available at the worksite where excavation is to be undertaken in either printed or electronic format. If the plans are in an electronic format, they must be in a format visible on a screen size 10 inches or greater. Plans must be reviewed and understood by the crew on site prior to commencing excavation.
- Non-destructive water excavation must be operated at or below 2000PSI. Any operation exceeding 2000PSI must be classed and treated as a destructive excavation practice
- Whilst Endeavour Energy has taken all reasonable steps to ensure that the information contained in any plan is as accurate as possible at the time of installation, the location of underground assets depicted on a plan is approximate and it will accept no liability for inaccuracies in the information shown on such plans.

SUPPLEMENTARY MATERIAL

Material	Purpose	Location
BYD Cover Letter	Endeavour Energy BYD response Cover Letter	Attached
BYD Important Information & Disclaimer	Endeavour Energy disclaimer, responsibilities and information on understanding plans	Attached
BYD Response Plans	Endeavour Energy BYD plans	Attached
Work Cover NSW "Work near underground assets: Guide"	Guideline for anyone involved in construction work near underground assets	Contact Work Cover NSW for a copy
Work Cover NSW "Excavation work: Code of practice"	Practical guidance on managing health and safety risks associated with excavation	URL [Click Here]
Safe Work Australia "Working in the vicinity of overhead and underground electric lines guidance material"	Provides information on how to manage risks when working in the vicinity of overhead and underground electric lines at a workplace	URL [Click Here]
Endeavour Energy Safety Brochures & Guides	To raise awareness of dangers of working on or near Endeavour Energy's assets	URL [Click Here]

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-  or 

Street light column
- 

Padmount substation
-  or 

Overground pillar (O.G.Box)
- 

Underground pit
- 

Duct run
- 

Cable run
- 

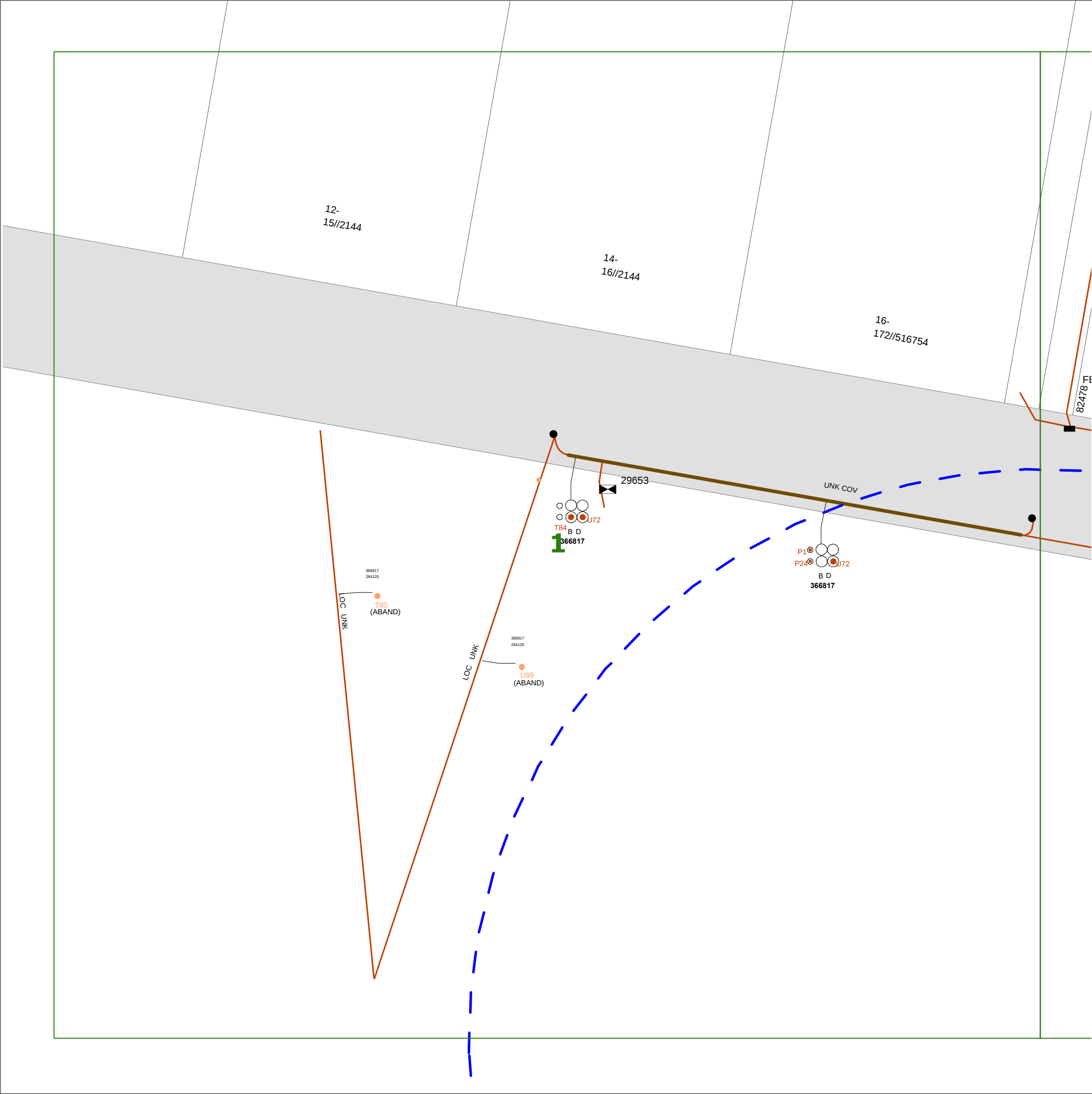
Typical duct section
- 

Asbestos warning



NOT TO SCALE

BYDA Sequence No.:	252031753
Issued Date:	10/03/2025



- WARNING**
- **All electrical apparatus shall be regarded as live until proved de-energised.** Contact with live electrical apparatus will cause severe injury or death.
 - Underground assets may be congested at the approach to bridges and other structures. Typical asset depths and alignment may vary substantially, rising and falling sharply and at much shallower depths than elsewhere as they are channelled into shared allocated spaces on bridges and other structures. Additional precautions and underground asset location methods will be required in proximity to bridges and other structures.
 - In accordance with the *Electricity Supply Act 1995*, you are obliged to report any damage to Endeavour Energy Assets immediately by calling **131 003**.
 - The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
 - The customer must contact Endeavour Energy if any of the plans provided have blank pages, as some underground asset information may be incomplete.
 - Endeavour Energy underground earth grids may exist and their location **may not** be shown on plans. Persons excavating are expected to exercise all due care, especially in the vicinity of padmount substations, pole mounted substations, pole mounted switches, transmission poles and towers.
 - Endeavour Energy plans **do not** show any underground customer service mains or information relating to service mains within private property.
 - Asbestos or asbestos-containing material may be present on or near Endeavour Energy's underground assets.
 - Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.
 - All plans must be made available at the worksite where excavation is to be undertaken in either printed or electronic format. If the plans are in an electronic format, they must be in a format visible on a screen size 10 inches or greater. Plans must be reviewed and understood by the crew on site prior to commencing excavation.
 - Non-destructive water excavation must be operated at or below 2000PSI. Any operation exceeding 2000PSI must be classed and treated as a destructive excavation practice

- INFORMATION PROVIDED BY ENDEAVOUR ENERGY**
- Any plans provided pursuant to this service are intended to show the approximate location of underground assets relative to road boundaries, property fences and other structures at the time of installation.
 - Depth of underground assets may vary significantly from information provided on plans as a result of changes to road, footpath or surface levels subsequent to installation.
 - Such plans have been prepared solely for use by Endeavour Energy staff for design, construction and maintenance purposes.
 - All enquiry details and results are kept in a register.

DISCLAIMER

Whilst Endeavour Energy has taken all reasonable steps to ensure that the information contained in any plan is as accurate as possible at the time of installation, the location of underground assets depicted on a plan is approximate and it will accept no liability for inaccuracies in the information shown on such plans.

-  or 

 Street light column
- 
- Padmount substation

 or 

 Overground pillar (O.G.Box)

NOT TO SCALE

BYDA Sequence No.:	252031753
Issued Date:	10/03/2025

WARNING

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- or

Street light column

Padmount substation

or

Overground pillar (O.G.Box)

Underground pit

Duct run

Cable run

Typical duct section

Asbestos warning
-
- NOT TO SCALE**
- | | |
|--------------------|------------|
| BYDA Sequence No.: | 252031753 |
| Issued Date: | 10/03/2025 |
- Cadastre: © Land and Property Information 2015, 2016
-

Referral

252031754

Member Phone

1300 880 906

Responses from this member

Response received Mon 10 Mar 2025 12.12pm

File name	Page
Response Body	15
image1	Excluded
Jemena_BYDAResponse_STD_38823795_252031754.pdf	16
Standard_Gas_Coversheet_Jemena.pdf	18

Dear Kirusan Subakaran

REF: BYDA JOB:38823795 SEQ:252031754 - 24 Charlotte Street Burradoo NSW 2576

Thank you for your BYDA inquiry. For a detailed response from Jemena, please refer to the attached documents.

Please follow the excavation guidelines attached.

For your safety and to further reduce the risk of accidental hit to Jemena's services, the attached plans will now show lines from the mains to the serviced properties, representing Jemena's Gas Service Pipes. This new detail is explained further on the attached legend.

This information is valid for 28 days from the date of enquiry.

Regards

BYDA Admin, Jemena

Level 14, 99 Walker Street North Sydney, NSW
2060

PO Box 1220, North Sydney, NSW 2059

1300 880 906

www.jemena.com.au |

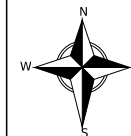
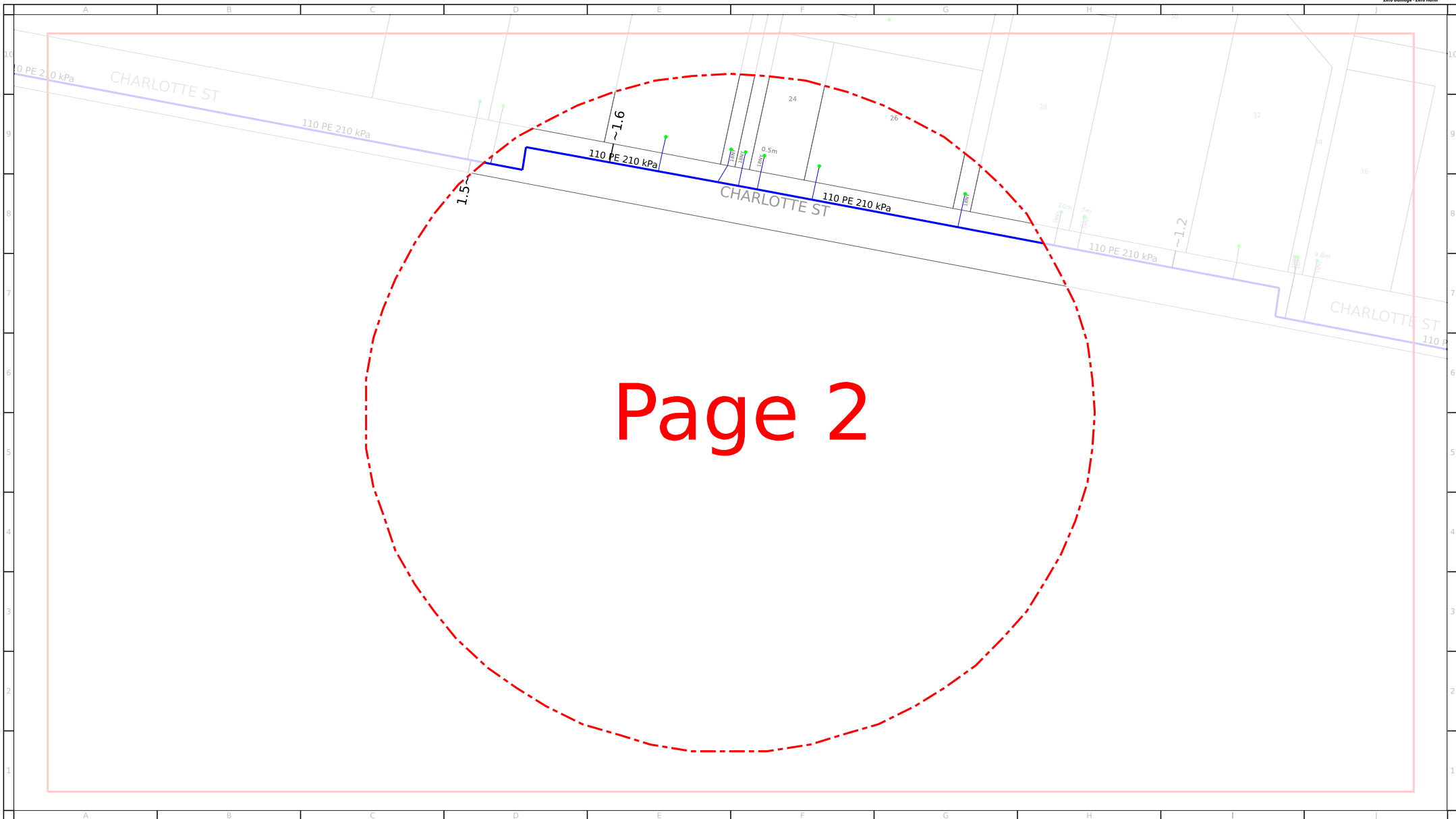
www.gonaturalgas.com.au



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

This message is intended for the named recipient and may contain personal information of individuals, and subject to Commonwealth and/or State privacy laws in Australia. If you have received this e-mail in error, you must not read, print, store, copy, forward or use the message and request that the message is permanently deleted. No warranty is given in relation to the contents (including accuracy, reliability, completeness, currency or suitability) and the contents should not be considered as any more than indicative only. Any use of the contents for the performance of works is at your own risk. Jemena accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential loss or damage) relating to any use of the contents. If you have received this email in error, please call 1300 880 906.

This is a confidential message intended for the named recipient(s) only. The contents herein are privileged to the sender and the use thereof is restricted to the intended purpose. If you have received this e-mail in error, please do not use, disclose, distribute, copy, print or relay on this email. If receipt is in error, please advise the sender by reply email. Thank you.





For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



Scale: 1:2000

Issue Date: 10/03/2025
BYDA Seq No: 252031754
BYDA Job No: 38823795

0m 10m 20m 30m 40m 50m 60m 70m 80m



WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. This plan is diagrammatic only, and distances scaled from this plan may not be accurate. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.

ASSETS AFFECTED

This information is only valid for 28 days from the date of issue

Please note that there are **Gas Mains or Services** in the vicinity of your intended work, as generally illustrated on the attached map. There may also be other mains or services at the location. For an explanation of the map, please see the legend attachment and read the important information below.

Please note that you have duty of care to ensure that Jemena's assets are not compromised or damaged during any digging, future development or construction work.

Excavation Guidelines:

It is essential that the location of gas pipe/s are confirmed by carefully pot-holing by hand excavation prior to proceeding with mechanical excavation in the vicinity of gas pipes. If you cannot locate the pipe, contact the local depot.

Important Information:

1. The enclosed plans have been prepared solely for the use of Jemena Gas Networks (NSW) Ltd and Jemena Asset Management Pty Ltd (together "Jemena") and show the position of Jemena's underground gas mains and installations in public gazetted roads. If the enclosed plans show gas assets located on private property or other third party property, these are approximate locations.
2. There may be underground assets owned by other utilities in the vicinity of your work and it is your responsibility to identify and locate such assets.
3. The plans may show the position of underground mains and installations relative to fences, buildings and other structures, as they existed at the time the assets were installed and may not have been updated to take account of any subsequent change in the location or style of those features. Depth of underground assets may also vary as a result of changes to road, footpath or surface levels subsequent to installation.
4. While Jemena takes all reasonable care to ensure the accuracy and completeness of the information provided, it makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error or omission. It is intended to be indicative only and must not be solely relied upon when undertaking underground works.
5. Except to the extent that liability may not be capable of being lawfully excluded, Jemena, its employees, agents, officers and contractors will not be liable to any person for loss or damage (including indirect and consequential loss or damage) which may be suffered or incurred in connection with the provision of this information.
6. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to Jemena's underground mains, service lines and equipment. In accordance with the *Work Near Underground Assets – Guide* published in 2007 by Work Cover Authority*, Jemena recommends that you carry out potholing by hand to accurately confirm the location of gas mains and installation prior to commencing excavations.

Network Mains

	Proposed New Main (coloured as per kPa)		
	Proposed Isolate (coloured as per kPa)		
	Unknown kPa		
	2kPa Low Pressure gas main		
	7kPa Low Pressure gas main		
	30kPa Medium pressure gas main		
	100kPa Medium Pressure gas main		
	210kPa Medium Pressure gas main		
	300kPa Medium Pressure gas main		
	400kPa Medium Pressure gas main		
	1050kPa High Pressure gas main		
	3500kPa High Pressure gas main		
	7000kPa High Pressure gas main		
	>7000kPa Transmission pipeline		
	Isolated Service - Former Med/High Pressure		
	Isolated Steel Main - Treat as High Pressure		
	Conduit or Casing		
100 PVC	Size & Material (see conduit material codes)		
	Critical Main - Treat as High Pressure (Main coloured as per kPa)		
	Exposed Main section		
	Shallow Main section: see Protection Code below, no code assume no protection		
SP	Steel Plate	CE	Concrete Encased
PP	PE Plate	UNK	Unknown Type
CS	Concrete Slab		
	Warning - Blue Jacket Coated gas main (Main coloured and styled as per kPa)		

Gas Services

	Gas service – coloured by kPa
	Serviced Site indicator

Jemena has created service pipe features programmatically based on known pipe characteristics and cartographic principles. They may provide guidance to identify assets whilst in the field in addition to existing processes.

