ARUP

Goodman

Project Duke Data Centre

Infrastructure Requirements Report

Reference: Project Duke Data Centre – Services Infrastructure Report

Rev. 2 SSDA Amendment | 16 May 2025

Job number 296866

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Executive Summary

This services infrastructure report has been prepared by Arup on behalf of Goodman Property Services Aust. Pty Ltd to accompany a State Significant Development Application (SSDA) for the construction and ongoing operation of a data centre facility at 2 and 10-22 Kent Road, and 685 Gardeners Road, Mascot, legally referred to as Lot 1 DP529177, Lot 1 DP1009083 and Lot 2 DP529177. The site is located on Country of the Gadigal people within the local government area of Bayside Council. This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project. This report concludes that the proposed data centre development is suitable and warrants approval subject to the implementation of the following mitigation measures.

- The data centre building facility is designed to operate with N-1 Utility Supply to mitigate the likelihood for a need for the backup generators to run. This fully redundant HV supply, increases the reliability of the utility power supply and provides additional security, that would minimise downtime further and would limit disruption to only parts of the facility.
- High electrical demand impacting the surrounding HV distribution network. Negotiations and consultation are underway with the supply authority to confirm the network has the capacity to supply the new data centre.
- Mitigation for Noise levels when testing or operating back-up generators will be to provide acoustic treatment measures assessed against NSW Noise Policy for Industry ratings to ensure the noise levels are below the permissible thresholds.
- Fuel spills when filling generators. Mitigation measure will be to design the tanks to meet AS1940 requirement.
- Fire and explosion risks associated with the generators. Mitigation measure will be separation between Generators and associated fuel tanks designed in accordance with AS 1940 and active fire protection measures as required by the dangerous goods report and Australian Standards.
- Fire and explosion risks associated with the switching station. Mitigation measure will be HV switching station will be designed by a certified Level 3 ASP designer in accordance with relevant current version of Australian Standards and Industry Associations Standards and Guidelines. Switching station located secure lockable plantrooms meaning only approved personnel can access this area.
- Air pollution when generators are operational. Mitigation measure will be two separate, HV electrical supply routes are proposed and so the probability of mains failure has been investigated for the electrical supply. Failure rates for a supply in this arrangement are extremely low meaning the generators will rarely be used. Generators will include specific emissions control measures to Australian EPA requirements. Spatial provision has been considered for selective catalytic reducers (SCR) to be retrofit where required.
- Redundant telecoms supply. Mitigation measure will be that 6no. PoE telecommunications pathways are physically separated by a minimum of 50m to minimise risk of concurrent damage to multiple pieces of telecommunications infrastructure.
- High demands reducing the capacity of the estate or precinct water and sewer networks. Mitigation measures to minimise the peak water demand on Sydney Water's potable water network, the preliminary water balance of the proposed site has

been undertaken through the use of rainwater re-use tanks and the provision of fire and water storage tanks on site.

- Overtopping of rainwater harvesting/water storage tanks. Mitigation measure water overtopping from the rainwater tanks will discharge to the stormwater system. Discharged water will not contaminate the surrounding environment as it will be from either mains supply or roof collected which has passed through water quality treatment features.
- Spills/leakages from on-site storage of effluent during early stages of construction through early works construction of dedicated site sewer connections for compliant disposal without the need to store effluent on-site.

Following the implementation of the above mitigation measures, the remaining impacts are appropriate.

1. Abbreviations and Glossary

Abbreviations	
Colo	A colocation facility, or colo, is a data centre facility in which a business can operate or rent space for servers and other computing hardware.
BYDA	Before You Dig Australia
DPHI	Department of Planning Housing and Industry
HV	High Voltage
IT	Computer servers
kL	Kilolitre (1000L – equivalent to $1m^3$ volume)
KVA	Kilo Volt Amp
LV	Low Voltage
MV	Medium Voltage
MVA	Mega Volt Amp
MW	Megawatts
N-1	Level of resilience. Components (N) has at least 1 backup component (-1)
POEO	Protection of the Environment Operations Act
Proponent	Goodman Services Pty Ltd
Proposal (the)	The purpose of the proposal is
SEARs	Secretary's Environmental Assessment Requirements
UGOH	Underground to Overhead
WSC	Water Services Co-ordinator
WWTP	Waste water Treatment Plant

2. Introduction

2.1 Purpose of this report

This briefing pack has been prepared by Mecone Group on behalf of Goodman Property Services Aust. Pty Ltd in relation to the Project Duke Data Centre (**SSD-71368959**).

The purpose of this briefing pack is to provide the consultant team with standardised project text and assumptions to inform the preparation of the technical reports and plans to support submission of the State Significant Development Application (**SSDA**) to the Department of Planning Housing and Industry (**DPHI**).

This is to ensure consistency is achieved across the various technical reports being prepared and that reports satisfy the requirements set by the Secretary's Environmental Assessment Requirements (**SEARs**).

This briefing pack is accompanied by the following attachments submitted under separate cover:

- **Attachment A** – SEARs prepared by DPHI
- **Attachment B** – SEARs and Planning Legislation Matrix prepared by Mecone
- **Attachment C** – Architectural Plans prepared by Grimshaw

3. Preamble Information

3.1 Preamble

3.1.1 Project Summary

The proposed development (SSD-71368959) will seek approval for the construction of a 120 MVA Data Centre. The proposal seeks to demolish existing structures on the site, construct, fit out and the 24/7 operation of a Data Centre, with associated works.

The works subject to SSD-71368959 include the following:

- Site preparation works including demolition, bulk excavation, and removal of existing structures on the site, tree and vegetation clearing, and bulk earthworks,
- Construction, fit out and 24/7 operation of a 120 MVA data centre with a maximum building height of 40m (from natural ground level) and total gross floor area of approximately 26,052m^2 comprising:
  - At-grade parking for thirty-four (34) car parking spaces and one (1) accessible car parking spaces,
  - Two (2) 12.5m loading dock spaces,
  - Four (4) levels of technical data hall floor space with one data hall on ground level, three (3) data halls on levels one and two (2) data halls on level three.
  - Secure entrance lobby on ground level and ancillary office space on each level and mezzanine level,
- Provision of required plant and utilities, including:
  - Six (6) 33kV switch rooms on ground level
  - 1,172,000L above ground diesel storage tanks,
  - 5,125kL above ground water storage tanks,
  - 72 diesel generators
- Acoustic screen parapet,
- Vehicle access provided via Gardeners Road and Ricketty Street,

3.1.2 The Site

The project is located on land known as 2 and 10-22 Kent Road, and 685 Gardeners Road, Mascot, legally referred to as Lot 1 DP529177, Lot 1 DP1009083 and Lot 2 DP529177. The site is located on Country of the Gadigal people within the local government area of Bayside Council.

It has a land area of approximately 23,470m2 with frontages to Ricketty Street, Kent Road and Gardeners Road, all of which are classified roads.

The site forms part of the Mascot West Employment lands which comprises a mix of land zoned for industrial, commercial and business park uses. To the east of the site is Mascot Station Town Centre which comprises a mix of retail, commercial, residential and recreational open space land uses.

Surrounding land uses in the immediate vicinity of the include:

- **North**: Gardeners Road, which is the LGA boundary with the City of Sydney. Further to the north is existing industrial development with Alexandra Canal beyond.
- **South**: Ricketty Street is immediately south, with predominantly one (1) to four (4) storey commercial and industrial development beyond.
- **East**: Kent Road is immediately to the east, with four (4) to 14 storey high density residential development beyond.
- **West**: To the west is light industrial development typically one (1) to two (2) storeys in height.

The site is zoned E3 Productivity Support under the Bayside Local Environmental Plan 2012 (BLEP 2021). The proposal is permissible with development consent in the E3 zone and meets the zone objectives.

In its existing state, the site itself contains two large warehouse buildings which are currently leased out to multiple tenants. Large extents of the site consist of hardstand for vehicle circulation and parking with a number of mature trees are located along the site's boundaries.

A summary of the site is provided in Table 1 below.

Table 1 – Site Description Summary

Item	Description
Site Area	23, 470m^2
Ownership	Goodman
Legal Description	Lot 1 in DP529177, Lot 1 in DP1009083 and Lot 2 DP529177

3.1.3 SEARs and DCP requirements relevant to this report

Table 2 - SEARs requirements for Services and Infrastructure identifies the SEARs requirements which are relevant to this technical assessment.

Table 2 - SEARs requirements for Services and Infrastructure

SEARs relevant to this technical report	Section addressing SEARs
Infrastructure Requirements A detailed written and/or graphical description of infrastructure required on the site, including any testing procedures and details for diesel generators, electrical substations and switch yard.	Section 7
Infrastructure Requirements Identification of any upgrades required off-site to facilitate the development and describe any arrangements to ensure that the upgrades will be implemented in a timely manner and maintained.	Sections 7.1 to 7.4
Infrastructure Requirements An infrastructure delivery and staging planning, including a description of how infrastructure on-site and off-site will be co-ordinated and funded to ensure it is in place prior to the commencement of construction.	Section 7.1
Infrastructure Requirements An assessment of the impacts of the development on existing utility infrastructure and service provided assets surrounding the sites, and a description of how any potential impacts would be avoided and minimised.	Section 8 and 9
Agency comments	
EPA – Electricity Generation The EPA requests further information be provided on the back-up generators, including: 1. Number of back-up generators proposed 2. Individual capacity (in terms of megawatts and megajoules per second) 3. Maximum operating time in an emergency situation 4. Testing procedure, frequency and duration 5. Confirmation that testing will be carried out individually or in clusters; and 6. Justification of the need to test during the evening or at night	Section 7.1

SEARs relevant to this technical report	Section addressing SEARs
EPA – Electricity Generation The Environmental Impact Statement (EIS) should definitely state whether schedules testing will exceed that 200-hour annual limit. If the testing time is definitely stated to be less than 200 hours per annum, then DPIE may want to consider adding a condition of consent reflecting this. Alternatively, if testing time could exceed 200 hours per year, then the proposed activity may meet the trigger for Clause 17, schedule 1 of the POEO Act. Please note that the EPA would consider 'operating' to include testing, if testing involved starting the generator. In addition, the definition of 'plant' in the schedule activity includes all generators on the premises, not each individual generator.	Section 7.1
EPA – Chemical Storage The EPA requests clarification on the total volume of diesel proposed to be stored at the premises and the capacity of the tanks in which diesel is to be stored. Under Clause 9 of the POEO Act, an activity requires a license is there is a capacity to store more than 2,000 tonnes of petroleum products (which includes diesel). Information on the location and design of chemical bunding and containments should also be included in the EIS. If diesel storage tanks are above ground, bunding requirements are set out in AS 1940:2017 The storage and handling of flammable and combustible liquids.	Section 7.1.3
Sydney Water – Water-related Infrastructure Requirements The proponent of the development should determine service demands following servicing investigations and demonstrate that satisfactory arrangements for drinking water, wastewater, and recycled water (if required) services have been made.	Sections 7.2.3, and 7.3.3 and Table 9 - Fire Services Demand Table 10 - Estimated Water Demand Table 11 - Estimated Sewer Requirements
Sydney Water – Water-related Infrastructure Requirements The proponent must obtain endorsement and/or approval from Sydney Water to ensure that the proposed development does not adversely impact on any existing water, wastewater or stormwater main, or any other Sydney Water asset, including easement or property. When determining landscaping options within the public domain or streetscaping works, the proponent should take into account that certain tree species can cause cracking or blockage of Sydney water pipes and therefore should be avoided.	Sections 7.2.2, 7.3.3 and 7.3.4
Sydney Water – Water-related Infrastructure Requirements Strict requirements for Sydney Water's stormwater assets (for certain types of development) may apply to this site. The proponent should ensure that satisfactory steps/measures been taken to protect existing stormwater assets such as avoiding building over and/or adjacent to stormwater assets and	Section 6.4, 8.3

SEARs relevant to this technical report	Section addressing SEARs
building bridges over stormwater assets. The proponent should consider taking measures to minimise or eliminate potential flooding, degradation of water quality, and avoid adverse impacts on any heritage items, and create pipeline easements where required.	
Sydney Water – Integrated Water Cycle Management The proponent should outline any sustainability initiative that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any water conservation measures that are likely to be proposed. This will allow Sydney Water to determine the impact of the development on our existing services and required system capacity to service the development.	Section 7.2.3.4
WaterNSW WaterNSW's main concern is the potential effects on the metallic Warragamba Pipelines from the proposed substation development within the site. Of specific concern are matters covered by applicable AS/NZS 4853:2012 Electrical hazards and metallic pipelines in respect of the below items. 1. Earth potential rise (EPR) from an earth fault causing step and touch voltages on or near the pipelines. 2. Low frequency induction (LFI) induced voltages on the metallic pipeline, and 3. Capacitive coupling.	Section 7.1.8

4. Policy and planning context

This Chapter presents relevant regulation, legislation, and policy governing management of public utilities as it relates to the proposal.

4.1 Legislative context

4.1.1 Commonwealth Legislation

A number of Commonwealth legislative requirements to protect public utilities are noted below:

- Telecommunications Act 1997
- Security of Critical Infrastructure Act 2018

4.1.2 New South Wales Legislation

A number of NSW legislative requirements to protect public utilities are noted below:

- Protection of the Environment Operations Act 1997
- State Environmental Planning Policy (Infrastructure) 2007
- Electricity Supply Act 1995
- Gas Supply Act 1996
- Water Management Act 2000

4.1.3 Guidelines

- Fire safety guideline, Access for fire brigade vehicles and firefighters, ver 05.01, November 2020, Fire and Rescue NSW (FRNSW).
- Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines, ver 3, February 2020, WaterNSW.
- Building over and adjacent to pipe assets, 2015, Sydney Water

5. Methodology

This Chapter outlines the methodology used to define the baseline and undertake the environmental assessment of potential impacts of the proposal on public utilities including definition of the study area used as the basis of the assessment.

5.1 Study area

The assessment area will be limited to the subject site (the site boundary).

5.2 Method of Assessment

To address the project SEARs and address points raised by public utility authorities the following methodology was developed:

- Collate and review available data on existing public utilities; including conducting a Before You Dig Australia (BYDA) search.
- Assess proposed site layout against any existing public utility infrastructure within the proposal boundary and identify any necessary protection or diversion works required.
- Undertake demand assessment for each core utility serving the data centre.
- Develop a site plan considering key, on-site utility infrastructure required to serve the data centre.
- Consult with all relevant service providers to determine necessary off-site utility upgrades.
- Consult with estate developer in developing integrated, estate utility networks.
- Define preferred point of connection or servicing strategy for the development for each service.

6. Existing environment

The consented development design accounts for the various future developments proposed within the estate site boundary, including the proposed data centre. The baseline site will feature:

- Demolition of existing buildings and structures.
- Earthworks, excavation and retaining walls.
- Construction of one three level data storage centres with a maximum building height of 39.2 metres.
- Vehicle access will be provided from Ricketty St and Gardeners St.
- On-site car parking and loading within ground level.
- Connection stubs/points to the wider estate utility networks.

Existing utility provisions from BYDA searches and the consented estate design are described in sections 6.1 to 6.6. A copy of maps acquired from the BYDA search is contained within Appendix A.

Table 3 provides the following utility providers have been identified (but not limited to) as known to have assets located in broader proximity to the estate area:

Table 3 - Schedule of Utility Providers with assets in the near proximity of the estate

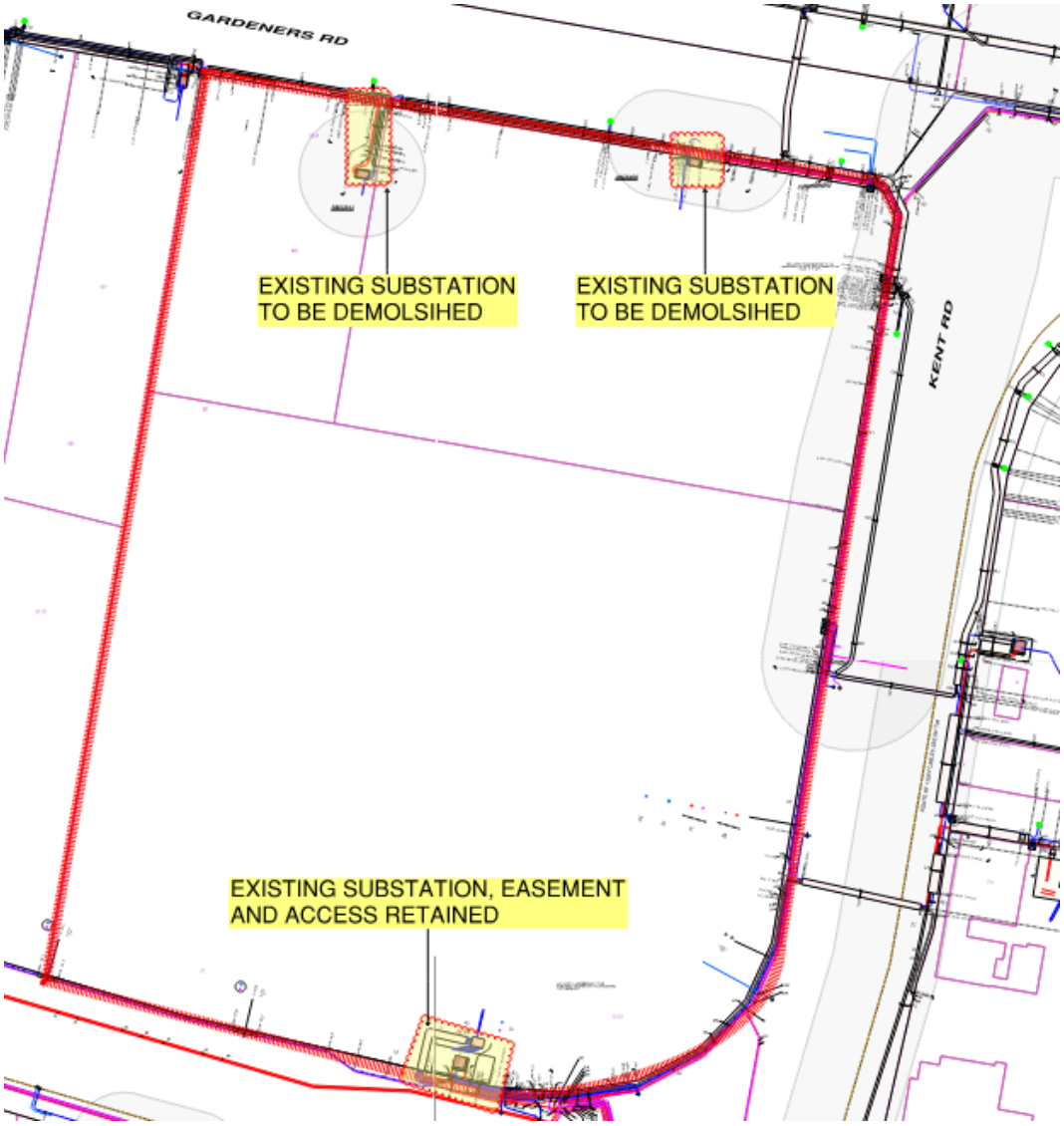
Utility Provider	Utility Type
Ausgrid	Electricity
Bayside Council	Stormwater
Jemena	Gas
NBN Co	Communications
OPTUS	Communications
Sydney Water	Water / Sewer / Stormwater
Telstra	Communications
TPG NSW	Communications
Verizon Business NSW	Communications
VOCUS	Communications

6.1 Electrical Services

Within the subject site boundary, there are three substations serving the existing buildings with their associated underground incoming cables from Gardeners Road and Ricketty St.

Existing underground electrical conduits run along Gardeners Road, Kent Road and Ricketty Street along the site perimeter and feed into these here substations, based on BYDA information from Ausgrid (Refer to Appendix A and Figure 1).

Figure 1 - Ausgrid BYDA



6.2 Water Services

The site is unencumbered of utility water mains and the site appears to be suitably serviced in its existing form. The existing Sydney Water' water mains infrastructure consists of water mains around the north, east and south boundaries, as illustrated in **Figure 2 - Sydney Water - Water Asset Locations** and include:

- 150mm DICL main along Ricketty St (Proposed Connection B).
- 150mm Cast Iron Cement Lined (CICL) main along Gardeners Rd (Proposed Connection A)
- 150mm Cast Iron Cement Lined (CICL) main along Kent Rd

Figure 2 - Sydney Water - Water Asset Locations

6.3 Sewer Services

There are a number of Sydney Water sewer mains around the boundary of the site, illustrated in **Figure 3 - Sydney Water Sewer Asset Locations** that can be extended to service the site including:

- 225mm Cast Iron (CI) main near intersection of Rickety St and Kent Rd.
- 225mm Cast Iron (CI) sewer connection running near Eastern boundary of a site branching of 225 PVC main along Gardeners Rd.
- Both 225mm Cast Iron (CI) sidelines to be replanned to suit the development

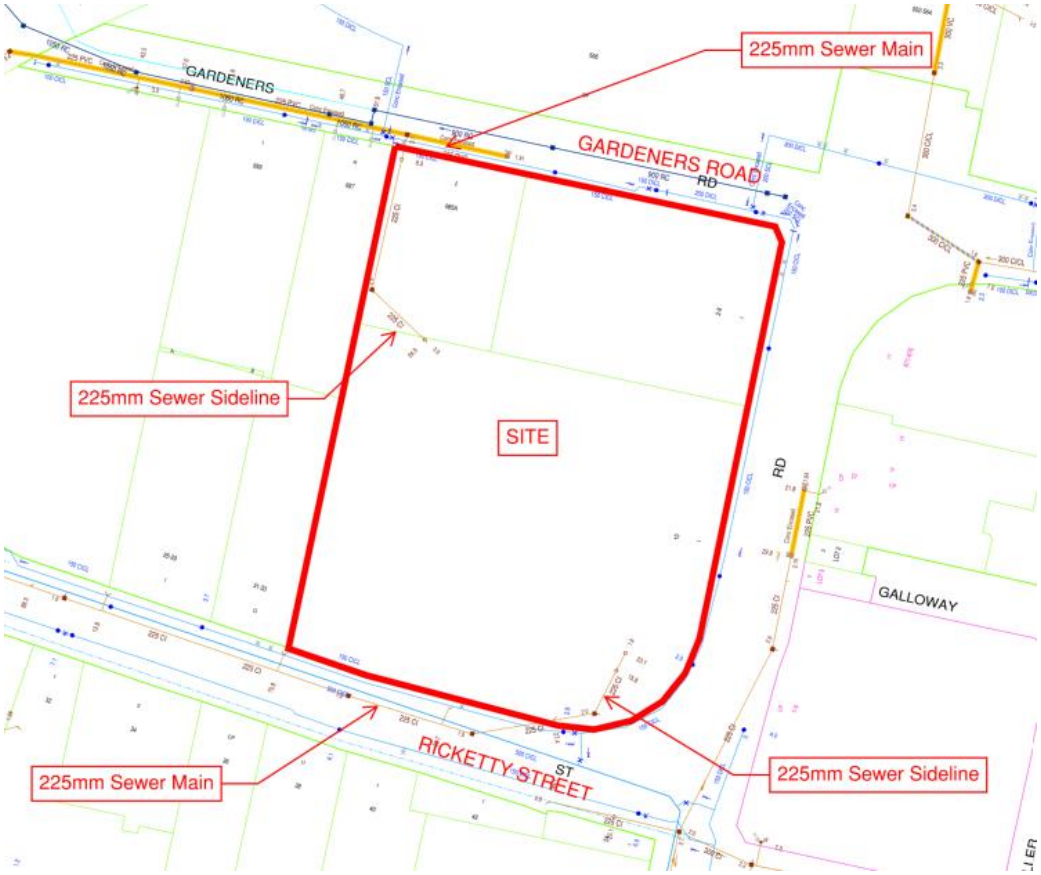


Figure 3 - Sydney Water Sewer Asset Locations

6.4 Stormwater Services

The local stormwater system is owned and operated by Bayside City Council and Sydney Water. Figure 4 shows the site connecting to the council-owned stormwater pipe system that runs along the Gardeners Road via several discharge points.

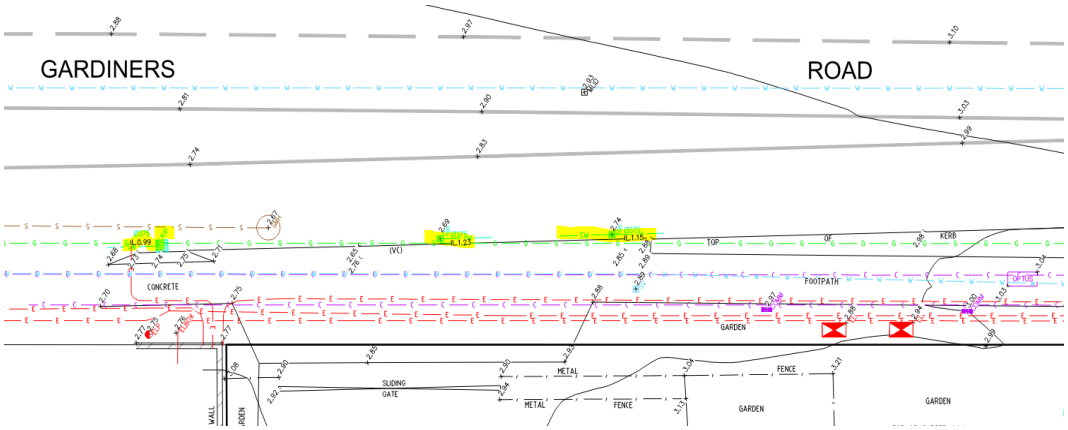


Figure 4 - Existing Stormwater Infrastructure (Source: LTS Survey dated 25/03/2024)

There is a 375mm diameter pipe running along the Gardeners Road and the existing site is serviced by discharging into multiple kerb inlet pits along the northern boundary. Existing site also seemed to be discharging to kerb inlet pits on the Kent Road on the east side, which then connects to the Gardener Road discharge system and ultimately directed into northwest towards Alexandra Canal.

Existing Overland Flow Path

According to updated hydraulic modelling for the site, overland flows from Ricketty Street are prevented from entering the site due to the presence of an earth embankment along the southern perimeter of the site. In the proposed design, this will be retained via an earth batter and flood barrier wall around the south/southeastern boundary of the site, maintaining the existing overland flow paths. Surface water runoff is ultimately directed west/northwest towards the receiving water body of Alexandra Canal. Further detail is provided in Flood Impact and Risk Assessment Report.

6.5 Communications Services

There are telecommunication services serving the proposed site existing building from Gardeners Road, Kent Road and Ricketty Street. From BYDA survey, the following telecommunication conduits are reticulating to the site:

- NBN Co
- OPTUS
- TELSTRA
- TPG TELECOM (NSW)
- VERIZON BUSINESS (NSW)
- VOCUS

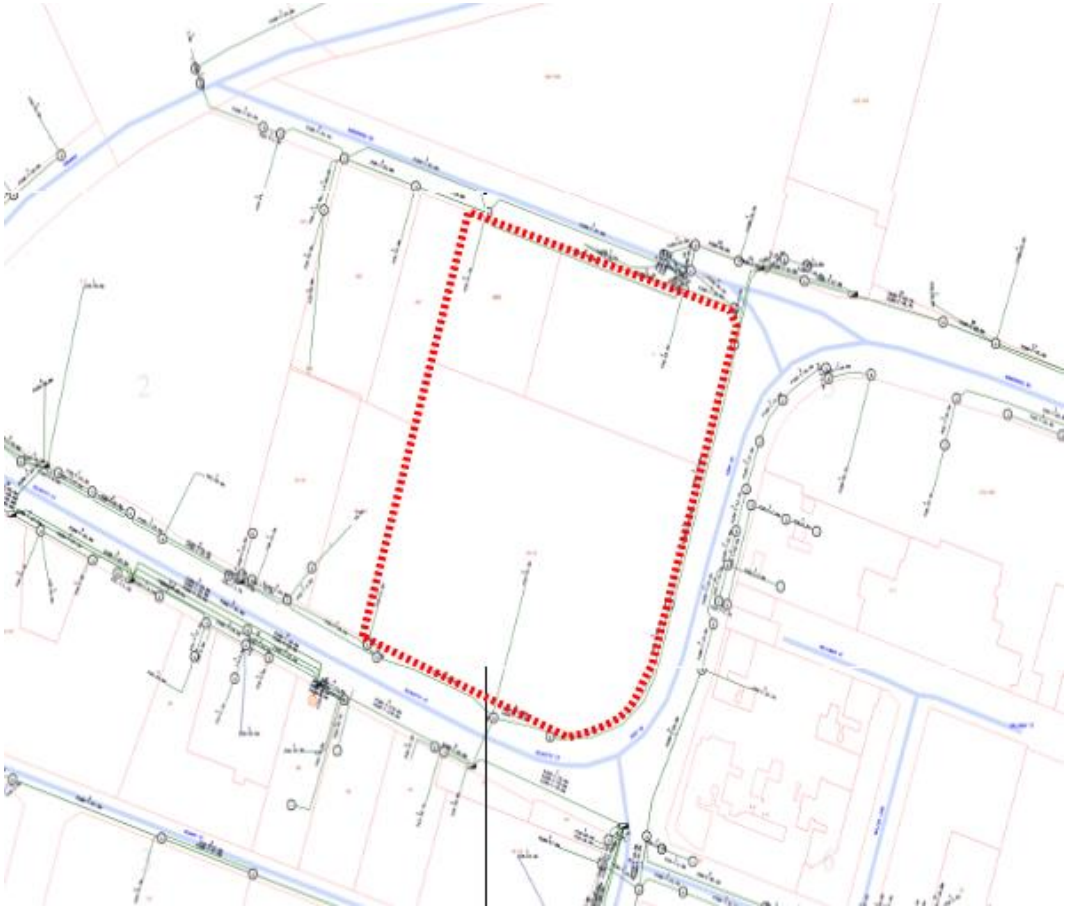


Figure 5 - NBN Co

Figure 6 - OPTUS

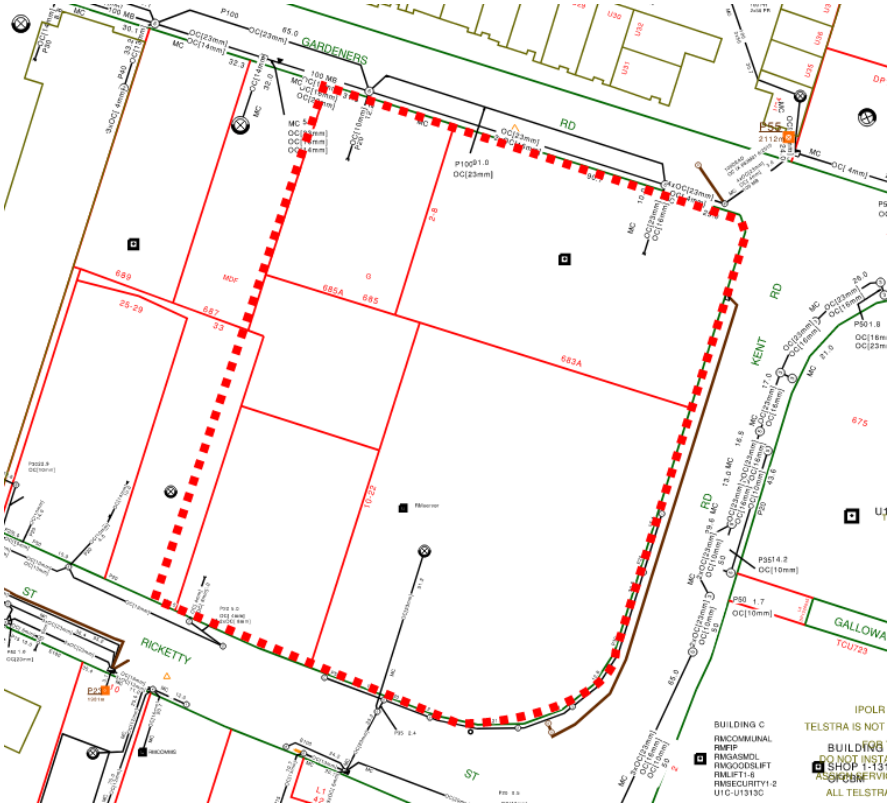


Figure 7 - TELSTRA

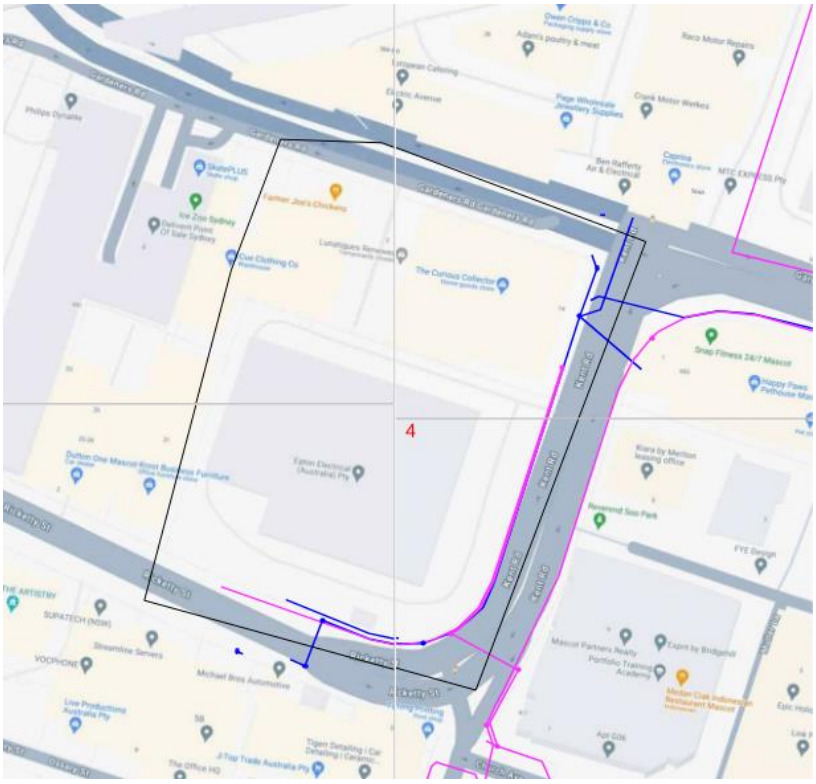


Figure 8 – TPG TELECOM (NSW)

