

October 23, 2025

WOLLONGONG PRIVATE HOSPITAL EXTENSION
LOCATION, SUBJECT ADDRESS: 15 – 23 URUNGA PARADE AND
360-364, 366 AND 368 CROWN STREET, WOLLONGONG
CLIENT: 360 PROPERTY AGENCY PTY LTD C/- AA CROWN HOLDINGS
APPLICATION NUMBER: SSD-30240120
INFRASTRUCTURE REQUIREMENTS AND UTILITIES PLAN



JOB NUMBER: 221051

Prepared by:



DSA Consulting

ABN: 82 613 850 598

Suite 10, 82-86 Pacific Highway
St Leonards NSW 2065

Ph: 02 9436 3500 Fax: 02 9437 0890

Email: dsaconsulting@dsaconsulting.com.au

Email: www.dsaconsulting.com.au

DOCUMENT CONTROL SHEET

Title	Infrastructure Management Plan – Existing Building and New Building
Project	Wollongong Private Hospital
Description	Details of the Infrastructure Requirements and Impacts for the new Extension and Existing Building Modifications
Key Contact	Marcelo Ramirez
Client	360 Property Agency

Prepared by

Company	DSA Consulting
Address	Suite 10, 82-86 Pacific Highway, St Leonards NSW 2065
Phone	61-2-9436 3500
Fax	61-2-9437 0890
Email	David.shreeve@dsaconsulting.com.au
Website	www.dsaconsulting.com.au
Author	Leon Gower / Rob Gruber
Checked	DS
Authorised	DS

Revision History

Issued To	Revision and Date							
Mike Ryan	A	31 Mar 2022						
Christina Gordon	B	26 Apr 2022						
Marcelo Ramirez	C	11 June 2025						
Marcelo Ramirez	D	17 June 2025	Correspondence from Endeavour Energy Received. Section 2.4 Updated					
Marcelo Ramirez	E	23 Oct 2025	Updated Scheme – MediHotel and extra carparking – Load Increase					

Client Status

Client Representative	Marcelo Ramirez
Date	
Signature	
Approved	☐
Amended as Noted	☐

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1. INTRODUCTION

DSA Consulting have been engaged by Erilyan to prepare an Infrastructure Management Plan for the Electrical, Communications and Hydraulic Services for the proposed extension to the Wollongong Private Hospital located in Urunga Parade, Wollongong.

1.1 PROJECT INFORMATION/PROPOSED OVERVIEW

As demand for health care services continues to expand in the local community, the proposed expansion of the hospital will provide additional operational capacity for the facility to provide general and specialised services.

The proposed development includes the erection of a nine-storey (above ground) extension to the existing private hospital which will comprise the following:

- Additional inpatient units (anticipated 3 tenancy floors may be fitout as ward accommodation)
- Tenancy space for offices and/or professional suites
- CSSD expansion
- Additional Operating Theatres to assist with the new Emergency Department expansion
- ICU expansion
- Radiation Oncology
- Basement Carpark expansion
- Emergency Department
- Expanded hospital back of house spaces
- 3 Levels of Medi-Hotel accommodation
- Repurpose of houses in Crowne Street for specialist tenancy purposes

Additionally, in response to improve and enhance patient, visitor and staff experience, the proposed extension will incorporate, a new Urunga Parade entry, new outdoor spaces, courtyards, café and a new medical tenancy building connecting into the Private Hospital.

1.2 SEARs REQUIREMENTS

This report addresses the requirements outlined in the Planning Secretary's Environmental Assessment Requirements (SEARs) for this proposed development.

The report addresses the following:

Utilities

In consultation with the relevant service providers:

- Assess the impacts of the development on existing utility infrastructure and serve provider assists surrounding the site.
- Identify any infrastructure upgrades required on-site and off-site to facilitate the development and arrangements to ensure that the upgrades will be implemented on time and be maintained.

2. ELECTRICAL SERVICES

2.1 GENERAL

All services are to be installed to meet (but not limited to) the requirements of:

- NSW Service and Installation Rules
- Endeavour Energy Network and Installation standards
- AS3000
- AS3003
- AS/NZS3008.1
- AS3009
- AS1670 Series
- NCC 2022 A1
- ACMA Manuals and associated Australian Standards

2.2 ESD PROVISIONS/CONSIDERATIONS

Energy Metering

Additional load meters will be provided to BCA Section J8 requirements, and to any additional heavy power load equipment systems. Coordination of interconnection to mechanical systems BMS will be required.

Metering Inclusions (but not limited to):

- Mechanical Plant (gas and electricity consumption to be separately metered)
- Lifts
- Lighting
- Power
- Hot Water

Meters will be located in an area that allows regular monitoring and maintenance by facilities managers and other facilities management personnel.

Monitoring Systems

Energy information is proposed to be monitored through an electronic system capable of capturing and processing the data produced by the installed energy meters to meet BCA Section J8.3. The automatic monitoring system must be capable of:

- Collecting data from all meters;
- Alerting to missing data due to failures;
- Recording and processing of data on energy use consumption at user adjustable levels;
- Provide a breakdown of the information by building system type;
- Include the energy consumption, the load versus time (load profile) and the power factor

Minimum Lighting Comfort

Lighting colour rendition index will have a rating CRI ≥ 80 .

General Illuminance and Glare Reduction

Glare will be reduced where possible and “best practice” methods put into place to minimise glare impact issues.

Localised Lighting Control

Ward areas and care areas are generally exempted from lighting control requirements under the NCC.

Individual Wards are generally all locally switched via traditional light switches at the room entrance. We can utilise localised controls in medical suite areas.

PV Cell Installation

A Photo Voltaic (PV) system will be investigated as part of the ESD consultants review.

Light Pollution to Neighbouring Properties – Lighting Strategy

External and Carpark Lighting

An external lighting system will be required for the proposed new extensions to the expanded Wollongong Private Hospital as proposed below.

The design and installation of a system of lighting to operate from dusk to dawn via a photo-electric switch within areas where the public have general access will be implemented (external carpark, public vehicle/pedestrian drop-off areas and pathways). Internal carparks will be controlled via movement sensor systems, and/or via the Building Management System.

Any lighting to the facade and accent lighting to highlight the external features of the building will be incorporated into the design where requested by the design architect. This lighting will be timer controlled via a building management system, and linked to a photo-electric switch.

The obtrusive effects of lighting will be controlled in accordance with the requirements of AS4282. This standard outlines the requirements to limit/remove light spill to neighbouring properties from external lighting sources.

Lighting to the external areas of the development will be designed to the minimum following requirements:

- AS/NZS1158.3.1 – Pedestrian Area (Minimum Category PC3 External Carpark / Driveway Lighting)
- AS/NZS1158.3.1 – Pedestrian Area (Category PP4/PA3 for General External Lighting)
- AS/NZS1680 Series – Interior and Workplace Lighting (AS/NZS 1680.2.1 – for Indoor Carparks)

Lamp type will be LED.

Light Pollution to Night Sky

Lighting will be designed to minimise light spill to the night sky.

2.3 SEARs REQUIREMENTS - ELECTRICAL

General

This electrical services section of this report, addresses the relevant clause requirements outlined in the Planning Secretary's Environmental Assessments Requirements (SEARs)

The following item will be addressed.

Utilities

- In consultation with relevant service providers:
 - assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.
 - identify any infrastructure upgrades required off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.
 - provide an infrastructure delivery and staging management plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.

2.4 SUBSTATION

A preliminary maximum demand based on area methods give a preliminary additional demand of 3804kVA for the new extension.

An existing substation (33773) is rated at 3x1500kVA located in the existing hospital Urunga Parade. It services the current hospital.

It is anticipated the existing substation will be retained and to continue service the existing hospital and its internal loading requirements

The extension is anticipated to require an additional new substation to accommodate the new extension and anticipated loads. Preliminary calculations indicate a new 3x1500kVA chamber type substation to supplement the existing (subject to Endeavour Energy assessment). It would be proposed to also locate this new substation with access from Urunga Parade, located within the new extension.

An existing High Voltage line exists in Urunga parade that currently services the existing private hospital substation 33773. The HV supply is generally an aerial type, but traverses underground to supply the existing private hospital substation. Refer to Figure 2.4.

In relation to the new expansion to the hospital, Correspondence has been received from Endeavour Energy as following:

1. The proposed enquiry for the expansion of Wollongong Private Hospital as per the latest information in the e-mail and attachments has been reviewed by Endeavour Energy.
2. There is insufficient spare capacity in the primary supply from 11kV distribution feeder WVE2 - David St to service and support the additional proposed maximum demand of 3804kVA. There is only spare capacity for 1782kVA.
3. Backup supply from feeder WWD2 - Dempster St is not available to support the maximum demand of 3804kVA and marginal at 1782kVA.
4. To supply this new load of a new 11kV distribution feeder will need to be development from West Wollongong ZS. Route length approximately 0.95km. Note: there is major renewal project (TS174) about to commence which will see the 11kV switchboard at West Wollongong ZS replaced.
5. The developer or their nominated accredited serve provider/s (ASPs) for designer and construction need to apply for and deliver the lead-in distribution works to service the development, including the new 11kV feeder.
6. Please note capacity is not reserved and the conditions of supply along with a HV PMOS and HV linkages will need to be confirmed at the time the proponent makes a formal application for load.
7. Endeavour Energy is committed to making provisions for proponents to connect to its network in a fair and equitable manner.

It should be noted that a new feeder will be required to the hospital expansion due to insufficient capacity on the existing feeders servicing the area. The existing feeders will likely be retained that currently service the loads as existing.

Final supply arrangements are required to be negotiated by the successful contractor with the local supply authority.

Note: Demand calculation will be revisited upon confirmation of final internal make-up/usage of building.

Final substation arrangements and design will be carried out by an authorised Level 3 Accredited Services Provider (ASP) during the detailed design phases of the project.

Endeavour Energy application and contribution costs will be as Endeavour Energy policies for substation and associated works.

Any Endeavour Energy works will be carried out via Endeavour Energy Policies via Level 1 and Level 3

Accredited Services Providers as per NSW Department of Planning and Environment requirements.

Figure 2.4 is attached indicating general arrangements of the existing Endeavour network around the site

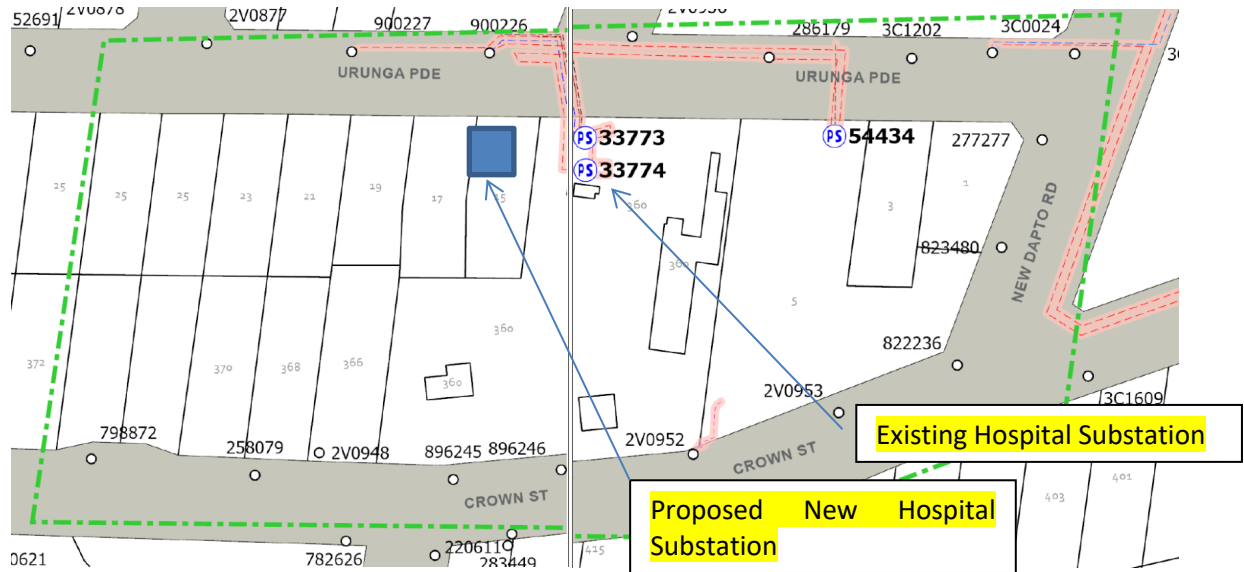


Figure 2.4 - Existing Underground Endeavour Energy Network and Indicative New Substation Location

Construction Period Services Continuity

Services continuity to the existing loads should be maintained. However, to allow for the new development. A new High Voltage (HV) feeder will be required to power the new extension. Some disruption is expected during the proposed new building construction period due to the requirement of the new HV feeder. It would be anticipated that the existing HV feeders will allow for continued power availability to the existing hospital and surround.

Note: Endeavour Energy are upgrading the switchboard at the proposed zone substation.

2.5 MAIN SWITCHBOARD

Proposed:

The extension is required to be serviced via site Main Switchboard/s (MSBs).

Main switchboard/s minimal requirements:

- All general building loads, including lifts, house services, etc.
- All hospital loads including Wards, BOH areas, etc.
- Bulk metering of development, existing and new buildings
- MSB to be arranged into BCA essential, unmetered, hospital essential and hospital non-essential sections.
- Inclusion of Automatic Transfer Switching (ATS) system for diesel generation system. Diesel generator section/s to cater for all BCA essential systems supplies and essential hospital loads.
- A dedicated diesel generator switchboard for distribution of diesel generator loads.

Main switchboards (including main diesel generator switchboard) are to be house in 2hr fire rated dedicated rooms to satisfy BCA and AS3000 requirements.

Interface to any solar array system will be implemented into the main switchboard and/or distribution system.

Existing:

The existing Wollongong Private Hospital was completed approximately 2016.

It is proposed to leave the existing as is where it will continue to supply the existing hospital and any

internal changes within the existing hospital envelope.

2.6 DIESEL GENERATION SYSTEM

The existing site is currently serviced via an existing 1750kVA diesel generation system.

The generator system supplies generator supply to selected hospital clinical, administration and circulation areas.

An additional generator will be required for the new extension. It would be proposed this generator would be in the order of 1400kVA for the new building. The new generator will meet all the NCC2022, AS/NZS3000, AS/NZS3009 and AS/NZS3010 requirements for the new building extension.

The new diesel generator will need be housed in a dedicated 2hr fire rated room/s and/or containerised on the roof of the building. Allow for all attenuation and ventilation requirements to satisfy the running requirements of the generator and acoustic performance requirements.

All generator systems will be of a Standby type and proposed not to synchronise with the Endeavour Energy network.

2.7 UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEM

Additional central UPS systems will be proposed for the new development to service the clinical needs of the new extension.

2.8 CONSUMERS AND SUBMAINS

Consumers mains, submains from standby generator, submains from generator switchboard, BCA essential supplies and hospital essential supplies are to be WS53 to AS3013, BCA and AS3000 requirements.

Non-essential submains are to be of the XLPE/PVC type.

Dedicated submains are required for all mechanical plant, medical gases plant, etc. Provide separate BCA Essential, hospital essential and non-essential supplies as required.

All major power supplies will be metered/monitored to minimum NCC Section J9 requirements, and to any potential green star assessment/ESD requirements.

2.9 GENERAL DISTRIBUTION REQUIREMENTS

Electrical risers are requested to be in a straight line vertically up the building where possible to minimise offsets and bends to the rising cable system/s.

Electrical risers will need to back onto a 2hr fire rated structure.

Carparking Levels

Essential and non essential supplies to each carparking level. Carparking areas.

Dedicated supplies to carpark mechanical ventilation supplies (fire rated where required)

Lower Ground Floor

Hospital Medical Essential (if applicable) and non-essential supplies to public areas and hospital back of house, administration areas and to general circulation.

Dedicated supplies to BCA essential systems – Upgrade existing to current compliance.

Hospital Levels

Hospital Medical Essential and non-essential supplies to hospital back of house, administration areas and to general circulation.

Dedicated supplies to BCA essential systems – upgrade existing to current compliance.

Dedicated Hospital essential and non-essential supplies to mechanical services (as applicable)

Tenancy Levels

Non-essential supplies to tenancy spaces

Essential and non-essential to circulation and amenities spaces..

Dedicated supplies to BCA essential systems – upgrade existing to current compliance.

Non-essential supplies to mechanical services (as applicable)

Medi-Hotel Levels

Non-essential supplies to medi-hotel levels

Essential and non-essential to circulation and amenities spaces.

Dedicated supplies to BCA essential systems – upgrade existing to current compliance.

Non-essential supplies to mechanical services (as applicable)

Plant and Lifts

Dedicated BCA Essential, hospital essential and non-essential supplies to mechanical services switchboards to plant areas and stairs (final extent to be determined and advised by mechanical trades).

Dedicated BCA essential supplies to lifts and lift motor room.

2.10 COMMUNICATION SYSTEMS

General

The new building will be serviced from the existing building ICT network and will not impact on any service provider systems from the street.

Data and Telephony

The new building will be supplied from the existing building.

