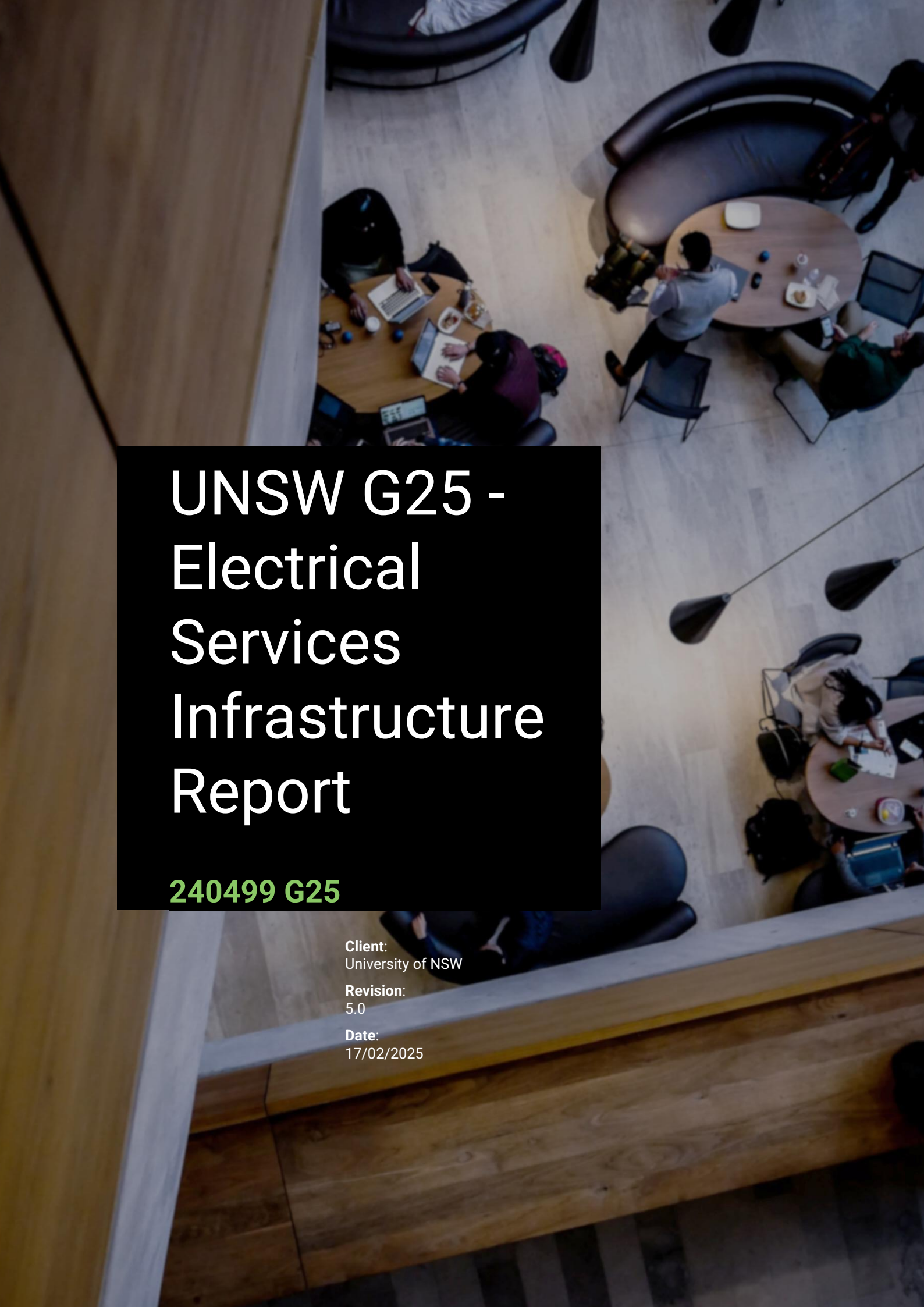

UNSW G25 - Electrical Services Infrastructure Report

240499 G25

Client:
University of NSW

Revision:
5.0

Date:
17/02/2025

REPORT INFORMATION

Project	G25
Title	UNSW G25 - Electrical Services Infrastructure Report
Client	University of NSW
Revision	5.0
Revision Date	17/02/2025
Prepared By	LCI Consultants Sydney Office Level 5, 73 Miller Street North Sydney, NSW 2060
ABN/ACN	92 124 107 973 / 124 107 973
Author	Gina Matthews

REVISION SCHEDULE

Revision	Date	Issue Name	Author	Authorised
1.0	25/10/2024	Draft for Comment	GM	AK
2.0	11/11/2024	Issue For SSDA	GM	AK
3.0	12/11/2024	Issue For SSDA	GM	AK
4.0	28/11/2024	Issue For SSDA	GM	AK
5.0	17/02/2025	Issue For SSDA	GM	AK

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1 Declaration

PROJECT DETAILS	
PROJECT NAME	
Application number	SSD-74670005
Address of subject land	8 High Street, Kensington, NSW, 2033
Lot / DP	Lot 5 DP 1264171
APPLICANT DETAILS	
Applicant name	University of NSW
Applicant address	Sydney, NSW
REPORT DETAILS	
Name of report this declaration relates	UNSW G25 – Electrical Services Infrastructure Report
Report reference no.	N/A
Report date	17/02/2025
Company name (inc. ABN / ACN)	Lehr Consultants International (Australia) Pty Ltd 92 124 107 973 / 124 107 973
Author name	Gina Matthews
Author qualifications	BEng Elec (Hons)
Author address	LCI, Level 5, 73 Miller Street, North Sydney 2060
DECLARATION BY CONSULTANT	
Name	Lehr Consultants International (Australia) Pty Ltd
Registration no.	N/A
Organisation registered with	N/A
Declaration	The undersigned declares that UNSW G25 – Electrical Services Infrastructure Report: • has been prepared in accordance with the following policy, guidelines, or legislative requirements: - BCA 2022 - UNSW Electrical Standards (see table 3) • does not contain information that is false or misleading to the best of the authors ability;

	• identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project that involves Electrical infrastructure; • identifies the relevant statutory requirements for the project to which the UNSW G25 - Electrical Services Infrastructure Report relates; • contains a consolidated summary of the proposed or necessary mitigation measures
Signature	
Date	17/02/2024

2 Introduction

2.1 Purpose

This UNSW G25 Electrical Services Infrastructure Report has been prepared by LCI on behalf of the University of New South Wales (UNSW) for construction and operation of a teaching and learning facility (the Proposal) to be known as the UNSW G25 Education Building, on land at 8 High Street, Kensington (the Site).

This report has been prepared to highlight the electrical infrastructure to support the G25 building and any impacts the new building may have on existing electrical services.

This report accompanies a State Significant Development Application (SSD) that seeks approval for the construction and operation of a teaching and learning facility at the G25 site, within the Upper Campus of UNSW. Specifically, the SSDA seeks consent for the following:

- Site preparation works including demolition of the existing at-grade car park, tree removal, and excavation works.
- Construction of an eleven (11) storey (plus roof plant) teaching and learning building with approximately 20,200m2 of gross floor area. The building will comprise the following:
  - Basement including plant/services, Bike Storage, End of Trip facilities and staff amenities, ancillary service areas such as Mail and Print rooms.
  - Ground level Food and Beverage space and informal education spaces
  - Teaching and Learning spaces and workspaces for UNSW Faculties for other levels
  - (The internal fit-out will be subject to separate approval)
  - Rooftop level including landscaped outdoor terrace, multifunction space, mechanical plant and services
- Associated landscaping, replacement trees and public domain embellishment works in and around the proposed building
- Extension and augmentation of infrastructure and services as required
- New lift core in the adjacent building, H25 Botany Street Carpark and associated access improvements.

The Proposal will seek to deliver improvements including:

- Providing new, purpose built learning and teaching spaces to support the University activities and strategic goals such as the development of the Randwick Health and Education Precinct
- Delivering an enhanced ground plane connection
- Providing flexible and adaptable teaching and learning spaces
- Creating a healthy, green, and welcoming place for students, staff and visitors
- Creating an experience that is an open, permeable, and connected public realm
- Creating pedestrian priority and inclusive shared public space

For a detailed project description refer to the Environmental Impact Statement prepared by Ethos Urban.

2.2 Glossary

Table 1: Glossary and Abbreviations

Abbreviation	Meaning
ASP	Accredited Service Provider
DA	Development Application
DBYD	Dial Before You Dig
DPE	Department of Planning

EIS	Environmental Impact Statement
HV	High-Voltage
ICTS	Information and Communications Technology Services
LCI	Lehr Consultants International
LGA	Local Government Area
LV	Low-Voltage
MSB	Main Switchboard
NBN	NBN Co
NSW DPIE	NSW Department of Planning, Industry and Environment
SEARs	Secretary's Environmental Assessment Requirements
SSD	State Significant Development
UNSW	University of NSW

2.3 Site Context

The site is situated within the UNSW Kensington upper campus, within the Randwick Local Government Area (LGA). The site address is 8 High Street, Kensington, which applies to the whole of the UNSW Kensington campus.

The UNSW campus forms part of the wider Randwick Health and Education Precinct, which has been strategically identified to provide a world-class coalition of education, research, innovation and healthcare organisations and to attract growth, investment and employment opportunities. This Precinct has been identified in the Greater Sydney Region Plan – A Metropolis of Three Cities and the Eastern City District Plan, for its strategic importance as a specialised centre providing for health and education research, innovation, teaching and learning.

The UNSW campus is located approximately 6km southeast of the Sydney CBD, immediately adjacent to the east is the Randwick Hospitals Complex which also forms part of the Randwick Health and Education Precinct. The UNSW site is within 600m of the Randwick Shopping Centre to the east and adjacent to Royal Randwick Racecourse to the north (refer Figure 1 below).

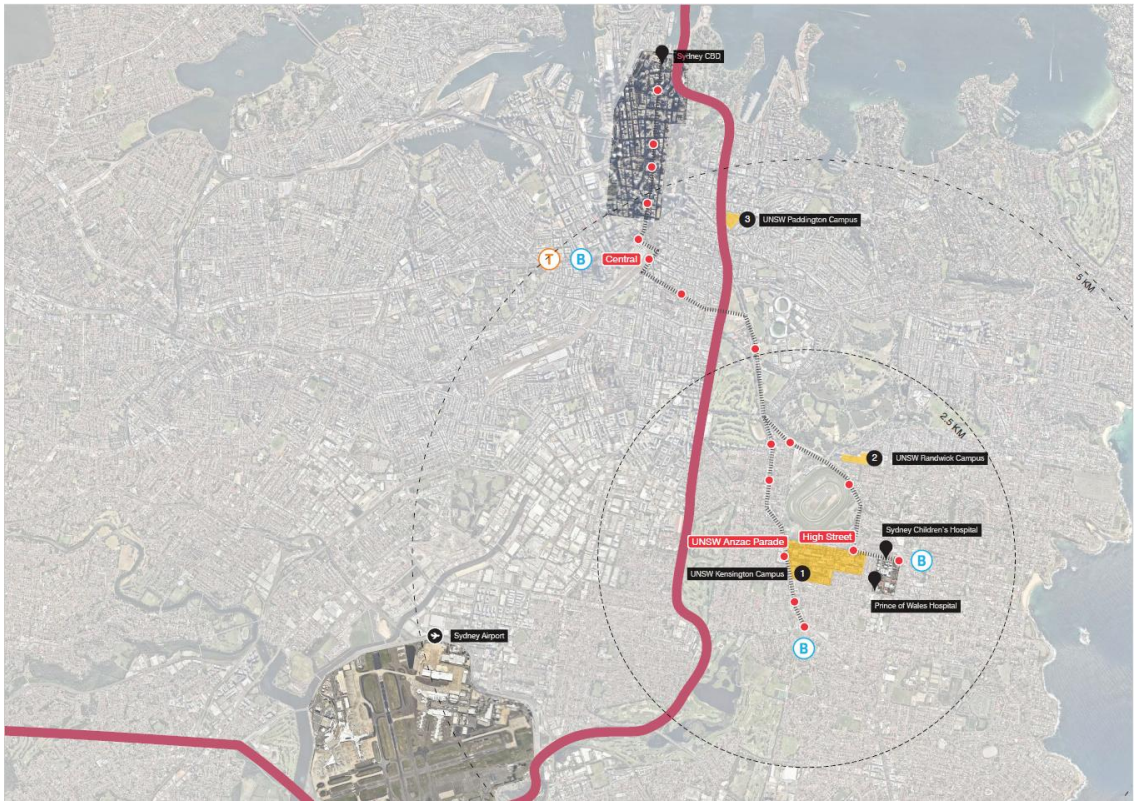


Figure 1 Site Context

Source: Ethos Urban, Google Maps

2.4 Site Description

The subject site known as the G25 site, is an existing on-grade carpark comprising of hardstand pavement with line-marked spaces, trees and landscaped areas. The site also includes the eastern portion of Library Walk and the loading dock area of the AGSM (Australian Graduate School of Management) Building (G27), with no other existing development on the site.

It is bounded to the north by the Samuels Building (F25) and Mathews Building (F23), to the west by the Solar Industrial Research Facility (SIRF) Building (G23), to the south by the multi-storey Botany Street Carpark Station (H25), and to the east by the Australian Graduate School of Management (AGSM) Building (G27) and the Gate 11 entrance to UNSW from Botany Street.

The broader UNSW Kensington Campus consists of five separate allotments. This site is situated within a single allotment legally described as Lot 5 DP 1264171. The UNSW Kensington campus is bounded by Anzac Parade (to the west), High Street (to the north), Botany Street (to the east), and Barker Street (to the south). It also includes developments to the west of Anzac Parade and north of Day Avenue, such as NIDA, the University Regiment, and the New College Post-Graduate Village. The campus currently has approximately 60,000 student enrolments.

Figure 2 provides an aerial image of the site and its location relative to the UNSW upper campus boundaries.

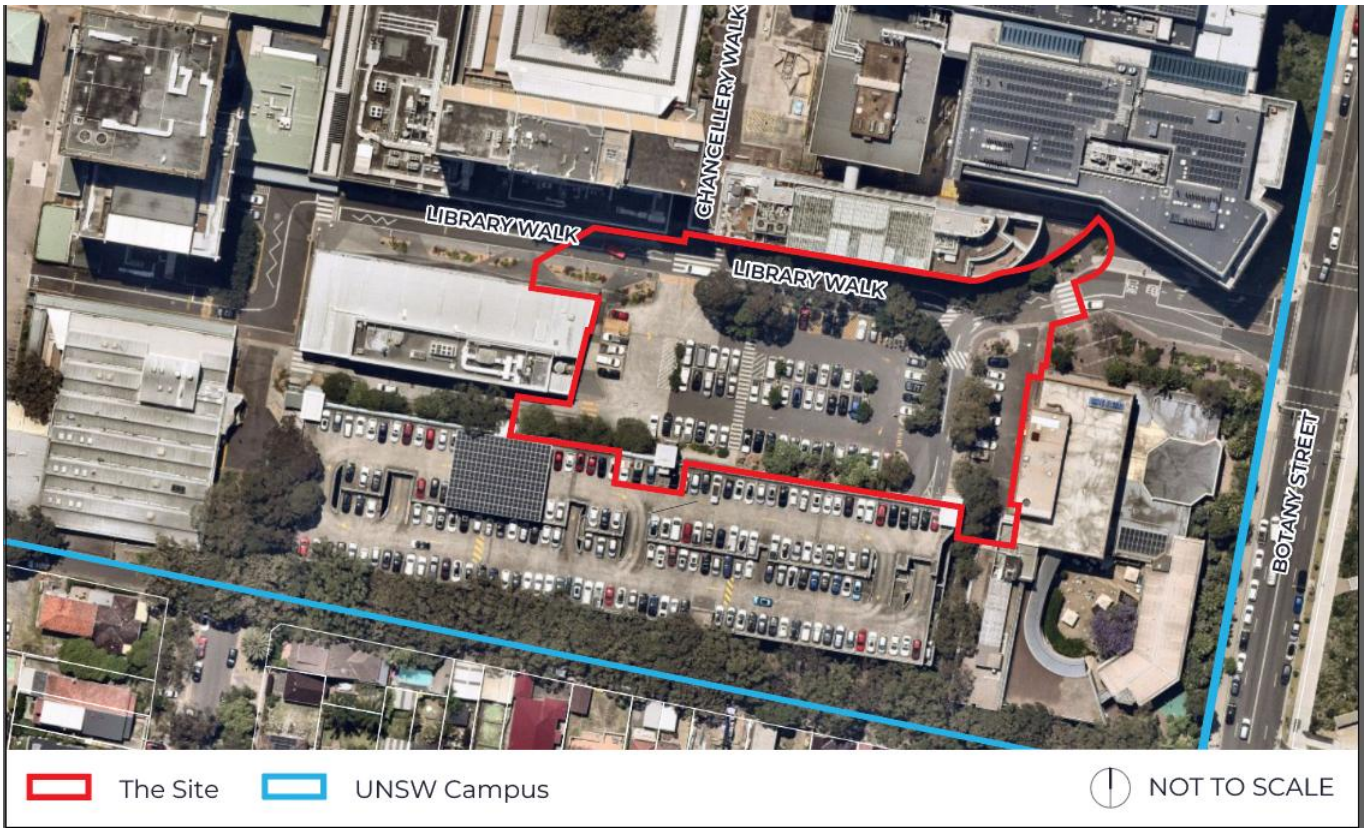


Figure 2 Site Aerial (approximate site area outlined in red)

Source: Nearmap, Ethos Urban

2.5 Surrounding Development

The following development surrounds the site:

- North: To the north and directly adjacent to the site across from the Library Walk are the Samuels (F25) Building and Mathews (F23) Building, which comprise up to 16-storeys. Further north within the campus are additional education, administration and library buildings. The wider context includes the UNSW High Street Light Rail stop, as well as low to medium density residential development north of High Street.
- South: South of the site is the UNSW Botany Street Carpark Station (H25) (5 storeys), which is accessed internally within the UNSW campus. This location includes a pedestrian link from Oval Lane. The wider context includes low-medium density residential development south of Oval Lane.
- East: The site directly abuts the ASGM Building (G27) to the east (5 storeys), which fronts Botany Street. To the east and also fronting Botany Street is the Randwick Hospitals Complex including the Prince of Wales Hospital, the Sydney Children's Hospital, and the Royal Hospital for Women, as well as low-medium density residential development to the south-east.
- West: The site directly adjoins the Solar Industrial Research Facility (SIRF) (G23) to the west, which also sits within the confines of Library Walk and Valentine Close. The western context of the subject site is primarily characterised by the wider UNSW campus (lower campus) as well as the Anzac Parade Light Rail stop.

2.6 SEARS Table Response

Table 2: SEARS Responses

Project SEAR	Section of report
22. Infrastructure Requirements and Utilities *In consultation with relevant service providers:* • *Assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.*	Section 3
• *identify any infrastructure required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.*	Section 3
• *provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development*	Section 3

3 Infrastructure Requirements

3.1 General

The proposed electrical systems require integration with the UNSW Private HV System, the existing UNSW Information, Communications Technology Services (ICTS) infrastructure and the communications services carriers.

3.2 Applicable Standards

The electrical and communication systems will be designed in compliance with the relevant Australian Standards, National Construction Code and University Infrastructure Standards.

The specific standards are noted in the table below.

Table 3: Applicable Standards

References, codes and standards	
AS/NZS 1768	Lightning protection
AS/NZS 1680 (Series)	Interior and workplace lighting
AS/NZS 2293 (Series)	Emergency lighting and exit signs for buildings
AS/NZS 3000	Electrical Installations – Wiring Rules
AS/NZS 3008	Electrical installations – Selection of cables
AS/NZS 3010	Electrical installations – Generator sets
AS/NZS 3008.1	Electrical installations – Classification of the fire and mechanical performance of wiring system elements
AS/NZS 3084	Telecommunications Installation, Pathways and Spaces for commercial buildings
AS/NZS 4777	Grid Connection of energy systems via inverters
AS/NZS 5033	Installation and safety requirements for photovoltaic (PV) arrays
AS/NZS 61439 (Series)	Low-voltage switchgear and control gear assemblies
AS/NZS 11801	Information technology - Generic cabling for customer premises
AS/CA S008 and S009	Installation requirements for customer cabling (Wiring Rules)
Building Code of Australia 2022	
Service and Installation Rules of New South Wales	
UNSW Standard – Low Voltage – Rev6	
UNSW Standard – High Voltage – Rev6	
UNSW Standard – Photovoltaic Systems – Rev1f	
UNSW Standard – Communications – Rev4.20.1	
UNSW Standard – Lighting – Rev6	
UNSW Standard – Special Systems – Rev5	
Clean Energy Council Guidelines	

3.3 Proposed Electrical Services

UNSW HV

UNSW is a private HV customer and has its own five HV Ring system on campus. It is the intention for G25 to connect into one of these five HV rings with an internal substation and not directly into the local Ausgrid Network.

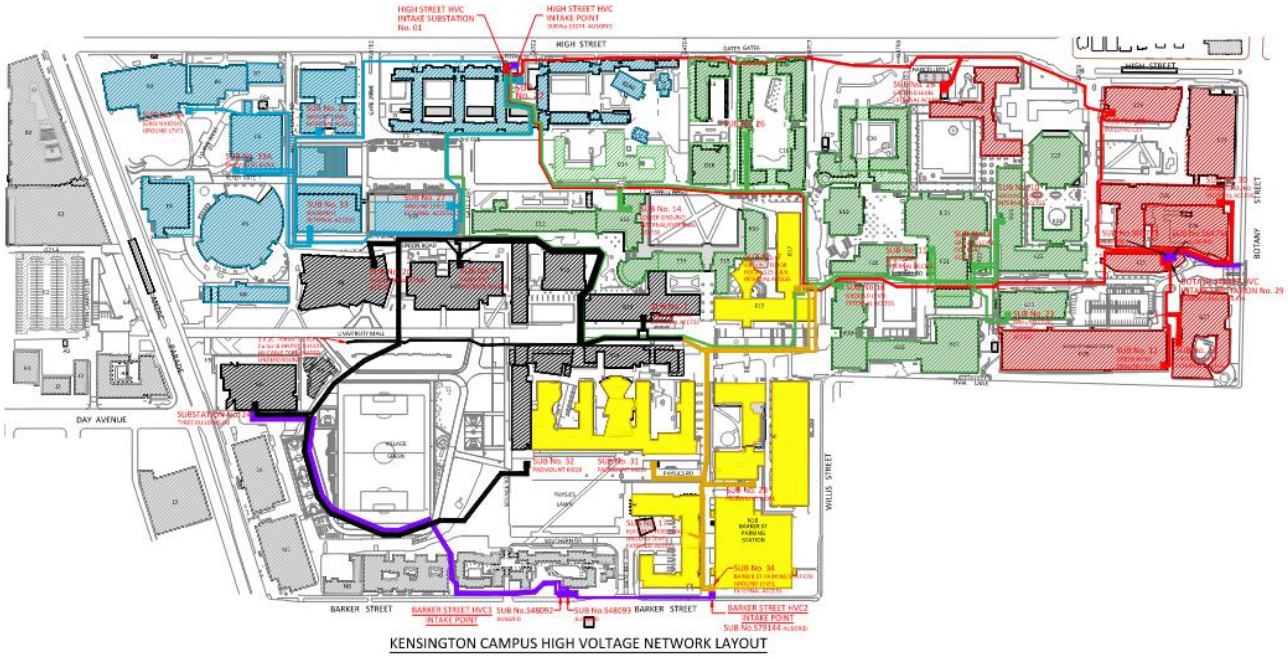


Figure 3 UNSW Kensington Campus High Voltage Network Layout - Source: UNSW

Part of the Red ring's assets currently run adjacent/just inside the Project's boundary. These services may need to be diverted as part of enabling works, which will be designed in collaboration with UNSW electrical and estate management during the design development.

G25 will be provided with a permanent generator to provide backup to essential and life safety services compliant to the BCA and any additional requirements as nominated by UNSW. The building may also be provided with a temporary generator connection panel. The generator location is to be coordinated with other stakeholders and services during detailed design.

Ausgrid

Ausgrid local network has been identified along Botany St and connects to the Samuels building via Library Walk. The network is outside of the project boundary.

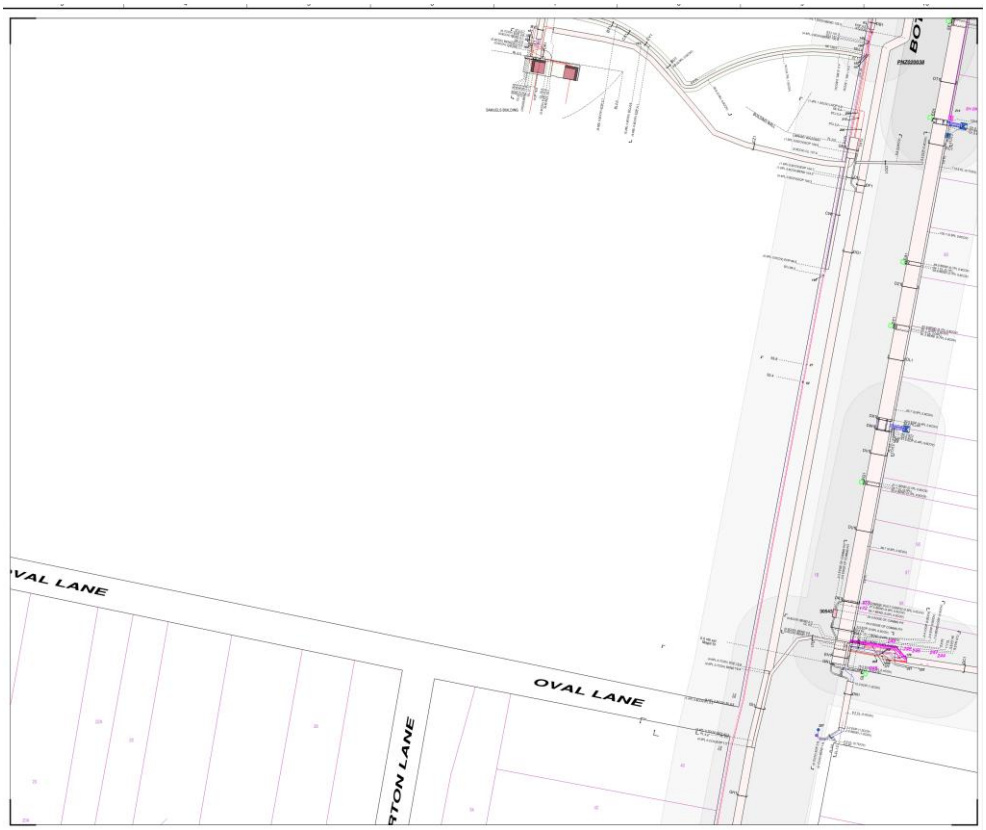


Figure 4 Ausgrid Network - DBYD

3.4 Proposed Communication Services

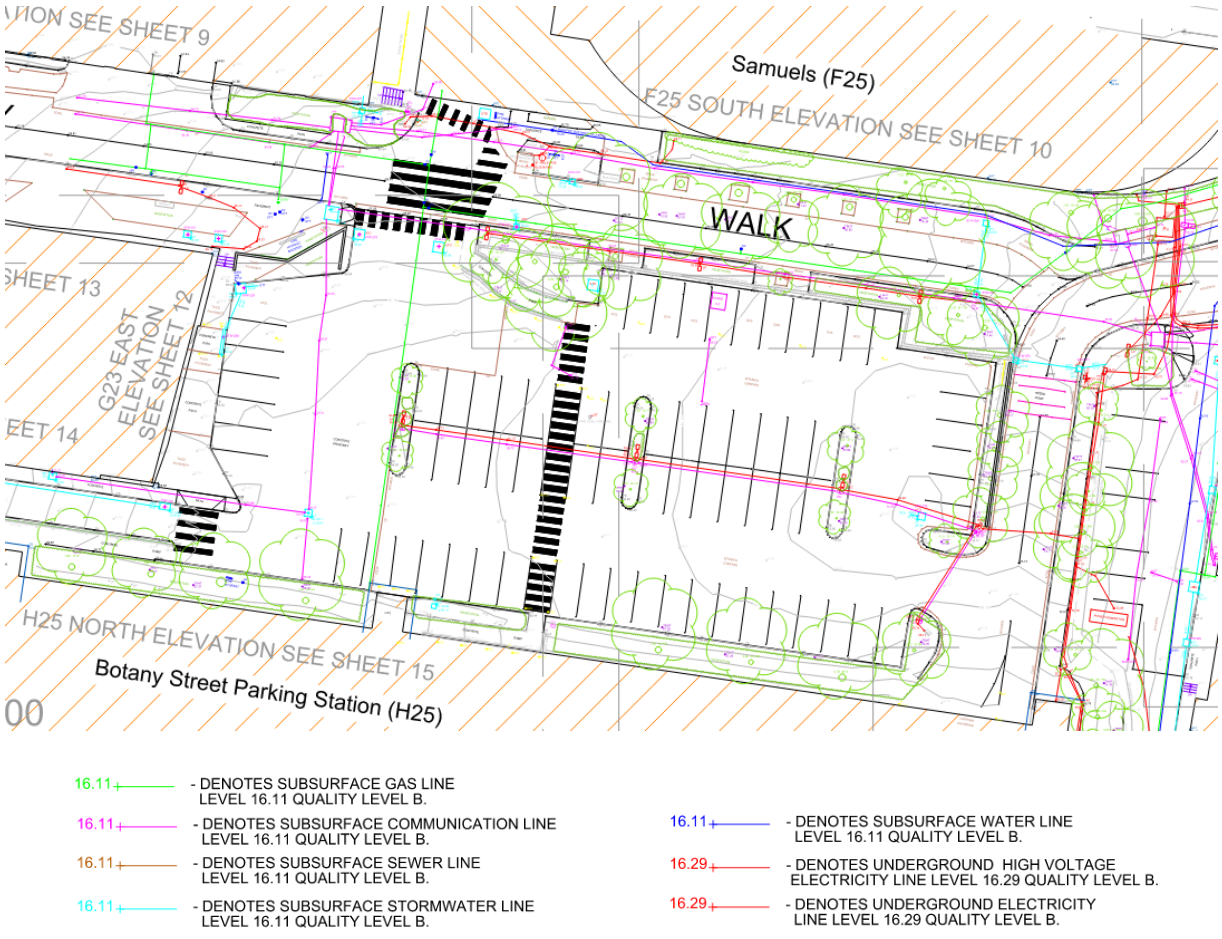
UNSW Private Network

It is envisioned that G25 will be connected to the existing UNSW campus communication network via redundant pathways nominated by UNSW ITCS. New pit and pipe is to be run from pits to facilitate the connection, subject to UNSW plans.

A minimum of two (2) 100mm conduits will be provided for each diverse lead-in pathway from separate cable pits into the G25 building. The location of these runs is subject to ongoing consultation with UNSW.

Some UNSW ICTS assets have been identified within the site boundary as seen in the below figure. It is expected that some of these serve the existing car park infrastructure and will be demolished as part of the early works package. Other UNSW ICTS assets appear to support the G23 Solar Industrial Research Facility. These will need to be diverted as part of the early works package.