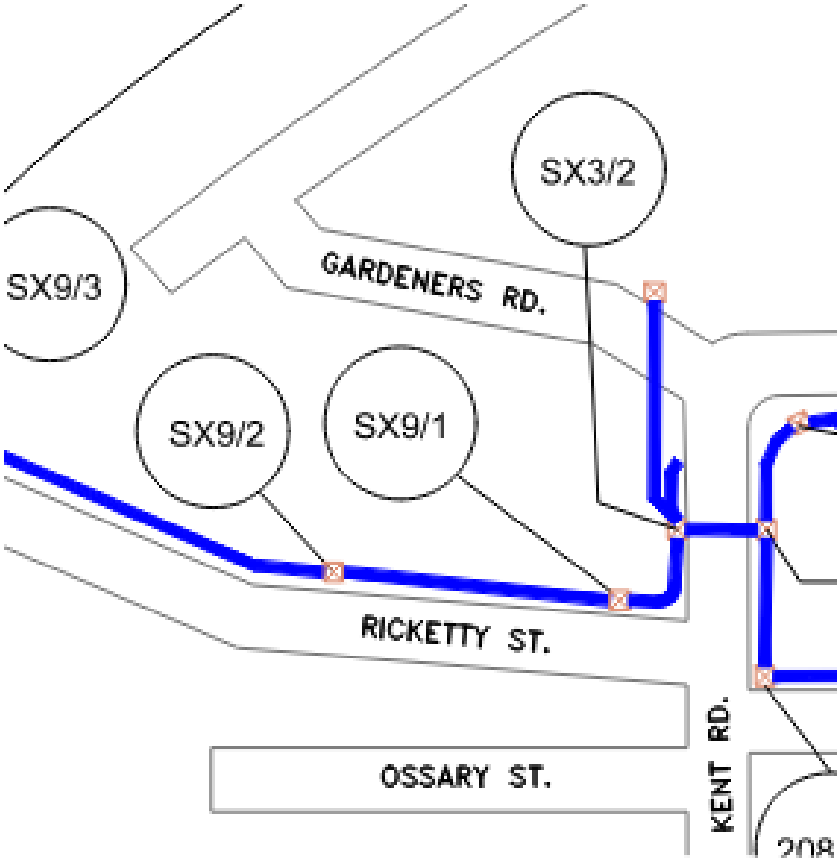


Figure 9 – VERIZON BUSINESS (NSW)

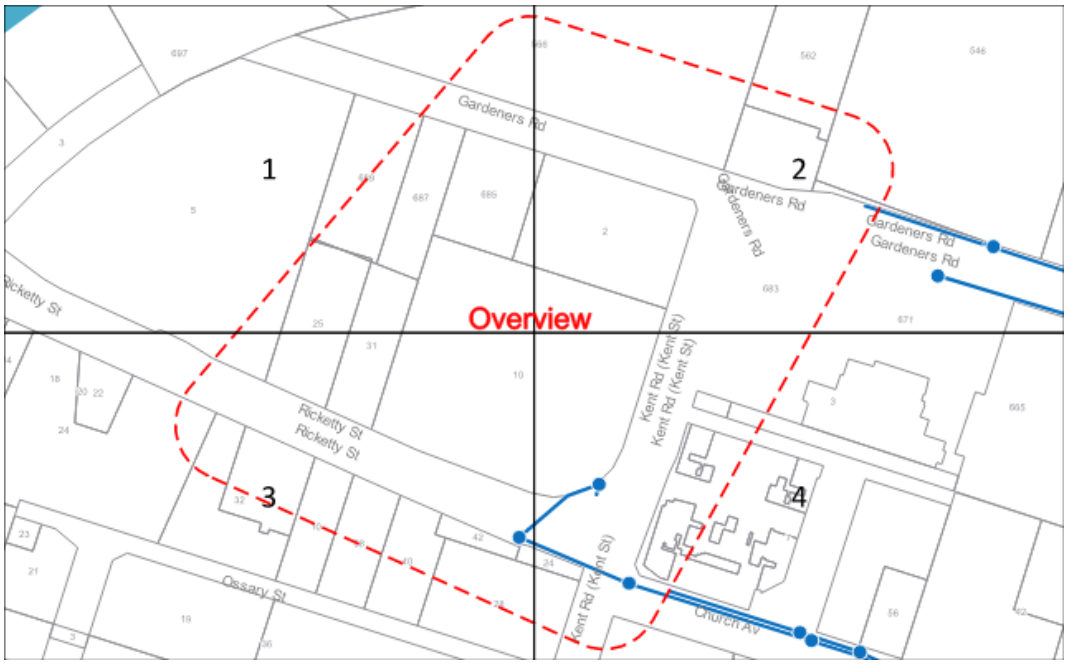


Figure 10 – VOCUS COMMUNICATIONS

6.6 Gas Services

No natural gas supply is expected to be required, as all hydraulic and mechanical heating demands are to be met by electric powered equipment to meet electrification intent for

ESG requirements. The existing site gas supplies will be isolated and capped off at the main in accordance with Jemena requirements.

Authority gas mains are noted at the following locations as shown in Figure 11:

- 63mm PE (Polyethylene) 210kPa medium pressure mains on Gardeners Rd
- 63mm PE (Polyethylene) 210kPa medium pressure mains on Kent Rd
- 75mm Nylon 210kPa medium pressure mains on Ricketty St
- 100mm Steel 1050kPa high pressure mains on Ricketty St

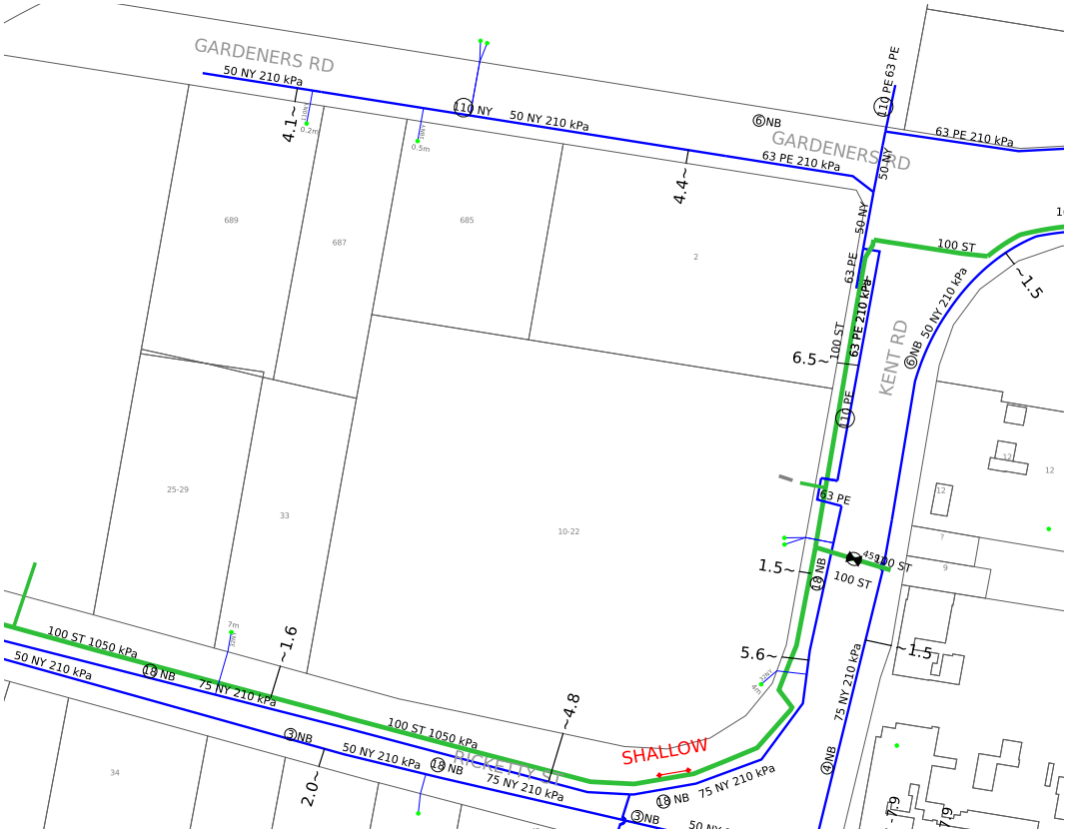


Figure 11 - Jemena Gas Authority Infrastructure

7. Servicing Strategies

This Chapter describes the service demands and details the proposed servicing strategies for the development.

Data centres require to maintain a controlled temperature environment to safely operate the high density of equipment contained within the data halls. The outcome of this is a significant electrical and water demand which varies throughout the year depending on the ambient temperature. A large number of telecommunication conduits are also required to support a data centre.

Key on-site utility infrastructure is required to serve the data centre such as:

- HV switching station & control room
- Back-up electrical generators
- Potable and industrial water tanks
- Rainwater capture for re-use
- Fire tanks and pumps
- Inground drainage services / holding tanks

7.1 Electrical Infrastructure

The proposed development of a data centre requires both a high density and a high reliability of the site's power supply. The data centre will be classified as a mission critical facility and therefore requires a resilient source of supply 24 hours a day / 365 days a year to support its IT equipment. Any outage will have severe impacts on users of the data centre, and the Proponent as it's developer.

To support the site's power density and reliability requirements, the electrical infrastructure of the site will include:

- HV utility feeders from Ausgrid's supply network in N-1 arrangement to allow for high density, high reliability power
- Customer owned HV switching rooms, associated switchgear, control rooms and auxiliary equipment.
- On-site cable reticulation from Ausgrid network to the data centre in new in-ground conduits.
- LV infrastructure such as dry type transformers, LV switchgear, uninterruptible power supplies, batteries, and auxiliary systems
- Backup generator system to provide emergency supply to the data centre in the unlikely event that the utility network suffers a major outage

7.1.1 Consultation

Preliminary consultation is currently being undertaken with Ausgrid to align with the site's gradual load build-up and maximum demand, and to confirm network supply

availability. The site's supply arrangements, civil works, easements, authority metering, installation and access requirements are subject are in discussion.

7.1.2 Design Status at Submission

Ausgrid are providing connection options as part of the formal enquiry. Detailed design of the MV supplies will be undertaken by an accredited Level 3 Accredited Service Provider as part of later design stages.

7.1.3 Requirements for Back-Up Generators and Alternatives considered

As established in section 7.1, the data centre is a mission critical facility and therefore requires back up emergency power generation to support the data centre's IT equipment in the unlikely event of an utility failure. Industry standards require that the facility be able to function independently of the grid and other external factors. This requires the data centre to have the ability to fully support the site on back-up generation, as well as replenish the energy storage systems which supply the back-up system without relying on the site utility.

As part of the master planning process, an analysis of available alternative back-up power systems was carried out. Refer to Table 4 for the summary of commercially available technologies which have been considered as potential alternatives for standby diesel generators.

Table 4 – Alternative power generation technologies instead of standby diesel generators

Technology	Spatial Requirements	Technical Requirements	Technology Availability	Comment
Gas Turbine Diesel Generators	Standalone equipment has a higher density footprint compared to traditional diesel generator – ie. greater power generation and reduced space. But requires additional infrastructure.	Gas turbine takes much longer start up. Require additional batteries to support the data centre during start up period. More suitable to sites with major medium voltage infrastructure.	Yes, however low usage in the Australian data centre market may results in user hesitation.	Not feasible for this project due to slow start to pick-up the critical load, and spatial requirements for additional MV equipment.
Hydrogen Cell	Very large real estate space required for energy storage for Data Centre load requirement	Significant auxiliary infrastructure required to support hydrogen plant.	Yes, but not in use for data centre market.	Not feasible for this project due to lack of real estate space in urban areas.
Photo Voltaic or Wind Generation System with large scale battery storage	Very large real estate required for PV / Wind system to support Data Centre Load requirement	Photo Voltaics, wind and other weather dependent power sources do not provide the supply reliability required by data centres. A large-scale battery storage device cannot therefore be replenished reliably by alternative source. Replacement of batteries when discharged for emergency scenarios	Yes, but not in use for data centre market.	Not feasible for PV or wind generation systems to act as backup systems for this project due to lack of real estate space in urban areas, and due to inability of technology to support the data centre's load and industry requirements. PV generation has been allowed on site in line with NCC and

Technology	Spatial Requirements	Technical Requirements	Technology Availability	Comment
				ESD requirements to offset the data centre's electrical consumption.

The alternative technologies considered are not feasible for the proposed data centre due either a lack of commercial availability or real estate and technological compatibility with data centre operations.

Diesel generators are hence selected as the backup-system used to maintain supply to the data centre as a mission critical facility. Re-fuelling of generators using diesel fuel allows for continuous operation of the generators as a standby power source in the event of a prolonged utility outage, thereby protecting business continuity.

Provisions to reduce the diesel generator's environmental impact have been considered in detail and summarised in the table below.

Table 5 Diesel Generator provisions considered

Technology	Spatial Requirements	Technical Requirements	Technology Availability	Comment
HVO (2nd gen biofuel)	Shelf-life comparable to diesel. Additional space required due to HVO's lower efficiency compared to diesel as a fuel source.	Generators selected must be HVO compatible and the fuel storage systems must accommodate the service.	Lack of HVO availability in Australia	HVO provides a fossil-free composition and up to 75% lower carbon content. While HVO fuel is currently not available, the design of the standby generation plant shall allow for HVOs to be utilised once it is fully realised and available in the market.
Biodiesel	Shelf-life not comparable to diesel or HVOs.	Not feasible due to reduced shelf-life and not tested by suppliers.	Not tested by generator supplies	Biodiesel is not considered a viable alternative fuel source to diesel and has not been considered for this project.
Selective Catalytic Reducers (SCRs)	Additional space required for the installation of SCRs located in the vicinity of the combustion engine. Flue reticulation must be considered.	SCRs begin to operate once the generator has achieved higher temperatures. For standby generation applications, SCRs are unlikely to operate before the failure has resolved.	Yes	Spatial provisions for Catalytic converters have been allowed for retrofit onto the data centre should there be a requirement for SCRs in the future.
Acoustic Attenuation	Additional space required for the attenuators to reduce noise impacts from generators	Noise study being carried to assess impact of generator noise to local receivers and environment.	Yes	Spatial provisions have been allowed for the installation of acoustic attenuation as required by the noise studies.

7.1.4 Site Standby Generators

The site will contain a total of 72 no. LV diesel standby generators to supply the data centre critical IT and mechanical loads, as well as building commercial and life safety loads.

The generators utilized will be highly reliable, data centre continuous rated and will be sourced from reputable and market trusted original equipment manufacturers.

All generators are containerized and located on a generator gantry, occupying four floors from L01 to Roof with 18 generators allowed per floor. All generators are required to operate in the unlikely event of a full utility failure.

In the initial construction the data centre will build out the shell of the building and the generator gantry. Generators will be installed in stages, as each data hall and mechanical system is fit out, subject to the tenant demand for data storage. Site staging is subject to site demand and final supply arrangements with Ausgrid.

7.1.5 Back Up Generators Operation

Generators will operate as a standby power supply in the event of mains failure. The likelihood of generator operation in a standby event is extremely low as the site will be fed in N-1 arrangement, allowing the grid to supply the site, with the loss of any single utility infrastructure upstream.

7.1.6 Back Up Generators Maintenance

For standby generators to be ready to operate should an unexpected interruption to mains power occurs, a regular maintenance and testing schedule is required. The below standby generator testing schedule in Table 6 is proposed for the final stage development of the data centre once all generators have been installed. The stage 1 development will have fewer generators and require reduced testing time.

Maintenance testing of standby generators is anticipated to occur during the daytime period (the period from 7 am to 6 pm (Monday to Saturday) and 8 am to 6 pm (Sundays and public holidays[1]).

Table 6 - Proposed standby generator maintenance testing regime

Parameter	Value	
Test frequency per generator	Quarterly*	Annually
No. of generators	72	72
Run time per test	70 minutes (including 5 min cool down)	95 minutes (including 5 min cool down)
No of generators on full load (100%) per test	2	
Number of tests per quarter	36	
Testing schedule	7:00 am to 6:00 pm Monday to Saturday, and 8:00 am to 6:00 pm Sundays & public holidays.	
Total testing time for all generators	183 hours / annum (based on 2 generators running per test)	

[1] NSW EPA, 2017. Noise Policy for Industry.

Note: Generator tested under full load is to be undertaken such that the emissions do not exceed the POEO (Clean Air) Standard of Concentration for non-scheduled premises.
*** Quarterly maintenance occurs in three quarters of the year; annual testing occurs in the 4th quarter**

Each generator will undergo annual and quarterly maintenance testing. Table 7 summarises the proposed maintenance regime which has been adopted for the maintenance scenario in this report. The total test time for all generators (existing and proposed) is estimated to be 183 hours per year.

Table 7 - Fuel required for Testing Produces

	Data Hall Generator	Units
Generator Fuel Consumption - No Load	No Data	L/hr
Generator Fuel Consumption – 50% Load	293	L/hr
Generator Fuel Consumption – 75% Load	420	L/hr
Generator Fuel Consumption – Full Load	554	L/hr
Annual Fuel Consumption for Generator Test	199,948	L

The annual fuel consumption calculation is determined under the assumption that all testing is carried out at full load. The fuel consumption calculation includes generators running during cooldown period.

7.1.7 Diesel Fuel Tank Storage

There are 10 bulk fuel tanks supplying to generator day tanks at the ground level of the building with 24 hour autonomy. 2 no. fuel storage rooms with bunding requirements that comply with AS1940:2017 to be designed. Each bulk tank will be single walled with 110kL capacity.

Each generator will also have a local 1000 litre day tank located inside the generator enclosure. These day tanks will be fed from the bulk tanks located on ground floor.

All fuel design will be fully compliant with AS1940:2017.

Preliminary fuel calculations are shown in Table 8 below.

Table 8 - Fuel Calculations

Total Fuel on Site (volume)	**1172**	**kL**
Total Fuel on Site (weight)	996	**t**

7.1.8 Earthing Analysis

Earthing study will be undertaken in compliance with AS2067:2016 which will include allowances for the on-site substation, local voltage hazards, earth potential rise (EPR) in compliance with AS/NZS 3835:2006 and system impedance for both high voltage and medium voltage 33kV earth fault.

As part of the analysis, metallic pipe criteria which will include capacitive coupling and low frequency induction requirements as per AS/NZS 4853:2012 Electrical hazards on metallic pipelines to ensure the standard is fully complied with.

Low frequency induction shall be in accordance with SAA HB102:1997 ‘Coordination of Power and Telecommunications – Low Frequency Induction (LFI)’, Standards Australia.

7.2 Potable and Industrial Water

The building within the site will be supplied with both potable and a dedicated water system for industrial water use. Potable water will be supplied to the industrial water tanks as a means of separation of potable / non-potable sources to feed all non-potable requirements to reduce demands on potable water supplies.

Industrial water will supply the mechanical evaporative cooling system serving the data halls heat rejection requirements. In addition, the potable water supply backs up the industrial water tank fed supplies. The industrial water system consists of 24hr stored water volume should the water supply be under maintenance for short periods.

All tanks and pipework within the subject site will be owned and operated by the Proponent.

The fire services connection will serve the aggregate fire hydrant and fire sprinkler demand. Due to the vertical rise of the site and available pressure and flow data from Sydney Water, it is anticipated fire pumps and dedicated fire services storage tanks will be required to serve the development. Design of an efficient system will be subject to input and coordination with Fire & Rescue New South Wales (FRNSW) and Fire Engineering to provide data centre specific protection requirements performance solutions.

When determining landscaping options within the public domain or streetscaping works, the proponent will take into account that certain tree species can cause cracking or blockage of Sydney water pipes and shall conform to Sydney Water advice and local council landscaping guidelines.

7.2.1 Points of connection

It is proposed to utilise two (2) water connections to limit draw from a single main and provide dual water supply to the domestic, industrial and fire services to ensure resilience to the site. These connections shall be made from two 150mm mains on Ricketty Street and Gardeners Road. Refer to ***Figure 12*** for locations.

These two (2) connections shall be reticulated primarily through the private access roads via authority meters and fire booster assemblies located to the north-west and south-west corners of the site. Locations shall be as per Australian standards, design guidelines, site architectural master planning options and utility requirements.

The buildings within the site shall be supplied with both potable and industrial water supplies. Potable water shall be supplied to the industrial water tanks, administration and amenities areas as well as hose taps surrounding the site. Industrial water will supply the evaporative cooling system serving the data halls. In addition, the potable water supply backs up the industrial water tank fed supplies.

All tanks and pipework within the subject site will be owned and operated by the Proponent.

The fire services connection shall serve all fire hydrant and sprinkler demand. Due to the extent of the site, it is anticipated fire pump and storage tanks will be required to serve the development. Design of an efficient system will be subject to input and coordination with Fire & Rescue New South Wales (FRNSW) and Fire Engineering to provide performance solutions.

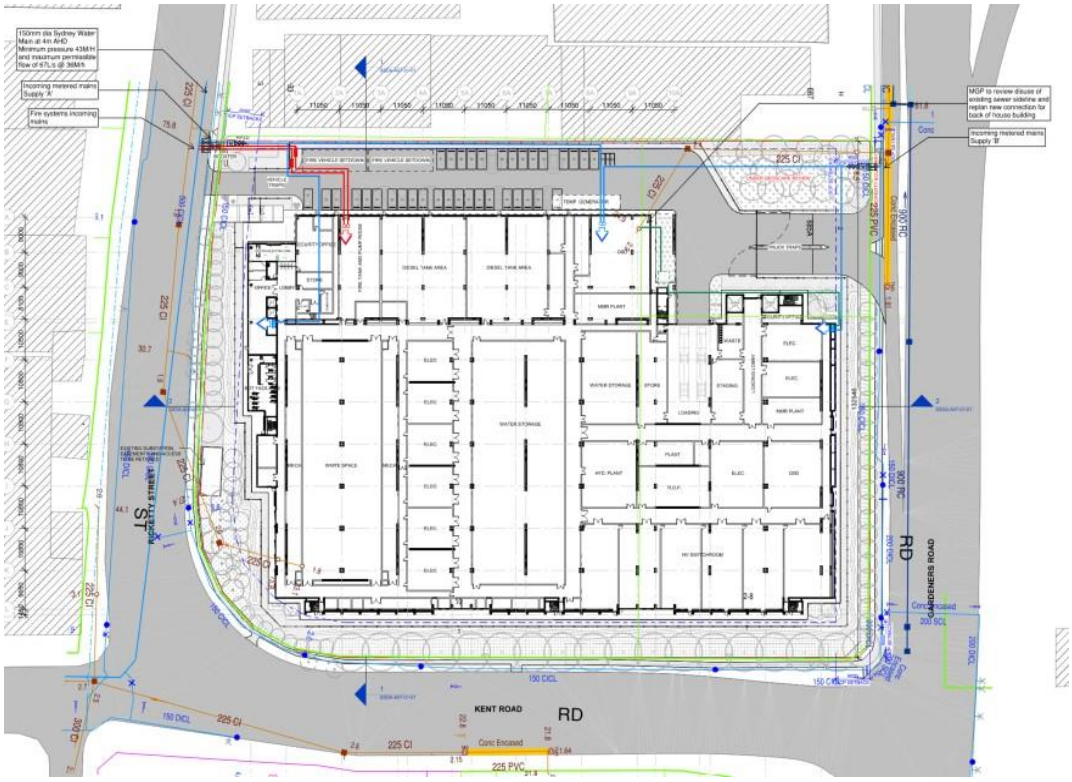


Figure 12 - Proposed Water Connections

7.2.2 Specific Site Demand

7.2.2.1 Fire Water Supply

The site fire water supply will be provided from the authorities' water main on the Ricketty Street frontage with an independent fire hydrant and fire sprinkler service.

The site will also have one fire water storage tank (partitioned into 50% volumes) sized to provide 90 mins Sprinkler water supply during a fire event in accordance with FM Global design guidance note FMD 5-32. The estimated the site fire water storage to be approximately 400kL.

The following demand in Table 9 has been calculated for the fire services flow.

Table 9 - Fire Services Demand

System	Site Requirement
Fire Hydrant Flow	Fire Hydrant Flow rate per hydrant = 10 L/s at 700kPa assisted or 30 L/s unassisted Number of hydrants operating simultaneously = 3 Total flow rate required 30L/s
Fire Sprinkler Flow	NFPA / FMDS_5-33 protection for battery energy storage systems (BESS) 12.2mm design density / 230m² area of operation / 5 min duration Total flow rate required 46.8 L/s + 20% = 56.1 L/s
Combined Fire Flow	Total flow rate required 86.1 L/s

7.2.2.2 Potable Water Demand Estimate

Initial calculations indicate that an ultimate **4,862,674L/day** total water demand at peak 46.2 L/s flow will be required to service the Duke DC development. Refer to Table 10 for demand values at proposed stages of work.

Table 10 - Estimated Water Demand

Stage	Shell	Phasing	Maximum Demand	Peak Flow Demand	Number of Storage Tanks (cumulative)	Tank Storage Volume (cumulative)
			(kL/Day)	l/s	(No.)	(kL)
1	Stage 1	Q3 2030	814	6.25	2	2,936
2	Stage 2	Q1 2031	1,624	18.74	2	2,936
3	Stage 3	Q3 2031	2,703	31.24	4	5,872
4	Stage 4	Q1 2032	3,783	43.73	4	5,872
5	Stage 5	Q3 2032	4,863	56.22	4	5,872

7.2.2.3 Industrial Water

The industrial water system will supply the mechanical evaporative cooling system. The cooling system typically recirculates water 6-8 cycles prior to discharge reducing the net water demand.

The industrial water system will be supplied primarily from industrial water tanks located in the ground level of the site. An industrial water reticulation network will be installed, serving each building independently.

The reticulation network will be designed in a ring main configuration to provide an N+1 redundancy to the system.

The industrial water system will be supplied from the following sources;

- Potable water from the authority's water mains.
- Rainwater Captured from the roof catchments

The industrial water system will draw its water source in sequence as follows;

- Bulk water storage tanks
- Rainwater make-up
- Potable water supply

The industrial water supply will be filtered with automatic back wash filters and automatically chemically dosed to prevent legionella growth prior to being supplied to the evaporative cooling units.

Water supplied to the evaporative heat rejection system will be circulated continuously through the cooling towers. Water within the mechanical heat rejection loop will be circulated and be partially evaporated to cool the water volume each time it passes through the cooling tower. To minimise water usage, the non-evaporated water is recirculated again to absorb more heat rejected from the mechanical system. This recirculation process will occur until adequate evaporation process has taken place such that the concentration of dissolved solids (TDS) within the sump water reaches six times the incoming water – achieving 6-8 cycles of concentration.

7.2.3 Offsetting Potable Water

This demand will be reduced by utilising the rainwater stored in on site two (2) 75kL rainwater tanks of (total 150,000 litre capacity). The rainwater tanks capacity has been sized based on average highest daily rainfall received each month over the past 50 years, and a roof catchment area of ~7,600m^2.

Based on the estimated annual average recycled water consumption by the cooling systems the rainwater harvesting system could further reduce the water consumption in the ultimate configuration and at higher percentages in early stages of the ramping profile whilst discharging minimal collected roof water off-site thus improving the existing zone tailwater flows in conjunction with the civil OSD.

7.2.4 Consultation with Authority

A Section 73 feasibility application has been made to Sydney Water under case number **216608**. The design team have provided a site-specific calculations for anticipated maximum water and sewer demands, based on the peak operating day for the fully developed data centre including phased ramp up demands throughout the build and fit-out phases for the facility.

The Proponent has appointed Rose Atkins Rimmer as the projects Water Services Co-ordinator (WSC) and will continue to liaise with Sydney Water during the SSDA and ongoing design process.

7.3 Sanitary Drainage

The site will be serviced by sanitary drainage system that will gravity drain to both sewer connections provided by the estate developer. The sanitary drainage will be separated into soil waste and wastewater drainage systems within the data halls.

7.3.1 Soil waste

The soil waste drainage will collect all sanitary fixtures within the office spaces and the data halls. This drainage system will run separately to the wastewater system throughout the data halls.

7.3.2 Industrial Wastewater

The wastewater system will collect all the cooling system wastewater as well as all floor waste and tundishes within the data halls. The wastewater drainage systems shall run separately to the soil waste systems throughout the data halls and will merge to the site's sanitary drainage system prior to site discharge via the sewer connections located at the north and south boundaries of the subject site.

7.3.3 Demand Estimate

Most of the site's discharge is from the wastewater generated by the evaporated cooling system. The soil waste discharge will be minimal due to relatively low staff number in relation to the size of the facility.

The ultimate wastewater discharge forecast is detailed below in Table 11**.**

Initial calculations indicate that a **808,876L/day** sewer discharge demand and 9.32 L/s peak day flow will be required to service the final Project Duke data centre development. Refer to Table 11 & Table 10 for demand values at proposed stages of work.