Propose to establish a new main communications room for the new building with distribution to all levels of the new building. Fibre Optic backbone extended from the existing PABX room to the new building.

Systems to meet the requirements of the ACMA Manuals and standards.

MATV

An MATV distribution system is to be extended to all new areas from the existing building system. MATV to distribute all Free-to-air (FTA) and Pay TV channels/requirements.

Nurse Call

Data backbone to support nurse call backbone system. Nurse call to each new hospital level via backbone system to allow for hospital inter-departmental interconnection.

NBN

Several existing premises will be demolished and the land area incorporated into the overall development. As such, several existing NBN services may need to be removed. It is not anticipated that the removal of these NBN services will affect the existing services already in place to the surrounding properties. Please refer to Figure 1.10.1.

NBN services will be made available to the tenancy floors/spaces as required.

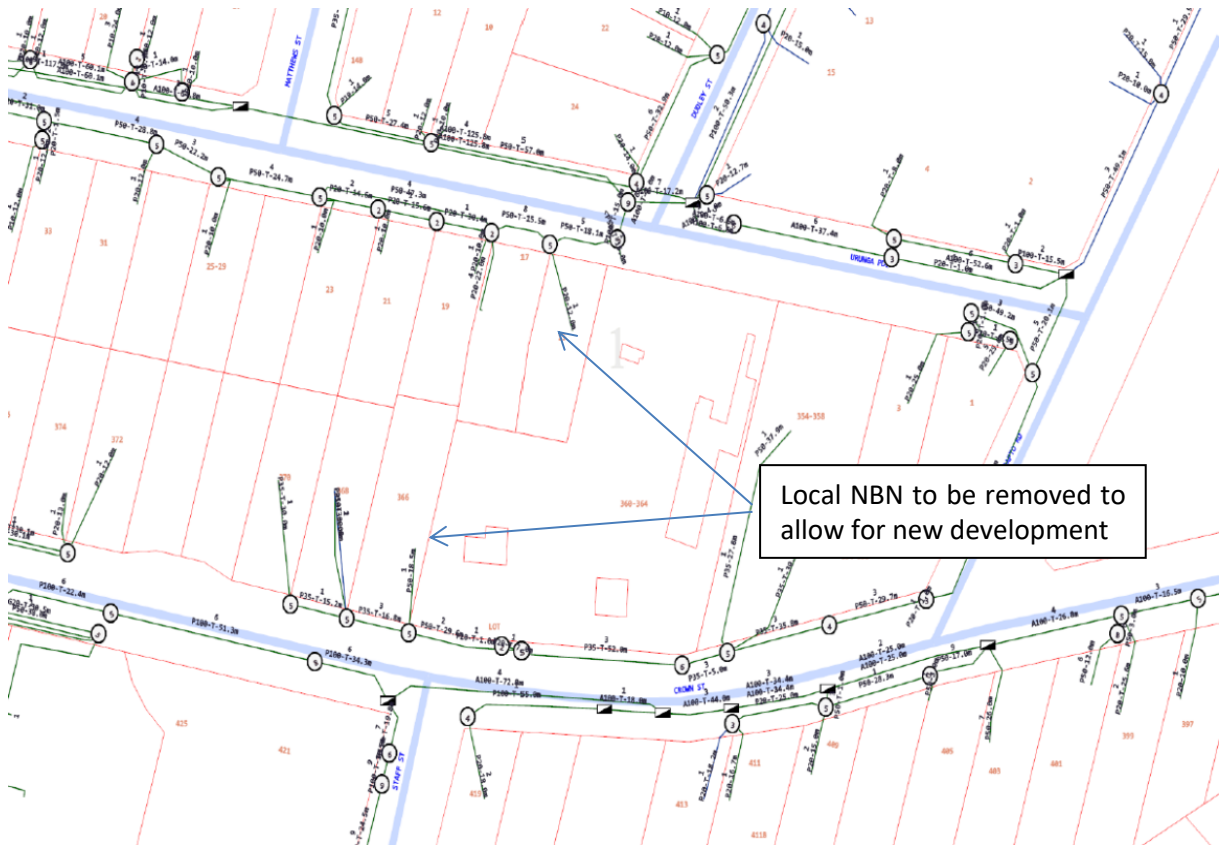


Figure 2.10.1 – NBN

Nextgen, Optus and UECOM

Existing Optus and UECOM services are present in Urunga Parade. These services are located of the far side of Urunga Parade and should not be affected by the proposed development. Nextgen services are also located within the main duct run on the far side of Urunga Pde. Please refer to Figure 2.10.2.



Figure 2.10.2 – Optus and UECOM services

Telstra

Several existing premises will be demolished and repurposed, and the land area incorporated into the overall development. As such, several existing Telstra services may need to be removed. It is not anticipated that the removal of these Telstra services will affect the existing services already in place to the surrounding properties. Please refer to Figure 1.10.3.

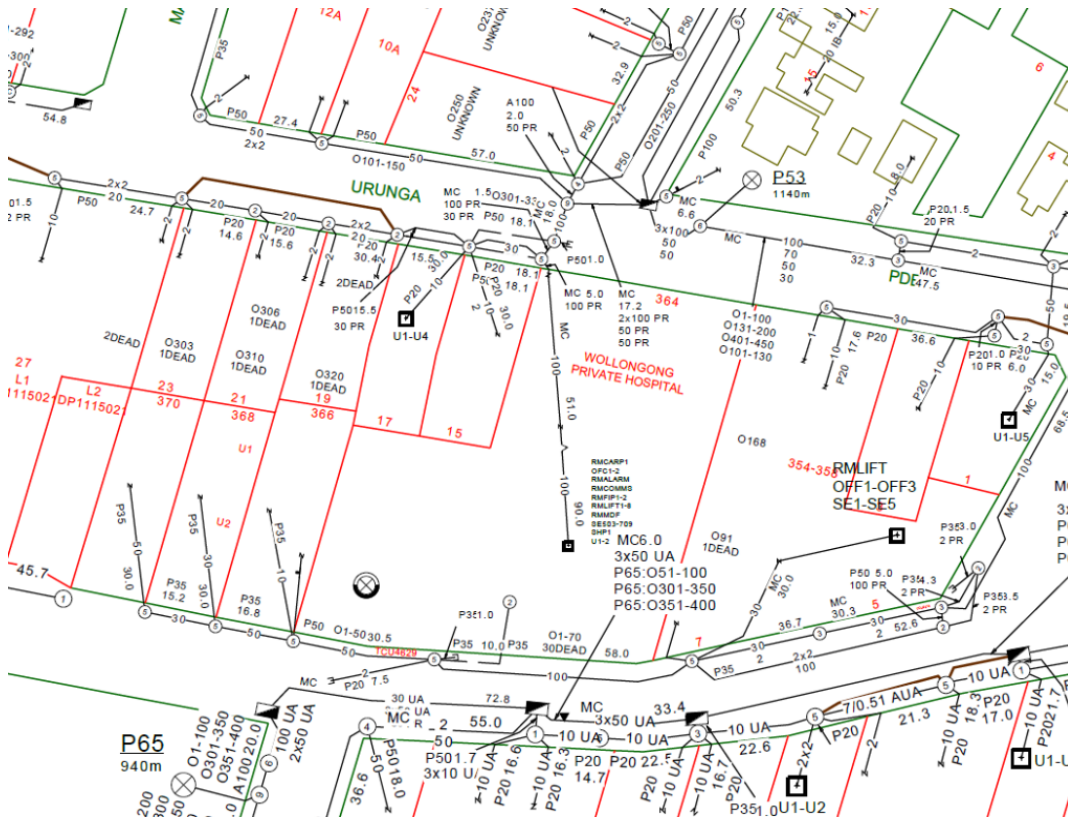


Figure 2.10.3 – Telstra services

Construction Period Services Continuity

It is anticipated that no interruption is expected during the proposed new building construction period to the existing hospital and surrounds as the new extension will utilise and extend the existing hospital network system already on site.

It should be noted that there are existing communications utilities services in Urunga Parade and care is required during any Electrical Systems upgrade works, to avoid these services.

2.11 ACCESS CONTROL / MONITORING / CCTV SYSTEM

Access control to all new external entries and lift services is anticipated for the new building.

Access control provisions to carparking levels, including access control to a potential dedicated staff carparking area.

CCTV to all entries and carparking levels.

All external doors to be monitored under the access control system.

All systems are to be expandable to allow for dedicated hospital and future medical tenancy suite requirements.

All systems expanded from the existing building systems.

3. HYDRAULIC SERVICES

3.1 GENERAL

All services are to be installed to meet (but not limited to) the requirements of:

- National Construction Code (NCC) – 2022 Volume 1, 2 & 3
- Work Cover Authority
- Wollongong City Council regulations having jurisdiction on this project
- NSW Fire and Rescue
- Sydney Water Corporation
- Jemena network operator rules
- AS 2419.1 Fire hydrant installations
- AS 2441 Installation of fire hose reels
- AS 3500.0 Glossary of terms
- AS 3500.1 Water services
- AS 3500.2 Sanitary plumbing & drainage
- AS 3500.4 Heated water services
- AS 5601 Gas installations
- NSW Environmental Planning and Regulation 2000

3.2 EXISTING INFRASTRUCTURE

Sydney Water Corporation

Sydney Water Corporation currently has the following mains available to serve the proposed hospital extension:

- 150mm CIDL water main located within Crown Street
- 250mm CIDL water main located within Crown Street
- 100mm DIDL water main located within Urunga Parade
- 150mm VC sewer main located within Crown Street
- 150mm VC sewer main located within Urunga Parade

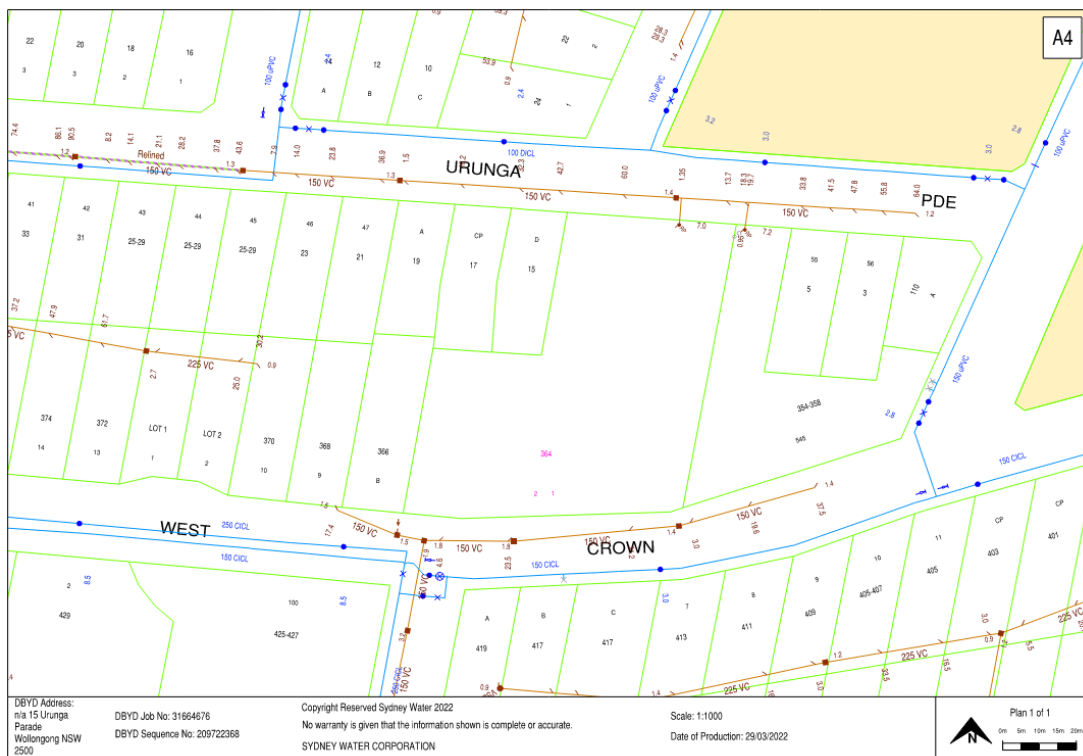


Figure 3.2 Sydney water DBYD Plan



Statement of Available Pressure and Flow

Dakota Masters
277 Clarence Street
SYDNEY, 2000

Attention: Dakota Masters

Date: 04/02/2025

Pressure & Flow Application Number: 2057916
Your Pressure Inquiry Dated: 2025-01-28
Property Address: 364 Crown Street, Wollongong 2500

The expected maximum and minimum pressures available in the water main given below relate to modelled existing demand conditions, either with or without extra flows for emergency fire fighting, and are not to be construed as availability for normal domestic supply for any proposed development.

ASSUMED CONNECTION DETAILS

Street Name: Princes Highway	Side of Street: South
Distance & Direction from Nearest Cross Street	10 metres East from Staff Street
Approximate Ground Level (AHD):	44 metres
Nominal Size of Water Main (DN):	150 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	60 metre head
Minimum Pressure	50 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	50
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	10	51
	15	51
	20	50
	25	50
	30	50
	40	49
	50	48
	60	46
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	10	50
	15	49
	20	49
	25	48
	30	48
	40	47
	50	45
	60	44
Maximum Permissible Flow	67	43

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

hydraulicassessment@sydneywater.com.au

Figure 3.2.1 Sydney Water Statement of Available Water Supply Flow and Pressure

Jemena

Jemena currently has the following mains available to serve the proposed hospital extension:

- 63mm PE natural gas main (low pressure 7kPa) located within Crown Street
- 32mm NY natural gas main (medium pressure 210kPa) located within Crown Street
- 110mm NY natural gas main (medium pressure 210kPa) located within Urunga Parade

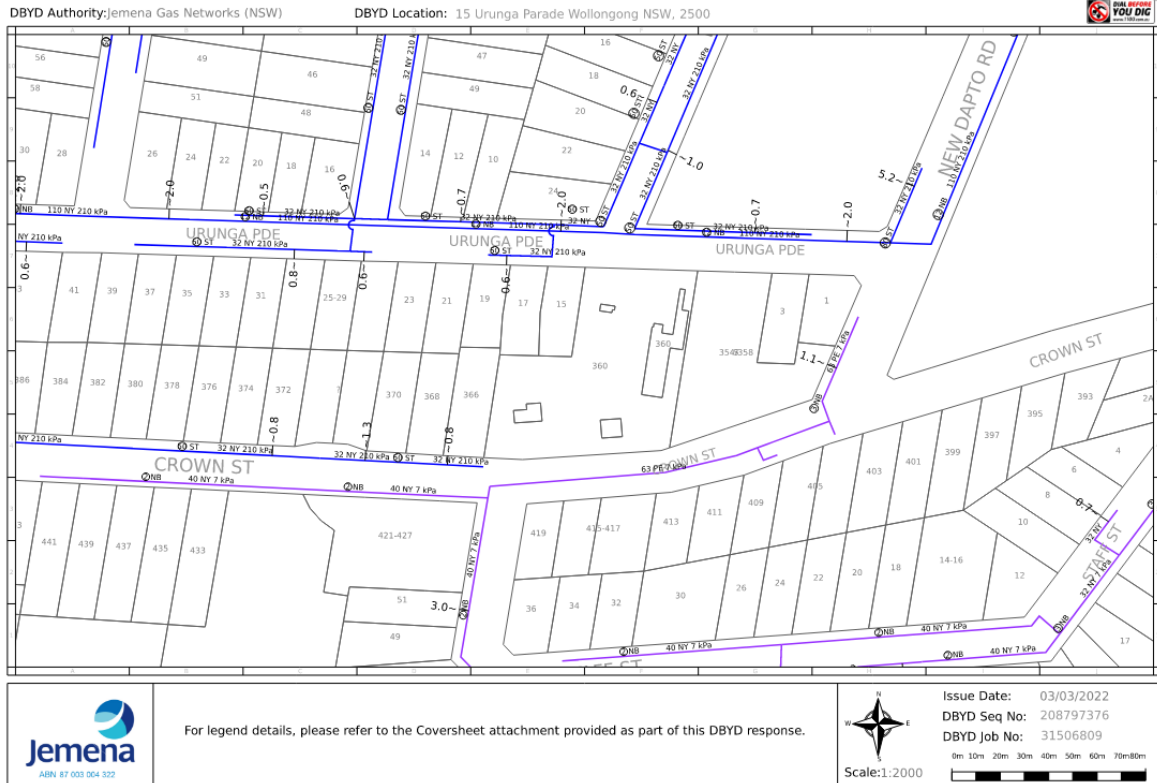


Figure 3.2.2 Jemena DBYD plan

3.3 AUTHORITY SUPPLIES AND CONNECTIONS

Sydney Water Corporation

Section 73 Application Process

The proposed development will require a Section 73 application to be submitted to Sydney Water upon development approval.

After Sydney Water Section 73 application review, Sydney Water will issue a Section 73 Notice of Requirements (NOR).

The NOR will specify: -

1. Whether Sydney Water sewer and water assets need to be protected,
2. If Sydney Water sewer and water assets they are suitable for the proposed development or,
3. If minor or major works are required to enable new water and sewer connections for the proposed development.