Network Assets

	Siphon
	Network Valve
	High Pressure Main Line Valve (>=1050kPa)
	High Pressure Automatic Line Break Valve (>1050kPa)
	Boundary Regulator Set (=<1050kPa)
	Distribution Regulator Set (=<1050kPa)
	High Pressure Regulating Station (>1050kPa)

Annotations

Pipe and Conduit Material Codes

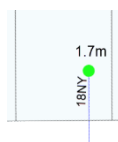
NY	Nylon	NB	Nominal Bore – Cast Iron
PE	Polyethylene	ST	Steel
P/PL	Plastic (undefined)	C/CO	Copper
PVC	Polyvinyl Chloride		

Pipe code combinations and dimension references

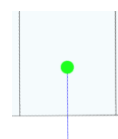
6NB 50MM NY	50mm Nylon main inserted into 6 inch (Nominal Bore) Cast Iron pipe
50MM 32MM NY	32mm Nylon main inserted into 50mm Steel pipe

~1.5 Distance (in metres) of main from Boundary Line (MBL)

MBK	Distance in Metres Back of Kerb
MKL	Distance in Metres from Kerb Line
MEBL	Distance in Metres from Eastern Boundary Line (North/South/West)
MCL	Distance in Metres from Centre Line of Road
MFL	Distance in Metres from Fence Line



Distance (in metres) of service from side Boundary where the service pipe crosses from the road reserve into the private lot
Service placed towards left or right boundary
Service pipe size & material where known



For connected sites with insufficient asset details, service is shown down the centre of the lot with no attributes plotted

Referral

252031752

Member Phone

1800 687 626

Responses from this member

Response received Mon 10 Mar 2025 2.08pm

File name	Page
Response Body	21
252031752_20250310_030732986917_1.pdf	22
Disclaimer_252031752_20250310_030732986917.pdf	25
4678_NBN_Dial_Before_You_Dig_Poster_20170517.pdf	29

Hi Kirusan Subakaran,

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

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

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

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

Confidentiality and Privilege Notice

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

Please Do Not Reply To This Mail

To: Kirusan Subakaran
Phone: Not Supplied
Fax: Not Supplied
Email: kirusan.subakaran@ttw.com.au

Dial before you dig Job #:	38823795	
Sequence #	252031752	
Issue Date:	10/03/2025	
Location:	24 Charlotte Street , Burradoo , NSW , 2576	

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



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

To: Kirusan Subakaran
Phone: Not Supplied
Fax: Not Supplied
Email: kirusan.subakaran@ttw.com.au

Before You Dig Australia Job #:	38823795	 BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	252031752	
Issue Date:	10/03/2025	
Location:	24 Charlotte Street , Burradoo , NSW , 2576	

Information

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

nbn™ Assets	Search Results
Communications	Asset identified
Electricity	No assets

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

Location of nbn™ Underground Assets

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

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

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

Notes:

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

Referral Conditions

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

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

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

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

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

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

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

Thank You,

nbn BYDA

Date: 10/03/2025

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

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Working near **nbn**TM cables

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

Practice safe work habits

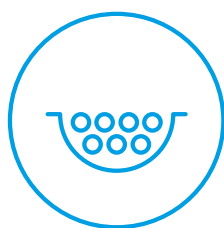
Once the DBYD plans are reviewed, the Five P's of Excavation should be adopted in conjunction with your safe work practices (which must be compliant with the relevant state Electrical Safety Act and Safe Work Australia "Excavation Work Code of Practice", as a minimum) to ensure the risk of any contact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



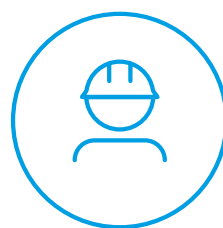
Plan: Plan your job by ensuring the plans received are current and apply to the work to be performed. Also check for any visual cues that may indicate the presence of services not covered in the DBYD plans.



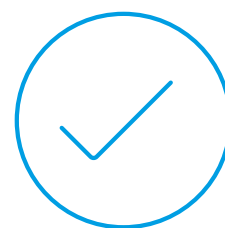
Prepare: Prepare for your job by engaging a DBYD Certified Plant Locator to help interpret plans and identify on-site assets. Contact **nbn** should you require further assistance.



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

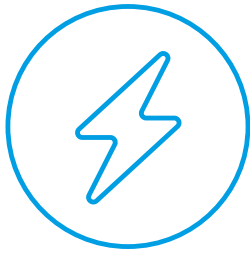


Protect: Protecting and supporting the exposed **nbn** underground asset is the responsibility of the worker. Exclusion zones for **nbn** assets are clearly stated in the plan and appropriate controls must be implemented to ensure that encroachment into the exclusion zone by machinery or activities with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

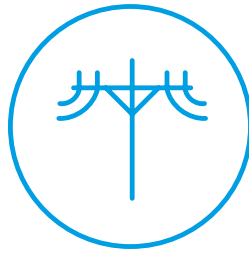


Proceed: Proceed only when the appropriate planning, preparation, potholing and protective measures are in place.

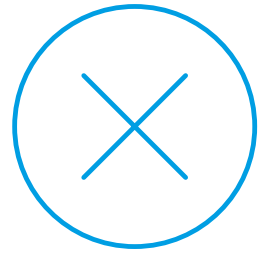
Working near **nbn**[™] cables



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



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



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

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

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

Contact

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

Disclaimer

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

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

This document is provided for information purposes only. This document is subject to the information classification set out on this page. If no information classification has been included, this document must be treated as UNCLASSIFIED, SENSITIVE and must not be disclosed other than with the consent of nbn co. The recipient (including third parties) must make and rely on their own inquiries as to the currency, accuracy and completeness of the information contained herein and must not use this document other than with the consent of nbn co. Copyright © 2021 nbn co limited. All rights reserved.



Referral

252031756

Member Phone

1800 653 935

Responses from this member

Response received Mon 10 Mar 2025 10.49am

File name	Page
Response Body	32
Telstra Map Legend 4.0b.pdf	34
252031756.pdf	35
AccreditedPlantLocators 2025-01-08a.pdf	37
Telstra Duty of Care v32.0c.pdf	38

Attention: Kirusan Subakaran

Site Location: 24 Charlotte Street, Burradoo, NSW 2576

Your Job Reference: 24 Charlotte Street

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

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

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

Please refer to all enclosed attachments for more information.

Information for opening Telstra Asset Plans as well as some other useful contact information is noted in the attached documents.

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

Please note:

When working in the vicinity of telecommunications plant you have a 'Duty of Care' that must be observed.

Ensure you read all documents (attached) - they contain important information.

Please also refer to the **Before you Dig Australia - BEST PRACTISE GUIDES and The five Ps of safe excavation**

<https://www.byda.com.au/before-you-dig/best-practice-guides/>, The essential steps that must be undertaken prior to commencing construction activities.

WARNING - MAJOR CABLES and/or OPTIC FIBRE IN THE AREA.

Phone 1800 653 935 for further assistance.

Note: In some areas Telstra fibre routes may be marked as "Amcom", as Telstra has purchased much of this infrastructure. If in doubt, please contact Telstra Plan services on the number above. Telstra plans and information are only valid for 60 days from the date of issue.

WARNING:

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

<https://www.byda.com.au/before-you-dig/best-practice-guides/>.

Please note that:

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

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

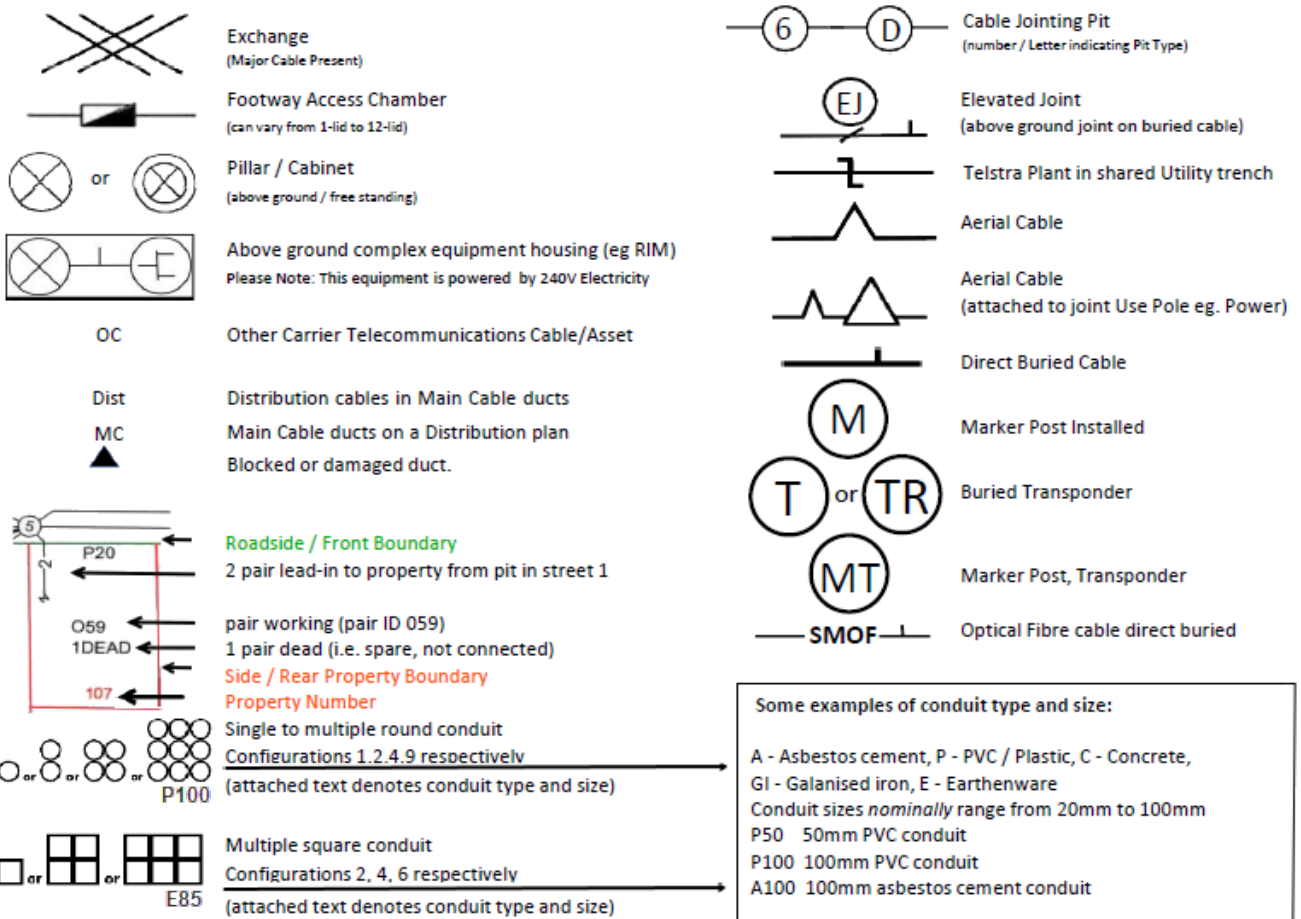
(See attached file: *Telstra Duty of Care v32.0c.pdf*)

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

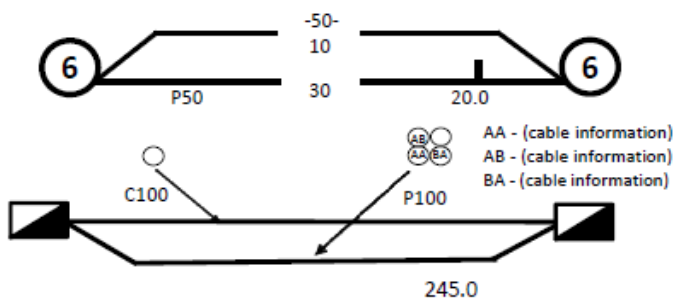
(See attached file: AccreditedPlantLocators 2025-01-08a.pdf)

(See attached file: 252031756.pdf)

LEGEND



Some Examples of how to read Telstra Plans



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

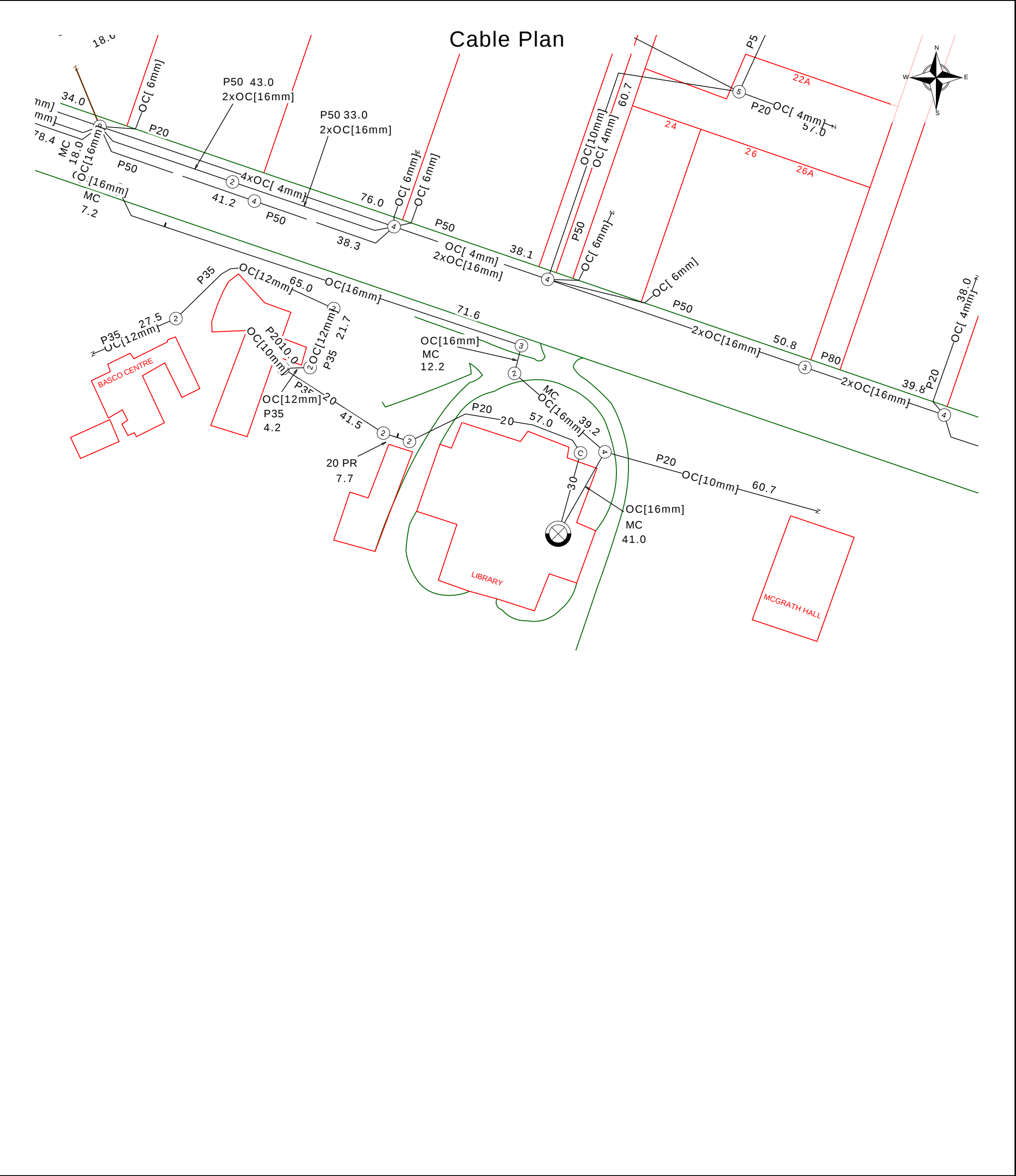
Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart. A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along

Protect our Network:

by maintaining the following distances from our assets:

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

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



	Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 252031756 CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
TELSTRA LIMITED A.C.N. 086 174 781 Generated On 10/03/2025 10:42:13		