Table 11 - Estimated Sewer Requirements

Stage	Shell	Phasing	Maximum Demand	Peak Drainage Demand
			(kL/Day)	(l/s)
1	Stage 1	Q3 2030	89.44	1.04
2	Stage 2	Q1 2031	268.33	3.10
3	Stage 3	Q3 2031	447.21	5.18
4	Stage 4	Q1 2032	626.1	7.25
5	Stage 5	Q3 2032	804.99	9.32

On the basis of standard soil and waste generated from the Front of House office side and Cooling system discharge from the back of house zones, the requirement of Trade waste agreements for the facility are likely not required. Trade waste requirements confirmation will be reviewed with Sydney Water in due course the design progresses.

Sewer demands are significantly lower than peak water demands as industrial water is recirculated ~6 times prior to bleed off discharge from the cooling equipment to the wastewater system. In the initial earlier years of operation, the sewer demands will be significantly lower than those presented in stage 5 of Table 11**.**

A Sydney Water ***Section 73 feasibility*** review has been submitted (11/07/2024) by the Water Services Coordinator (**WSC**) under **Case number 216608.**

The overall capacity of the water network must be assessed by Sydney Water via a ***Section 73*** Notice of Anticipated Requirements (NoAR) application submitted by the Water Services coordinator following receipt of the SSDA requirements.

7.3.4 Consultation

A Section 73 feasibility application has been made to Sydney Water under case number **216608**. The design team have provided a site-specific utility demands report for anticipated maximum water and sewer demands, based on the peak operating day for the fully developed Project Duke data centre.

The Proponent has appointed Rose Atkins Rimmer. as the projects Water Services Co-ordinator (WSC) and will continue to liaise with Sydney Water during the SSDA and ongoing post SSDA design process through construction to receipt of a section 73 certificate to enable an occupancy certificate to be granted in due course.

7.3.4.1 Permanent Configuration

In the permanent configuration, sewer flows will drain from the site to Sydney Water sewer system to sewer junctions that exist on site already subject to Section 73 feasibility application advice for the subject site.

7.3.5 On-Site Reticulation

The soil waste drainage and waste drainage systems for Project Duke will reticulate to the south and north boundaries on the Site and discharge into 225mm sewer mains operated by Sydney Water.

The front of house drainage will drain directly into sewer main on Ricketty Street via gravity sewer line. Back of house drainage will drain into 10kL sewer sump before being pumped to a sewer connection west to a parking lot.

Two independent sewer connections are proposed to service the development subject to Sydney Water acceptance through the Section 73 NoR process.

7.4 Telecommunications

7.4.1 Connection Strategy

Six (6) entry points are proposed for the building and each entry is 50m apart or fire segregated.

7.4.2 On-Site Reticulation

Within the site, containments will reticulate at high level to support telecommunications lead-in cabling and distribution pathways. External services will be services by a network of buried cable conduits and pits.

Each PoE communications pathways always retain a minimum of 20m separation or fire segregation to minimise risk of concurrent damage to multiple pieces of telecommunications infrastructure.

7.5 Gas

No gas supply is proposed to serve the data centre facility. All power supplies will be from electrical sources with auxiliary supply from diesel generators. As such no consultation with Jemena has been undertaken.

All existing site supplies will be capped off during site demolition phase via standard application to disconnect by licenced gas fitters as required by Jemena and any meters returned to Jemena.

8. Assessment of potential construction impacts

This chapter presents potential construction impacts on existing utility infrastructure within the subject site.

8.1 Electricity

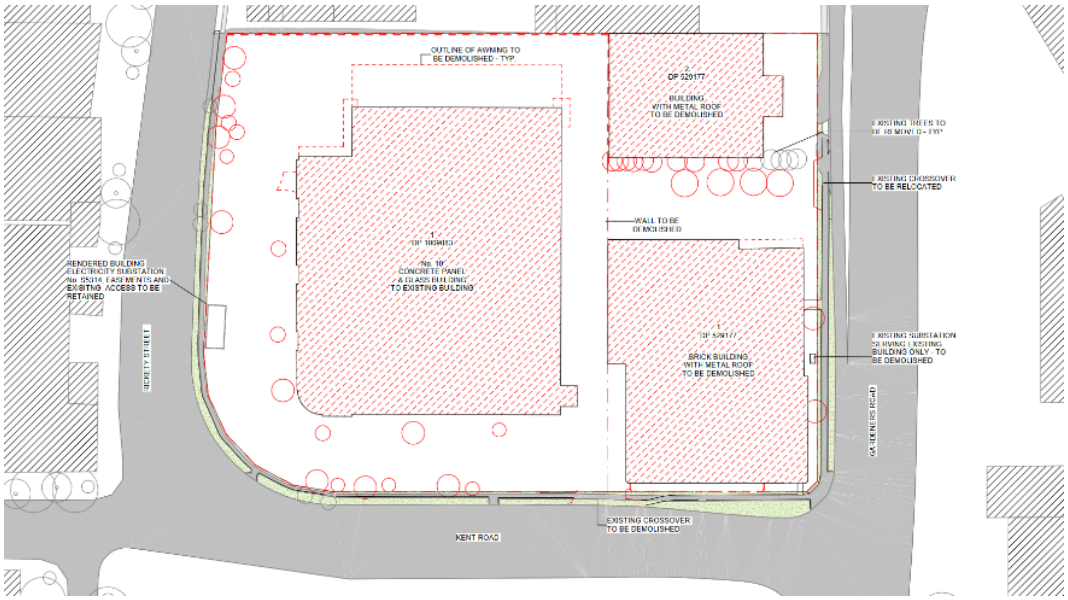
Existing developments to be demolished includes a concrete panel and glass building, a brick building with metal roof, a building with metal roof, and substations serving existing buildings only .

Another existing substation (No. S5314) and its associated easement and access near the corner of Ricketty Street and Kent Road is to be retained. Refer to Figure 1-2 for locations of existing developments.

During construction, measures will be implemented to avoid damage to electrical services and infrastructure constructed during initial stages of work. Any demolition of the building will also allow for removal of any incoming supply from Ausgrid with ASPL3 designer.

Refer to Figure **13** for locations of existing developments and Appendix A for BYDA information.

Figure 13 - Existing developments on subject site



8.2 Water Supply

In the baseline condition the site is unencumbered by water infrastructure. Therefore, construction works within the subject site will cause no impacts to the utilities water infrastructure.

During later construction stages, measures will be implemented to avoid damage to water services constructed during initial stages of work.

8.3 Sewerage

In the baseline condition the site building footprint is minorly encumbered by a sewer sideline to both the north and south that will both be disused and capped for future stage connection during the early works. The work will be completed in accordance with Sydney Water's disused sewer connections process or as otherwise prescribed within the Section 73 notice of requirements as this information becomes available.

Therefore, construction works within the subject site will cause no impacts to sewer infrastructure.

During later construction stages, measures will be implemented to avoid damage to sewer services constructed during initial stages of work.

8.4 Telecommunications

Existing development includes a concrete panel and glass building and a brick building with metal roof. Refer to section 6.5 for existing telecommunications services within the site.

During construction stages, measures will be implemented to avoid damage to telecommunications services and infrastructure constructed during initial stages of work. Any demolition of the building will also allow for removal/rerouting of any conduits in coordination with the service provider.

Refer to Appendix A for BYDA information.

8.5 Gas

No gas supply is proposed to serve the data centre facility. All power supplies will be from electrical sources with auxiliary supply from diesel generators. There are also no existing gas network mains within the subject site boundary and therefore the development causes no impact to existing gas networks.

All minor existing supplies shall be capped off in accordance with Jemena requirements prior to demolition early works being undertaken.

8.6 Stormwater

No Sydney Water stormwater assets are within the site boundary of the works. The Civil engineering report address the impacts of water management and flood impacts. Refer to the following SSDA reports:

- Project Duke Data Centre - SSDA Civil Engineering Report Incorporating Water Management Plan
- Project Duke Data Centre - Flood Impact and Risk Assessment Report

A Section 73 feasibility application has been made to Sydney Water under case number **216608** to ascertain Sydney Waters assessment of potential impacts and protection during construction.

The Proponent has appointed Rose Atkins Rimmer. as the projects Water Services Co-ordinator (WSC) and will continue to liaise with Sydney Water during the SSDA and ongoing post SSDA design process through construction to receipt of a section 73 certificate to enable an occupancy certificate to be granted in due course.

9. Assessment of potential operational impacts

Section 9 presents potential operational impacts that the development could have on the surrounding environment and public utility networks.

9.1 Electricity

Potential operational impacts of the electrical infrastructure within the subject site include:

- High electrical demand impacting the surrounding HV distribution network.
- High noise levels when testing or operating back-up generators.
- Fuel spills when filling generators.
- Fire and explosion risks associated with the generators.
- Fire and explosion risks associated with the switching station.
- Air pollution when generators are operational.

Refer to below section 10 for mitigation measures.

9.2 Water and Sewerage

Potential operational impacts of the water and sewer infrastructure include:

- High Water demands potentially requiring modelling of precinct water and sewer networks as part of the assumed Sydney Water Section 73 NoAR's.

9.3 Telecommunications

The key operational issue for the Proponent is that the facility can operate in the event one telecoms route is offline. The facility will be serviced by separate telecom supply routes to ensure path diversity.

9.4 Gas

No gas supply is proposed to serve the data centre facility. All power supplies will be from electrical sources with auxiliary supply from diesel generators. There are also no existing gas mains within the proposal boundary and therefore the development causes no impact to existing gas networks. As such there is no potential risk during the operational and maintenance phase.

9.5 Cooling System

9.5.1 Heat Rejection System

The heat rejection system selected for this project is based on evaporative cooling using open circuit cooling towers. The discharge air temperature from the towers is lower than the ambient dry bulb due to the evaporative process so it does not contribute the urban heat island effects.

All heat rejecting equipment is located on the roof of the building and discharges heat directly upwards from the roof where it mixes with the ambient air.

9.5.2 Maintenance and Legionella Control

Building commissioning and tuning will be done to internationally recognized standards such as ASHRAE and BSRIA, with equipment tested to full load and under various failure conditions. Maintenance schedules for equipment are carried out in accordance with the OEM prescribed requirements. The cooling towers and supporting systems installation and operation will follow the guidelines outlined in the NSW Health Guidelines for Legionella Control. The cooling towers will be installed in accordance with AS 3666.1, operated in accordance with AS 3666.2: and maintained in accordance with AS 3666.3 to minimise the risk of legionella transmission

10. Environmental management measures

Table 12 details the proposed management and mitigation measures proposed as part of the design for utility impacts.

Table 12 Environmental Management Measures for Utility Impacts

ID	Impacts	Mitigation	Responsibility	Timing
IR1	High electrical demand impacting the surrounding HV distribution network.	Proposals are to have data centre specific electrical supply. Electrical authorities have acknowledged the formal request and currently providing connection options to the client.	Proponent/Electrical Authority	Design
IR2	High noise levels when testing or operating back-up generators.	Generators are indoor acoustically treated. The noise level of generator testing will be assessed against NSW Noise Policy for Industry. A maximum of 2 generators will operate at any one time during testing and normal operation.	Proponent/Contractor	Design and Operation
IR3	Fuel spills when filling generators.	Fuel tanks will be designed to comply with AS1940. Each fill point will have all ancillaries to meet requirements of AS1940.	Proponent/Contractor	Design and Operation
IR4	Fire and explosion risks associated with the generators.	Generators fuel system will be designed in accordance with AS 1940 which defines location in the building and fire separation between the tanks. Generators and bulk fuel tanks located inside secure plantrooms only approved personnel can access this area.	Proponent/Contractor	Design and Operation
IR5	Fire and explosion risks associated with the switching station.	HV switching station will be designed by a certified Level 3 ASP designer in accordance with relevant current version of Australian Standards and Industry Associations Standards and Guidelines. Switching station located inside secure plantroom area only approved personnel can access this area.	Proponent/Contractor	Design and Operation

ID	Impacts	Mitigation	Responsibility	Timing
IR6	Air pollution when generators are operational	Two separate mains supply routes are proposed, and the probability of mains failure has been investigated for the electrical supply. Failure rates for a supply in this arrangement are extremely low meaning the generators will rarely be used. Generators will include specific emissions control measures to Australian EPA requirements. Spatial provision has been considered for selective catalytic reducers (SCR) to be retrofit where required. A maximum of 2 generators will operate at any one time during testing and normal operation.	Proponent	Design and Operation
IR7	High demands reducing the capacity of the estate or precinct water and sewer networks.	To minimise the peak water demand on Sydney Water's potable water network, the preliminary water balance of the proposed site has been undertaken through the use of rainwater re-use tanks and the provision of fire and water storage tanks on site. Consultation with Sydney Water through the design process has confirmed that the precinct wide water and sewer networks will be designed to cater for peak day flows from the final configuration of the data centre.	Proponent / Sydney Water	Design / Construction
IR8	Overtopping of rainwater harvesting/water storage tanks.	Water overtopping from the rainwater tanks will discharge to the stormwater system. Discharged water will not contaminate the surrounding environment as it will be discharged via gravity into the civil stormwater OSD tank and discharge to the utility network through water quality treatment measures(WSUD).	Proponent / Civil Engineer	Design / Operation
IR9	Redundant telecoms supply	Each of the administration buildings is concurrently connected to the Eastern and Western Points of Entry, providing the operator with the ability to utilise a physically diverse service in the event of failure. All telecommunications pathways are physically separated by a minimum of 50m to minimise risk of concurrent damage to multiple pieces of telecommunications infrastructure.	Proponent	Design / Operation

11. Summary of residual impacts

This section provides a summary of the construction and operational risks both pre-mitigation and any residual impacts remaining after the implementation of the management measures describe in Section 7. Pre-mitigation and residual impacts are summarised in Table 13.

Table 13 Summary of pre-mitigation and residual impacts

Potential pre-mitigation adverse impact	Relevant management measures	Potential residual impact after implementation of management measures	Comment on how any residual impacts would be managed
Operation			
High noise levels when testing or operating back-up generators.	Generators are standby acoustically treated units which include noise attenuation features. No more than 2 generators will be tested and operated at any one time. In the unlikely event of that both utility supplies are off-line, the site may utilise all backup generators.	Potential that noise levels are high.	The noise level of generator testing will be assessed against NSW Noise Policy for Industry. Testing of generators to be undertaken during daytime periods.
Fuel spills when filling generators.	Each fill point will have all ancillaries to meet requirements of AS1940. The fuel parking truck area will be bunded to contain any spillage. The generator room will have 1000 litre day tank with the whole room bunded.	Risk of accidental spills when fuelling.	Operator to prepare a management plan detailing safe method of work for filling bulk fuel tanks. Supplier to have spill kits available at the time of filling.
Fire and explosion risks associated with the generators.	Generators fuel system will be designed in accordance with AS 1940 which defines location in the building and fire separation between the tanks. Generators and bulk fuel tanks located inside secure plantrooms only approved personnel can access this area.	Low risk of fire and explosion.	Operator to implement monitoring and maintenance plan. Generator area to be kept clean and free from flammable materials. Generators to be frequently inspected for faults/defects.

Potential pre-mitigation adverse impact	Relevant management measures	Potential residual impact after implementation of management measures	Comment on how any residual impacts would be managed
Fire and explosion risks associated with the switching station.	HV switching station will be designed by a certified Level 3 ASP designer in accordance with relevant current version of Australian Standards and Industry Associations Standards and Guidelines	Low risk of fire and explosion.	Operator to implement monitoring and maintenance plan. Switching station to be kept clean and free from flammable materials. Switching station to be frequently inspected for faults/defects.

12. References

Australian Rainfall and Runoff, 2016. *Australian Rainfall and Runoff*.

Environmental Protection Authority, 1997. Managing Urban Stormwater: Council Handbook.

NSW Government, 1997. Protection of the Environment Operations Act.

NSW Government, 2007. State Environmental Planning Policy (Infrastructure).

Appendix A

Before You Dig Australia (BYDA)

A.1 AARNet Pty Ltd NSW

aarnet
Australia's Academic and Research Network

Sequence No: 239238673
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

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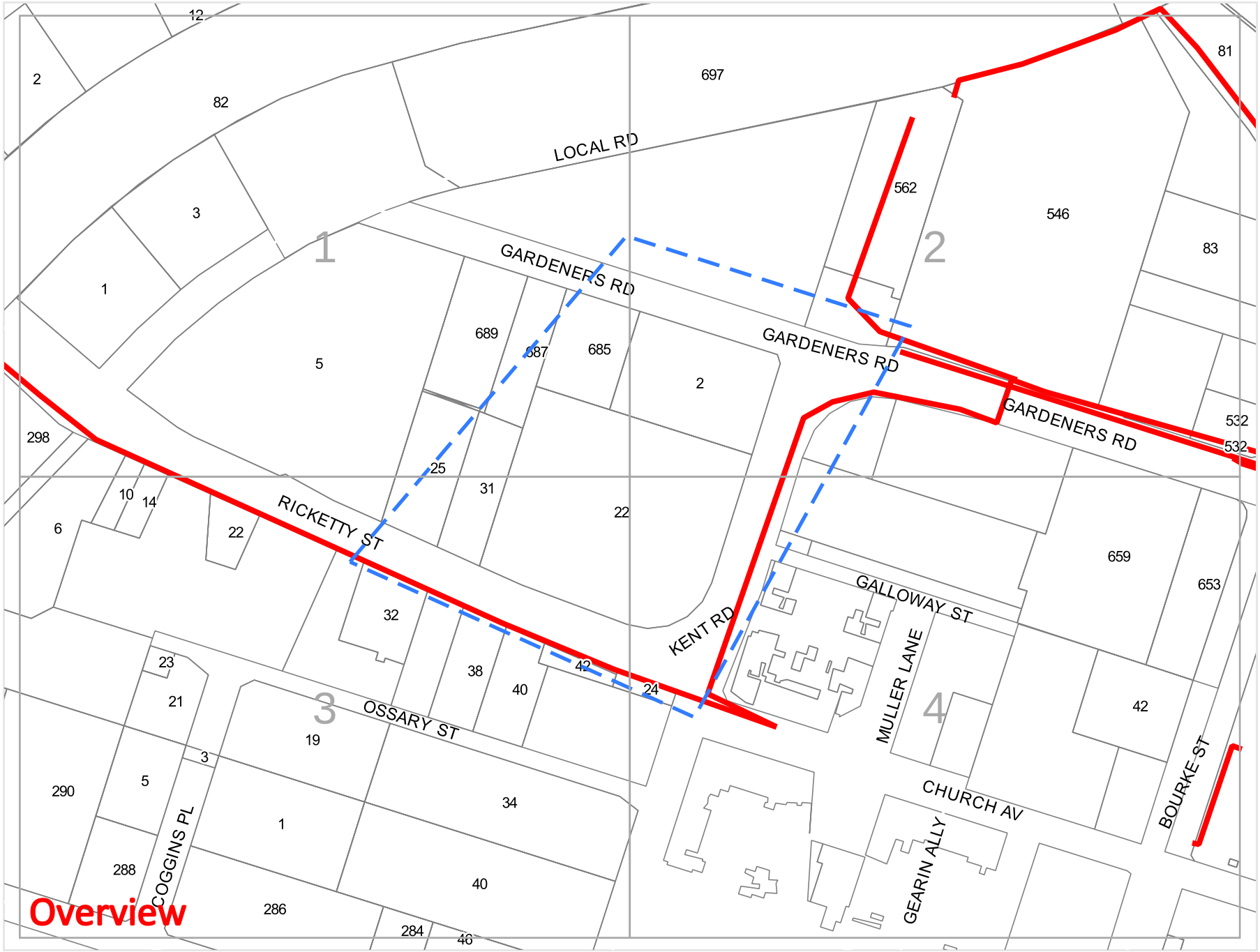

Legend

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

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Scale: 1:3075
Expires: 12 Jun 2024

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Australia's Academic and Research Network

Sequence No: 239238673
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

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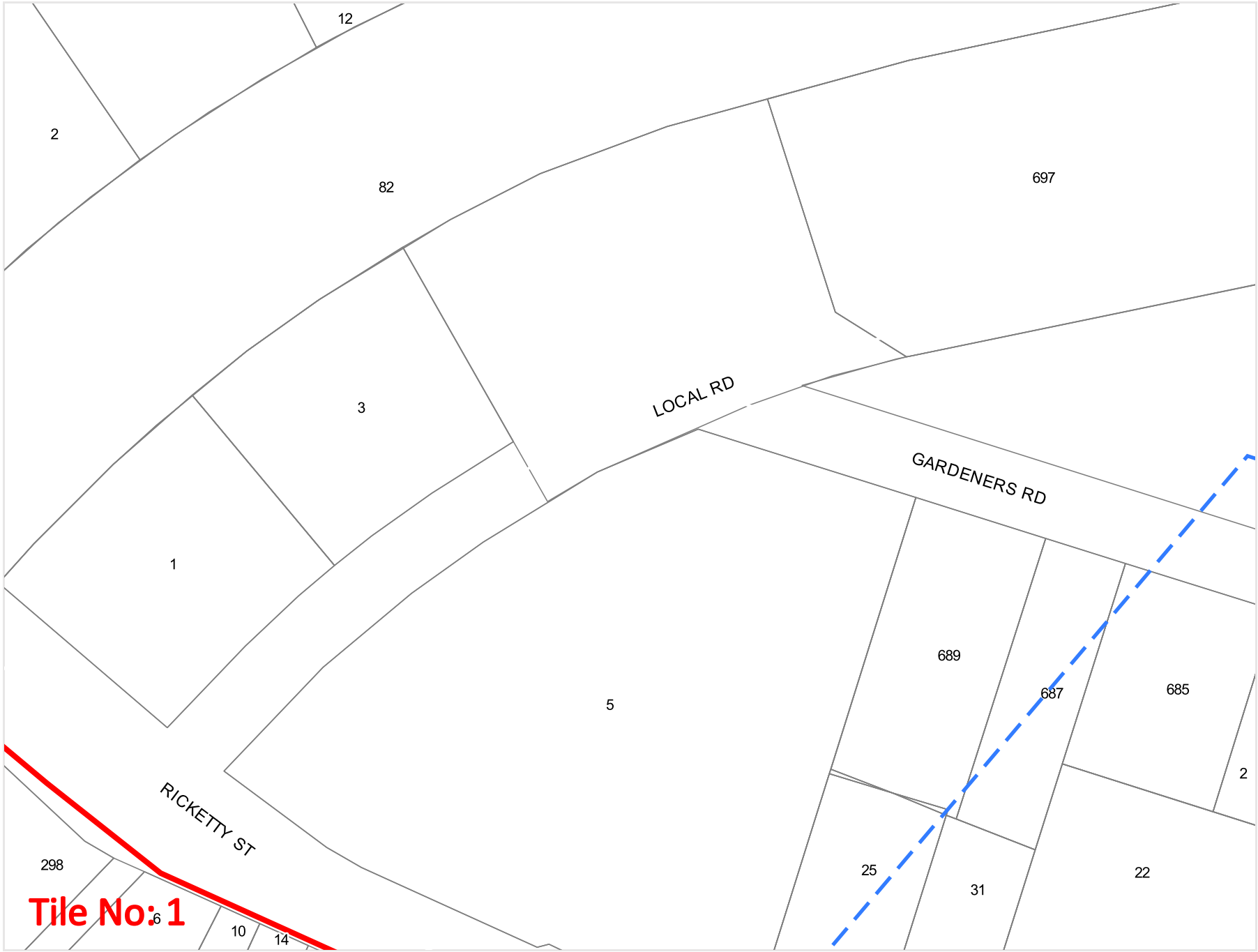

Legend

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

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Scale: 1:1500
Expires: 12 Jun 2024

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Sequence No: 239238673
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

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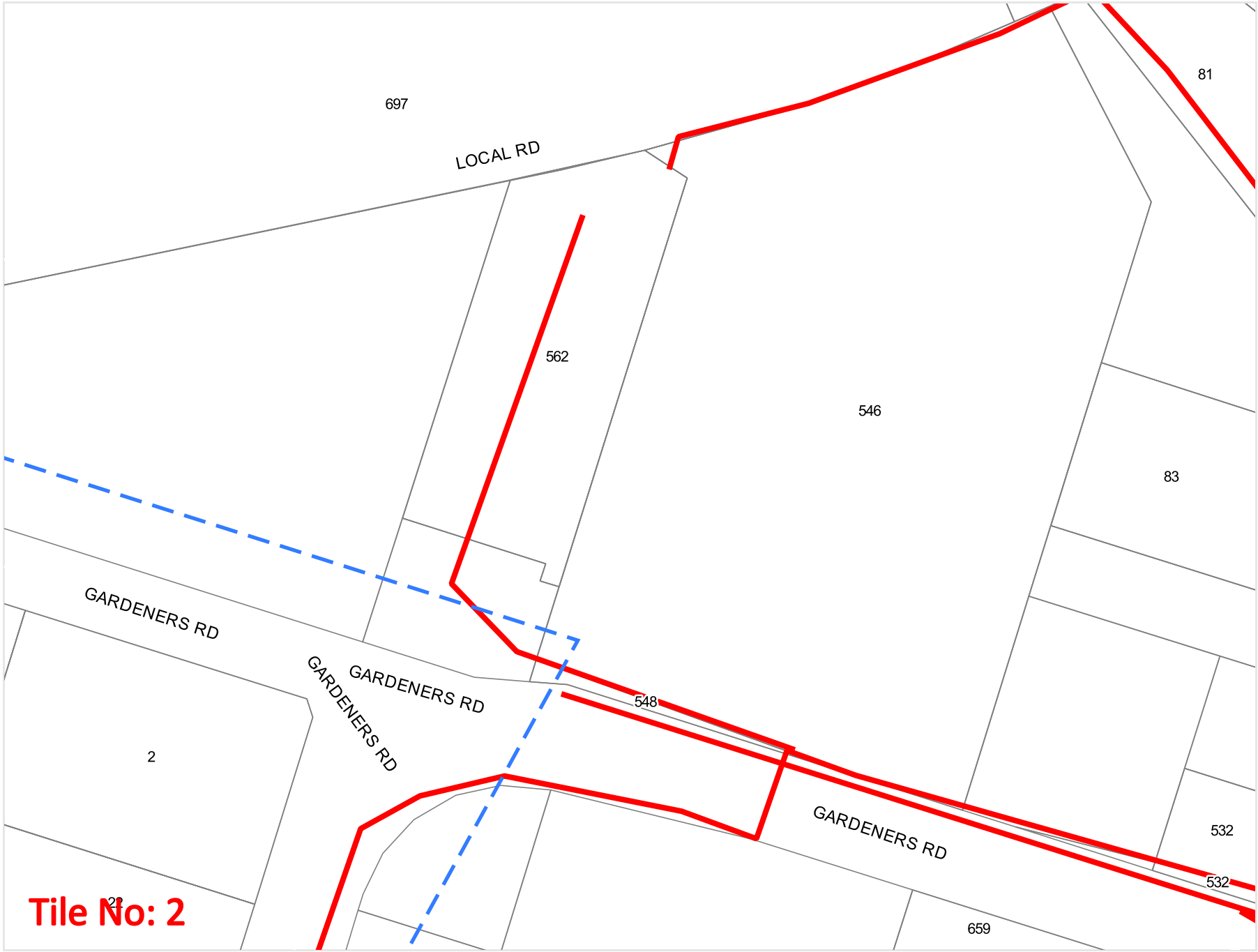


Legend

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

N

Scale: 1:1500
Expires: 12 Jun 2024

aarnet
Australia's Academic and Research Network

Sequence No: 239238673
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

BEFORE YOU DIG www.byda.com.au

Legend

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

N

Scale: 1:1500
Expires: 12 Jun 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.

Tile No: 3

aarnet
Australia's Academic and Research Network

Sequence No: 239238673
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

BEFORE YOU DIG www.byda.com.au

Legend

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

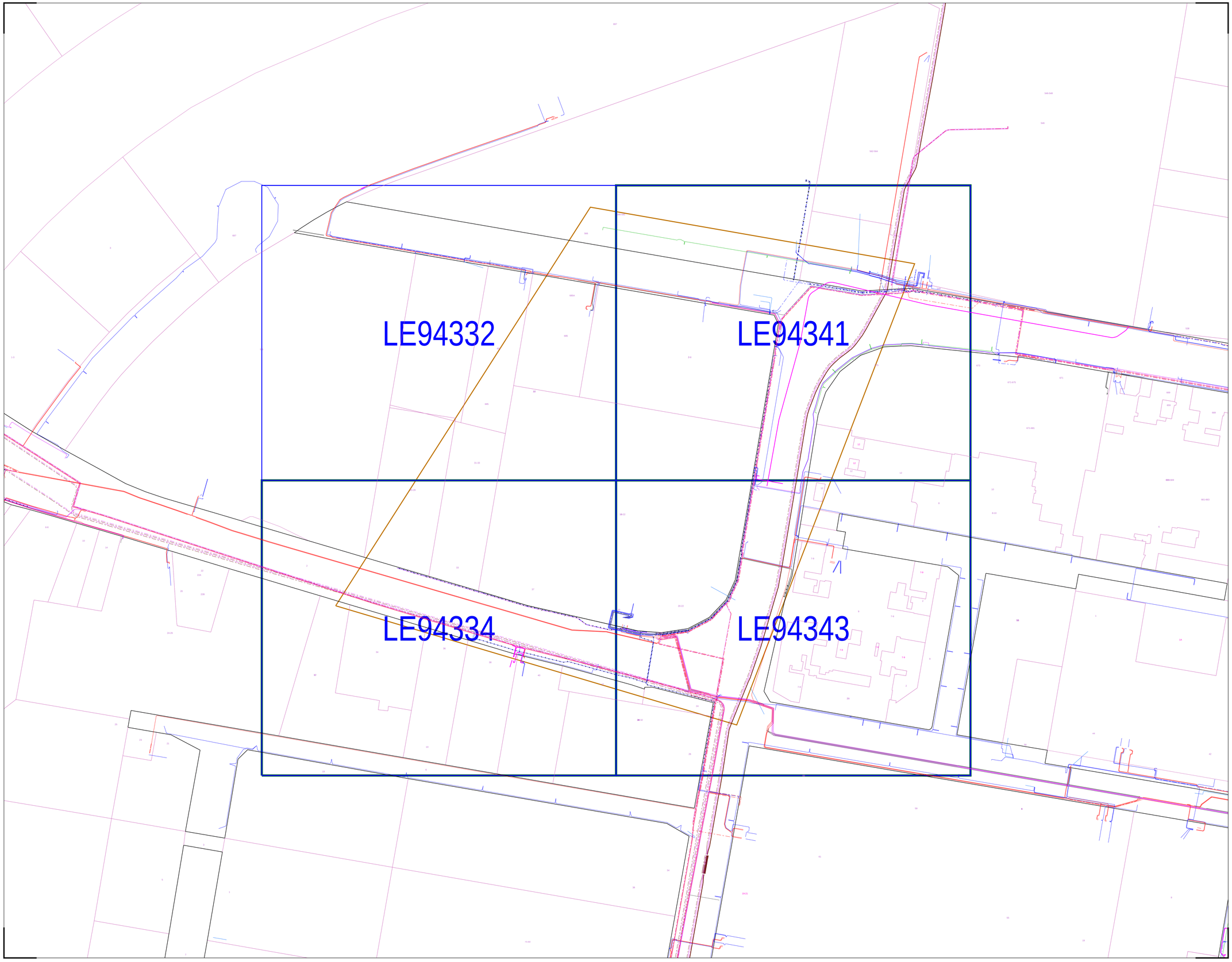
N

Scale: 1:1500
Expires: 12 Jun 2024

A.2 Ausgrid

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.

This plot is for reference only. Please refer to the individual plans for detailed information



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 area.

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 WorkCover 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.

Contact Ausgrid to obtain safe approach distances and follow applicable WorkCover 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.