Figure 5 Site Survey - Project Surveyors



Carrier Networks

Mobile coverage is to be provided to the building. At this stage in the design this will be via DAS infrastructure. To facilitate this, new pit and pipe will be coordinated with the local services providers.
Refer to the table below for a summary of the existing communication services from a Dial-Before-You-Dig (DBYD) in the vicinity of G25:

Table 4: Summary of Existing Communication Services and Assessment Impact

Provider	Service	Assessment Impact	Figure Reference
NBN	Communications	Pits and underground conduits are identified on Botany St, outside the project boundary.	Figure 6
Telstra	Communications	Telstra services have been identified within the G25 project boundary. It is expected that some of the Telstra assets support the existing carpark. The carpark is to be demolished, and it is expected that the service supporting it will be removed as part of a separate enabling works project for G25. Some of the service within the building boundary appears to be serving other facilities. This service will need to be protected and/or diverted as required.	Figure 7, Figure 8 & Figure 5 Site Survey - Project Surveyors
AARNet	Communications	AARNet fibre optic assets have been identified along Botany St, but outside the G25 project boundary. AARNet assets have been identified along Library Walk. The Library Walk asset's locations are not accurately placed and cannot be easily cross-identified on other surveys. These assets may be running through or adjacent to the site and will need to be protected and/or diverted as required.	Figure 9 & Figure 5
Optus	Communications	Cables and manholes/pits have been identified along Botany St, outside the project boundary. Cables in other utilities conduits and manholes/pits have been identified along Library Walk. The Library Walk asset's locations are not accurately placed and cannot be easily cross-identified on other surveys. These assets may be running through or adjacent to the site and will need to be protected and/or diverted as required.	Figure 10 & Figure 5
Uecomm	Communications	Uecomm assets have been identified along Library Walk and part of Botany St. The Library Walk asset's locations are not accurately placed and cannot be easily cross-identified on other surveys. These assets may be running through or adjacent to the site and will need to be protected and/or diverted as required.	Figure 11 Uecomm DBYD Plan & Figure 5

Figure 6: NBN Dial-Before-You-Dig Indicative Plans

Figure 7: Telstra Dial-Before-You-Dig Cable Plan

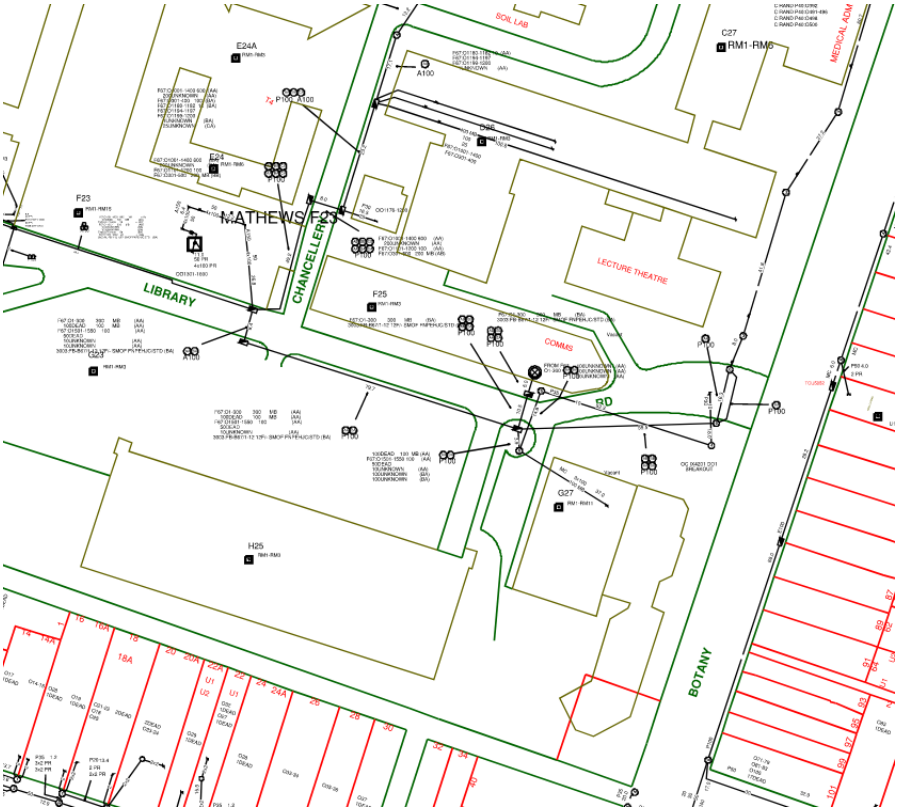


Figure 8: Telstra Dial-Before-You-Dig Main Cable Plan

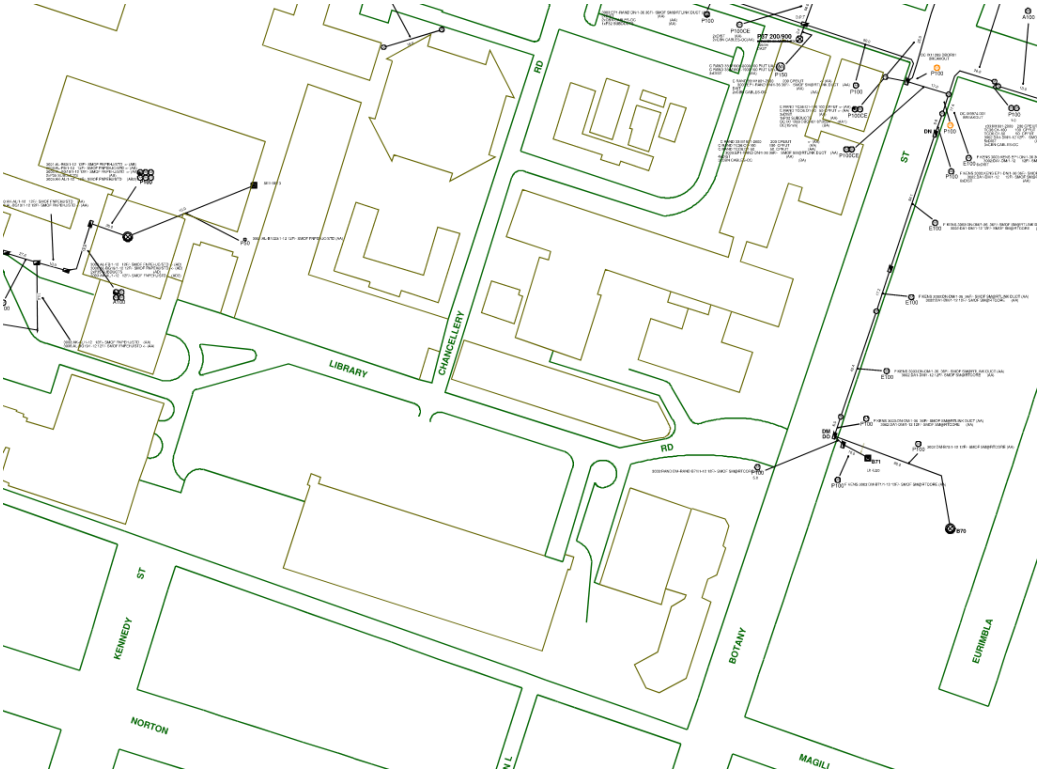


Figure 9: AARNet Dial-Before-You-Dig Plan

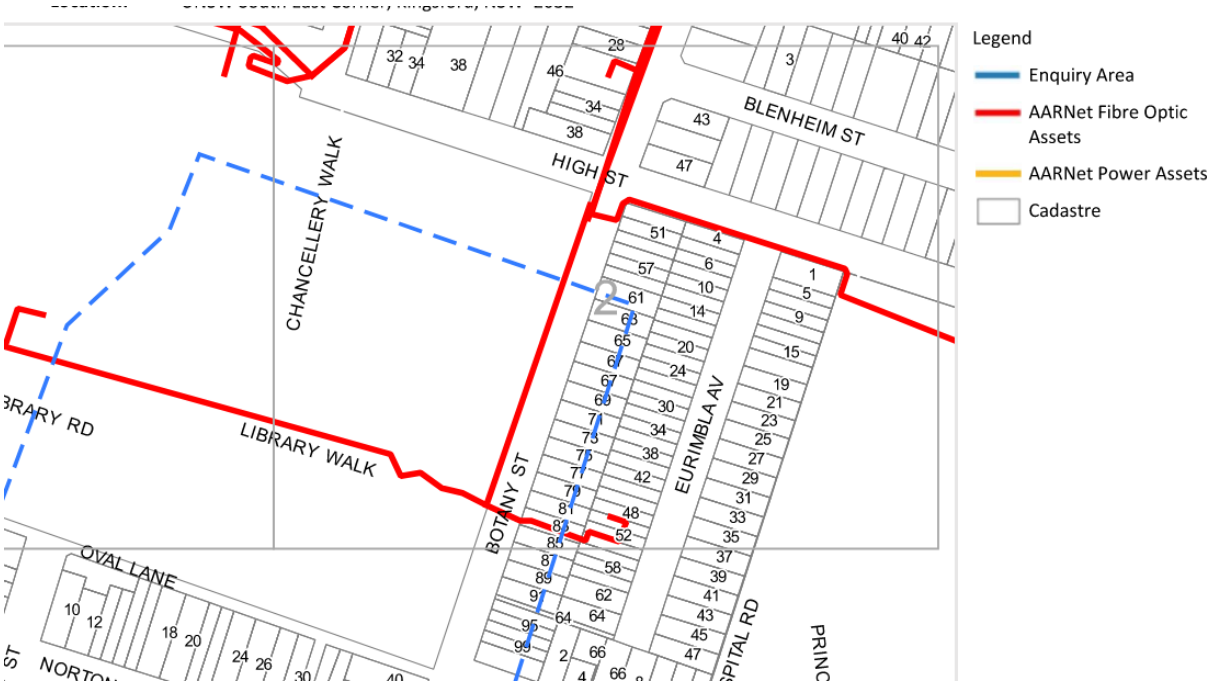


Figure 10 Optus DBYD Plan

Figure 11 Uecomm DBYD Plan

4 Consultation History

The following is a summary of the consultation with utilities to date:

Dial Before You Dig (DBYD)

- The DYBD application was lodged on the 11th of September 2024.
- DYBD to be renewed prior to construction.

NBN

- NBN asset review on the 11th of September 2024 as part of the DYBD application responses.

Telstra, Optus, AARNet, NBN, Uecomm

- Telstra, Optus, AARNet, NBN and Uecomm asset review on the 11th of September 2024 as part of the DYBD application responses.
- The major mobile carriers will be consulted as required via UNSW ICTS during design development.
- The major mobile carriers will be consulted as required for DAS design.

5 Methodology

Utilising survey information from both Dial Before You Dig (DBYD) and authority database (Ausgrid) an initial assessment on the existing services was made to find out which stakeholders may be affected during the development of G25 project, are outlined in this report. These were outlined in section 2 of this report.

6 Mitigation Measures

No mitigation measures have been identified or required at this stage.

7 Conclusion

Based on the preliminary information available at the SSDA stage, there is existing electrical and telecommunication services in the vicinity of the site. Further consultation will be required with Ausgrid, the University of NSW and any nominated telecommunication providers during the next stage of the development to ensure the relevant assets are maintained, removed or established during construction.

Appendix A AARNet Dial Before You Dig Responses

aarnet
Australia's Academic and Research Network

GPO Box 5519
Chatswood
NSW, 1515

Date: 11 Sep 2024

To: Gina Matthews

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

Thank you for your BYDA enquiry (referenced below)—this letter is in relation to the proposed work at location detailed below. AARNet has assets in the area but not in the local vicinity of the proposed work.

SEQUENCE NO.:	244523865
JOB NO.:	37568423
LOCATION:	UNSW South East Corner Kingsford NSW 2032
COMMENCEMENT DATE:	16 Sep 2024

Attached is a map indicating the location of the enquiry area and an approximate location of AARNet's underground infrastructure in the local vicinity.

There may be additional AARNet assets in this area that are contained within Telstra duct. No work is to take place until plans have been obtained from Telstra and reviewed as necessary.

Any information provided is valid for 28 days from the date of issue of this document.

WARNING: When working in the vicinity of AARNet's underground infrastructure you have a legal *Duty of Care* that must be observed.

Please review the map and if you have any further concerns, contact the AARNet NOC on 1300 APL NOC.

To best manage the risk of damage and liabilitiy, we recommend that you engage the services of a BYDA Certified Locator

Important Notice

Where AARNet plans have been attached, they are indicative of the position of AARNet Pty Ltd's (**AARNet**) installation/s **only**. Services belonging to other third parties are not included on these plans.

These plans have been prepared solely for the use of AARNet and any reliance placed on these plans by you is entirely at your own risk. The plans may show the position of our assets relative to fences, buildings, etc, as they existed at the time the fibre, etc, was installed. The plans may not have been updated to take account of any subsequent change in the location or style of those features since the time at which the plans were initially prepared.

AARNet 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, omission, lack of detail, transmission failure or corruption in the information provided. AARNet does not accept any responsibility for any loss that you or anyone else may suffer in connection with the provision of these plans, however that loss may arise (including whether or not arising from the negligence of AARNet, its employees, agents, officers or contractors).

The recipient of these plans must use their own care and diligence in carrying out their works and must carry out further surveys to locate services at their work site. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to AARNet's installations.

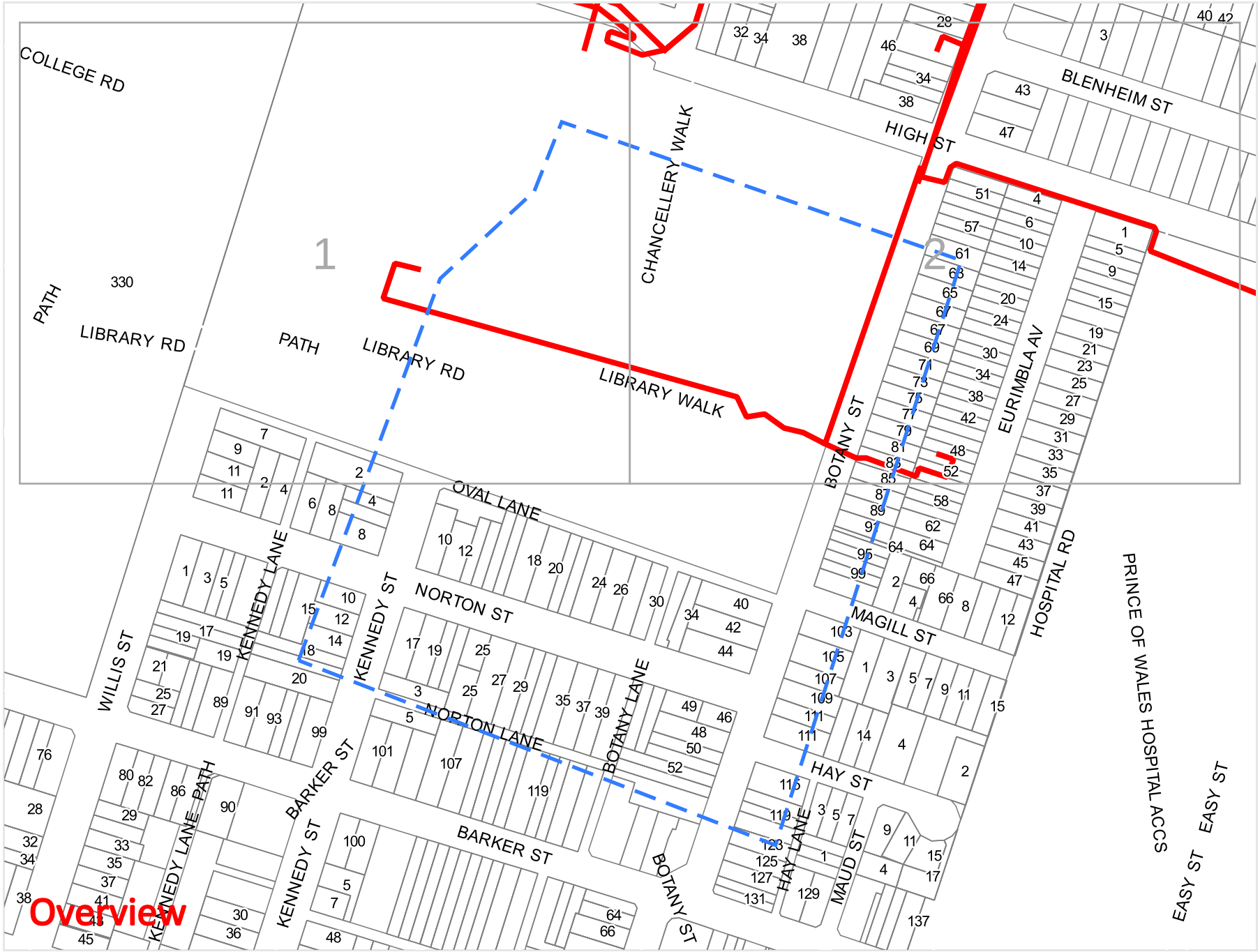
Disclaimer: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

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

aarnet
Australia's Academic and Research Network

Sequence No: 244523865
Job No: 37568423
Location: UNSW South East Corner, Kingsford, NSW 2032

BEFORE YOU DIG www.byda.com.au



Legend

- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastre

N

Scale: 1:3075
Expires: 08 Oct 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

aarnet
Australia's Academic and Research Network

Sequence No: 244523865
Job No: 37568423
Location: UNSW South East Corner, Kingsford, NSW 2032

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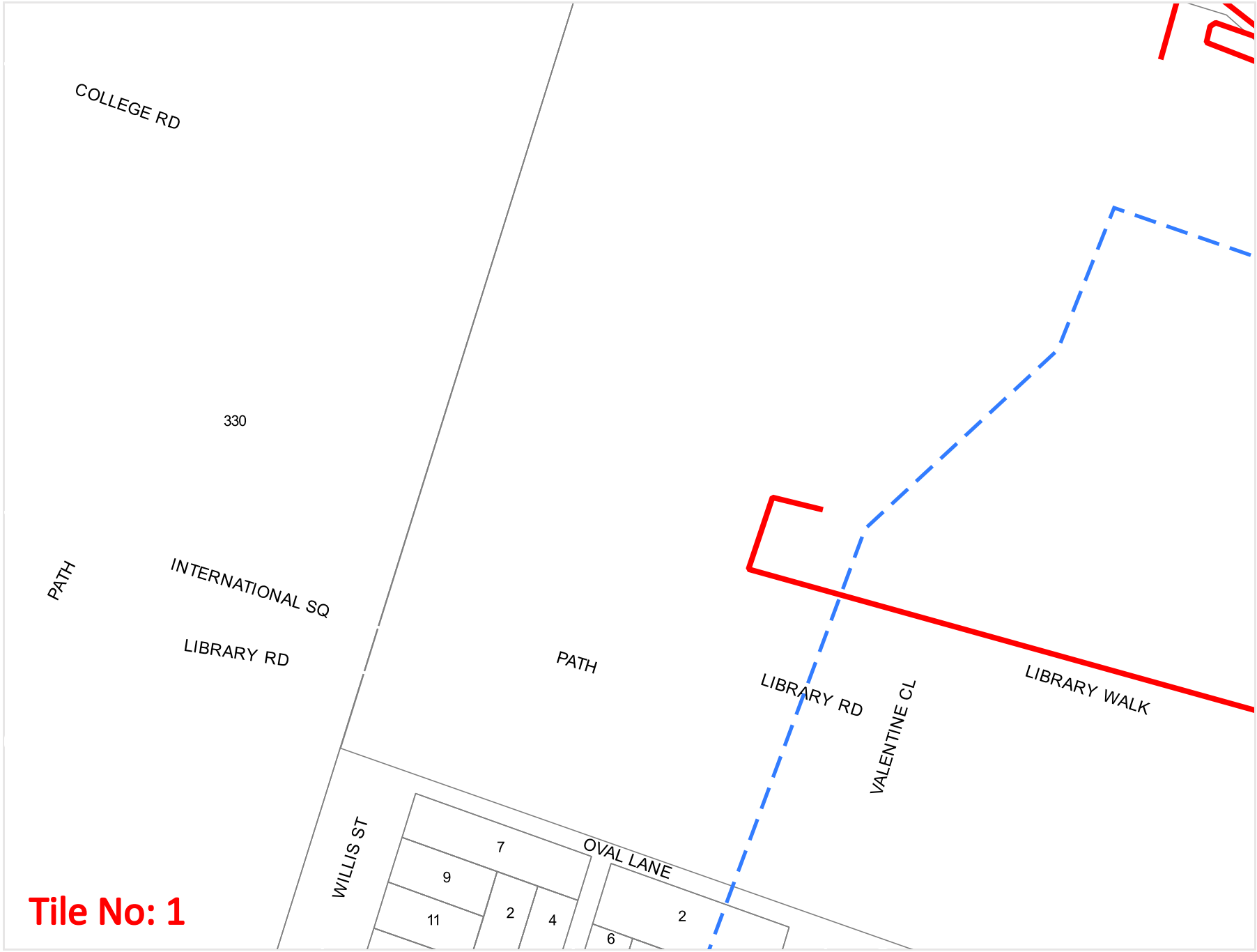

Legend

- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastre

N

Scale: 1:1500
Expires: 08 Oct 2024

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aarnet
Australia's Academic and Research Network

Sequence No: 244523865
Job No: 37568423
Location: UNSW South East Corner, Kingsford, NSW 2032

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Legend

- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastre

N

Scale: 1:1500
Expires: 08 Oct 2024

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aarnet
Australia's Academic and Research Network

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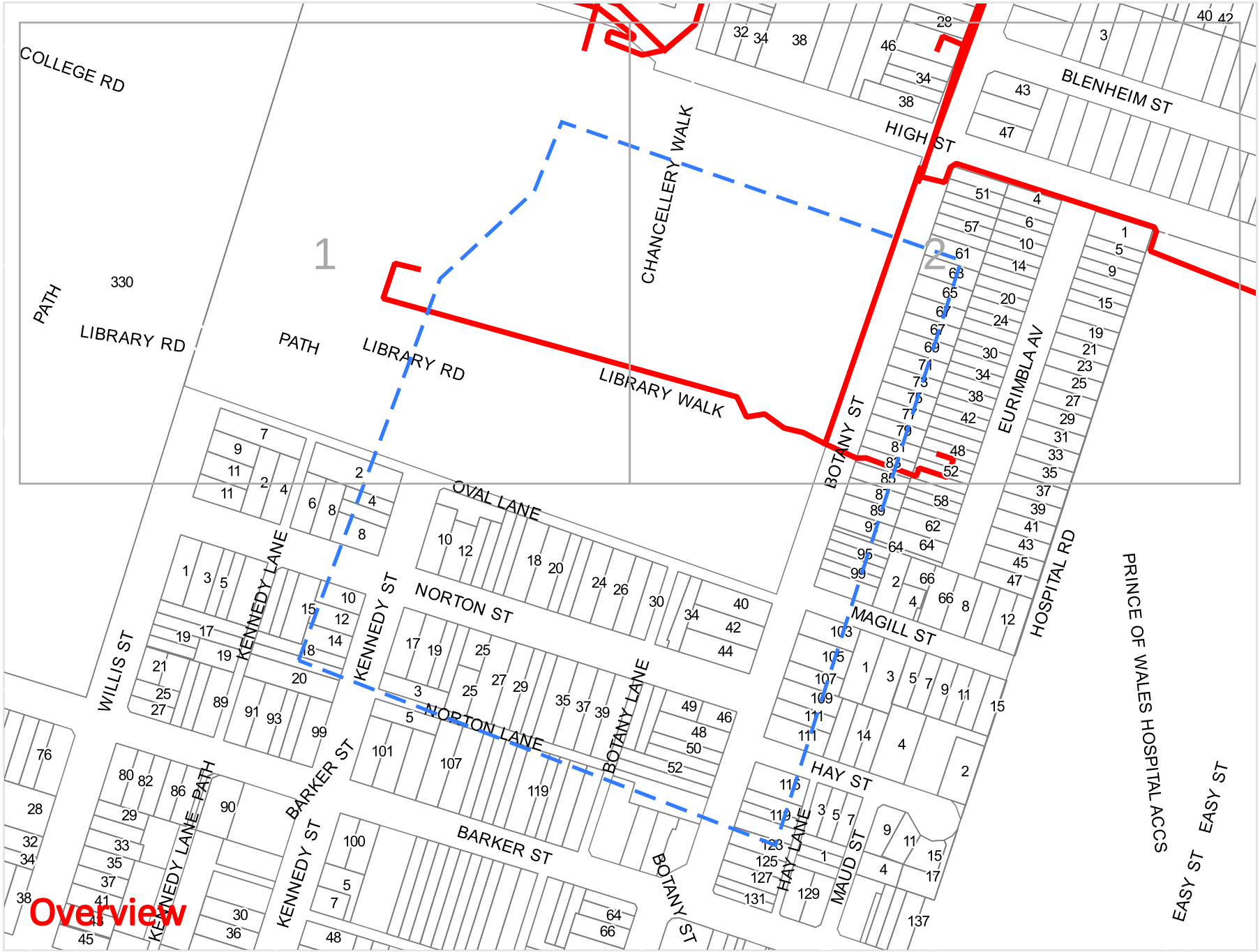

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- Enquiry Area
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- AARNet Power Assets
- Cadastre

N

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aarnet
Australia's Academic and Research Network

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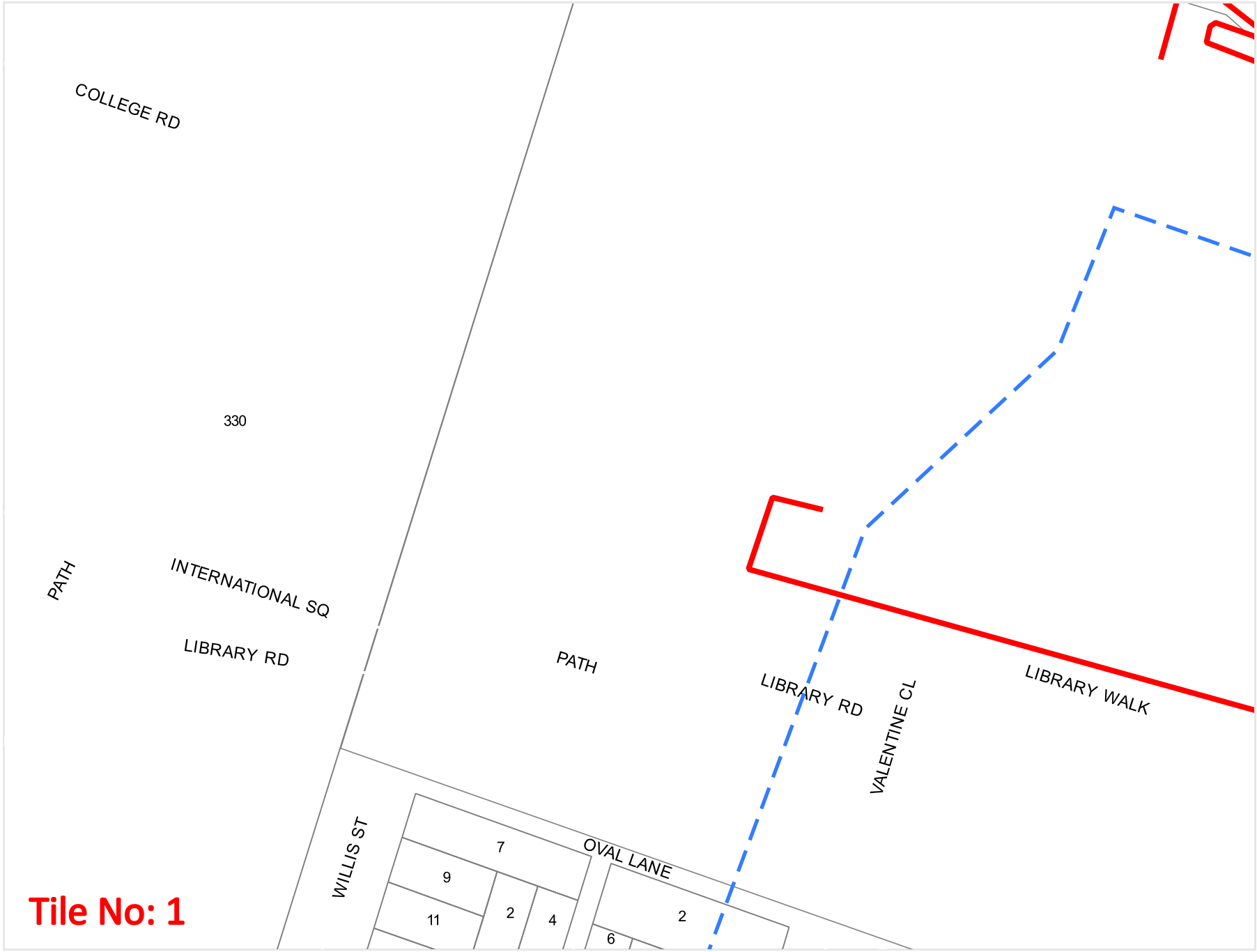
Location: UNSW South East Corner, Kingsford, NSW 2032

BEFORE YOU DIG www.byda.com.au



Legend

- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastre

N

Scale: 1:1500
Expires: 08 Oct 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

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Australia's Academic and Research Network

Sequence No: 244523865
Job No: 37568423
Location: UNSW South East Corner, Kingsford, NSW 2032

BEFORE YOU DIG www.byda.com.au

Legend

- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastre

N

Scale: 1:1500
Expires: 08 Oct 2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

aarnet
Australia's Academic
and Research Network

GPO Box 5519
Chatswood
NSW, 1515

Guidelines for digging in the vicinity of

AARNet Fibre Optic infrastructure

REQUIREMENTS FOR ALL AREAS

Under no circumstances shall construction, digging or excavating work entailing crossing AARNet plant be carried out without first exposing or locating the AARNet asset by an accredited locator and under the supervision of an accredited plant location contractor.

Manual pot-holing needs to be undertaken with extreme care, common-sense and employing techniques least likely to damage cables. For example, orientate shovel blades and trowels parallel to the cable rather than digging across the cable.

Visual location of asset must be carried out by hand digging or using non-destructive water jet method (pot holing) where construction activities may damage or interfere with AARNet assets.

The following minimum clearances must be maintained between mechanical construction activity and the located AARNet asset.

Jackhammers / Pneumatic Breakers	Not within 1.0m of actual location
Vibrating Plate or Wacker Packer Compactor	Not within 0.5m of actual location 300mm compact clearance before compactor can be used over AARNet conduits. 750mm compact clearance cover before compactor can be used Over AARNet Direct Buried cable
Boring Equipment (in-line, horizontal and vertical)	Not within 5.0m of actual location without supervision of accredited plant location contractor onsite OR AARNet asset must exposed via hand dig or nondestructive water jet method (pot holing). AND AARNet asset must not be crossed without first exposing the asset at the crossing point and not without an accredited plant location contractor representative onsite
Heavy vehicle Traffic (over 3 tonnes)	Not to be driven over AARNet conduits or assets with less than 600mm of cover. Depth to be verified via hand digging
Mechanical Excavators, Farm ploughing, Boring, Tree removal, fencing	Not within 1.0m of actual location. Constructor to hand dig or use non-destructive water jet method (pot holing) and expose asset

aarnet
Australia's Academic
and Research Network

GPO Box 5519
Chatswood
NSW, 1515

REQUIREMENTS FOR URBAN AREAS

Under no circumstances shall construction, digging or excavating work be carried out: within 1.5m of AARNet assets without first locating and identifying the AARNet asset by an accredited locator and under the supervision of an accredited plant location contractor.

REQUIREMENTS FOR RURAL AREAS

Under no circumstances shall construction, digging or excavating work be carried out within 10m of AARNet plant be carried out without first locating and identifying the AARNet asset by an accredited locator and under the supervision of an accredited plant location contractor.

ASSET RELOCATIONS

You are not permitted to relocate, modify or alter any AARNet assets under any circumstances. Please contact AARNet Infrastructure Development Group via email apl-dig@aarnet.edu.au for all enquiries relating to the relocation of AARNet assets.

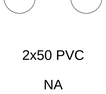
DAMAGE

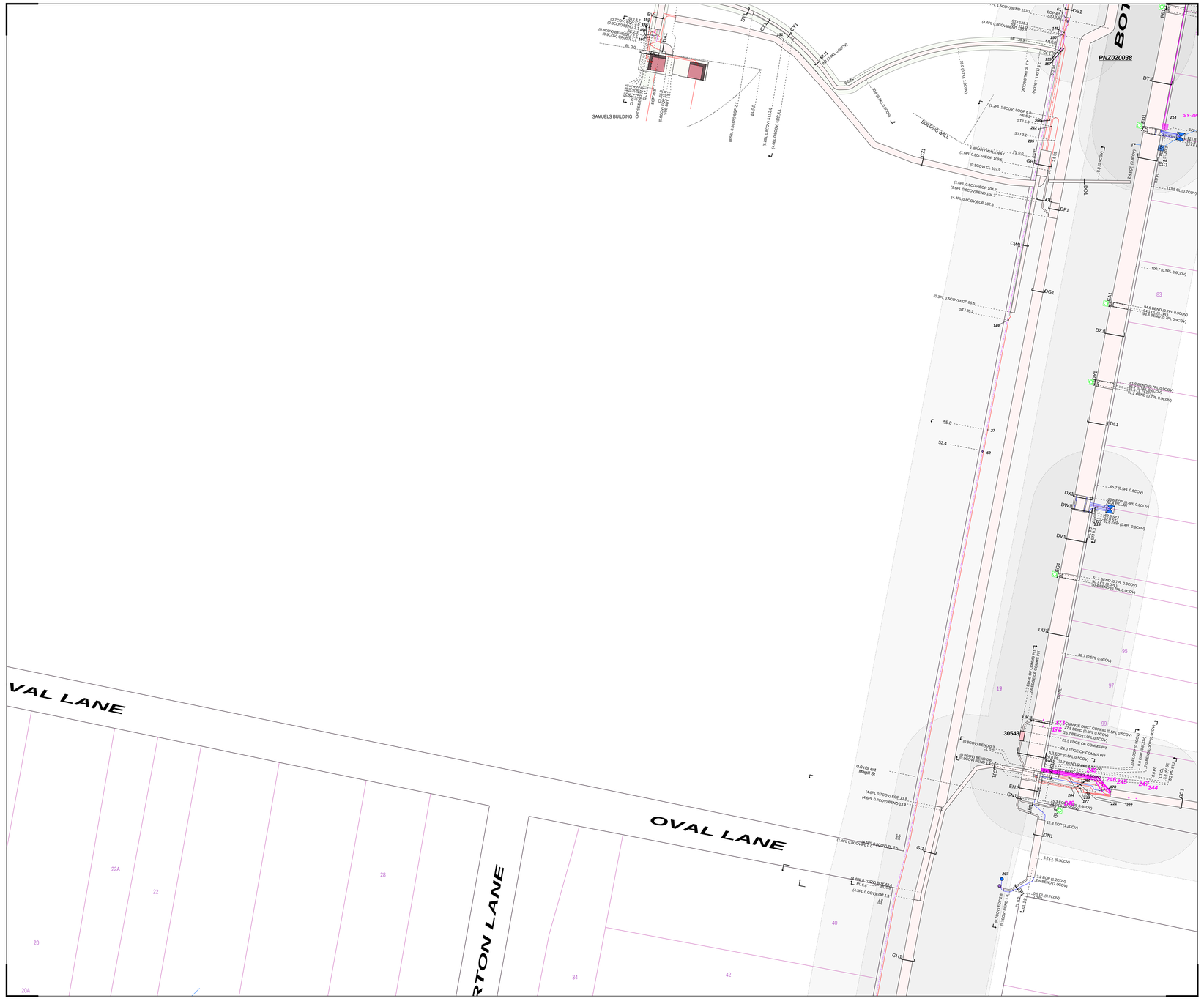
AARNet will seek Compensation for any loss caused by damage to its assets. Damage to any AARNet asset must be immediately reported to AARNet NOC on 1300 APL NOC (1300 275 662).