Upon completion of all the Section 73 requirements, a Section 73 certificate is issued to allow building occupation.

Potable Cold Water Service

Based on Sydney Water water metering guidelines Sydney Water nominate to have only one main water meter assembly, for this type of development.

A review of the existing incoming water supply and the water meter assembly would be required determine if adequate and compliant flow capacity is available to service the existing and proposed building.

If adequate capacity is not available from existing infrastructure, upgrade options include: -

1. Upgrade of incoming water supply connection and water meter assembly,
2. Incorporation of on-site water storage tanks in the new development works to accommodate any short falls in flow.

Fire Protection Systems

Fire protection systems for the existing hospital and proposed hospital expansion include:-

1. Automatic Fire Sprinkler Suppression System.
2. Fire hydrant Protection System
3. Fire Hose Reel Protection Systems
4. Portable Fire Extinguishers and Fire Blankets.

This report only discusses items 1,2 and 3.

Based on Fire and Rescue policy, each development site shall only have one point for pressure boosting in a fire emergency.

A review of the available authority water main flow and pressure, existing incoming fire water supply and the fire booster assembly has determined adequate and compliant flow capacity is available to service the existing and proposed building.

Due to the building classification, maximum fire compartment size and building height Incorporation of on-site emergency fire water storage tanks and pumps is required to achieve AS2419 and AS2118 Compliance.

All ultimate design solutions are subject to fire engineering report (FER) and National Construction Code (NCC) report.

Sanitary Drainage Service

Sanitary plumbing and drainage systems for the new building works will comply with NCC 2022, AS3500.2 (2021) and Sydney Water Notice of Requirements, when made available.

Jemena**Natural Gas Service**

Discussions with Jemena have advised that a new connection for the existing hospital to any Jemena natural gas mains would not be permitted.

If the existing main to meter and or the natural gas regulator and meter assembly located above the Urunga Parade car park entrance does not have sufficient capacity to meet the additional gas loads for the proposed extension, then existing gas meter / regulator assembly could be replaced with new natural gas regulator. and meter assembly would be installed to meet the existing gas loads and the proposed extension gas loads.

3.4 EXISTING HOSPITAL HYDRAULIC SERVICES

Sanitary Drainage

The existing hospitals sanitary drainage service would likely remain unchanged. Possible upgrades from the boundary trap to the sewer main may be required, or additional sewer connections may be utilised. This would be reviewed and determined during the Section 73 application and detailed design phase.

Drinking Cold Water, Fire Hydrant and Natural Gas

The existing hospitals hydraulic services would need to be maintained throughout the construction phase to ensure minimal disruptions.

Proposed hydraulic services design would incorporate any required upgrades for infrastructure connections and or meters and regulators.

The proposed building will be interconnected to the existing building water

Domestic Hot Water Service

The existing hospitals hot water plant would need to be reviewed for both spare capacity, ability to be expanded and available plant space.

Based on the proposed development works extension incorporating the existing domestic hot water heating plant does not sufficient spare capacity to meet the increased hydraulic demand.

Therefore, new “standalone”: domestic hot water heating plant and piping system serving the proposed extension would be constructed.

3.5 ESD PROVISIONS/CONSIDERATIONS

Hydraulic ESD considerations include the following:

- Rain water re-use system with non-drinking cold water service to irrigation, toilet flushing and hose taps subject to ESD report and NSW Department of Health requirements
- Efficient hot water plant with flow and return system and suitable insulation to meet NCC/PCA requirements.
- Potable water sub metering and monitoring of new building
- Potable water submetering and monitoring of clinical areas
- Potable water submetering and monitoring of Medi hotel.
- Potable water, gas , electrical sub metering and monitoring for hot water plant usage
- atural gas supplies.
- Sub metering and monitoring for tenancies.
- Best industry practice water efficient fixtures and appliances.

Meters will be located in an area that allows remote monitoring and safe maintenance by facilities managers and other facilities management personnel.

Monitoring System

Water and natural gas consumption shall be monitored through an electronic system capable of capturing and processing the data produced by the sub meters to meet ESD requirements. Hydraulic plant and equipment shall also be monitored for faults or failures. The automatic monitoring system must be capable of:

- Collecting data from all meters
- Alert to any faults or failures of hydraulic plant and equipment

4. APPENDIX A – SERVICES CORRESPONDENCE

ENDEAVOUR ENERGY

Previous advice and current correspondence to Endeavour Energy

From: Jonathan Lei Jonathan.Lei@endeavourenergy.com.au
Subject: RE: ENL4343 –Capacity check for additional demand of 2750kVA for Wollongong Private Hospital
Date: 17 June 2025 at 2:10pm
To: leon.gower@dsaconsulting.com.au

JL

Hi Leon,

Pankaj is no longer with Endeavour Energy, and the response provided in 2022 is outdated. Please below updated assessment based on current network conditions.

1. The proposed enquiry for the expansion of Wollongong Private Hospital as per the latest information in the e-mail and attachments has been reviewed by Endeavour Energy.
2. There is insufficient spare capacity in the primary supply from 11kV distribution feeder WWE2 - David St to service and support the additional proposed maximum demand of 2970kVA. There is only spare capacity for 1782kVA.
3. Backup supply from feeder WWD2 - Dempster St is not available to support the maximum demand on of 2970kVA and marginal at 1782kVA.
4. To supply this new load of a new 11kV distribution feeder will need to be development from West Wollongong ZS. Route length approximately 0.95km. Note: there is major renewal project (TS174) about to commence which will see the 11kV switchboard at West Wollongong ZS replaced.
5. The developer or their nominated accredited serve provider/s (ASPs) for designer and construction need to apply for and deliver the lead-in distribution works to service the development, including the new 11kV feeder.
6. Please note capacity is not reserved and the conditions of supply along with a HV PMOS and HV linkages will need to be confirmed at the time the proponent makes a formal application for load.
7. Endeavour Energy is committed to making provisions for proponents to connect to its network in a fair and equitable manner.

Regards,

Jonathan Lei | Customer Connections Manager

P 02 9853 7905 M 0448 173 719
Level 40-42, 8 Parramatta Square, 10 Darcy Street
Parramatta NSW 2150. Dharug Country

endeavourenergy.com.au



**Endeavour
Energy**

**POWER
together**



Endeavour Energy respectfully acknowledges the Traditional Custodians on whose lands we live, work, and operate and their Elders past, present and emerging.

From: Leon Gower <leon.gower@dsaconsulting.com.au>

Sent: Wednesday, 11 June 2025 11:05 AM

TO: Pankaj Bharambe <Pankaj.Bharambe@endeavourenergy.com.au>

Cc: Jonathan Lei <Jonathan.Lei@endeavourenergy.com.au>

Subject: Re: ENL4343 –Capacity check for additional demand of 2750kVA for Wollongong Private Hospital

Importance: High

■ CAUTION: External email. Be cautious with links and attachments. ■

Pankaj,

Thanks you for you assistance earlier for this project. Not sure if this reference number is still active.

Please see attached a revision to the project to suit comments received from the last submission. The planning has changed to suit these comments. Please see attached.

We have reviewed the loadings for the site, and have a slight increase from the previous version. MD is attached.

Also attached are general arrangement plans for you info and you previous advice.

If you can confirm if this advice is still valid.

If there are any additional fees and charges, please advise.

Thanks,

Leon

Leon Gower

DSAConsulting

Suite 10, 82-86 Pacific Highway

St Leonards Sydney, NSW 2065

PH +61 (02) 9436 3500

FAX +61 (02) 9437 0890

MOB 0412 900 931

E-Mail leon.gower@dsaconsulting.com.au

On 6 May 2022, at 5:08 pm, Pankaj Bharambe
<Pankaj.Bharambe@endeavourenergy.com.au> wrote:

Hi Leon,

Thank you for your subject query and we are pleased to provide our response as attached.

Should you need any clarification on the response, please feel free to contact us. Kindly include our reference “ENL4343” in your correspondence.

Regards,
Pankaj Bharambe
Customer Network Solutions

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<ENL4343 _Technical Clarification_v1.0.pdf><WGPB Tech Review Request-Endeavour Energy-2203031.pdf>

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ENL4343 _Technical
Clarification_v1.0.pdf



WGP20-MP-combined.pdf



Wollongong Private Hospital - New Extension				Preliminary Maximum Demand				3/6/2025	
Summary of Area-220302 - New Building Only									
Level	Department	GFA	Area sqm	VA/sqm	KVA	amps	Sub-Total KVA	Sub-Total Amps	
Basement 1	Medical	1400	1100	0.01	0.01	0.01	0.01	0.01	0.01

From: Leon Gower leon.gower@dsaconsulting.com.au 
Subject: Re: ENL4343 –Capacity check for additional demand of 2750kVA for Wollongong Private Hospital
Date: 11 June 2025 at 11:04 am
To: Pankaj Bharambe Pankaj.Bharambe@endeavourenergy.com.au
Cc: Jonathan Lei Jonathan.Lei@endeavourenergy.com.au

LG

Pankaj,

Thanks you for you assistance earlier for this project. Not sure if this reference number is still active.

Please see attached a revision to the project to suit comments received from the last submission. The planning has changed to suit these comments. Please see attached.

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If there are any additional fees and charges, please advise.

Thanks,

Leon

Leon Gower

DSAConsulting

Suite 10, 82-86 Pacific Highway
St Leonards Sydney, NSW 2065
PH +61 (02) 9436 3500
FAX +61 (02) 9437 0890
MOB 0412 900 931
E-Mail leon.gower@dsaconsulting.com.au

On 6 May 2022, at 5:08 pm, Pankaj Bharambe <Pankaj.Bharambe@endeavourenergy.com.au> wrote:

Hi Leon,

Thank you for your subject query and we are pleased to provide our response as attached.

Should you need any clarification on the response, please feel free to contact us. Kindly include our reference "ENL4343" in your correspondence.

Regards,
Pankaj Bharambe
Customer Network Solutions

Message protected by MailGuard: e-mail anti-virus, anti-spam and content filtering.
<https://www.mailguard.com.au>

[Report this message as spam](#)

<ENL4343 _Technical Clarification_v1.0.pdf><WGPH Tech Review Request-Endeavour Energy-2203031.pdf>

**ENL4343 _Technical
Clarification_v1.0.pdf**
289 KB



WGP20-MP-combined.pdf
11.7 MB



MD Preliminary Area Method
-250603.pdf



Summary of Area-220302 - New Building Only								
Level	Department	GFA	Area sqm	VA/sqm	kVA	amps	Sub-Total kVA	Sub Total Amps
Basement 4	Oncology	YES	1136	350	397.6	573.8861676	397.6	573.9
Basement 3	CARPARK	NO	2714	20	54.28	78.34643153		
Basement 3	FIRE STAIRS	NO	96	5	0.48	0.692820323		
Basement 3	LIFT LOBBY	NO	30	60	1.8	2.598076211		
Basement 3	PLANTROOM	NO	50	40	2	2.886751346		
Basement 3	SERVICE LIFT	NO	20	0	0	0		
Basement 3	VISITOR LIFT	NO	10	0	0	0		
							456.2	658.4
Basement 2	CARPARK	NO	2686	20	53.72	77.53814115		
Basement 2	FIRE STAIRS	NO	134	5	0.67	0.967061701		
Basement 2	LIFT LOBBY	NO	30	60	1.8	2.598076211		
Basement 2	PLANTROOM	NO	40	40	1.6	2.309401077		
Basement 2	SERVICE LIFT	NO	20	0	0	0		
Basement 2	VISITOR LIFT	NO	10	0	0	0		
							57.8	83.4
Lower Ground	Undercroft	NO	1230	15	18.45	26.63028117		
Lower Ground	FIRE STAIRS	NO	30	5	0.15	0.216506351		
Lower Ground	LIFT LOBBY		247	60	14.82	21.39082747		
Lower Ground	PLANTROOM	NO	93	40	3.72	5.369357503		
Lower Ground	PUBLIC AMENITIES	YES	85	60	5.1	7.361215932		
Lower Ground	loading dock	YES	163	40	6.52	9.410809388		
Lower Ground	BoH	NO	178	60	10.68	15.41525219		
Lower Ground	Comms	YES	25	140	3.5	5.051814855		
Lower Ground	LIFTS	NO	58	0	0	0		
							62.9	90.8
Ground Floor	Entry	YES	302	80	24.16	34.87195626		
Ground Floor	Imaging	YES	123	350	43.05	62.13732272		
Ground Floor	CORRIDOR	YES	90	60	5.4	7.794228634		
Ground Floor	EMERGENCY DEPARTMENT	YES	1232	120	147.84	213.3886595		
Ground Floor	FIRE STAIRS	NO	66	5	0.33	0.476313972		
Ground Floor	Undercroft	YES	1500	15	22.5	32.47595264		
Ground Floor	House Tenancy 1	YES	123	100	12.3	17.75352078		
Ground Floor	House Tenancy 2	YES	148	100	14.8	21.36195996		
							270.4	390.3
Level 1	CORRIDOR	YES	0	60	0	0		
Level 1	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 1	OR Suite	YES	1738	200	347.6	501.7173839		
Level 1	Recovery Stage 1	YES	144	120	17.28	24.94153163		
Level 1	Recovery Stage 2	YES	280	120	33.6	48.49742261		
Level 1	ICU Support	YES	180	100	18	25.98076211		
Level 1	Corridor	NO	117	60	7.02	10.13249722		
Level 1	SERVICE LIFT	NO	24	0	0	0		
							423.7	611.5
Level 2	Hospital Support	YES	650	110	71.5	103.2013606		
Level 2	CORRIDOR	YES	274	60	16.44	23.72909606		
Level 2	CSSD	YES	181	500	90.5	130.6254984		
Level 2	Support	YES	58	100	5.8	8.371578903		
Level 2	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 2	OT PLANTROOM	NO	387	40	15.48	22.34345542		
Level 2	Landscape	NO	360	5	1.8	2.598076211		
Level 2	PLANTROOM	NO	264	40	10.56	15.24204711		
							212.3	306.4
Level 3	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 3	Tenancy	YES	1347	100	134.7	194.4227031		
Level 3	Waiting Longe	YES	223	80	17.84	25.74982201		
Level 3	Amenities	YES	65	60	3.9	5.629165125		
Level 3	Corridor	NO	104	60	6.24	9.006664199		
							162.9	235.1
Level 4	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 4	Tenancy	YES	1347	100	134.7	194.4227031		
Level 4	Waiting Longe	YES	223	80	17.84	25.74982201		
Level 4	Amenities	YES	65	60	3.9	5.629165125		
Level 4	Corridor	NO	104	60	6.24	9.006664199		
							162.9	235.1
Level 5	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 5	Tenancy	YES	1347	100	134.7	194.4227031		
Level 5	Waiting Longe	YES	223	80	17.84	25.74982201		
Level 5	Amenities	YES	65	60	3.9	5.629165125		
Level 5	Corridor	NO	104	80	8.32	12.0088856		
							164.9	238.1
Level 6	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 6	Tenancy	YES	1347	100	134.7	194.4227031		
Level 6	Waiting Longe	YES	223	80	17.84	25.74982201		
Level 6	Amenities	YES	65	60	3.9	5.629165125		
Level 6	Corridor	NO	104	60	6.24	9.006664199		
							162.9	235.1
Level 7	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 7	Tenancy	YES	940	100	94	135.6773133		
Level 7	Waiting Longe	YES	223	80	17.84	25.74982201		
Level 7	Amenities	YES	65	60	3.9	5.629165125		
Level 7	Corridor	NO	88	60	5.28	7.621023553	115.9	167.3
Level 8	FIRE STAIRS	NO	36	5	0.18	0.259807621		
Level 8	Tenancy	YES	940	100	94	135.6773133		
Level 8	Waiting Longe	YES	223	80	17.84	25.74982201		
Level 8	Amenities	YES	65	60	3.9	5.629165125		
Level 8	Corridor	NO	88	60	5.28	7.621023553	115.9	167.3
Level 9	Plant	NO	615	40	24.6	35.50704156	27.0	39.0

				diversity			
				AS/NZS3000 Lifts Allowance			
Carpark Lift 1	80	50%	Table C2	55.42562584	80	27.7	40.0
Carpark Lift 2	80	50%		55.42562584	80	27.7	40.0
Lift 1	100	50%		69.2820323	100	34.6	50.0
Lift 2	100	75%		69.2820323	100	34.6	50.0
Lift 3	100	125%		69.2820323	100	52.0	75.0
				0	0	0.0	0.0

2969.94286.6

kVAamps

6 May 2022



Endeavour Energy Ref: ENL4343
Customer Ref:

DSA Consulting Pty Ltd
Suite 10, 82 - 86 Pacific Highway
ST LEONARDS, NSW 2065

Attention: Leon Gower

ENL4343 –Capacity check for additional demand of 2750kVA for Wollongong Private Hospital: 15 - 21 URUNGA PARADE & CROWN STREET, WOLLONGONG

Dear Leon,

Thank you for your application for additional supply requirement and providing information on the proposed extension at Wollongong Private Hospital situated at the above location. Your application has been registered under the above reference number. Please quote this reference number on all future correspondence.