COVERGMLA0

Cover Sheet - 239238661

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

Page 1 of 1

15 May 2024

1:660

0 40 metres

LE94314	LE94323	LE94324
LE94333	LE94342	LE94343
LE94334	LE94343	LE94344

SSG GRID

Ausgrid

LE943 - AN1

2 x 125 PVC — 0.7 / --- / 0.6

1x50 PVC — 1.3-1.5 / --- / 0.5-0.8

Ref: B6

LE943 - AO1

1x125 PVC

1.0

0.6

Ref: C9

LE943 - AP1

3 x 125 PVC — 0.7-1.0 / ---- / 0.4-0.6

2x150 PVC — 1.4-1.5 / --- / 0.5-0.7

Ref: B8

LE943 - AR1

5x140 FC — 0.7 / --- / 0.6

2x150 PVC — 1.4-1.6 / --- / 0.7-1.0

Ref: C10

LE943 - AS1

3x140 FC

0.5

0.5

Ref: C10

LE943 - AT1

2x140 FC — NA / --- / 0.6

2x150 PVC — NA / --- / 0.5-0.6

Ref: C10

LE943 - HR1

STEEL PLATE

6x125 PVC

1x50 PVC

GPS COORDINATES REFER TO FB IC07/354

0.5-0.6

Ref: A4

LE943 - HS1

6x125 PVC

1x50 PVC

GPS COORDINATES REFER TO FB IC07/354

0.6-0.7

Ref: A5

LE943 - HT1

6x125 PVC

1x50 PVC

GPS COORDINATES REFER TO FB IC07/354

0.5-0.6

Ref: B4

LE943 - LA1

1x50 PVC

GPS

0.7

Ref: A3

LE943 - MV1

4x150 PVC

0.9

0.6

Ref: C8

LE943 - MW1

2x150 PVC

3.5

0.6

Ref: C8

LE943 - MY1

2x150 PVC

1.4-1.5

0.6-0.8

Ref: C9

LE943 - NQ1

1x50 PVC

GPS

0.5

Ref: B10

LE943 - SX1

2 x 125 PVC — 0.7 / --- / 0.6

1x50 PVC — 1.3-1.5 / --- / 0.5-0.8

Ref: B5

LE943 - TC1

2 x 125 PVC — 0.7 / --- / 0.6

2x50 PVC — 1.5-1.6 / --- / 0.5-0.7

2x150 PVC — 1.3-1.5 / --- / 0.5-0.8

Ref: B7

LE943 - UO1

2x50 PVC

NA

0.7

Ref: B4

LE943 - UP1

2x50 PVC

NA

0.7

Ref: B6

LE943 - UQ1

1x50 PVC

NA

0.5-0.7

Ref: B7

LE943 - UT1

1x50 PVC

GPS

0.5

Ref: B10

LE943 - VD1

2x50 PVC

NR

0.5

Ref: B10

LE943 - VM1

1x50 PVC

1.4

0.5

Ref: B4

LE943 - VN1

1x50 PVC

NA

0.7

Ref: B7

LE943 - VO1

1x50 PVC

NA

NR

Ref: C10

LE943 - VP1

1x50 PVC

NA

0.5-0.7

Ref: C10

JOINT DETAIL REPORT

Map: LE943

No.	Bk-Pg	Pl/Cvr	Joint Location
14	1985-84	2.30/0.50	2.6E OF EXT WBL OF SUB 6797
16	1985-84	0.80/0.60	1.0E OF EXT OF W BL OF SUB 5543
17	1459-69		3.8FROM KIOSK NWALL & 0.5W OF EWALL
18	1459-69		2.6FROM KIOSK NWALL & 0.7W OF EWALL
218	ER75-64	1.20/0.60	4.4 from PL
219	ER75-64	0.80/0.60	4.4 from PL
478	ES07-518	/0.50	0.6 E OF EXT WBL OF SUB 6797
479	ES07-518	1.00/0.50	4.5M E .6979, SE PL
481	IC07-370	0.80/0.80	239.0M W KENT RD, SW PL
482	IC07-370	1.00/0.80	240.0M W KENT RD, SW PL
483	ES07-700	1.20/0.60	238.3 W OF KENT RD WPL
484	ES07-700	1.00/0.60	238.3 W OF KENT RD WPL
485			NR
549	ES11-0731	1.50/0.50	8.4 S GARDENERS RD S PL
550	ES11-0731	1.80/0.50	9.5 S GARDENERS RD S PL
563	ES13-0756	1.10/0.60	1.3 W OF 685 GARDENERS RD E BDY
564	ES13-0756	1.10/0.60	2.2 E OF 685 GARDENERS RD E BDY
848	AN24230-0001	1.00/0.50	3.1 NW OF 5-9 E BDY

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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.

Workers must maintain safe approach distances and follow applicable SafeWork NSW Codes of Practice.

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N

LE94313	LE94314	LE94323
LE94331	LE94332	LE94341
LE94333	LE94334	LE94343

ISG GRID

LE94332

MOCS

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

Page 1 of 1

1:250

0 — 15 metres

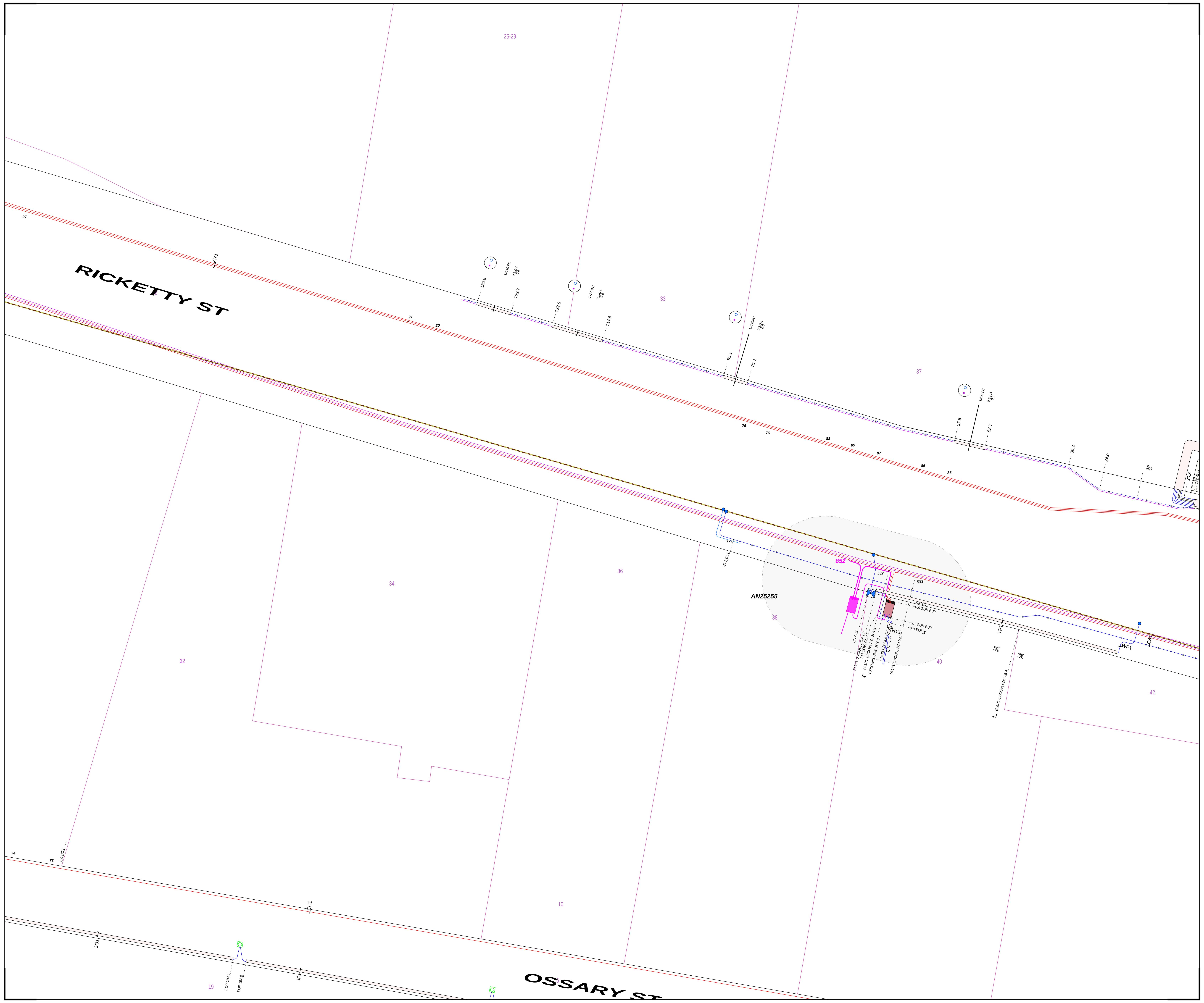
Ausgrid

LE943 - AY1	LE943 - CA1
0.6-1.0 / NR Ref: B4	2.9 / --- / NR Ref: E10

LE943 - CC1	LE943 - HY1
0.7-0.9 / ---- / 0.6 Ref: F5	2x125 PVC N/A / --- / 0.5 Ref: E8

LE943 - JO1	LE943 - JP1
2x50 PVC 0.3 / --- / 0.6 Ref: F3	2x50 PVC 0.3 / --- / 0.6 Ref: G4

LE943 - TP1	LE943 - WP1
2x150 PVC 0.6 / --- / 0.6-0.7 Ref: E9	GPS / --- / NA Ref: E10



JOINT DETAIL REPORT

Map: LE943

No.	Bk-Pg	Pl/Cvr	Joint Location
20	288-24	/0.80	133.1W OF WBL SUB 607
21	288-24	/0.80	144.7W OF WBL SUB 607
27	318-142	6.40/0.60	206.8W OF WBL OF SUB 607
73	328-35	0.90/1.10	64.0E OF SUB EXT EBL 1.2 Conc. pipe, cables 1.5 cov
74	328-35	0.90/0.90	58.7E OF SUB EXT EBL
75	1985-32	7.11/0.60	110W OF SUB 607
76	1985-32	7.11/0.60	108W OF SUB 607
85	318-142	5.60/0.60	62.0W OF WBL OF SUB 607
86	318-142	5.50/0.60	58.2W OF WBLOF SUB607
87	259-19	/0.60	111.0W OF WPL OF KENT RD
88	318-142	5.50/0.60	78.2W OF WBL OF SUB 607
89	259-19	/0.60	112.8W OF WPL OF KENT RD
171	ES05-118	1.50/	22.4 W OF NO 38 E BDY
532	ES10-0573	4.10/1.00	104.2 W OF KENT RD WPL
533	ES10-0573	4.10/1.00	99.9 W OF KENT RD WPL
852			

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N

LE94331	LE94332	LE94341
LE94333	LE94334	LE94343
KO32111	KO32112	KO32121

ISG GRID

LE94334

MOCS

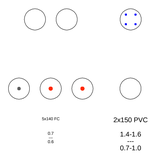
INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE

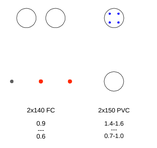
Page 1 of 1

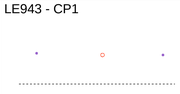
1:250

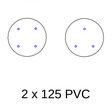
0 15 metres

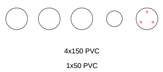
Ausgrid

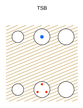


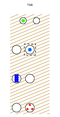


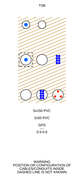


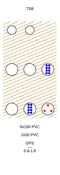


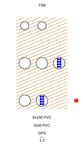


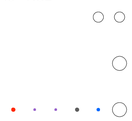


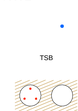


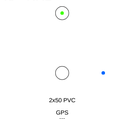


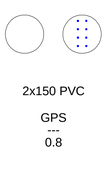












No.	Bk-Pg	Pl/Cvr	Joint Location
Map: LE943			
111	ER 94-065+...	1.30/0.70	8.7m west of S1317 western boundry
112	ER 94-065	1.30/0.70	8.2m west of S1317 western boundry
114	326-39	1.20/0.50	0.3E OF SUB EBL
115	326-39	1.40/0.70	OFF SUB WALL
119	1991-12	2.50/0.70	3.2S OF GARDENERS RD SPL
120	965-96	1.80/0.50	7.0S OF GARDENERS RD SKL
121	1991-12	1.00/0.50	44.9W OF SUB W WALL
122	1991-9	1.20/0.50	33.6W OF SUB1317 W WALL
123	1126-68	1.50/0.70	NO RECORD
124	319-81	1.80/0.90	10.8S OF GARDENERS RD SPL
127	1485-93	1.20/	3.1E OF SUB EWALL
128	965-96	1.00/0.30	1.8E OF SUB EWALL
129	1485-99		1.1W OF SUB EWALL
130	346-114	1.30/1.20	7.3R OF R.O.W. NPL
131	1126-68	2.00/0.70	21.9S OF GARD. RD
132	599-56	3.20/1.00	78.5 S OF GARDENERS RD SPL
195	ER55-144	3.60/0.50	29.3W OF SUB 1317
196	319-78	1.50/0.80	1.2W OF SUB E BL
198	898-13	1.52/0.50	ON SUB EXT EBL
201	1396-22	2.10/0.60	1.9E OF SUB EBL
202	1396-22	1.50/0.60	3.9E OF SUB EBL
203	864-85	2.70/0.50	2.7W OF JUNCTION GARDENERS RD SPL & KENT RD WPL
204	ER55-144	3.60/0.50	29.3W OF S1317 WBL
208	2021-51	0.60/0.70	86.0S OF GARDENERS RD
241	319-78	0.90/0.80	0.3E OF SUB EBL
242	1320-14	0.70/0.50	0.7W OF SUB WBL
243	328-91	0.90/0.60	1.4N OF WBL OF SUB
244	326-37	1.40/0.90	26.7S OF GARDENERS RD SPL
245	326-37	1.80/0.60	29.33N OF RICKETTY ST NPL
248	319-81	1.20/1.20	64.5S OF GARDENERS RD SPL
268	599-56		NO RECORD
298	1320-14	0.30/0.50	0.3W OF SUB WBL
334	2020-92		ENDS OF DUCTS ON GARDENERS RD NPL
335	2020-92		ENDS OF DUCTS ON GARDENERS RD NPL
336	ER55-144	3.60/0.50	29.3W OF SUB 1317
337	ER55-144	3.60/0.50	29.3W OF 1317
374	1320-14	0.30/0.50	0.3W OF SUB WBL
375	1320-14	0.30/0.50	0.3W OF SUB WBL
432	IC03-0258	0.60/6.00	19.1m E KENT RD EXT'D WPL
433	ES19-0029+...	0.60/0.50	15.9M EAST OF KENT RD EXT'D WPL.
436	ES19-0029+...	0.60/0.60	25.3m E KENT RD EXT'D WPL
503	ES10-0321	/0.40	2.0 S OF SUB S35988 S BDY, 0.3 W OF W BDY
505		/0.50	
515	ES10-0089	1.20/1.10	16.2 E OF FENCE BDY
518	ES10-0170	/0.40	
519	ES10-0170	/0.40	
520	ES10-0170+...	0.60/0.60	
521	ES10-0194	1.00/0.60	1.2 E OF 546 GARDENERS RD WPL
525	ES10-0317	0.30/0.60	12.9 E OF 562-564 E PBDY
536	ES11-0110	0.60/0.70	3.1 W OF KENT RD WPL
551	ES11-0837	1.00/0.50	43.0 W OF KENT RD WPL
565	ES13-0856+...	1.00/0.70	0.2 E OF KENT RD W PL
566	ES13-0856+...	1.00/0.50	3.6 W OF KENT RD W PL
597	ES15-0336	0.60/0.50	4.7 E OF LOT 562-564 GARDENERS RD E BDY
639	ES16-0672+...	0.60/0.60	26.7 S OF GARDENERS RD S PL
658	ES19-0029	1.00/0.60	66.5 E OF 685 GARDENERS RD E BDY
659	ES19-0030	6.60/0.80	6.6 N OF 546-548 GARDENERS RD S BDY
660	ES19-0263	6.80/0.70	7.5 N OF GARDENERS RD N PL
661			NO RECORD
673			
674			
675			NO RECORD
681			NO RECORD
682			NO RECORD
683			NO RECORD
684			NO RECORD
689			NO RECORD
715	ES18-0101	2.20/0.40	20.9 S OF SW CNR GARDENERS RD & KENT RD
732	ES19-0004	1.00/0.50	40.8 W OF KENT RD W PL
737	ES19-0029	1.00/0.60	70.0 E OF 685 GARDENERS RD E BDY
772	ES19-0263	6.80/0.70	5.7 N OF GARDENERS RD N PL
776			
777			
778			NO RECORD
779			NO RECORD
780			NO RECORD
803	SC09581-0005	0.30/0.50	40.5 W OF KENT RD W PL
805	ES20-0068	/0.60	0.5 S OF GARDENERS RD SUB BDY S.78612
806	ES20-0068	/0.60	0.5 S OF GARDENERS RD SUB BDY S.78612
807	ES20-0102+...	0.90/0.70	13.3 W OF KENT RD W PL

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N

LE94314	LE94323	LE94324
LE94332	LE94341	LE94342
LE94334	LE94343	LE94344

ISG GRID

LE94341

MOCS

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

Page 1 of 2

1:250

0 **15 metres**

Ausgrid

LE943 - QF1
1x50 PVC
2.5
0.8
2x50 PVC
0.2-1.2
1.1
Ref: D6
LE943 - QI1
2x150 PVC
1x50 PVC
0.8-5.4
0.6-1.3
Ref: E6
LE943 - QJ1
2x150 PVC
1x50 PVC
0.8-5.4
0.6-1.3
Ref: F6
LE943 - QK1
2x150 PVC
1x50 PVC
0.8-5.4
0.6-1.3
Ref: G6
LE943 - QU1
Ref: D9
LE943 - QV1
Ref: D9
LE943 - QW1
Ref: D8
LE943 - QX1
Ref: D8
LE943 - QY1
Ref: E7
LE943 - QZ1
Ref: E7
LE943 - RA1
Ref: F7
LE943 - RH1
Ref: G7
LE943 - RI1
Ref: G7
LE943 - RM1
4x150 PVC
1x50 PVC
1.4-1.6
0.7-1.0
Ref: C4
LE943 - RN1
3x150 PVC
1x50 PVC
1.4-1.6
0.7-1.0
Ref: C4
LE943 - RO1
4x150 PVC
1x50 PVC
1.5-1.6
0.6-1.0
Ref: C5
LE943 - RP1
2x150 PVC
1x50 PVC
1.5
1.0
Ref: C5
LE943 - RQ1
Ref: C5
LE943 - RR1
2.9KL
0.6
2x150 PVC
1x50 PVC
GPS
0.6-1.2
Ref: C5
LE943 - RS1
Ref: C6
LE943 - RT1
Ref: C6
LE943 - RU1
Ref: C6
LE943 - SB1
Ref: D8
LE943 - SC1
Ref: E7
LE943 - SD1
Ref: E7
LE943 - SF1
Ref: E7
LE943 - SG1
Ref: E7
LE943 - SI1
Ref: E7
LE943 - SK1
1x63 PVC
NA

NA
Ref: D9
LE943 - SL1
1x63 PVC
NA

NA
Ref: D9
LE943 - TF1
2x140 FC
0.9
0.6
2x150 PVC
1.4-1.6
0.7-1.0
Ref: C4
LE943 - TJ1
2x50 PVC
NA

0.7
Ref: C9
LE943 - TK1
1x50 PVC
0.9

0.7
Ref: C9
LE943 - TL1
1x50 PVC
4.0

0.6
Ref: D6
LE943 - UA1
1x50 PVC
4.0
0.6
2x150 PVC
2x50 PVC
1.2-3.1
0.6-1.1
Ref: D6
LE943 - UB1
3x150 PVC
3.4

1.0
Ref: D6
LE943 - US1
2x50 PVC
NA

0.5
Ref: B6
LE943 - VG1
1x50 PVC
NA

NA
Ref: D8
LE943 - VJ1
2x150 PVC
1x50 PVC
1x63 PVC
0.6-1.2
0.7-1.2
Ref: D8
LE943 - VS1
1x50 PVC
NA

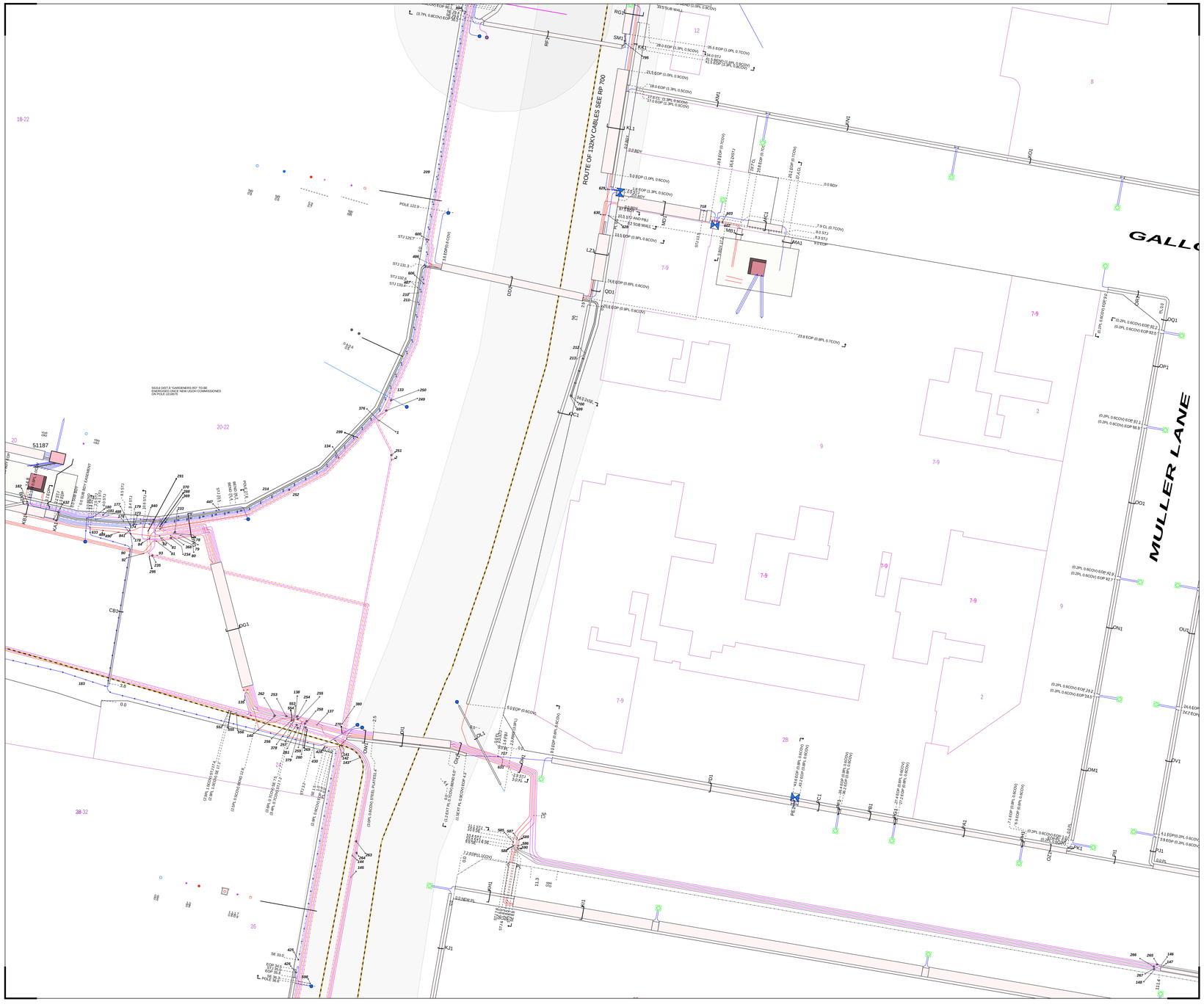
0.5
Ref: B8
LE943 - WE1
1x50 PVC
NA

0.5
Ref: C8
LE943 - MM1
TSB
6x150 PVC
2x50 PVC
GPS
0.6-1.2
Ref: C9
LE943 - WG1
TSB
1x50 PVC
0.1-0.2
0.5
6x150 PVC
2x50 PVC
GPS
0.5-0.8
WARNING
POSITION OR CONFIGURATION OF
CABLES/CONDUITS INSIDE
DASHED LINE IS NOT KNOWN
Ref: C8
LE943 - GV1
Ref: C8

A0 UG Details

Ausgrid | DERIVE SCALE FROM COMPARISON TO RELATIVE FEATURES & SCALE ON PAGE 1 | 25 Apr 24 | LE94341 | MOCS | Page 2 of 2

WARNING: REFER TO DISCLAIMER ON PAGE 1



LE943 - BX1

Ref: D3

LE943 - CB1

Ref: D3

LE943 - DD1

Ref: B6

LE943 - DG1

Ref: D4

LE943 - DH1

Ref: E6

LE943 - DI1

Ref: E5

LE943 - KA1

Ref: D3

LE943 - KB1

Ref: D3

LE943 - KH1

AS PER PLAN

Ref: F6

LE943 - KI1

Ref: F6

LE943 - KJ1

AS PER PLAN

Ref: F5

LE943 - KK1

Ref: A7

LE943 - KL1

Ref: B7

LE943 - KM1

Ref: A7

LE943 - KN1

Ref: B8

LE943 - KO1

Ref: B9

JOINT DETAIL REPORT

No.	Bk-Pg	Pl/Cvr	Joint Location
Map: LE943			
1	366-166	1.50/0.60	24.4N OF RICKETTY ST NPL
2	366-166	2.30/0.90	18.9N OF RICKETTY ST NPL
78	430-34	3.30/0.70	2.1E OF SUB EBL
79	846-78	3.40/0.50	2.3 E OF SUB EBL
80	431-37	4.00/0.80	2.4E OF SUB EXT EBL
81	846-78	2.10/0.40	0.5E OF SUB EBL
82			
84	431-37	4.00/0.80	NO RECORD
90	204-182	7.90/0.80	7.9S OF RICKETTY ST NPL
91	431-37	4.00/0.80	0.6W OF SUB EXT EBL
92	243-58	11.70/0.80	1.7W OF SUB EXT WBL & 11.7 S OF SUB S WALL
93	204-182	7.90/0.80	7.9S OF RICKETTY ST NPL & ON SUB EXT EBL
133			NO RECORD
134		1.80/0.60	73.2S OF LANE SPL
135			
137	864-61	3.50/0.50	3.2W OF KENT RD WPL
138	431-6	4.50/0.60	7.0 W OF KENT RD WPL
140	431-6	4.00/0.60	10.1W OF KENT RD WPL
141	599-81	2.40/0.70	ON KENT RD EXT WPL
142	602-7	1.40/1.20	NO RECORD
143	599-81	2.40/0.70	3.6 E OF KENT RD WPL
144	245-83	6.24/0.76	14.93S OF RICKETTY ST
145	245-83	1.90/0.20	7.6S OF RICKETTY ST SPL
146	414-34	1.00/0.50	111.4E OF KENT RD EPL
147	414-34	0.80/0.50	111.4E OF KENT RD EPL
148	414-34	0.50/0.50	110.5E OF KENT RD EPL
173	1063-16+...	1.60/0.80	4.4W OF SUB EBL
174	ER89-14	/1.00	
176	ES08-044	0.90/0.60	8.5 E SUB S5314 EAST BOUNDARY WALL
177	ER89-15	/1.00	
178			
179	ER89-110	/0.60	
180	ER89-14	1.60/1.00	
181	ER89-13	1.00/1.00	
182	ER89-13	0.50/1.00	
183	258-90	3.40/0.60	3.4 BL
209	249-30	0.60/0.60	115.5S OF GARDENERS RD SPL
210	1044-81	0.60/0.50	154.8S OF KENT RD NPL
211	1044-81	0.50/0.50	156.4S OF KENT RD NPL
212	1044-81	0.90/0.50	56.1N OF CHURCH AV NPL
213	1044-81	0.70/0.50	56.1N OF CHURCH AV NPL
214	817-38	0.50/0.70	16.3E OF SUB EBL
233	430-34	3.00/0.70	1.8E OF SUB EBL
234	865-16	1.20/0.50	3.35BL 1.1E OF SUB EBL
235	288-19	8.80/0.90	8.8S OF RICKETTY ST NPL & 1.1W OF SUB EXT EBL
249	414-52	2.30/0.90	41.8E OF SUB BL & 2E OF BL
250	414-52	2.30/0.90	42.7E OF SUB BL & 2.3E OF BL
251	366-166	2.00/0.90	19.5N OF RICKETTY ST NPL
252	414-52	1.00/0.60	21.0E OF SUB EBL
253	431-6	4.20/0.60	8.2 W OF KENT RD WPL
254	431-6	4.50/0.60	7.0 W OF KENT RD WPL
255	864-61	4.00/0.50	6.3W OF KENT RD WPL
256	431-30	4.11/0.60	7.0W OF KENT RD WPL
257	864-61	3.00/0.50	6.3W OF KENT RD WPL
258	864-61	4.00/0.50	4.9W OF KENT RD WPL
259	431-30	4.10/0.60	5.2W OF KENT RD W PL
260	864-61	3.00/0.50	5.8W OF KENT RD WPL
261	759-49	2.90/1.10	6.1W OF KENT RD WPL
262	431-6	3.90/0.60	10.0 W OF KENT RD WPL
263	245-83	6.40/0.91	12.6S OF RICKETTY ST SPL
264	245-83	6.80/0.91	14.4S OF RICKETTY ST SPL
265	414-62	0.50/0.60	157.3W OF BOURKE ST WPL
266	414-62	0.50/0.60	157 W OF BOURKE ST WPL
267	414-62	0.50/0.60	157.3W OF BOURKE ST WPL
269	864-61	2.90/0.50	4.6W OF KENT RD WPL
270	599-81	0.60/0.80	0.6E OF KENT RD WPL 2.4N OF RICKETTY ST SPL
288	326-38	1.20/0.80	EXT OF EBL OF SUB
291	358-36	0.80/1.00	1.4W OF SUB WBL
295	243-NR	12.30/0.80	1.4W OF SUB EXT EBL & 12.3S OF SUB S WALL
299	366-166		21.2N OF RICKETTY ST NPL
300			
301			
302			
368	865-16		EXT WBL OF SUB
369	326-38	1.40/0.50	EXT EBL OF SUB
370	358-36	2.10/1.00	0.8W OF SUB EBL
376	366-166	1.50/0.60	24.4N OF RICKETTY ST NPL
377			
378	864-61	3.90/0.50	6.9W OF KENT RD W PL
379	599-75	1.90/1.10	5.8W OF KENT RD W PL
380			NO RECORD
425	ER131-006	0.60/0.90	33m S from Ricketty St PL
426	ER131-006	0.60/0.70	35m S from Ricketty St PL
428	ER131-006	0.60/0.90	1.5m E of Kent Rd PL
430	ER131-006	1.00/0.70	3.2m E of Kent Rd PL
447	ES04-0066	1.10/0.60	23.5m E OF SUB 5314 EBDY
486	ES08-044	3.00/1.50	131.3S GARDNERS RD SPL
487	ES08-044	0.30/0.60	133.4S GARDNERS RD SPL
488	ES08-044	1.10/0.90	4.1E SUB S5314 EAST BOUNDARY WALL
489	IC08-167	1.10/0.70	17.4E OF S.5314 WEST BDY
490	IC08-167	1.30/0.70	19.9 E OF S.5314 WEST BDY
552	IC13-0042	2.90/1.00	17.4 W OF KENT RD W PL
553	IC13-0042	3.40/0.70	7.2 W OF KENT RD W PL
554	IC13-0042	3.60/0.70	7.5 W OF KENT RD W PL
555	IC13-0042	2.90/1.00	17.1 W OF KENT RD W PL
556	898-45	2.40/0.90	16.2 E OF KENT RD W PL
585	ES15-0156	10.40/1.00	7.8 E OF KENT ST E PL
586	ES15-0156	10.00/1.00	8.7 E OF KENT ST E PL
587	ES15-0156	11.10/1.20	8.3 E OF KENT ST E PL
588	ES15-0156	10.00/1.00	8.0 E OF KENT ST E PL
589	ES15-0156	10.90/1.20	8.5 E OF KENT ST E PL
590	ES15-0156	9.60/1.20	8.8 E OF KENT ST E PL
598	ES15-0447	3.90/	36.3 S OF RICKETTY ST S PL
600	ES16-0596	0.80/0.60	125.7 S OF GARDENERS RD S PL
602	ES16-0562	/0.70	8.3 S OF 7-9 KENT RD N BDY
603	ES16-0562	/0.70	8.0 S OF 7-9 KENT RD N BDY
606	ES16-0596	0.90/0.60	132.6 S OF GARDENERS RD S PL
628	ES17-0576	0.90/0.90	10.5 S OF 3 KENT RD S PL
629	SC07839-0002	0.90/0.90	2.5 N OF 9 KENT ROAD N BDY
630	ES17-0574+...	0.90/1.00	10.5 S OF 3 KENT RD S BDY
631	ES17-0575	/0.60	1.4 W OF 7-9 KENT RD W PL
632	ES16-0282	1.00/0.60	2.2 W OF S5314 E SUB BDY
633	ES16-0282	3.20/1.50	3.4 E OF S5314 E SUB BDY
699	ES17-0460	1.20/0.30	
700	ES17-0460	1.30/0.30	
717	ES18-0141	0.60/0.50	0.5 E OF KENT ST E PL
718	ES18-0142	0.60/0.50	13.5 E OF KENT ST E PL
795	SC09581-0003	1.50/0.60	37.0 S OF 675 GARDENERS RD S BDY
804	ES20-0103	0.60/0.70	89.4S OF GARDENERS RD S PL
840	ES22-0770	1.10/0.90	10.6 E OF SUB S5314 W SUB BDY ESMT
841	ES22-0770	1.10/0.90	8.4 E OF SUB S5314 W SUB BDY ESMT

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N

LE94332	LE94341	LE94342
LE94334	LE94343	LE94344
KO32112	KO32121	KO32122

ISG GRID

LE94343

MOCS

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

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1:250

0 15 metres

Ausgrid

LE943 - MA1

Ref: B8

LE943 - MB1

Ref: B7

LE943 - MC1

Ref: B8

LE943 - MD1

Ref: B7

LE943 - OL1

BFWR

Ref: E6

LE943 - OM1

Ref: F9

LE943 - ON1

Ref: E10

LE943 - OO1

Ref: D10

LE943 - OP1

Ref: C10

LE943 - OQ1

Ref: C10

LE943 - OR1

Ref: C10

LE943 - OU1

Ref: E10

LE943 - OV1

Ref: F10

LE943 - OW1

Ref: E5

LE943 - OX1

Ref: E6

LE943 - OZ1

Ref: F9

A0 UG Details

WARNING: REFER TO DISCLAIMER ON PAGE 1

Ausgrid

DERIVE SCALE FROM COMPARISON TO RELATIVE FEATURES & SCALE ON PAGE 1

25 Apr 24

LE94343

MOCS

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.