FURTHER ASSISTANCE

Assistance can be obtained by contacting AARNet NOC on 1300 APL NOC (1300 275 662) Where an on-site location is provided by an accredited locator, the owner is responsible for all costs associated with hand digging or use of non-destructive water jet method (pot holing) to visually locate AARNet assets. If plant location drawings or visual location of AARNet assets by digging reveals that the location of AARNet plant is situated wholly or partly within the owner work area, then AARNet Infrastructure Development Group
apl-dig@aarnet.edu.au **must be contacted to discuss possible engineering solutions**.

Appendix B Ausgrid Dial Before You Dig Responses





SY833 - BT1

2x125 PVC

0.7-0.9 KL

0.5-0.6

Ref: A8

SY833 - BU1

2x125 PVC

0.7-1.0 KL

0.6-1.3

Ref: A8

SY833 - BV1

4x125 PVC

NA

0.4-0.6

WARNING: SHALLOWER THAN
STANDARD COVER

Ref: A7

SY833 - CW1

1x50 PVC

2x150 PVC

0.3-0.5

0.5-0.6 BFWR

Ref: B9

SY833 - CX1

1x125 PVC

5.2-8.5 BL

0.8

Ref: A8

SY833 - CY1

1x125 PVC

5.2-8.5 BL

0.8

Ref: A8

SY833 - CZ1

4x125 PVC

1x50 PVC

GPS

0.6-1.1

Ref: B9

SY833 - DA1

4x150 PVC

2x50 PVC

0.6

0.6

Ref: A7

SY833 - DB1

0.9

0.6

4x150 PVC

NR

0.75

Ref: A10

SY833 - DC1

4x125 PVC

2x50 PVC

NA

0.6

Ref: A7

SY833 - DF1

5x150 PVC

2x63 PVC

4.4

0.8

Ref: B9

SY833 - DG1

6x150 PVC

2x63 PVC

3.6-7.3

0.7-1.0

Ref: C9

SY833 - DI1

1x150 PVC

1.6-4.4

0.6-0.8

Ref: B9

SY833 - DN1

1x50 PVC

1x63 PVC

4x150 PVC

NA

1.2

Ref: F9

SY833 - DO1

2x50 PVC

NA

0.9

Ref: B10

SY833 - DY1

2x50 PVC

3.0

0.9

Ref: C10

JOINT DETAIL REPORT

No.	Bk-Pg	Pl/Cvr	Joint Location
Map: SY833			
27	70-90	19.20/0.61	55.8 N OF MAGILL ST NBL EXT
61	ER82-012	0.80/0.60	3.9m NORTH OF THE KB LINE AT THE ENTRANCE TO THE NSW UNIVERSITY
62	70-90	19.20/0.61	52.4 N OF MAGILL ST NBL EXT
145	ES15-0349	0.90/0.70	131.3 N OF OVAL LN N PL
149	ES15-0207	0.70/0.70	85.2 N OF OVAL LN N PL
150	ES15-0207	0.80/0.80	131.0 N OF OVAL LN N PL
151	ES15-0208	/0.80	2.8 E OF UNSW SAMUELS BUILDING E CORNER
154	ES15-0343	2.30/0.80	
155	ES15-0343	0.60/0.70	128.9 N OF OVAL LN N PL
156	ES15-0349	2.30/0.80	
157	ES15-0349	0.80/0.70	128.9 N OF OVAL LN N PL
160	ES16-0241	2.20/0.80	18.2 W OF SAMUELS BUILDING E BL
161	ES16-0241	3.70/0.80	18.4 W OF SAMUELS BUILDING E BL
172			
173			
177	SC11992-0021	0.07/1.00	AS PER GPS
178	SC11992-0021	/0.90	AS PER GPS
179			CAPTURED ASPER NP
204			CAPTURED ASPER NP
205	ES20-0185	1.40/1.00	
206	ES20-0185	0.70/1.00	
208	SC12464-0009		Pit SYNR
212	ES20-0185	0.70/1.00	
214	AN22265-0005	0.30/0.60	121.8 N OF BOTANY ST 77 W BDY
215	AN22265-0004	0.30/0.60	62.0 N OF BOTANY ST 91 W BDY
221	SC11992-0021+...	0.05/0.90	AS PER GPS
222	SC11992-0021+...	0.05/0.90	AS PER GPS
227	AN22265-0004	0.30/0.60	62.3 N OF BOTANY ST 91 W BDY
244			
245			
246			
247			
248			
249			
258			
259	ES23-0762	/0.80	AS PER GPS POINTS
260	ES23-0762	/0.80	AS PER GPS POINTS

WARNING

Ausgrid's plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street.
Persons working near electricity networks must exercise care and will be held responsible for any damage caused.
You must excavate by hand or use vacuum excavation to establish the location of Ausgrid underground cables and associated assets.
Underground: Working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in SafeWork NSW Code of Practice for Excavation and SafeWork NSW Guide for Work Near Underground Assets
as well as recommendations of Ausgrid's Network Standard NS156.
Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers.
Workers must maintain safe approach distances and follow applicable SafeWork NSW Codes of Practice.
NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information (c) 2016, used under Creative Commons licence version 4.0.

SY83321	SY83322	SY83411
SY83323	SY83324	SY83413
SY83341	SY83342	SY83431

ISG GRID

SY83324

MOCS

INFORMATION ON THIS PLAN ONLY VALID
FOR 30 DAYS FROM ISSUE DATE

Page 1 of 2

1:250

0 15 metres

SY833 - EA1

2x50 PVC

3.1

0.9

Ref: C10

SY833 - ED1

2x100 PVC

2.3

0.6

Ref: B10

SY833 - EE1

2x50 PVC

3.1

0.9

Ref: A10

SY833 - EF1

1x63 PVC

NA

0.7-1.2

Ref: F9

SY833 - EG1

2x100 PVC

0.7-2.3

0.7

Ref: D9

SY833 - GB1

1x50 PVC

6x150 PVC

0.5

0.6-1.0 BFWR

Ref: B9

SY833 - GJ1

3x150 PVC

4.6-GPS

0.8

Ref: F9

SY833 - GK1

3x150 PVC

GPS

0.8

Ref: F9

SY833 - GL1

1x50 PVC

NA

0.5

Ref: F9

SY833 - GM1

1x50 PVC

NA

0.5

Ref: F9

SY833 - GN1

1x50 PVC

1x63 PVC

0.5

0.4

Ref: F9

SY833 - DK1

11x150 PVC

2x50 PVC

1x63 PVC

0.5

0.4-0.5

Ref: E9

A0 UG Details

Ausgrid | DERIVE SCALE FROM COMPARISON TO RELATIVE FEATURES & SCALE ON PAGE 1 | 20 Aug 24 | SY83411 | MOCS

WARNING: REFER TO DISCLAIMER ON PAGE 1

If further information is required, please contact:
Ausgrid BYDA
Phone: (02) 4951 0899
Fax: (02) 4951 0729

Emergency Phone Number 131388

Underground Cable Location Search Advice

-- Ausgrid Assets Affected –

To:	Gina Matthews Not Supplied 73 Miller Street North Sydney NSW 2060		
		Phone No:	+61402570731
		Issue Date:	11/09/2024

In response to your enquiry, Sequence No: 244523861 the records of Ausgrid disclose that there **are** Ausgrid underground cables in the defined search location and relevant Ausgrid plans have been provided.

This search is based on the geographical position of the dig site as denoted in the Before You Dig Australia caller confirmation sheet and an overview is provided:

Address:	UNSW South East Corner Kingsford NSW 2032
Job #:	37568423

Important

- All information provided to you is **ONLY VALID FOR 30 DAYS** from the date of issue
- You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret plans.
- If you require a full size print of A0 plans and don't have the resources to do so please contact our office on 49510899 to request a hard copy to be posted. **Please allow 3 working days for delivery.**
- Please note you will ONLY receive portions of your search area that contain Ausgrid Underground Assets

YOU MUST READ AND UNDERSTAND THE *SUPPLEMENTARY MATERIAL* CONTAINED IN THIS ADVICE BEFORE PROCEEDING WITH ANY WORKS.

Summary of Supplementary Information:

Material	Purpose	Location
Important Information.pdf	Details important information	Attached
Working near Ausgrid Cables.pdf	Summary of NS156	Attached
COMN0119 How to Read Ausgrid Plans.pdf	Details how to read Ausgrid plans	Attached
SafeWork NSW "*Work near underground assets: Guide*"	To assist you in deciding appropriate measures to eliminate or control risks when working near underground assets.	Web Link [Click Here]
Ausgrid's Network Standard NS156	For important information for work near or around underground cables	Web Link [Click Here]
Ausgrid's Network Standard NS199	This Network Standard applies to specific work on Ausgrid Low Voltage Underground Assets and associated Hazards	Web Link [Click Here]
Working in Confined Spaces	For important information when working in confined spaces	Web Link [Click Here]

1	2
SY833 - AU1 NR / 0.6 Ref: B4	SY833 - AV1 2x140 FC NA / 1.0 Ref: B5
SY833 - AW1 1x125 PVC NA / 0.5 Ref: B4	SY833 - AX1 1x125 PVC 0.6-0.7 / 0.5 Ref: C5
SY833 - AY1 0.7 / 0.6 0.9-2.4 / 0.6 Ref: C4	SY833 - AZ1 1x125 PVC 0.6 / 0.5 Ref: C5
SY833 - BA1 2x140 FC 0.6 / 0.6 Ref: C3	SY833 - BB1 2x140 FC 0.7 / 0.6 0.3 / 0.6 Ref: C4
SY833 - BC1 2x140 FC 0.7 / 0.6 Ref: C4	SY833 - BF1 2x140 PVC 0.6 / 0.7 Ref: F3
SY833 - BG1 3x140 PVC 0.6 / 0.5 Ref: F3	SY833 - BW1 0.5 / 0.6 Ref: C7
SY833 - BX1 2x100 EW 2.0 ext PL / 0.5-0.6 Ref: B9	SY833 - BY1 0.5 / 0.6 Ref: D8
SY833 - BZ1 2x100 EW NA / 0.6 Ref: D8	SY833 - CA1 1x140 FC 0.5 / 0.5-0.6 Ref: D9

JOINT DETAIL REPORT

No.	Bk-Pg	Pl/Cvr	Joint Location
Map: SY833			
12	518-72	2.13/0.61	0.6 N OF KIOSK SBL
13	536-18	1.07/0.76	1.0 N OF KIOSK SBL
14	536-11	0.61/0.61	4.3 E OF KENNEDY LANE EBL
15	348-90	2.00/0.61	7.0 N OF BARKER ST NBL
28	70-89	1.98/0.61	35.7 S OF HAY ST SBL EXT
29	70-88	1.83/0.61	1.2 W OF BOTANY ST WBL
30	538-18	2.29/0.84	4.4 W OF BOTANY ST WBL EXT
31	538-18	0.61/0.84	5.6 W OF BOTANY ST WBL EXT
34	ER18-40	1.09/0.41	29.2 E OF BOTANY ST EBL
40	1343-16	0.89/0.41	3.2 S OF KIOSK NBL
41	347-176	1.30/0.69	27.1 N OF BARKER ST NBL
42	1343-17	0.51/0.51	12.0 E OF KENNEDY ST EBL
43	347-177	2.67/0.61	32.7 W OF KENNEDY ST WBL
44			NA
53	538-18	2.74/0.61	18.1 N OF BARKER ST NBL
54	934-95	0.61/0.53	17.1 S OF BARKER ST SBL
55	538-15	0.53/0.46	0.3 W OF KIOSK EBL
57	937-7	0.30/0.61	0.3 FROM KIOSK
59	1668-2	0.91/0.61	3.1 E OF HAY LANE EBL
60	ES07-288	1.10/0.60	0.8 W OF BOTANY LANE EPL
63	70-88	1.83/0.61	2.6 W OF BOTANY ST WBL EXT
64	70-75	1.22/0.61	6.4 N OF MIDDLE ST NBL
89	538-18	2.29/0.84	4.4 W OF BOTANY ST WBL EXT
90	538-18	0.61/0.84	5.6 W OF BOTANY ST WBL EXT
91	538-18	0.84/0.69	1.1 W OF KIOSK WBL
92	538-11	1.14/0.69	1.1 W OF KIOSK WBL
94	ES05-194	0.80/0.80	1.5 E OF HAY LANE EPL
95	ES05-194		0.4 E OF HAY LANE EPL
119			
120			
164	ES17-0404	0.70/0.60	8.4 W OF HAY LN W PL
165	ES17-0404	0.80/0.60	3.5 W OF HAY LN W PL
169	SM24849-0017	3.40/1.00	58.7 N OF MIDDLE ST NPL
170	SM24849-0017	3.60/1.00	58.7 N OF MIDDLE ST NPL
174	SC11992-0012	4.20/1.10	20.2 SW OF BOTANY ST & BARKER ST W PL
175	SC11992-0012	4.40/1.10	20.0 SW OF BOTANY ST & BARKER ST W PL
176	SC11992-0012	3.80/1.10	18.8 SW OF BOTANY ST & BARKER ST W PL

WARNING

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Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers.
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N

SY8331	SY8332	SY8341
SY8333	SY8334	SY8343
MA2111	MA2112	MA2121

ISG GRID

SY8334

MOCS

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE

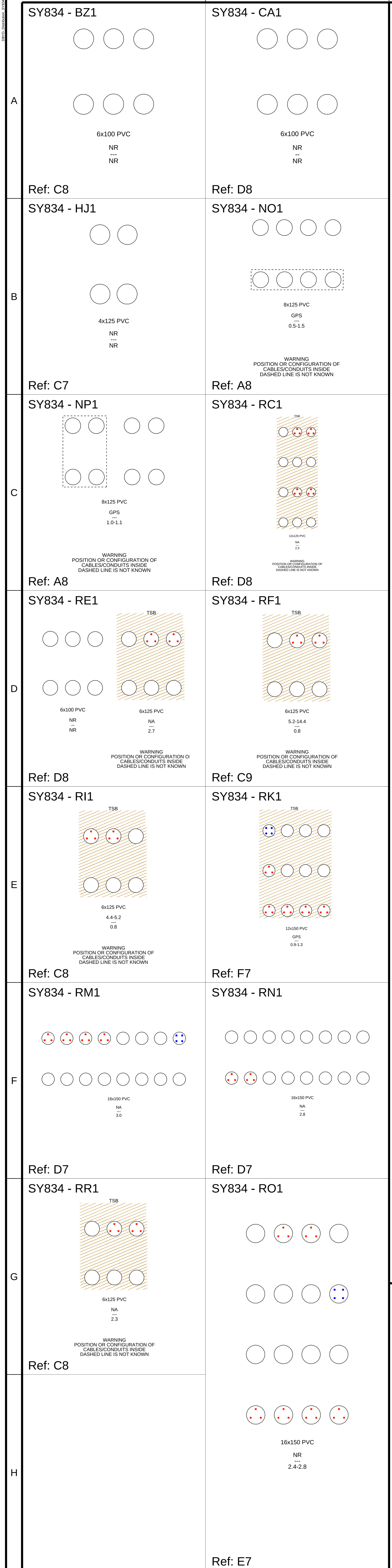
1:500

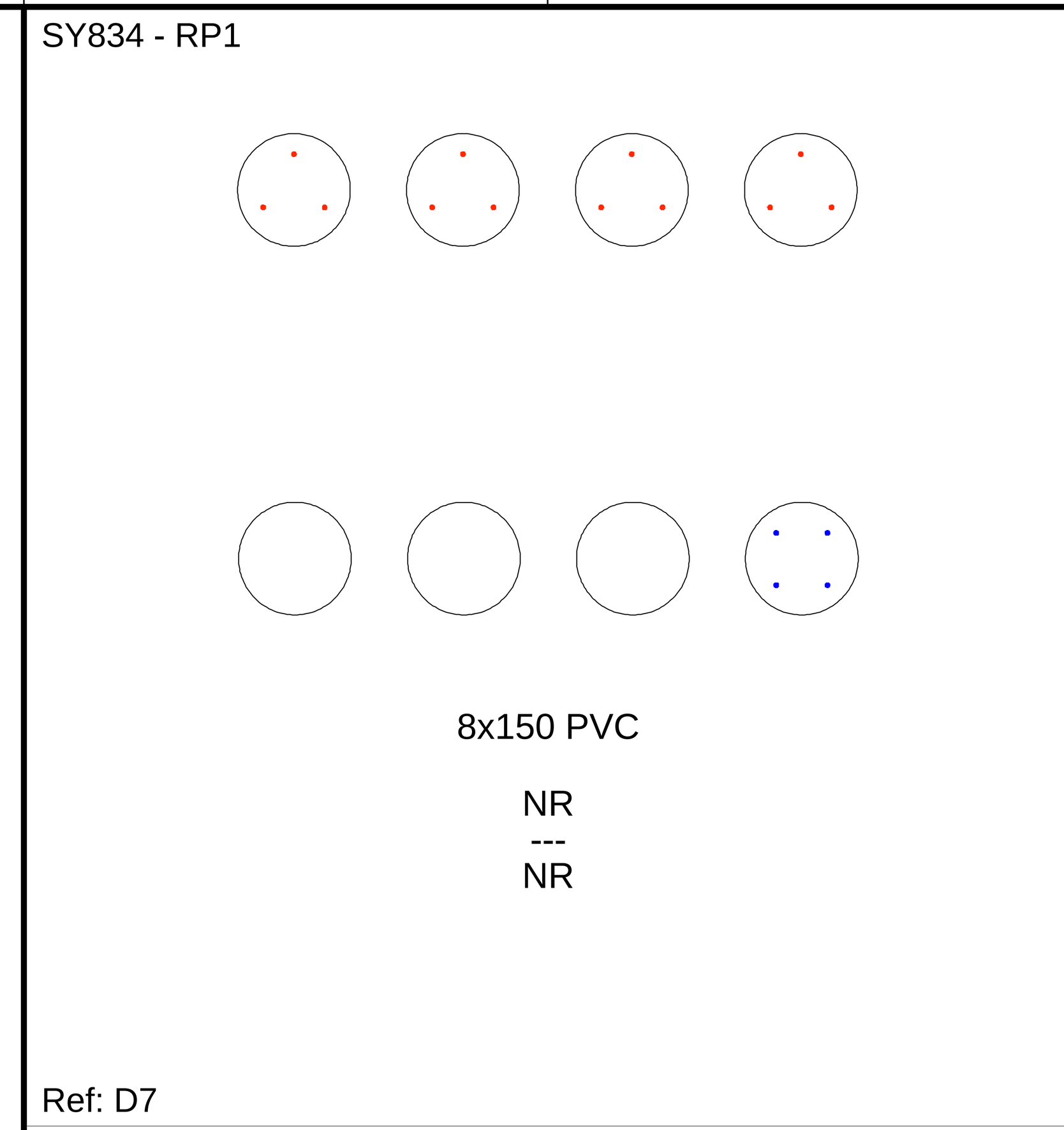
0 — 30 metres

Ausgrid

11	12
SY833 - CB1 Ref: D8	SY833 - CC1 5x140 FC NA / 0.8 Ref: D9
SY833 - CD1 0.8 / 0.6 Ref: D9	SY833 - CE1 1x140 FC 0.5 / 0.5-0.6 Ref: D9
SY833 - CF1 1x140 FC 0.5 / 0.5-0.6 Ref: D9	SY833 - CG1 1x125 PVC 0.7-0.9 / 0.5-0.8 Ref: D10
SY833 - CH1 2x140 FC NA / 0.8-1.0 Ref: D10	SY833 - CJ1 2x100 EW Ref: G8
SY833 - DH1 TSB Ref: F8	SY833 - EI1 TSB 6x150 PVC 1x63 PVC 2.6-2.8 / 0.9-1.1 Ref: G10
SY833 - EJ1 TSB 5x150 PVC 1x63 PVC 2.6 / 0.9 Ref: G10	SY833 - EK1 2x150 PVC NR / 0.7 Ref: G10
SY833 - EL1 4x150 PVC NR / 0.8 Ref: G10	SY833 - EM1 3x150 PVC NR / 0.4-0.8 Ref: G10
SY833 - EN1 TSB 6x150 PVC 1x63 PVC 2.8 / 0.9 Ref: G10	SY833 - EP1 1x50 PVC 0.3 / 0.4 Ref: G10

A0 MOCS_std_plot





JOINT DETAIL REPORT

No.	Bk-Pg	Pl/Cvr	Joint Location
Map: SY834			
908	ES20-0098+...		Pit SY30013
950			Pit sy29943
951	ES20-0098+...		Pit SY30013
977			Pit sy29943
981	SC14233-0001		Pit SY30013
982	ES21-0446+...		Pit sy29943
983	ES21-0446+...		Pit sy29943
985	ES21-0446		Pit sy29943
1002	ES21-0565		Pit sy29943

WARNING

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N

SY83322	SY83411	SY83412
SY83324	SY83413	SY83414
SY83342	SY83431	SY83432

ISG GRID

SY83413

MOCS

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE

Page 1 of 1

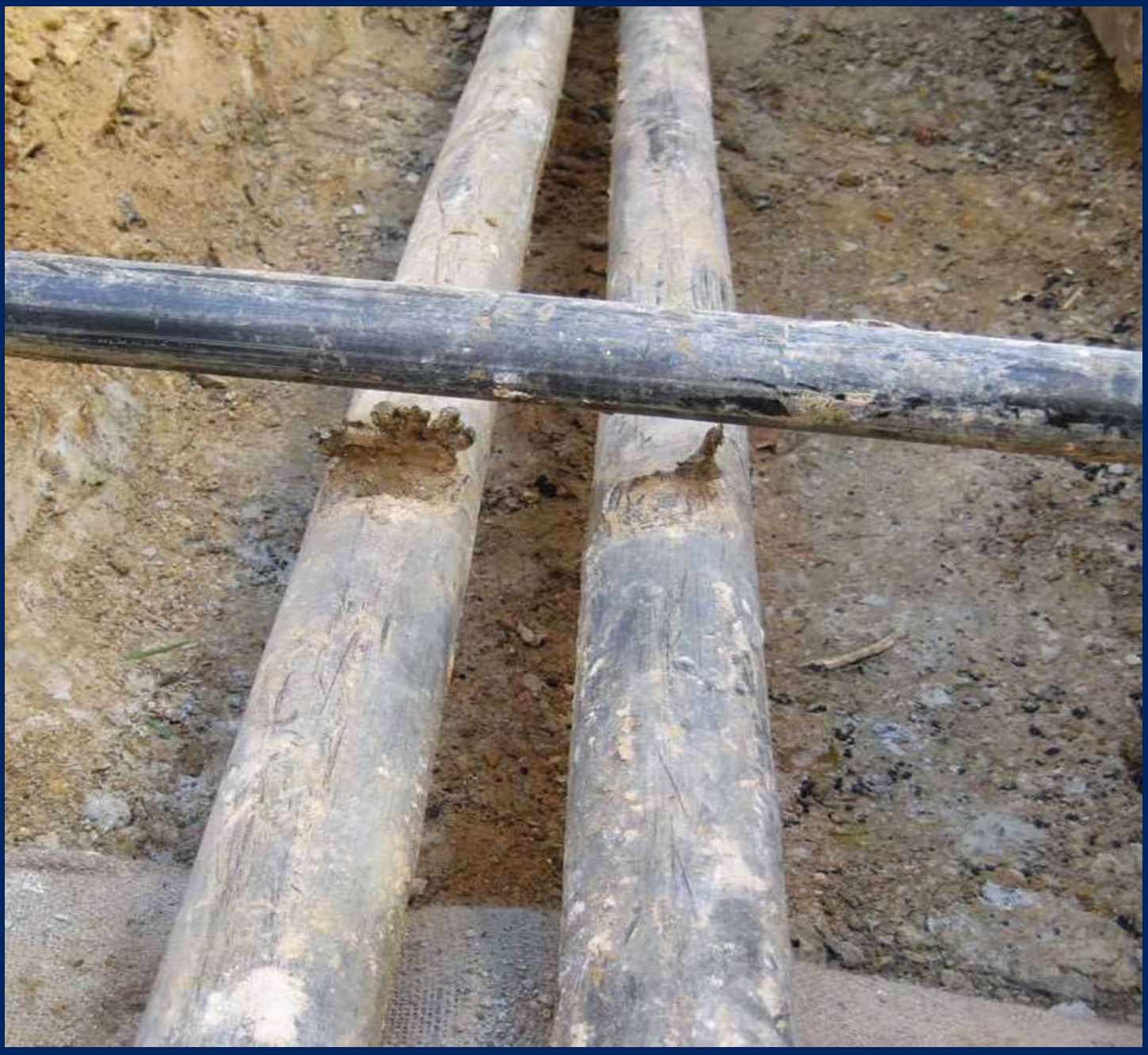
1:250

0 — 15 metres

Ausgrid

Working near
Ausgrid cables

Finding out what's below the surface can save your life.
Contact Before You Dig Australia @ www.byda.com.au or call 1100



Ausgrid

Changes in the Law.

NSW legislation now requires people who are planning to do excavation work to obtain copies of underground electricity cable plans through Before You Dig Australia (Phone 1100) and to make sure that the plans are no more than 30 days old when excavation commences.

The aim of the legislation is to ensure that when workers dig near electricity cables, they will establish the exact location of the cables and thus avoid coming into contact with them or damaging them. This will ensure worker safety and also prevent disruption to Ausgrid's electricity network.

This brochure gives you a brief overview of how to prepare for excavation works near or around electricity cables. It is important that you also consult our guide How to Read Ausgrid Plans and make sure that workers engaged in excavation works fully understand how to read the plan. If the people actually doing the digging can't read the plans, it is essential that the work is directed by a person who has been trained to read Ausgrid's plans.

You must also consult Ausgrid's Network Standard NS156, which contains comprehensive information concerning all the issues that arise when excavating near underground cables (such as safety hazards from asbestos conduits and organochlorine pesticides).

Excavating near transmission cables.

If any cable plan you receive says "You are working near transmission cables" it is compulsory to notify Ausgrid two weeks before work is scheduled to begin. Ausgrid will then arrange for an Ausgrid representative to attend the site during excavation work.

Phone the Ausgrid Transmission enquiries line on (02) 4951 9200 to arrange for an Ausgrid representative in your region.

Be prepared. Wise words for safety at work.

Here are some simple precautions you and your workers need to follow to be as safe as possible.

- Make sure that your Before You Dig Australia (BYDA) plan is less than 30 days old
- Keep a copy of the cable plan on site at all times
- Make sure the excavation work is conducted or directed by staff who are trained to read the plan
- Hand dig until the exact location of the cable has been established
- Have on site at all times a first aid kit and a person trained in resuscitation
- Wear protective clothing, including safety footwear and safety helmet
- Have emergency contact numbers on site
- Set up safety barriers, witches hats and warning lights to reduce the risk of injury to the general public
- Comply with all SafeWork NSW requirements and codes.

See also:

- **SafeWork NSW Guidelines: Work Near Underground Assets**
- **SafeWork NSW Code of Practice: Excavation Work**
- **SafeWork NSW Code of Practice: Work Near Overhead Powerlines (if applicable).**

Before you start. Complete the checklist. Stop and look around.

Before you start excavating, consult the flow chart and fill in the checklist at the end of this brochure.

Then, be sure to look for clues where cables might be located on the site: for example, pits, distribution pillars (green and other colours), cables attached to the side of poles, street lights without overhead wires.

Do all power cables look the same?

No. Power cables come in different sizes, colours and coverings. They may be covered in black plastic sheath, steel wires in a sticky bitumen like material, or even a simple lead or steel wire/tape sheath.

What else should I look for below ground level?

Cables may also be buried in orange PVC or PE conduits or even in earthenware or steel pipes. A bank of cables may be covered with electrical bricks, plastic warning markers or protective covers, or they may not be covered at all. If they have been buried close to the surface, they may be covered by concrete slabs or steel plates.

When in doubt, ask Ausgrid.

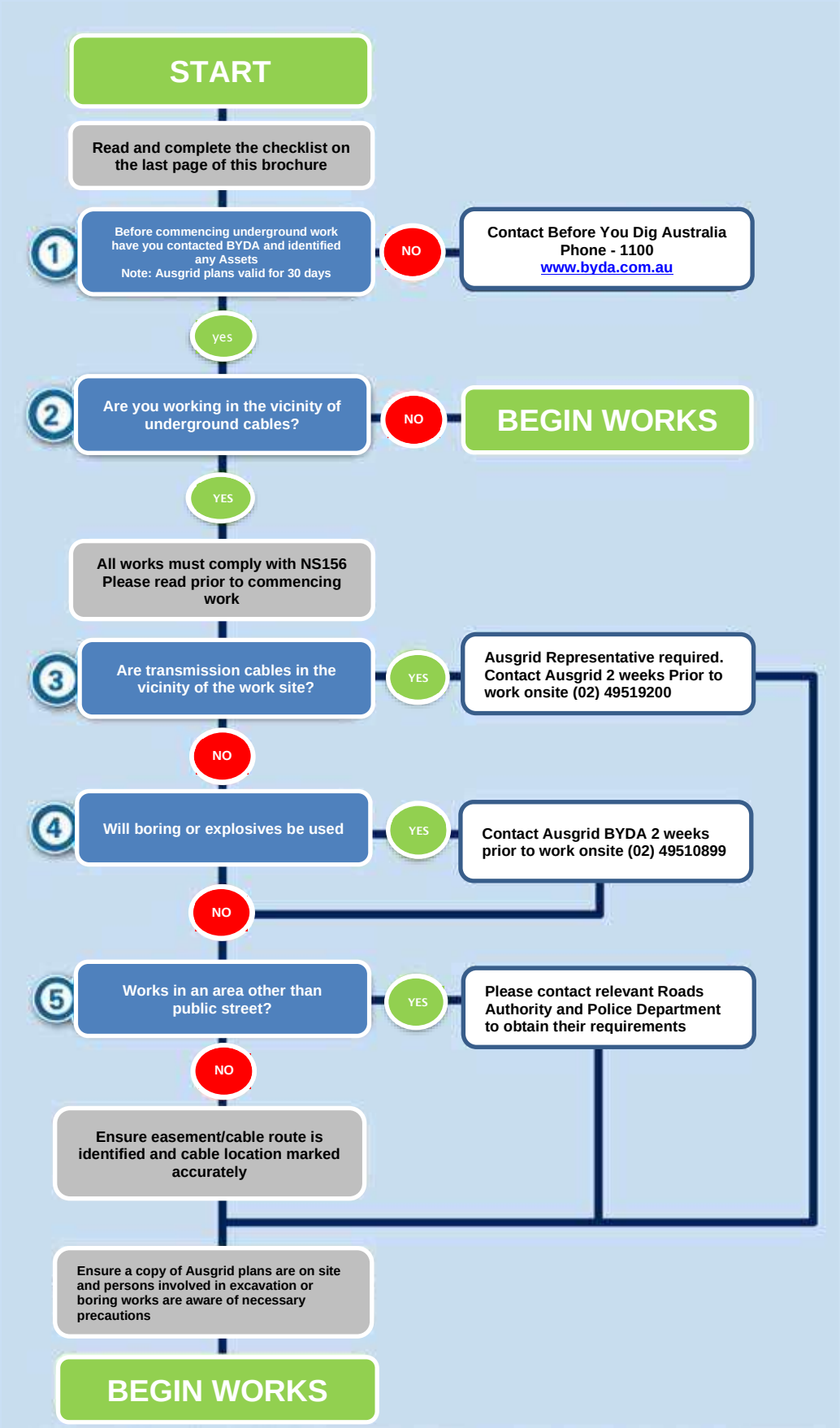
If you have any questions about excavating near Ausgrid cables, read **NS156** (available at ausgrid.com.au).
For further information call 13 13 65.