Endeavour Energy (EE) understood that Wollongong Private Hospital is planning to extend the existing facility, as shown in the below figure 1, at the said location and hence will be needing additional supply to cater 2750kVA load required for the development. There are no further details on loads and demand breakdown supplied in support of the above application.

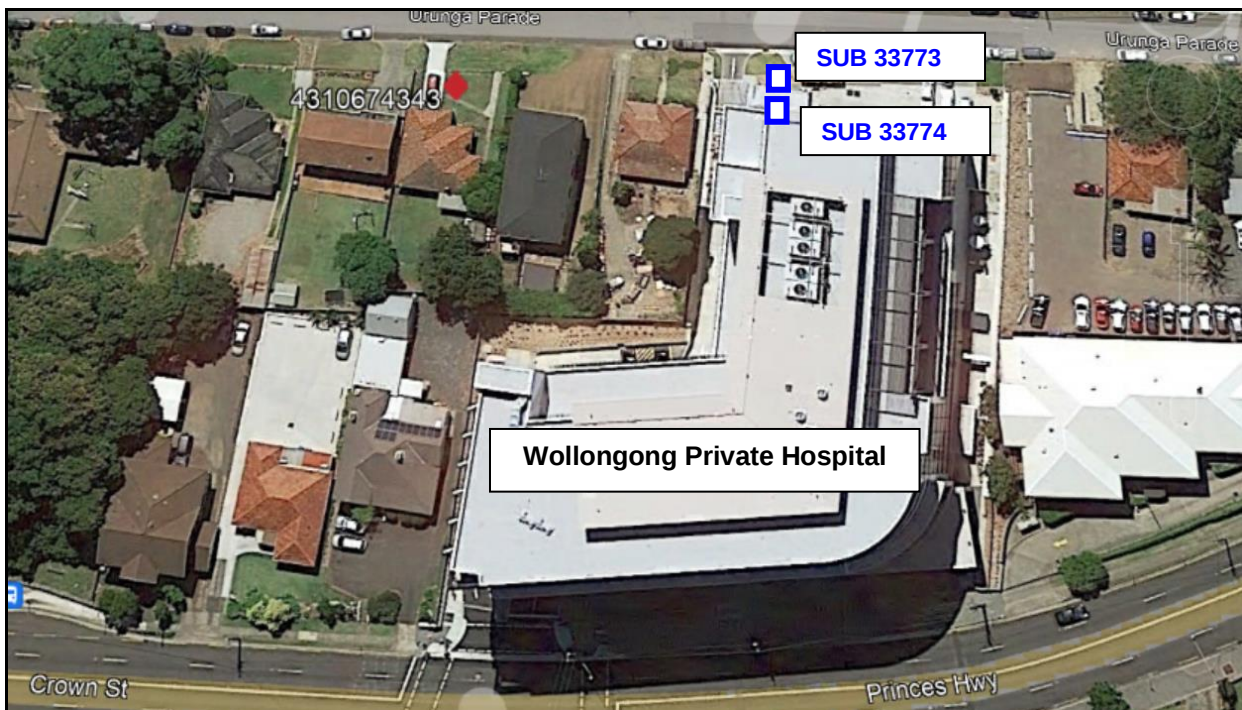


Figure 1

At the location, currently there are two existing 11kV indoor substations, supplied via 11kV feeder WWE2 with a backup 11kV feeder WWD2, both entering via Urunga Parade. The substations are identified as follows:

1. Endeavour Energy's substation number 33773 containing 2X 1500kVA transformers

2. Endeavour Energy's substation number 33774 containing 1 X 1500 kVA transformer

Based on experience and estimated load diversity, Endeavour Energy typically applies a 60% load factor when assessing load for large industrial & commercial customers.

EE has completed a preliminary desk top assessment of the information provided in your application and are pleased to provide a pointwise response as follows:

- At present there is spare capacity available in 11kV distribution feeder WWE2 - to service and support the additional proposed maximum demand of 2750kVA. Also, there are no foreseen limitations on the backup from feeder WWD2
- At this preliminary level of review, there is no detrimental impact to customers anticipated from the supply point of view.
- The development can be serviced based on appropriate, agreeable, construction plan and as long as the total load does not exceed the capacity of each transformer

Further details and method of supply will be confirmed once a formal load application is received. Also note the applicant will be required to provide a detailed maximum demand estimate as part of the load application process so that a more accurate load assessment can be carried out by Endeavour Energy.

We hope the information is meeting with your current requirements. Please note that the response provided above does not constitute any kind of method of supply. The conditions of supply will need to be reviewed and confirmed only after the proponent makes a formal application for load and the associated design, which in turn will be reviewed and approved by Endeavour Energy.

Should you have any further enquiries regarding your application, please feel free to contact the undersigned.

Yours faithfully,

Pankaj Bharambe

Pankaj Bharambe
Customer Network Solutions
Ph: 61403020740
Email: CWTech@endeavourenergy.com.au

Summary of Area-220302 - New Building Only									
Level	Department	GFA	Area sqm	VA/sqm	kVA	amps	Sub-Total kVA	Sub Total Amps	
Basement 6	Oncology	YES	1136	350	397.6	573.8861676	397.6	573.9	
Basement 3,4,5	CARPARK	NO	8142	20	162.84	235.0392946			
Basement 3	FIRE STAIRS	NO	96	5	0.48	0.692820323			
Basement 3	LIFT LOBBY	NO	30	60	1.8	2.598076211			
Basement 3	PLANTROOM	NO	50	40	2	2.886751346			
Basement 3	SERVICE LIFT	NO	20	0	0	0			
Basement 3	VISITOR LIFT	NO	10	0	0	0			
							564.7	815.1	
Basement 2	CARPARK	NO	2686	20	53.72	77.53814115			
Basement 2	FIRE STAIRS	NO	134	5	0.67	0.967061701			
Basement 2	LIFT LOBBY	NO	30	60	1.8	2.598076211			
Basement 2	PLANTROOM	NO	40	40	1.6	2.309401077			
Basement 2	SERVICE LIFT	NO	20	0	0	0			
Basement 2	VISITOR LIFT	NO	10	0	0	0			
							57.8	83.4	
Lower Ground	Undercroft	NO	1230	15	18.45	26.63028117			
Lower Ground	FIRE STAIRS	NO	30	5	0.15	0.216506351			
Lower Ground	LIFT LOBBY		241	60	14.46	20.87121223			
Lower Ground	Store	NO	229	40	9.16	13.22132116			
Lower Ground	PUBLIC AMENITIES	YES	85	60	5.1	7.361215932			
Lower Ground	loading dock	YES	163	40	6.52	9.410809388			
Lower Ground	BoH	NO	283	60	16.98	24.50851893			
Lower Ground	Comms	YES	25	100	2.5	3.608439182			
Lower Ground	LIFTS	NO	58	0	0	0			
							73.3	105.8	
Ground Floor	Entry	YES	298	80	23.84	34.41007604			
Ground Floor	Imaging	YES	157	350	54.95	79.31349323			
Ground Floor	CORRIDOR	YES	90	60	5.4	7.794228634			
Ground Floor	EMERGENCY DEPARTMENT	YES	1156	120	138.72	200.2250734			
Ground Floor	FIRE STAIRS	NO	66	5	0.33	0.476313972			
Ground Floor	Undercroft	YES	1500	15	22.5	32.47595264			
Ground Floor	House Tenancy 1	YES	123	90	11.07	15.9781687			
Ground Floor	House Tenancy 2	YES	148	90	13.32	19.22576396			
							270.1	389.9	
Level 1	CORRIDOR	YES	0	60	0	0			
Level 1	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 1	OR Suite	YES	1738	200	347.6	501.7173839			
Level 1	Recovery Stage 1	YES	144	120	17.28	24.94153163			
Level 1	Recovery Stage 2	YES	280	120	33.6	48.49742261			
Level 1	ICU Support	YES	180	100	18	25.98076211			
Level 1	Corridor	NO	117	60	7.02	10.13249722			
Level 1	SERVICE LIFT	NO	24	0	0	0			
							423.7	611.5	
Level 2	Hospital Support	YES	650	110	71.5	103.2013606			
Level 2	CORRIDOR	YES	274	60	16.44	23.72909606			
Level 2	CSSD	YES	181	500	90.5	130.6254984			
Level 2	Support	YES	58	100	5.8	8.371578903			
Level 2	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 2	OT PLANTROOM	NO	354	40	14.16	20.43819953			
Level 2	Landscape	NO	360	5	1.8	2.598076211			
Level 2	PLANTROOM	NO	33	40	1.32	1.905255888			
							201.7	291.1	
Level 3	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 3	Tenancy	YES	1335	100	133.5	192.6906523			
Level 3	Waiting Longe	YES	223	80	17.84	25.74982201			
Level 3	Amenities	YES	65	60	3.9	5.629165125			
Level 3	Corridor	NO	104	60	6.24	9.006664199			
							161.7	233.3	
Level 4	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 4	Tenancy	YES	1335	100	133.5	192.6906523			
Level 4	Waiting Longe	YES	223	80	17.84	25.74982201			
Level 4	Amenities	YES	65	60	3.9	5.629165125			
Level 4	Corridor	NO	104	60	6.24	9.006664199			
							161.7	233.3	
Level 5	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 5	Tenancy	YES	1335	100	133.5	192.6906523			
Level 5	Waiting Longe	YES	223	80	17.84	25.74982201			
Level 5	Amenities	YES	65	60	3.9	5.629165125			
Level 5	Corridor	NO	104	80	8.32	12.0088856			
							163.7	236.3	
Level 6	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 6	Tenancy	YES	1335	100	133.5	192.6906523			
Level 6	Waiting Longe	YES	223	80	17.84	25.74982201			
Level 6	Amenities	YES	65	60	3.9	5.629165125			
Level 6	Corridor	NO	104	60	6.24	9.006664199			
							161.7	233.3	
Level 7	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 7	Tenancy	YES	940	100	94	135.6773133			
Level 7	Waiting Longe	YES	223	80	17.84	25.74982201			
Level 7	Amenities	YES	65	60	3.9	5.629165125			
Level 7	Corridor	NO	88	60	5.28	7.621023553	115.9	167.3	
Level 8	FIRE STAIRS	NO	36	5	0.18	0.259807621			
Level 8	Tenancy	YES	940	100	94	135.6773133			
Level 8	Waiting Longe	YES	223	80	17.84	25.74982201			
Level 8	Amenities	YES	65	60	3.9	5.629165125			
Level 8	Corridor	NO	88	60	5.28	7.621023553	115.9	167.3	
Level 9	Medihotel		1352	90	121.68	175.6299519	121.7	175.6	
Level 10	Medihotel		1352	90	121.68	175.6299519	121.7	175.6	
Level 11	Medihotel		1352	90	121.68	175.6299519	121.7	175.6	
Level 12	Plant	NO	615	40	24.6	35.50704156	392.1	565.9	

diversity

AS/NZS3000 Lifts Allowance							
Carpark Lift 1	80	50%	Table C2	55.42562584	80	27.7	40.0
Carpark Lift 2	80	50%		55.42562584	80	27.7	40.0
Lift 1	100	50%		69.2820323	100	34.6	50.0
Lift 2	100	75%		69.2820323	100	34.6	50.0
Lift 3	100	125%		69.2820323	100	52.0	75.0
				0	0	0.0	0.0

3803.35489.5

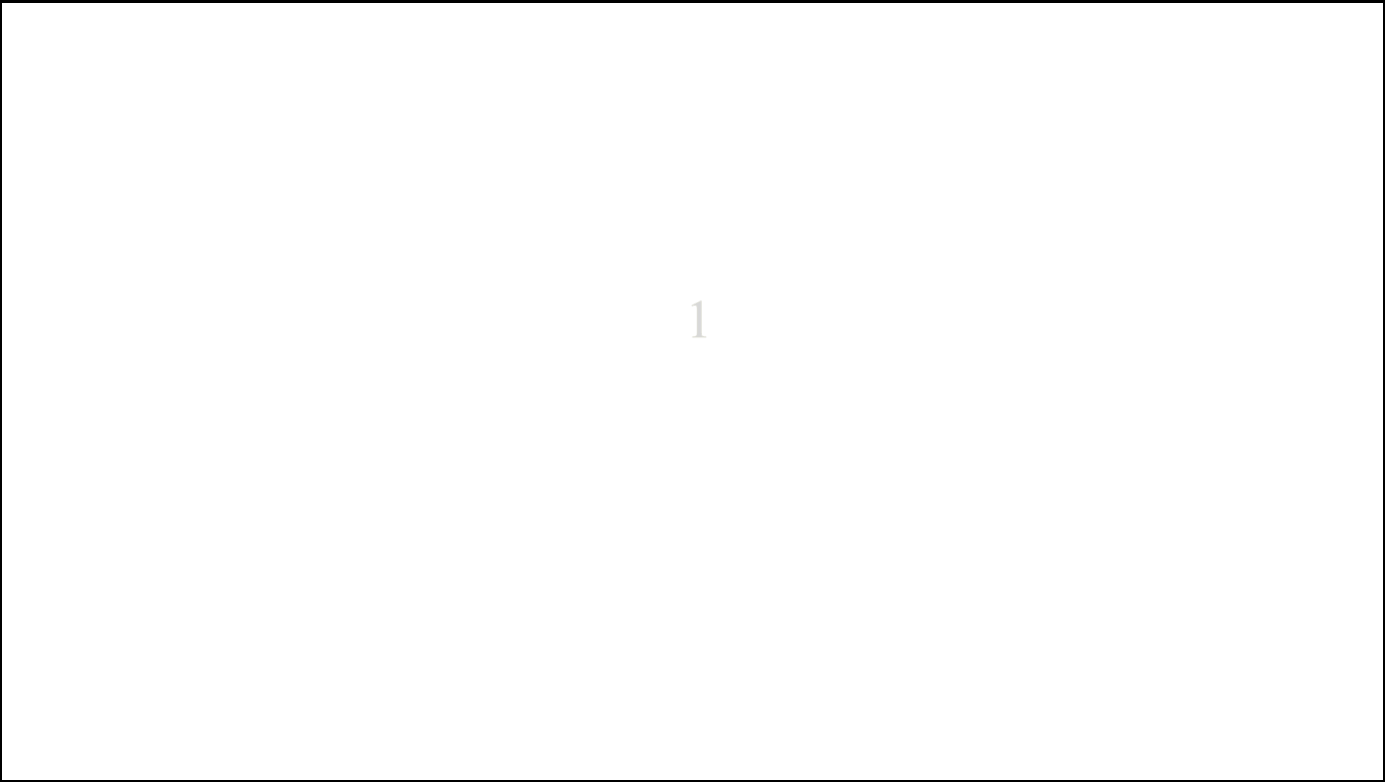
kVAamps

5. APPENDIX B – DIAL BEFORE YOU DIG INFORMATION

To: Leon Gower
Phone: Not Supplied
Fax: Not Supplied
Email: leon.gower@edconsulting.com.au

Dial before you dig Job #:	50355290	 BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	256086348	
Issue Date:	05/06/2025	
Location:	15 Urunga Parade , Wollongong , NSW , 2500	