JOINT DETAIL REPORT

Map: LE943

No.	Bk-Pg	Pl/Cvr	Joint Location
407	245-84	4.70/0.80	4.7N of PL.201.5W of Kent St.WPL
408	245-84	4.70/1.00	4.7N of PL.193.3W of Kent St.WPL
409	263-88	4.30/0.90	4.3N of PL.100.7W of Kent St.WPL
410	263-88	4.00/0.90	4.0N of PL.101.2W of Kent St.WPL

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N

LE94331	LE94332	LE94341	ISG GRID
LE94333	LE94334	LE94343	
KO32111	KO32112	KO32121	

LE94334

TR MOCS

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

Page 1 of 1

1:250

0 — 15 metres

Ausgrid

A0 TR_MOCS_std_plot

LE943 - QU1

2x150 PVC
2x50 PVC
1x63 PVC
0.8-0.9
0.8-0.9

Ref: D9

LE943 - QV1

2x150 PVC
1x63 PVC
0.6-1.2
0.7-1.2

Ref: D9

LE943 - QW1

2x150 PVC
1x50 PVC
1x63 PVC
0.8-1.2
0.7-1.2

Ref: D8

LE943 - QX1

2x150 PVC
1x63 PVC
0.8-1.3
0.8-0.9

Ref: D8

LE943 - QY1

2x150 PVC
1x50 PVC
1x63 PVC
0.8-1.3
0.8-0.9

Ref: E7

LE943 - QZ1

Ref: E7

LE943 - RA1

Ref: F7

LE943 - RH1

Ref: G7

LE943 - RI1

Ref: G7

LE943 - SB1

Ref: D8

LE943 - SC1

Ref: E7

LE943 - SD1

Ref: E7

LE943 - SF1

Ref: E7

LE943 - SG1

Ref: E7

LE943 - SI1

Ref: E7

LE943 - SK1

1x63 PVC
NA
NA

Ref: D9

JOINT DETAIL REPORT

No.	Bk-Pg	Pl/Cvr	Joint Location
Map: LE943			
399		/1.20	STJ yellow phase 91M/1,4.2FL

LE943 - SL1

1x63 PVC
NA
NA

Ref: D9

LE943 - VJ1

Ref: D8

LE943 - GV1

Ref: C8

LE943 - ID1

CONCRETE PLATE

Ref: B9

LE943 - FK1

CONCRETE

10x140 AC
NA
1.1-1.4
NO FB
ROUTE PLAN NO.700
Contract No.2568
91M/1 R Sumitomo Drum No.48 4,5,6,7&12-4-77
91M/1 Y Sumitomo Drum No.20&49 4,5,6,7&12-4-77
91M/1 B Sumitomo Drum No.18 4,5,6,7&12-4-77
91M/3 R Sumitomo Drum No.2 4,5,6,7&12-4-77
91M/3 Y Sumitomo Drum No.16 4,5,6,7&12-4-77
91M/3 B Sumitomo Drum No.48 4,5,6,7&12-4-77
Pilot 156 Olex Drum No.2839 4,5,6,7&12-4-77
Pilot 157 Olex Drum No.2814 4,5,6,7&12-4-77

Ref: C8

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N

LE94314	LE94323	LE94324
LE94332	LE94341	LE94342
LE94334	LE94343	LE94344

ISG GRID

LE94341

TR MOCS

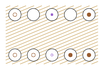
INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE

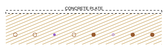
Page 1 of 1

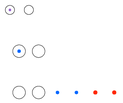
1:250

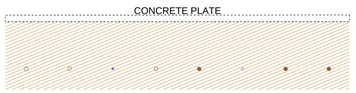
0 — 15 metres

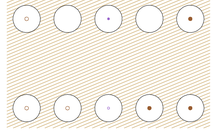
Ausgrid











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.

DBYD_Transmission_LE94343_1.hpgl2

LE943 - HZ1

CONCRETE

10x140 AC

NR

1.9

NO FB

ROUTE PLAN NO.700

Contract No.2568

91M/1 R Sumitomo Drum No.48 4,5,6,7&12-4-77
91M/1 Y Sumitomo Drum No.20&49 4,5,6,7&12-4-77
91M/1 B Sumitomo Drum No.18 4,5,6,7&12-4-77
91M/3 R Sumitomo Drum No.2 4,5,6,7&12-4-77
91M/3 Y Sumitomo Drum No.16 4,5,6,7&12-4-77
91M/3 B Sumitomo Drum No.48 4,5,6,7&12-4-77
Pilot 156 Olex Drum No.2839 4,5,6,7&12-4-77
Pilot 157 Olex Drum No.2814 4,5,6,7&12-4-77

Ref: G5

LE943 - IE1

NR

1.0-1.6

NO FB

ROUTE PLAN NO.700

Contract No.2568

91M/1 R Sumitomo Drum No.48 4,5,6,7&12-4-77
91M/1 Y Sumitomo Drum No.20&49 4,5,6,7&12-4-77
91M/1 B Sumitomo Drum No.18 4,5,6,7&12-4-77
91M/3 R Sumitomo Drum No.2 4,5,6,7&12-4-77
91M/3 Y Sumitomo Drum No.16 4,5,6,7&12-4-77
91M/3 B Sumitomo Drum No.48 4,5,6,7&12-4-77
Pilot 156 Olex Drum No.2839 4,5,6,7&12-4-77
Pilot 157 Olex Drum No.2814 4,5,6,7&12-4-77

Ref: E5

LE943 - RF1

4x150 PVC

2x63 PVC

NP

0.8

Ref: A6

LE943 - RG1

4x150 PVC

1x50 PVC

1x63 PVC

1.0-3.4

0.8-1.1

Ref: A7

LE943 - SM1

1x63 PVC

NA

NA

Ref: A7

LE943 - FN1

4.9-6.8

0.9-1.5

NO FB

ROUTE PLAN NO.700

Contract No.2568

91M/1 R Sumitomo Drum No.48 4,5,6,7&12-4-77
91M/1 Y Sumitomo Drum No.20&49 4,5,6,7&12-4-77
91M/1 B Sumitomo Drum No.18 4,5,6,7&12-4-77
91M/3 R Sumitomo Drum No.2 4,5,6,7&12-4-77
91M/3 Y Sumitomo Drum No.16 4,5,6,7&12-4-77
91M/3 B Sumitomo Drum No.48 4,5,6,7&12-4-77
Pilot 156 Olex Drum No.2839 4,5,6,7&12-4-77
Pilot 157 Olex Drum No.2814 4,5,6,7&12-4-77
WARNING: SHALLOWER THAN
STANDARD COVER

Ref: B6

LE943 - FR1

CONCRETE

10x140 AC

5.4

1.0-1.3

NO FB

ROUTE PLAN NO.700

Contract No.2568

91M/1 R Sumitomo Drum No.48 4,5,6,7&12-4-77
91M/1 Y Sumitomo Drum No.20&49 4,5,6,7&12-4-77
91M/1 B Sumitomo Drum No.18 4,5,6,7&12-4-77
91M/3 R Sumitomo Drum No.2 4,5,6,7&12-4-77
91M/3 Y Sumitomo Drum No.16 4,5,6,7&12-4-77
91M/3 B Sumitomo Drum No.48 4,5,6,7&12-4-77
Pilot 156 Olex Drum No.2839 4,5,6,7&12-4-77
Pilot 157 Olex Drum No.2814 4,5,6,7&12-4-77

Ref: E5

LE943 - FS1

CONCRETE

10x140 AC

NR

1.5-1.6

NO FB

ROUTE PLAN NO.700

Contract No.2568

91M/1 R Sumitomo Drum No.48 4,5,6,7&12-4-77
91M/1 Y Sumitomo Drum No.20&49 4,5,6,7&12-4-77
91M/1 B Sumitomo Drum No.18 4,5,6,7&12-4-77
91M/3 R Sumitomo Drum No.2 4,5,6,7&12-4-77
91M/3 Y Sumitomo Drum No.16 4,5,6,7&12-4-77
91M/3 B Sumitomo Drum No.48 4,5,6,7&12-4-77
Pilot 156 Olex Drum No.2839 4,5,6,7&12-4-77
Pilot 157 Olex Drum No.2814 4,5,6,7&12-4-77

Ref: F5

JOINT DETAIL REPORT

Map: LE943

No.	Bk-Pg	Pl/Cvr	Joint Location
411	245-83	/0.90	5.9E of WPL.13.2S of Richetty St.SPL
412	245-83	/0.80	5.8E of WPL.16.9S of Richetty St.SPL

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.

N

LE94332	LE94341	LE94342
LE94334	LE94343	LE94344
KO32112	KO32121	KO32122

ISG GRID

LE94343

TR MOCS

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

Page 1 of 1

1:250

0 **15 metres**

Ausgrid

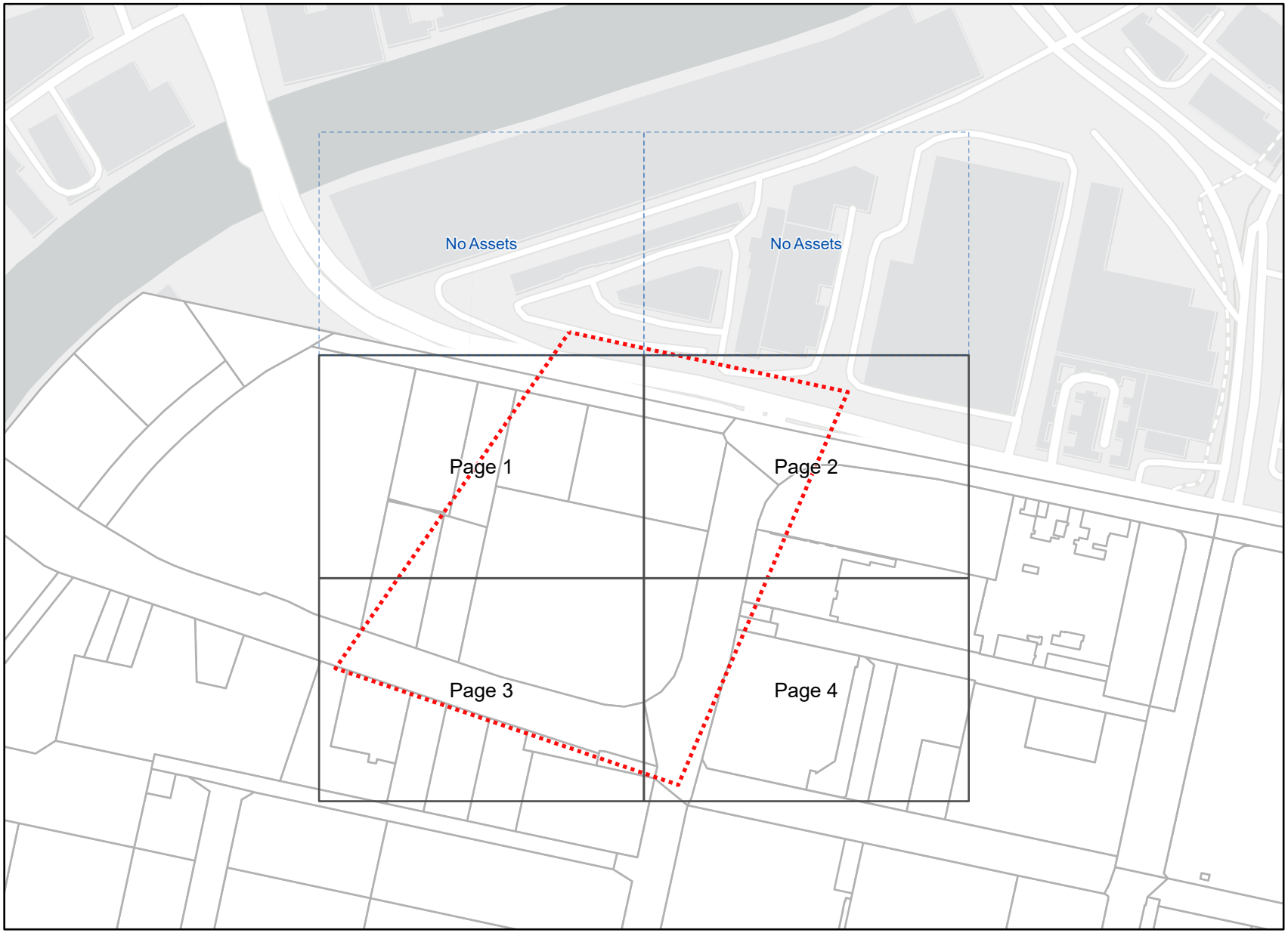
A0 TR_MOCS_std_plot

DBYD_Transmission_LE94343_1.hpgl2

A.3 Bayside Council

Job # 36682921
Seq # 239238663

Provided by Bayside Council



Legend

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

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

In an emergency contact Bayside Council on 93663529

Index Sheet

Plans generated by SmarterWX™ Automate

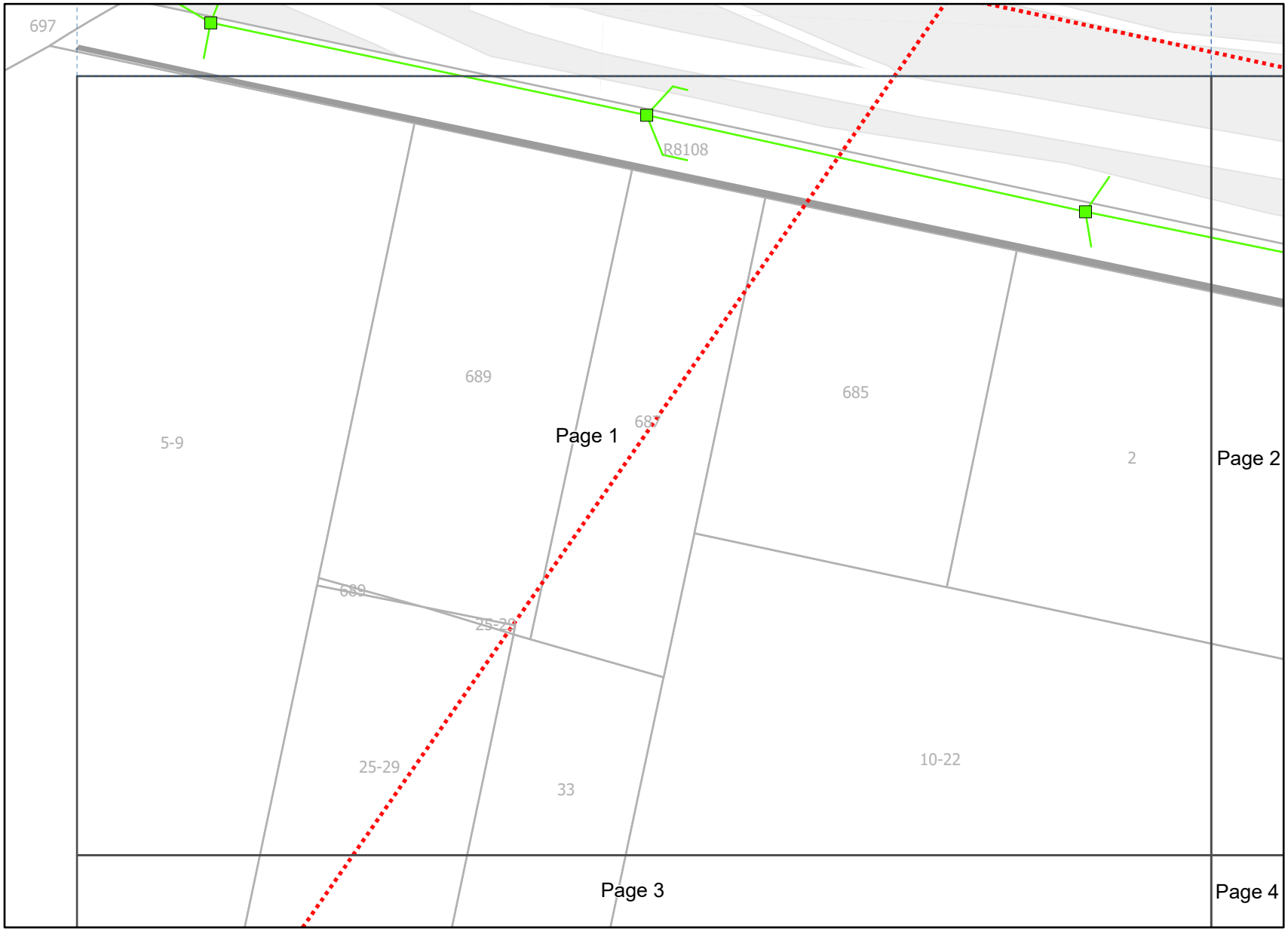
0 37.5 75 150 m

N

Scale 1:3,500

Job # 36682921
Seq # 239238663

Provided by Bayside Council



Legend

BYD Enquiry

Stormwater

Stormwater Pit

Stormwater Pipe

Other

Footpaths

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

In an emergency contact Bayside Council on 93663529

15/05/24 (valid for 30 days)

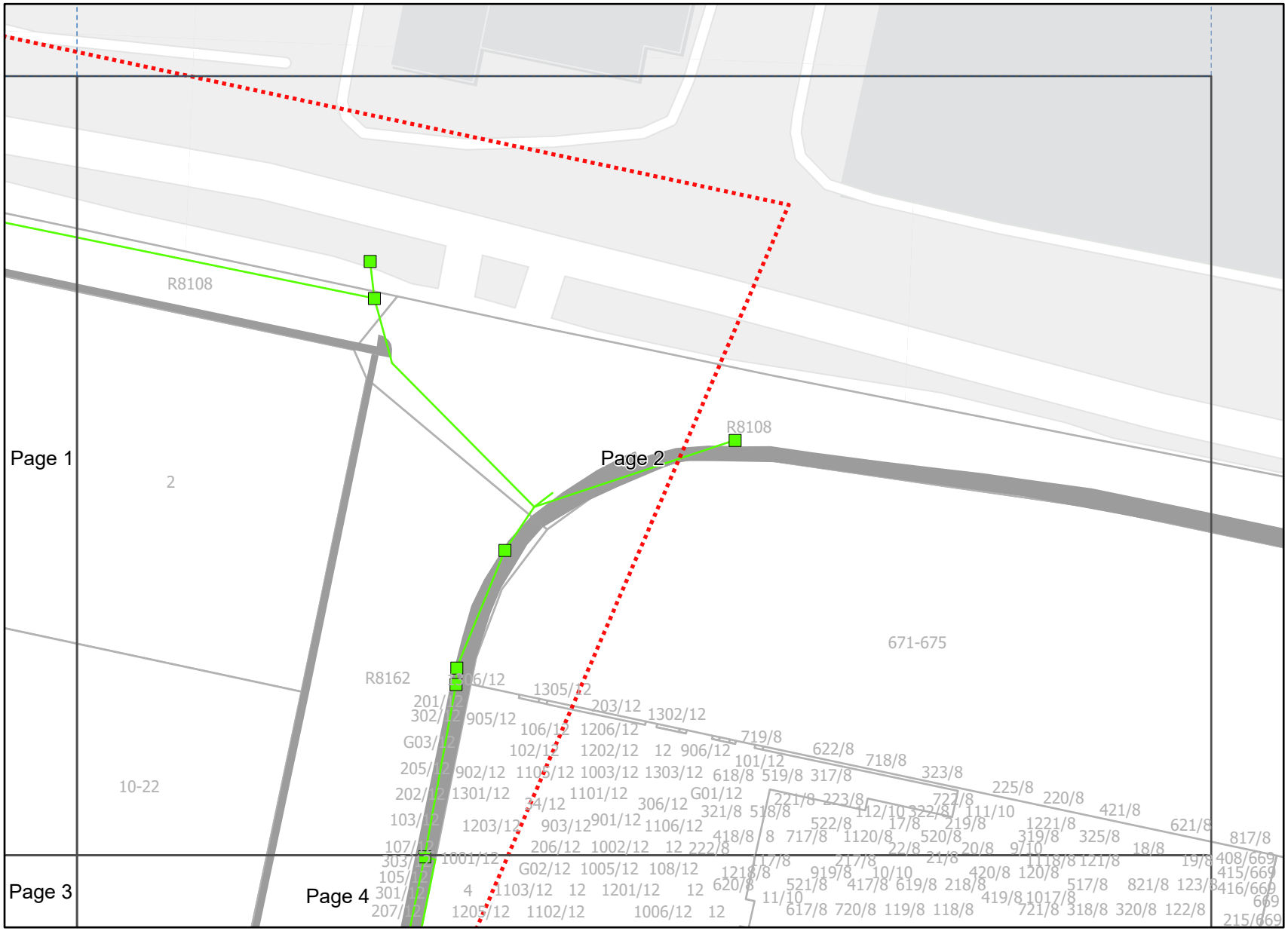
Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

Job # 36682921
Seq # 239238663
Provided by Bayside Council



Legend

- BYD Enquiry

Stormwater

- Stormwater Pit
- Stormwater Pipe

Other

- Footpaths

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

In an emergency contact Bayside Council on 93663529

15/05/24 (valid for 30 days)

Plans generated by SmarterWX™ Automate

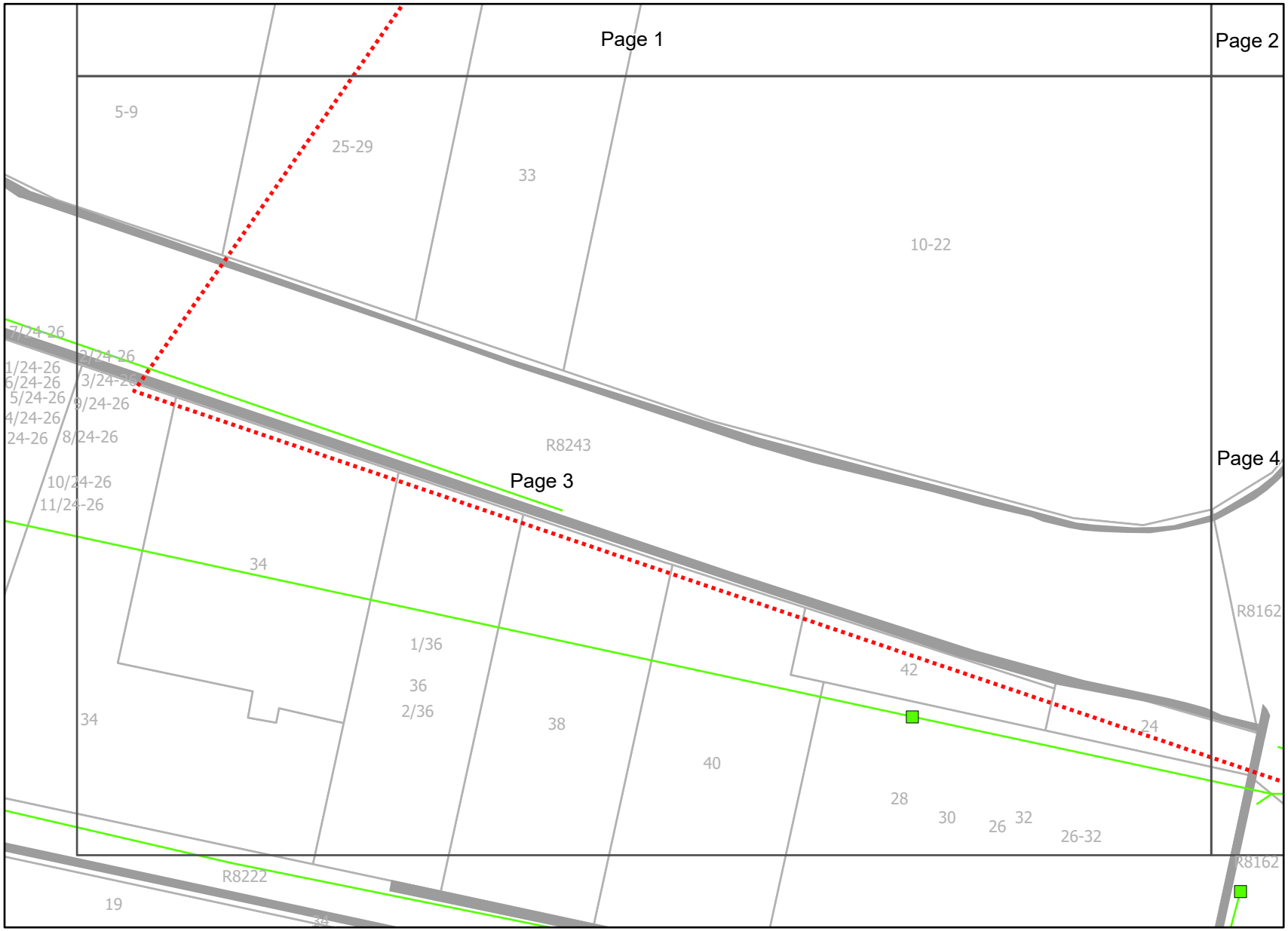
0 10 20 40 m

N

Scale 1:1,000

Job # 36682921
Seq # 239238663

Provided by Bayside Council



Legend

- BYD Enquiry

Stormwater

- Stormwater Pit
- Stormwater Pipe

Other

- Footpaths

In an emergency contact Bayside Council on 93663529

15/05/24 (valid for 30 days)

Plans generated by SmarterWX™ Automate

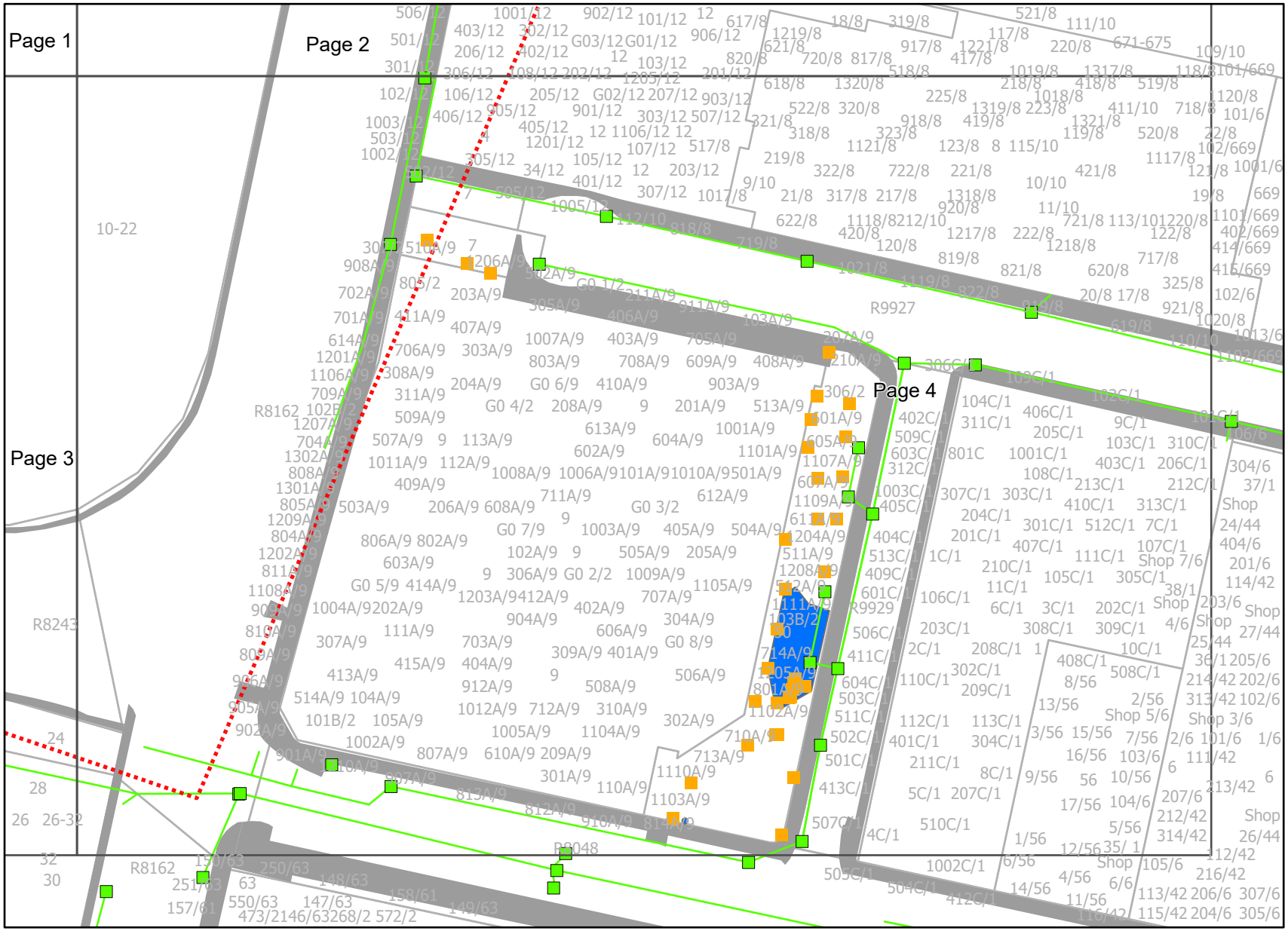
0 10 20 40 m

N

Scale 1:1,000

Job # 36682921
Seq # 239238663

Provided by Bayside Council



Legend

- BYD Enquiry

Stormwater

- Stormwater Pit
- Stormwater Pipe

Other

- Irrigation_System

Electrical

- Lighting

Other

- Footpaths

In an emergency contact Bayside Council on 93663529

15/05/24 (valid for 30 days)

Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

A.4 City of Sydney (IMS)

City of Sydney
Town Hall House
Level 2, 456 Kent Street
Sydney NSW 2000

+61 2 9265 9333
council@cityofsydney.nsw.gov.au
GPO Box 1591 Sydney NSW 2001
cityofsydney.nsw.gov.au

Dial Before You Dig (DBYD): Asset Location Response

Arup - Neil Langford
135-151 Clarence Street Level 5
Sydney NSW 2000
neil.langford@arup.com

City of Sydney has been advised that you have placed an enquiry through the Dial Before You Dig service. Our records indicate the enquiry with the following details are affecting City of Sydney asset(s) as per the attached plans.