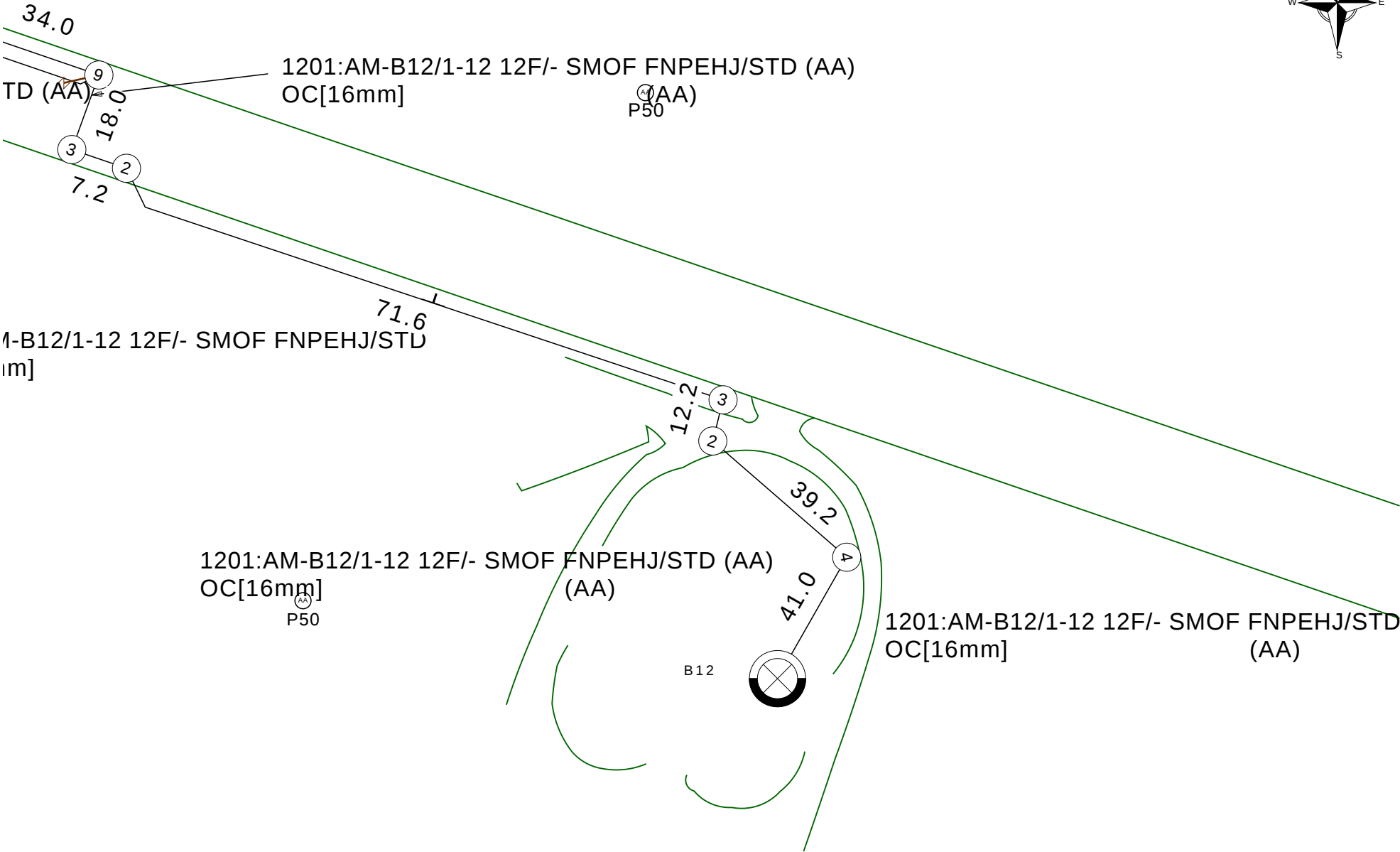
The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING

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

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

Page 1 of 2



	Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra- Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 252031756
	TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
	Generated On 10/03/2025 10:42:13	

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

Page 2 of 2

Before you Dig Australia – BEST PRACTISE GUIDES

The five Ps of safe excavation

<https://www.byda.com.au/before-you-dig/best-practice-guides/>

OPENING ELECTRONIC MAP ATTACHMENTS –

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



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



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



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



REPORT ANY DAMAGE TO THE TELSTRA NETWORK IMMEDIATELY

Report online - <https://www.telstra.com.au/forms/report-damage-to-telstra-equipment>

Ph: 13 22 03

If you receive a message asking for a phone or account number say:
“I don’t have one” then say “Report Damage” then press 1 to speak to an operator.



Telstra New Connections / Disconnections
13 22 00



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



Telstra Aerial Assets Group (overhead network)
1800 047 909



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

Only Telstra authorised personnel and CERTLOC Locators can access Telstra’s Pit and Pipe Network.

Before You Dig Australia

Think before you dig

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

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

Please read this document carefully. Taking your time now and following the BYDA's Best Practices and 5 Ps of Safe Excavation <https://www.byda.com.au/before-you-dig/best-practice-guides/>

can help you avoid damaging our network, interrupting services, and potentially incurring civil and criminal penalties.

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

Disclaimer and legal details



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

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

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

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

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

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

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

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

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

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

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

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

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

Data Extraction Fees

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

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

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

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

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

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

Workers and equipment must maintain safety exclusion zones around power lines

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

Privacy Note

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

Referral
252031755

Member Phone
(02) 4868 0888

Responses from this member

Response received Mon 10 Mar 2025 10.42am

File name	Page
Response Body	41
BYD_Factsheet_V2024.04 252031755.pdf	42
ASSET 252031755.pdf	45
DBYD_Response_Letter_(V2024.04) 252031755.pdf	47
WSC Map Legend 252031755.pdf	49

Attention: **Kirusan Subakaran**

Thank you for your Before You Dig (BYDA) enquiry.

Job Number: **38823795**

Sequence Number: **252031755**

Dig Site Location: **24 Charlotte Street Burradoo NSW 2576**

According to our records, your enquiry with the following details **impacts our infrastructure**.

Please ensure that you read the attached documents, it contains important information including essential steps that must be undertaken prior to commencing construction activities.

This enquiry is valid for **30 days** from the enquiry date.

If you require further information or assistance with interpretation of plans, please contact **Wingecarribee Shire Council** on **(02) 4868 0888** or **dialbeforeyoudig@wsc.nsw.gov.au**

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

Excavating? Know your obligations

Protecting Council's underground infrastructure assets



BACKGROUND

Water, wastewater and stormwater plans (plans) show the position of Wingecarribee Shire Council owned and maintained water, wastewater and stormwater assets. The plans do not show any private assets such as customer service lines beyond the water meter or the internal sewer drainage within private property boundaries.

Council has taken all reasonable steps to ensure that the information provided is accurate. However, Council cannot accept liability for any inaccuracy in the information shown and cannot guarantee that all assets are accurately mapped or included.

The plans:

- Show indicative location of Council owned infrastructure assets only;
- Should not be used to measure the distance of assets from a property boundary;
- Show depth of assets, however this may not be accurate as a result of changes to the road, footpath or surface levels since the assets were installed;
- Do not show privately owned customer service lines beyond connection points;
- Must be made available at the worksite where any excavation is to be undertaken;
- Must be read and understood by all crew on site prior to commencing excavation; and
- Are **valid for 30 days** from the date of issue.

Please exercise extreme caution during excavation.



IMPORTANT – ASBESTOS CEMENT

Wingecarribee Shire's water and wastewater network's include infrastructure assets that were manufactured using Asbestos-containing materials such as asbestos cement. When working near these assets, additional caution must be taken to prevent any disturbance or damage to these assets. Prior to conducting any works (in the vicinity of Council's infrastructure) you must ensure that your processes and procedures eliminate any possibility of disturbing, damaging or interfering in any way with the network. Your processes and procedures must include appropriate measures to mitigate against all aspects of this risk.



EXCAVATING GUIDE

Underground assets may be closer to the surface than expected. Get all the facts on underground assets before potentially damaging pipes or essential networks. Failure to do so may result in financial impact, asset damage, flooding and/or injury.

- Plans showing indicative location of Council's infrastructure assets are available online at *Before You Dig Australia (BYDA)* via byda.com.au.
- Identify underground assets by potholing or non-destructive digging prior to commencing any mechanical excavation. Do not use large heavy machinery to locate Council assets.
- All excavation MUST be performed by competently trained operators in accordance with Safework NSW's *Work Near Underground Assets Guide 2007*. A copy of this guide is available from safework.nsw.gov.au.

If you suspect an underground asset is present and have not been successful in locating it, please contact Council on (02) 4868 0888.



DAMAGE TO COUNCIL INFRASTRUCTURE – PLEASE READ CAREFULLY

Council has the right to compensation for loss or damage to its assets or property as a result of excavation works, tampering or interference. This may include consequential losses.

It is illegal to access, interfere with, relocate, alter or repair Council infrastructure.

Only Council and its authorised contractors may access, and conduct works on Council's water, wastewater and stormwater networks and properties.

Any damage to Council's infrastructure assets must be reported immediately to Council's 24/7 Customer Service Centre on (02) 4868 0888.



WATER SUPPLY FOR CONSTRUCTION PURPOSES

Council has installed Water Filling Stations at eight locations across the Shire for use by approved Water Carters. Further information about accessing these stations can be found on our website at wsc.nsw.gov.au.

The use of standpipes is considered theft and hefty penalties may apply.

The use of standpipes to draw water supply from water hydrants is not permitted within the Wingecarribee Local Government Area.



wsc.nsw.gov.au



Civic Centre,
68 Elizabeth Street,
Moss Vale, NSW 2577



mail@wsc.nsw.gov.au



02 4868 0888



DISCHARGING TO SEWER

Council adopted its Liquid Trade Waste (LTW) Policy in 2018. The discharge of stormwater, surface and subsoil waters into Council's sewerage system is prohibited under this policy.

Sewerage systems are designed to collect, transfer and treat domestic liquid waste. Council may accept LTW into its sewerage system from businesses or industry provided that the discharges are within acceptable limits controlled by the use of pre-treatment devices (e.g., grease traps) and systems. If not controlled, LTW can pose serious problems to public health, worker safety, the sewerage system and the environment.

A person wishing to discharge LTW to the sewerage system must, under Section 68 of the *Local Government Act 1993* (the Act) and Council's Liquid Trade Waste Policy, obtain prior approval from Council.

Discharging LTW without an approval is an offence under Section 626 of the Act. Anyone who fails to comply with the conditions of approval may be prosecuted under Section 120(1) of the *Protection of the Environment Operations (POEO) Act 1997*.

Council Liquid Trade Waste Policy can be found on its website at wsc.nsw.gov.au/policies



INTERNAL DRAINAGE DIAGRAMS

Drainage diagrams show the wastewater pipes located within private property. This information is not shown on Council's BYDA responses.

Drainage diagrams can be obtained from Council by payment of applicable fees and applying on our website at [Drainage Diagram and Sewer Reference Application](#)

Contact Us

Report any asset damage or unidentified assets immediately:

02 4868 0888 (24/7)



wsc.nsw.gov.au



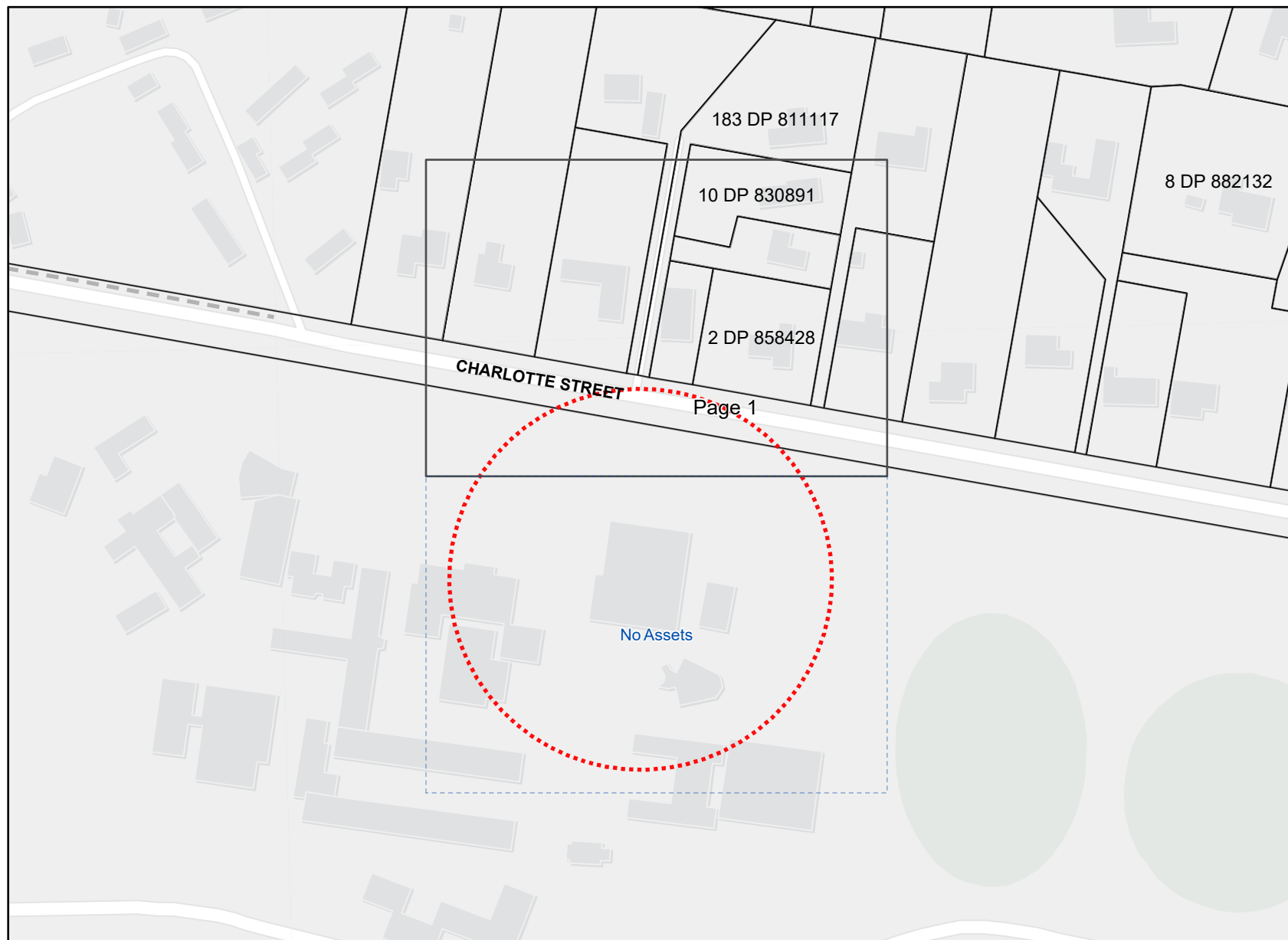
Civic Centre,
68 Elizabeth Street,
Moss Vale, NSW 2577



mail@wsc.nsw.gov.au



02 4868 0888

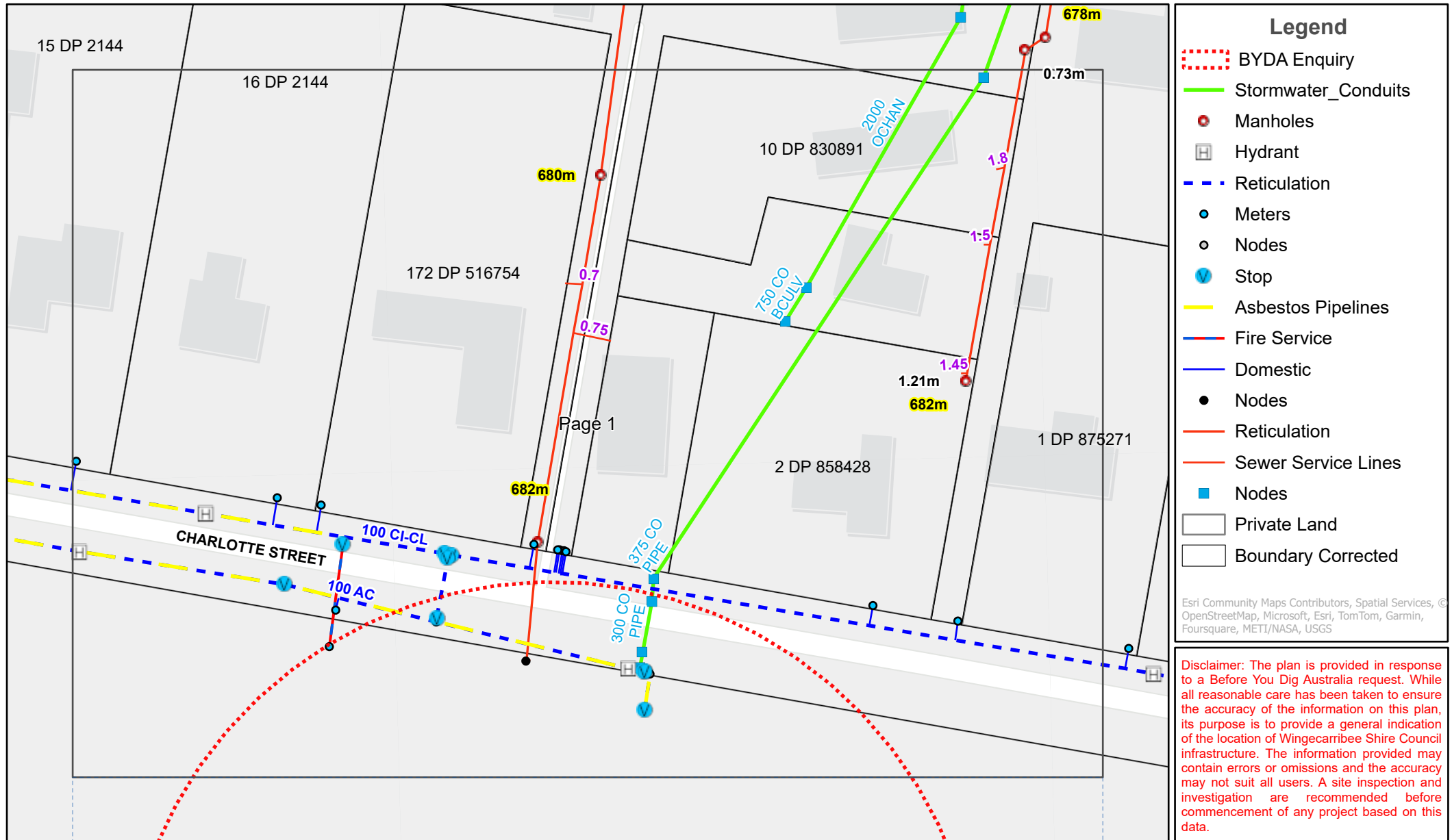


Legend

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

Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, Foursquare, METI/ NASA, USGS

Disclaimer: The plan is provided in response to a Before You Dig Australia request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of Wingecarribee Shire Council infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation are recommended before commencement of any project based on this data.