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





LEGEND



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



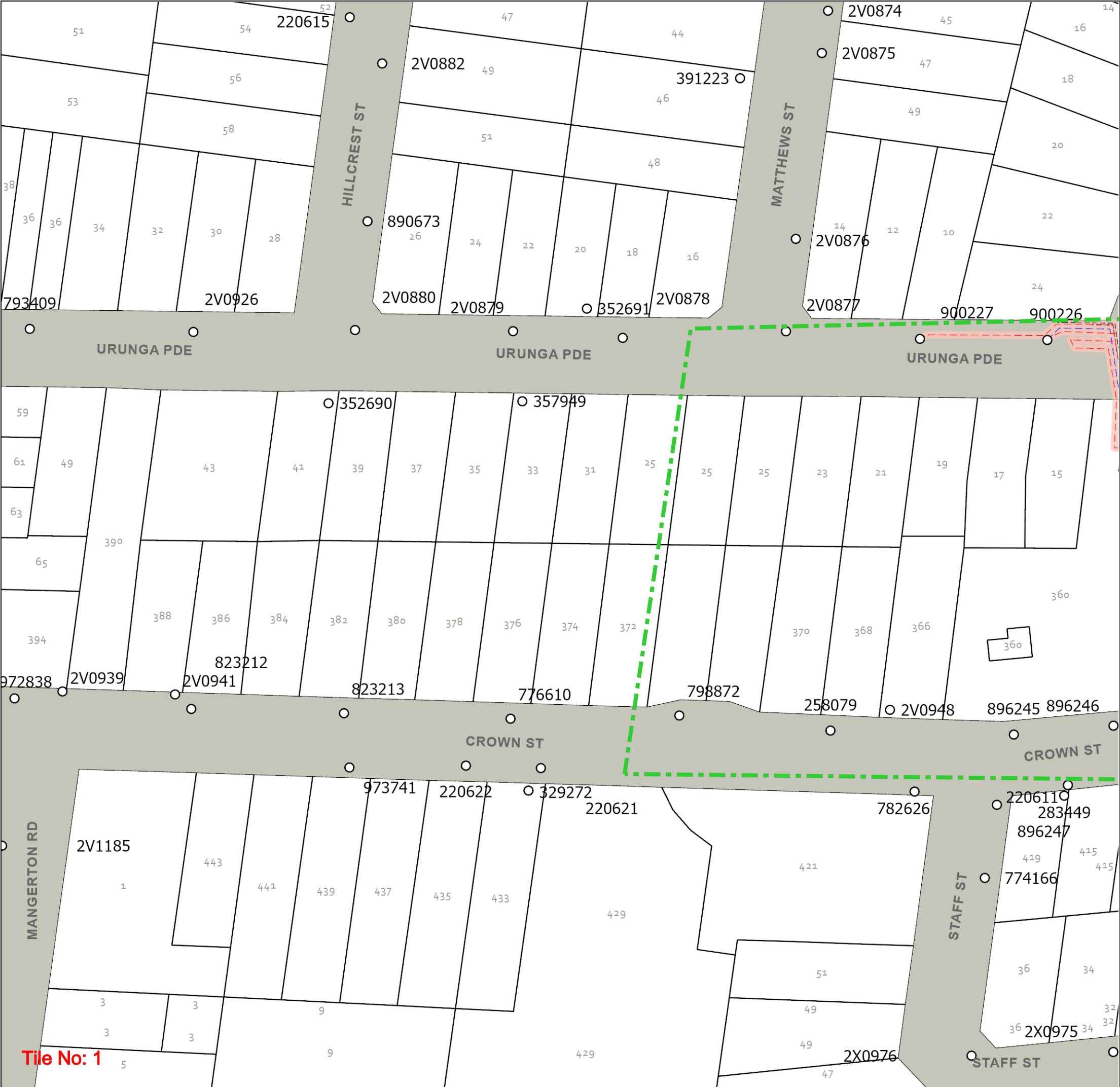
- WARNING**
- **All electrical apparatus shall be regarded as live until proved de-energised.** Contact with live electrical apparatus will cause severe injury or death.
 - Underground assets may be congested at the approach to bridges and other structures. Typical asset depths and alignment may vary substantially, rising and falling sharply and at much shallower depths than elsewhere as they are channelled into shared allocated spaces on bridges and other structures. Additional precautions and underground asset location methods will be required in proximity to bridges and other structures.
 - In accordance with the *Electricity Supply Act 1995*, you are obliged to report any damage to Endeavour Energy Assets immediately by calling **131 003**.
 - The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
 - The customer must contact Endeavour Energy if any of the plans provided have blank pages, as some underground asset information may be incomplete.
 - Endeavour Energy underground earthing and earth grids may exist and their location **may not** be shown on plans. Persons excavating are expected to exercise all due care, especially in the vicinity of padmount substations, pole mounted substations, pole mounted switches, transmission poles and towers.
 - Our plans may not show the presence of all cables, pipes and plant. Endeavour Energy plans do not depict any underground consumer mains. These assets are the conductors between the connection point at a network operators' asset such as a pillar or column, and the customer Service Equipment Enclosure
 - It should be noted that adjacent to any network operator asset, there may be multiple underground consumer mains that feed from a pillar or column. Those underground consumer mains and any other underground services will need to be positively identified prior to mechanical excavation in the vicinity. Please refer to the Work Near Underground Assets Guideline published in 2007 by the WorkCover Authority.
 - Asbestos or asbestos-containing material may be present on or near Endeavour Energy's underground assets.
 - Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.
 - All plans must be made available at the worksite where excavation is to be undertaken in either printed or electronic format. If the plans are in an electronic format, they must be in a format visible on a screen size 10 inches or greater. Plans must be reviewed and understood by the crew on site prior to commencing excavation.
 - Non-destructive water excavation must be operated at or below 2000PSI. Any operation exceeding 2000PSI must be classed and treated as a destructive excavation practice.

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

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

OVERVIEW ONLY
ASSETS ARE ONLY SHOWN ON
DETAILED TILES (PAGES)





- WARNING**
- **All electrical apparatus shall be regarded as live until proved de-energised.** Contact with live electrical apparatus will cause severe injury or death.
 - Underground assets may be congested at the approach to bridges and other structures. Typical asset depths and alignment may vary substantially, rising and falling sharply and at much shallower depths than elsewhere as they are channelled into shared allocated spaces on bridges and other structures. Additional precautions and underground asset location methods will be required in proximity to bridges and other structures.
 - In accordance with the *Electricity Supply Act 1995*, you are obliged to report any damage to Endeavour Energy Assets immediately by calling **131 003**.
 - The customer must obtain a new set of plans from Endeavour Energy if work has not been started or completed within twenty **(20)** working days of the original plan issue date.
 - The customer must contact Endeavour Energy if any of the plans provided have blank pages, as some underground asset information may be incomplete.
 - Endeavour Energy underground earthing and earth grids may exist and their location **may not** be shown on plans. Persons excavating are expected to exercise all due care, especially in the vicinity of padmount substations, pole mounted substations, pole mounted switches, transmission poles and towers.
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ENDEAVOUR ENERGY MAP LEGEND			
Hazard Area	Conductor	Column	Substation
	HV		
Asbestos	LV	Pole	Zone Substation
	SL		
Cubicle	TR	Pillar	<i>Note: Pink features may be in construction.</i>
	Pilot Cable		
Pit	Earth Cable		

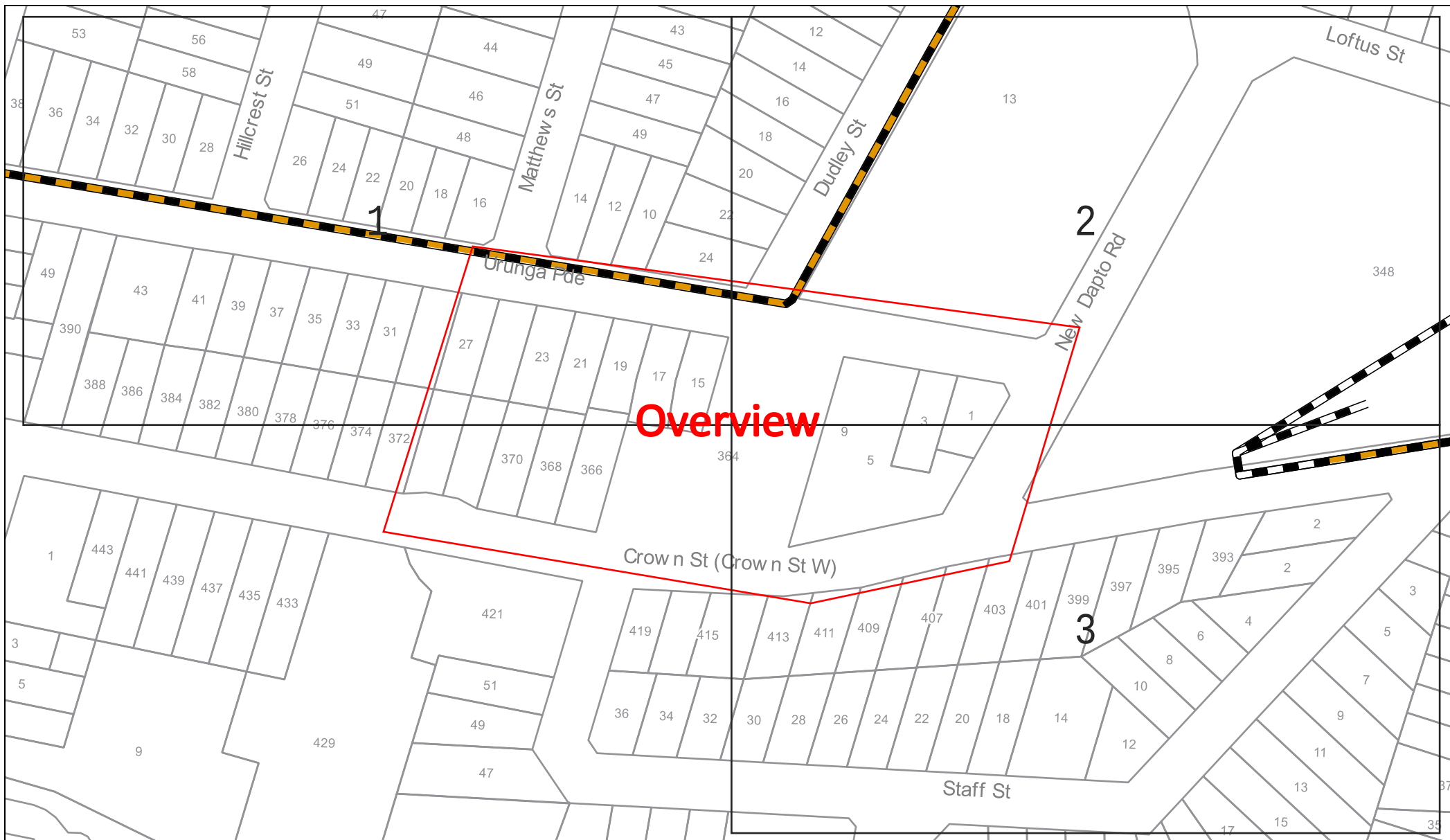


NOT TO SCALE

BYDA Sequence No.: 256086349

Issued Date: 05 Jun 2025

Cadastre: © Land and Property Information 2015, 2016



Sequence Number: 256086352

Date: 05/06/2025

DISCLAIMER: THIS DRAWING SHOULD NOT BE SCALED TO LOCATE CABLES. NO WARRANTY IS GIVEN THAT THE INFORMATION IS ACCURATE OR COMPLETE. IF YOU REQUIRE INFORMATION REGARDING LOCATING THE CABLE PLEASE CALL NEXTGEN. THIS DOCUMENT HAS BEEN PREPARED SOLELY FOR DIAL BEFORE YOU DIG USE. THIS PLAN CONTAINS COMMERCIAL SENSITIVE INFORMATION AND IS TO BE TREATED ACCORDINGLY. NO SUCH INFORMATION IS TO BE PASSED ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD.



LEGEND

Digsite



Area

Assets



Cable



3rd Party Duct



Marker Post



Sequence Number: 256086352

Date: 05/06/2025

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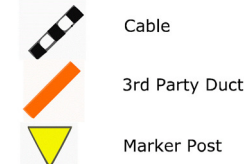


LEGEND

Digsite



Assets





Sequence Number: 256086352

Date: 05/06/2025

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LEGEND

Digsite



Area

Assets



Cable



3rd Party Duct



Marker Post



Sequence Number: 256086352

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LEGEND

Digsite



Area

Assets



Cable



3rd Party Duct



Marker Post

Date: 05/06/2025

Enquirer Name: Leon Gower
Enquirer Address: Unit 6 75-77 Pacific Highway
Email: leon.gower@edconsulting.com.au
Phone: +61412900931

Dear Leon Gower

The following is our response on behalf of each of the TPG carriers (listed below) to your Before You Dig Australia enquiry – Sequence 256086353

It is provided to you on a confidential basis under the following conditions and must be shredded or securely disposed of after use.

Assets Affected: 15 Urunga Parade Wollongong

Carriers (each a “TPG carrier”) and assets affected:

PIPE Networks

Location:

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

IMPORTANT INFORMATION

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

DAMAGE

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

DUTY OF CARE

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

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

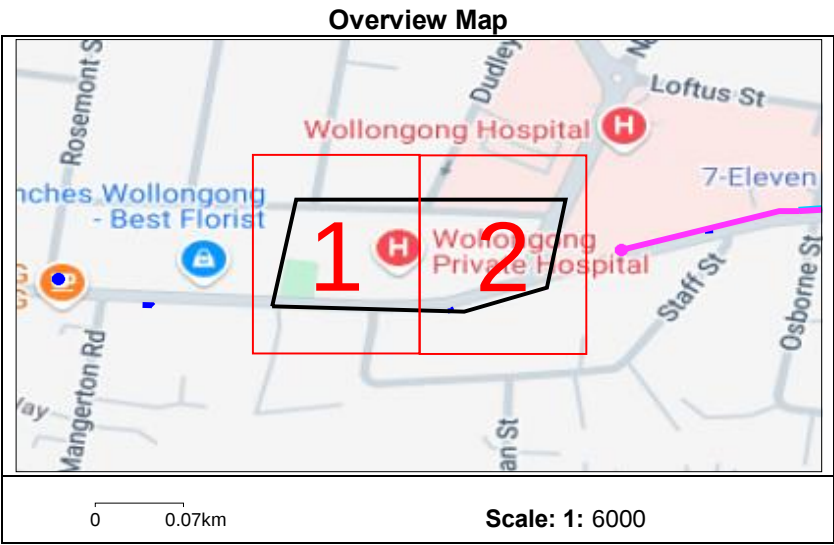
- Use suitably qualified and supervised professionals, particularly if you are working near assets that contain electricity cables or gas pipes.
- Ensure the below minimum clearance distances between the construction activities and the actual location of our assets are met. If you need clearance distances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

Minimum assets clearance distances.

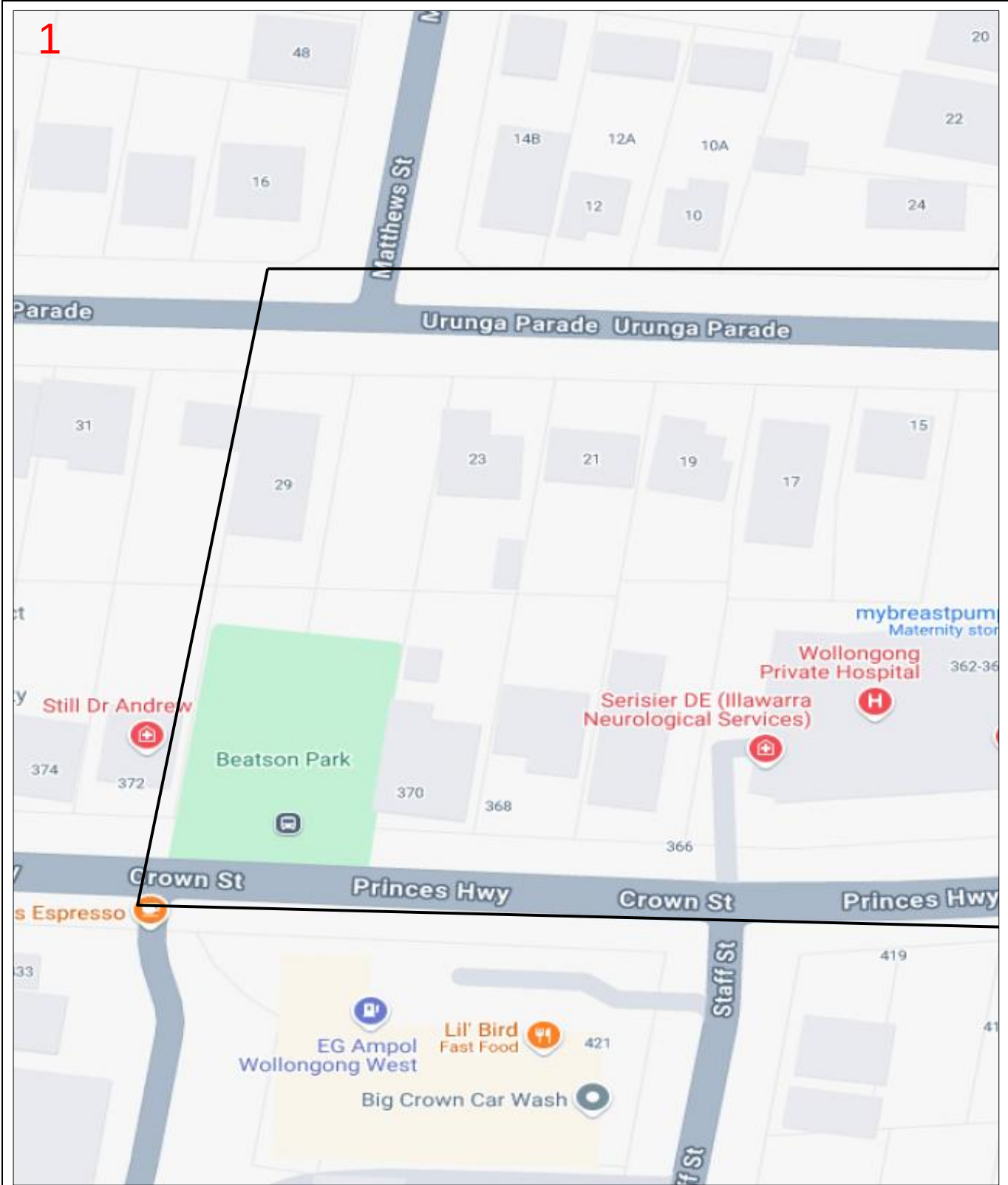
- 300mm when laying asset inline, horizontal or vertical.
 - 1000mm when operating vibrating equipment. Eg: vibrating plates. No vibrating equipment on top of asset.
 - 1000mm when operating mechanical excavators or jackhammers/pneumatic breakers.
 - 2000mm when performing directional bore in-line, horizontal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

PRIVACY & CONFIDENTIALITY

- Privacy Notice – Your information has been provided to us by Before You Dig Australia to respond to your Before You Dig Australia enquiry. We will keep your personal information in accordance with TPG’s privacy policy, see www.tpg.com.au/about/privacy.
- Confidentiality – The information we have provided to you is confidential and is to be used only for planning and designing purposes in connection with your Before You Dig Australia enquiry. Please dispose of the information by shredding or other secure disposal method after use. We retain all intellectual property rights (including copyrights) in all our documents and plans.