You've taken every precaution, but accidents still happen. What now?

If you damage an electricity cable, it is compulsory to notify Ausgrid on **13 13 88**.

Striking power cables can cause serious damage to the cables and endanger the lives of anyone who comes in contact with them. Machinery and hand operated plant such as jack hammers can become alive if it is in contact with electrical cables or equipment. Keep people well away from machinery and the work site if contact is made with a cable.

Flow Chart for work near Ausgrid Cables



Ausgrid Checklist for work near or around underground cables

It is the responsibility of the Constructor to ensure that underground pits, ducts and cables are not damaged as a result of construction work. It is also your duty to protect your workers from harm or injury. This Checklist is intended to be used as a guide to what Constructors should do to make sure they have satisfied the minimum requirements to minimise damage to underground networks.

PLANS, LOCATION and NOTIFICATIONS	Completed
All relevant utilities plans obtained from Before You Dig Australia? (call 1100 – allow at least 5 working days for plans).	
Checked issue date on all the above plans to ensure issue was within the last 30 days?	
Examined plans and assessed all possible impacts on Ausgrid's network?	
Do you have both Underground Distribution and Transmission Plans (if applicable), on site at all times?	
All cables and conduits shown on the Ausgrid plans been located and marked on the ground?	
If you are planning to use a bore, have you ensured that the equipment is calibrated?	
Have you read and understood the requirements of NS 156? (For copies of NS 156 visit Ausgrid's Website or phone Ausgrid BYDA Office (02) 4951 0899) **www.ausgrid.com.au**	
Have you notified Ausgrid as specified by NS 0156 and complied with requirements? Where an Ausgrid representative is required, two weeks notice is required before work commencing on site. Contact phone number for Transmission cable enquiries is (02) 4951 9200. For all other cases contact Ausgrid BYDA Office: (02) 4951 0899.	
INSPECTION OF WORK BY Ausgrid's REPRESENTATIVE	
Is the Ausgrid representative on site for any work near or around* any transmission cable before you start? (*Refer to NS 156.)	
For proposed work near or around* cables other than transmission and/or conduits, are any requirements specified by Ausgrid's representative clearly understood and ready to be applied before you start the work? (*Refer to NS 156.)	
PROTECTION	
Check that all people on-site have been made aware of the presence and location of ALL Ausgrid underground cables and/or conduits; especially boring, drilling and trenching machine operators?	
Is there any asbestos or asbestos containing material in Ausgrid's underground network assets?	
Have you checked for the presence of any Organo-Chloride Pesticides (OCP) in transmission trenches?	
Is the site supervisor monitoring all machine operators working near or around Ausgrid's underground cables and/or conduits?	
Are the requirements specified by Ausgrid's representative being followed?	
Are Ausgrid's requirements in place for any exposed cables and/or conduits to be supported and protected?	
Have you marked all exposed underground cables and/or conduits with flags that are clearly visible from within all machinery used on-site?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/ conduits in areas that are at risk?	

In the event of DAMAGE to Ausgrid's cable or conduits, call 13 13 88 immediately.

PROCEED with CAUTION

It is your responsibility to protect Ausgrid's cables and conduits from damage and your Duty of Care to protect your workers from harm or injury.

Signed: _____ **Date:** _____ **/** _____ **/** _____

Responsible person on site

For more information call 13 13 65 or visit www.ausgrid.com.au

Reading Ausgrid Plans
COMN0119

1 Property Lines

"property line" (PL), sometimes referred to as **"building line" (BL),** is the standard dimensioning reference point on all Ausgrid plans and represents property boundaries.

Typically, the PL is the boundary between private property and local council's footpath area or nature reserve. Most residential fences and office blocks are erected along the PL.

"kerb line" (KL) is less frequently referred to on Ausgrid plans, and where used will be identified clearly as KL.

Numbers listed within property boundaries should correspond to recognised "street numbers" (refer to figure 1).

Figure 1

2 Datum References

"datum references" identify distances (in metres) from significant features (such as corners of property boundaries) to reference points such as Ausgrid assets (eg: "conduits", "cables", "joints") (refer to figure 2).

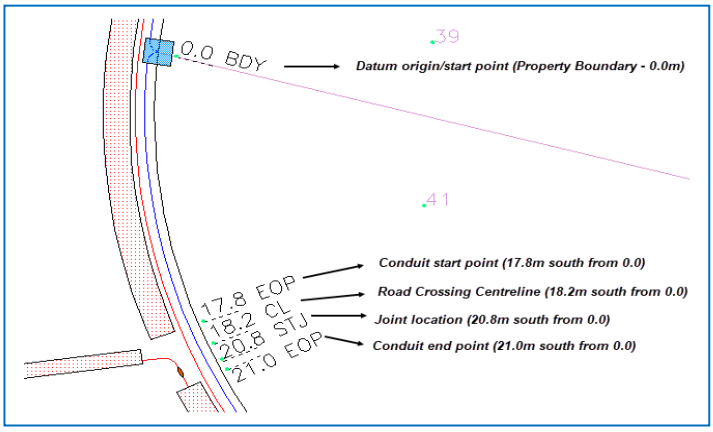


Figure 2

3 Cross Sections

A "cross sections" displayed on Ausgrid plans detail information relating to the relative position (ie: distance from the **"property line",** and the depth of **"cover"**) of Ausgrid assets.

"Cover" is a term used to refer to the depth of cables underground.

A "cross section" leader line will be drawn indicating the location of the displayed **"cable"** or **"conduit"** information on Ausgrid plans.

The distance from **"property line"** (in metres) and depth of **"cover"** (in metres) references are displayed as; ie: 0.6 metres from PL and 0.5 metres underground.

Where distance and cover are not recorded, they will be clearly marked as **"NR".**

NOTE: Distance and cover where indicated may be different to the actual position of the cables (eg: fill may have been placed at site that has changed the ground level).

"PL" distance shown in cross sections is an indicative measure to the centre of the trench allocation from the adjacent property line.

On some plans the "cross sections" may also be shown with a specific number (eg: HR1). This number will match with a cross section detail found in the border of the plot or on a separate plot page (refer to figures 3 and 4).

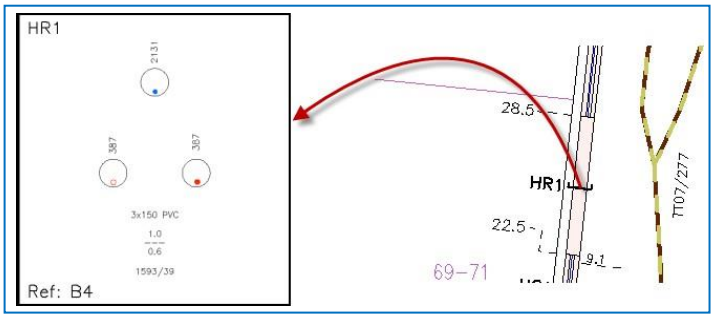


Figure 3

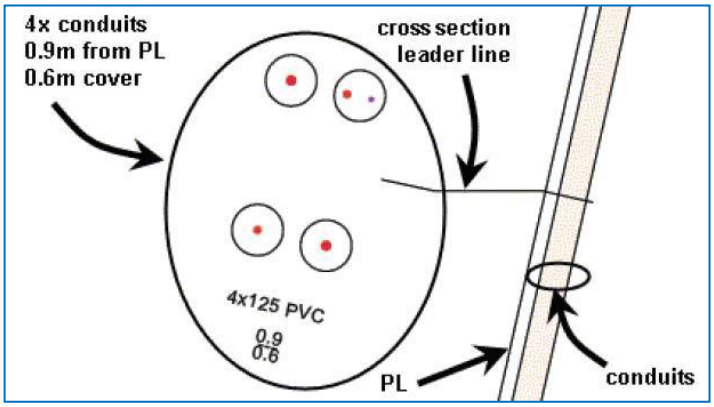


Figure 4

4 Cable Joints and Joint Reports

"cable joints" (numbered individually) and **"joint reports"** (attached to Ausgrid plans) can provide information relating to the relative position of Ausgrid assets, distance from the "property line" (in metres), and the depth of "cover" (in metres) (refer to figures 5 and 6).

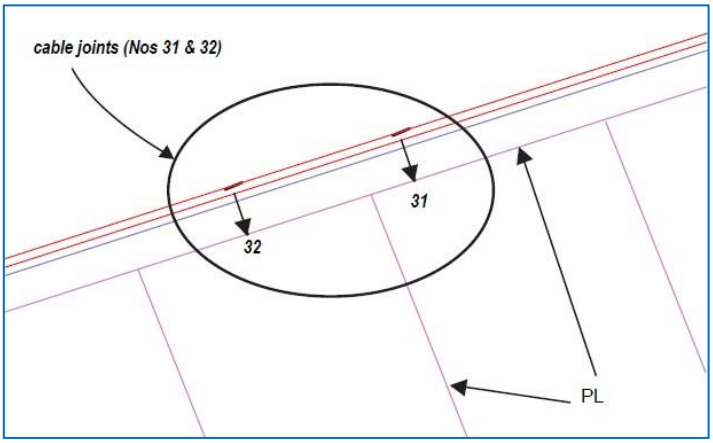


Figure 5

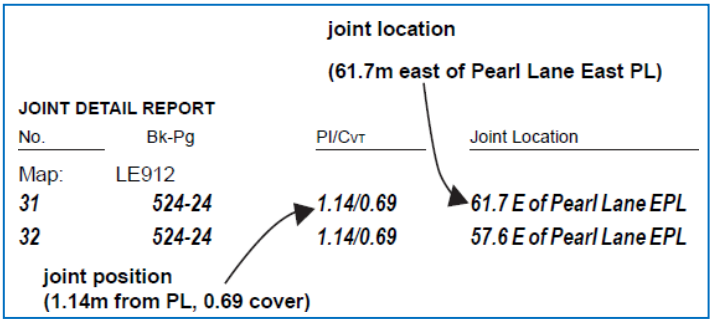


Figure 6

5 Cross Section Detail Boxes

"cross section" detail boxes on the sides of an Ausgrid plan are used when there is insufficient room to display **"cable"** and/or "conduit" information on the Ausgrid plan.

Ausgrid plans (refer to figure 7) are bordered by numeric identifiers along the top and bottom borders and alpha identifiers along the side borders.

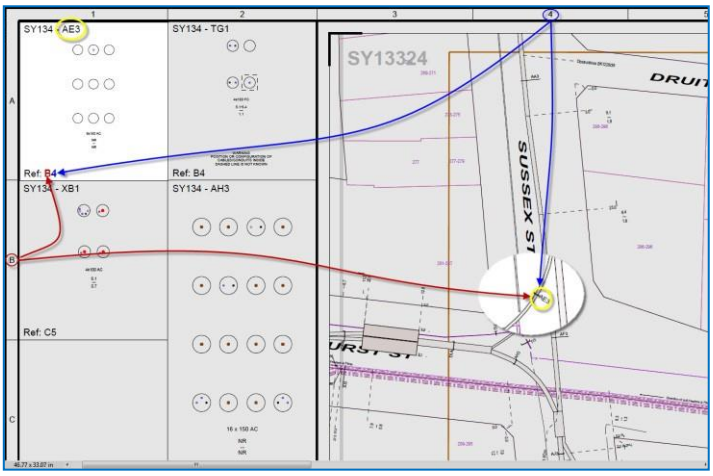


Figure 7

"Cross section" leader line and annotation is drawn on the Ausgrid plan for a reference to **"cable"** and/or **"conduit"** information in the **"cross section"** detail boxes. There are areas where underground work may have been issued for construction by Ausgrid, but details are not yet completely displayed on Ausgrid plans. In such cases a shaded "proposal area" is displayed on the Ausgrid plan, indicating underground work may have commenced in the vicinity but is not yet complete.

6 Pits

Underground **"pits"** are numbered on Ausgrid plans, positioned relative to the **"property line" (PL)**, and can be found on either the footpath (nature strip) or the road (refer figure 8).

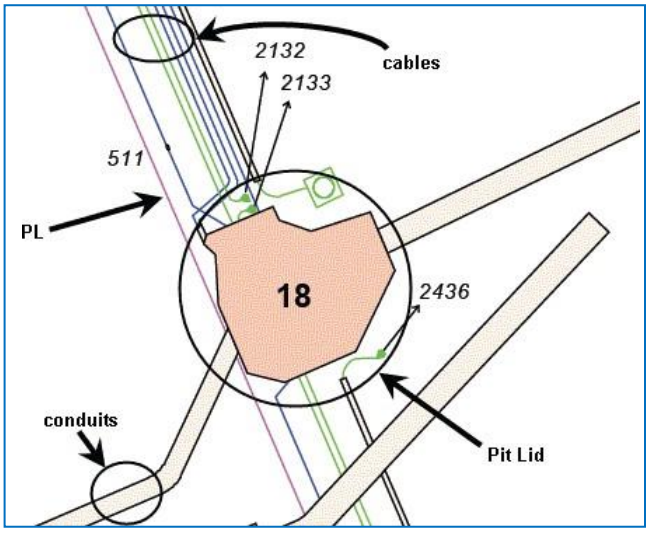


Figure 8

7 Proposal Areas

In some instances, cables and other assets within the shaded **"proposal area"** will be shown in a **bright magenta** colour, indicating that the proposed new work displayed within the shaded area is based on initial planning documentation (refer to figure 9).

Figure 9

In other instances, the shaded **"proposal area"** itself may be shown as a blue colour, indicating that the new work displayed within the shaded area on the Ausgrid plan is yet to include details regarding final depths and dimensioning (refer to figure 10).

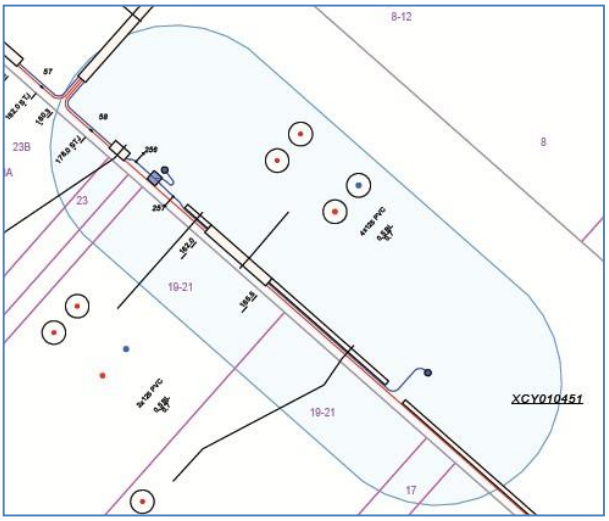


Figure 10

NOTE: In cases where these shaded **"proposal areas"** are displayed on Ausgrid plans.

"Ausgrid's design plans showing the proposed position of its underground cables, overhead lines and structures have been prepared solely for Ausgrid's own planning use. They show the proposed position of such underground cables, overhead lines and structures as proposed at the time of planning and have not necessarily been corrected to take into account any changes to road widths, road levels, fences and buildings subsequent to proposed installation.

Actual installations may vary from proposed installations as it may be necessary to take account of unforeseen above ground or subterranean constructions. Therefore, Ausgrid does not hold out that the design plans show more than the proposed presence or absence of its underground cables, overhead lines and structures in the street and will accept no liability for inaccuracies in the information shown on such design plans from any cause whatsoever."

Any further information regarding information displayed for "proposal areas" can be obtained by contacting the Ausgrid Before You Dig Australia (BYDA) office at the number indicated on the response to your BYDA enquiry for further information.

8 Ausgrid Maps

Depending on the size of the BYDA request, the response will either be a **single map area** or **a cover sheet** and several standard maps.

8.1 Single Map Area Response

The single map area response will have a buffer area shown on the plan that should relate to the original Before You Dig Australia request.

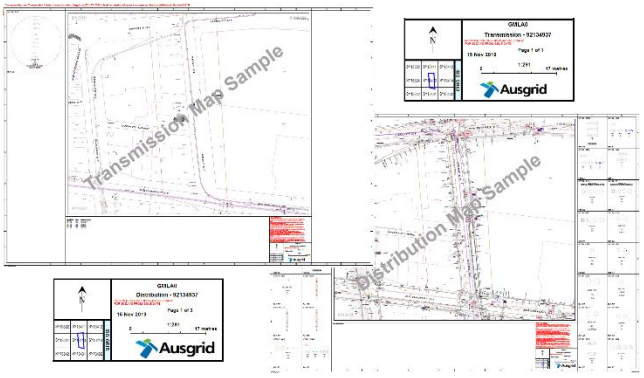


Figure 11

The **map grid index box** on Ausgrid plans should be used when reading the **"joint report"** (see part 4 of this document for more detail) to accurately locate underground cables. The buffer area will display on the grid index box for single map area responses

There are two different size maps that can be produced – A3 will be issued if there are no cross sections in the area, and an A0 will be issued if there are cross sections that are required to be displayed in the detail boxes on the side.

A single map area response could include two maps in the Sydney region. Ausgrid plans are separately labelled as "**Distribution – nnnnnnn"** and **" Transmission – nnnnnnn"**, where **"nnnnnnn"** refers to the BYDA sequence number quoted. If the request does not include any Transmission assets, then only one Distribution map will be issued.

In the Hunter region, the Ausgrid plans show combined **"distribution"** and **"transmission"** voltage assets, are clearly labelled as **"Distr + Trans – nnnnnnn"** where **"nnnnnnn"** refers to the BYDA sequence number.

Some Hunter plans may have transmission cables in the area, when these cables are present there will be a warning printed at the top of the plan supplied: "**"You are working near Transmission Cables. You must contact Ausgrid on (02) 4951 9200 at least two weeks before work commences. See Ausgrid Network Standard NS156"**

8.2 Cover Sheet Response

On a response that includes a cover sheet, the buffer area will only be shown on the cover sheet and it will not appear on the standard maps. The cover sheet will indicate which standard maps have been included and provide a high-level view of the location of the underground details (Figure 12). The standard maps will have the detail of the underground assets (Figure 13).

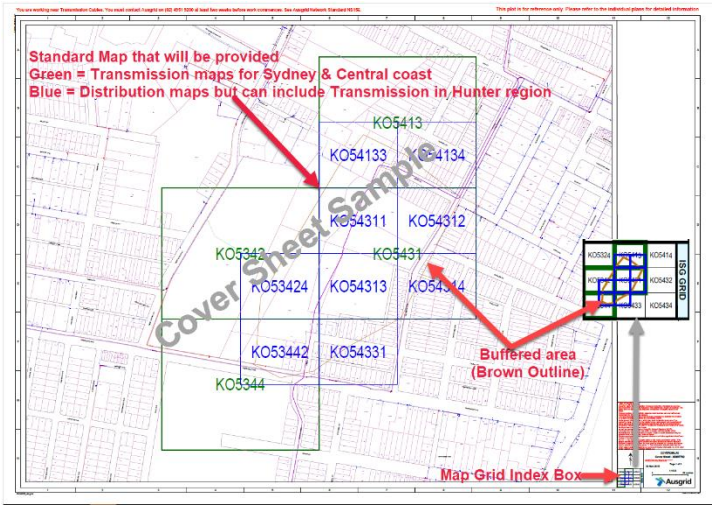


Figure 12

A **map grid index box** has been included in the cover sheet and on the standard maps. The buffer area will only display on the grid index box on the cover sheet and not on standard maps (Figure 12 + Figure 13).

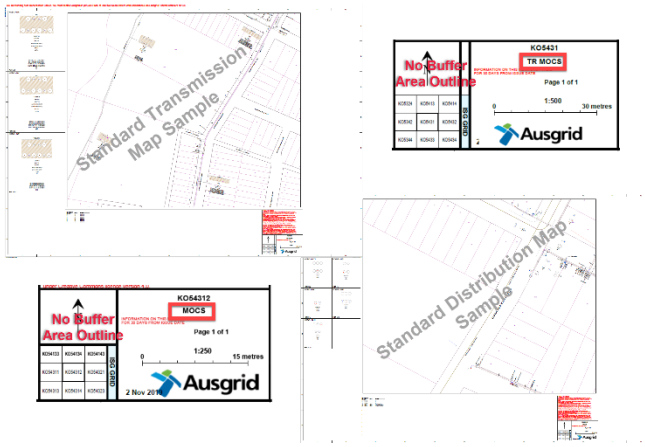


Figure 13

9. Shifting Land Base" on Ausgrid Distribution and Transmission Plans

In some instances, the plans supplied may indicate road or property outlines that appear to have shifted in relation to the Ausgrid assets displayed (refer to figure 14).

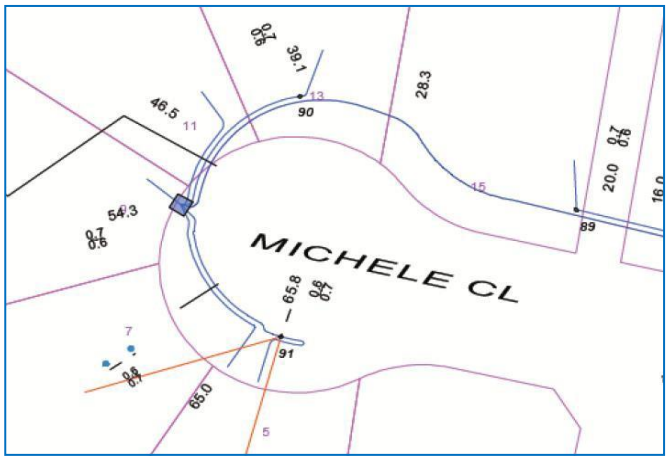


Figure 14

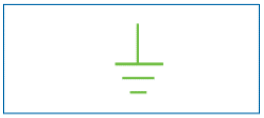
In such instances, always refer to the **"property line"** (in metres) and depth of **"cover"** (in metres) references displayed on the nearest relevant **"cross sections"** to obtain Ausgrid asset location information (*see* Reading Ausgrid Plans, clause 3, Cross Sections for more detail).

10. "Underground Earthing Infrastructure"

In some instances, the plans supplied may also indicatethe presence of underground earthing infrastructure associated with underground and/or overhead Ausgrid assets.

The **"Earth Point"** symbol (refer to figure 15) will be shown on plans to minimize risk of disturbance or damage to any Ausgrid underground earthing infrastructure in the vicinity.

Figure 15



11. Hazardous Cables – Specific Excavation Hazard

Certain low voltage cables are susceptible to deterioration or defects that may pose a risk of electric shock when working near them particularly in damp ground. Other low voltage cables may have an exposed conductive sheath or armour which may, under certain conditions, become energised. These cables may pose a significant risk and will be illustrated as in figures 15 and 16 below.
For all work on or near Ausgrid's network where workers have been trained in Ausgrid's "Working near or around underground cables" course the work practices outlined in NS156 "Working near or around underground cables", NS199 "Safe Electrical Work on Low Voltage Underground Assets" for low voltage cables susceptible to deterioration and the Electrical Safety Rules for low voltage exposed conductive sheath or armoured cables must be adhered to.
All other persons must contact Ausgrid before excavating near or accessing areas where these cables are present to arrange for appropriate precautions to be applied.

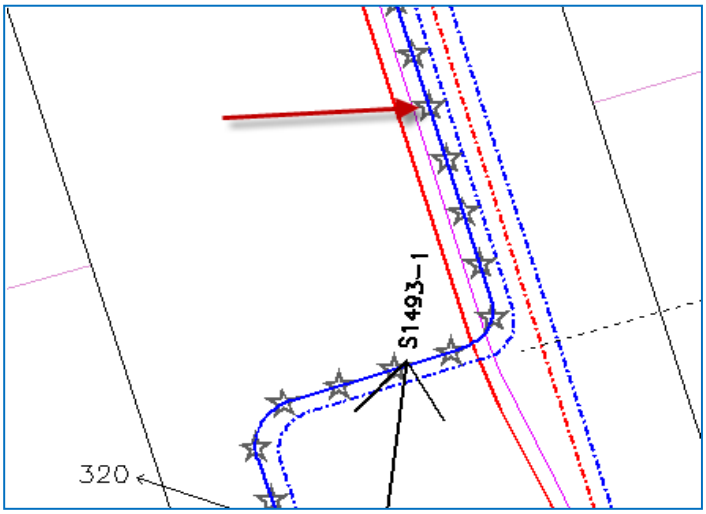


Figure 15

The **"star"** symbols over the cable indicates that it may be susceptible to deterioration or defects or the cable may contain an exposed conductive sheath or armour which could pose an electrical risk to workers.
Cables that are in duct lines have this symbology covered so an at-risk cable is indicated only within a cross section by a **"#"** appended to its cable code as illustrated below.

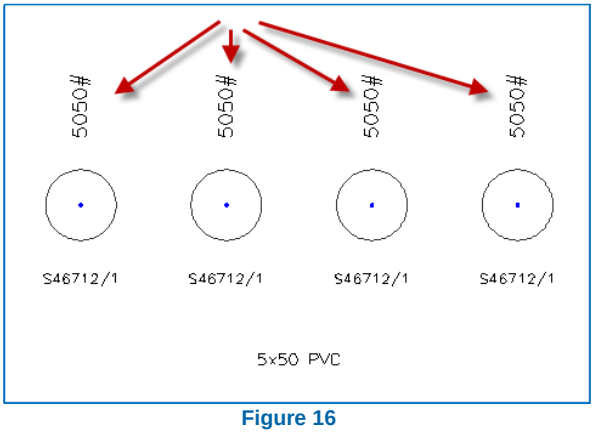


Figure 16

Ausgrid Underground Map Symbology

NOTE: Please note symbology is subject to change. This document provides underground (UG) related objects only. In cases where you are unsure of the data presented, please contact Ausgrid's BYDA for clarification *prior* to any planning/excavation works.

Object		Symbol
HV Cable	HV (High Voltage) 5kV-22kV	In Service / Out of Service
	TR (Transmission) 33kV – 330kV	In Service / Out of Service
LV Cable (Low Voltage)	Mains (Dark blue)	In Service / Out of Service
	Street Lighting (Green) Note: Mains Connector also used as Street Lighting (dark blue)	In Service / Out of Service
	Service (Light blue)	In Service / Out of Service
	Stars are used to highlight At Risk cables	In Service Risk / In Service Risk / In Service Risk
	Unknown	
Auxiliary Cable	Data	In Service / Out of Service
	Comms	
	Telco	
	Protection	
	Fibre Optic	
	Pilot	

Object		Symbol
HV UG Joint	Straight Through, Parallel Branch or Tee	
	Switchgear, End Box or Transition	
HV UG Termination	Sealed end	
	Pot End	
	UGOH	
HV Cable Repair	5kV-330kV (HV & TR)	
LV UG Joint	Straight Through, Parallel Branch, Tee or Service	
	Network Box	
LV UG Termination	Switchgear, End Box or Transition	
	Sealed end	
	Pot End	
	UGOH	

Object		Symbol
Auxiliary Fix	Pilot Window	
Auxiliary Joint	Straight Through, Parallel Branch or Tee	
Auxiliary Termination	UGOH or Pole Termination	
	Pilot	P
	UGOP-ADSS Termination	
Cable Pit (Can be various shapes)	Auxiliary	
	Distribution	
	Transmission	
LV Pillar	Distribution	
	Switch	1-3 WAY / 4+WAY
	SL Pillar	NO SLCP / SLCP
	SL Cubicle	
	Fargo	F
	Private	P
LV Auxiliary Pillar	All Types	
LV Link Box	2 Way & 4 Way	

Ausgrid Underground Map Symbology

Object		Symbol
Substation	Cottage & Chamber	
	Ground & Subtransmission Ground	
	Kiosk & Subtransmission Kiosk	
	Zone	
	Transmission	T
	Bulk Supply Point	BSP
	Metering Station & Subtransmission Metering	
Switching Station	Isolating & Earth	
	Other – OH & UG	
	Ring Main Unit	
Earthing	UG Earth Cable	
	Earth Point	
Frequency Marker	Distribution and Transmission Power	FM Ball or Disc Type Marker
	Auxiliary Communications	FM Ball or Disc Type Marker
	Distribution and Transmission Power	Tape Marker
	Auxiliary Communications	Tape Marker

Object		Symbol
Trench	Centreline	
Conduit (Can be various shapes)	Coverage (Distribution)	
	Coverage (Transmission)	
	Coverage (Underbore – cross hatched)	
Cross Section	Marker (Staple)	
	User Line	
Measure-ment Point		
Miscella-neous Point Feature	Cable Clamp	
	Cable Core split (Trifurcation)	
	Cable Marker	
	Electrolysis Point	E
	End Of Pipe	
	Frequency Injection Unit	IU
	Gas Charger	G
	Gas Control Cabinet	
	Gas Control Kiosk	
	Gas Control Point	
	Gas Control Valve	GV
	Gatic Pit lid	

Object		Symbol
Miscella-neous Point Feature	Inspection Box	
	Link point	
	Oil Control Valve	
	Oil Gauge	
	Oil Tank	
	Sniffer Box	
	Thermocouple Box	
	Transmission Cable Marker	
	Transmission Link Point	
Miscella-neous Linear Feature	All Geometries	
Map Note	Location & Text	Text about note
Dimension Feature	Placement Change	
Lead Cable	Oil/Gas/ Thermocouple	
	Bonding	
	Electrolysis	