In an emergency contact Wingecarribee Shire Council on 0248 680 888

10/03/25 (valid for 30 days)

Plans generated by SmarterWX™ Automate

0 10 20 40
m



Scale 1:1,000

Date 10 March 2025

Kirusan Subakaran
Level 6 73 Miller Street
North Sydney NSW
2060

Dear Kirusan Subakaran

Assets Affected – Please Read Carefully

Based on your Before You Dig Australia (BYDA) enquiry, Wingecarribee Shire Council (Council) has been requested to provide information regarding its underground infrastructure and instructions on working safely around it.

According to Council's records, your intended work area impacts our infrastructure as indicated on the attached map. Please review all documents provided with this response.

Sequence No: 252031755
Job No: 38823795
Location: 24 Charlotte Street Burradoo
NSW 2576

Should you require any additional information please contact us on 02 4868 0888 or via dialbeforeyoudig@wsc.nsw.gov.au

This enquiry is valid for 30 days from the enquiry date.

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

When working in the vicinity of Wingecarribee Shire Council's assets you have a duty of care that must be observed.

We're with you

Duty of Care

- All Council assets must be validated (physically sighted and identified) prior to commencing any excavation in the vicinity.
- To locate assets, it is recommended that a Certified Locator be engaged.
- All Council assets, once validated, must be protected from damage.
- Council infrastructure is not to be altered by any third party. Only Council and its authorised contractors may access and conduct works on Council's water, wastewater and stormwater assets.
- All trench and pothole reinstatements are to occur no later than five days after work occurring.
- Incorrect Plans - please advise if there are any errors or incorrect locations shown on the plans by contacting Council at dialbeforeyoudig@wsc.nsw.gov.au

Important Information

Council wishes to advise:

- The actual location of any Council assets may differ from the position shown in the plans.
- Asset location plans are intended to be indicative only. Completeness and accuracy of the information provided cannot be guaranteed.
- Asset plans, as per Australian Standard AS 5488, are Quality Level D.
- Council reserves the right to recover compensation for loss or damage to infrastructure or any property.
- Council retains copyright and ownership of all plans and information provided.

Further Information

- Certified Locators: <http://www.dbydlocator.com/certified-locators/>
- Before You Dig Best Practice Guidelines: <https://www.byda.com.au/before-you-dig/best-practice-guides/>

**For any further assistance or to report asset damage please
contact Council on:**

02 4868 0888 (24/7)

or

dialbeforeyoudig@wsc.nsw.gov.au





Wingecarribee
SHIRE COUNCIL

We're with you

ASSET LEGEND

Water

Water Mains

- Trunk
- Reticulation
- Transfer
- Abandoned
- Asbestos Pipe

Water Service Lines

- Commercial
- Domestic

Water Valves

- Air
- Electric
- Closed Stop
- Non-Return
- Pressure Reduction
- Scour
- Stop
- Hydrant
- Nodes
- Meters
- Source Dams
- Pump Stations
- Reservoirs

Sewer

Sewer Mains

- Reticulation
- Rising
- Trunk
- Abandoned
- Asbestos Pipe

Sewer Service Lines

- Domestic

Sewer Valves

- Air
- Scour
- Stop
- Manholes
- Nodes
- Lamphole
- Ventshaft
- Flow Meter
- Sewer Pump Stations
- Wet / Dry Well
- Pressure Sewer System

Roads and Drainage

Asbestos Risk

- LOW
- MEDIUM
- No Risk

Footpath/Cycleway

- Conduits
- Nodes
- Facilities

Land

- Crown Land
- Easement
- Council Owned Land
- Private Land

Significant Trees

- Endangered
- Garden
- Tree

Labels

200 UPVC - Diameter and Material
687.859m - Sewer manhole lid level
1.89m - Sewer manhole/junction depth

PRIVATE ASSETS (NOT COUNCIL OWNED OR MAINTAINED)

PRIVATE WATER

- Reticulation
- Services
- Hydrant
- Water Valves
- Private WPS

PRIVATE SEWER

- Reticulation
- Rising
- Junction
- Nodes
- Lamphole
- Ventshaft
- Sewer Manhole
- Sewer Valves
- Private SPS

PRIVATE DRAINAGE

- Private Node
- Private Conduit
- Private Facilities

Note regarding private assets:

Council does not maintain an accurate register of privately owned assets. Private asset information included in this plan is provided as is, with no assurance of its accuracy.

PIPE MATERIAL TYPES

AC	Asbestos Cement	MDPE	Medium-Density Polyethylene
CC	Concrete Cement	HDPE	High-Density Polyethylene
RC	Reinforced Concrete	VC	Vitrified Clay
BR	Brick	GI	Galvanised Iron
ST	Steel	EW	Earthenware
ST-CL	Steel Cement Lined	CI	Cast Iron
PVC	Polyvinylchloride	DI	Ductile Iron
UPVC	Unplasticised Polyvinylchloride	COPPER	Copper
MPVC	Modified Polyvinylchloride	CIPP	Cured In Place Pipe
CPVC	Chlorinated Polyvinylchloride	GRP	Glass Fibre Reinforced Plastics
OPVC	Oriented Polyvinylchloride	CI-CL	Cast Iron Cement Lined
UNKN	Unknown	DI-CL	Ductile Iron Cement (Mortar) Lined
ABS	Acrylonitrile Butadiene Styrene	CO	Concrete

Contact Us

Report any asset damage or unidentified assets immediately:

02 4868 0888 (24 hours)



wsc.nsw.gov.au



Civic Centre,
68 Elizabeth Street,
Moss Vale, NSW 2577



mail@wsc.nsw.gov.au



02 4868 0888



End of document

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

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Appendix B

S3QM Certificate

s3qm

General Details

Project Name:	Chevalier College	Comments:	
Project No.:	241904		
Author:	kirusan.subakaran@ttw.com.au		

Location Details

Site Address:	11 Charlotte Street, Burradoo NSW 2576	Lot/DP No.:	12/DP748370
Council Area:	Water NSW	Dominant Soil Texture:	
Rainfall Region:	SCA Zone3	Design Mode and WQOs:	Design/NorBE
Total Area (m2):	2435	No. Catchments:	1

Output Summary

	Existing		Developed	
Catchment Characteristic:				
Imperviousness(%)	74.13%		82.34%	
Water Usage:				
Storage Capacity (kL)	0.0 kL		10.0 kL	
Demand (kL/yr)	418.68 kL/yr		418.68 kL/yr	
Utilisation (%)	0.0%		63.48%	
Efficiency (%)	0.0%		99.42%	
Tank Spills	0.0 per Year		29.79 per Year	
Catchment 1				
Urban	2435.0		2435.0	
Agriculture	0.0		0.0	
Forest	0.0		0.0	
Treatment Train:				
Treated Loads / Flows		Train		Train
		Load	Effectiveness	Load
		(%)	(%)	(%)
	Flow(ML)	1.6	0.0	1.5
	TSS(kg/yr)	64.0	0.0	42.0
	TP (kg/yr)	0.24	0.0	0.2
	TN (kg/yr)	3.2	0.0	2.9
Gross Pollutants (kg/yr)		7.2	0.0	1.7
Note:				

Appendix C

Civil Engineering Drawings

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THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES AND LEGENDS



GENERAL

241904-TTW-00-DR-CI-00001
241904-TTW-00-DR-CI-00002
241904-TTW-00-DR-CI-00404

COVER SHEET AND DRAWING INDEX
GENERAL NOTES & LEGEND
GENERAL ARRANGEMENT PLAN

EROSION & SEDIMENT CONTROL

241904-TTW-00-DR-CI-02001
241904-TTW-00-DR-CI-02101

EROSION AND SEDIMENT CONTROL NOTES, LEGEND & DETAILS
EROSION AND SEDIMENT CONTROL PLAN

EARTHWORKS

241904-TTW-00-DR-CI-03101

EARTHWORKS CUT & FILL VOLUMES PLAN

STORMWATER

241904-TTW-00-DR-CI-04001
241904-TTW-00-DR-CI-04101

STORMWATER NOTES AND LEGEND
STORMWATER SUBSOIL AND DRAINAGE PLAN

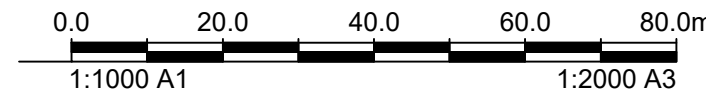
PAVEMENT

241904-TTW-00-DR-CI-07001
241904-TTW-00-DR-CI-07101

PAVEMENT NOTES, LEGEND & DETAILS
PAVEMENT PLAN

LOCALITY PLAN

1:1000



NOT FOR CONSTRUCTION

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WITH ALL RELEVANT NOTES AND LEGENDS

GENERAL

1. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
2. STRIP ALL TOPSOIL FROM THE CONSTRUCTION AREA. ALL STRIPPED TOPSOIL SHALL BE DISPOSED OF OFF-SITE UNLESS DIRECTED OTHERWISE.
3. MAKE SOUND CONNECTION WITH ALL EXISTING WORKS.
4. COMPACT SUBGRADE UNDER BUILDINGS AND PAVEMENTS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.1.1. COMPACTION UNDER BUILDINGS TO EXTEND 2M MINIMUM BEYOND BUILDING FOOTPRINT.
5. ALL WORK ON PUBLIC PROPERTY, PROPERTY WHICH IS TO BECOME PUBLIC PROPERTY, OR ANY WORK WHICH IS TO COME UNDER THE CONTROL OF THE STATUTORY AUTHORITY, THE CONTRACTOR IS TO OBTAIN FROM THE DRAWINGS USED FOR CONSTRUCTION HAVE BEEN APPROVED BY ALL RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT SITE.
6. ALL WORK ON PUBLIC PROPERTY, PROPERTY WHICH IS TO BECOME PUBLIC PROPERTY, OR ANY WORK WHICH IS TO COME UNDER THE CONTROL OF THE STATUTORY AUTHORITY IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT AUTHORITY. THE CONTRACTOR SHALL OBTAIN THESE REQUIREMENTS FROM THE AUTHORITY. WHERE THE REQUIREMENTS OF THE AUTHORITY ARE DIFFERENT TO THE DRAWINGS AND SPECIFICATIONS, THE REQUIREMENTS OF THE AUTHORITY SHALL BE APPLICABLE.
7. FOR ALL TEMPORARY BATTERS REFER TO GEOTECHNICAL RECOMMENDATIONS.

REFERENCE DRAWINGS

1. THESE DRAWINGS HAVE BEEN BASED FROM, AND TO BE READ IN CONJUNCTION WITH THE FOLLOWING CONSULTANTS DRAWINGS. ANY CONFLICT TO THE DRAWINGS MUST BE NOTIFIED IMMEDIATELY TO THE ENGINEER.

CONSULTANT	DRAWING TITLE	DRAWING NUMBER	REVISION	DATE
AUSTRALIAN SURVEY SOLUTIONS	DETAIL SURVEY SHOWING RELATIVE HEIGHTS & PHYSICAL FEATURES IN THE VICINITY OF McGRATH HALL IN LOT 12 DP 748370	HALL DETAIL	C	NOV & DEC 2024
LEAF ARCHITECTURE	PROPOSED PLAN - GROUND FLOOR	DA100	H	26.03.2025

BOUNDARIES AND EASEMENTS

THE PROPERTY BOUNDARY AND EASEMENT LOCATIONS SHOWN ON TAYLOR THOMSON WHITTING
DRAWING'S HAVE BEEN BASED ON INFORMATION RECEIVED FROM : AUSTRALIAN SURVEY SOLUTIONS

1. TAYLOR THOMSON WHITTING MAKES NO GUARANTEES THAT THE BOUNDARY OR EASEMENT INFORMATION SHOWN IS CORRECT. TAYLOR THOMSON WHITTING WILL ACCEPT NO LIABILITIES FOR BOUNDARY INACCURACIES. THE CONTRACTOR/BUILDER IS ADVISED TO CHECK/CONFIRM ALL BOUNDARIES IN RELATION TO ALL PROPOSED WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. BOUNDARY INACCURACIES FOUND ARE TO BE REPORTED TO THE SUPERINTENDENT PRIOR TO CONSTRUCTION STARTING.

SURVEY

ORIGIN OF LEVELS:	SSM 145825, PM76557
DATUM OF LEVELS:	A.H.D
COORDINATE SYSTEM:	MGA GROUND (2020)
SURVEY PREPARED BY:	AUSTRALIAN SURVEY SOLUTIONS
SETOUT POINTS:	POINTS

1. TAYLOR THOMSON WHITTING DOES NOT GUARANTEE THAT THE SURVEY INFORMATION SHOWN ON THESE DRAWINGS IS ACCURATE AND WILL ACCEPT NO LIABILITY FOR ANY INACCURACIES IN THE SURVEY INFORMATION PROVIDED TO US FROM ANY CAUSE WHATSOEVER.

UNDERGROUND SERVICES - WARNING

1. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON TAYLOR THOMSON WHITTINGS DRAWINGS HAVE BEEN PLOTTED FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. THIS INFORMATION HAS BEEN PREPARED SOLELY FOR THE AUTHORITIES OWN USE AND MAY NOT NECESSARILY BE UPDATED OR ACCURATE.
2. THE POSITION OF SERVICES AS RECORDED BY THE AUTHORITY AT THE TIME OF INSTALLATION MAY NOT REFLECT CHANGES IN THE PHYSICAL ENVIRONMENT SUBSEQUENT TO INSTALLATION.
3. THE CONTRACTOR MUST CONFIRM THE EXACT LOCATION AND EXTENT OF SERVICES PRIOR TO CONSTRUCTION AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY TO THE ENGINEER/SUPERVISOR.
4. THE CONTRACTOR IS TO GET APPROVAL FROM THE RELEVANT STATE SURVEY DEPARTMENT, TO REMOVE/ADJUST ANY SURVEY MARK. THIS INCLUDES BUT IS NOT LIMITED TO: STATE SURVEY MARKS (SSM), PERMANENT MARKS (PM), CADASTRAL REFERENCE MARKS OR ANY OTHER SURVEY MARK WHICH IS TO BE REMOVED OR ADJUSTED IN ANY WAY.
5. TAYLOR THOMSON WHITTING PLANS DO NOT INDICATE THE PRESENCE OF ANY SURVEY MARK. THE CONTRACTOR IS TO UNDERTAKE THEIR OWN SEARCH.

DIAL BEFORE YOU DIG (BYDA)

1. PUBLIC SERVICE UTILITY INFORMATION SHOWN ON PLAN HAS BEEN COMPLIED FROM INFORMATION RECEIVED FROM DIAL BEFORE YOU DIG INQUIRY, REFERENCE NUMBER 38823795 OBTAINED ON 10/03/2025 UNLESS SPECIFICALLY SHOWN OTHERWISE, THIS LOCATION AND DEPTH OF SERVICES SHOWN ON THIS PLAN HAVE NOT BEEN VERIFIED.
2. THE LOCATION OF SERVICES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED AS ACCURATELY AS POSSIBLE FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES AND SHOULD BE CONFIRMED BY SITE INSPECTION."

SITE WORKS

1. ALL BASECOURSE MATERIAL TO COMPLY WITH RMS SPECIFICATION NO 3051 AND COMPACTED TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1.
2. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
3. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED SELECT MATERIAL AND COMPACTED TO A MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1

PUBLIC DOMAIN WORKS

1. PUBLIC DOMAIN WORKS ARE NOT TO COMMENCE UNTIL THESE DRAWINGS ARE STAMPED AND APPROVED.

TENDER DOCUMENTATION

1. THESE DRAWINGS ARE PRELIMINARY DRAWINGS ISSUED FOR TENDER AS AN INDICATION OF THE EXTENT OF WORKS ONLY. THEY ARE NOT A COMPLETE CONSTRUCTION SET OF DRAWINGS.
2. TO DETERMINE THE FULL EXTENT OF WORK, THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS. ALLOW FOR ALL WORK SHOWN ON ARCHITECTURAL, GRA AND OTHER DRAWINGS AS NOT ALL ITEMS ARE SHOWN ON THE STRUCTURAL/CIVIL WORKS DRAWINGS.
3. SHOULD ANY AMBIGUITY, ERROR, OMISSIONS, DISCREPANCY, INCONSISTENCY OR OTHER FAULT EXIST OR SEEM TO EXIST IN THE DOCUMENTS, IMMEDIATELY NOTIFY IN WRITING TO THE SUPERINTENDENT.
4. THE WORK SHOWN ON THE DRAWINGS ARE FOR THE FINAL STRUCTURE/CIVIL WORKS IN PLACE AND DO NOT ALLOW FOR ANY WASTAGE, ROLLING MARGINS, OVER SUPPLY OR FABRICATION REQUIREMENTS, ETC.