TPG Telecom Limited



Enquiry Number: 256086353

Map Sheet: 1

Scale: 1: 750

0 0.008km

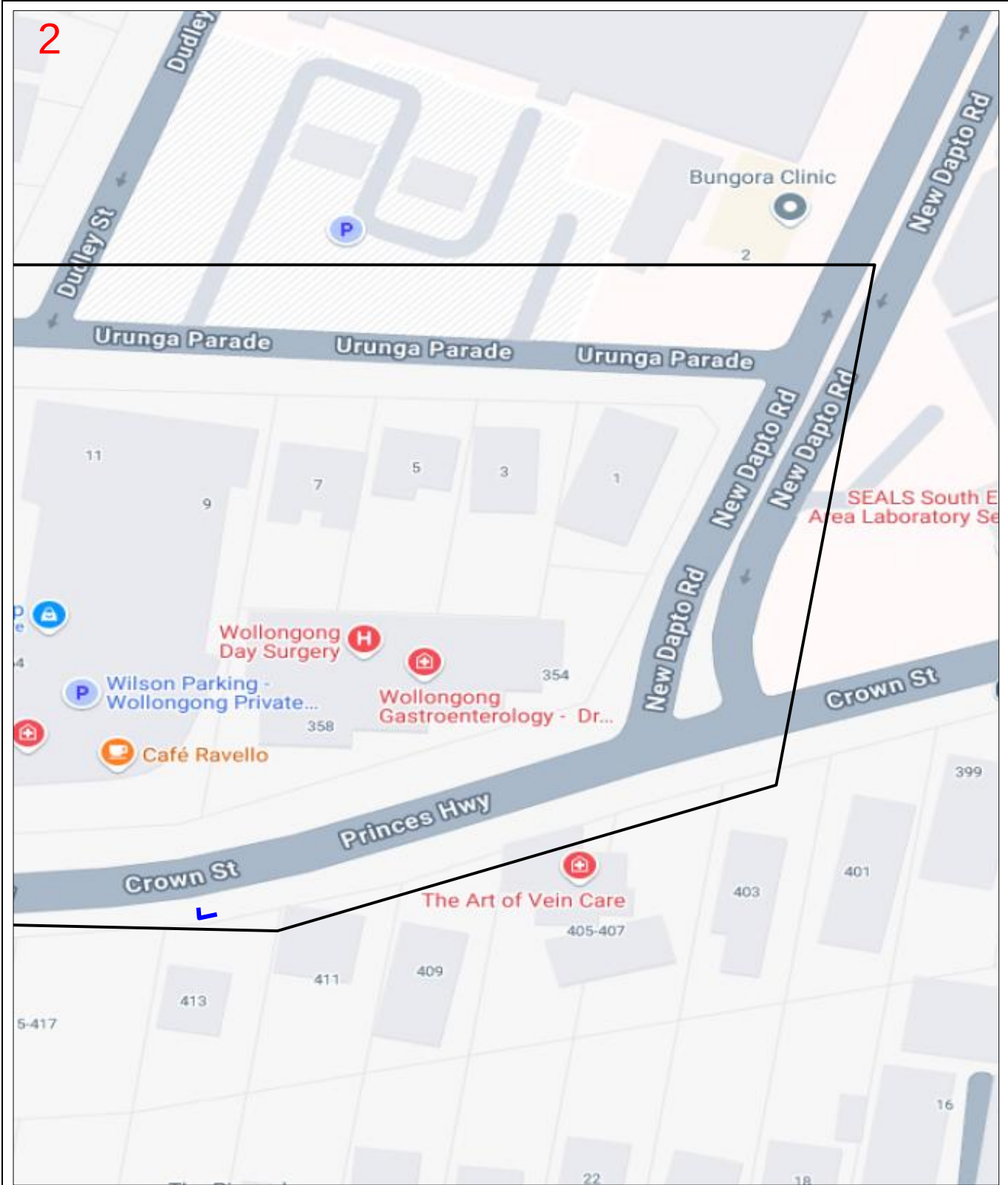
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LEGEND

BYDA Work Area

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

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Enquiry Number: 256086353

Map Sheet: 2

Scale: 1: 750

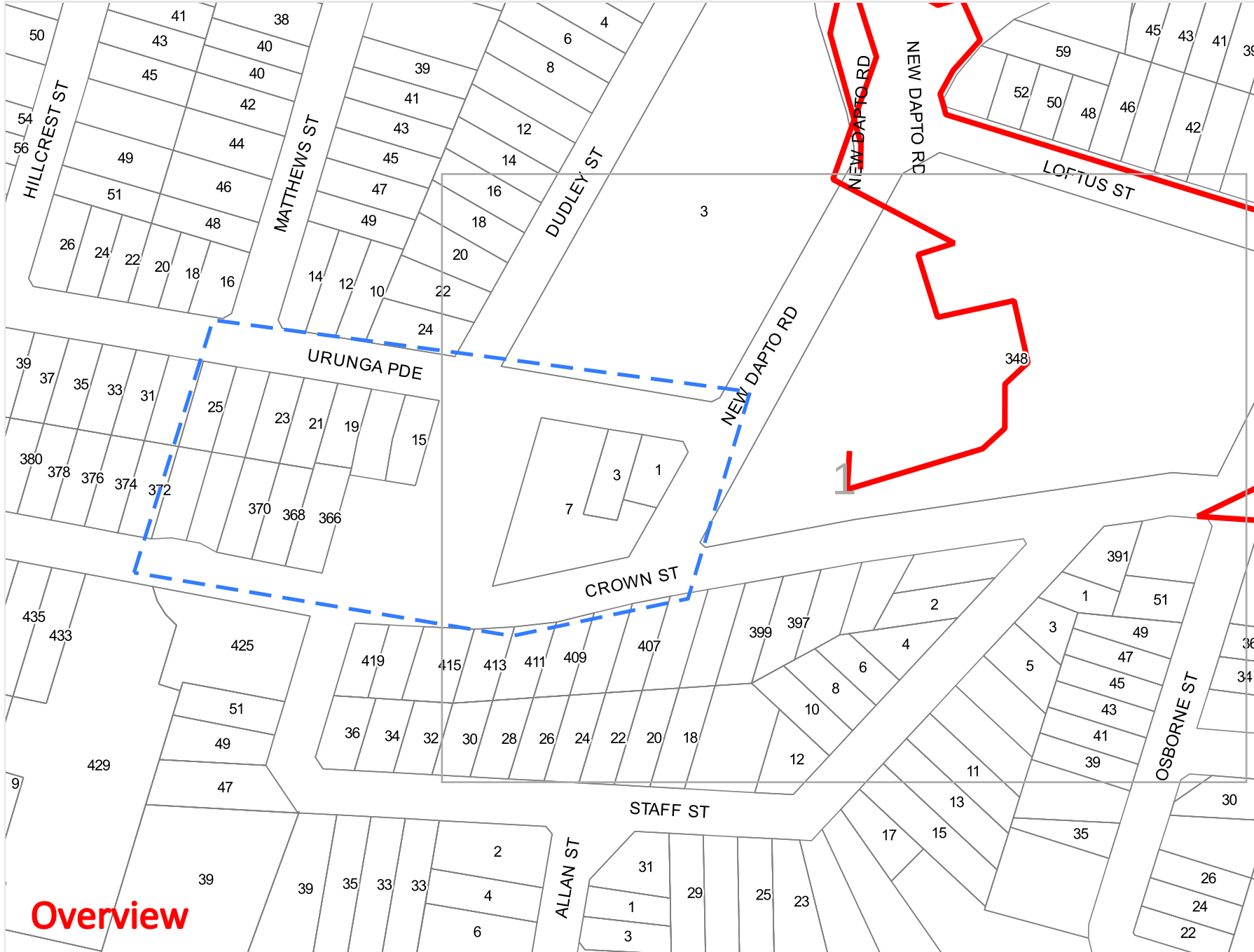
0 0.008km

LEGEND

BYDA Work Area

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

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Legend

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



Scale: 1:2342
Expires: 02 Jul 2025

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Overview



Legend

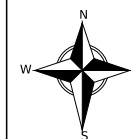
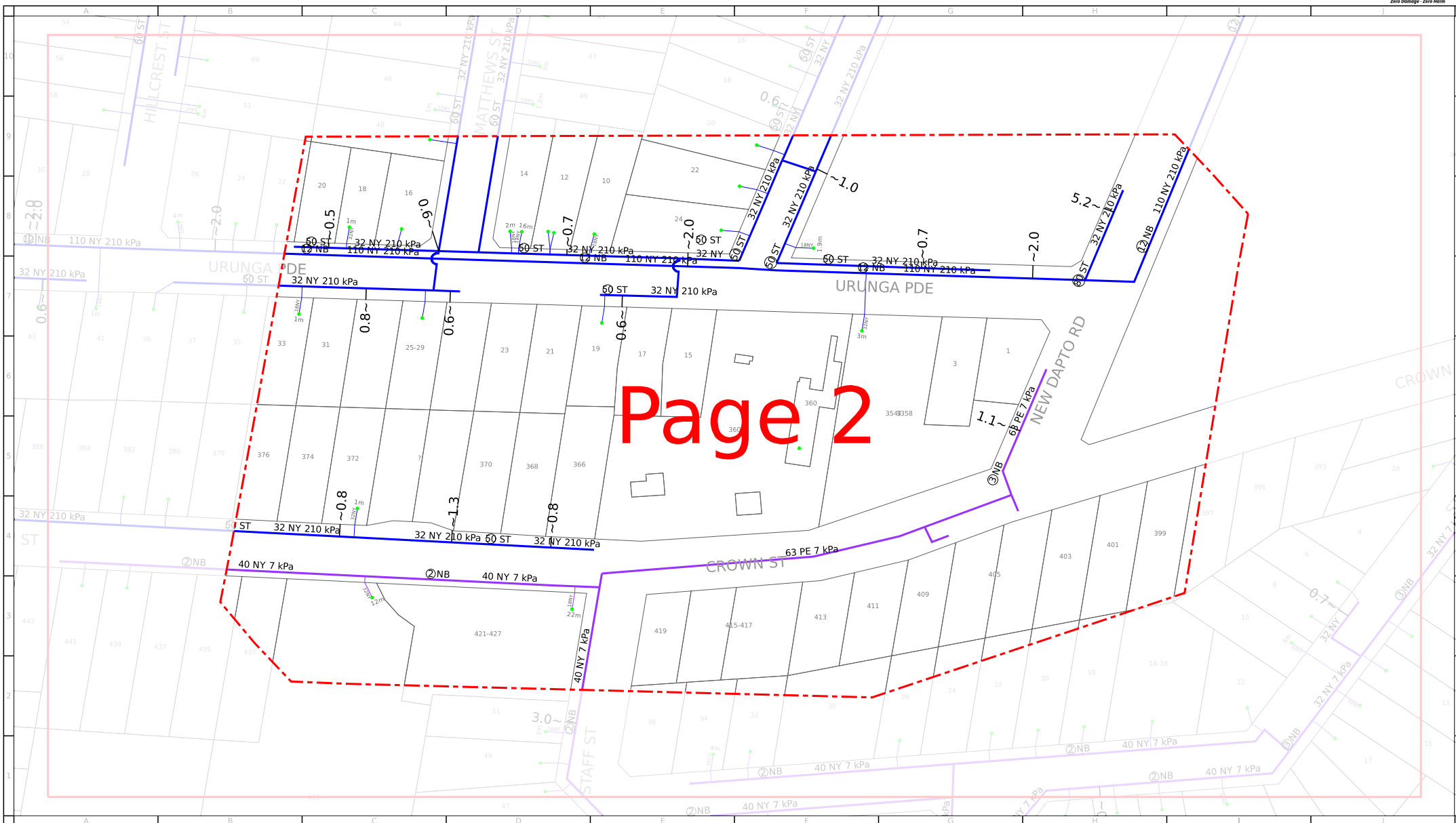
- Enquiry Area
- AARNET Fibre Optic Assets
- AARNET Power Assets
- Cadastre

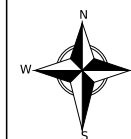
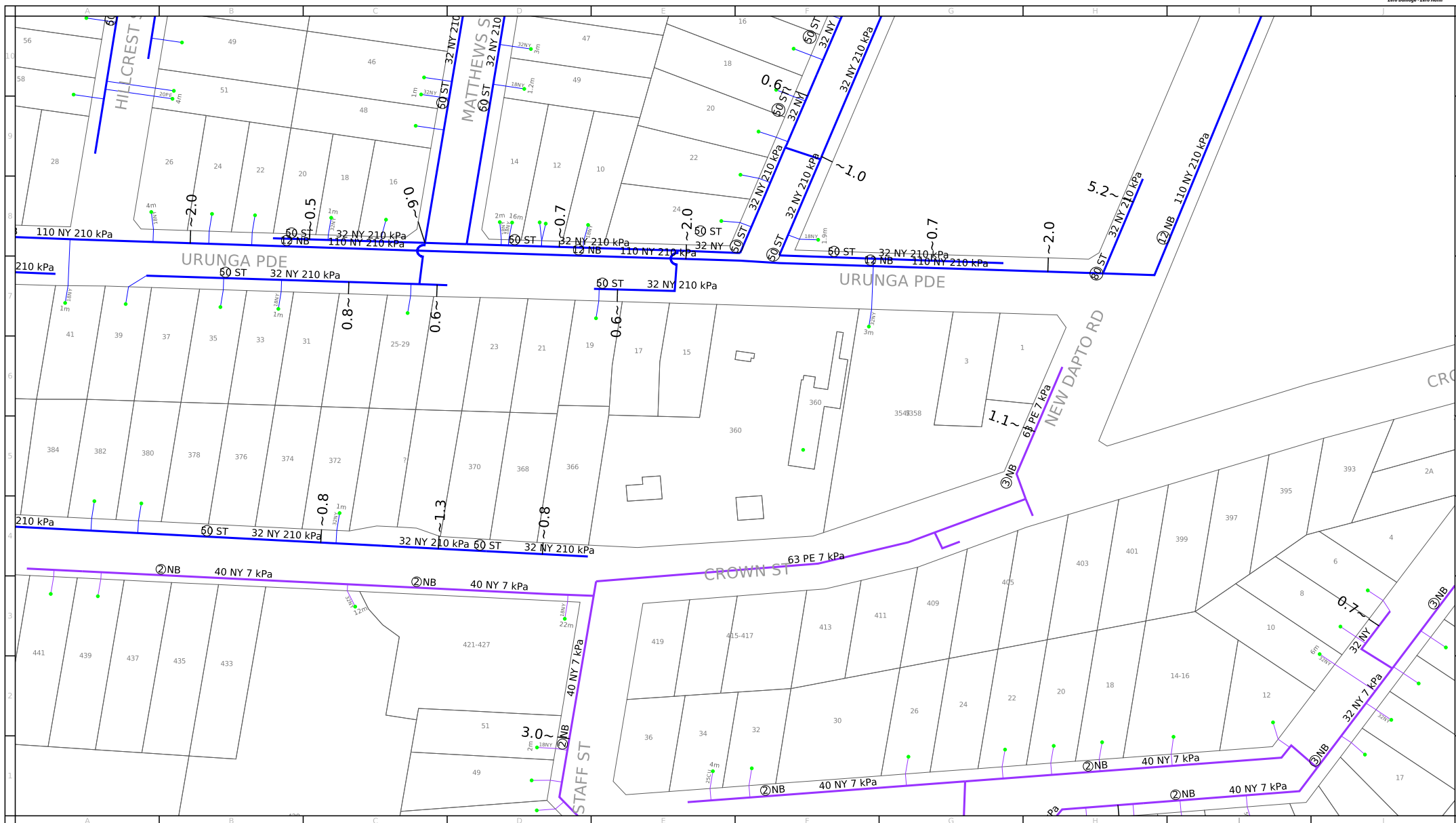