Ausgrid

SY833 - DL1

11x150 FC
2x50 PVC
1x63 PVC
0.4-0.7
—
0.6-0.9

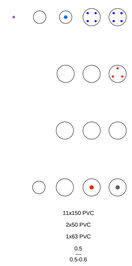
Ref: C10

SY833 - DT1

11x150 PVC
2x50 PVC
1x63 PVC
0.5-0.7
—
0.6-0.9

Ref: A10

SY833 - DU1



11x150 PVC
2x50 PVC
1x63 PVC
0.5
—
0.5-0.6

Ref: E9

SY833 - DV1

11x150 FC
2x50 PVC
1x63 PVC
0.4-0.7
—
0.6-0.9

Ref: D9

SY833 - DW1

6x150 FC
1x50 PVC
1x63 PVC
0.4
—
0.6

WARNING
POSITION OR CONFIGURATION OF
CABLES/CONDUITS INSIDE
DASHED LINE IS NOT KNOWN

Ref: D10

SY833 - DX1

6x150 PVC
1x50 PVC
1x63 PVC
0.4
—
0.6

WARNING
POSITION OR CONFIGURATION OF
CABLES/CONDUITS INSIDE
DASHED LINE IS NOT KNOWN

Ref: D10

SY833 - DZ1

11x150 PVC
2x50 PVC
1x63 PVC
0.5-0.7
—
0.5-0.9

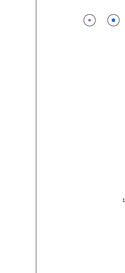
Ref: C10

SY833 - EC1

11x150 PVC
2x50 PVC
1x63 PVC
0.5-0.7
—
0.5-0.9

Ref: B10

SY833 - EH1

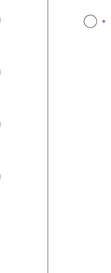


11x150 PVC
2x50 PVC
1x63 PVC
0.5
—
0.4-0.5

WARNING
POSITION OR CONFIGURATION OF
CABLES/CONDUITS INSIDE
DASHED LINE IS NOT KNOWN

Ref: F9

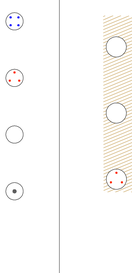
SY833 - GA1



11x150 PVC
2x50 PVC
1x63 PVC
0.5
—
0.4-0.5

Ref: E9

SY833 - GC1



12x150 PVC
GPS
—
0.9-1.3

Ref: F10

SY833 - GH1

6x150 PVC
2x63 PVC
3.6-7.3
—
0.7-1.0

Ref: G8

SY833 - GI1

6x150 PVC
2x63 PVC
3.6-7.3
—
0.7-1.0

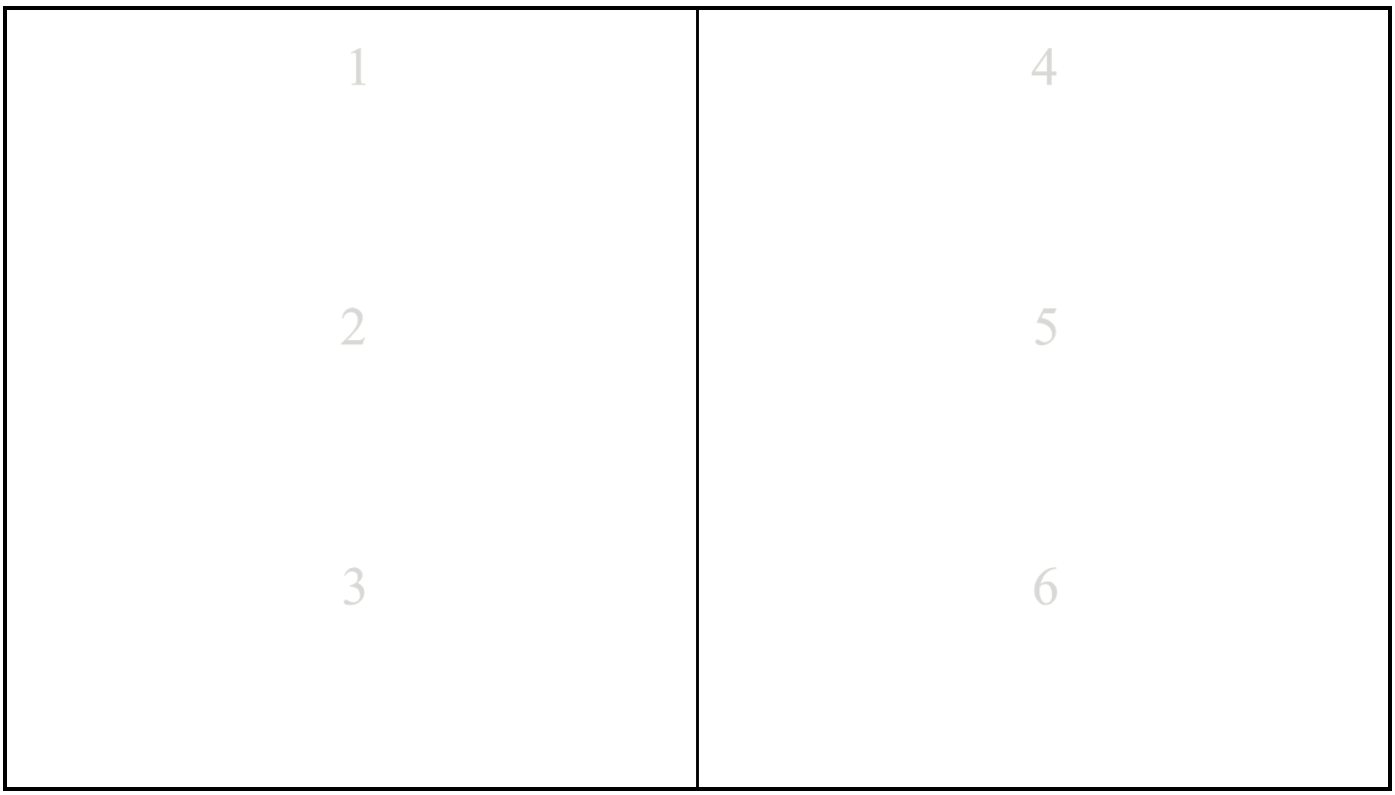
Ref: F8

Appendix C NBN Dial Before You Dig Responses

To:	Gina Matthews
Phone:	Not Supplied
Fax:	Not Supplied
Email:	gina.matthews@lciconsultants.com.au

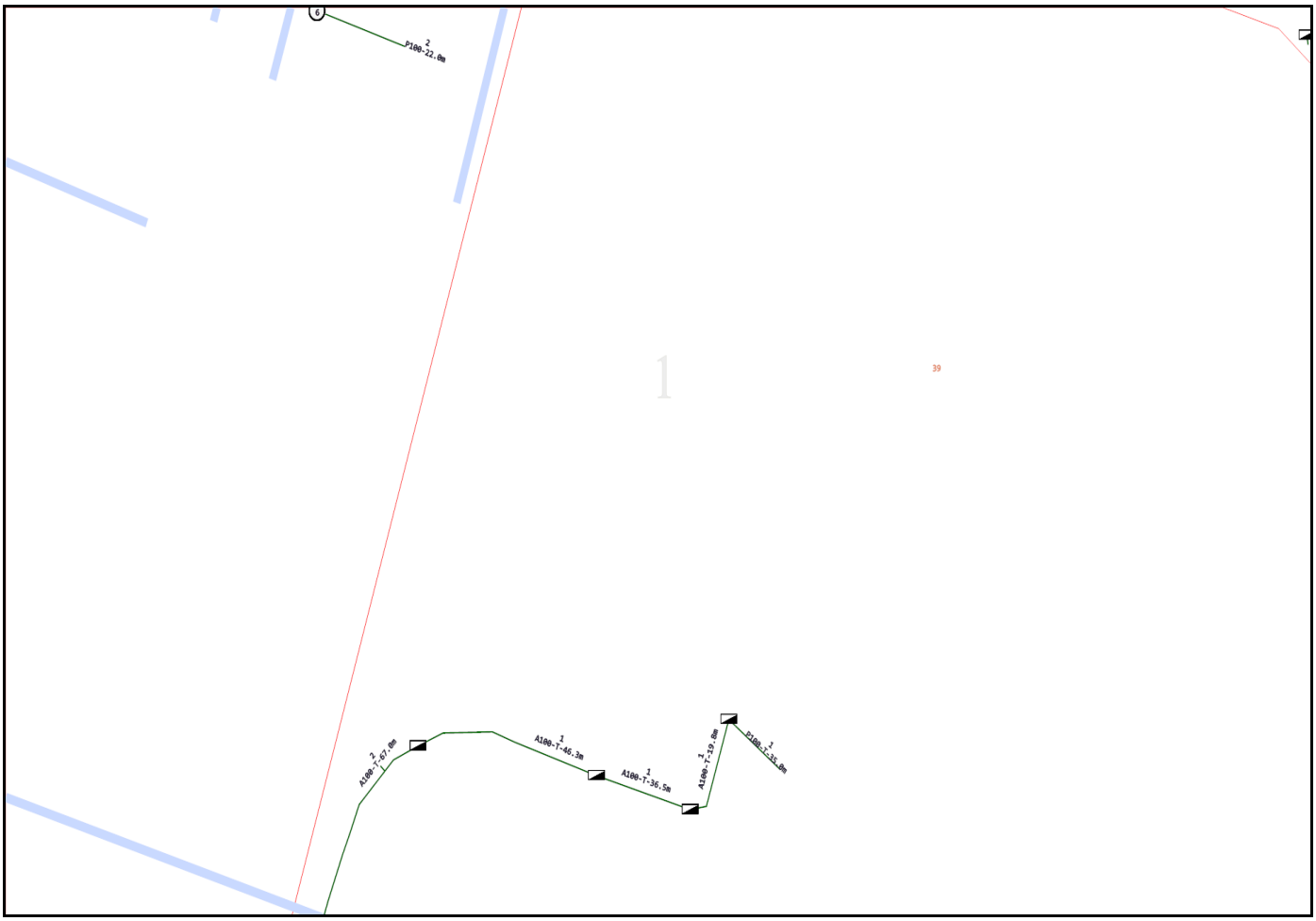
Dial before you dig Job #:	37568423	BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	244523860	
Issue Date:	11/09/2024	
Location:	UNSW South East Corner , Kingsford , NSW , 2032	

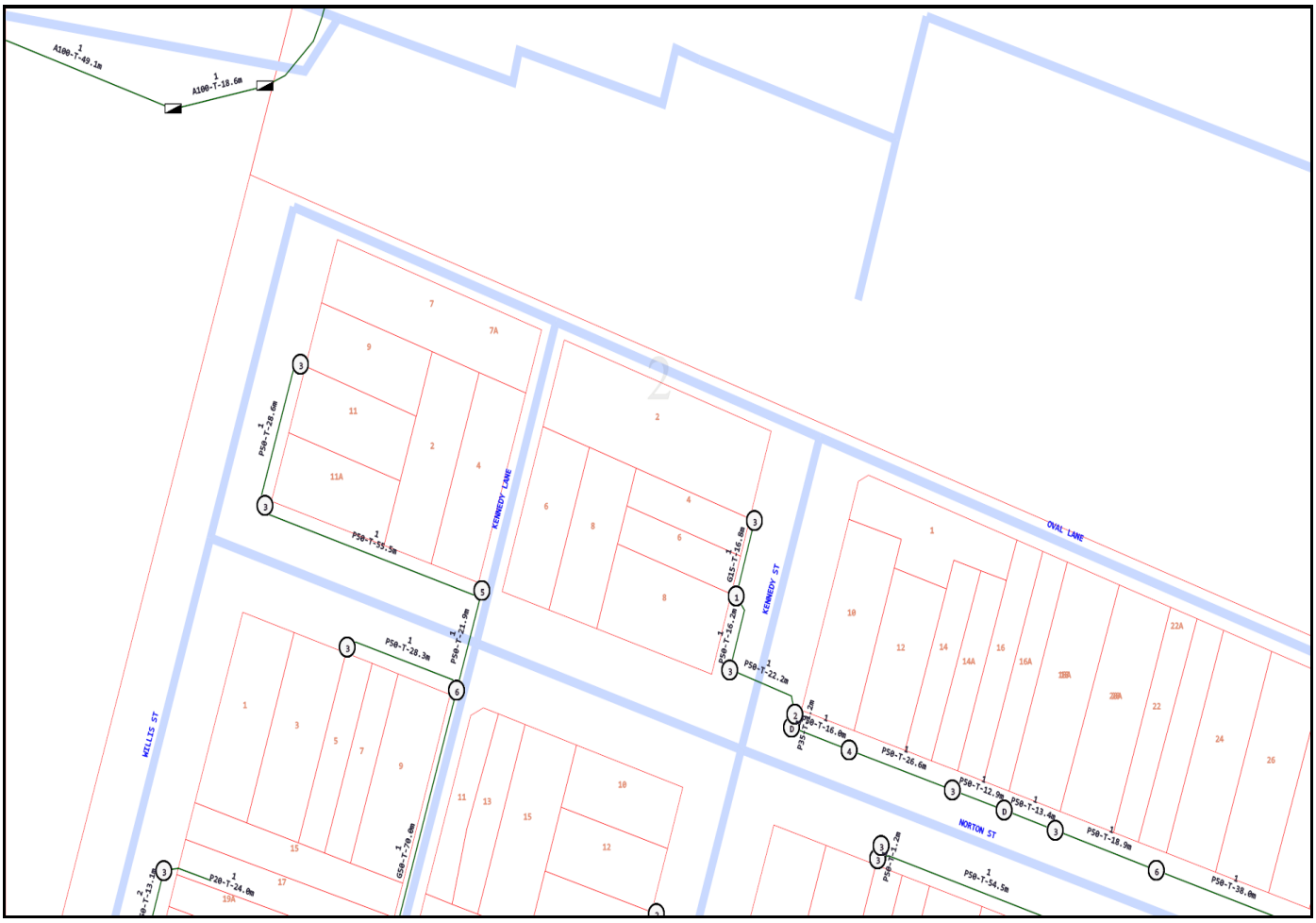
Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

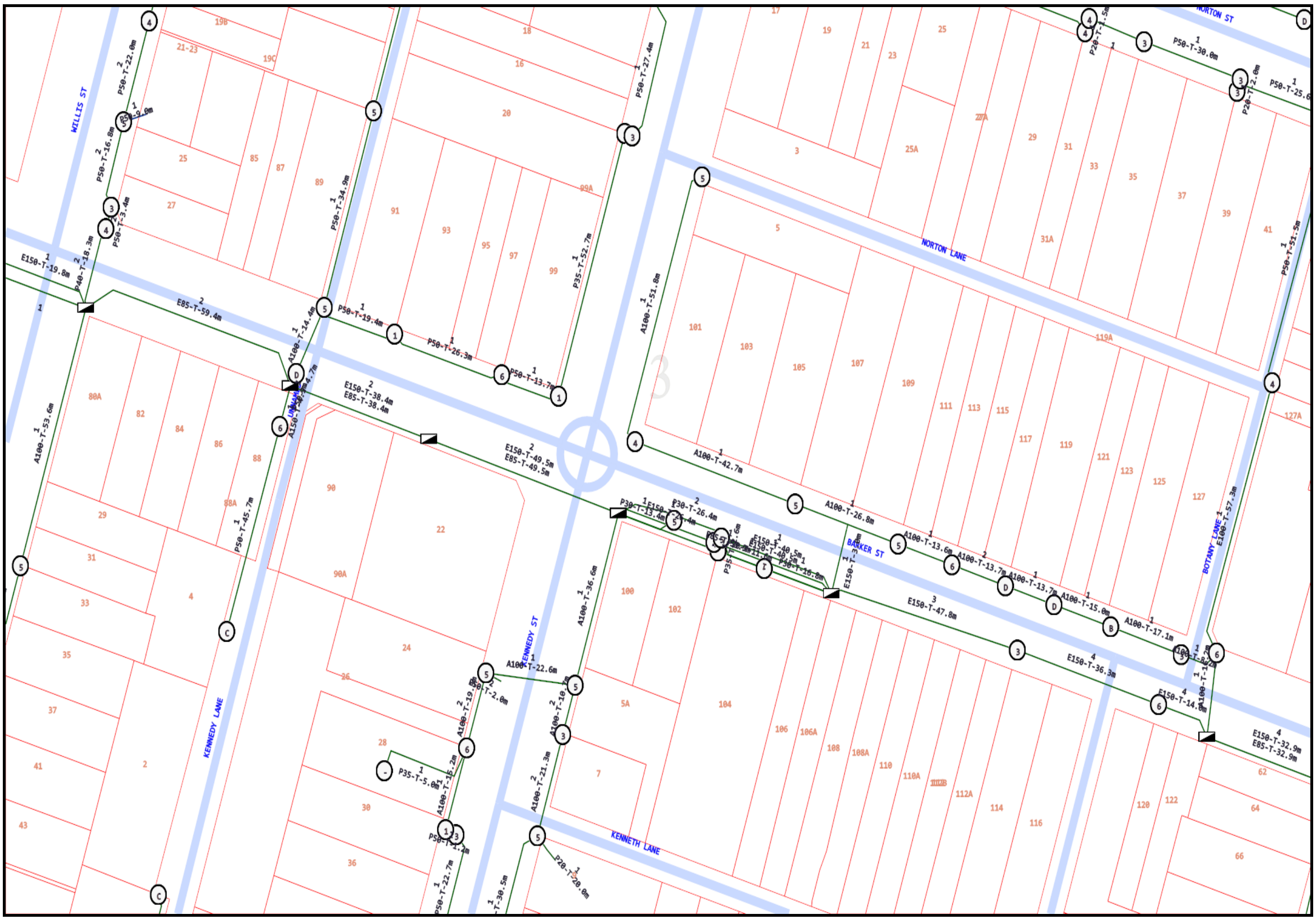


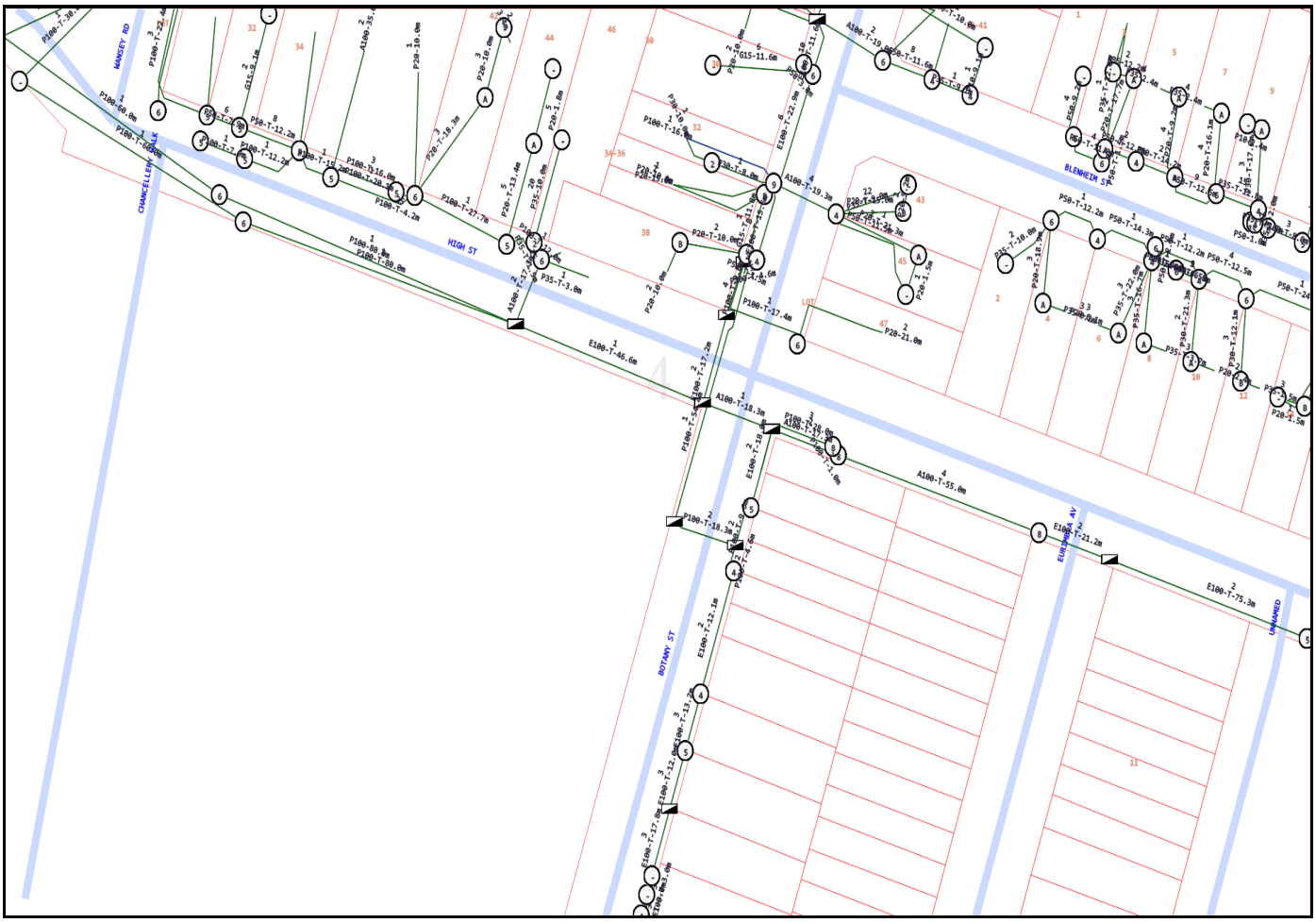
LEGEND

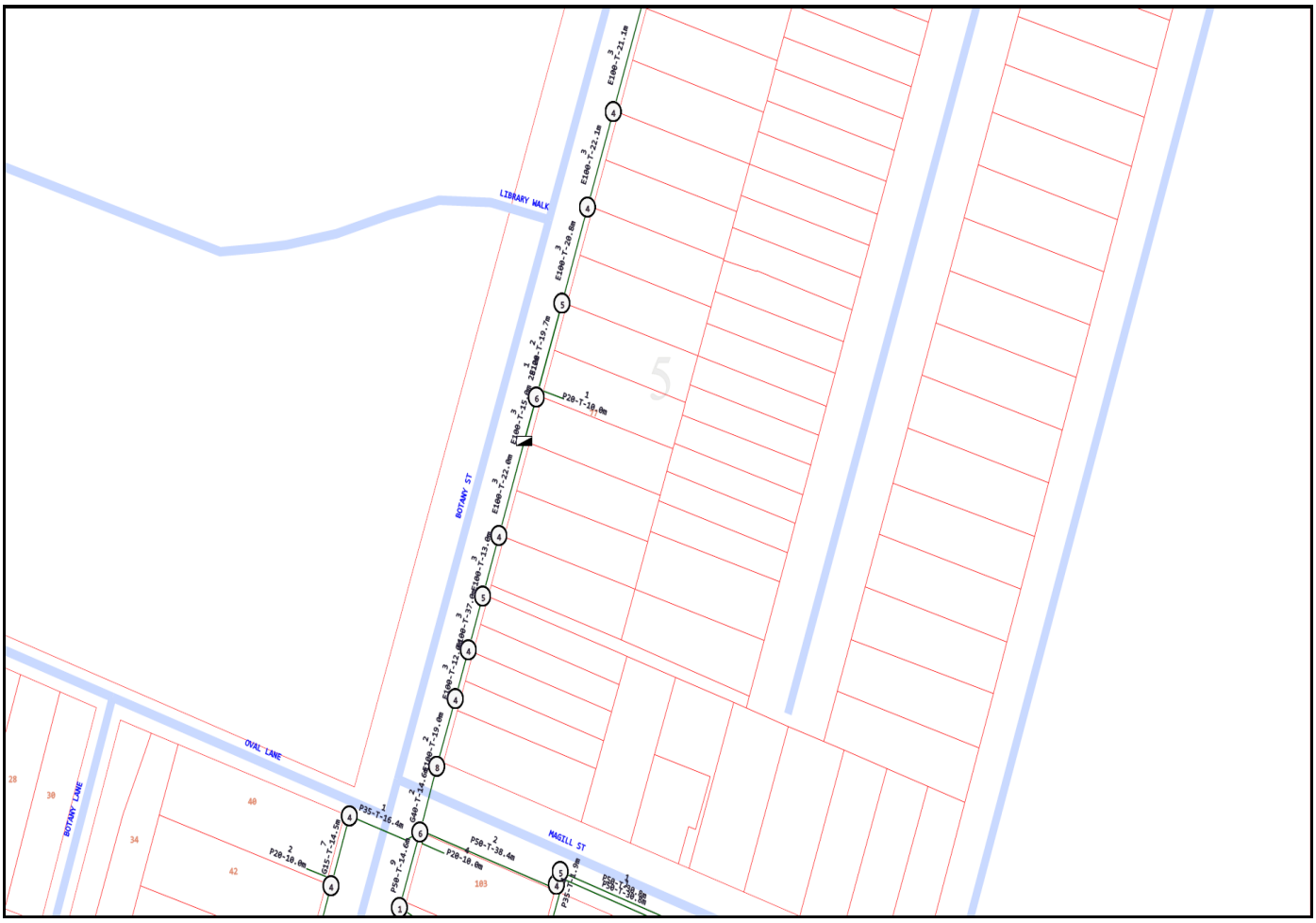
34	Parcel and the location
5	Pit with size "5"
2E	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
2 PO – T- 25.0m P40 – 20.0m 5 9	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m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

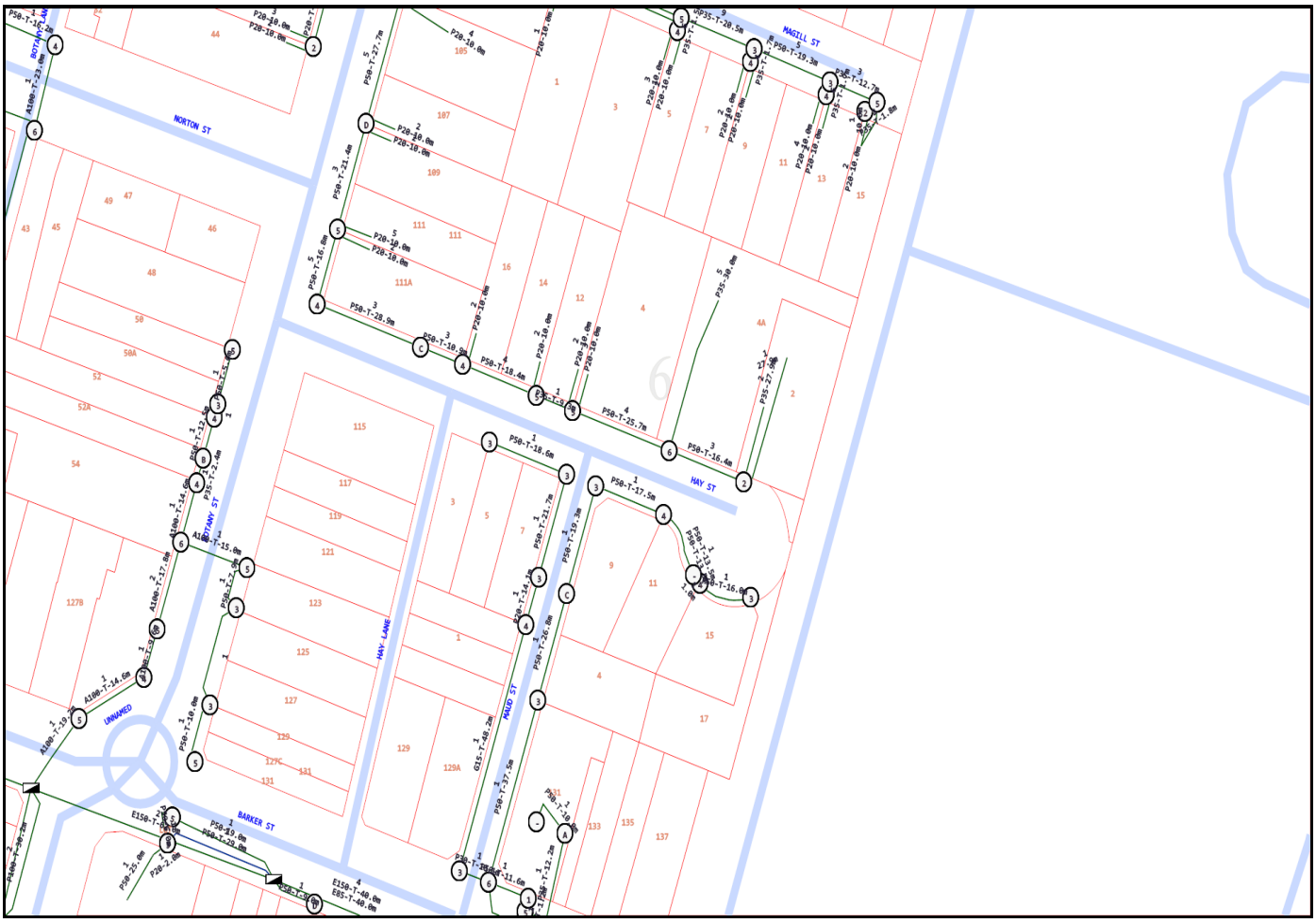

P100-22.0m
A100-T-46.3m
A100-T-36.5m
A100-T-59.0m
A100-T-35.0m
1
39


A100-T-49.1m
A100-T-18.6m
P50-T-28.6m
P50-T-55.5m
P50-T-21.9m
P50-T-28.3m
G50-T-7.8m
P20-T-24.0m
G15-T-16.8m
P50-T-36.2m
P50-T-22.2m
P50-T-16.0m
P50-T-26.6m
P50-T-12.9m
P50-T-13.4m
P50-T-18.9m
P50-T-30.0m
P50-T-54.5m
KENNEDY LANE
KENNEDY ST
OVAL LANE
NORTON ST
WELLIS ST


WILLIS ST
NORTON ST
NORTON LANE
KENNEDY LANE
KENNEDY ST
BARKER ST
KENNETH LANE
BOTANY LANE


MAKEEV RD
CHANCELLERY LA
HIGH ST
BOTANY ST
BLENHEIM ST
EUREKA AV
UNNAMED


LIBRARY WALK
BOTANY ST
OVAL LANE
BOTANY LANE
WAGILL ST
5
28
30
40
34
42
103



Emergency Contacts

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

To:	Gina Matthews
Phone:	Not Supplied
Fax:	Not Supplied
Email:	gina.matthews@lciconsultants.com.au

Dial before you dig Job #:	37568423
Sequence #	244523860
Issue Date:	11/09/2024
Location:	UNSW South East Corner , Kingsford , NSW , 2032

Information

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

nbn™ Assets	Search Results
Communications	Asset identified
Electricity	No assets

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

Location of **nbn™** Underground Assets

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

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

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

Notes:

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

Referral Conditions

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

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

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

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

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

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

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

Thank You,

nbn DBYD

Date: 11/09/2024

Working near nbn™ 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.

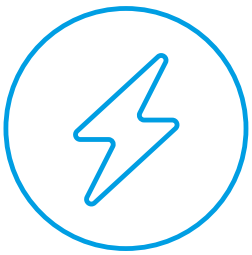
Prepare: Prepare for your job by engaging a DBYD Certified Plant Locator to help interpret plans and identify on-site assets. Contact **nbn** should you require further assistance.

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.

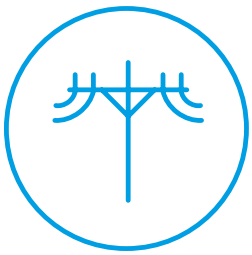
Protect: Protecting and supporting the exposed **nbn** underground asset is the responsibility of the worker. Exclusion zones for **nbn** assets are clearly stated in the plan and appropriate controls must be implemented to ensure that encroachment into the exclusion zone by machinery or activities with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

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

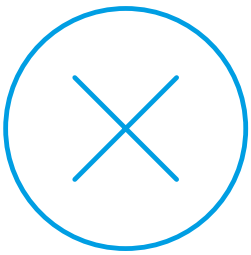
Working near nbn™ cables



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.

DIAL BEFORE YOU DIG
www.1100.com.au

Appendix D Optus Dial Before You Dig Reponses

OPTUS

BEFORE YOU DIG www.byda.com.au

Optus Contract Management Team
Unit 9, 677 Springvale Road
Mulgrave, Victoria, 3178

Date: 11 Sep 2024
To: Gina Matthews
Company: Not Supplied
Address: 73 Miller Street
North Sydney, NSW 2060

ENQUIRY DETAILS
Location: UNSW South East Corner, Kingsford, NSW 2032
Sequence No.: 244523868
BYDA Reference: 37568423

In relation to your enquiry concerning the above location, Optus advises as follows:

Optus records indicate that there ARE underground Optus FIBRE OPTIC TELECOMMUNICATIONS ASSETS in the vicinity of the above location as per the attached drawing(s).

PLEASE NOTE that any interference with these assets may be considered an offence under the Criminal Code Act 1995 (Cth). Optus reserves the right to seek compensation for loss or damage to its assets including consequential loss.

This reply is valid for a period of 30 days from the date above.

IMPORTANT INFORMATION
Asset location drawings provided by Optus are reference diagrams and are provided as a guide only. The completeness of the information in these drawings cannot be guaranteed. Exact ground cover and alignments cannot be provided with any certainty as these may have altered over time. Depths of telecommunications assets vary considerably as do alignments. It is essential to identify the location of any Optus assets in the vicinity prior to engaging in any works.

All Optus assets in the vicinity of any planned works will need to be electronically located to ascertain their general location. Depending on the scope of planned works in the vicinity, the assets may also need to be physically located.

YOU MUST ENGAGE THE SERVICES OF ONE OF THE OPTUS ASSET ACCREDITED LOCATORS TO CARRY OUT ASSET LOCATION (REFER LIST OF ACCREDITED LOCATORS AT THE END OF THIS OPTUS RESPONSE).

Unless otherwise agreed with Optus, where an on-site asset location is required, the requestor is responsible for all costs associated with the locating service including (where required) physically exposing the Optus asset.

DUTY OF CARE
When working in the vicinity of telecommunications assets you have a legal "Duty of Care" and non-interference that must be observed.

It is your responsibility as the requesting party (as a landowner or any other party involved in the planned works) to design for minimal impact to any existing Optus asset. Optus can assist at the design stage through consultation.

It is also your, as the requesting party (or your representative's), responsibility to:

a) Obtain location drawings (through the Before You Dig Australia process) of any existing Optus assets at a reasonable time before any planned works begin;

b) Have an Optus Accredited Asset Locator identify the general location of the Optus asset and physically locate the asset where planned works may encroach on its alignment; and

c) Contact Optus for further advice where requested to do so by this letter.

DAMAGE TO ANY OPTUS ASSET MUST BE REPORTED TO 1800 505 777 IMMEDIATELY

You, your head contractor, and any relevant subcontractor are all responsible for any Optus asset damage as a result of planned activities in the vicinity of Optus assets.

This applies where works commence prior to obtaining Optus drawings, where there is failure to follow instructions or during any construction activities.

Optus reserves the right to recover compensation for loss or damage to its assets including consequential loss. Also, you, your head contractor and any relevant subcontractor may also be liable for prosecution under the Criminal Code Act 1995 (Cth).

ASSET RELOCATIONS

You are not permitted by law to relocate, alter or interfere with any Optus asset under any circumstance. Any unauthorised interference with an Optus asset may lead to prosecution under the Criminal Code Act 1995 (Cth). Enquiries relating to the relocation of Optus assets must be referred to the relevant Optus Damages and Relocations Team (refer to "FURTHER ASSISTANCE").

APPROACH DISTANCES

On receipt of Optus asset location drawings and prior to commencing any planned works near an Optus asset, engage an Optus Accredited Locator to undertake a general location of the Optus asset.