Enquiry Details	
Sequence Number	239238675
Enquiry Date	15/05/2024 10:50
Response	**AFFECTED**
Address	2-22 Kent Road Mascot
Location in Road	Road,Nature Strip,Footpath
Activity	Planning and Design,Tendering

It is important to read and understand all the information and disclaimers provided below and the responsibilities outlined in the attachment prior to commencing work(s)

Due to the nature and the age of assets and records, the accuracy and/or completeness of the information in the attached plan(s) cannot be guaranteed. The City does not make any representation or give any guarantee, warranty or undertaking as to the accuracy, currency, completeness, effectiveness or reliability of the information.

Plan(s) are indicative only and all information needs to be verified through field survey including the use of appropriately qualified personnel and equipment.

This information has been generated by an automated system based on the information specified by the Enquirer. It is the Enquirer's responsibility to ensure that the work site has been properly identified and is accurately reflected in the information provided by the City. If the information does not match the work site, resubmit your enquiry for the correct site.

To the extent of any inconsistency, the information contained in this document will prevail over any other information provided to you by the City and Dial Before You Dig.

Duty of Care

When working in the vicinity of City Assets you have a "duty of care" that must be observed.

Works or proposed works should be planned to allow for minimal impact and appropriate protection of City Assets.

Locating Assets

It is the Enquirer's responsibility to:

- Request plans of City Assets for a particular location at a reasonable time before work begins. If you have any doubts as to the exact location of City Assets, we strongly recommend that you engage the service of a suitably qualified locator; and
- Visually locate City Assets. For buried assets this should be done by hand digging or using non-destructive methods such as water jetting (pot holing) where construction activities may damage or interfere with City Assets.

Damage of Assets

Damage to City Assets must be reported immediately to 02 9265 9333 or council@cityofsydney.nsw.gov.au anytime, any day.

Enquirers and other parties undertaking works will be held responsible for all damage that occurs or impacts City Assets as a result of the works. This includes interfering with City Assets, conducting unauthorised modification works and interfering with City Assets in a way that prevents the City or a third party from accessing or using City Assets in the future.

The City reserves all rights to recover compensation for any Loss (including consequential losses).

Relevant Approvals

Relevant approval must be obtained prior to commencement of works on or near City Assets. The Enquirer is responsible to ensure that all requisite approvals have been obtained prior to works and that all works are undertaken in accordance with the requirements of any approval.

There is a variety of legislation, regulation and City policies that govern requirements for approval to install or modify City Assets. These requirements will also vary depending on the type of asset. Additional guidance may be provided in subsequent sections of this document. This is intended for guidance purposes only and is not comprehensive. It should also be acknowledged that standards may vary from time to time and the information supplied regarding approvals or standards may be out of date or superseded.

User Risk

The Enquirer acknowledges that they use the information at their own risk. In consideration of the information provided by the City to the fullest extent permitted by law:

- All conditions and guarantees concerning the information (whether as to quality, outcome, fitness, care, skill or otherwise) expressed or implied by statute, common law, equity, trade, custom or usage or otherwise are expressly excluded. To the extent that those statutory guarantees cannot be excluded, the liability of the City to the Enquirer is limited to the supplying of the information again;
- In no event will the City be liable for, and the Enquirer releases the City from, any Loss arising from or in connection with the information, including the use of or inability to use the information and delay in the provision of the information;
- The Enquirer will indemnify the City against any Loss arising from or in connection with the information and the works; and
- The Enquirer assumes all risks associated with the use of the Dial Before You Dig and City websites, including risk to the Enquirer's computer, software or data being damaged by any virus, and release and discharge the City from all Loss which might arise in respect of your use of the websites.

Glossary

"City" *means The Council of the City of Sydney.*

"City Assets" *mean those items that are under the ownership, care or control of the City*

"Enquirer" *is the person(s) or organisation(s) requesting or using the information.*

"Loss" *includes any loss, cost, expense, claim, liability or damage (including arising in connection with personal injury, death or any damage to or loss of property and economic or consequential loss, lost profits, loss of revenue, loss of management time, opportunity costs or special damages).*

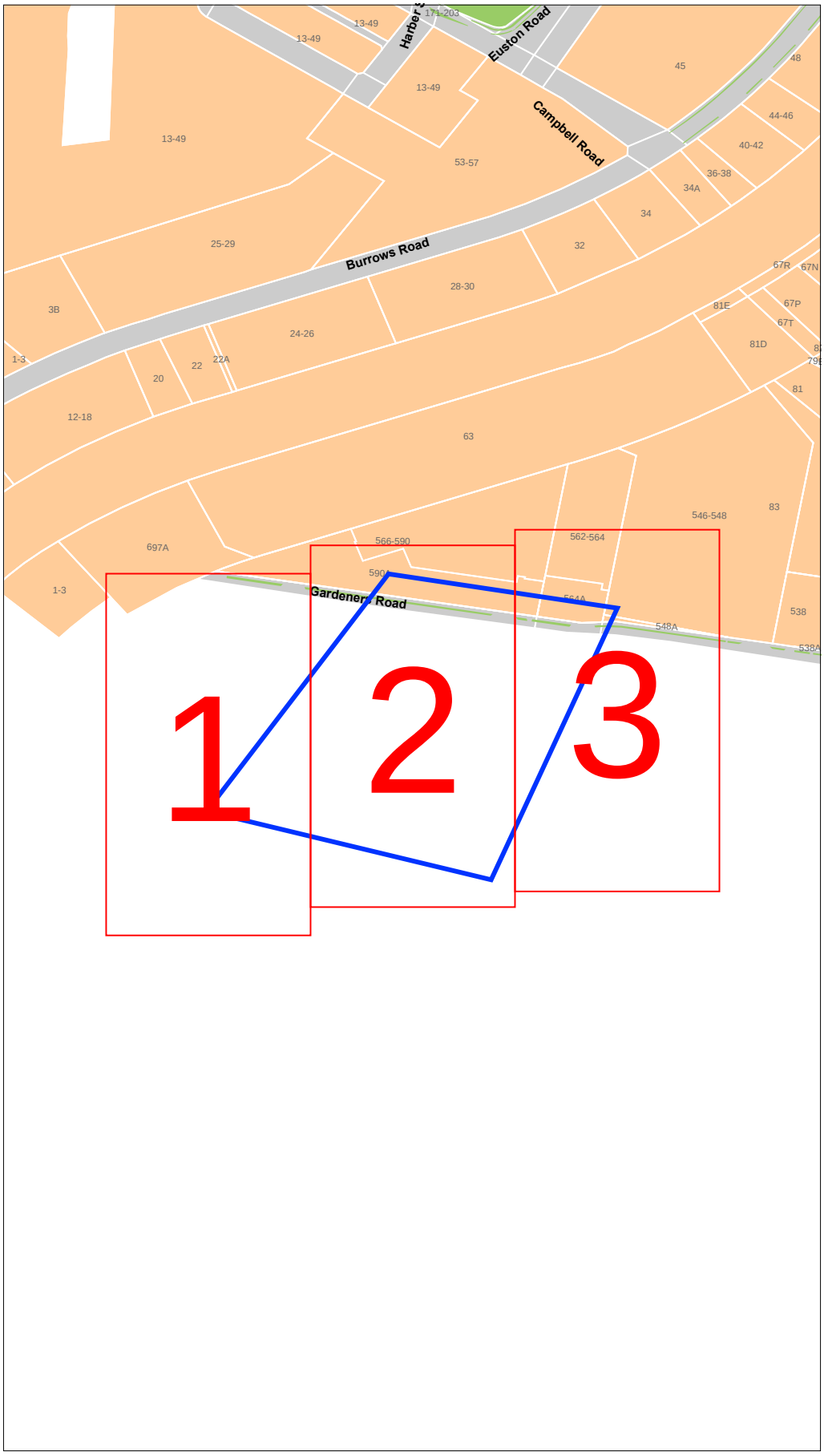
If you have any further enquiries in regards to assets affected in this referral, please contact the following:

- For **Survey Infrastructure** contact Don Urquhart or Ben Jackson via email Surveyors@cityofsydney.nsw.gov.au or phone: (02) 9265 9333.
- For **Stormwater** contact Well Yum or Adrian Smit via email Stormwater@cityofsydney.nsw.gov.au or phone (02) 9265 9333.
- For **Electrical** contact Frank Morosin or Malik Huda via email Electrical@cityofsydney.nsw.gov.au or phone (02) 9265 9333.

Overview Map

Sequence No: 239238675

2-22 Kent Road Mascot



LEGEND:

Affected DBYD Work Area

1 Detail Map

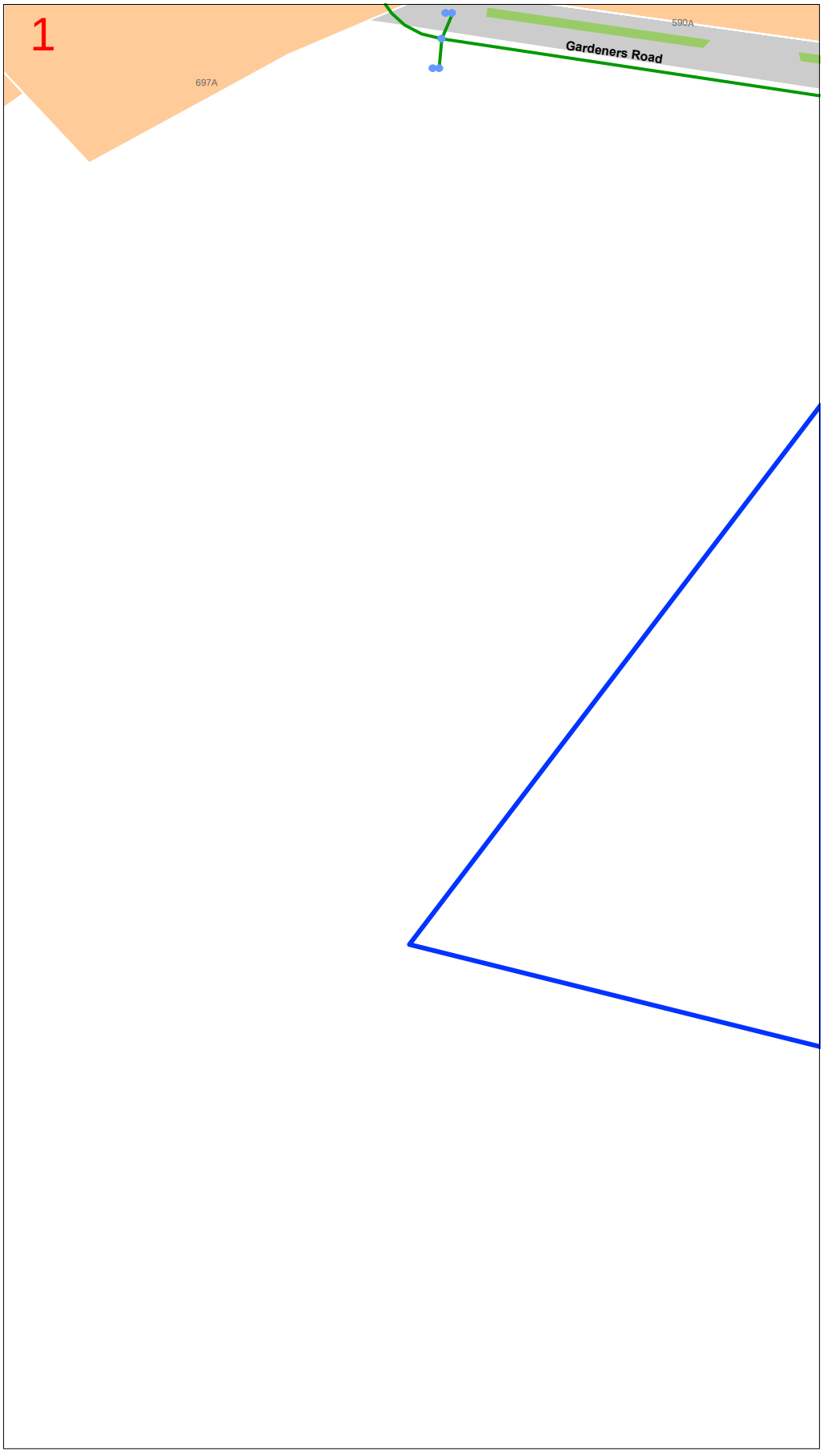
N

0 0.05km

Map 1

Sequence No: 239238675

2-22 Kent Road Mascot



LEGEND:

Affected DBYD Work Area

Survey Infrastructure

- Permanent Mark
- Trigonometrical Station
- State Survey Mark
- Miscellaneous Mark
- Cadastral Reference Mark

Stormwater

- Stormwater Gross Pollutant Traps
- Stormwater Structures
- Stormwater Conduit
- Stormwater Raingardens

Electrical

- Lighting Points
- Smart Poles

Electrical Services

- Main Switch Board
- Distribution Board
- Special Small Service
- Electrical Pit
- Supply Feature
- Other

Electrical Conduits & Cables

- Underground
- Building
- Aerial

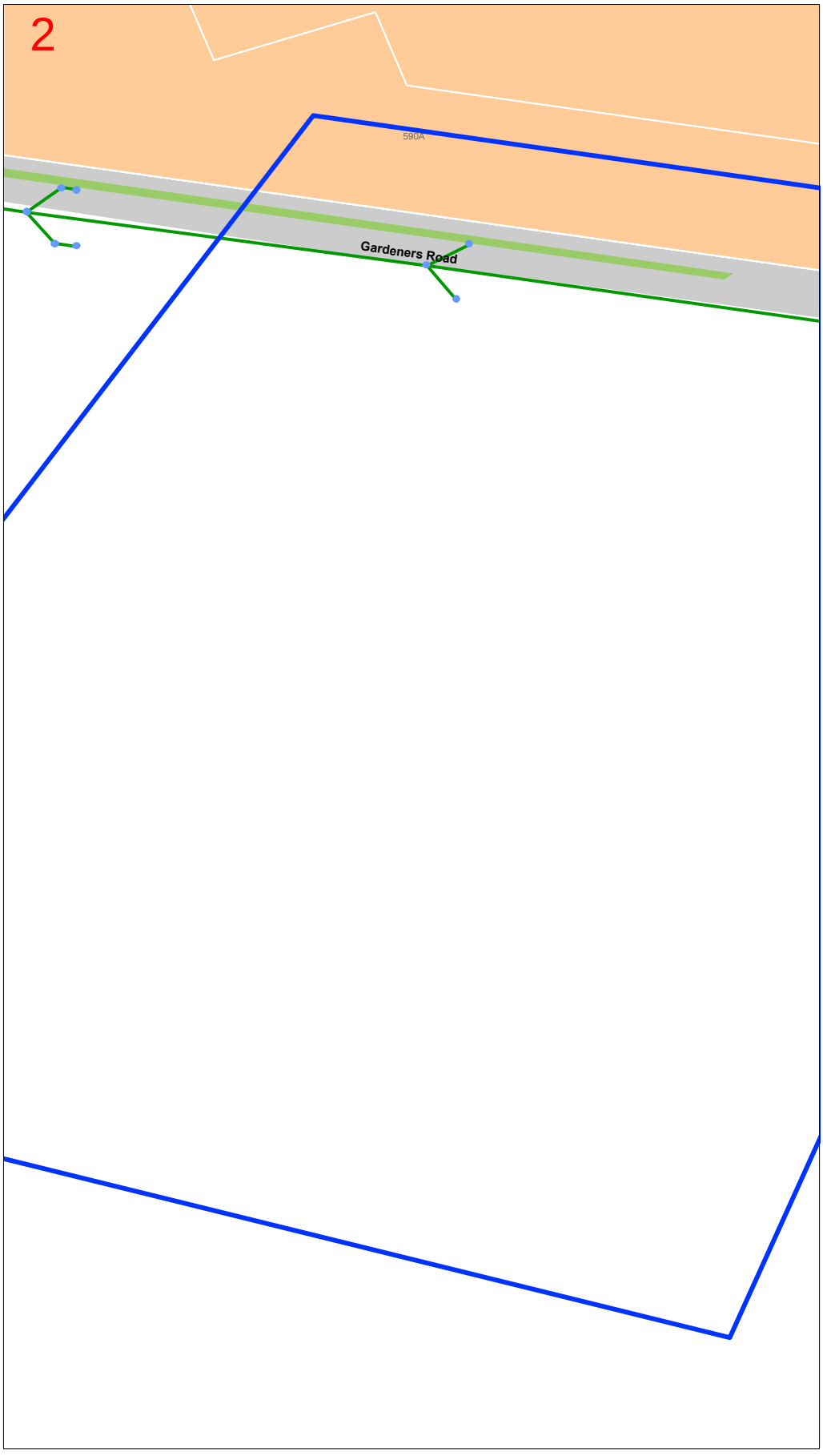
N

0 0.01km

Map 2

Sequence No: 239238675

2-22 Kent Road Mascot



LEGEND:

Affected DBYD Work Area

Survey Infrastructure

- Permanent Mark
- Trigonometrical Station
- State Survey Mark
- Miscellaneous Mark
- Cadastral Reference Mark

Stormwater

- Stormwater Gross Pollutant Traps
- Stormwater Structures
- Stormwater Conduit
- Stormwater Raingardens

Electrical

- Lighting Points
- Smart Poles

Electrical Services

- Main Switch Board
- Distribution Board
- Special Small Service
- Electrical Pit
- Supply Feature
- Other

Electrical Conduits & Cables

- Underground
- Building
- Aerial

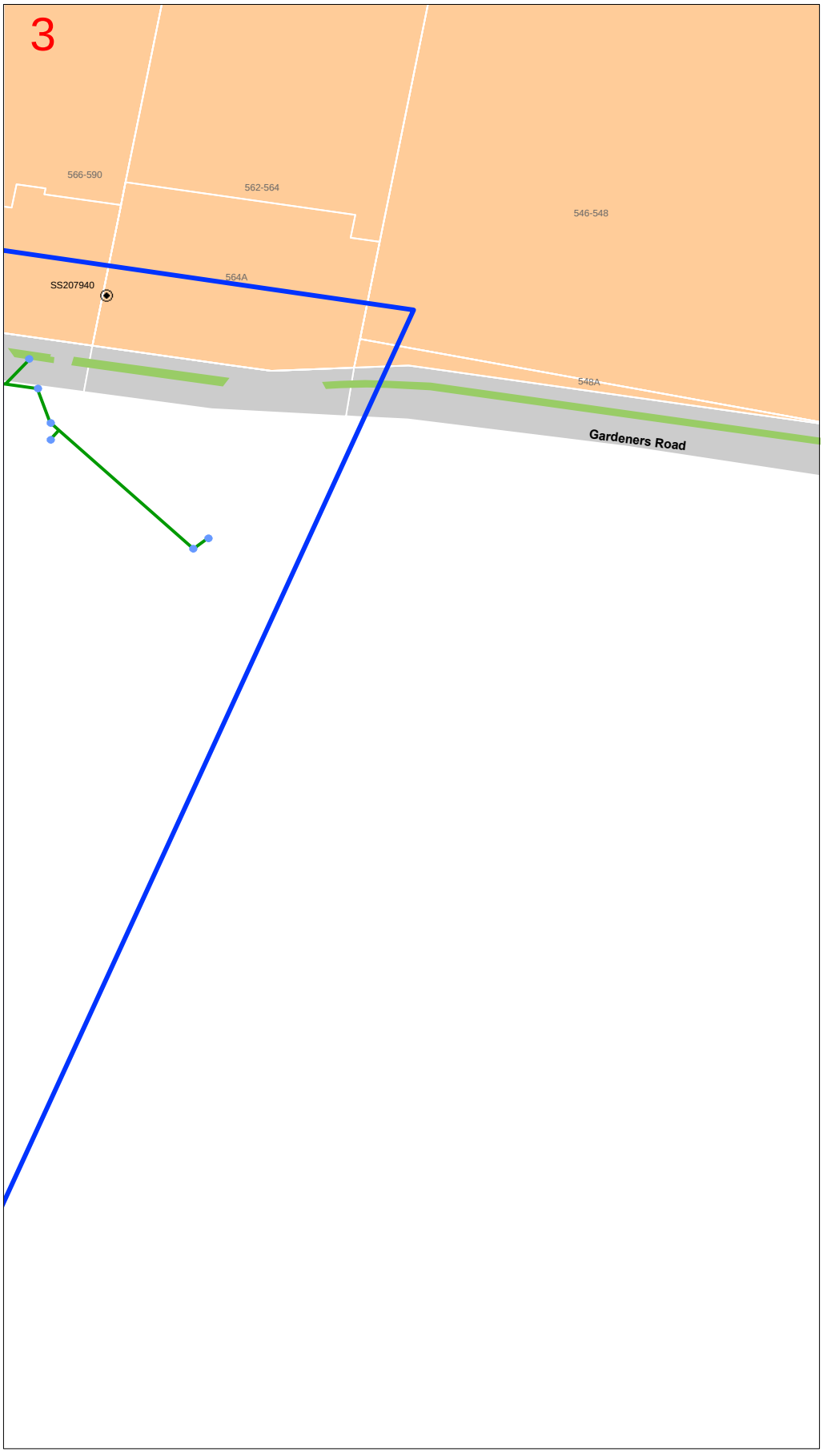
N

0 0.01km

Map 3

Sequence No: 239238675

2-22 Kent Road Mascot



LEGEND:

Affected DBYD Work Area

Survey Infrastructure

- Permanent Mark
- Trigonometrical Station
- State Survey Mark
- Miscellaneous Mark
- Cadastral Reference Mark

Stormwater

- Stormwater Gross Pollutant Traps
- Stormwater Structures
- Stormwater Conduit
- Stormwater Raingardens

Electrical

- Lighting Points
- Smart Poles

Electrical Services

- Main Switch Board
- Distribution Board
- Special Small Service
- Electrical Pit
- Supply Feature
- Other

Electrical Conduits & Cables

- Underground
- Building
- Aerial

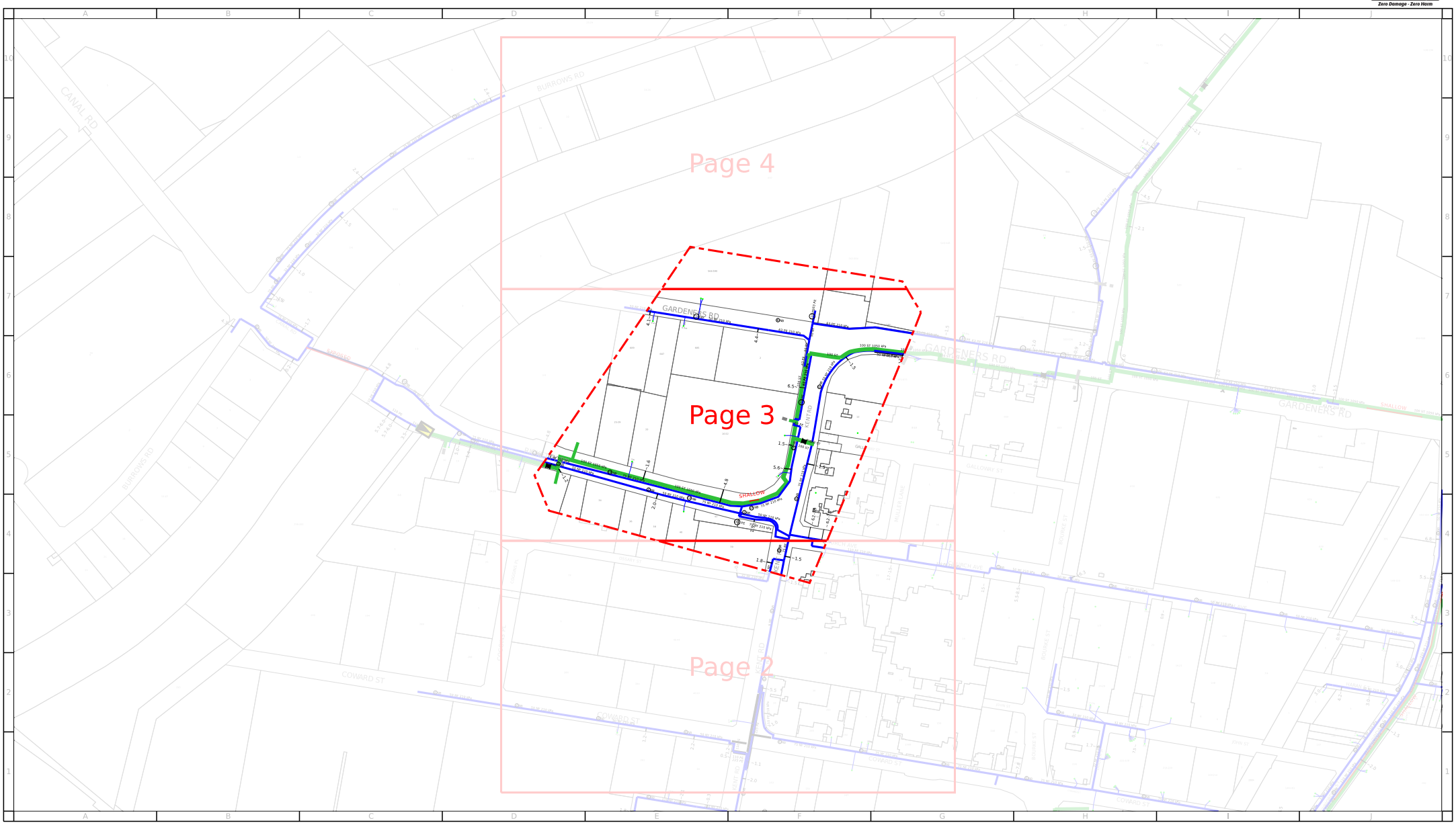
N

0 0.01km

A.5 Jemena Gas South

BYDA Authority: Jemena Gas Networks (NSW)

BYDA Location: 2-22 Kent Road Mascot NSW, 2020



Jemena
ABN 87 003 004 322

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

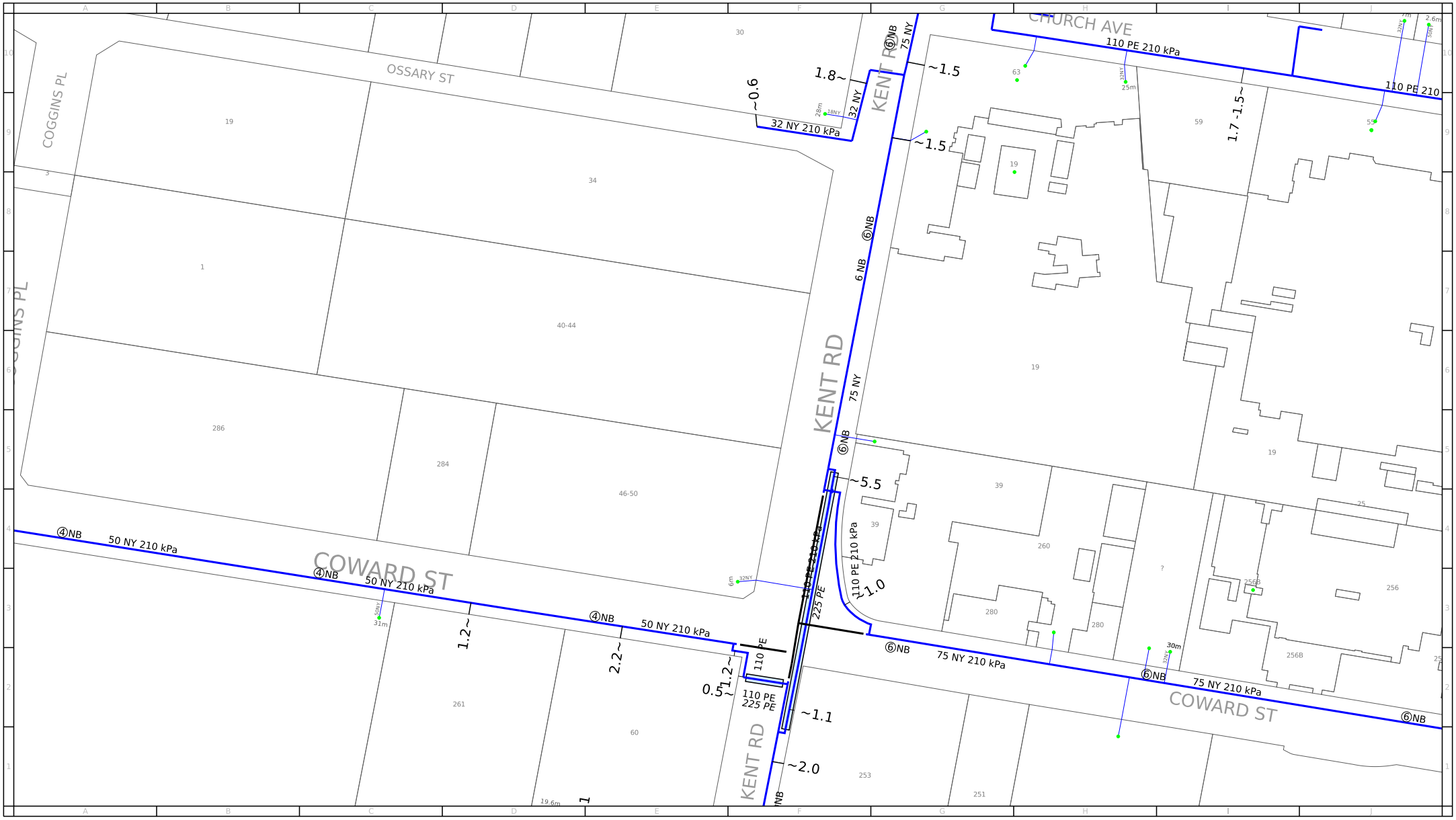
N
W
E
S

Scale: 1:6301

Issue Date: 15/05/2024
BYDA Seq No: 239238674
BYDA Job No: 36682921
Overview Page:

BYDA Authority: Jemena Gas Networks (NSW)