DESIGN AND CONSTRUCT DOCUMENTATION

1. THE LEVEL OF DETAIL DESIGN REFLECTED IN THESE DOCUMENTS IS BASED ON THE UNDERSTANDING THIS WILL BE BUILT AS PART OF A DESIGN & CONSTRUCT CONTRACT.
2. THE CONTRACTOR SHALL RETAIN THE RESPONSIBILITY TO UNDERTAKE DETAILED DESIGN, CONFIRM COMPLIANCE WITH RELEVANT STANDARDS, CONSENT CONDITIONS & THE SPECIFICATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE FINAL DESIGN IS CO-ORDINATED FULLY WITH OTHER CONSULTANTS.
4. NO VARIATION WILL BE ACCEPTED FOR DESIGN AMENDMENTS REQUIRED TO MEET THE FUNCTIONAL OBJECTIVE OF THIS DOCUMENTATION.

SAFETY IN DESIGN

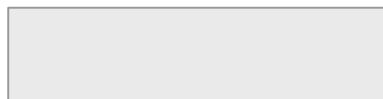
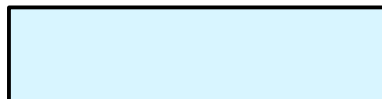
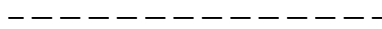
CONTRACTOR TO REFER TO APPENDIX B OF THE CIVIL SPECIFICATION FOR THE CIVIL RISK AND SOLUTIONS REGISTER.

1. **EXISTING SERVICES**
CONTRACTOR TO BE AWARE EXISTING SERVICES ARE LOCATED WITHIN THE SITE. LOCATION OF ALL SERVICES TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORKS. CONTRACTOR TO CONFIRM WITH RELEVANT AUTHORITY REGARDING MEASURES TO BE TAKEN TO ENSURE SERVICES ARE PROTECTED OR PROCEDURES ARE IN PLACE TO DEMOLISH AND/OR RELOCATE.
2. **EXISTING STRUCTURES**
CONTRACTOR TO BE AWARE EXISTING STRUCTURES MAY EXIST WITHIN THE SITE. TO PREVENT DAMAGE TO EXISTING STRUCTURE(S) AND/OR PERSONNEL, SITE WORKS TO BE CARRIED OUT AS FAR AS PRACTICABLY POSSIBLE FROM EXISTING STRUCTURE(S).
3. **EXISTING TREES**
CONTRACTOR TO BE AWARE EXISTING TREES EXIST WITHIN THE SITE WHICH NEED TO BE PROTECTED. TO PREVENT DAMAGE TO TREES AND/OR PERSONNEL, SITE WORKS TO BE CARRIED OUT AS FAR AS PRACTICABLY POSSIBLE FROM EXISTING TREES. ADVICE NEEDS TO BE SOUGHT FROM ARBORIST AND/OR LANDSCAPE ARCHITECT ON MEASURES REQUIRED TO PROTECT TREES.
4. **GROUNDWATER**
CONTRACTOR TO BE AWARE GROUND WATER LEVELS ARE CLOSE TO EXISTING SURFACE LEVEL. TEMPORARY DE-WATERING MAY BE REQUIRED DURING CONSTRUCTION WORKS.
5. **EXCAVATIONS**
DEEP EXCAVATIONS DUE TO STORMWATER DRAINAGE WORKS IS REQUIRED. CONTRACTOR TO ENSURE SAFE WORKING PROCEDURES ARE IN PLACE FOR WORKS. ALL EXCAVATIONS TO BE FENCED OFF AND BATTERS ADEQUATELY SUPPORTED TO APPROVAL OF GEOTECHNICAL ENGINEER.
6. **GROUND CONDITIONS**
CONTRACTOR TO BE AWARE OF THE SITE GEOTECHNICAL CONDITIONS. REFER TO GEOTECHNICAL REPORT BY
 - JK GEOTECHNICS.
 - GEOTECHNICAL INVESTIGATION, 7 MARCH 2025, REF: 37313pnRPT
7. **HAZARDOUS MATERIALS**
EXISTING ASBESTOS PRODUCTS & CONTAMINATED MATERIAL MAY BE PRESENT ON SITE. CONTRACTOR TO ENSURE ALL HAZARDOUS MATERIALS ARE IDENTIFIED PRIOR TO COMMENCING WORKS. SAFE WORKING PRACTICES AS PER RELEVANT AUTHORITY TO BE ADOPTED AND APPROPRIATE PPE TO BE USED WHEN HANDLING ALL HAZARDOUS MATERIALS.
8. **CONFINED SPACES**
CONTRACTOR TO BE AWARE OF POTENTIAL HAZARDS DUE TO WORKING IN CONFINED SPACES SUCH AS STORMWATER PITS, TRENCHES AND/OR TANKS. CONTRACTOR TO PROVIDE SAFE WORKING METHODS AND USE APPROPRIATE PPE WHEN ENTERING CONFINED SPACES.
9. **MANUAL HANDLING**
CONTRACTOR TO BE AWARE MANUAL HANDLING MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ENSURE MANUAL HANDLING PROCEDURES AND ASSESSMENTS ARE IN PLACE PRIOR TO COMMENCING WORKS.
10. **WATER POLLUTION**
CONTRACTOR TO ENSURE APPROPRIATE MEASURES ARE TAKEN TO PREVENT POLLUTANTS FROM CONSTRUCTION WORKS CONTAMINATING THE SURROUNDING ENVIRONMENT.
11. **SITE ACCESS/EGRESS**
CONTRACTOR TO BE AWARE SITE WORKS OCCUR IN CLOSE PROXIMITY TO FOOTPATHS AND ROADWAYS. CONTRACTOR TO ERECT APPROPRIATE BARRIERS AND SIGNAGE TO PROTECT SITE PERSONNEL AND PUBLIC.
12. **VEHICLE MOVEMENT**
CONTRACTOR TO SUPPLY AND COMPLY WITH TRAFFIC MANAGEMENT PLAN AND PROVIDE ADEQUATE SITE TRAFFIC CONTROL INCLUDING A CERTIFIED TRAFFIC MARSHALL TO SUPERVISE VEHICLE MOVEMENTS WHERE NECESSARY.

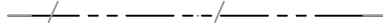
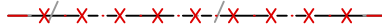
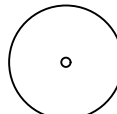
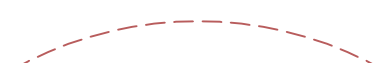
BOUNDARIES

[illegible]

BUILDINGS

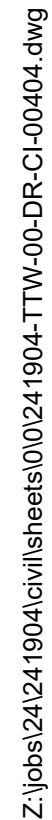
EXISTING	REMOVED	PROPOSED	
			BUILDING ENVELOPE
			FUTURE BUILDING ENVELOPE
			BASEMENT OUTLINE
			BUILDING AWNING
			BUILDING DOUBLE DOOR ENTRY
			BUILDING SINGLE DOOR ENTRY
			BUILDING SLIDING DOOR ENTRY

LANDSCAPE

EXISTING	REMOVED	PROPOSED	
			FENCE LINE
			FENCE LINE ON BOUNDARY
			PROPOSED RETAINING WALL
			PROPERTY ACCESS GATE
			TREES TREE REPRESENTATION MAY VARY BASED ON LANDSCAPE CONSULTANT OR SURVEY INFORMATION
			PAVEMENT
			SOFT LANDSCAPE
			TREE PROTECTION ZONE
			STRUCTURAL ROOT ZONE

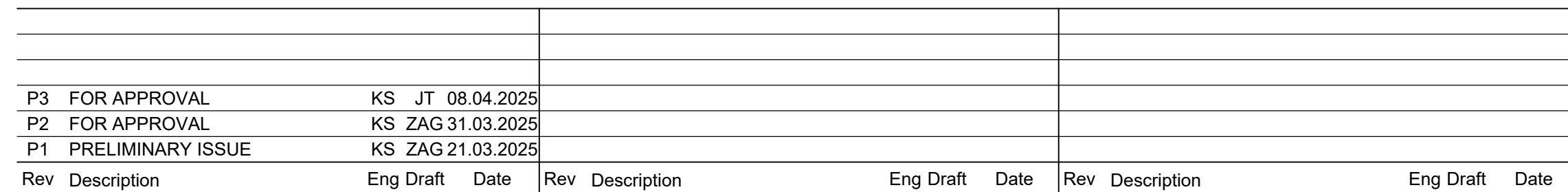
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												Client: 												Engineer:  www.ttweengineers.com												Project: CHEVALIER COLLEGE 11 CHARLOTTE STREET, BURRADOO, NSW 2576												Drawing Title: GENERAL NOTES , LEGEND AND DETAILS												Scale at A1 N/A				Drawn ZAG				Designed KS				Approved CR			
																																																Project No				Originator				Zone				Type				Role				Sheet No.				Rev			
P3 FOR APPROVAL KS JT 08.04.2025																																																241904-TTW-00-DR-CI-00002-P3																											
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P1 PRELIMINARY ISSUE KS ZAG 21.03.2025																																																																											
Rev Description Eng Draft Date				Rev Description Eng Draft Date				Rev Description Eng Draft Date																																																																			



This site plan illustrates the layout of the proposed building and its relationship to existing infrastructure. The plan includes the following elements:

- Proposed Building:** A large, light blue rectangular structure with internal room divisions and a central staircase.
- Existing Building:** A large, grey rectangular structure located to the right of the proposed building.
- Existing McGrath Hall Car Park:** A parking area located to the north of the proposed building.
- Concrete Retaining Wall:** A wall located to the west of the proposed building.
- Landscaping:** Numerous circular tree symbols, some with red outlines and others with green outlines, are distributed around the buildings and parking areas.
- Annotations:**
 - "REFER TO DWG. No.07101 FOR PAVEMENT PLAN" points to a specific area on the left.
 - "REFER TO DWG. No.04101 FOR STORMWATER PLAN" points to a specific area on the left.
- Dimensions and Lines:** Various dimension lines and dashed lines are used to indicate boundaries and measurements throughout the site.



Engineer:

TTW

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Scale at A1	Drawn	Designed	Approved			
1:200	ZAG	KS	CR			
Project No	Originator	Zone	Type	Role	Sheet No.	Rev
241904-TTW-00-DR-CI-00404-P3						
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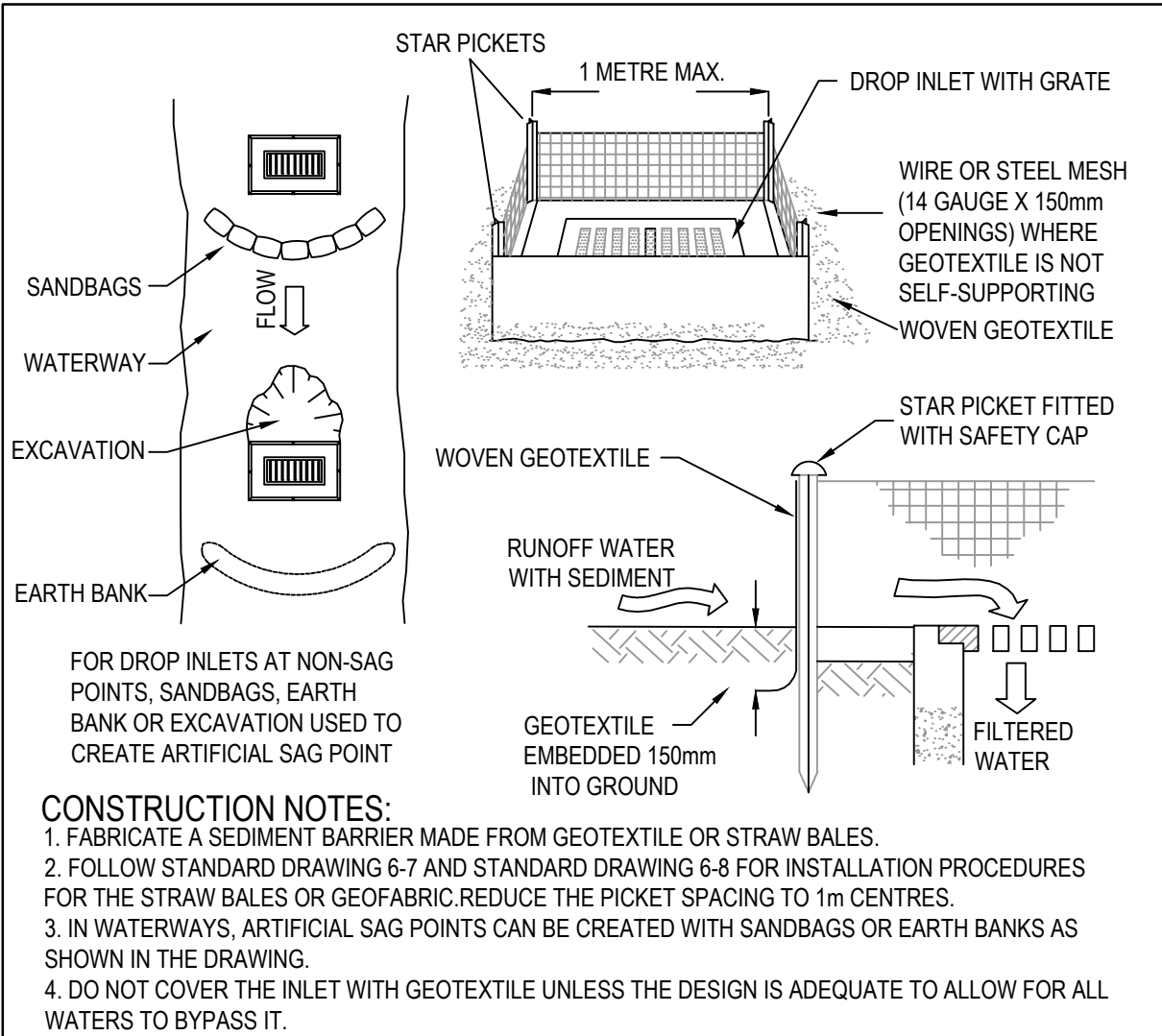
1. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:-
 - LOCAL AUTHORITY REQUIREMENTS,
 - EPA POLLUTION CONTROL MANUAL FOR URBAN STORMWATER,
 - LANDCOM NSW - MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION ("BLUE BOOK").
2. EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES ARE PROVIDED FOR THE WHOLE OF THE WORKS. SHOULD THE CONTRACTOR STAGE THESE WORKS THEN THE DESIGN MAY BE REQUIRED TO BE MODIFIED. VARIATION TO THESE DETAILS MAY REQUIRE APPROVAL BY THE RELEVANT AUTHORITIES. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED AND ADAPTED TO THE SITUATIONS AS WORK ON SITE PROGRESSES.
3. THE EROSION & SEDIMENT CONTROL PLAN IS PREPARED FOR INFORMATION & PLANNING APPROVALS ONLY. THE CONTRACTOR SHALL PREPARE THE CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN BASED ON THEIR WORKS STAGING & PROPOSED SITE FACILITIES.
4. MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
5. WHEN STORMWATER PITS ARE CONSTRUCTED PREVENT SITE RUNOFF ENTERING THE PITS UNLESS SILT FENCES ARE ERECTED AROUND PITS.
6. MINIMISE THE AREA OF SITE BEING DISTURBED AT ANY ONE TIME.
7. PROTECT ALL STOCKPILES OF MATERIALS FROM SCOUR AND EROSION. DO NOT STOCKPILE LOOSE MATERIAL IN ROADWAYS, NEAR DRAINAGE PITS OR IN WATERCOURSES.
8. ALL SOIL AND WATER CONTROL MEASURES ARE TO BE PUT BACK IN PLACE AT THE END OF EACH WORKING DAY, AND MODIFIED TO BEST SUIT SITE CONDITIONS.
9. CONTROL WATER FROM UPSTREAM OF THE SITE SUCH THAT IT DOES NOT ENTER THE DISTURBED SITE.
10. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE TEMPORARY CONSTRUCTION ENTRY/EXIT.
11. ALL VEHICLES LEAVING THE SITE SHALL BE CLEANED AND INSPECTED BEFORE LEAVING.
12. MAINTAIN ALL STORMWATER PIPES AND PITS CLEAR OF DEBRIS AND SEDIMENT. INSPECT STORMWATER SYSTEM AND CLEAN OUT AFTER EACH STORM EVENT.
13. CLEAN OUT ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH STORM EVENT.
14. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:-

1. PRIOR TO COMMENCEMENT OF EXCAVATION THE FOLLOWING SOIL MANAGEMENT DEVICES MUST BE INSTALLED.
 - 1.1. CONSTRUCT SILT FENCES BELOW THE SITE AND ACROSS ALL POTENTIAL RUNOFF SITES.
 - 1.2. CONSTRUCT TEMPORARY CONSTRUCTION ENTRY/EXIT AND DIVERT RUNOFF TO SUITABLE CONTROL SYSTEMS.
 - 1.3. CONSTRUCT MEASURES TO DIVERT UPSTREAM FLOWS INTO EXISTING STORMWATER SYSTEM
 - 1.4. CONSTRUCT SEDIMENTATION TRAPS/BASIN INCLUDING OUTLET CONTROL AND OVERFLOW.
 - 1.5. CONSTRUCT TURF LINED SWALES.
 - 1.6. PROVIDE SANDBAG SEDIMENT TRAPS UPSTREAM OF EXISTING PITS.