Physical location of the Optus asset by an Optus Accredited Locator will also be required where planned works are within the following approach distances of the general location of the Optus asset:

a) In built up metropolitan areas where road and footpaths are well defined by kerbs or other features a minimum clear distance of 1 meter must be maintained from the general location of the Optus asset.

b) In non-established or unformed metropolitan areas, a minimum clear distance of 3 meters must be maintained from the general location of the Optus asset.

c) In country or rural areas where wider variations may exist between the general and actual location of an Optus asset may exist, then a minimum clear distance of 5 meters must be maintained from the general location of the Optus asset.

If planned works are parallel to the Optus asset, then the Optus asset must be physically located by an Optus Accredited Locator at a minimum of 5 meter intervals along the length of the parallel works prior to work commencing.

Under no circumstances is crossing of any Optus asset permitted without physical location of the asset being carried out by an Optus Accredited Locator. Depending on the asset involved an Optus representative may be required onsite.

The minimum clearances to the physical location of Optus assets for the following specific types of works must be maintained at all times.

Note: Where the clearances in the following table cannot be maintained or where the type of work differs from those listed then advice must be sought from the relevant Optus Damages and Relocations Team (refer to "FURTHER ASSISTANCE").

Type of Works	**Clearance to Physical Location of Optus Asset**
Jackhammers / Pneumatic Breakers	Not within 1 meter.
Light duty Vibrating Plate or Wacker Packer type compactors (not heavy road construction vibrating rollers etc.)	500mm compact clearance cover before a light duty compactor can be used over any Optus conduit. No compaction permitted over Optus direct buried cable without prior approval from Optus.
Boring Equipment (in-line, horizontal and vertical)	Not within 5 meters parallel of the Optus asset location without an Accredited Optus Asset Locator physically exposing the Optus asset and with an Optus representative onsite. Not to cross the Optus asset without an Accredited Optus Asset Locator physically exposing the Optus asset and with an Optus representative onsite.

Type of Works	Clearance to Physical Location of Optus Asset
Heavy vehicle Traffic (over 3 tonnes)	Not to be driven across Optus conduits with less than 600mm of cover. Not to be driven across Optus direct buried cable with less than 1.2 meters of cover. Once off crossings permitted, multiple crossing (e.g. road construction or logging) will require Optus approval. Accredited Optus Asset Locator to physically expose the Optus asset to verify actual depth.
Mechanical Excavators, Farm Ploughing, Vertical Hole installation for water bore or fencing etc.	Not within 1 meter. Accredited Optus Asset Locator to physically expose the Optus asset to verify actual location.

ASSET CLEARANCES AFTER COMPLETION OF WORKS

All Optus pits and manholes must be a minimum of 1 meter from the back of any kerb, 3.5 meters of the road surface without a kerb or not within 15 meters of street intersection.

In urban areas Optus conduit must have the following minimum depth of cover:

- Footway 600mm;
- Roadway 1 meter at drain invert and at road centre crown.

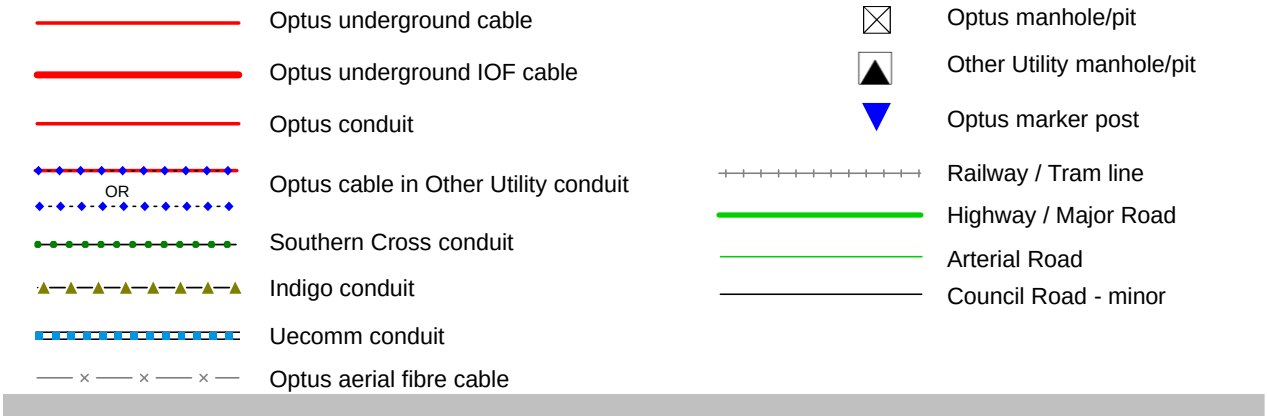
In rural areas Optus conduit must have a minimum depth of cover of 1 meter and direct buried cable 1.2 meters.

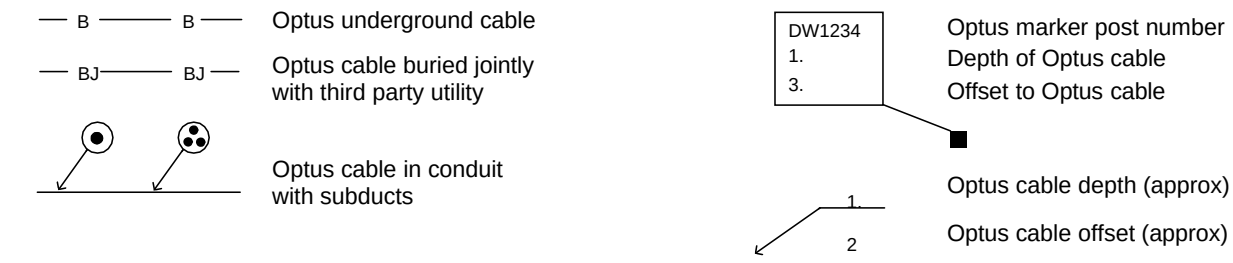
In cases where it is considered that the above clearances cannot be maintained at the completion of works, advice must be sought from the relevant Optus Damages and Relocations Team (refer "Further Assistance").

FURTHER ASSISTANCE

Further assistance on asset clearances, protection works, or relocation requirements can be obtained by contacting the relevant Optus Damages and Relocations Team on the following email address:
NFODamages&RelocationsDropbox@optus.com.au
Further assistance relating to asset location drawings etc. can be obtained by contacting the Optus Network Operations Asset Analysis Team on 1800 505 777.

OPTUS ENGINEERING DRAWING SYMBOLS





OPTUS

Optus Accredited Asset Locators

Name	Company Name	Phone	Email	State	Region/Service Area
Drew Misko	Australian Subsurface Pty Ltd	0427 879 600	admin@australiansubsurface.com	ALL	ALL
Andrew Watson	Subsurface Mapping Solutions Pty Ltd	0408 839 723	admin@subsurfacems.com.au	ALL (Not TAS)	South East QLD + Aus wide
Chris Gordon	Heavy Construction Solutions	1300 859 027	chris.gordon@heavycs.com.au	VIC,NSW,QLD,SA TAS	All
Alan Cordner	Alcom Fibre Services Pty Ltd	0400 300 337	alcomfibre@bigpond.com	NSW	Sydney, NSW
Brad McCorkindale	Bradmac Locating Services	0434 157 409	info@bradmaclocating.com.au	NSW	NSW
Shane Buckley	Cable & Pipe Locations Pty Ltd	0408730430	shane@cableandpipelocations.com.au	NSW	North Coast , Mid North Coast, Central West, Northern Rivers
Annabelle Pegler	Down Under Detection Services (DUDS)	0418 267 964	apegler@duds.net.au	NSW	All
Bruce Whittaker	Optical Fibre Technologies	0402 354 322	opticaltek1@aol.com	NSW	Sydney/Wollongong
George Koenig	Downunder Locations	0438243856	downunderlocations@gmail.com	NSW	Tweed Heads/Gold Coast
Michael Grant	M&K Grant Bega Bobcats Pty Ltd	0427 260 423	zzbobcat@bigpond.net.au	NSW	Bega, Far South Coast
Antony Critcher	Geotrace Australia Pty Ltd	0417 147 945	antony@geotrace.com.au	NSW	All Areas, Sydney, Wollongong, Newcastle, ACT
Sarah Martin	Hydro Digga	0447 774 000	admin@hydrodigga.com	NSW	Mid North Coast
Nathan Ellis	Utility Locating Services	0404 087 555	nathan@uls.com.au	NSW	Sydney
Scott O'Malley	Coastal Cable Locators Pty Ltd	0427 975 777	skomalley@bigpond.com	NSW	South Coast- Snowy Mountains- Southern Highlands
Liam Bolger	Brandon Construction Services	0438 044 008	liam.bolger@hotmail.com	NSW	Sydney
Laura Elvery	Durkin Construction Pty Ltd	02 9712 0308	info@durkin.au	NSW	NSW

Shireen Sidhu	Locate & Map	(02) 8753 0049	admin@locateandmap.com.au	NSW	Sydney & Regional NSW only
Ken Browne	Riteway Traffic Control Pty Ltd	0419 212 969	kbrowne@ritewaytc.com.au	NSW	Central Coast, Hunter
Jean-Max Monty	Civilscan	1300 575 488	john@civilscan.com.au	NSW	Sydney, Central Coast, Newcastle, Wollongong, Hunter Valley, Blue Mountains
Scott Hunter	Hunter Ground Search	0409327345	admin@hunter-groundsearch.net.au	NSW	Hunter, Upper Hunter, Central Coast, Newcastle
Damien Black	Mid North Coast Hydro Digging & Service Locating P/L	0418 409 465	djblack1@bigpond.com	NSW	Mid North Coast
Michael Nicholls	Utility Mapping NSW	1300 627 746	sydney@utilitymapping.com.au	NSW	All NSW
Joseph Restuccia	ProLocate	0415 633 393	joe.restuccia@prolocate.com.au	NSW	NSW Wide
Barry Maloney	Online Pipe & Cable Locating	1300 665 384	Office@onlinepipe.com.au	NSW	Sydney, Central Coast, Canberra, Wollongong, Newcastle
Sam Romano	Locating Services	0403 065 510	sam.romano@locatingservices.com.au	NSW	NSW All
Scott Allison	Crux Surveying Australia	02 9540 9940	sydneyoffice@cruxsurveying.com.au	NSW	Sydney Metro & Surrounding Areas
Donna Wullaert	Commence Communications Pty Ltd	02 6226 3869	admin@commencecomms.com.au	NSW	Canberra/ Yass / Bungendore/ Goulburn and surrounding regional areas
Grant Pearson	Warrabinya Services	0423 651 615	sales@warrabinya.com.au	NSW	Sydney Metro & Surrounding Areas
Stephen Fraser	Advanced Ground Locations	(02) 4930 3195	steve_agl@hotmail.com	NSW	Newcastle, Hunter Valley, Central Coast, Taree & Surrounding Areas
Andrew Findlay/ Anthony Hart	LiveLocates	0429 899 777	info@livelocates.com.au	NSW	South Coast/ACT, Snowy Mountains
Graeme Teege	Armidale Electrical	02 6772 3702	office@armidale-electrical.com.au	NSW	Armidale
Samantha Guptill	Australian Locating Services	1300 761 545	admin@locating.com.au	NSW	Sydney / Central Coast
Clay Laneyrie	Laneyrie Electrical	0411142627	bindy@laneyrieelectrical.com.au	NSW	Illawarra, South Coast, Shoalhaven, Southern Highlands

Reece Gainsford	East Coast Locating Services	0431 193 111	eastcoastlocating@hotmail.com	NSW	Sydney, Maitland, Newcastle, Hunter, Port Stephens, Central Coast
Craig Vallely	Aqua Freeze & Locate Pty Ltd	0458 774 440	service@aquafreeze.com.au	NSW	Sydney only
Jason Vane	Smartscan Locators PTY Ltd	1300 778 923	Admin@sslocators.com.au	NSW	Sydney
Alex Farcash	Newcastle Locating Services Pty Ltd	0410698599	Admin@newcastlelocatingservices.com.au	NSW	Newcastle, Hunter Valley, Central Coast, Taree & Surrounding Areas
Amer El Chami	Site Scan Pty Ltd	0449 992 520	office@sitescan.net.au	NSW	All NSW
Ian Brown	A1 Locate Services	0400 484 828	Ian.brown@a1locate.com.au	NSW	All NSW
Paul Wallis	Beveridge Williams	0431 458 878	wallisp@bevwill.com.au	NSW	Newcastle Sydney Wollongong
Cameron Handley	Wombat Underground Services	0407477038	accounts@wombatundergroundservices.com.au	NSW	ALL
Samantha Cupiado	Geoscope Utility Detection Services Pty Ltd	1300 750 350	info@geoscopelocating.com.au	NSW	All regions
Laurence Mead	Astrea Pty Ltd	1300 009 346	admin@astrea.com.au	NSW	Sydney Only
Braydon Greenwood	City Coast Services	0422432813	braydon.greenwood@live.com.au	NSW	NSW
Jim Morrison	Absolute Utilities Pty Ltd	0429 496 375	jim@absoluteutilities.com.au	NSW	Mid North Coast
Declan Dowd	Dowds Pipe And Cable Locating	0434 635 134	accounts@pipeandcable.com.au	NSW	Sydney/Wollongong/South Coast / Highlands/Soth west Sydney
Nicholas Schneider	Subsurface Utility Solutions	0421157372	nick@subsurf.com.au	NSW	Sydney only
Ricky Evans	Riverina Cable Locating	0411444980	ricky@riverinacablelocating.com.au	NSW	Riverina, Murray
Adrian Ruane	Road and Rail Excavations Pty Ltd	0414 594 063	cody@roadandrailexcavations.com.au	NSW	Sydney only
Billy Cameron	Locate Down Under Pty Ltd	0431275034	info@locatedownunder.com.au	NSW	Central Coast/ Sydney
Daniel Hudson	Geosurv Locating Pty Ltd	1300 554 675	dan@geosurv.com.au	NSW	Sydney only
Roneel Chand	JDG Civil	0416506891	sadhunaam@gmail.com	NSW	Sydney only

Tim Briggs	Deetect Locating Services	0414630852	deetect.locating@outlook.com	NSW	ACT / NSW
Sean Ferriter	Utech Solutions Pty Ltd	1300 427 614	seanf@vaughancivil.com.au	NSW	Sydney only
Mark Restuccia	Direct Connect Locating PTY LTD	0400507690	info@dclocating.com.au	NSW	NSW only
Ali Chahine	Underground Industries	0406906787	info@undergroundindustries.com.au	NSW	Sydney only
Scott Copetti	Metiri	0435 710 399	scott@metiri.com.au	NSW	Newcastle & Hunter Region
Blake Richardson	VFT	0409 210 502	b.richardson@vftes.com	NSW	NSW
Brett Pickup	BAP Services Pty Ltd	0434006009	Brett@bapservices.com.au	NSW	All Areas, Sydney, Illawarra, Newcastle, ACT
Patrick Billingham	OzDetect Pty Ltd	0497700667	patrick@ozdetect.com.au	NSW	NSW
Euan Gow	Jurovich Surveying	1300 750 000	egow@jurovichsurveying.com.au	WA/NSW/SA	All state
Jason Steger	Steger & Associates Registered Land Surveyors	0400 008 641	jason.steger@steger.com.au	ACT/NSW	ACT & Surrounds
Samuel Hathaway	Landmark Surveys	02 6280 9608	admin@landmarksurveys.com.au	NSW/ACT	ACT & Sourthen NSW
Kaisar sefian	Australian Utility Search Pty Ltd	0424 841 888	kaisar@aususearch.com.au	NSW/ACT	All NSW, ACT
Daniel Fox	Epoca Environmental Pty Ltd	1300 376 220	daniel@epocaenvironmental.com.au	NSW & ACT	All NSW & ACT
Scott Tancred	SureSearch Underground Services	1300 884 520	Scott.Tancred@suresearch.com.au	NSW/ACT QLD	NSW, Sydney, Northern NSW, Canberra, QLD, South East QLD.
Justin Martinez	LCG GLOBAL PTY LTD	0401749007	J.martinez@lcgsolutions.com.au	NSW, ACT, QLD, VIC	All regions
Troy Redden	On Point Utility Locating	1300 66 76 46	Troy@onpointlocating.com.au	NSW/QLD	Throughout both states
Geoff Campbell	CLS Locating	0450759497	geoffrey@campbellslocating.com.au	NSW/QLD	All QLD, Northern Rivers, NSW
Alexander Bogdanoff	Expert Service Locating	0420346477	info@expertservicelocating.com.au	NSW/QLD	Brisbane, Gold Coast, Sunshine Coast Northern Rivers NSW
Patrick Popovic	Site And See Pty Ltd	0479 162 692	patrick@siteandsee.com.au	QLD/NSW	South East QLD & Northern NSW

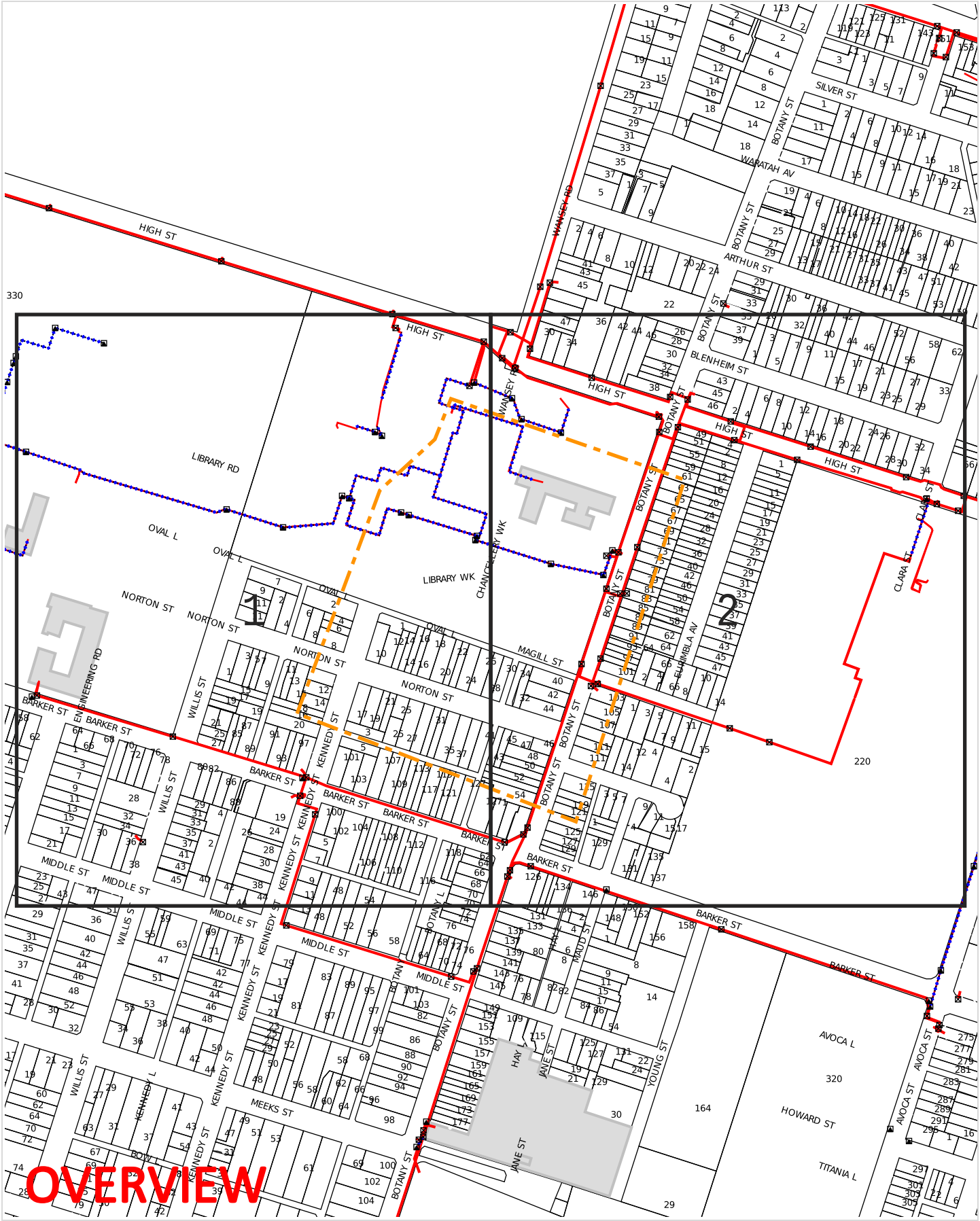
Rhys Lambert	Provac / one find cables	1300 734 772	rhys@provac.net.au	QLD	South East QLD
Paul Beaton	Cairns Asset Locations	0448 157 227	paul.beaton@clarketrenching.com.au	QLD	FNQ to NT Border
Chris Hall	D C Locators Pty Ltd	0419 679 741	dcloc@powerup.com.au	QLD	Brisbane, Ipswich
Benji Lee	LADS	0478 915 237	benji@ladsqld.com.au	QLD	South East QLD
Ian Lambert	Lambert Locations Pty Ltd	07 5562 8400	admin@lambertlocations.com.au	QLD	South East QLD & Northern NSW
Ross Clarke	FNQ Cable Locators Pty Ltd	0428 775 655	onlineco@bigpond.net.au	QLD	QLD REGION
Col Greville	Bsure Locators	0488 520 688	admin@bsurelocators.com.au	QLD	Wide Bay & Burnett; Central and Western QLD; Western Downs
Matthew Carr	Pensar	0405609739	matty.carr@pensar.com.au	QLD	Brisbane
Jimmy Wilkins	GeoRadar Asutralia Pty Ltd	0425057722	jimmy@georadar.net.au	QLD	Emerald, Bundeaberg
Craig Waite	C Locate	0437 808 444	clocate@bigpond.com	QLD	Brisbane GC SC
Jeffrey Lenehan	Syndicate Communications	0404 151 270	Jlenehan@syndicate.com.au	QLD	Brisbane
Toni O'Dell	Utility Location Services	1300 001 857	qldops@utilitylocationservices.com.au	QLD	South East QLD
Michael Jackman	Utility Mapping QLD	1300 627 746	brisbane@utilitymapping.com.au	QLD	All QLD
Jenny Dziduch	1300 Locate Pty Ltd	1300 562 283	admin@1300locate.com.au	QLD	All Queensland, Northern NSW
Brendon Smith	Advanced Locating PTY LTD	0424678823	admin@advancedlocating.com.au	QLD	Gold Coast
Samuel Hazel	Utility ID Underground Service Locators	0401 202 515	sam@utilityid.com.au	QLD	Darling Downs, South West QLD and South East QLD
Bruce Normyle	Dynamic Hydro Excavations	0434 731 933	admin@dynamicexcavation.com.au	QLD	QLD
Michael Koschel	Precision Service Locating	07 46462845	paul@pslocating.com.au	QLD	All QLD / North West NSW/South East QLD
Robert Rutledge	Safe Dig Services	+61 7 3376 0856	rrutledge@safedig.com.au	QLD	Brisbane

Michael Falla	ICUC Locating Services Pty Ltd	0410085365	michael.falla@icuclocatings-ervices.com.au	QLD	South East QLD
Ben Stephens	DTS Group TA Electros-can	0434 140 556	ben.s@electroscanqld.com.au	QLD	Queensland
Adam Lloyd	Aussie HydroVac Ser-vices	07 3287 7818	adam.lloyd@aussiehy-drovac.com.au	QLD	All
Michael Prentice	Onsite Utility Locations	0437 172 601	admin@onsiteutilityloca-tions.com.au	QLD	SEQ
Roland Mollison	LandPartners Pty Ltd	0439 488 545	roland.mollison@landpart-ners.com.au	QLD	South East Queensland
Duncan McGrath	Abletech Underground Group	0418 511 767	duncan@abletechunder-ground.com.au	QLD	QLD Wide
Daniel Poppi	Ace Cable Locations	0431517837	acecablelocations@bigpond.com	QLD	Wide Bay Burnett
Carl Molloy	Provac Melbourne	0451 104 611	melbourne@provac.net.au	VIC	Melbourne Region
Olivier Davies	Central Locating PTY LTD	0439 995 894	ollie@centrallocating.com.au	VIC	Melbourne & Western Victoria
Tina Brereton	D-Tech Ground & Over-head	03 9544 8933	tina@d-tech.net.au	VIC	ALL
Josh Taylor	Advanced Locations Vic-toria Pty Ltd	0427846716	josh@advancedloca-tionsvic.com.au	VIC	All Victoria
Ben Minutoli	Geelong Cable Locations	1800 449 543	ben@geelongcableloca-tions.com.au	VIC	Melbourne, Geelong, Country Victo-ria
Mick McGoldrick	Locate Cables	0404 241 679	mick@locatecables.com	VIC	Western Victoria
Alex Jones	Utility Mapping VIC	1300 627 746	melbourne@utilitymap-ping.com.au	VIC	All VIC
Phi Nguyen	Asset Detection Services Pty Ltd	1300 300 100	Phi.nguyen@assetdetec-tion.com.au	VIC	Melbourne/VIC
Maurice Tobin	Drain Solutions	0412 111600	info@drainsolutions.com.au	VIC	Melbourne Metro
Kate Ficker	Seeker Utility Engineer-ing	1300 733 583	admin@seekerutilityengineer-ing.com.au	VIC	All Victoria
Leigh French	Veris Australia VIC	(03) 7019 8400	melbourne@veris.com.au	VIC	Melbourne
Ben Wooldridge	Controltech Solutions	0447 760 759	ben.wooldridge@controltechsolu-tions.com.au	VIC	Melbourne

Chris Sandlant	Access Utility Engineering P/L	03 9799 8788	Chris.sandlant@accessue.com.au	VIC	Victoria & Regional
Shaun Stephen	STS Locating Services	0405 181 734	stslocatingservices@gmail.com	VIC	All VIC
Glen Foreman	Underground Services Detection Pty Ltd	0402 748 889	undergroundservices@bigpond.com	VIC	Victoria
Clinton Carver	Insight Underground Pty Ltd	0468 900 273	clinton@insightunderground.com.au	VIC	Victoria
Lindsay Botha	L B Underground Service Locations & Engineering	0499 658 677	lb.locations.engineering@gmail.com	VIC	Metro and Regional Victoria
Damien Nielsen	ELS Environmental Location Systems Pty Ltd	0499 499 137	bookings@elsvic.com.au	VIC	Victoria only
Tyler Blake	CHS Group	0409 437 750	tyler.blake@chsgroup.com.au	VIC	Horsham VIC
Craig Jackson	Survey Management Solutions	0400647299	craigj@surveyms.com.au	VIC	All Regions
Ashley Stevens	ABS HYDRO Pty Ltd	0422 798 476	ashley.stevens@abshydro.com.au	NSW/VIC	All of VIC, Regional NSW
Eddie Santos	Taylors Development Strategists	0488 700 155	m.tasker@taylorsds.com.au	VIC/SA/TAS	Victoria
Taryn van Dyk	Trenchless Pipelaying Contractors (TPC)	08 8376 5911	tpc@trenchlesspipelaying.com.au	SA	All
Marc Rose	SADB	0488190699	marc@sadb.com.au	SA	Adelaide only
Matthew Lewis	Adelaide Pipeline Maintenance services	0431 870 471	matt.apms@gmail.com	SA	South Australia
Deninis Stray	Pinpoint Services Mapping	(08) 8130 1600	hello@pinpointsm.com.au	SA	SA and western VIC
Liam Gill	Michael Grear Surveys	08 82788732	ugsl@mgsurveys.com.au	SA	SA
Mattew Cooper	Fulton Hogan	0447 320 581	Matthew.Cooper@fultonhogan.com.au	SA	South Australia
Liam Catchpole	APEX SERVICE LOCATING PTY LTD	0458 924 471	liam@apexvacsolutions.com.au	SA	Adelaide
Bradley Gosling	Engineering Surveys	0433506880	bgosling@engsurveys.com.au	SA	Adelaide
Jason Revill	MME/Platinum Locating Services	08 94080625	jason.revill@platinumlocating.com.au	WA	Perth
Henry Westbrook	Cable Locates & Consulting	08 9524 6600	admin@cablelocates.com.au	WA	All WA

Cameron Swift	Mikcomm Communication	08 9337 1125	cswift@mikcomm.com.au	WA	All
Tobi Lawrence-Ward	Abaxa	08 9256 0100	enquiries@abaxa.com.au	WA	Perth, Southwest, Western Australia
Ben Upton	TerraVac Vacuum Excavation	0433 374 802	locations@terravac.com.au	WA	Perth
Dale Shearsmith	Subtera	1300 046 636	dale@subtera.com.au	WA	WA
Cheron Ingram	Bunbury Telecom Service Pty Ltd	08 9726 0088	cheron@btswa.com.au	WA	WA
Drew Monkhouse	Utility Mapping WA	1300 627 746	perth@utilitymapping.com.au	WA	All WA
Edel O'Connor	Kier Contracting	0456 190 910	edel@kier.com.au	WA	Perth Metro & greater region; Regional WA
Nigel Nunn	CCS Group / Utility Locating Solutions	08 9385 5000	enquiry@ccswa.com.au	WA	Perth
Jeremy Brown	Spotters Asset Locations Pty Ltd	0459 130 677	jeremy@spottersassetlocations.com.au	WA	All
Reece Topham	Prime Locate	0400 888 406	reece@primelocate.com.au	WA	All
Rhyce Murphy	RM Surveys	08 9457 7900	rhyce.murphy@rmsurveys.com.au	WA	All
James Horton	Westscan Pty Ltd	1300 858 404	westscan1@gmail.com	WA	All
Ashleigh Austin	Veris WA	0419 024 696	perth@veris.com.au	WA	Perth Metro & Regional
Suhairee Suhaimi	BCE Spatial	08 9791 7411	harry@bcespatial.com.au	WA	WA
Tim Daws	Award Contracting Pty Ltd	0411 878 895	info@awardcontracting.com.au	WA	Metro & Country Regions
Stephen Steart	Cabling WA Pty Ltd	0422 845 586	ssteart@cablingwa.com.au	WA	Perth Metro
Devvyn Barto	Pulse Locating	0431402738	devvyn.barto@pulselocating.com.au	WA	Western Australia
Josh Pool	Utility Mapping NT	1300 627 746	darwin@utilitymapping.com.au	NT	All NT
Stuart Speckman	FYFE	08 8944 7888	Stuart.Speckman@fyfe.com.au	NT/SA/NSW	NT/SA/NSW

Wayne Parslow	Danisam	0417 089 865	danisam@westnet.com.au	NT	Darwin NT and Surrounds
Scott Crerar	Paneltec Group	0400 895 637	scott@paneltec.com.au	TAS	All



Sequence Number: 244523868

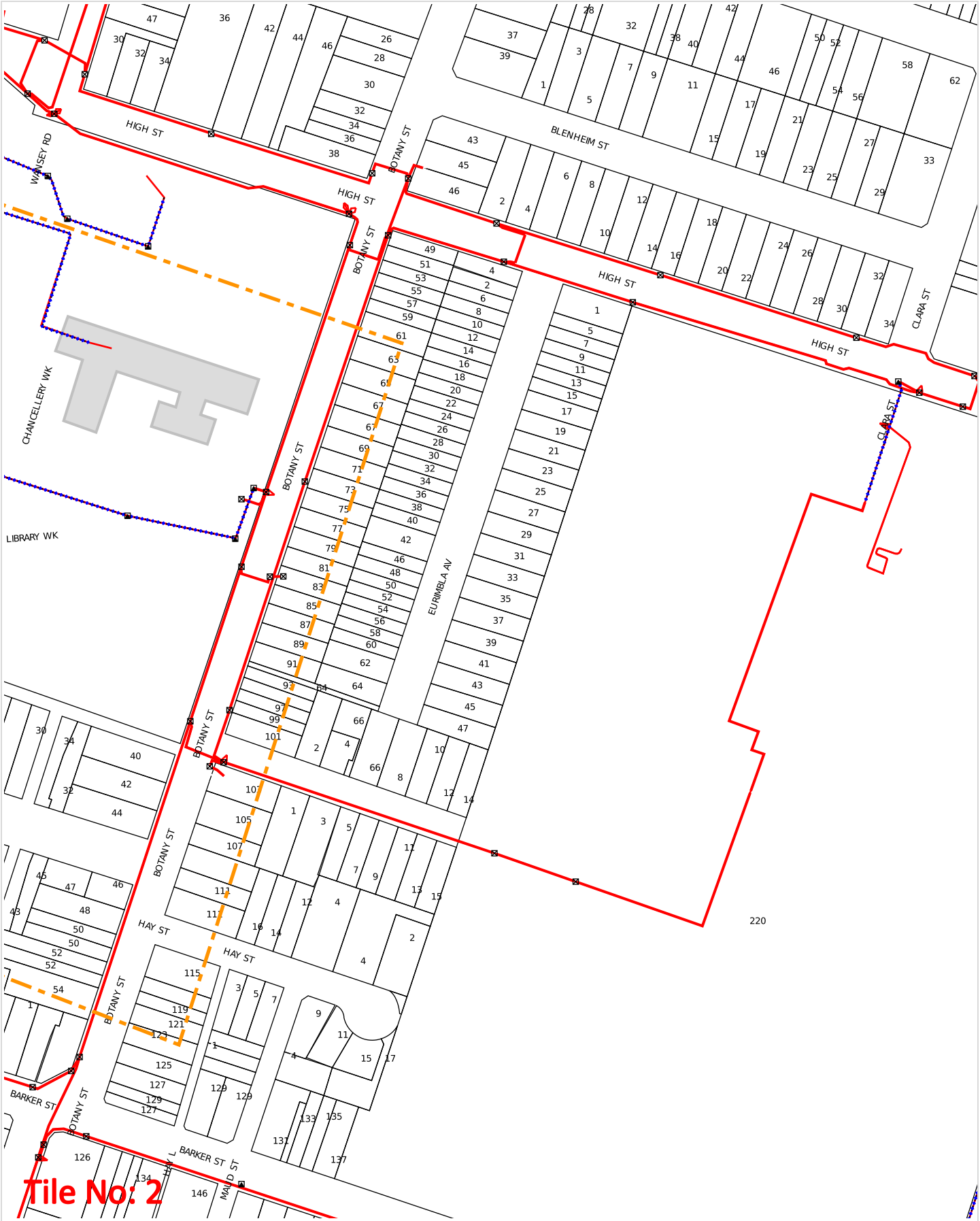
Date Generated: 11 Sep 2024

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

Sequence Number: 244523868

Date Generated: 11 Sep 2024

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



Sequence Number: 244523868

Date Generated: 11 Sep 2024

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

Appendix E Uecomm Dial Before You Dig Reponses

Gina Matthews
To: Not Supplied
73 Miller Street
North Sydney, NSW 2060

Uecomm Pty Limited
ABN 56 079 083 195

Building 8, 658 Church St,
Richmond, VIC 3121
Ph: (03) 9221 4100
Fax: (03) 9221 4193
Ah: 1800 707 447

LOCATION OF UNDERGROUND FIBRE OPTIC CABLE INFORMATION SHEET

IMPORTANT: PLEASE READ ALL INFORMATION AND CONDITIONS BELOW AND THE NOTICE ON THE REVERSE SIDE OF THE PLAN/S.