BYDA Location: 2-22 Kent Road Mascot NSW, 2020



Jemena
ABN 87 003 004 322

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

N W E S

Scale: 1:2000

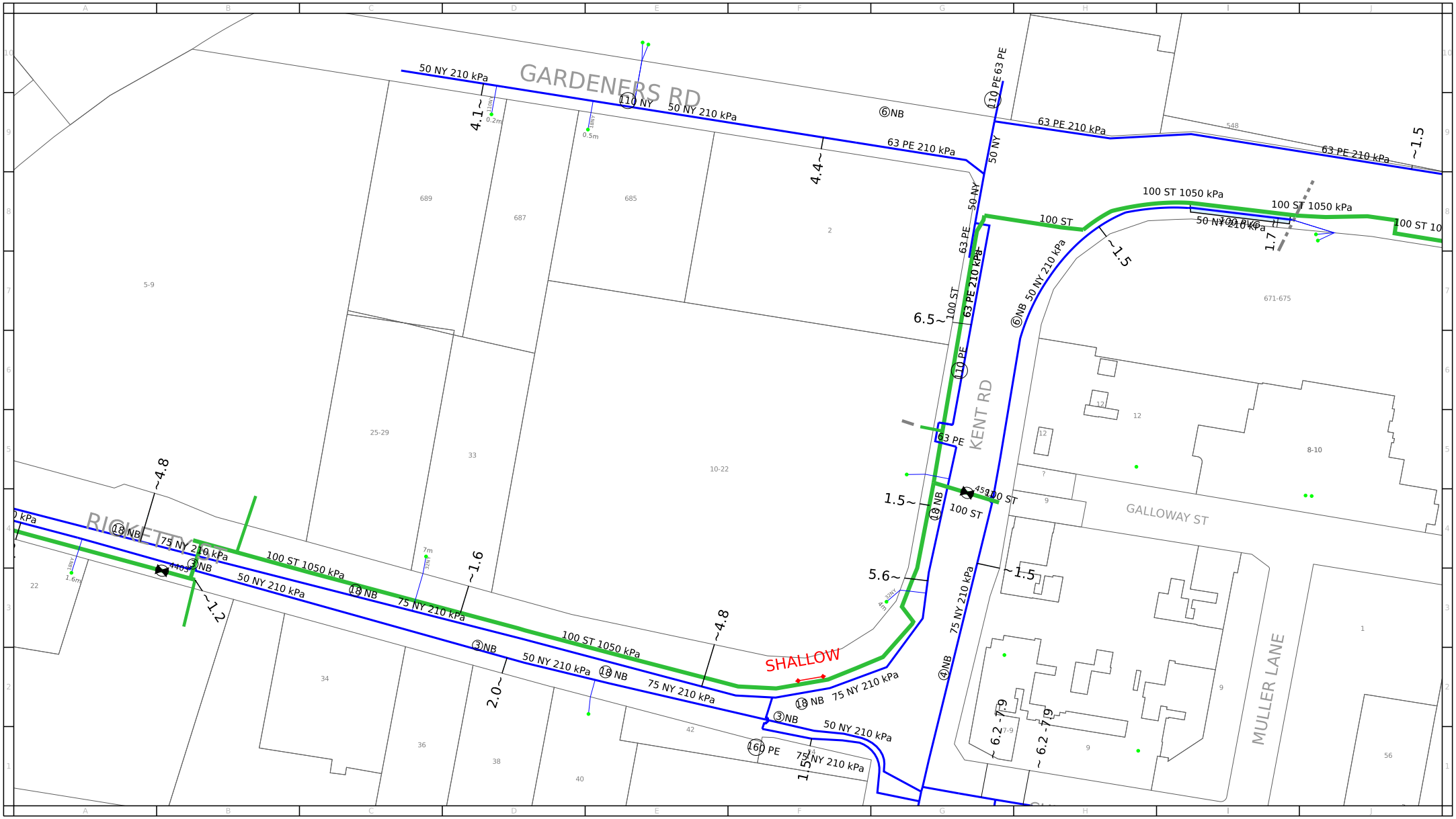
Issue Date: 15/05/2024
BYDA Seq No: 239238674
BYDA Job No: 36682921

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

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

BYDA Authority: Jemena Gas Networks (NSW)

BYDA Location: 2-22 Kent Road Mascot NSW, 2020



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

Issue Date: 15/05/2024

BYDA Seq No: 239238674

BYDA Job No: 36682921

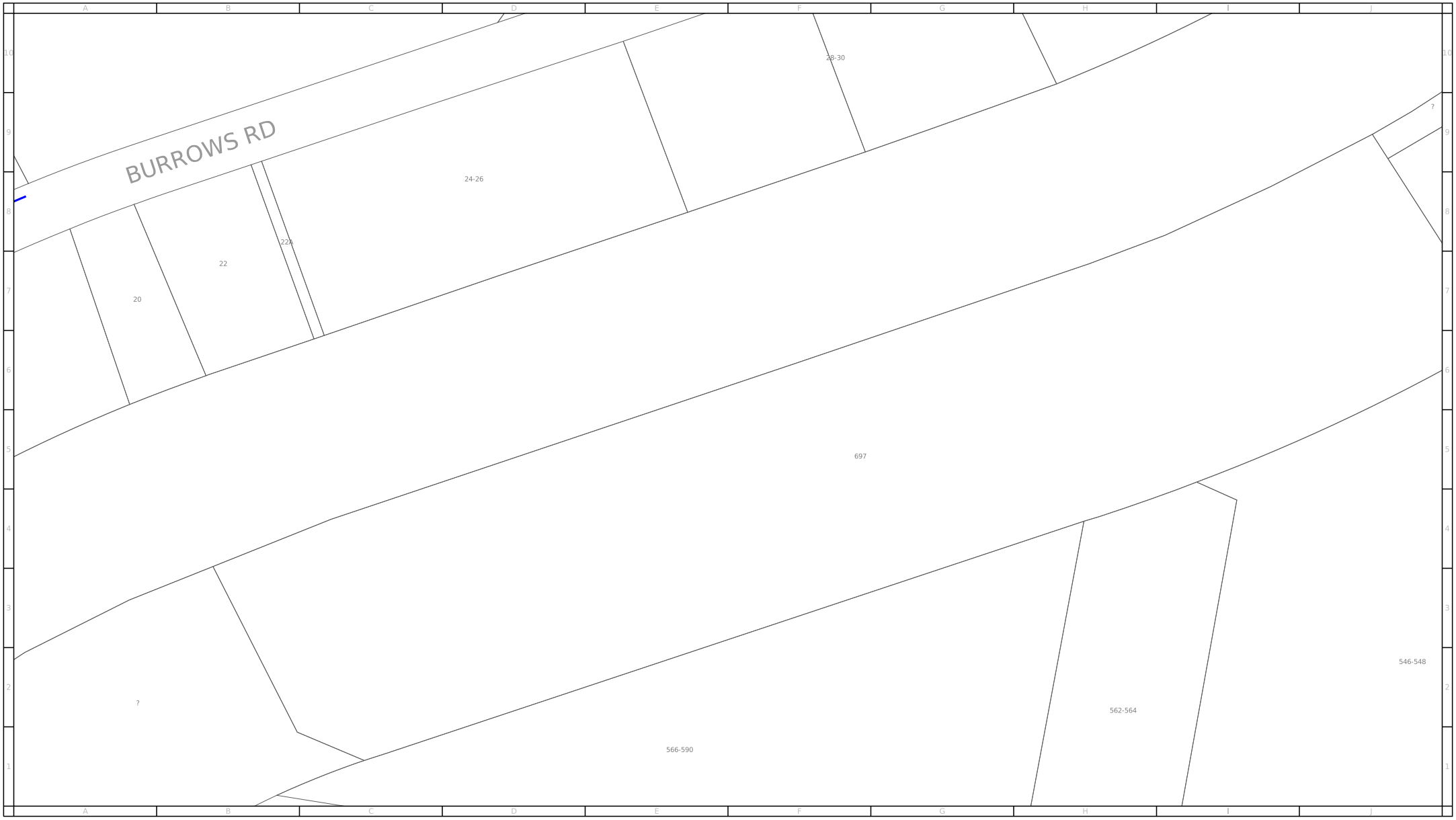
Scale: 1:2000

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

Jemena
ABN 87 003 004 322

BYDA Authority: Jemena Gas Networks (NSW)

BYDA Location: 2-22 Kent Road Mascot NSW, 2020



Jemena
ABN 87 003 004 322

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

N
W
E
S

Scale: 1:2000

Issue Date: 15/05/2024

BYDA Seq No: 239238674

BYDA Job No: 36682921

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

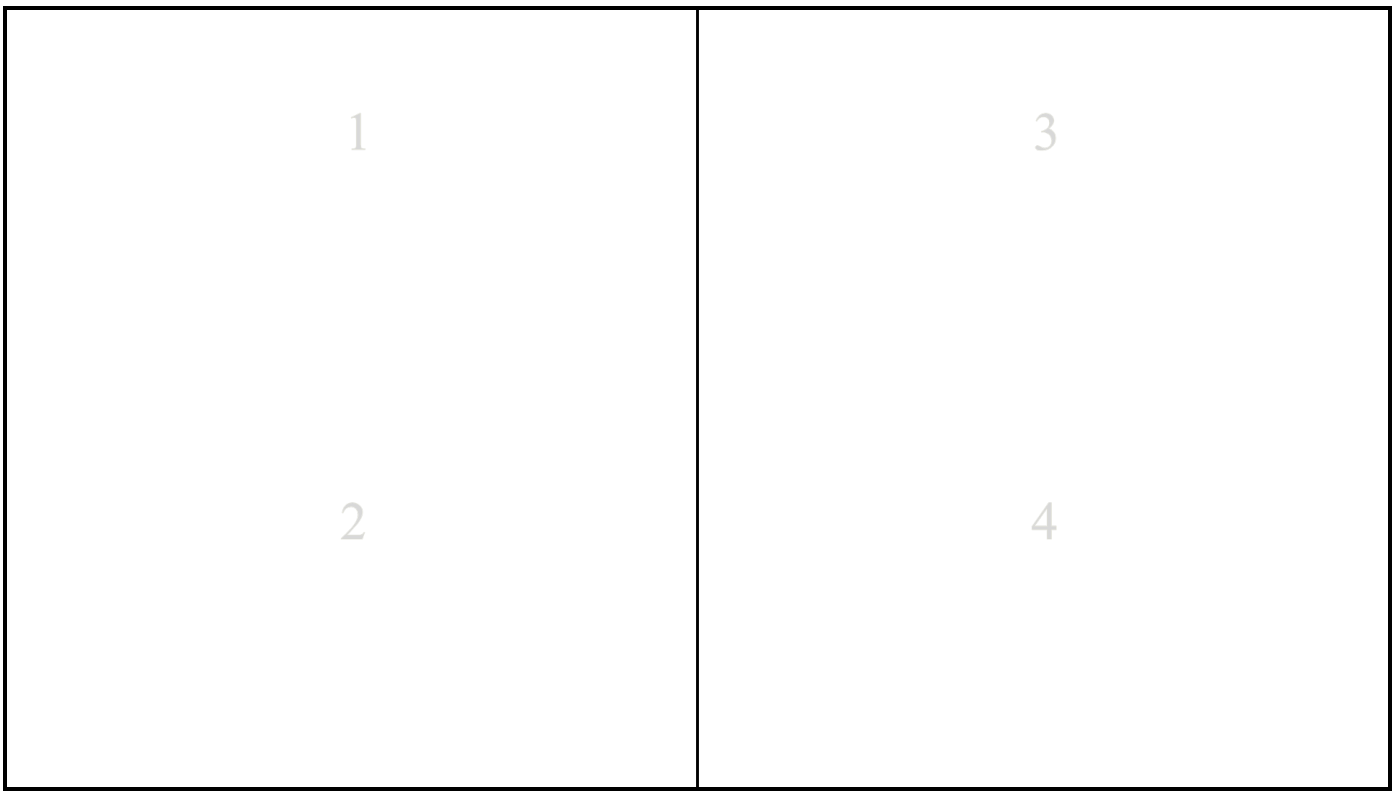
A.6 NBN Co NSWAct

To:	Neil Langford
Phone:	Not Supplied
Fax:	Not Supplied
Email:	neil.langford@arup.com

Dial before you dig Job #:	36682921
Sequence #	239238660
Issue Date:	15/05/2024
Location:	2-22 Kent Road , Mascot , NSW , 2020

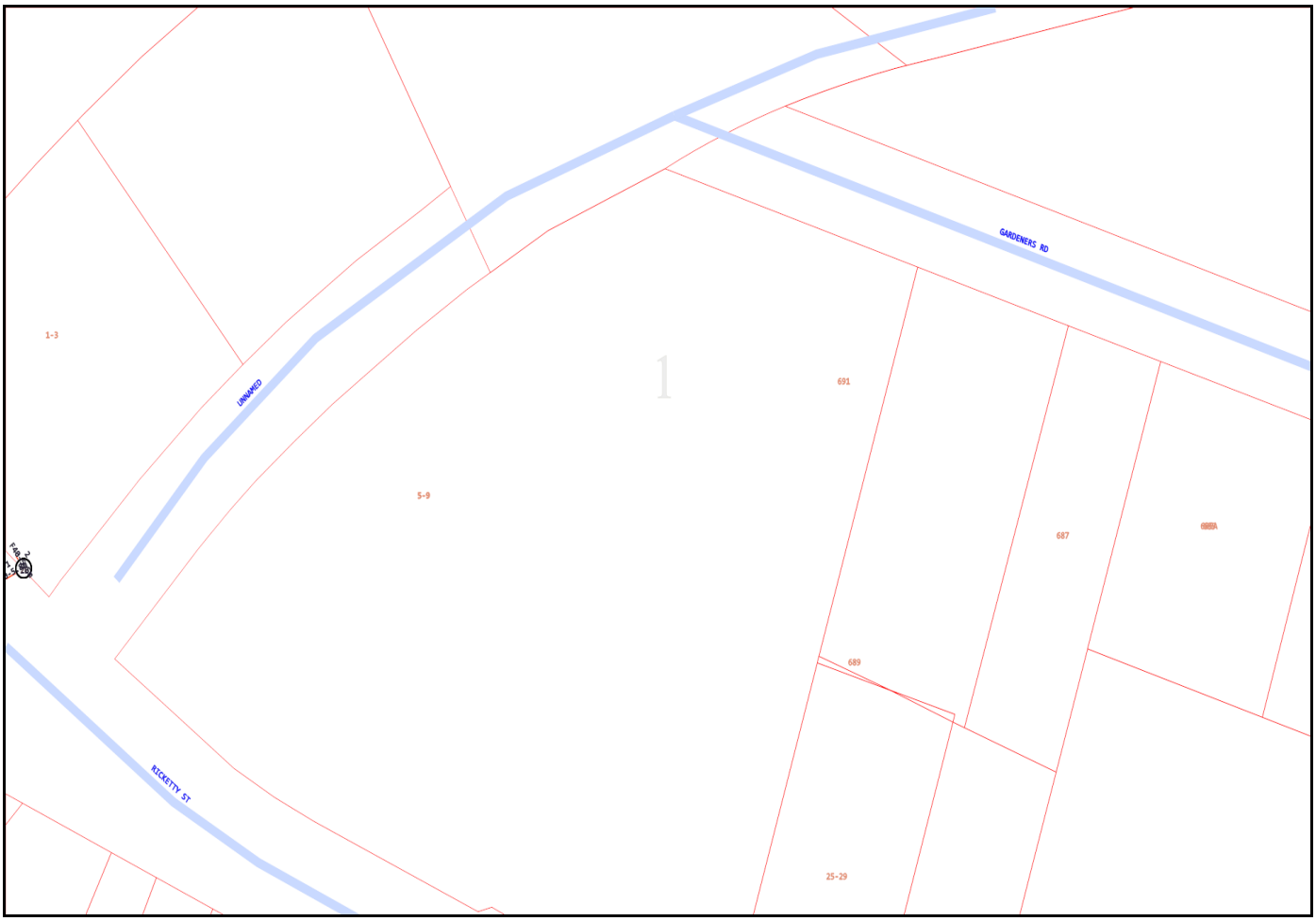
BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm

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

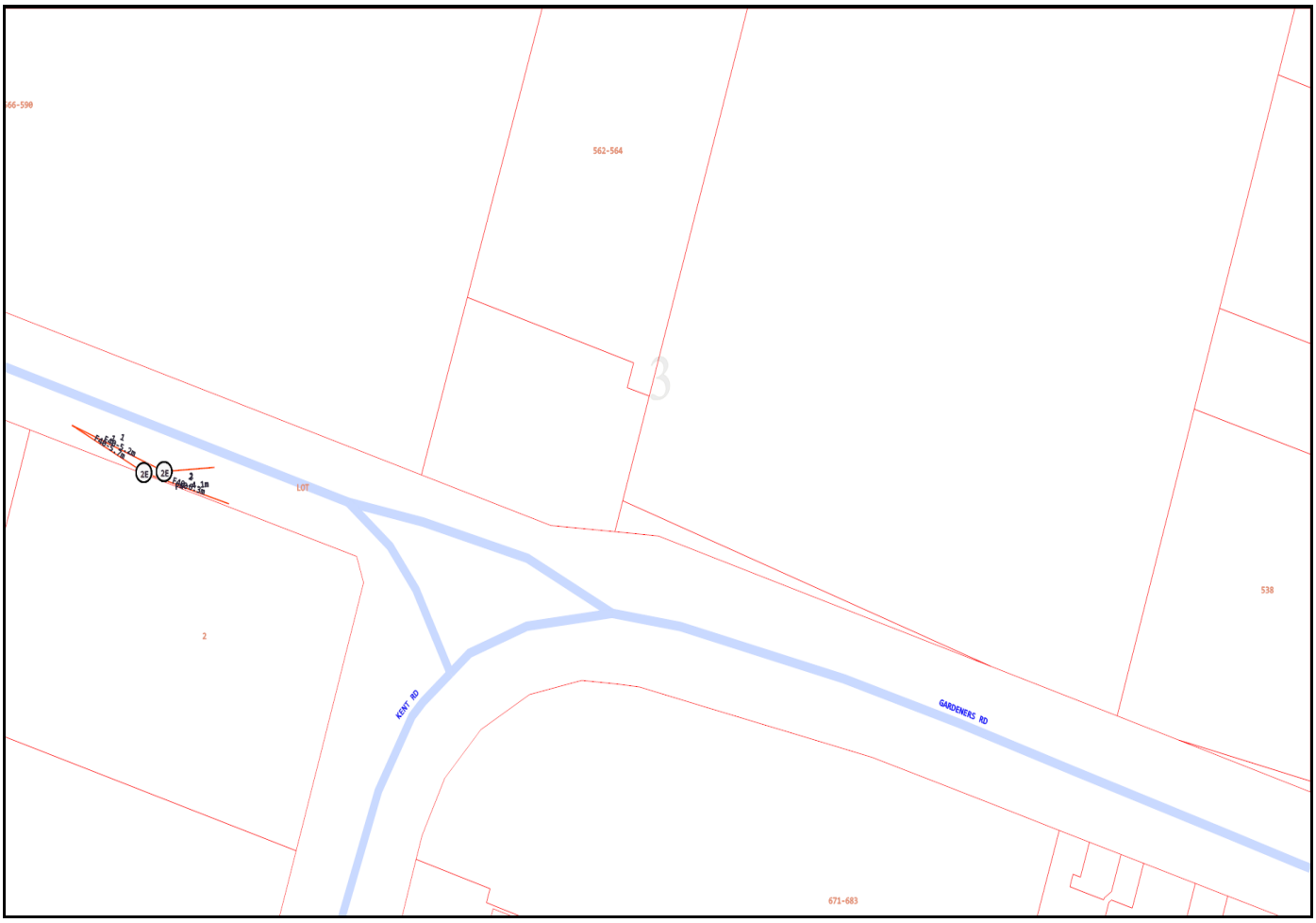


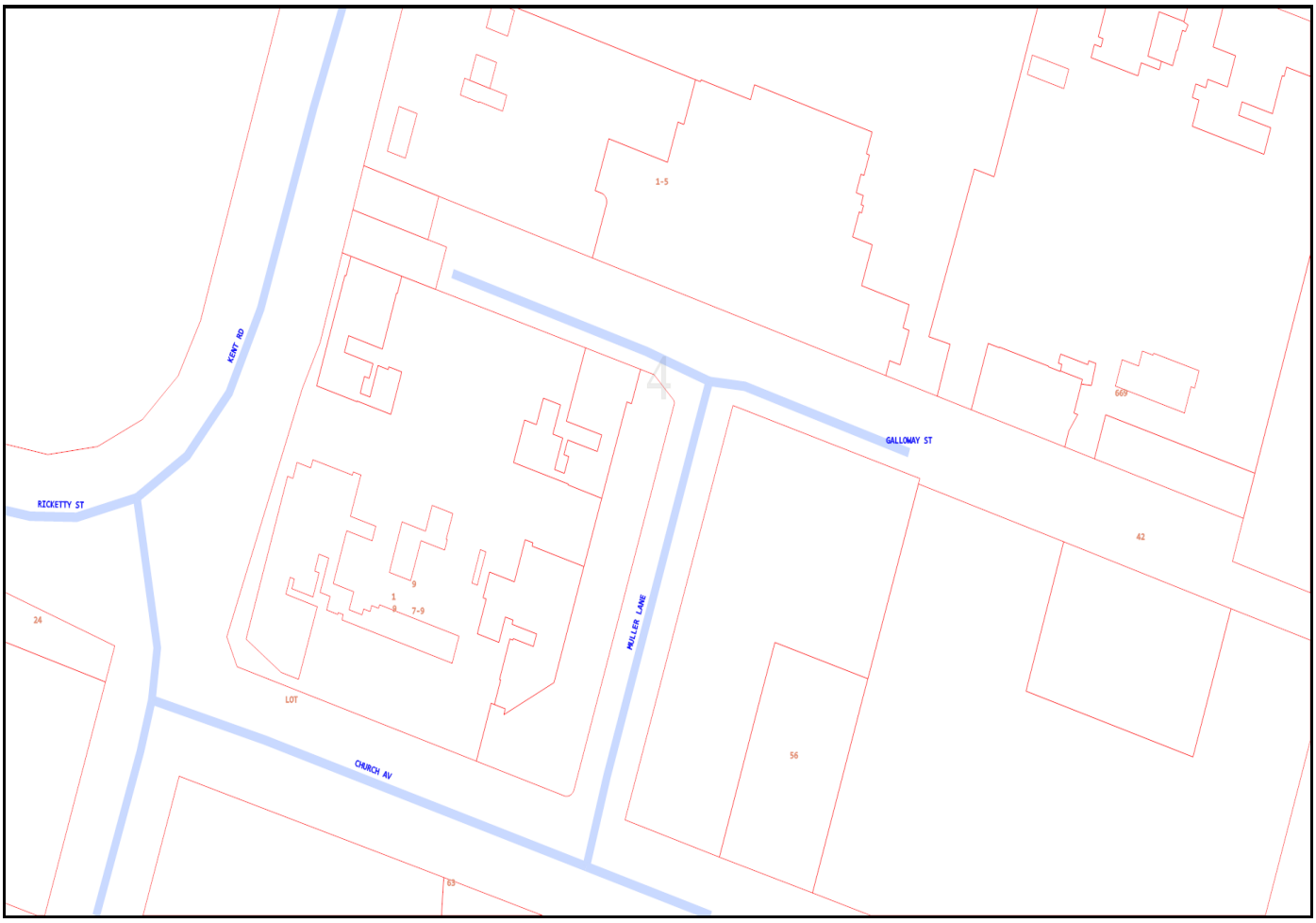
LEGEND

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


GARDENERS RD
UNNAMED
RICKETTY ST
1-3
5-9
1
691
687
689
25-29


10
20
22
24-26
31-33
10-22
RICKETTY ST
32
30
2
10
38
40
42
23
21
OSSARY ST
26-32
19
5
COGGING PL


566-590
562-564
3
LOT
2
538
KENT RD
GARDENERS RD
671-683



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:	Neil Langford
Phone:	Not Supplied
Fax:	Not Supplied
Email:	neil.langford@arup.com

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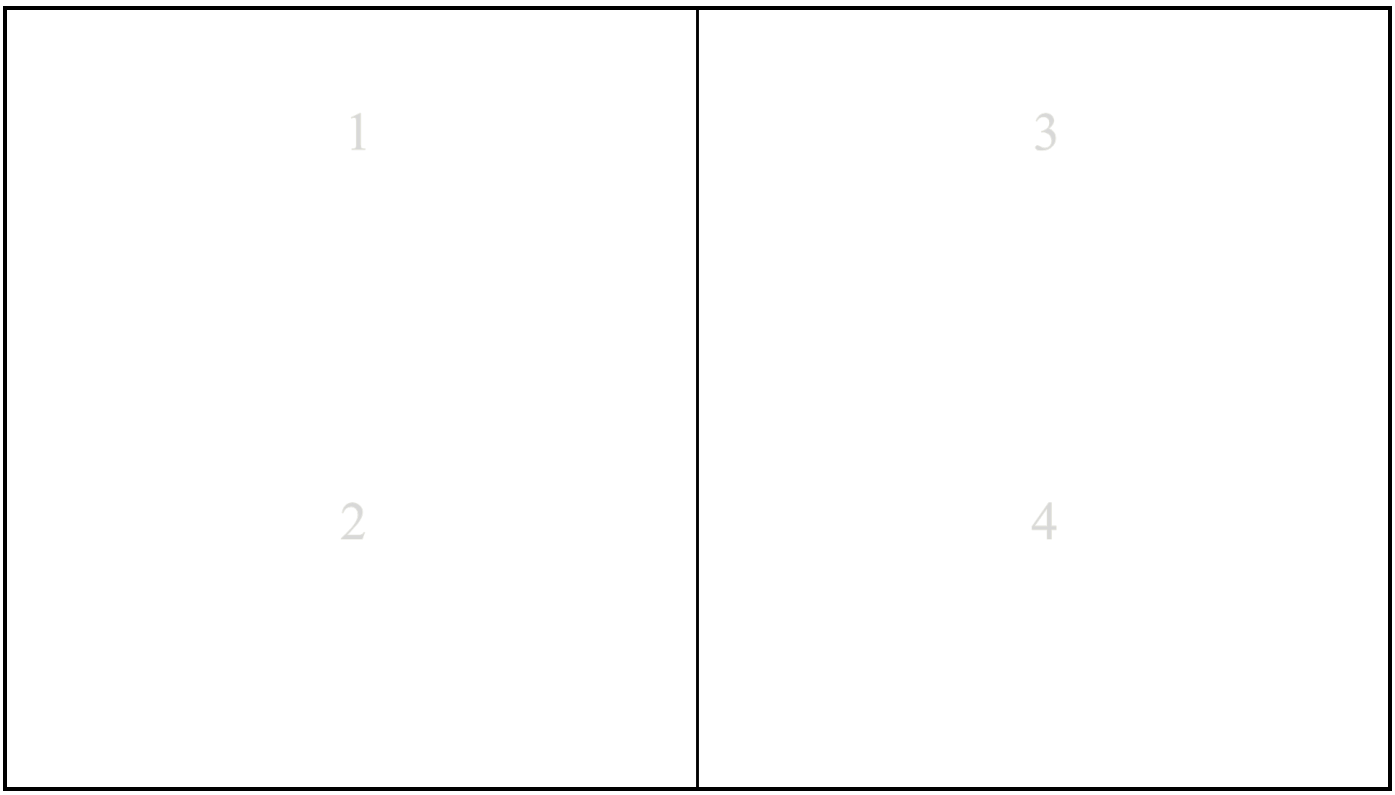