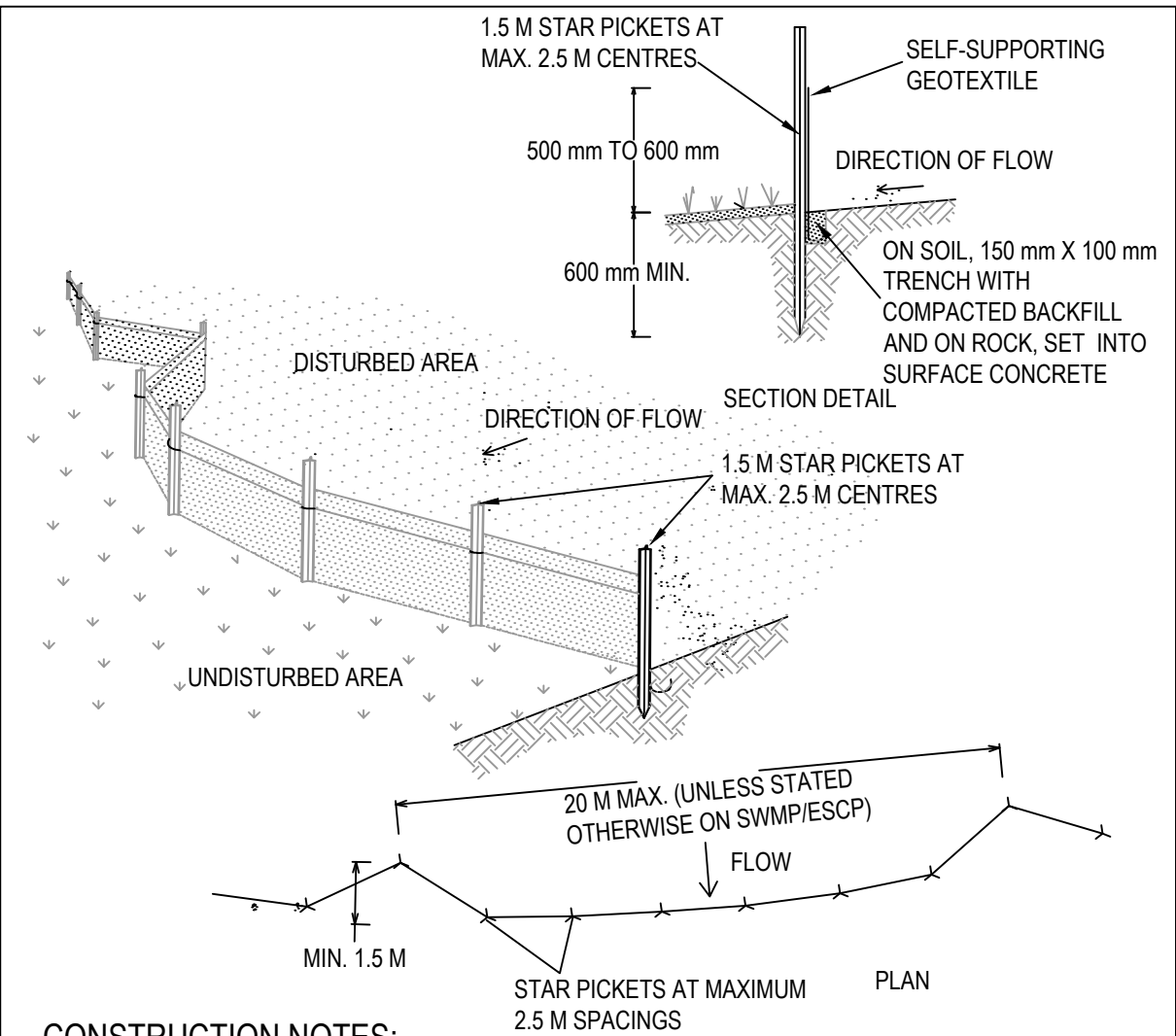
1. PRIOR TO DISCHARGE OF SITE STORMWATER, GROUNDWATER AND SEEPAGE WATER INTO COUNCIL'S STORMWATER SYSTEM, CONTRACTORS MUST UNDERTAKE WATER QUALITY TESTS IN CONJUNCTION WITH A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT OUTLINING THE FOLLOWING: -
 - COMPLIANCE WITH THE CRITERIA OF THE AUSTRALIAN AND NEW ZEALAND GUIDELINES FOR FRESH AND MARINE WATER QUALITY (2000)
 - IF REQUIRED SUBJECT TO THE ENVIRONMENTAL CONSULTANTS ADVICE, PROVIDE REMEDIAL MEASURES TO IMPROVE THE QUALITY OF WATER THAT IS TO BE DISCHARGED INTO COUNCILS STORM WATER DRAINAGE SYSTEM THIS SHOULD INCLUDE COMMENTS FROM A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT CONFIRMING THE SUITABILITY OF THESE REMEDIAL MEASURES TO MANAGE THE WATER DISCHARGED FROM THE SITE INTO COUNCILS STORM WATER DRAINAGE SYSTEM. OUTLINING THE PROPOSED, ONGOING MONITORING, CONTINGENCY PLANS AND VALIDATION PROGRAM THAT WILL BE IN PLACE TO CONTINUALLY MONITOR THE QUALITY OF WATER DISCHARGED FROM THIS SITE. THIS SHOULD OUTLINE THE FREQUENCY OF WATER QUALITY TESTING THAT WILL BE UNDERTAKEN BY A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT.

The diagram illustrates various types of stormwater management structures and their corresponding symbols. The symbols are arranged in two columns, with the structure name to the right of each symbol.

- BATTER**: A symbol consisting of a horizontal line with vertical tick marks above it.
- SEDIMENT FENCE (SD 6-8)**: A symbol consisting of a horizontal line with a wavy line above it.
- SEDIMENT FENCE (SD 6-9)**: A symbol consisting of a horizontal line with a wavy line above it, and a small square below it.
- STORMWATER PIT WITH GEOTEXTILE INLET FILTER (SD6-12)**: A symbol consisting of a square with a wavy line above it, and a small square below it.
- STRAW BALE FILTERS (SD6-7)**: A symbol consisting of a horizontal line with a wavy line above it, and a small square below it.
- SANDBAG SEDIMENT FILTER (SD6-11)**: A symbol consisting of a horizontal line with a wavy line above it, and a small square below it.
- CATCH DRAIN (CLEAN WATER)**: A symbol consisting of a horizontal line with a wavy line above it, and a small square below it.
- LEVEL SPREADER (SD5-6)**: A symbol consisting of a horizontal line with three vertical lines above it.

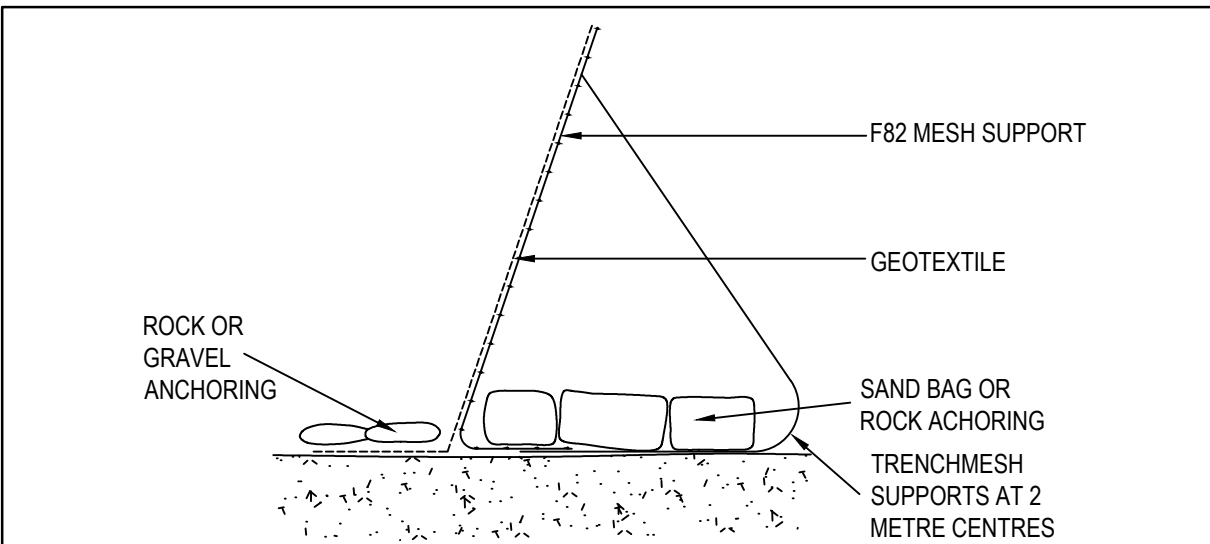


SD 6-12



1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SD 6-8

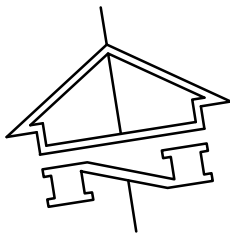


1. INSTALL THIS TYPE OF SEDIMENT FENCE WHEN USE OF SUPPORT POSTS IS NOT DESIRABLE OR NOT POSSIBLE, SUCH CONDITIONS MIGHT APPLY, FOR EXAMPLE, WHERE APPROVAL IS GRANTED FROM THE APPROPRIATE AUTHORITIES TO PLACE THESE FENCES IN HIGHLY SENSITIVE ESTUARINE AREAS.
2. USE BENT TRENCH MESH TO SUPPORT THE F&B WELDED MESH FACING AS SHOWN ON THE DRAWING. ABOVE ATTACH THE GEOTEXTILE TO THE WELDED MESH FACING USING UV RESISTANT CABLE TIES.
3. STABILISE THE WHOLE STRUCTURE WITH SANDBAG OR ROCK ANCHORING OVER THE TRENCH MESH AND THE LEADING EDGE OF THE GEOTEXTILE. THE ANCHORING SHOULD BE SUFFICIENTLY LARGE TO ENSURE STABILITY OF THE STRUCTURE IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.

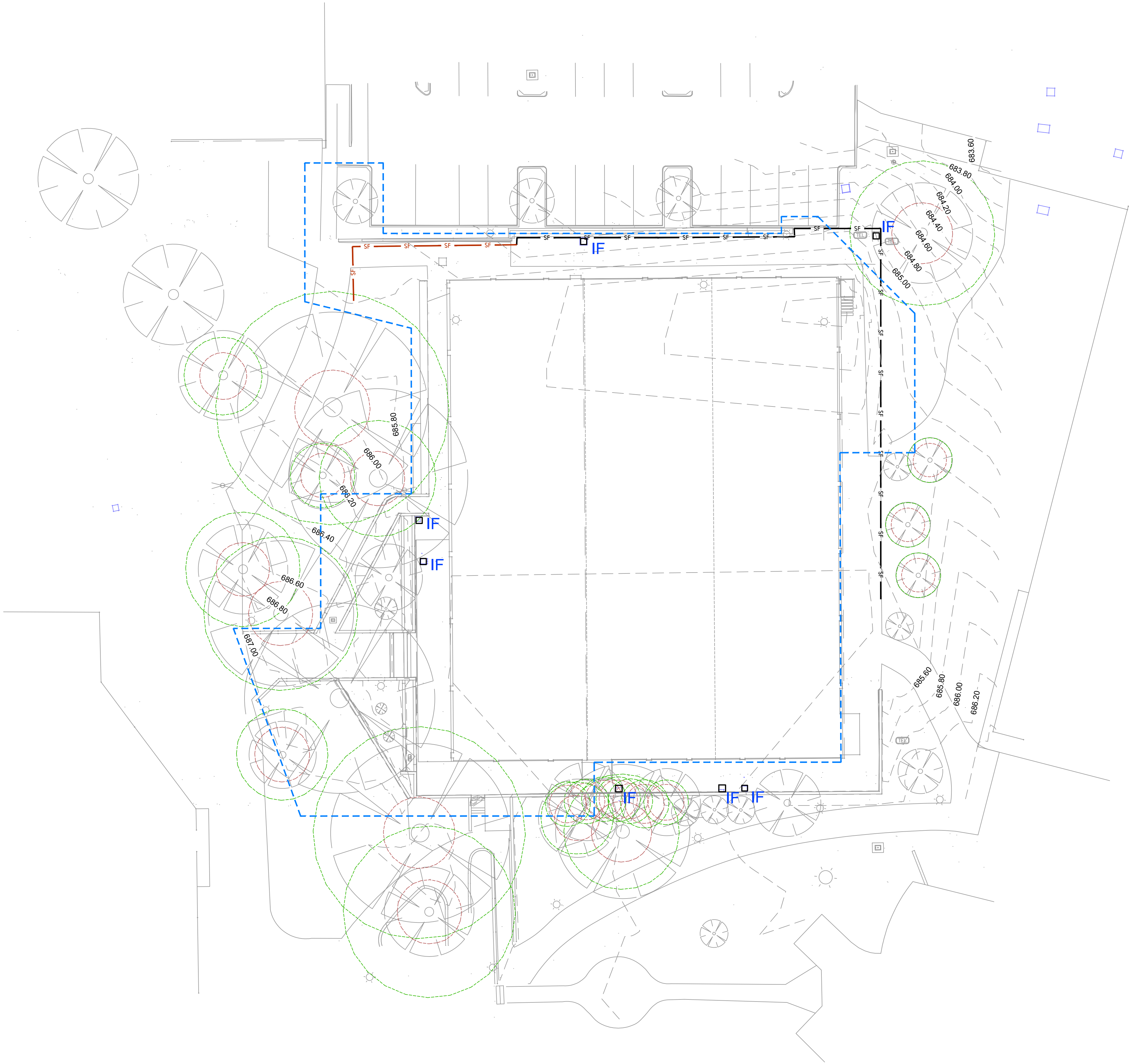
SD 6-9

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P3 FOR APPROVAL				KS JT 08.04.2025							
P2 FOR APPROVAL				KS ZAG 31.03.2025							
P1 PRELIMINARY ISSUE				KS ZAG 21.03.2025							
Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date

Client:

MADDISON
PROPERTY

Engineer:


www.ttwengineers.com

Project:

CHEVALIER COLLEGE
11 CHARLOTTE STREET,
BURRADOO, NSW 2576

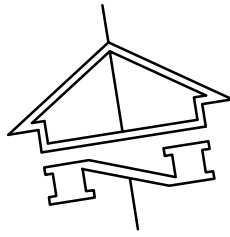
Drawing Title:

EROSION
AND SEDIMENT CONTROL
PLAN

Scale at A1	Drawn	Designed	Approved
1:200	ZAG	KS	CR
Project No	Originator	Zone	Type
	Role	Sheet No.	Rev

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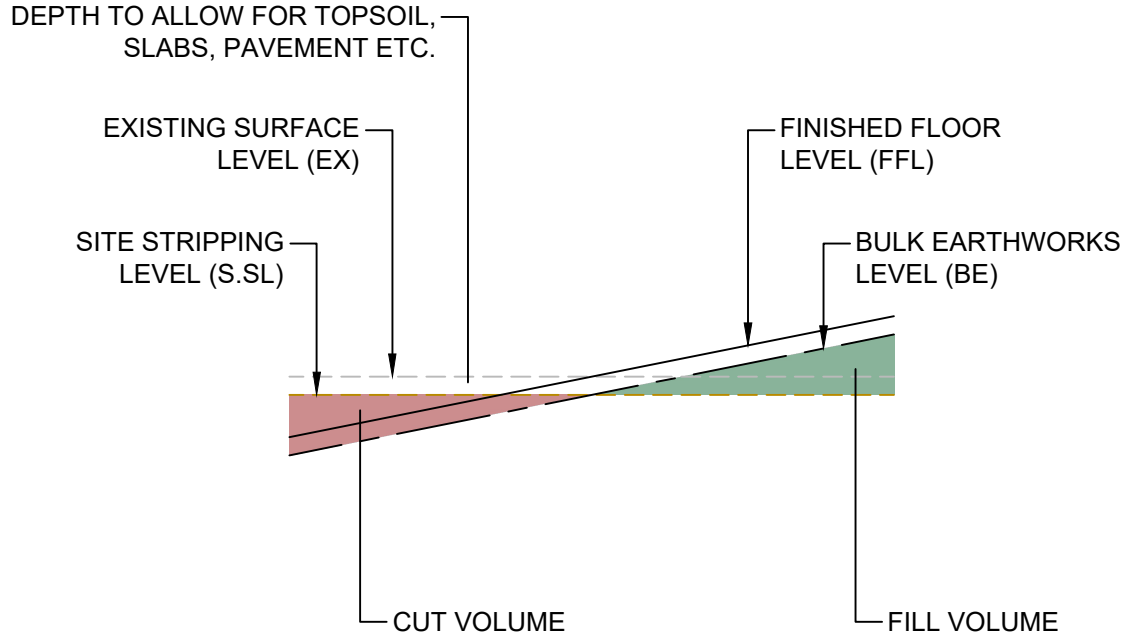
BULK EARTHWORKS NOTES

- All bulk earthworks setout from grid lines U.N.O.
- All batters at a slope of 2 (H) : 1 (V) U.N.O.
- Excavated material may be used as structural fill provided,
(i) it complies with the specification requirements for fill material,
(ii) the placement moisture content complies with the Geotechnical Consultants requirements, and allows filling to be placed and proofrolled in accordance with the specification. Where necessary the Contractor must moisture condition the excavated material to meet these requirements
- Compact fill areas and subgrade to not less than:

Location	Standard dry density (AS 1289 5.1.1.)	Moisture (OMC)
Under building slabs on ground:	98%	±2%
Under roads and carparks:	98%	±2%
Landscaped areas:	95%	±2%
- Before placing fill, proof roll exposed subgrade with a 12 tonne minimum roller to test subgrade and then remove soft spots(areas with more than 3mm movement under roller). Soft spots to be replaced with granular fill U.N.O.
- Contractor shall place safety barriers around excavations in accordance with relevant safety regulations.
- For interpretation of bulk earthworks foot print line shown on the bulk earthworks drawings refer to the bulk earthworks construction legend.
- Bulk earthwork drawings are not to be used for detailed excavation.
- Refer to Geotechnical Report prepared by JK GEOTECHNICS GEOTECHNICAL INVESTIGATION, 7 MARCH 2025,REF: 37313pnRPT
- Detailed earthworks such as piling, pile caps, ground beams, lift pits, service trenching & landscape mounding etc is excluded.