Scale: 1:1500
Expires: 02 Jul 2025

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Tile No: 1







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Sequence Number: 256086356

Date Generated: 05 Jun 2025



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





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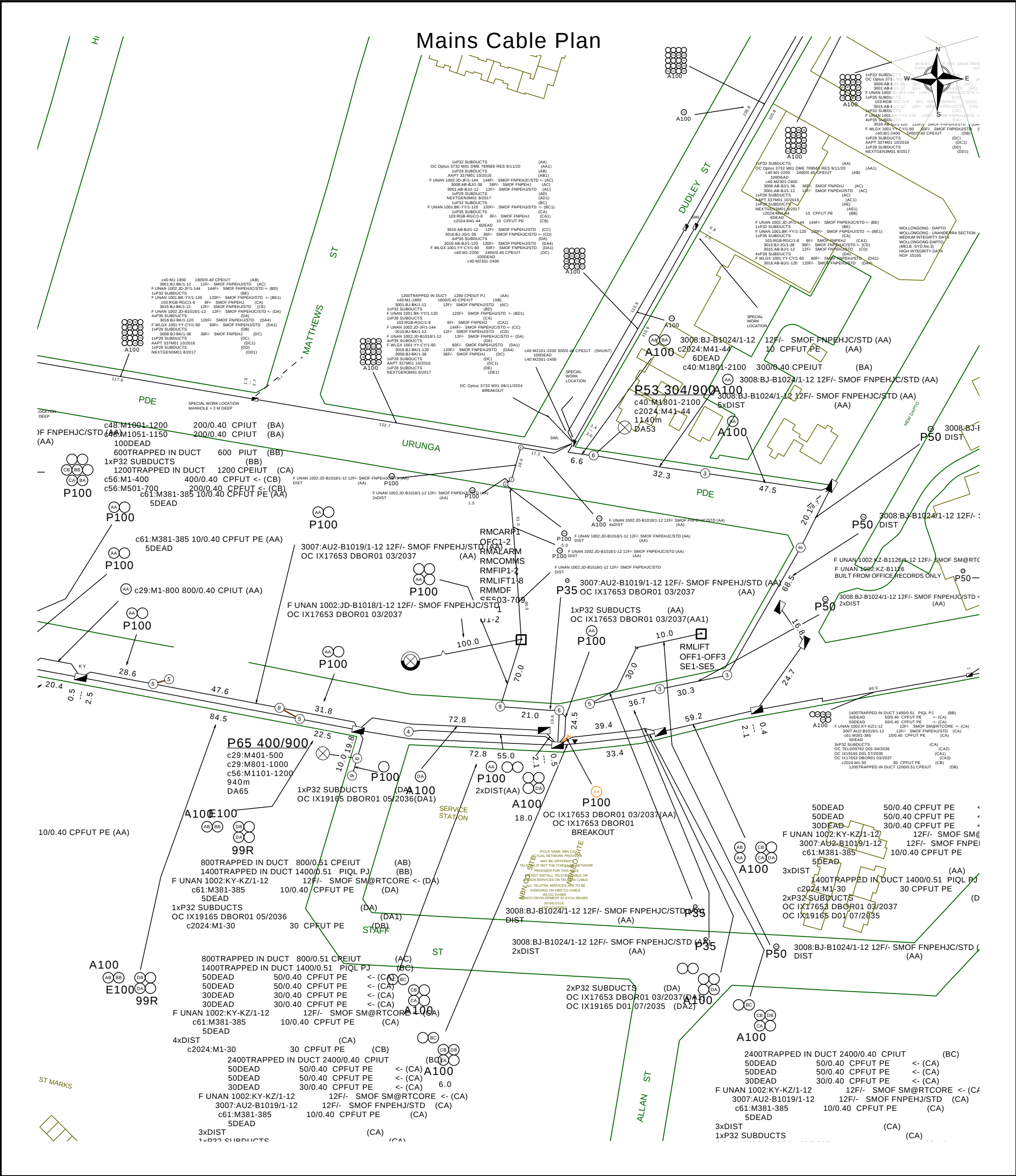


	Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra/ Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 256086357
	TELSTRA LIMITED A.C.N. 086 174 781 Generated On 06/06/2025 16:35:11	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.





Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra>

Ph - 13 22 03

Email - Telstra.Plans@team.telstra.com

Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

Sequence Number: 256086357

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

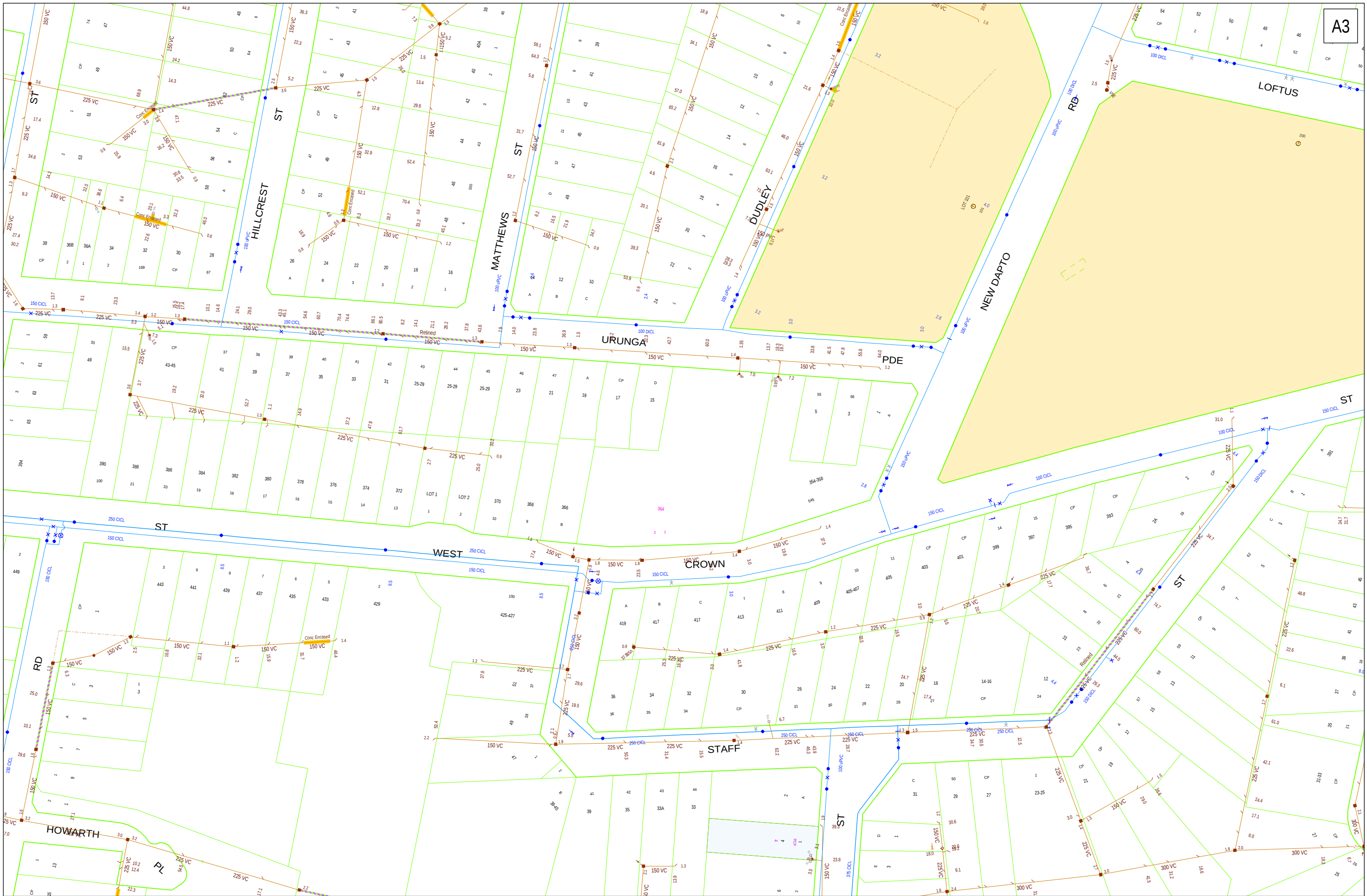
TELSTRA LIMITED A.C.N. 086 174 781

Generated On 06/06/2025 16:35:18

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

WARNING
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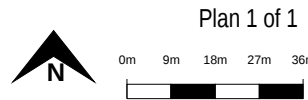
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DBYD Address:
n/a 15 Urunga Parade
Wollongong NSW 2500

DBYD Job No: 50355290
DBYD Sequence No: 256086358

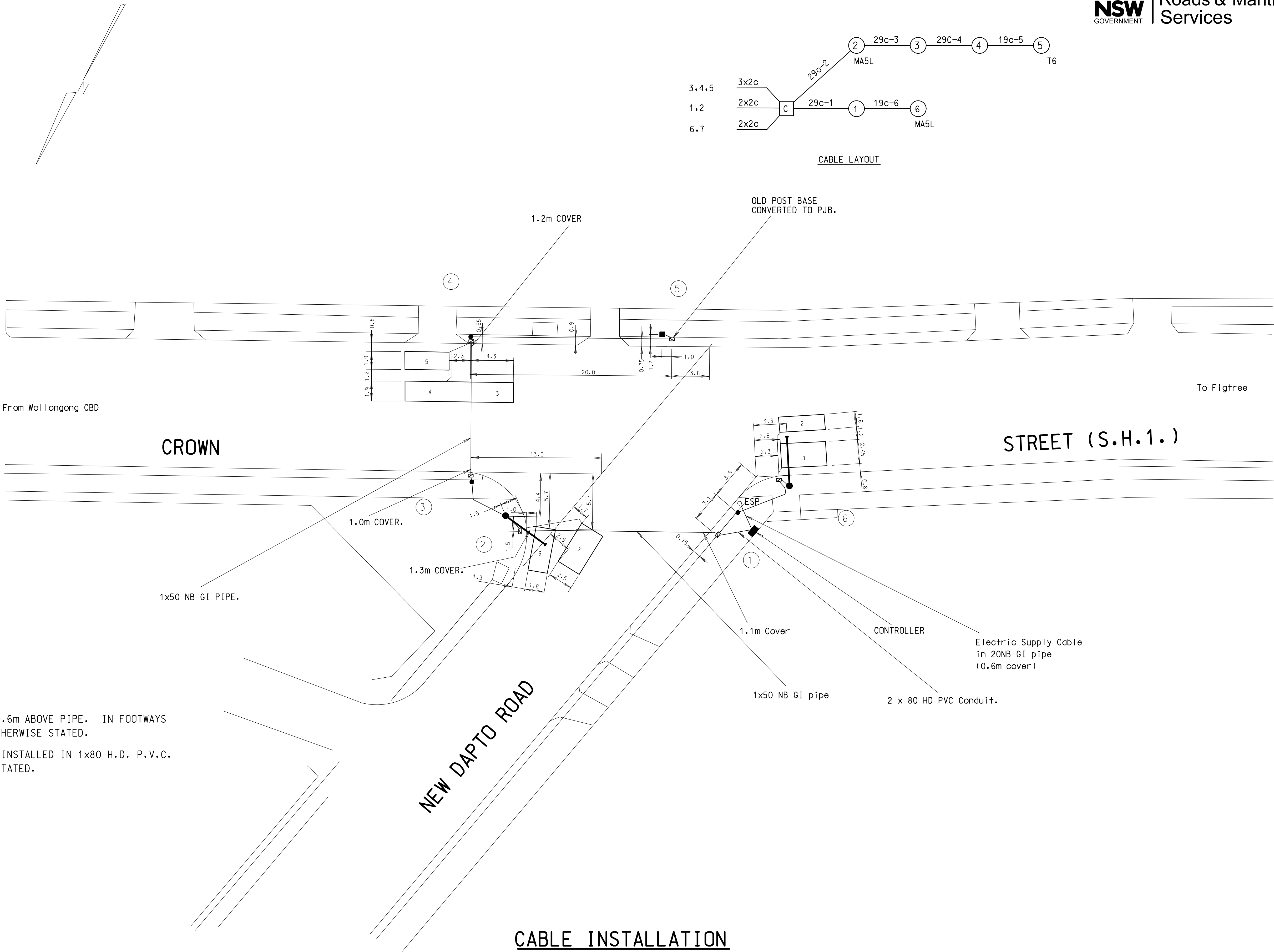
Copyright Reserved Sydney Water 2025
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SYDNEY WATER CORPORATION

Scale: 1:1500
Date of Production: 05/06/2025



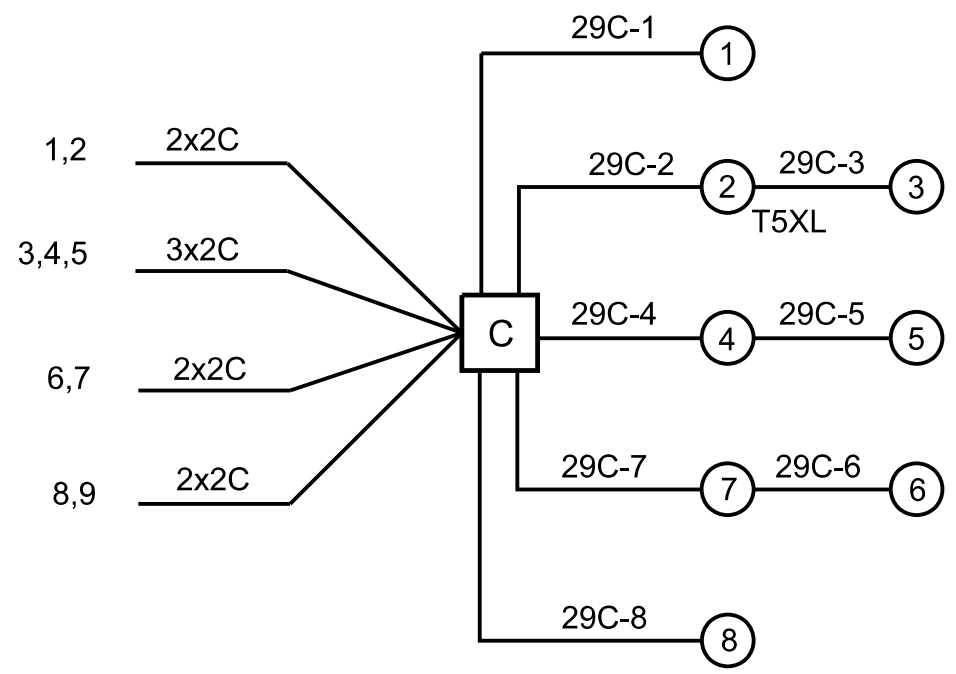
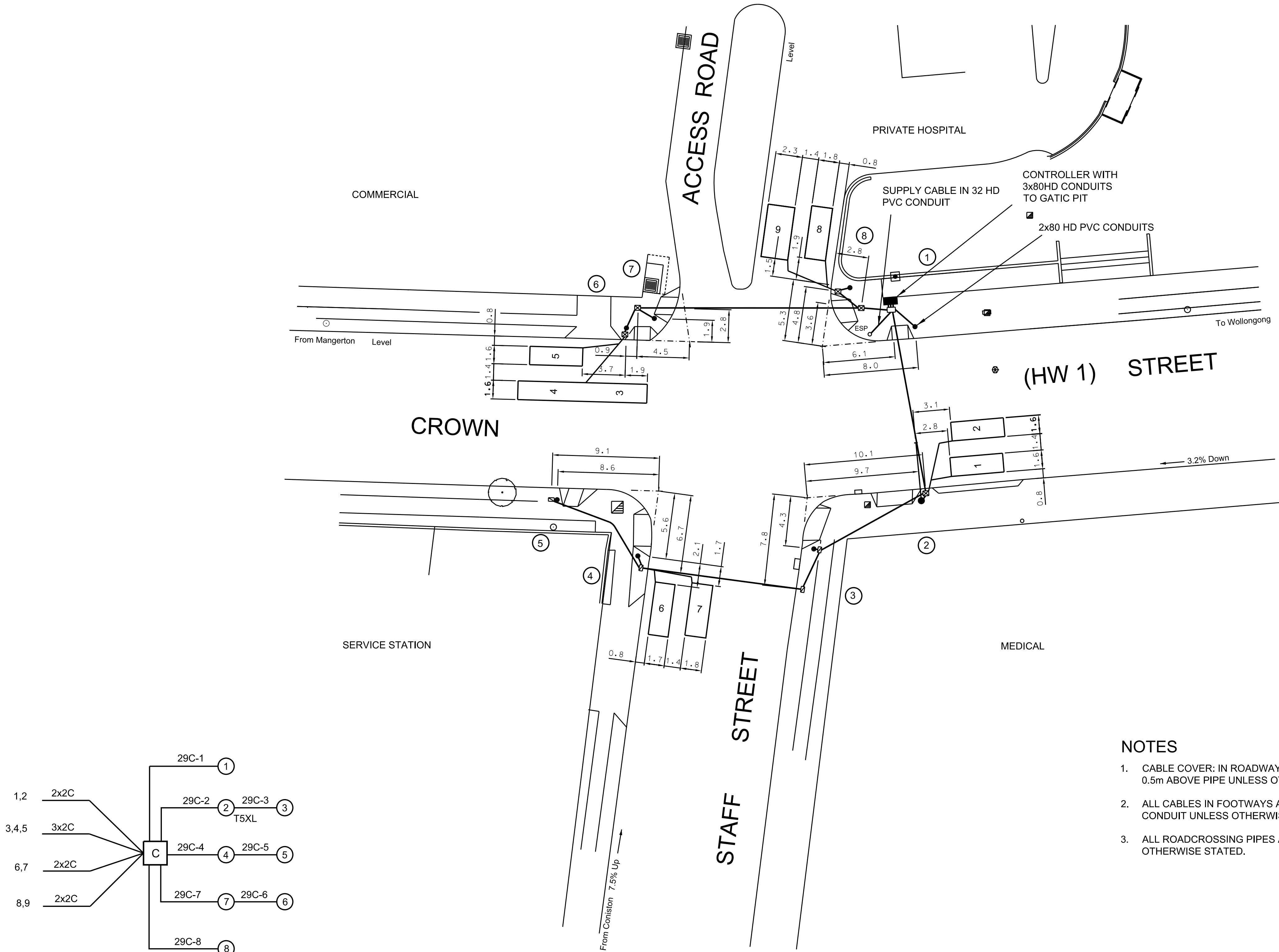
Plan 1 of 1