"Before You Dig Australia" Sequence No 244523868	**Issue Date:** 11 Sep 2024
Customer ID 22057	**Issue By:** Optus and or Uecomm Nsw

Location: UNSW South East Corner, Kingsford, NSW 2032
Uecomm Asset Location No. 2246-1
Before You Dig Australia Job No. 37568423

In relation to your enquiry at the above address, Uecomm advises as follows:

The records of Uecomm Limited disclose that there ARE underground FIBRE OPTIC / TELECOMMUNICATIONS cables in the vicinity of the above enquiry as per attached plan/s.

- The underground cables referred to in this advice are defined as the underground communications cables owned or controlled by Uecomm Pty Limited.
- The person/company responsible for submitting the inquiry should take care to ensure all plans listed above have been received. For any plan listed above but not received please contact **1800 707 447**.
- Any information provided is valid only for **30 days** from the date of issue set out above.
- If the work operations extend beyond this period, or if the designs are altered in any way, you are requested to resubmit your proposal for reassessment.
- Further assistance may be obtained if necessary, by telephoning **1800 707 447**.

PLEASE READ ALL INFORMATION AND DISCLAIMERS BELOW:

1. Due to the nature of underground cables and the age of some cables and records, it is impossible to conclusively ascertain the location of all cables. The accuracy and/or completeness of the information cannot be guaranteed and, accordingly, they are intended to be indicative only and, as a result, Uecomm does not accept any responsibility for any inaccuracies of its plans. They should not be solely relied upon when undertaking underground works. It is also inaccurate to assume that fibre optic cables follow straight lines and careful on-site investigations are essential to locate its exact position.
2. The following minimum clearances must be maintained:
    - 300mm when laying asset's inline, horizontal or vertical.
    - 500mm when operating vibrating equipment, e.g., jackhammers or vibrating plates.
    - 1000mm when operating mechanical excavators.
3. Due to the inherent dangers associated with excavation in the vicinity of underground cables, precautions should be taken in the undertaking of any underground works, including (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 likely hood of damage to the cable, e.g., blades of hand equipment should be orientated parallel to the line of the cable rather than digging across the cable.
    - If any undisclosed underground cables are located, Uecomm Limited should be notified immediately.
    - All personnel must be properly briefed, particularly those associated with the use of earthmoving equipment, trenching, boring and pneumatic equipment.
    - All excavations must be undertaken in accordance with the relevant legislation and regulations.

4. **DAMAGE. ANY DAMAGE TO UECOMM'S NETWORK MUST BE REPORTED IMMEDIATELY TO 1800 707 447.**
5. Uecomm recommends using Uecomm approved location contractors to provide on-site location services for Uecomm plant. You can arrange Uecomm on-site visits by calling Uecomm on 1800 707 447 and Uecomm or its approved representative will attend your site to provide guidance to the location of the Uecomm assets (the "Uecomm Asset Alignment"). **Uecomm requires 3 clear business days' notice to conduct an on-site location**. The initial on-site visit by Uecomm will not normally incur a charge, but at the discretion of Uecomm, subsequent site visits may incur a charge to be applied at an hourly rate.
6. Uecomm will hold the relevant party responsible for any damage to Uecomm plant and all expenses incurred by Uecomm as a result of asset damage.
7. Except to the extent that liability may not be capable of lawful exclusion, Uecomm Pty Limited and its servants and agents and the related bodies corporate of Uecomm Pty Limited 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 attached hereto. Except as expressly provided to the contrary in this information sheet or the attached Plans, all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

We thank you for your enquiry and appreciate your continued use of the Before You Dig Australia and/or Uecomm Asset Analysis Service. If you require further information, please contact Uecomm on **1800 707 447**.

Uecomm Underground Cable

Scale: 1:5125

Printed on: 11 Sep 2024

Sequence Number: 244523868

Location: UNSW South East Corner, Kingsford, NSW 2032

Job Location: Line, Point, Area

Undergound Asset: Uecomm

Uecomm Underground Cable

Scale: 1:2500

Printed on: 11 Sep 2024

Sequence Number: 244523868

Location: UNSW South East Corner, Kingsford, NSW 2032

Job Location: Line, Point, Area

Undergound Asset: Uecomm

Uecomm Underground Cable

Scale: 1:2500

Printed on: 11 Sep 2024

Sequence Number: 244523868

Location: UNSW South East Corner, Kingsford, NSW 2032

Job Location

Line

Point

Area

Undergound Asset

Uecomm

Appendix F Telstra Dial Before You Dig Responses

Attention: Gina Matthews

Site Location: UNSW South East Corner, Kingsford, NSW 2032

Your Job Reference: UNSW South East

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.

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

Please refer to all enclosed attachments for more information.
Please Report Damage to Telstra Equipment: Report damages to Telstra equipment - Telstra

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

WARNING - 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 Steps - Working Near Telecommunications Assets (attached Telstra Duty of Care).
Please note that:
- it is a criminal offence under the *Criminal Code Act* 1995 (Cth) to tamper or interfere with telecommunications infrastructure.
- Telstra will take action to recover compensation for damage caused to property and assets, and for interference with the operation of Telstra's networks and customers' services.

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

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

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

(See attached file: AccreditedPlantLocators 2024-06-21a.pdf)

(See attached file: 244523867.pdf)

General Information

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

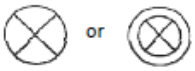
DBYDCertification

Certified Locating Organisation (CLO)
https://dbydlocator.com/certified-locating-organisation/

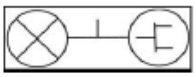
LEGEND

Exchange
(Major Cable Present)

Footway Access Chamber
(can vary from 1-lid to 12-lid)



Pillar / Cabinet
(above ground / free standing)



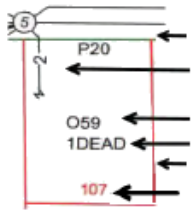
Above ground complex equipment housing (eg RIM)
Please Note: This equipment is powered by 240V Electricity

OC — Other Carrier Telecommunications Cable/Asset

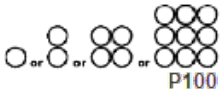
Dist — Distribution cables in Main Cable ducts

MC — Main Cable ducts on a Distribution plan

▲ — Blocked or damaged duct.



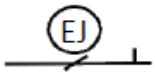
Roadside / Front Boundary
2 pair lead-in to property from pit in street 1
pair working (pair ID 059)
1 pair dead (i.e. spare, not connected)
Side / Rear Property Boundary
Property Number



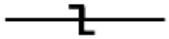
Single to multiple round conduit
Configurations 1,2,4,9 respectively
(attached text denotes conduit type and size)

Multiple square conduit
Configurations 2, 4, 6 respectively
(attached text denotes conduit type and size)

Cable Jointing Pit
(number / Letter indicating Pit Type)



Elevated Joint
(above ground joint on buried cable)

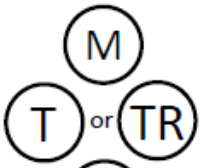


Telstra Plant in shared Utility trench

Aerial Cable

Aerial Cable
(attached to joint Use Pole eg. Power)

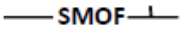
Direct Buried Cable



Marker Post Installed

Buried Transponder

Marker Post, Transponder

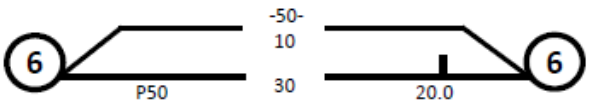


Optical Fibre cable direct buried

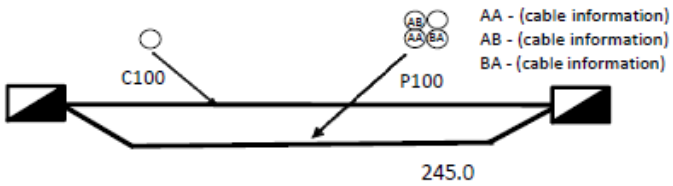
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galanised iron, E - Earthenware
Conduit sizes *nominally* range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

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



AA - (cable information)
AB - (cable information)
BA - (cable information)

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

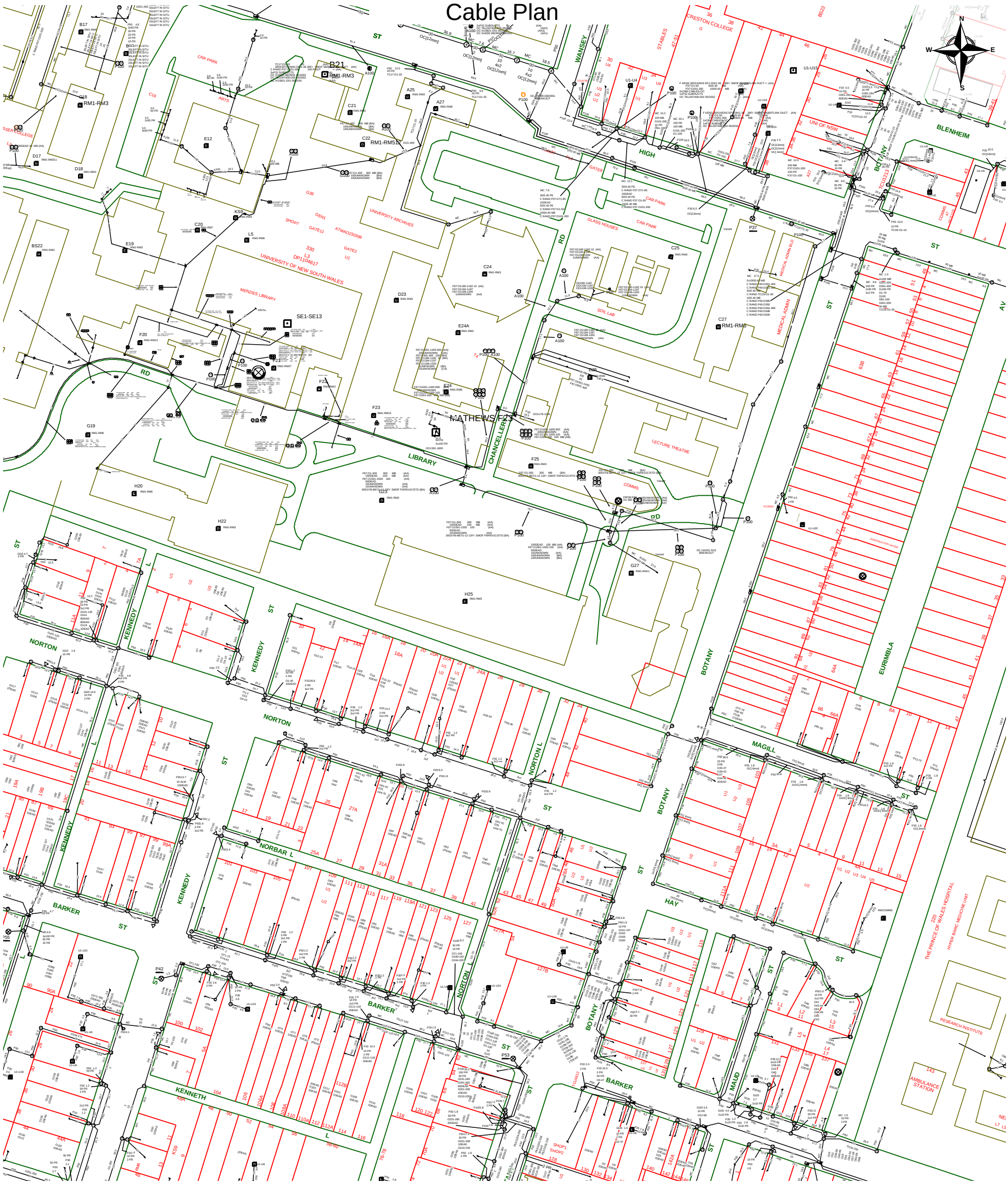
Protect our Network:

by maintaining the following distances from our assets:

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

For more info contact a Certified Locating Organisation or Telstra Plan Services 1800 653 935

Cable Plan



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

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/09/2024 11:22:12

Sequence Number: 244523867

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

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

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

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

Mains Cable Plan

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

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/09/2024 11:22:16

Sequence Number: 244523867

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.

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

Before You Dig Australia

Think before you dig

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

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

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

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

Disclaimer and legal details

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

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

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

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

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

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

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

This Notice has been provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of interest. You will also need to collate and understand all of the 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 Certified Locating Organisation. The applicant must not give the plans or details to any parties other than these and must not generate profit from commercialising the plans or details.

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

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

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

Data Extraction Fees

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

Telstra does not accept any liability or responsibility for the performance of or advice given by a Certified Locating Organisation. 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).

Appendix G Site Survey by Project Surveyors

UNDERGROUND SERVICES NOTES

NOTES:

- THE PURPOSE OF THIS PLAN IS FOR DESIGN ONLY. CURRENT PLANS ISSUED BY SERVICE PROVIDERS THOUGHT "DIAL BEFORE YOU DIG"ARE STILL REQUIRED. CONTRACTORS AND SUBCONTRACTORS WILL NEED TO EXERCISE THEIR OWN "DUTY OF CARE" AND SHOULD MAKE THEIR OWN DBYD ENQUIRY BEFORE EXCAVATION/CONSTRUCTION. YOU MUST ENSURE DBYD ARE CURRENT AS THEY HAVE VARYING EXPIRATION DATES, AND MAY REQUIRE RE0ISSUE OTHERWISE THE INFORMATION ON THE PLAN MAY NO LONGER BE CURRENT.

- UNKNOWN SERVICES MAY EXIST THAT COULD NOT BE ELECTRONICALLY DETECTED. THE DIAGRAMS OF THE SERVICE PROVIDER MAY NOT DEPICT ALL ASSETS WITHIN THEIR NETOWORK AND SERCICE PROVIDERS MAY SHARE CONDUITS AND/OR TRENCHES AT THE LOCATION.

- SINGLE MARKED LINES MAY REPRESENT MULTIPLE CONDUITS, PIPES END/OR CABLES AT THIS LOCATION. THE RECORDING OF DEPTHS AND POSITION OF UTILITIES CANNOT BE GUARANTEED AS CORRECT. WE RECOMMEND NON DESTRUCTIVE DIGGING/POTHOLING TO EXPOSE SERVICES FOR ACCURATE IDENTIFICATION AND DEPTH.

DETECTION PROCEDURES:

UTILITY MAPPING HAVE DETECTED AND MARKED OUT EXISTING SERVICES IN THE AREA SPECIFIED BY THE CLIENT. THESE SERVICE LINES HAVE BEEN LOCATED BY ABOVE GROUND SERVICE TRACING METHODS AND HAVE NOT BEEN SIGHTED.
PROJECT SURVEYORS HAVE THEN LOCATED THE LINE MARKED BY UTILITY MAPPING.
THE LOCATION OF THESE MARKED SERVICES ARE APPROXIMATE ONLY. THE POSITION OF THE MARKED SERVICE LINES HAS BEEN MADE WITH REFERENCE TO THE RELEVANT SERVICE AUTHORITY DIAGRAMS. ALL SERVICES MAY NOT HAVE BEEN SHOWN AND UTILITY DESCRIPTION HAVE BEEN TAKEN FROM UTILITY PROVIDED DIAGRAMS WHERE AVAILABLE. WE RECOMMEND NON DESTRUCTIVE DIGGING/POTHOLING TO EXPOSE MARKED SERVICES TO IDENTIFY AND SHOW EXACT DEPTH AND LOCATION OF SERVICE LINES PRIOR TO EARTHWORKS COMMENCING. UTILITES PLOTTED ON THE PLAN THAT TERMINATE IN THE SPECIFIED AREA MAY GO TO FEATURES THAT HAVE NOT BEEN SHOWN ON THE BACKGROUND DETAIL SURVEY PROVIDED BY CLIENT. THE RISKS WITH THE CLIENT AND/OR SUB CONTRACTOR AND THEIR RESPONSIBILITY TO EXERCISE CAUTION AT ALL TIMES.

ADDITIONAL INFORMATION ADDED:

IN PLACES WHERE UNDERGROUND DETECTION HAVE NOT BEEN ACHIEVED ADDITIONAL INFORMATION WAS PLOTTED FROM DOCUMENTS RECEIVED AND RECORDS OBTAINED FROM SERVICE PROVIDERS.

LOCATING QUALITY LEVELS PURSUANT TO AS5488-2013

QL-A QUALITY LEVEL A. VISUALISATION / CONFIRMATION OF A SERVICE, POSITION AND DEPTH, BY NON DESTRUCTIVE DIGGING METHODS OR POINTS OF ENTRY TO PITS OR MANHOLES.

QL-B QUALITY LEVEL B. LOCATING OF SERVICES USING RADIO DETECTION METHODS OR GROUND PENETRATION RADAR. ACCEPTABLE RANGE OF ACCURACY FOR QUALITY B IS 300mm FOR POSITION AND 500mm IN DEPTH.

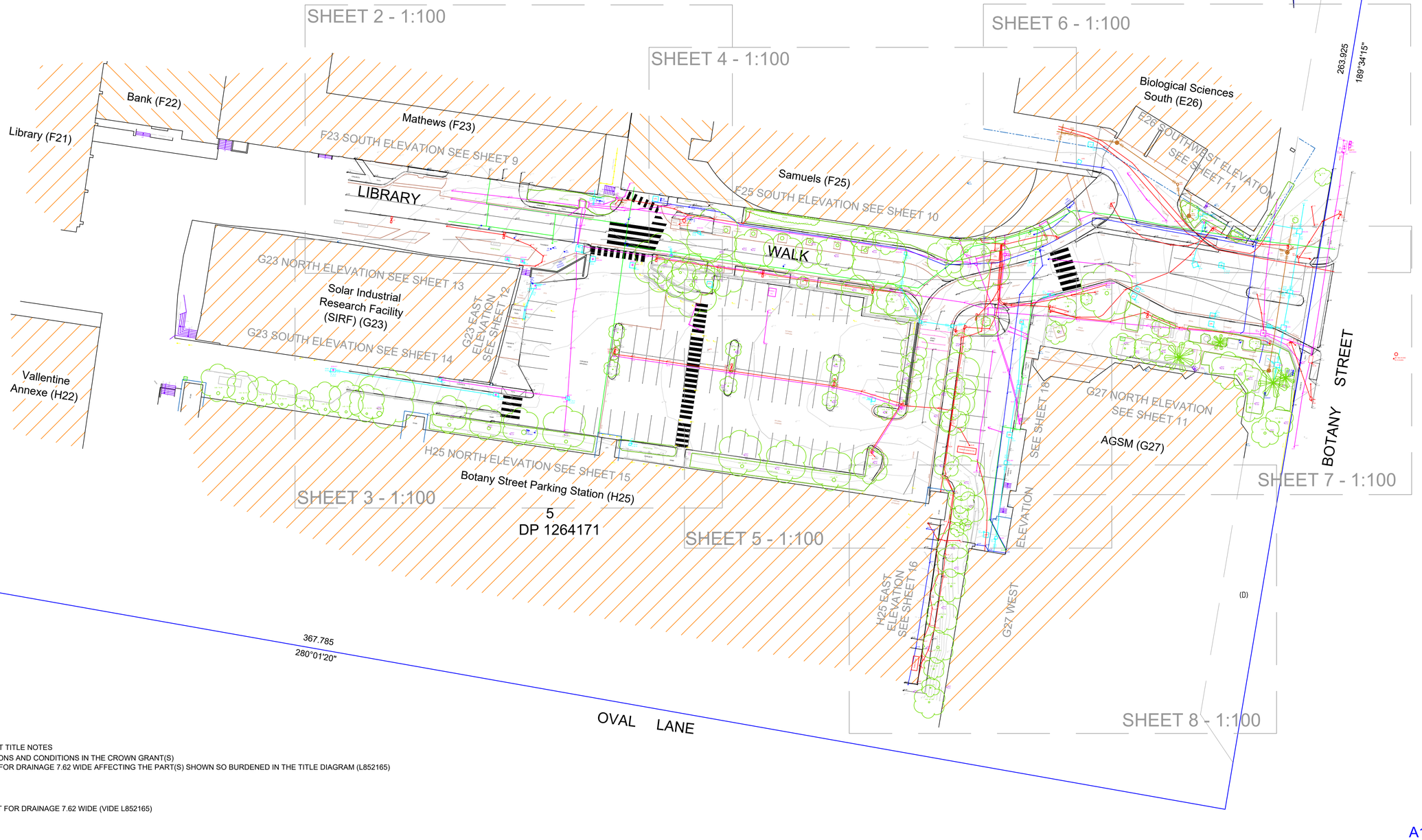
QL-C QUALITY LEVEL C. SERVICES MARKED OUT USING ONLY SURFACE FEATURES THAT HAVE BEEN MEASURED IN THE FIELD. THIS INCLUDES HYDRANTS, GAS MARKERS, PITS LIDS ETC. NO INDICATION OF SERVICE LOCATION OR DEPTH CAN BE OBTAINED FROM QUALITY LEVEL C.

QL-D QUALITY LEVEL D. SERVICES MARKED UP USING DBYD PLANS ONLY. NO INDICATION OF SERVICE CONFIRMATION CAN BE GIVEN.

SCHEDULE OF SURVEY CONTROL

STN	EASTING	NORTHING	LEVEL	DESCRIPTION
1	336 955.530	6 245 513.430	51.35	NAIL IN CONCRETE PATH
2	336 819.661	6 245 539.011	55.50	NAIL IN PAVEMENT
3	336 726.951	6 245 544.367	53.73	NAIL IN PAVEMENT

16.11 - DENOTES SUBSURFACE GAS LINE LEVEL 16.11 QUALITY LEVEL B.
16.11 - DENOTES SUBSURFACE COMMUNICATION LINE LEVEL 16.11 QUALITY LEVEL B.
16.11 - DENOTES SUBSURFACE SEWER LINE LEVEL 16.11 QUALITY LEVEL B.
16.11 - DENOTES SUBSURFACE STORMWATER LINE LEVEL 16.11 QUALITY LEVEL B.
16.11 - DENOTES SUBSURFACE WATER LINE LEVEL 16.11 QUALITY LEVEL B.
16.29 - DENOTES UNDERGROUND HIGH VOLTAGE ELECTRICITY LINE LEVEL 16.29 QUALITY LEVEL B.
16.29 - DENOTES UNDERGROUND ELECTRICITY LINE LEVEL 16.29 QUALITY LEVEL B.



* THE SUBJECT TITLE NOTES
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2. EASEMENT FOR DRAINAGE 7.62 WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (L852165)

(D) EASEMENT FOR DRAINAGE 7.62 WIDE (VIDE L852165)

A1

NOTES :

* BOUNDARIES HAVE BEEN DEFINED BY SURVEY
* LAND DIMENSIONS AND AREAS HAVE BEEN COMPILED FROM PLANS OBTAINED FROM NSW LRS
* BEARINGS RELATE TO GDA2020 NORTH ORIGINATING FROM DP1264171
* LEVEL DATUM IS AHD ORIGINATING FROM PM51316 RL 48.212 LOCATED AT BOTANY STREET.
* VISIBLE, ACCESSIBLE SERVICES ONLY HAVE BEEN LOCATED. THIS PLAN DOES NOT PURPORT TO SHOW UNDERGROUND SERVICES.
* THE EXISTENCE OF UNDERGROUND SERVICES HAS NOT BEEN ESTABLISHED.
* EXISTENCE OF SERVICES MUST BE VERIFIED BY CONTACTING BEFORE YOU DIG (BYDA) BYDA.COM.AU CRITICAL SERVICES MUST BE EXPOSED AND LOCATED.
* NEIGHBOURING HOUSES, WINDOWS AND ROOF POSITIONS ARE APPROXIMATELY ONLY.
* FLOOR LEVELS GENERALLY SURVEYED AT DOOR THRESHOLDS. INTERNAL ROOMS NOT SURVEYED.
* CONTOURS SHOWN ARE INDICATIVE OF LAND FORM. SPOT LEVELS SHOULD TAKE PRECEDENCE.
* REFER TO FACE OF PLAN FOR SUBJECT TITLE NOTATIONS.
* THIS TITLEBLOCK IS AN INTEGRAL PART OF THIS DRAWING AND SHOULD NOT BE REMOVED.

GDA 2020

SCIMS SURVEY MARK

BEFORE YOU DIG www.byda.com.au

LEGEND

BOL - BOLLARD	SMH - SEWER MANHOLE
BM - BENCHMARK	SP- SIGN POST
D - DOOR	SV - STOP VALVE
ELEC - ELECTRICAL BOX	TEL - TELSTRA PIT
TF - TOP OF FENCE	RF - ROOF
GASV - GAS VALVE	TK - TOP KERB
KO - KERB OUTLET	TW - TOP WALL
PPT - PARAPET	WM - WATER MAIN
STW - STORMWATER PIT	W - WINDOW
DCS - DISABLED CARSPACE	IP - INSPECTION POINT
IL & INV - INVERT LEVEL	LP - LIGHT POST
SL - SURFACE LEVEL	EOT - END OF TRACE
TL - TRAFFIC LIGHT	FOD - FULL OF DIRT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT	UTO - UNABLE TO OPEN UTT - UNABLE TO TRACE

REV	AMENDMENTS	DATE

SCALE 1:400
0 10 20 30 40

SHEET 1 0F 18 - DETAIL SURVEY

CLIENT: UNSW - SYDNEY

JOB REF. :	5749
DRAWING No.	5749–G25
SURVEYOR:	SONG C
CHECKED:	NATHAN M REGISTERED LAND SURVEYOR
DATE:	21/08/2024
DATUM:	A.H.D.
ORIGIN:	PM 51316 RL 48.212
REFERENCE SYSTEM:	GDA 2020

PLAN OF: LIBRARY WALK
RANDWICK

BEING: PART LOT 5 IN DP 1264171

SHOWING: GENERAL DETAIL AND SITE LEVELS

PURPOSE: ARCHITECTURAL DESIGN
COUNCIL SUBMISSION

ABN 20 068 433 974
BELLA VISTA
PO Box 7419 BAULKHAM HILLS NSW 2153
UNIT 1, GROUND FLOOR, 16 LEXINGTON DRIVE, BELLA VISTA NSW 2153
PHONE : 9056 1900
email: office@projectsurveyors.com.au
www.projectsurveyors.com.au
PROJECT SURVEYORS
Professional Innovative... Results.

MGA

TN

APPROX.

Mathews (F23)

LIBRARY

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
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LP - LIGHT POST
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UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

SHEET 2 0F 18

DRAWING No.: 5749-G25 -2

BELLA VISTA

PO Box 7419
BAULKHAM HILLS NSW 2153

UNIT 1
16 LEXINGTON DRIVE
BELLA VISTA NSW 2153

PHONE : 9056 1900

email: office@projectsurveyors.com.au
www.projectsurveyors.com.au
ABN 20 068 433 974

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A1

Solar Industrial Research Facility (SIRF) (G23)

Botany Street Parking Station (H25)

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
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GASV - GAS VALVE
KO - KERB OUTLET
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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

MGA

TN

APPROX.

SHEET 3 0F 18

DRAWING No.: 5749-G25 -3

BELLA VISTA

PO Box 7419
BAULKHAM HILLS NSW 2153

UNIT 1
16 LEXINGTON DRIVE
BELLA VISTA NSW 2153

PHONE : 9056 1900

email: office@projectsurveyors.com.au
www.projectsurveyors.com.au
ABN 20 068 433 974

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Samuels (F25)

MGA

TN

APPROX.

WALK

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

A1

SHEET 4 0F 18

DRAWING No.: 5749-G25 -4

BELLA VISTA

PO Box 7419
BAULKHAM HILLS NSW 2153

UNIT 1
16 LEXINGTON DRIVE
BELLA VISTA NSW 2153

PHONE : 9056 1900

email: office@projectsurveyors.com.au
www.projectsurveyors.com.au
ABN 20 068 433 974

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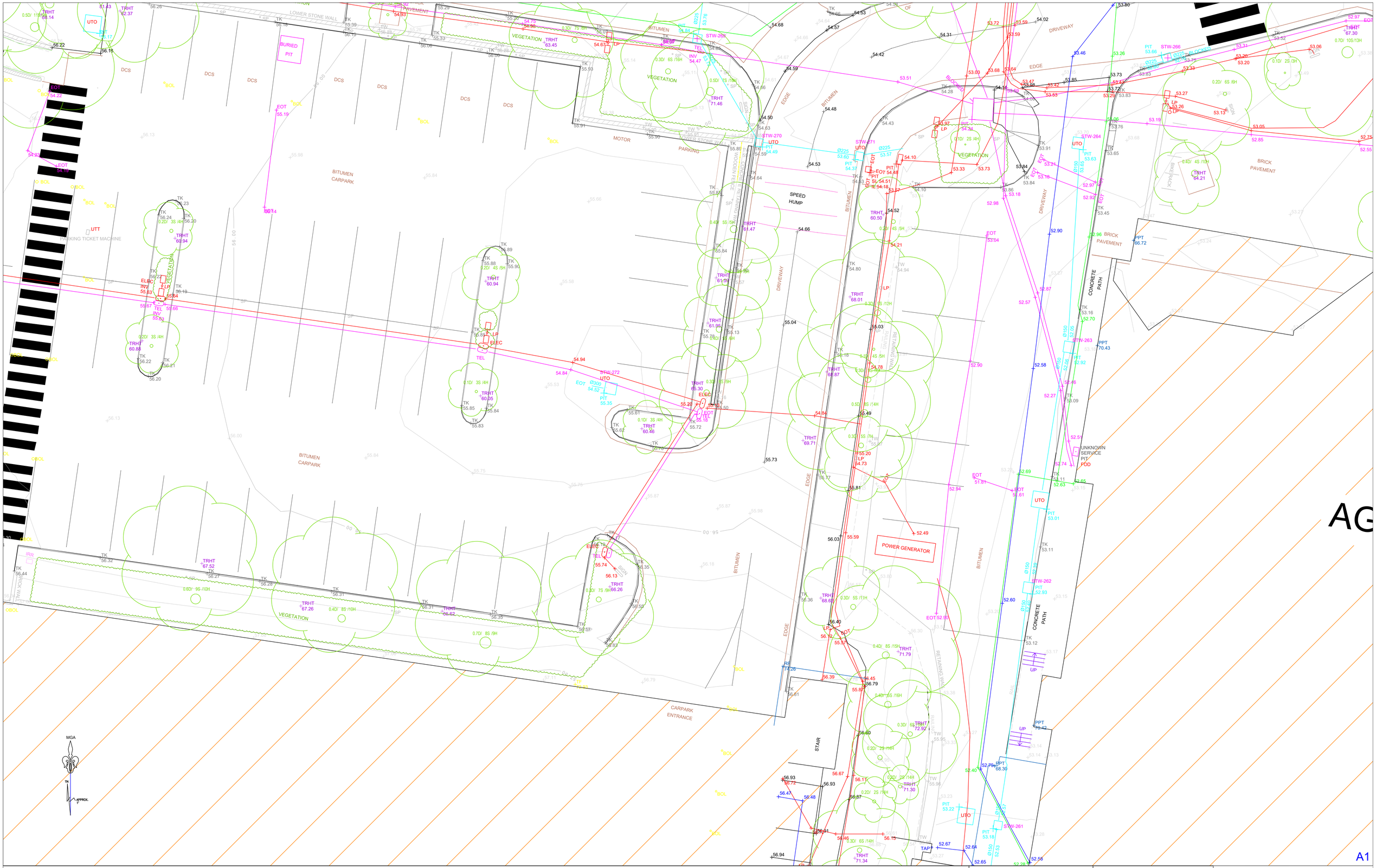

LEGEND

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ELEC - ELECTRICAL BOX
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STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
SV - STOP VALVE
TEL - TELSTRA PIT
RF - ROOF
TK - TOP KERB
TW - TOP WALL
WM - WATER MAIN
W - WINDOW
IP - INSPECTION POINT

LP - LIGHT POST
EOT - END OF TRACE
FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100
0 1 2 3 4 5 6 7 8 9 10

SHEET 5 0F 18
DRAWING No.: 5749-G25 -5

BELLA VISTA

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A1

Biological Sciences South (E26)

263.925

189°34'15"

MGA

TN

APPROX.