BULK EARTHWORKS				
LOCATION	AREA (m²)	CUT (m³)	FILL (m³)	NET (m³)
Overall site	140	250	0	250(fill)

- CUT
- FILL
- PROPOSED BUILDING

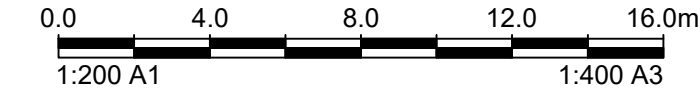


EARTHWORKS TYPICAL SECTION

- LEGEND
- EX308.00
- EXISTING SURFACE CONTOUR
- BE308.80
- BULK EARTHWORKS CONTOUR

NOT FOR CONSTRUCTION

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P3	FOR APPROVAL	KS	JT	08.04.2025			
P2	FOR APPROVAL	KS	ZAG	31.03.2025			
P1	PRELIMINARY ISSUE	KS	ZAG	21.03.2025			
Rev	Description	Eng	Draft	Date	Rev	Description	Eng

Client:

AP

MADDISON
PROPERTY

Engineer:

TTW

www.ttwengineers.com

Project:

CHEVALIER COLLEGE
11 CHARLOTTE STREET,
BURRADOO, NSW 2576

Drawing Title:

EARTHWORKS
CUT AND FILL
VOLUMES PLAN

Scale at A1

1:200

Drawn

ZAG

Designed

KS

Approved

CR

Project No

241904-TTW-00-DR-CI-03101-P3

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STORMWATER DRAINAGE

1. STORMWATER DESIGN CRITERIA
- (A) AVERAGE EXCEEDANCE PROBABILITY: -

- 1% AEP FOR ROOF DRAINAGE TO FIRST EXTERNAL PIT

- 5% AEP FOR PAVED AND LANDSCAPED AREAS
- (B) RAINFALL INTENSITIES :-

- TIME OF CONCENTRATION: 5 MINUTES

- 1% AEP = 221 mm/hr

- 5% AEP = 161mm/hr
- (C) RAINFALL LOSSES: -

- IMPERVIOUS AREAS: IL = 1.5 mm 0 CL= mm/hr

- PERVIOUS AREAS: IL = 16.8 mm 1.88 CL= mm/hr
2. PIPES 300 DIA AND LARGER TO BE REINFORCED CONCRETE CLASS "C" APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS U.N.O.
3. PIPES UP TO 300 DIA MAY BE SEWER GRADE UPVC WITH SOLVENT WELDED JOINTS, SUBJECT TO APPROVAL BY THE ENGINEER
4. EQUIVALENT STRENGTH VCP OR FRP PIPES MAY BE USED SUBJECT TO APPROVAL.
5. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY ENGINEER.
6. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE MANUFACTURED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
7. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED UPVC SEWER GRADE PIPE IS TO BE USED.
8. GRATES AND COVERS SHALL CONFORM WITH AS 3996-2006, AND AS 1428.1 FOR ACCESS REQUIREMENTS.
9. PIPES ARE TO BE INSTALLED IN ACCORDANCE WITH AS 3725. ALL BEDDING TO BE TYPE H2 U.N.O.
10. CARE IS TO BE TAKEN WITH INVERT LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
11. ALL STORMWATER PIPES TO BE 150 DIA AT 1.0% MIN FALL U.N.O.
12. SUBSOIL DRAINS TO BE SLOTTED FLEXIBLE UPVC U.N.O.
13. ADOPT INVERT LEVELS FOR PIPE INSTALLATION (GRADES SHOWN ARE ONLY NOMINAL).

STORMWATER PIPE INFORMATION

PIPE INFORMATION		TIE INFORMATION	
USIL Ø000 — 0.0m 0.0 m/s %0.0 DSIL	UPSTREAM INVERT LEVEL PIPE INTERNAL DIAMETER PIPE MATERIAL AND CLASS PIPE LENGTH HYDRAULIC FLOW RATE PIPE GRADE DOWNSTREAM INVERT LEVEL	SW L 10.0m D 1.0m Ø150	TIE LENGTH TIE DEPTH TIE DIAMETER

STORMWATER STRUCTURE IDENTIFICATION

SW1-2 LINE NUMBER 1 - STRUCTURE NUMBER 2

SUBSOIL DRAINAGE

1. ALL SUBSOIL DRAINAGE WORKS ARE TO BE COMPLETED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OUTLINED IN THE PROJECT SPECIFICATION.
2. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
3. SUBSOIL DRAINS TO BE Ø100 SLOTTED FLEXIBLE uPVC UNLESS NOTED OTHERWISE.
4. ALL SUBSOIL DRAINS ARE TO BE AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
5. ALL SUBSOIL DRAINS TO BE RODDED PRIOR TO THE PLACEMENT OF ASPHALT.
6. ALL SUBSOIL DRAINS ARE DRAWN DIAGRAMMATICALLY FOR CLARITY. REFER TO TYPICAL DETAIL FOR SUBSOIL SETOUT.

STORMWATER LEGEND

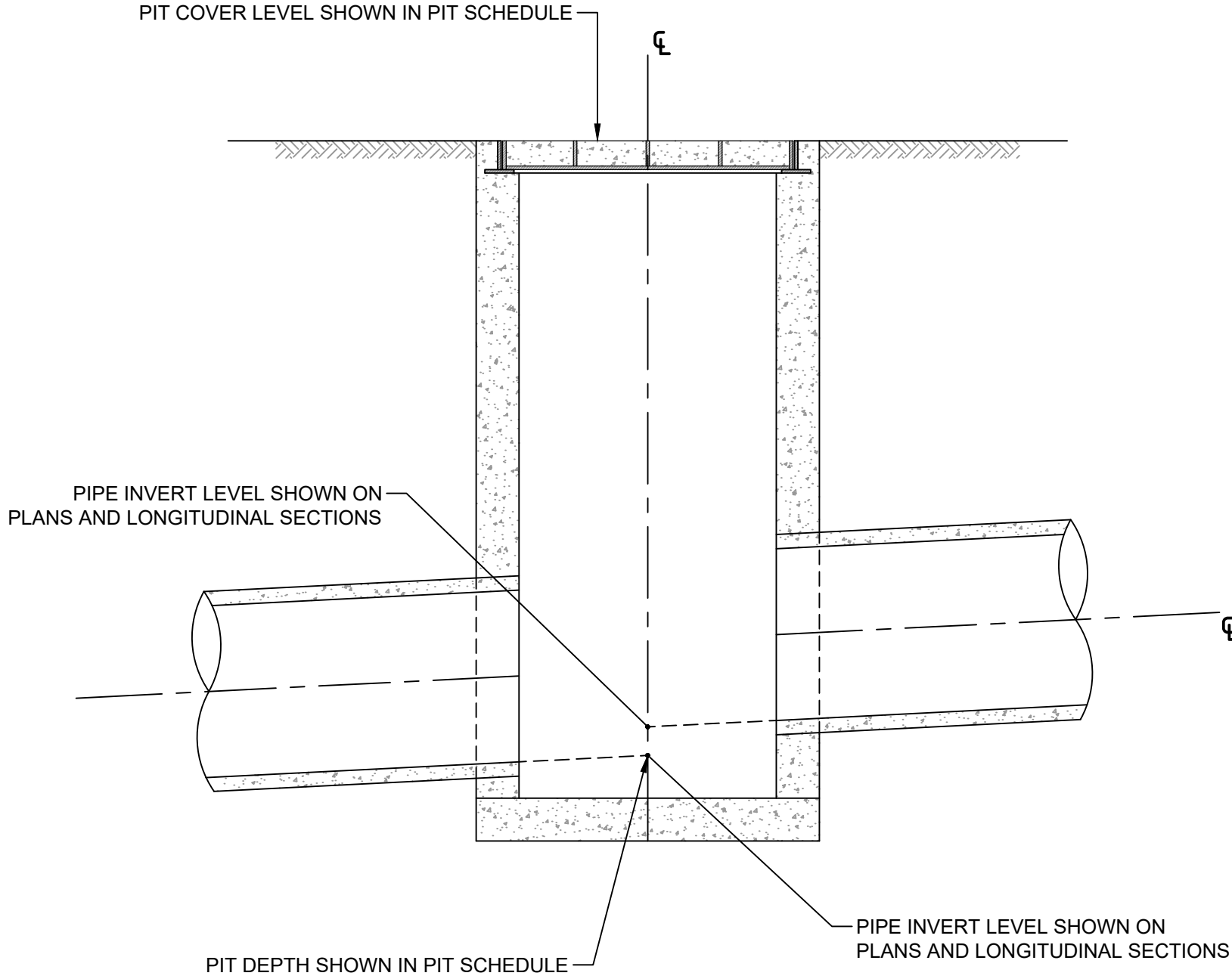
DP	DOWN PIPE
RP	RODDING POINT
FP	FLUSHING POINT
PO	PLANTER OUTLET
RO	RAINWATER OUTLET
GPT	GROSS POLLUTANT TRAP
→	OVERLAND FLOW ARROW
▬▬▬	CONCRETE INCASED PIPE
→	SWALE DRAIN
— IR —	SUBSOIL DRAIN INTERMEDIATE RISER

STORMWATER ANNOTATIONS

IL	PIPE INVERT LEVEL
OL	PIPE OBVERT LEVEL
CL	PIT COVER LEVEL
WL	WATER LEVEL

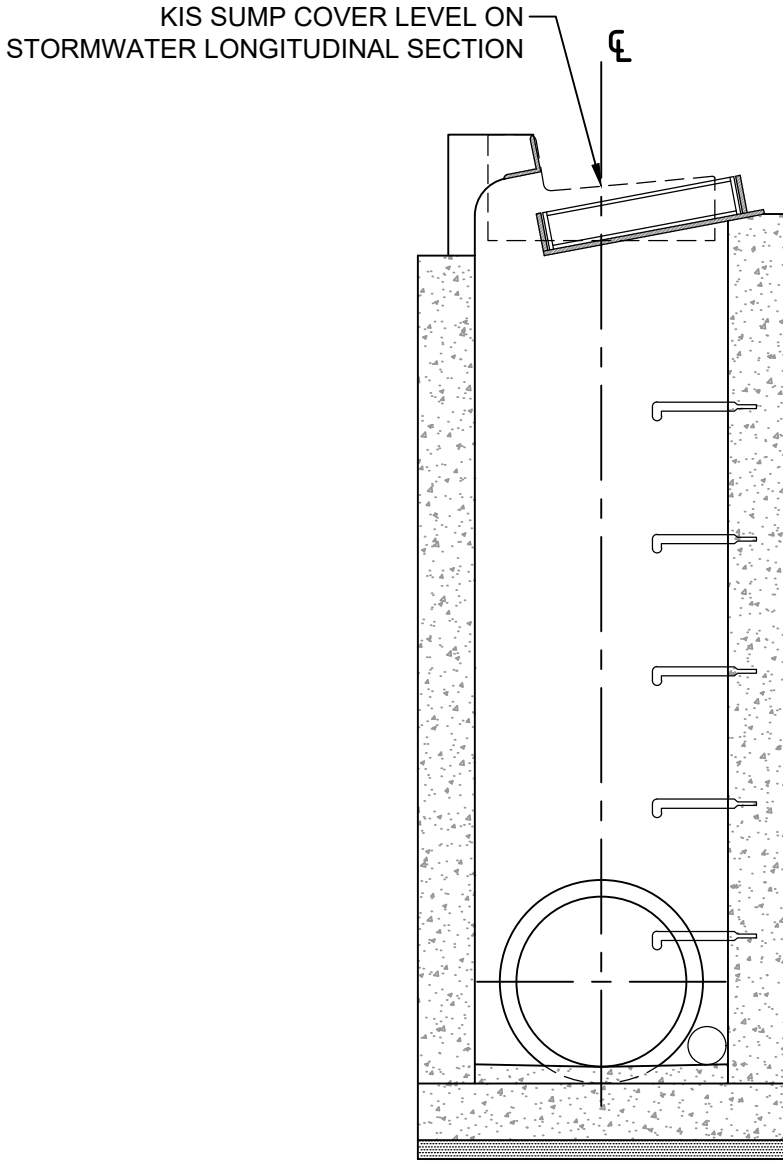
NOTE

STORMWATER DRAINAGE NOTES AND LEGEND IS TO READ IN CONJUNCTION WITH GENERAL NOTES AND LEGEND. REFER DRAWING No. 00002

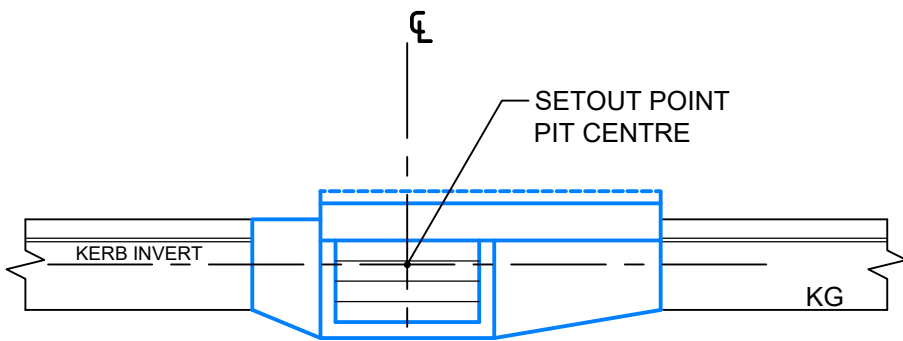


DESIGN INVERT LEVELS
AT STORMWATER STRUCTURES
SCALE 1:20

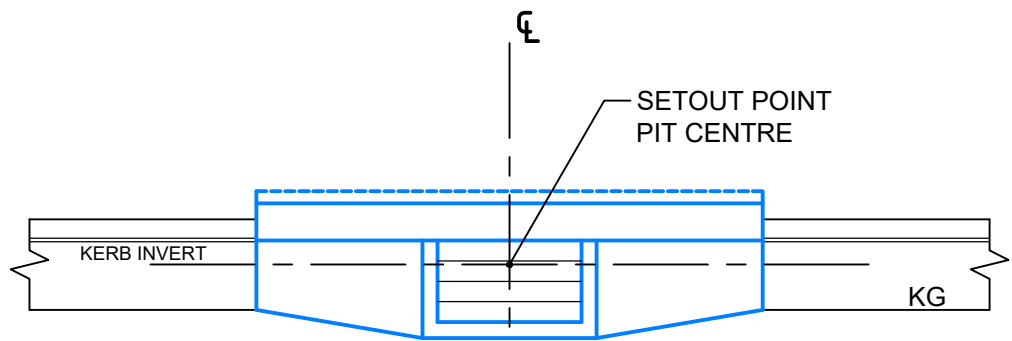
This drawing is copyright and is the property of TTW and must not be used without authorisation. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES AND LEGENDS



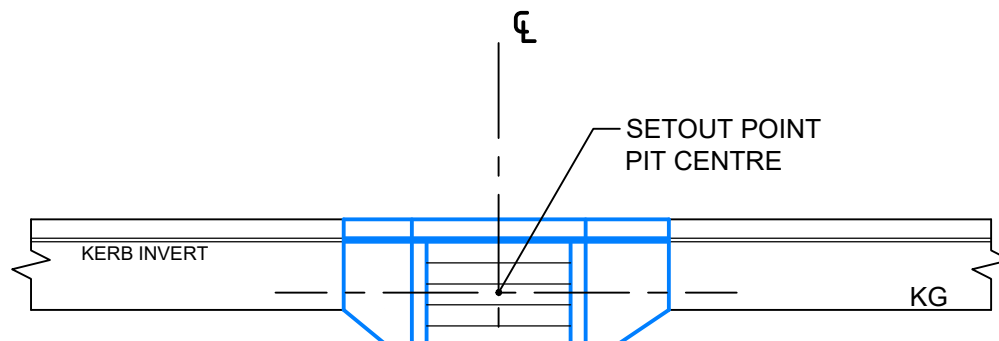
KERB INLET STRUCTURE (KIS)
COVER LEVEL FOR KIS IN ROAD
SCALE 1:20



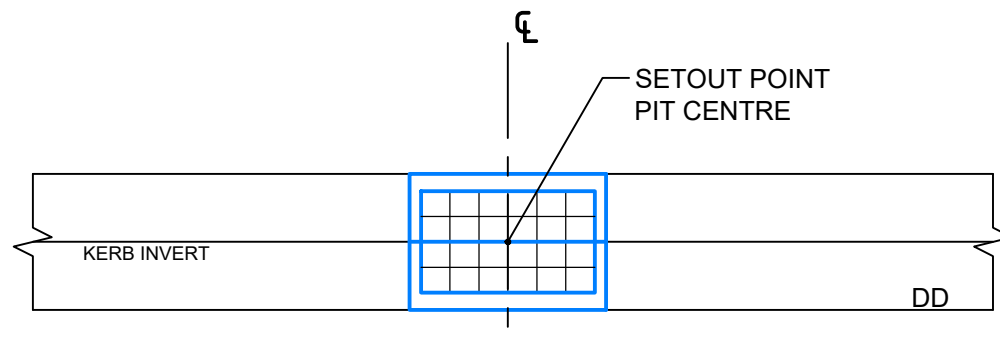
KERB INLET SUMP (KIS) ON GRADE
SCALE 1:50