DRAWN USING CAD
DO NOT AMEND MANUALLY



A ORIGINAL ISSUE	REFERENCE PLANS			APPROVED		ROADS AND MARITIME SERVICES		REGION: SOUTHERN		SHEET 5			
	Symbols & Abb.			R. W. A. 14/4/94		CITY OF WOLLONGONG INT OF CROWN ST (S.H.1.) AND NEW DAPTO ROAD WOLLONGONG		SCALE 		ISSUE			
	Standard Posit.			DESIGNED				FILE 497.TS.402		SUPERSEDES SHEET 2		A B	
	Det. Sched. Exp.			A GAUDIOSI 4/94		A GAUDIOSI		REGN.		0001.497.VV.2214			
B ISSUE 20.07.2012	Pres. Detectors			CHECKED		TED ELECTRICAL							
	SSG Dis. Seq.			A GAUDIOSI 4/94		DATE 5/11/2003							
	Design Layout			PASSED									
	Cable Connection												

DRAWN BY CADD
DO NOT AMEND MANUALLY

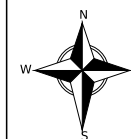
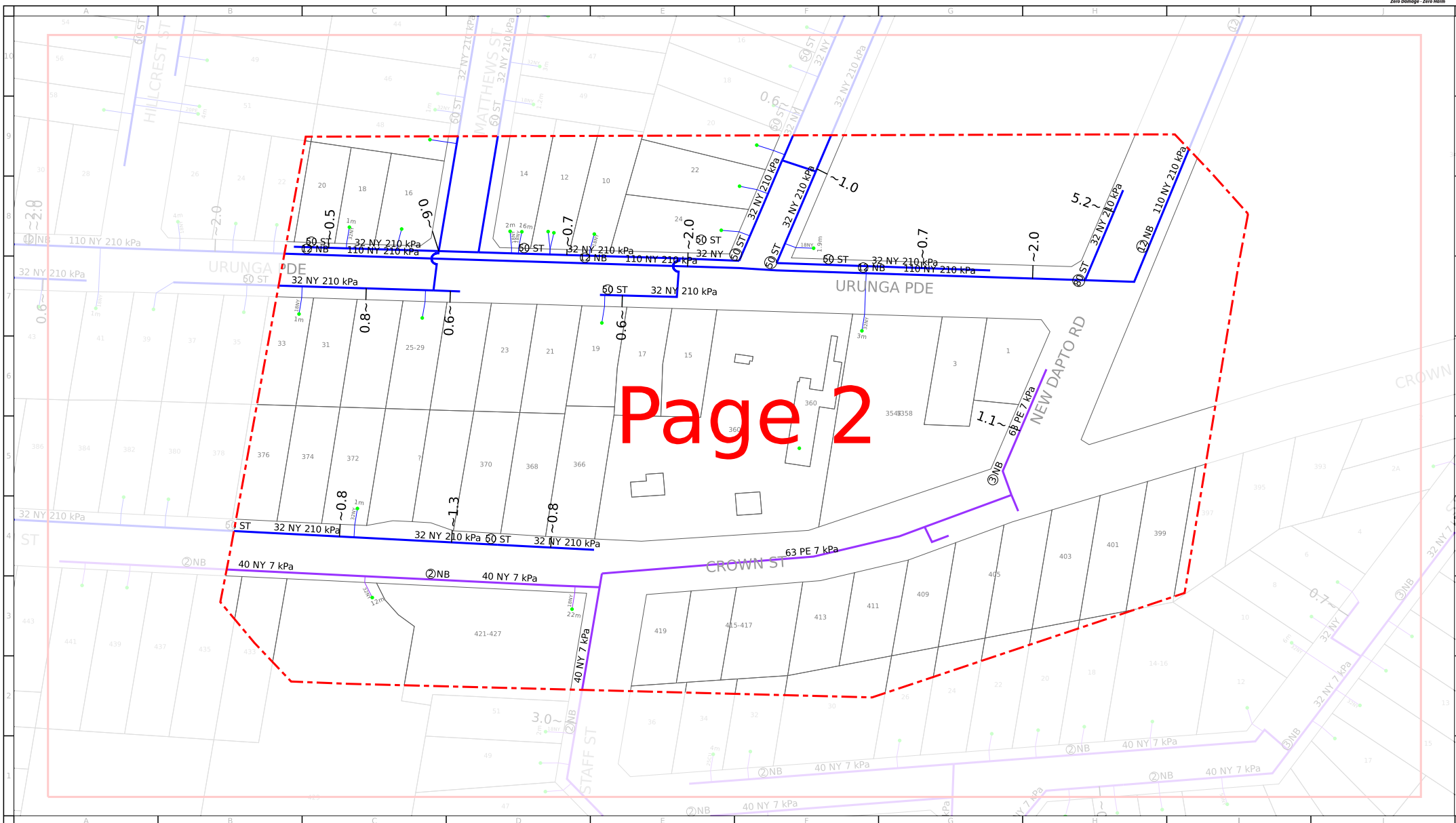


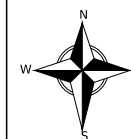
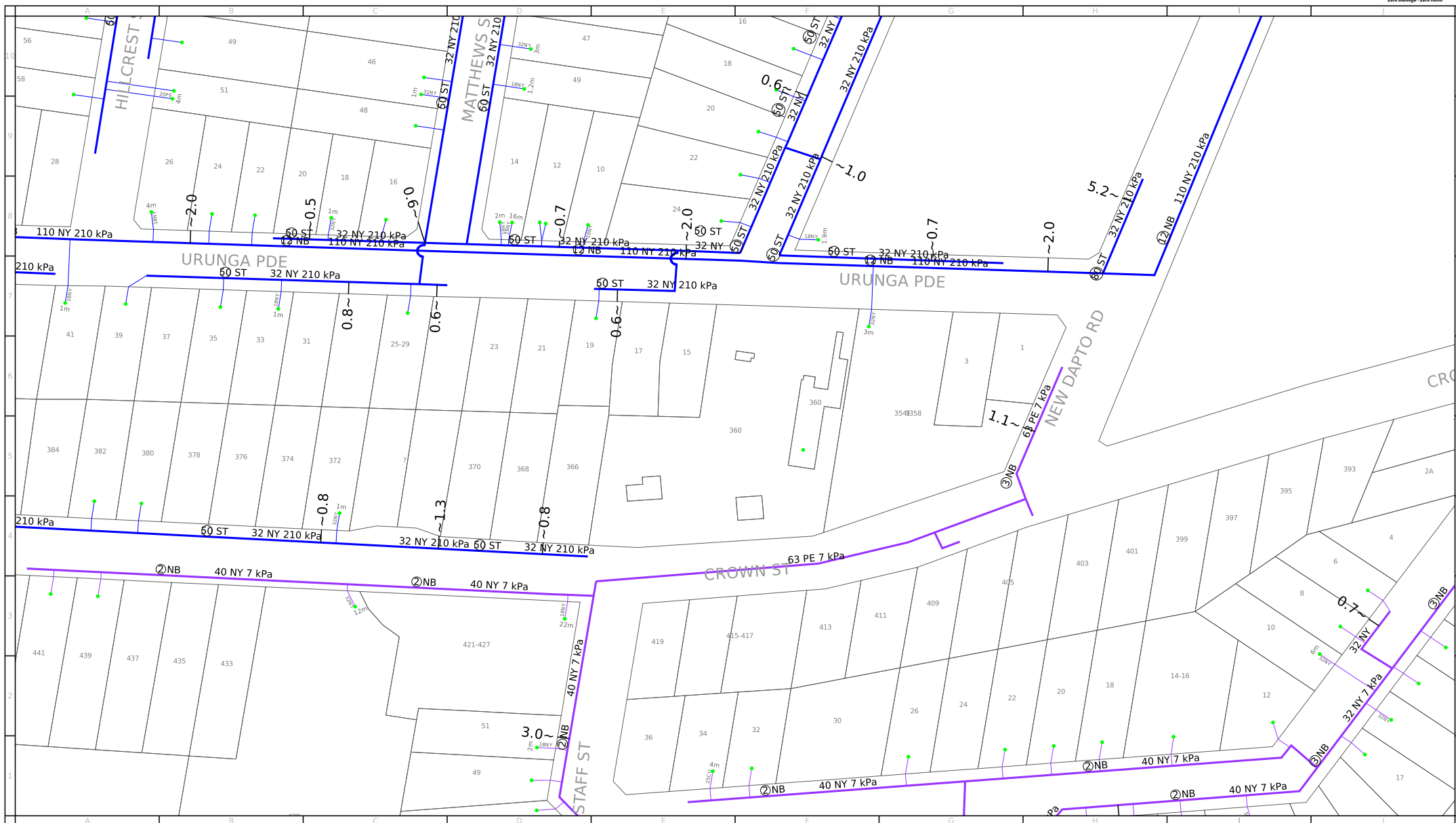
CABLE LAYOUT

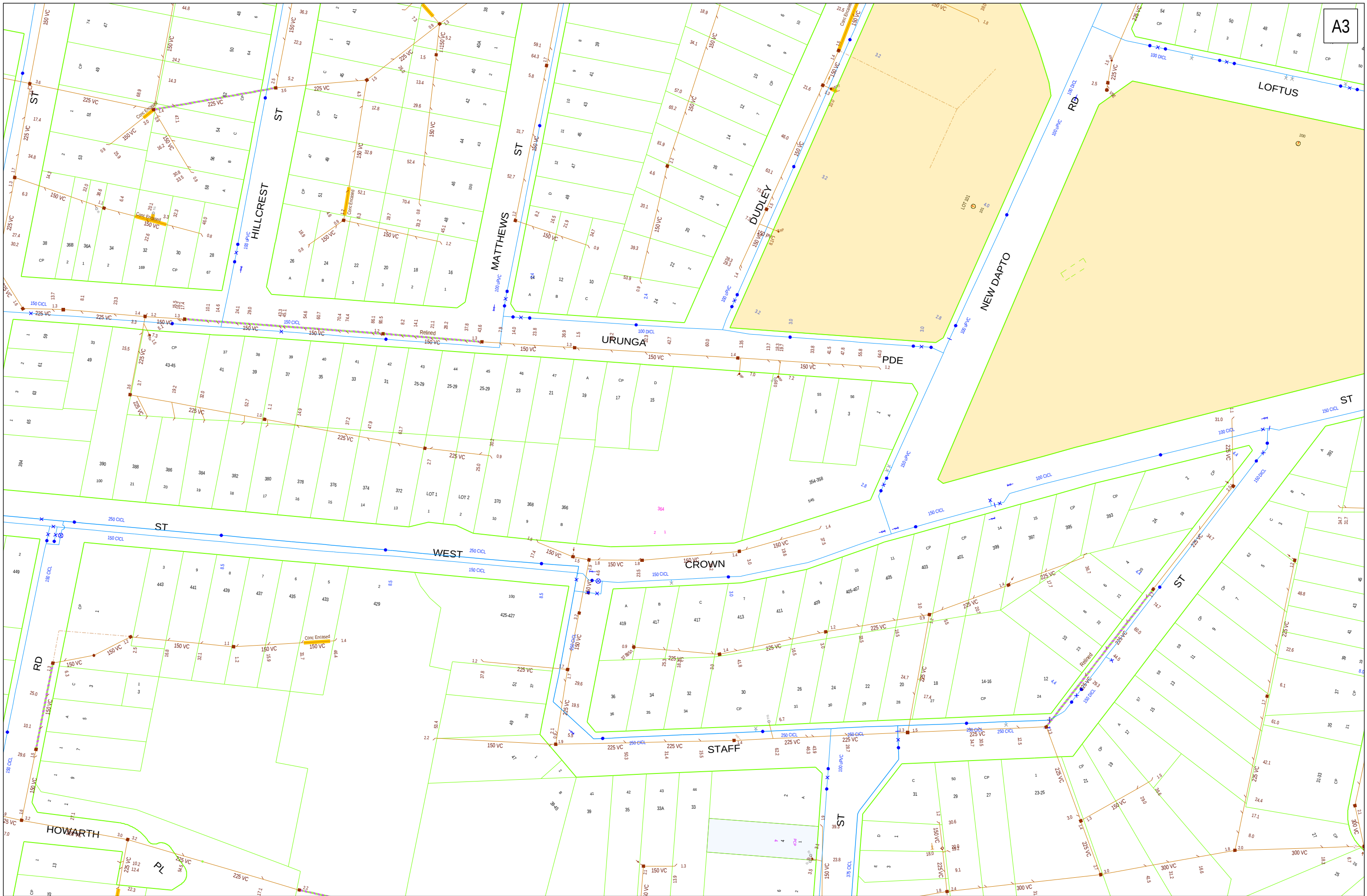
NOTES

1. CABLE COVER: IN ROADWAYS 0.75m ABOVE PIPE. IN FOOTWAYS 0.5m ABOVE PIPE UNLESS OTHERWISE STATED.
2. ALL CABLES IN FOOTWAYS ARE INSTALLED IN 1x80 HD PVC CONDUIT UNLESS OTHERWISE STATED.
3. ALL ROADCROSSING PIPES ARE 1x80 HD PVC CONDUIT UNLESS OTHERWISE STATED.

A ORIGINAL ISSUE		PUBLIC UTILITY LEGEND	<table><tr><td>HYDRANT</td><td>□</td><td>SYMBOLS/ABBS.</td><td>VD003-6</td></tr><tr><td>STOP VALVE</td><td>▲</td><td>STD POSIT</td><td>VD001-5</td></tr><tr><td>GAS VALVE</td><td>⦿</td><td>PRES. DETECT</td><td>VC005-17</td></tr><tr><td>SEWER MANHOLE</td><td>⊗</td><td>VEH. GROUP OP</td><td>TS-TN-019</td></tr><tr><td>TELECOM PIT</td><td>■</td><td>DET. LOGIC OP</td><td>TS-TN-020</td></tr><tr><td>ELECT LIGHT POLE</td><td>○</td><td>PED. MOVEMNT OP</td><td>TS-TN-021</td></tr><tr><td>POWER POLE</td><td>○</td><td>DESIGN</td><td>SHT 1</td></tr><tr><td>STAY POLE</td><td>○</td><td>CHART</td><td>SHT 3</td></tr><tr><td>TELEPHONE BOX</td><td>□</td><td>SURVEYOR : S P Site Setout Pty Ltd</td><td></td></tr><tr><td>TELECOM PILLAR</td><td>●</td><td>DATE : 24/8/2013</td><td></td></tr></table>	HYDRANT	□	SYMBOLS/ABBS.	VD003-6	STOP VALVE	▲	STD POSIT	VD001-5	GAS VALVE	⦿	PRES. DETECT	VC005-17	SEWER MANHOLE	⊗	VEH. GROUP OP	TS-TN-019	TELECOM PIT	■	DET. LOGIC OP	TS-TN-020	ELECT LIGHT POLE	○	PED. MOVEMNT OP	TS-TN-021	POWER POLE	○	DESIGN	SHT 1	STAY POLE	○	CHART	SHT 3	TELEPHONE BOX	□	SURVEYOR : S P Site Setout Pty Ltd		TELECOM PILLAR	●	DATE : 24/8/2013		REFERENCE PLANS	U.B.D. Ref. Map 35 H3 I.S.G. E: 288 862 CO-ORDS N: 1 189 087 DESIGNED CORRIGAN CHECKED M. GRIMA 27-08-2018 SITE CHECKED I. HAYES 20-02-2019 RECOMMENDED	APPROVED M. Mahinthan M. MAHINTHAN ELECTRICAL DESIGN MANAGER POSITION DATE 21-02-2019	ROADS AND MARITIME SERVICES		EXISTING ☒ PROPOSED ☐	
				HYDRANT	□	SYMBOLS/ABBS.	VD003-6																																											
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WOLLONGONG COUNCIL AREA		CADD FILE: VV4629_2A_INS.dgn																																																
TRAFFIC SIGNALS AT THE INTERSECTION		SCALE 5 0 (1:200) 5 10																																																
CROWN STREET (H.W.1)		FILE SF2014/038554																																																
STAFF STREET AND ACCESS ROAD		SUPERSEDES SHEET/ISSUE -/-																																																
CABLE INSTALLATION WOLLONGONG		TCS No 4629																																																
		REG NO DS2014/004973																																																
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		SHEET 2																																																







DBYD Address:
n/a 15 Urunga Parade
Wollongong NSW 2500

DBYD Job No: 50355290
DBYD Sequence No: 256086358

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Scale: 1:1500
Date of Production: 05/06/2025