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
SV - STOP VALVE
TEL - TELSTRA PIT
RF - ROOF
TK - TOP KERB
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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

A1

SHEET 6 0F 18

DRAWING No.: 5749-G25 -6

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STREET

BOTANY

AGSM (G27)

MGA

TN

APPROX.

1 ▲ BM - NAIL IN CONC RL 51.35 (AHD)

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
SV - STOP VALVE
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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

SHEET 7 0F 18

DRAWING No.: 5749-G25 -7

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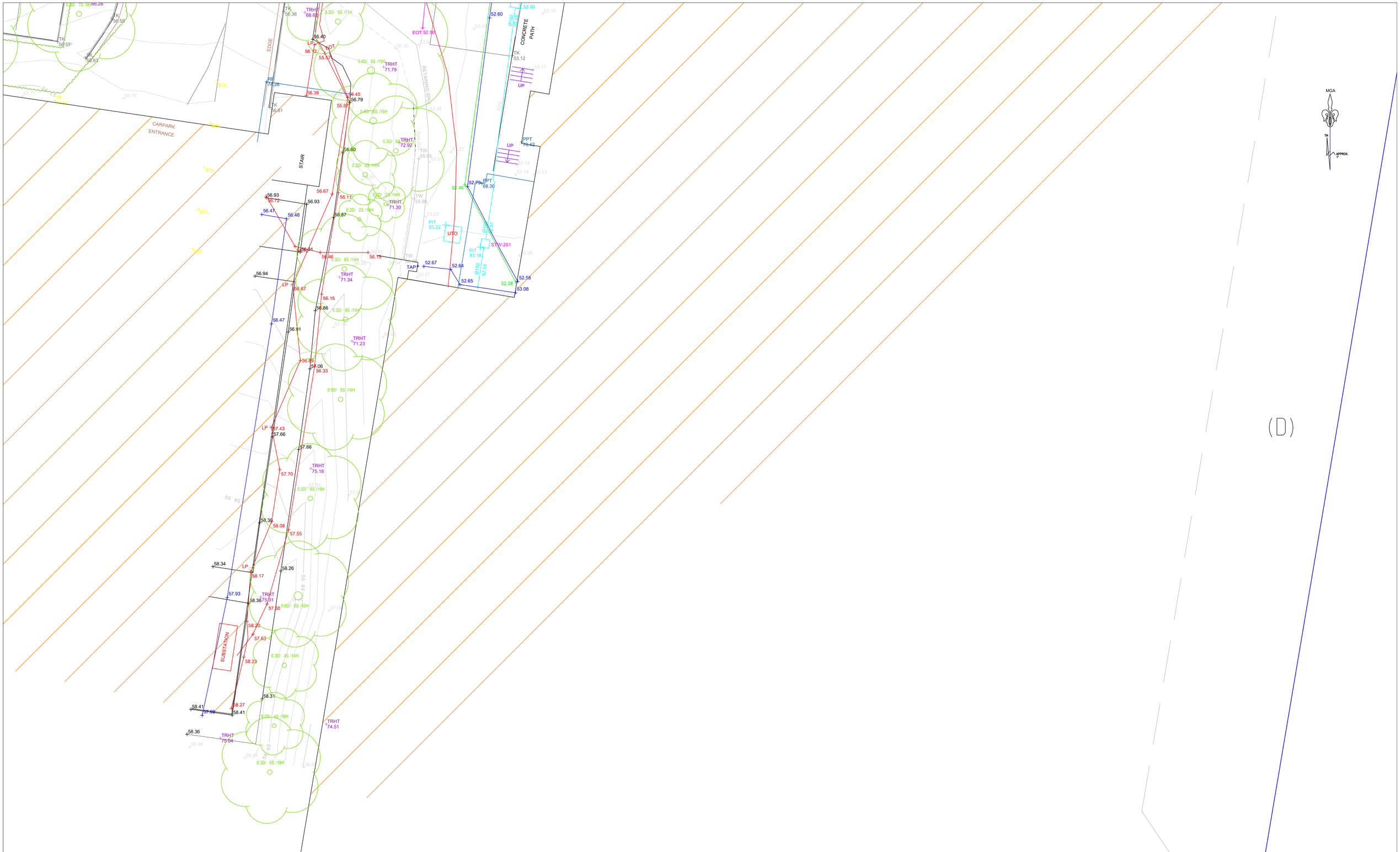

(D)

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
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SV - STOP VALVE
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IP - INSPECTION POINT

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FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

SHEET 8 0F 18

DRAWING No.: 5749-G25 -8

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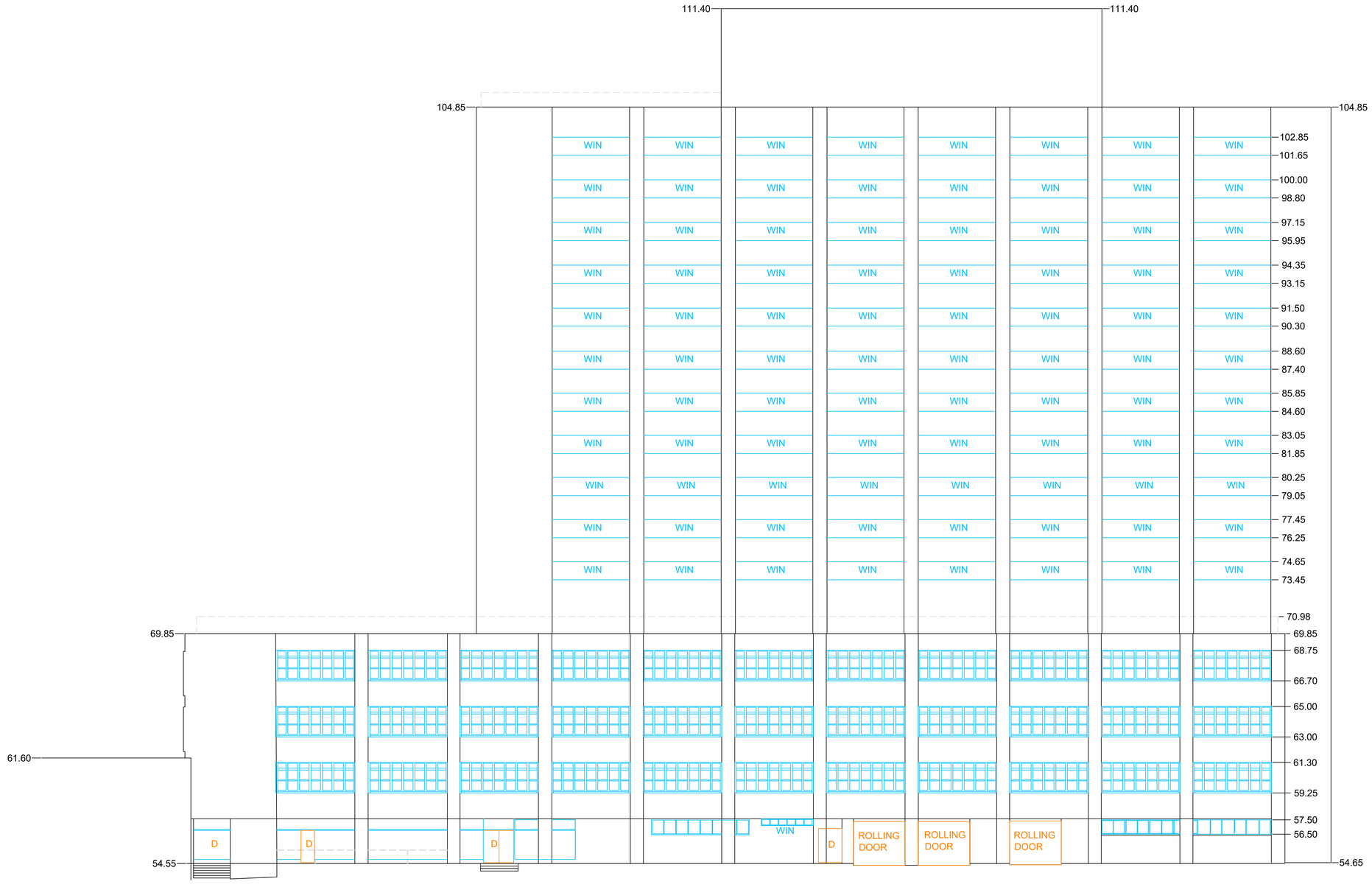

DATUM: RL 50.0

F23 SOUTH

F23 SOUTH

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

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FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:150
0 1 2 3 4 5 10 15

SHEET 9 0F 18
DRAWING No.: 5749-G25 -9

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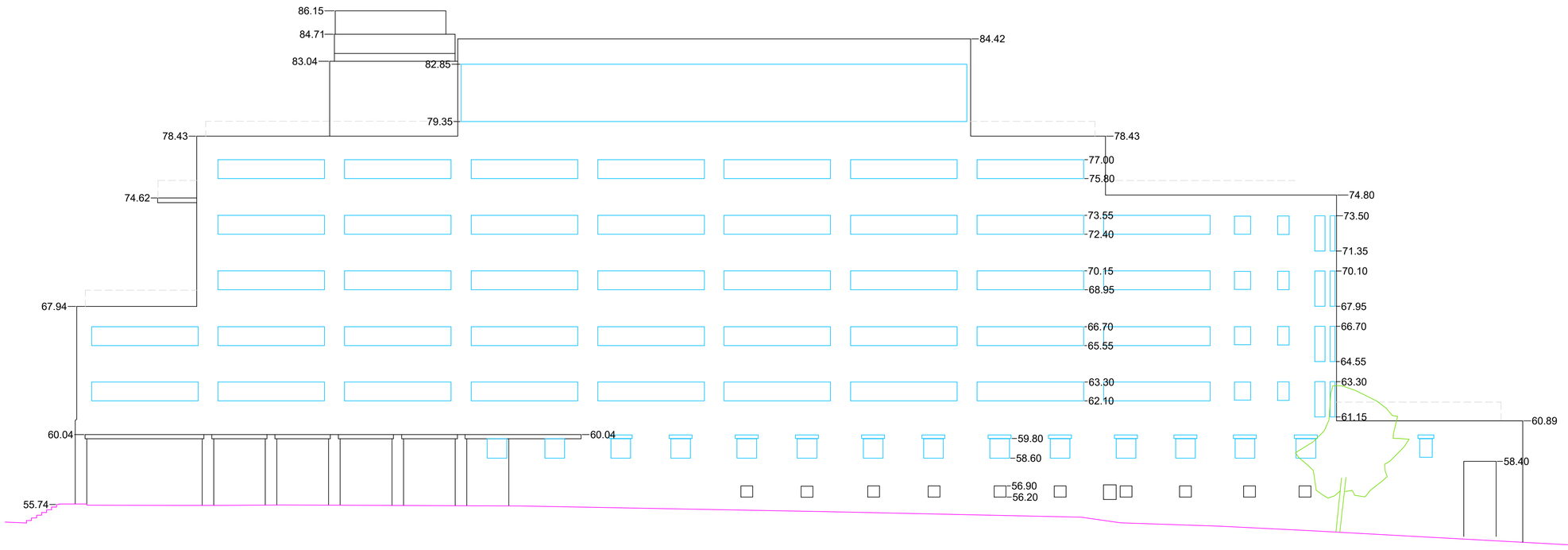

DATUM: RL 50.0

F25 SOUTH

F25 SOUTH

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:150
0 1 2 3 4 5 10 15

SHEET 10 0F 18
DRAWING No.: 5749-G25 -10

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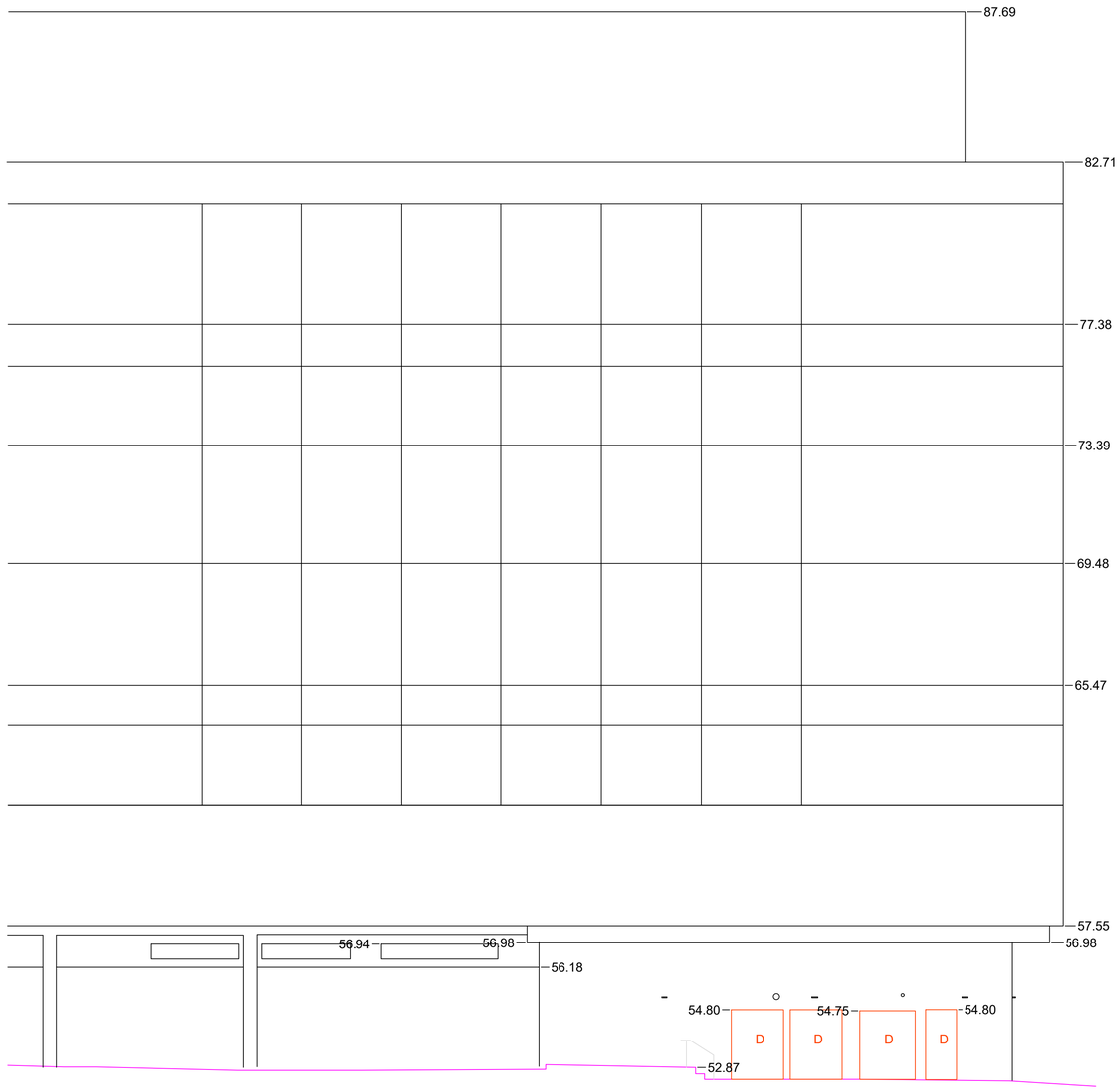

DATUM: RL 50.0

E2 SOUTH WEST

E26 SOUTH WEST

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100
0 1 2 3 4 5 6 7 8 9 10

SHEET 11 0F 18
DRAWING No.: 5749-G25 -11

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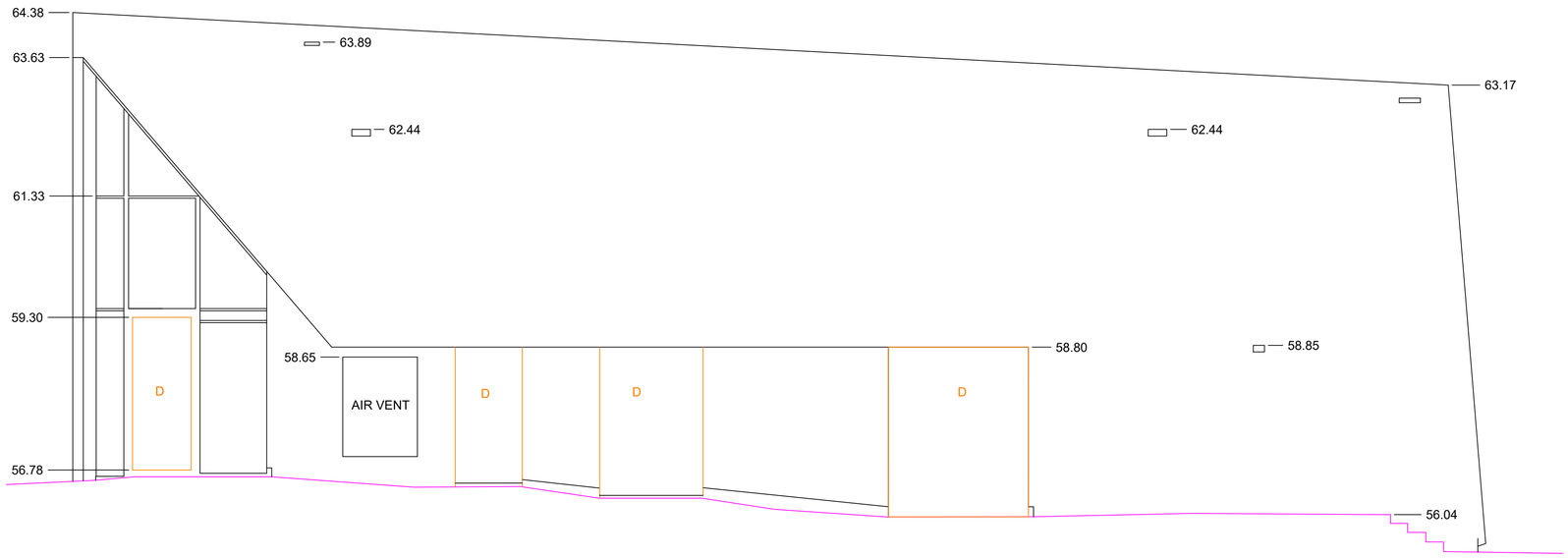

DATUM: RL 52.0

G23 EAST

G23 EAST

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
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TEL - TELSTRA PIT
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LP - LIGHT POST
EOT - END OF TRACE
FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:50

0 0.5 1 2 3 4 5

SHEET 12 0F 18

DRAWING No.: 5749-G25 -12

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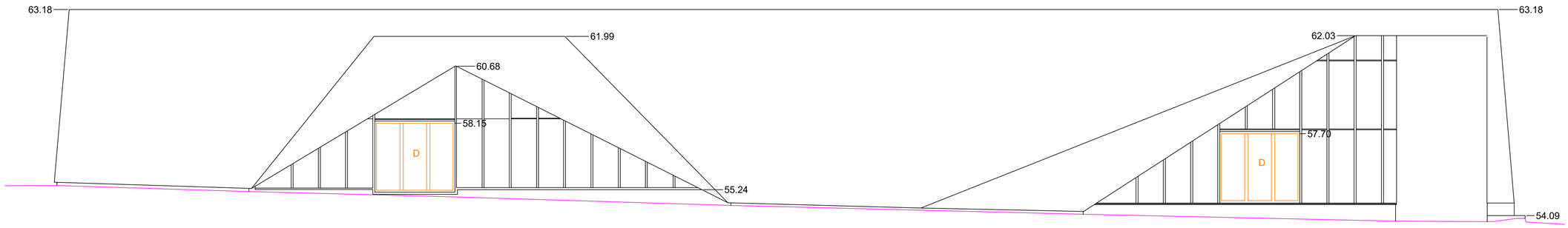

DATUM: RL 52.0

G23 NORTH

G23 NORTH

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
SV - STOP VALVE
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IP - INSPECTION POINT

LP - LIGHT POST
EOT - END OF TRACE
FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

SHEET 13 0F 18

DRAWING No.: 5749-G25 -13

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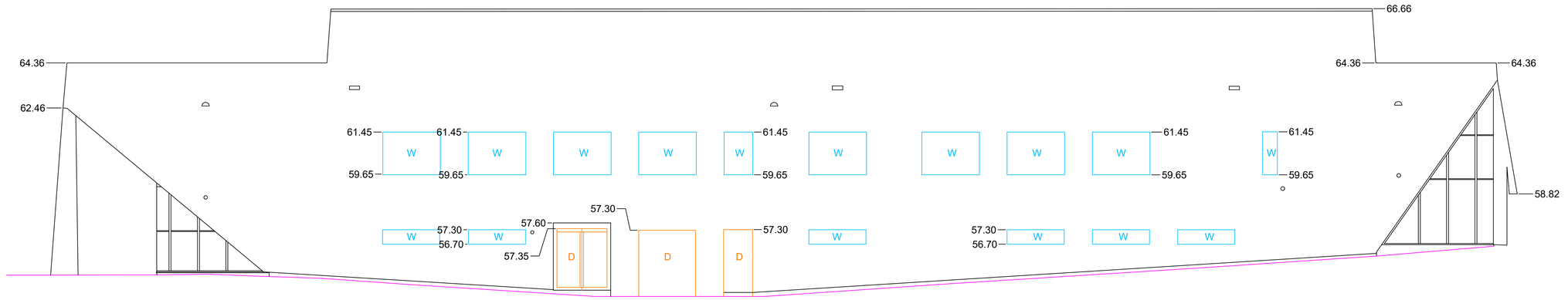

DATUM: RL 52.0

G23 SOUTH

G23 SOUTH

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
SV - STOP VALVE
TEL - TELSTRA PIT
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W - WINDOW
IP - INSPECTION POINT

LP - LIGHT POST
EOT - END OF TRACE
FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100
0 1 2 3 4 5 6 7 8 9 10

SHEET 14 0F 18
DRAWING No.: 5749-G25 -14

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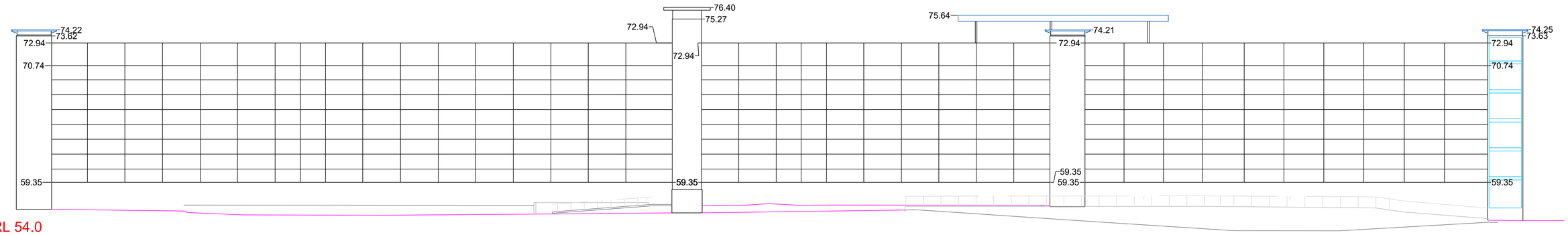

DATUM: RL 54.0

H25 NORTH

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

SMH - SEWER MANHOLE
SP- SIGN POST
SV - STOP VALVE
TEL - TELSTRA PIT
RF - ROOF
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TW - TOP WALL
WM - WATER MAIN
W - WINDOW
IP - INSPECTION POINT

LP - LIGHT POST
EOT - END OF TRACE
FOD - FULL OF DIRT
UTO - UNABLE TO OPEN
UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:200
0 5 10 15 20

SHEET 15 0F 18
DRAWING No.: 5749-G25 -15

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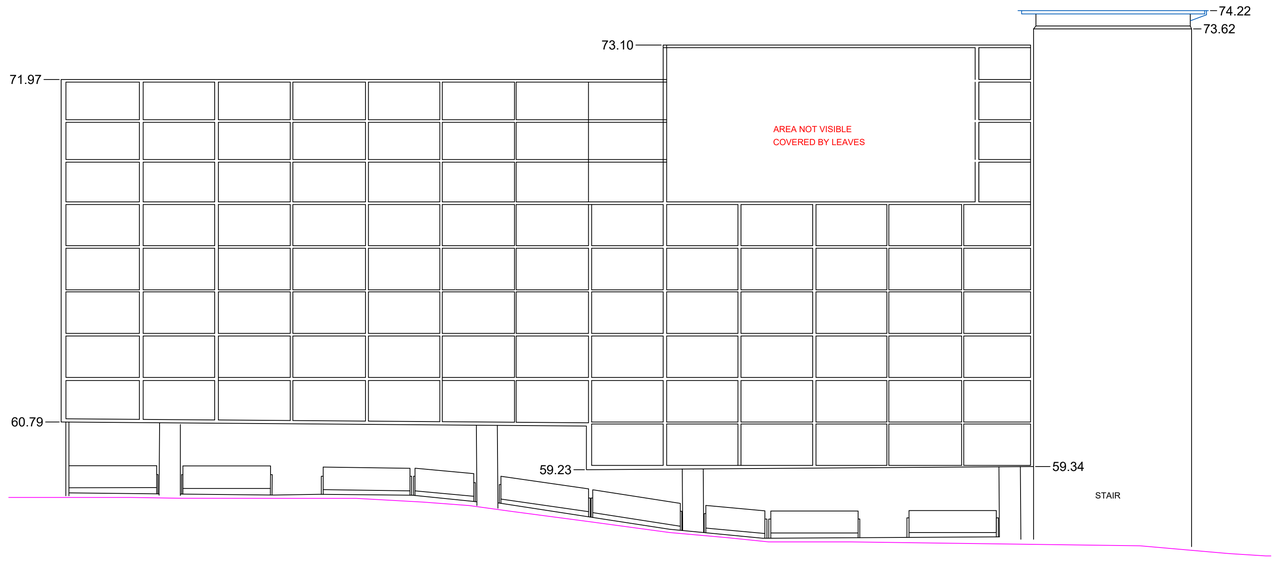

DATUM: RL 54.0

H25 EAST

H25 EAST

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

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UTT - UNABLE TO TRACE
IL & INV - INVERT LEVEL
SL - SURFACE LEVEL
TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100
0 1 2 3 4 5 6 7 8 9 10

SHEET 16 0F 18
DRAWING No.: 5749-G25 -16

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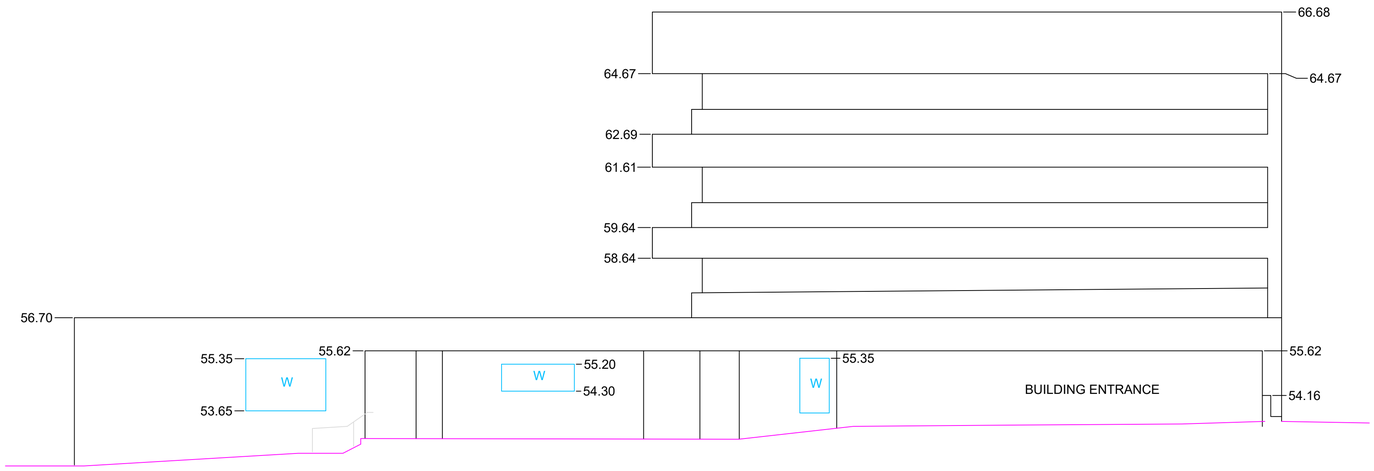

DATUM: RL 50.0

G27 NORTH

G27 NORTH

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
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TL - TRAFFIC LIGHT
0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100
0 1 2 3 4 5 6 7 8 9 10

SHEET 17 0F 18
DRAWING No.: 5749-G25 -17

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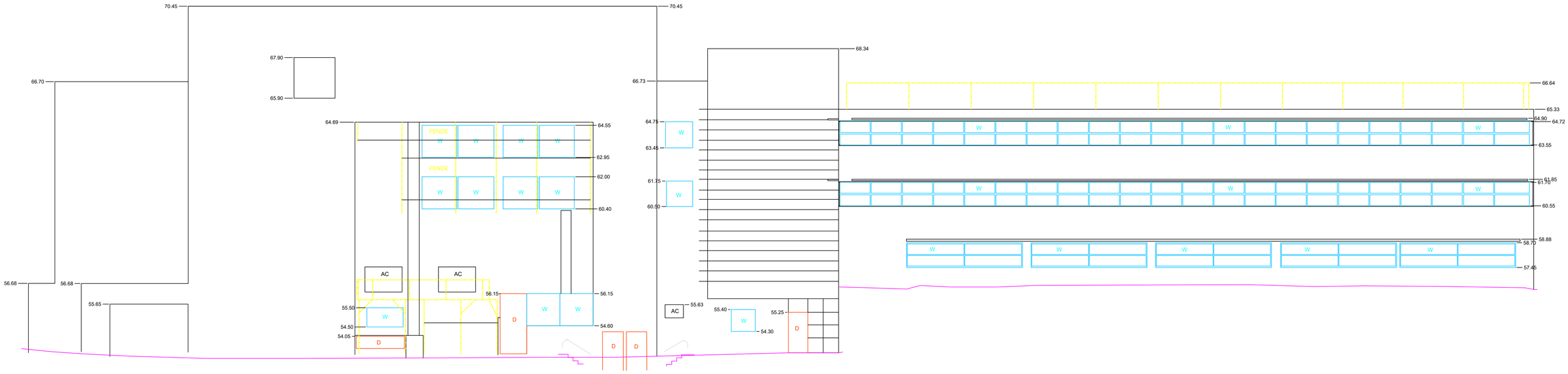

DATUM: RL 50.0

G27 WEST

G27 WEST

A1

LEGEND

BOL - BOLLARD
BM - BENCHMARK
D - DOOR
ELEC - ELECTRICAL BOX
TF - TOP OF FENCE
GASV - GAS VALVE
KO - KERB OUTLET
PPT - PARAPET
STW - STORMWATER PIT
DCS - DISABLED CARSPACE

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0.1D/3S/5H - TREE DIAMETER, SPREAD, HEIGHT

SCALE 1:100

0 1 2 3 4 5 6 7 8 9 10

SHEET 18 0F 18

DRAWING No.: 5749-G25 -18

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