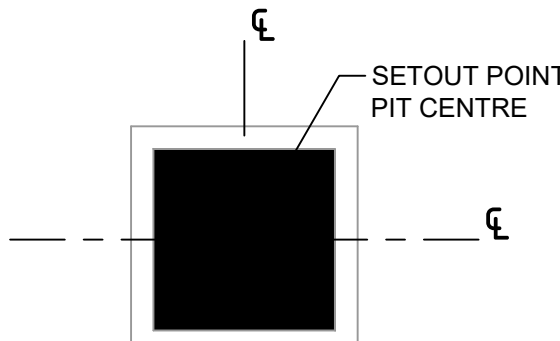
KERB INLET SUMP (KIS) IN SAG
SCALE 1:50



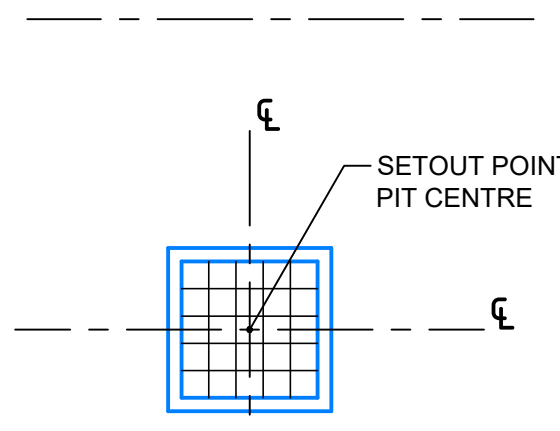
KERB GRATED INLET SUMP (KGI)
SCALE 1:50



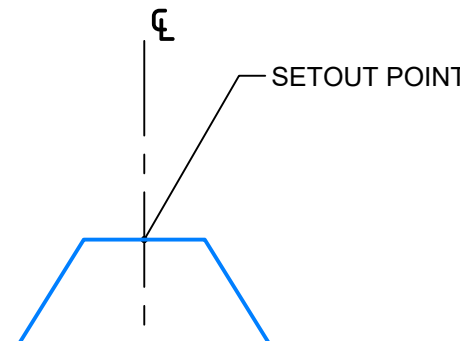
DISH DRAIN GRATED INLET SUMP (DDI)
SCALE 1:50



JUNCTION PIT
SCALE 1:50



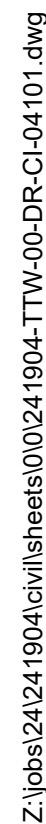
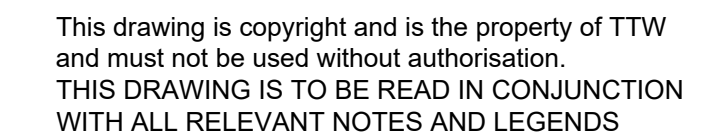
GRATED INLET SUMP
SCALE 1:50



HEADWALL
SCALE 1:50

NOT FOR CONSTRUCTION

			Client:			Engineer:			Project:			Drawing Title:			Scale at A1		
									CHEVALIER COLLEGE			STORMWATER			Drawn		
									11 CHARLOTTE STREET,			NOTES AND LEGEND			AS SHOWN		
									BURRADOO, NSW 2576			SHEET 1			ZAG		
															KS		
															CR		
															Project No		
															Originator		
															Zone		
															Type		
															Role		
															Sheet No.		
															Rev		
															241904-TTW-00-DR-CI-04001-P3		
															08.04.2025 12:39 PM		



Engineer:

TTW

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Drawing Title:
STORMWATER
AND SUBSOIL DRAINAGE
PLAN

Scale at A1	Drawn	Designed	Approved			
1:200	ZAG	KS	CR			
Project No	Originator	Zone	Type	Role	Sheet No.	Rev
241904-TTW-00-DR-CI-04101-P3						
08.04.2025 2:01 PM						

CONCRETE

1. PLACE CONCRETE OF THE FOLLOWING CHARACTERISTIC COMPRESSIVE STRENGTH f_c IN ACCORDANCE WITH AS 1379.
- 2.

LOCATION	f_c MPa (28 DAYS)	SPECIFIED SLUMP	NOMINAL AGG. SIZE
KERBS	S20	80	20
RETAINING WALL FOOTINGS	S40	80	20

3. USE TYPE 'GP' CEMENT, UNLESS OTHERWISE SPECIFIED.
4. ALL CONCRETE SHALL BE SUBJECT TO PROJECT ASSESSMENT AND TESTING TO AS 1379.
5. CONSOLIDATE BY MECHANICAL VIBRATION. CURE ALL CONCRETE SURFACES AS DIRECTED IN THE SPECIFICATION.
6. FOR ALL FALLS IN SLAB, DRIP GROOVES, REGLETS, CHAMFERS ETC. REFER TO ARCHITECTS DRAWINGS AND SPECIFICATIONS.
7. UNLESS SHOWN ON THE DRAWINGS, THE LOCATION OF ALL CONSTRUCTION JOINTS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW.
8. NO HOLES OR CHASES SHALL BE MADE IN THE SLAB WITHOUT THE APPROVAL OF THE ENGINEER.
9. CONDUITS AND PIPES ARE TO BE FIXED TO THE UNDERSIDE OF THE TOP REINFORCEMENT LAYER.
10. SLURRY USED TO LUBRICATE CONCRETE PUMP LINES IS NOT TO BE USED IN ANY STRUCTURAL MEMBERS.
11. ALL SLABS CAST ON GROUND REQUIRE SAND BLINDING WITH A CONCRETE UNDERLAY

CONCRETE FINISHING

1. ALL EXPOSED CONCRETE PAVEMENTS ARE TO BE BROOMED FINISHED.
2. ALL EDGES OF THE CONCRETE PAVEMENT INCLUDING KEYED AND DOWELLED JOINTS ARE TO BE FINISHED WITH AN EDGING TOOL.
3. CONCRETE PAVEMENTS WITH GRADES GREATER THAN 10 % SHALL BE HEAVILY BROOMED FINISHED.
4. CARBORUNDUM TO BE ADDED TO ALL STAIR TREADS AND RAMPED CROSSINGS U.N.O.

FORMWORK

1. THE DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF THE FORMWORK, FALSEWORK AND BACKPROPPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PROPOSED METHOD OF INSTALLATION AND REMOVAL OF FORMWORK IS TO BE SUBMITTED TO THE SUPERINTENDENT FOR COMMENT PRIOR TO WORK BEING CARRIED OUT.

CONCRETE REINFORCEMENT

1. FIX REINFORCEMENT AS SHOWN ON DRAWINGS. THE TYPE AND GRADE IS INDICATED BY A SYMBOL AS SHOWN BELOW. ON THE DRAWINGS THIS IS FOLLOWED BY A NUMERAL WHICH INDICATES THE SIZE IN MILLIMETRES OF THE REINFORCEMENT.

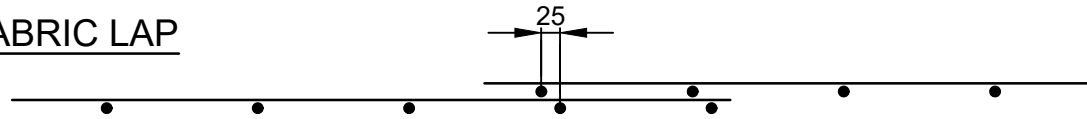
SYMBOL	TYPE	GRADE
N	HOT ROLLED RIBBED BAR	DN500N
R	PLAIN ROUND BAR	R250N
SL	SQUARE MESH	500L
RL	RECTANGULAR MESH	500L

2. PROVIDE BAR SUPPORTS OR SPACERS TO GIVE THE FOLLOWING CONCRETE COVER TO ALL REINFORCEMENT UNLESS OTHERWISE NOTED ON DRAWINGS.

LOCATION	COVER (MM)
FOOTINGS	50
WALLS	30

3. COVER TO REINFORCEMENT ENDS TO BE 50 mm U.N.O.
4. PROVIDE N12-450 SUPPORT BARS TO TOP REINFORCEMENT AS REQUIRED, LAP 500 U.N.O.
5. MAINTAIN COVER TO ALL PIPES, CONDUITS, REGLETS, DRIP GROOVES ETC
6. ALL COGS TO BE STANDARD COGS UNLESS NOTED OTHERWISE
7. FABRIC END AND SIDE LAPS ARE TO BE PLACED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS TO ACHIEVE A FULL TENSILE LAP. FABRIC SHALL BE LAID SO THAT THERE IS A MAXIMUM OF 3 LAYERS AT ANY LOCATION.

FABRIC LAP



8. LAPS IN REINFORCEMENT SHALL BE MADE ONLY WHERE SHOWN ON THE DRAWINGS UNLESS OTHERWISE APPROVED. LAP LENGTHS AS PER TABLE BELOW.

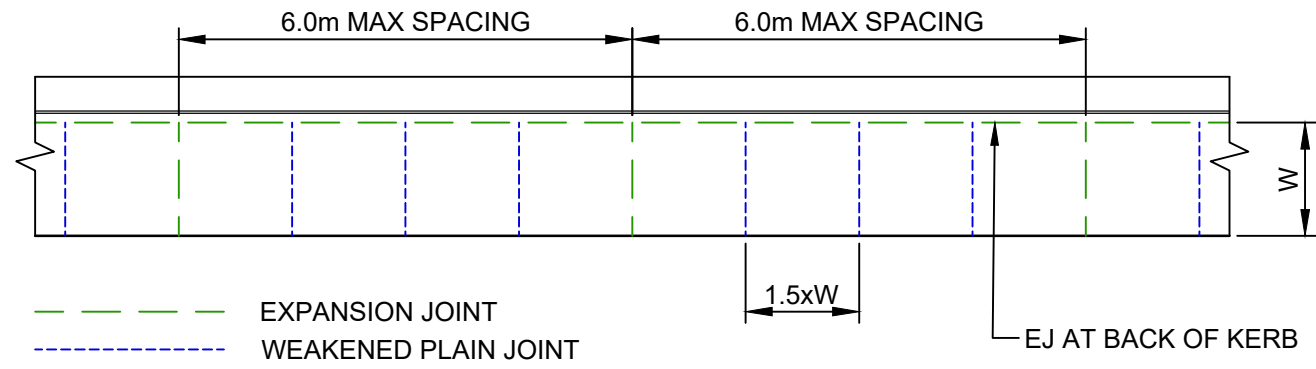
TENSION LAPS		
BAR SIZE	TOP BARS IN BANDS AND BEAMS	ALL OTHER BARS
N12	570	480
N16	800	700
N20	1150	950
N24	1500	1250
N28	1850	1500
N32	2250	1800
N36	2700	2100

COMPRESSION LAPS	
BAR SIZE	
N16	640
N20	800
N24	960
N28	1120
N32	1280
N36	1440

- ASSUMPTIONS:
1. TOP BARS IN BANDS AND BEAMS:
MORE THAN 300mm OF CONCRETE BELOW THE BAR.
 2. MINIMUM COVER OF 25mm AND MINIMUM STIRRUP SIZE OF N12 GIVING $C_d=37\text{mm}$; THEREFORE MINIMUM CLEAR SPACING BETWEEN BARS = $2 \times C_d = 74\text{mm}$. MINIMUM COVER IS BASED ON THE NEW A2 EXPOSURE CLASSIFICATION FOR INTERIOR, NON-RESIDENTIAL WHICH REQUIRES 25mm COVER FOR 32Mpa CONCRETE.
 3. $f_c = 32\text{Mpa}$
ALL OTHER BARS:
1. LESS THAN 300mm OF CONCRETE BELOW THE BAR.
2. MINIMUM COVER OF 25mm GIVING $C_d = 25\text{mm}$; THEREFORE MINIMUM CLEAR SPACING BETWEEN BARS = $2 \times C_d = 50\text{mm}$.
 3. $f_c = 32\text{Mpa}$.
COLUMNS:
1. COVER TO COLUMNS = 40mm $(30+10)k7 = 1.25$
2. COVERS FOR FIRE RATING ARE TO BE DESIGNED BY THE ENGINEER.

PEDESTRIAN PATH JOINTING (03000 SERIES DRAWINGS)

1. EXPANSION JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 6.0M CENTRES
2. WEAKENED PLANE JOINTS ARE TO BE LOCATED AT A MAX 1.5 X WIDTH OF THE PAVEMENT.
3. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND / OR ADJACENT PAVEMENT JOINTS.
4. ALL PEDESTRIAN FOOTPATH JOINTING AS FOLLOWS (UNO).

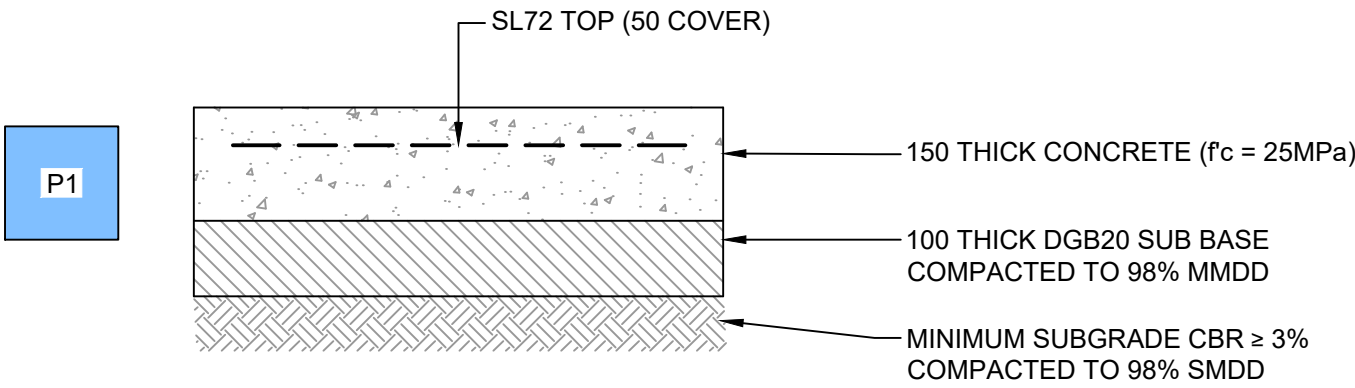


KERBING

INCLUDES ALL KERBS, GUTTERS, DISH DRAINS, CROSSINGS AND EDGES.

1. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON MINIMUM 75mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1.
2. EXPANSION JOINTS (EJ) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT 12M CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN SLABS.
3. WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3M CENTRES EXCEPT FOR INTEGRAL KERBS WHERE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN SLABS.
4. BROOMED FINISHED TO ALL RAMPED AND VEHICULAR CROSSINGS, ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
5. IN THE REPLACEMENT OF KERBS - EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm FROM LIP OF GUTTER. UPON COMPLETION OF NEW KERBS, NEW BASE COURSE AND SURFACE IS TO BE LAID 900mm WIDE TO MATCH EXISTING MATERIALS AND THICKNESSES. EXISTING ALLOTMENT DRAINAGE PIPES ARE TO BE BUILT INTO THE NEW KERB WITH A 100mm DIA HOLE. EXISTING KERBS ARE TO BE COMPLETELY REMOVED WHERE NEW KERBS ARE SHOWN.

PAVEMENT LEGEND

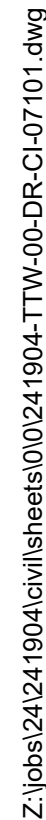


PAVEMENT TYPE 1
CONCRETE FOOTPATH PAVEMENT
SCALE 1:10

- P2 REFER LANDSCAPE ARCHITECTS DRAWINGS AND SPECIFICATIONS

NOT FOR CONSTRUCTION

			Client:			Engineer:			Project:			Drawing Title:			Scale at A1			Drawn			Designed			Approved		
									CHEVALIER COLLEGE			PAVEMENT			NTS			ZAG			KS			CR		
P3 FOR APPROVAL									11 CHARLOTTE STREET,			NOTES , LEGEND			Project No			Originator			Zone			Sheet No.		
P2 FOR APPROVAL									BURRADOO, NSW 2576			AND DETAILS			241904-TTW-00-DR-CI-07001-P3											
P1 PRELIMINARY ISSUE															08.04.2025											
Rev	Description	Eng	Draft	Date	Rev	Description	Eng	Draft	Date	Rev	Description	Eng	Draft	Date												

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