LEGEND

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2E	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
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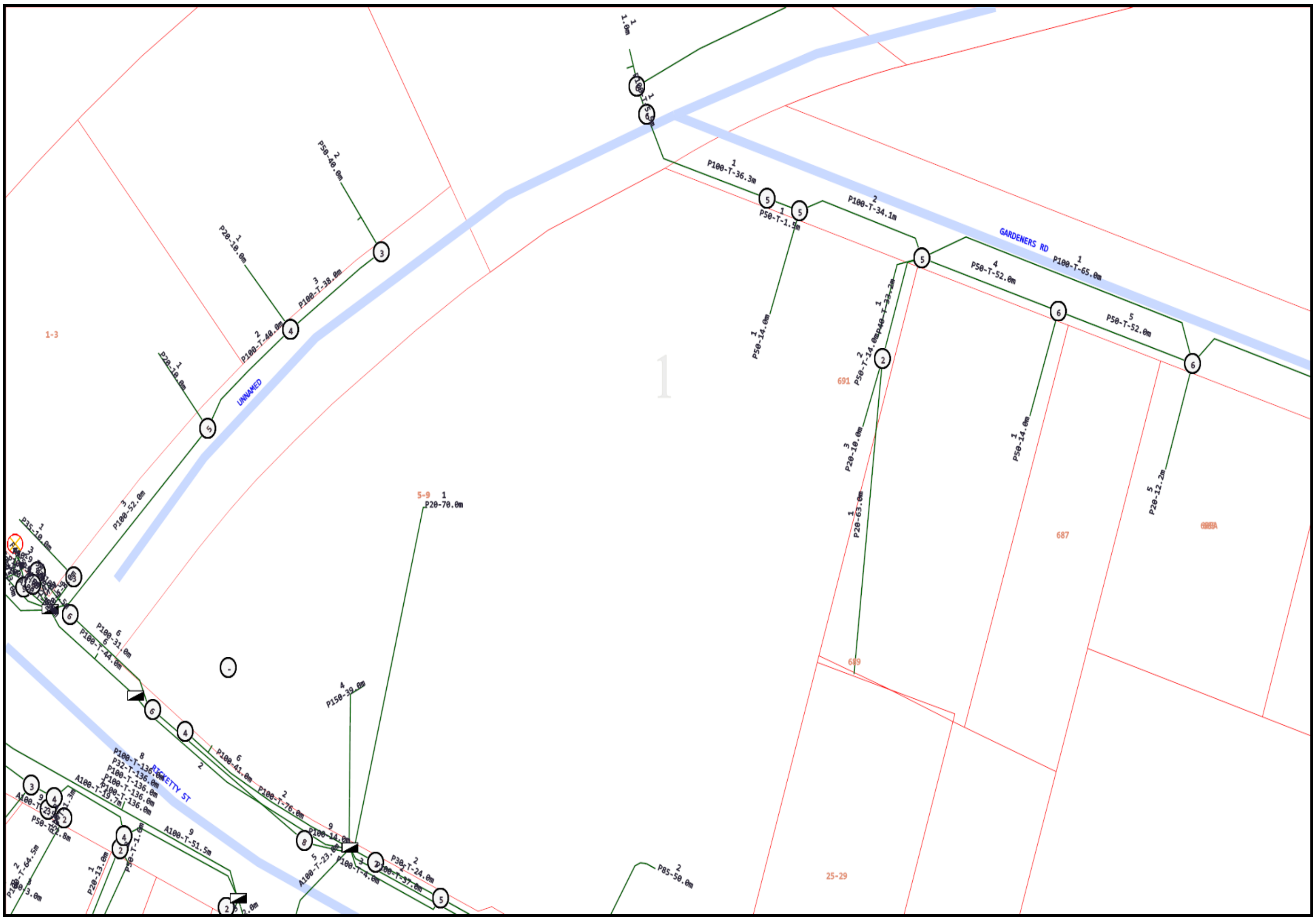
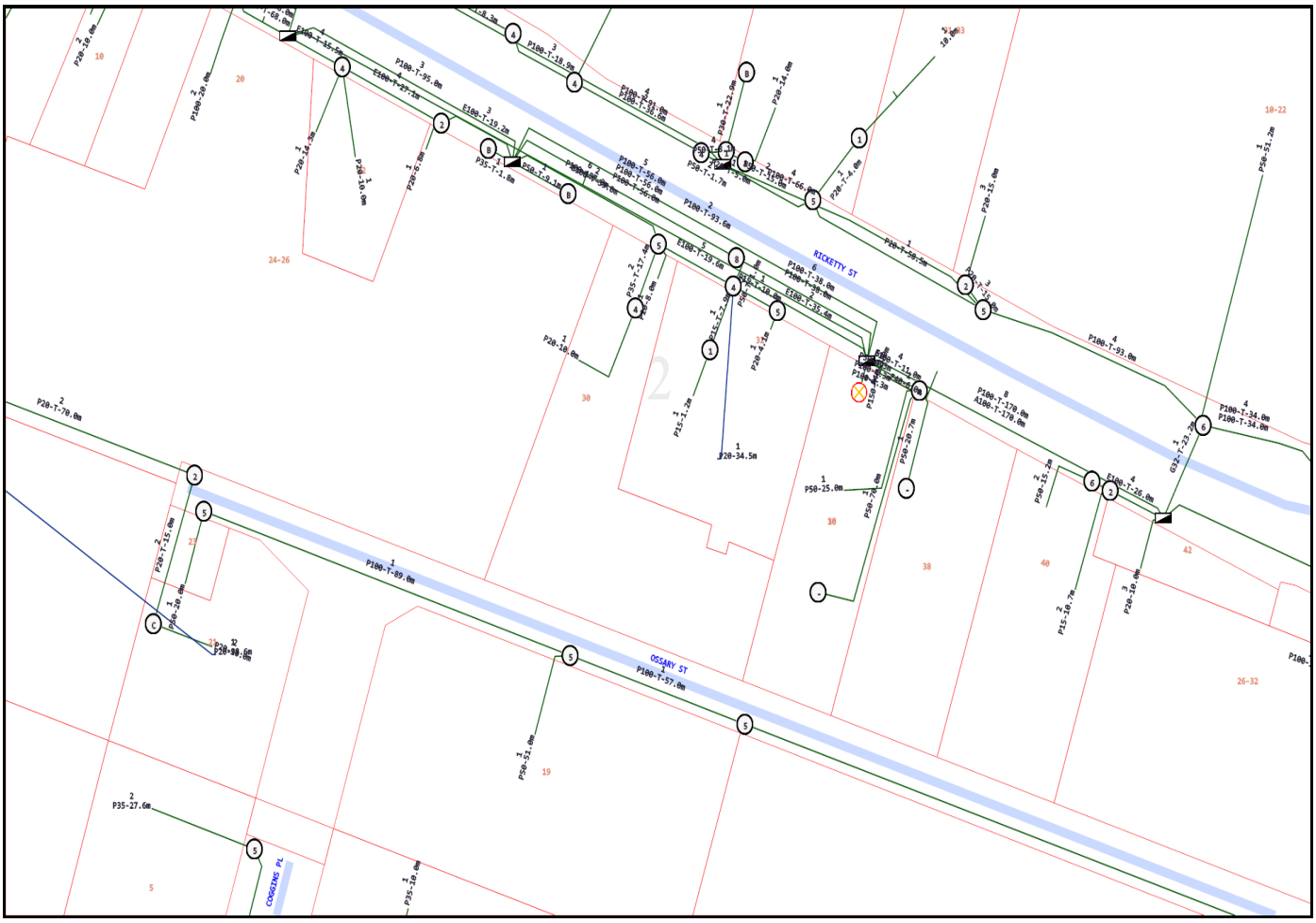
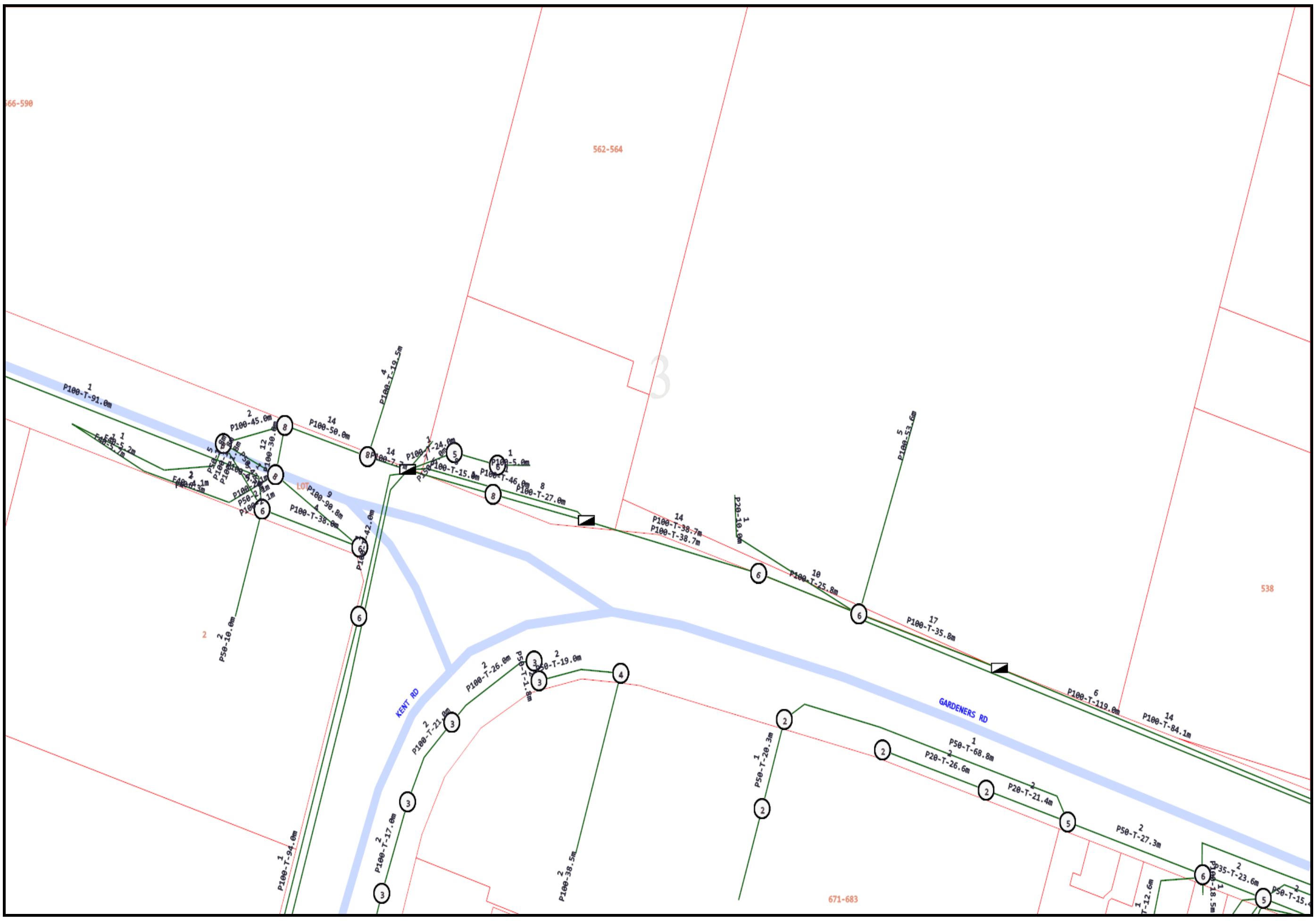
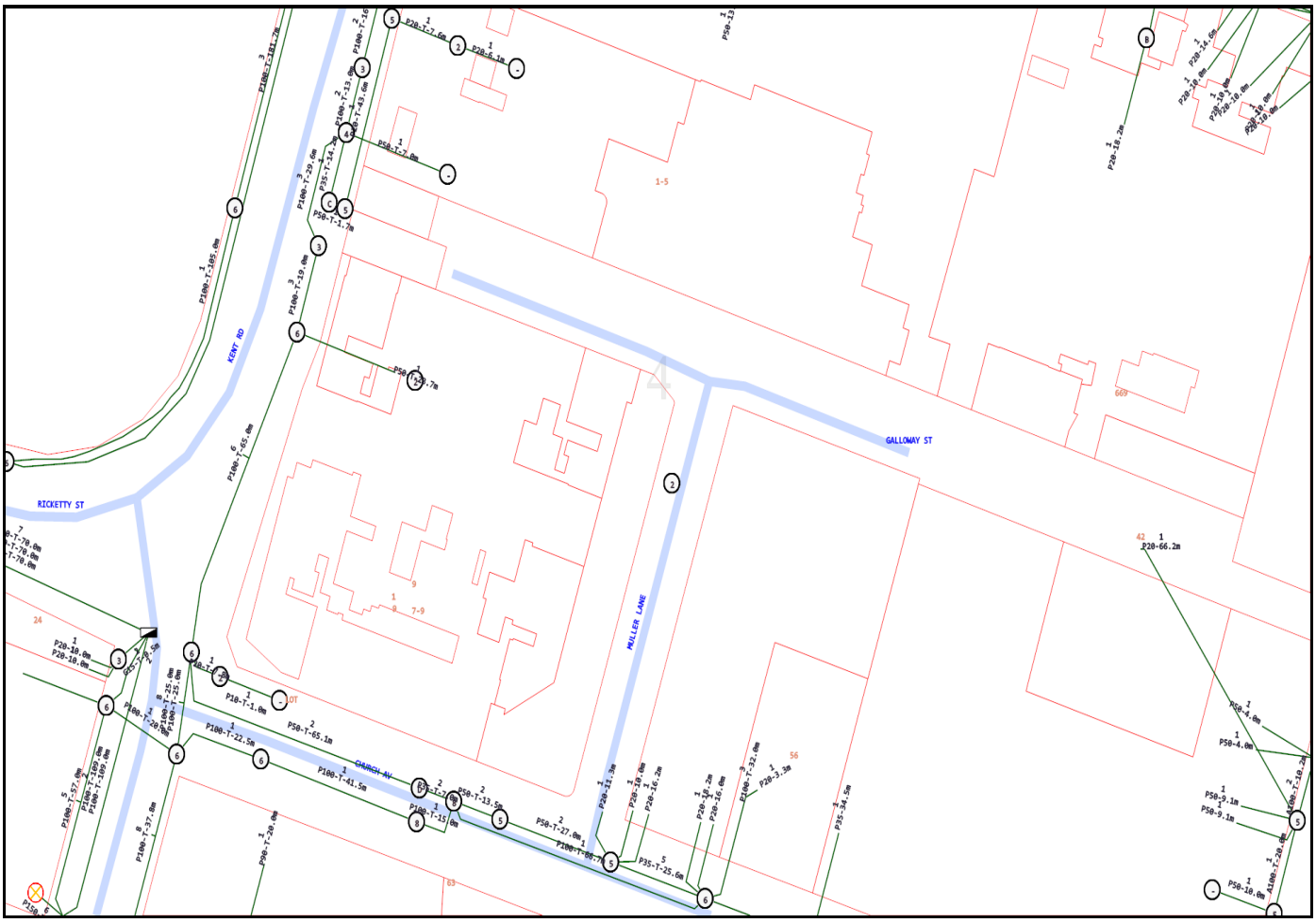


GARDENERS RD
UNNAMED
1-3
691
687
689
5-9
25-29
1
P100-T-36.3m
P100-T-34.1m
P50-T-1.5m
P50-T-14.0m
P100-T-65.0m
P50-T-52.0m
P20-12.2m
P50-40.0m
P20-10.0m
P100-T-38.0m
P100-T-40.0m
P100-52.0m
P20-70.0m
P150-39.0m
P100-41.0m
P100-T-76.0m
P100-31.0m
P100-T-44.0m
A100-T-51.5m
P85-50.0m
P30-T-24.0m


RICKETTY ST
OSSARY ST
COGGING PL



562-564
538
671-683
KENT RD
GARDENERS RD
P100-T-91.0m
P100-T-45.0m
P100-T-50.0m
P100-T-19.5m
P100-T-53.6m
P100-T-38.7m
P100-T-25.8m
P100-T-35.8m
P100-T-119.0m
P100-T-84.1m
P100-T-94.0m
P100-T-38.5m
P50-T-68.8m
P20-T-26.6m
P20-T-21.4m
P50-T-27.3m
P50-T-20.3m
P100-T-17.0m
P100-T-26.0m
P50-T-19.0m
P50-T-10.0m
P100-T-38.0m
P100-T-27.0m



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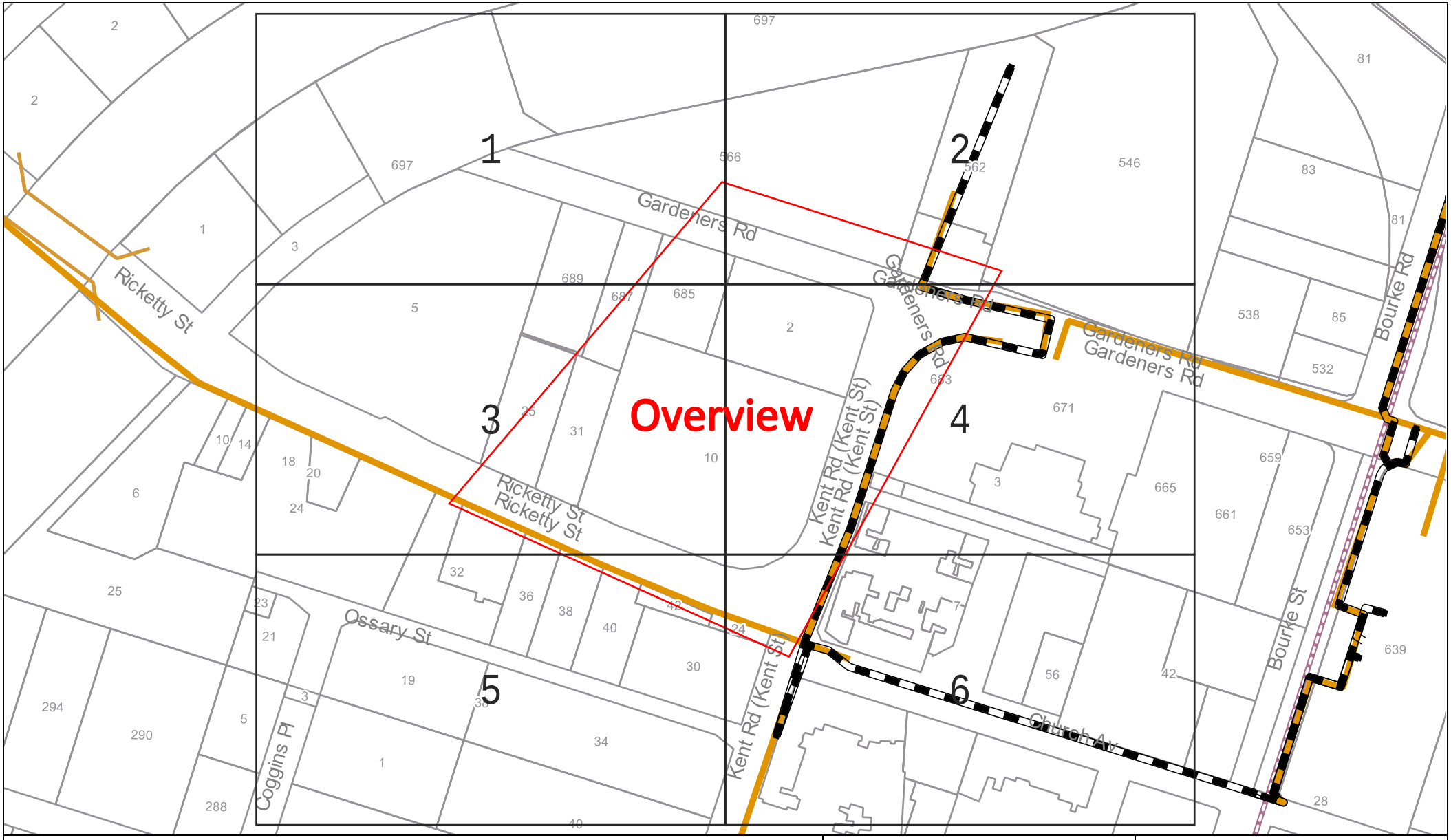
A.7 Nextgen NCC - NSW



Sequence Number: 239238667

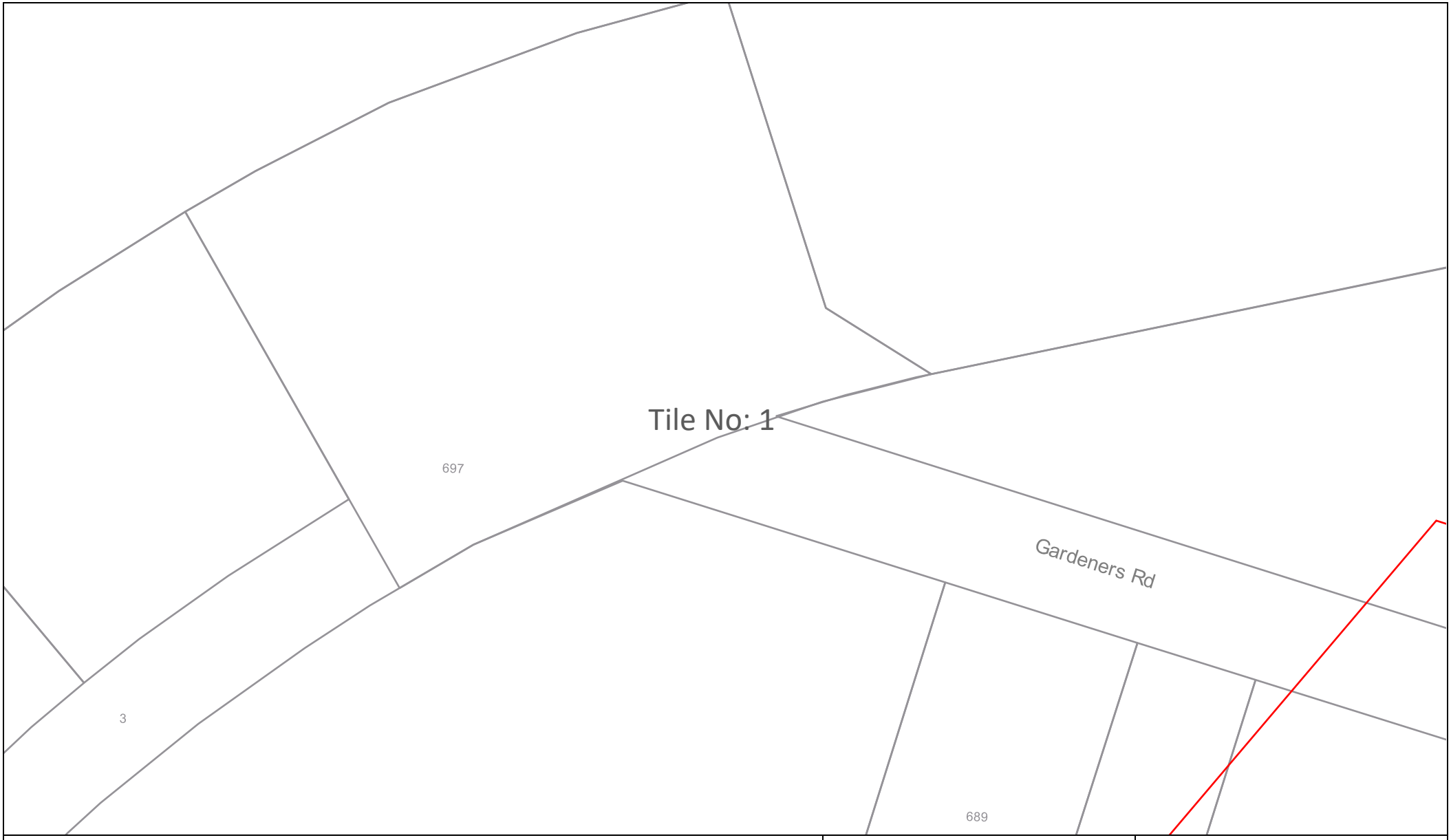
Date: 15/05/2024

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 COMMERCIALLY 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.

nextgen GROUP

LEGEND

Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post



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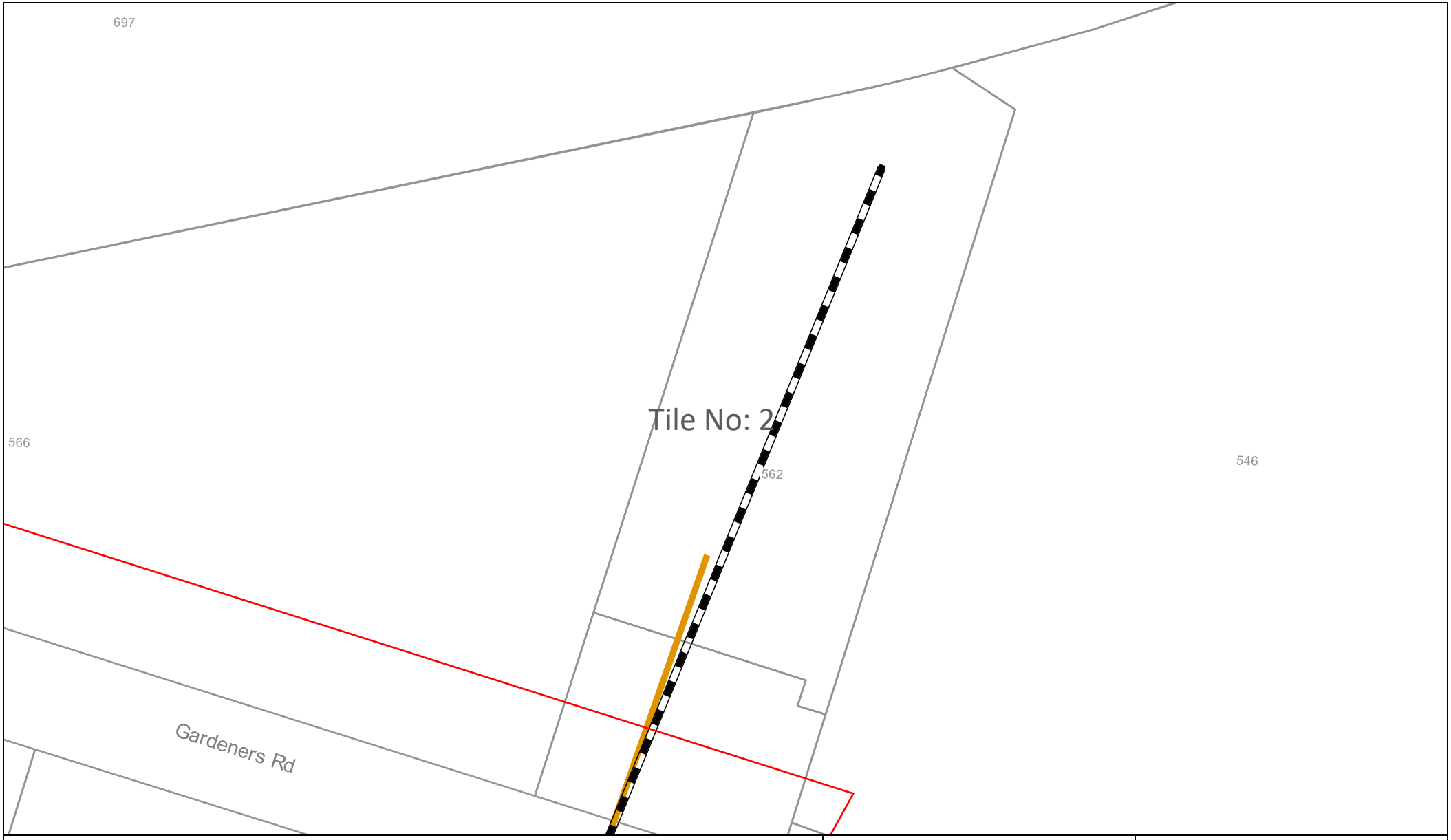
nextgen GROUP

LEGEND

Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post



Sequence Number: 239238667

Date: 15/05/2024

nextgen GROUP

LEGEND

Digsite

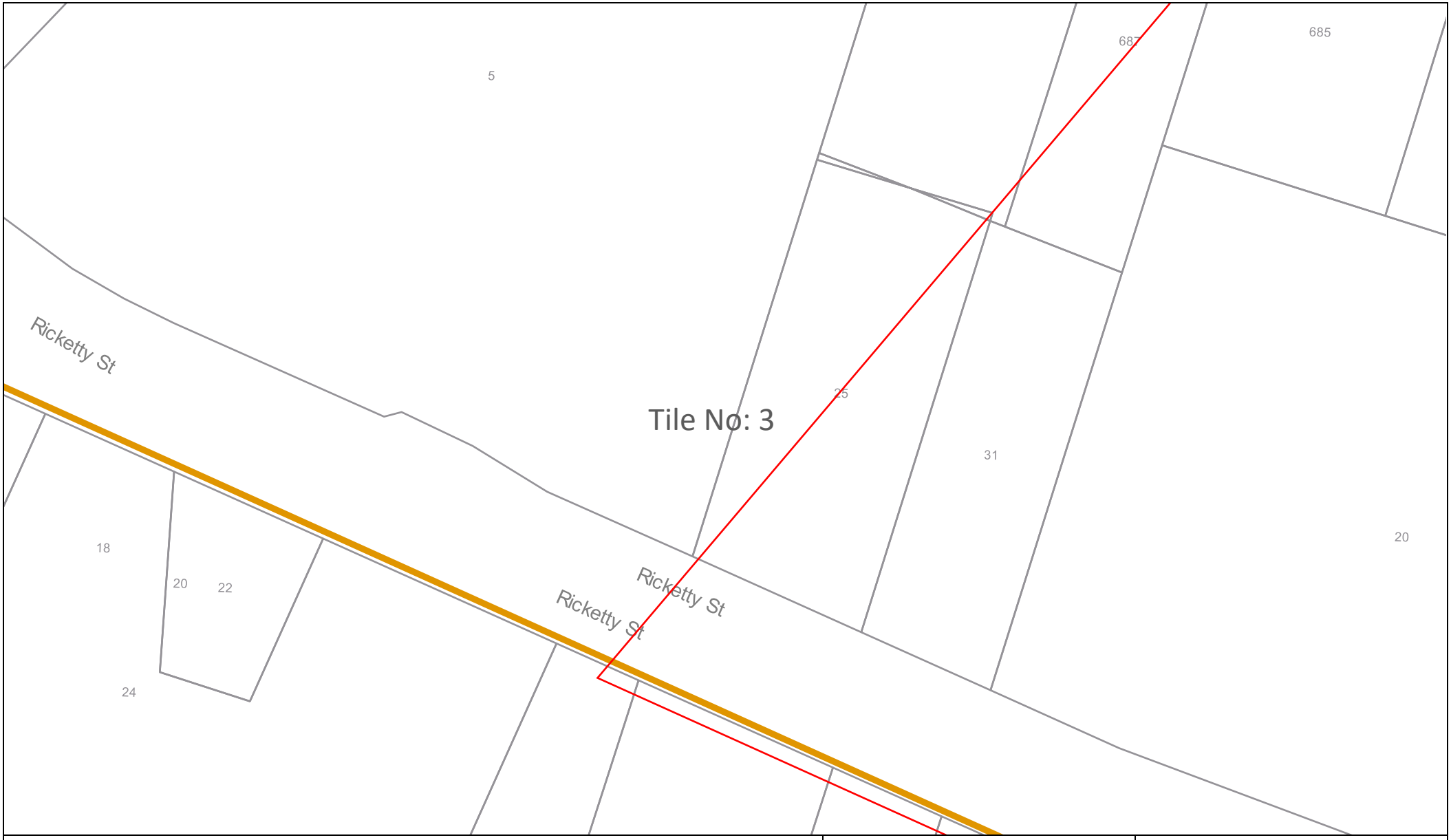
Area

Assets

Cable

3rd Party Duct

Marker Post



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nextgen GROUP

LEGEND

Digsite

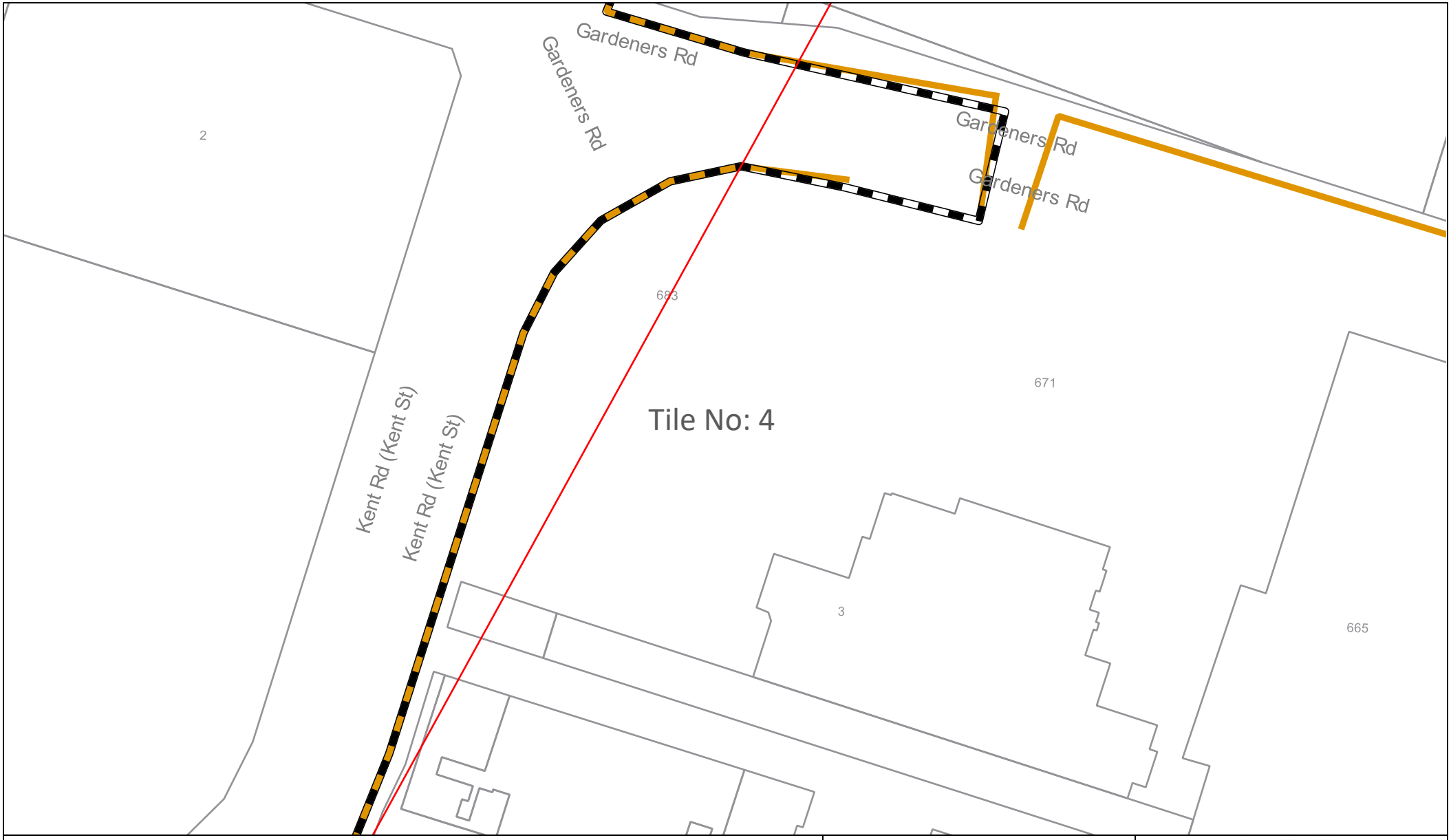
Area

Assets

Cable

3rd Party Duct

Marker Post



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nextgen GROUP

LEGEND

Digsite

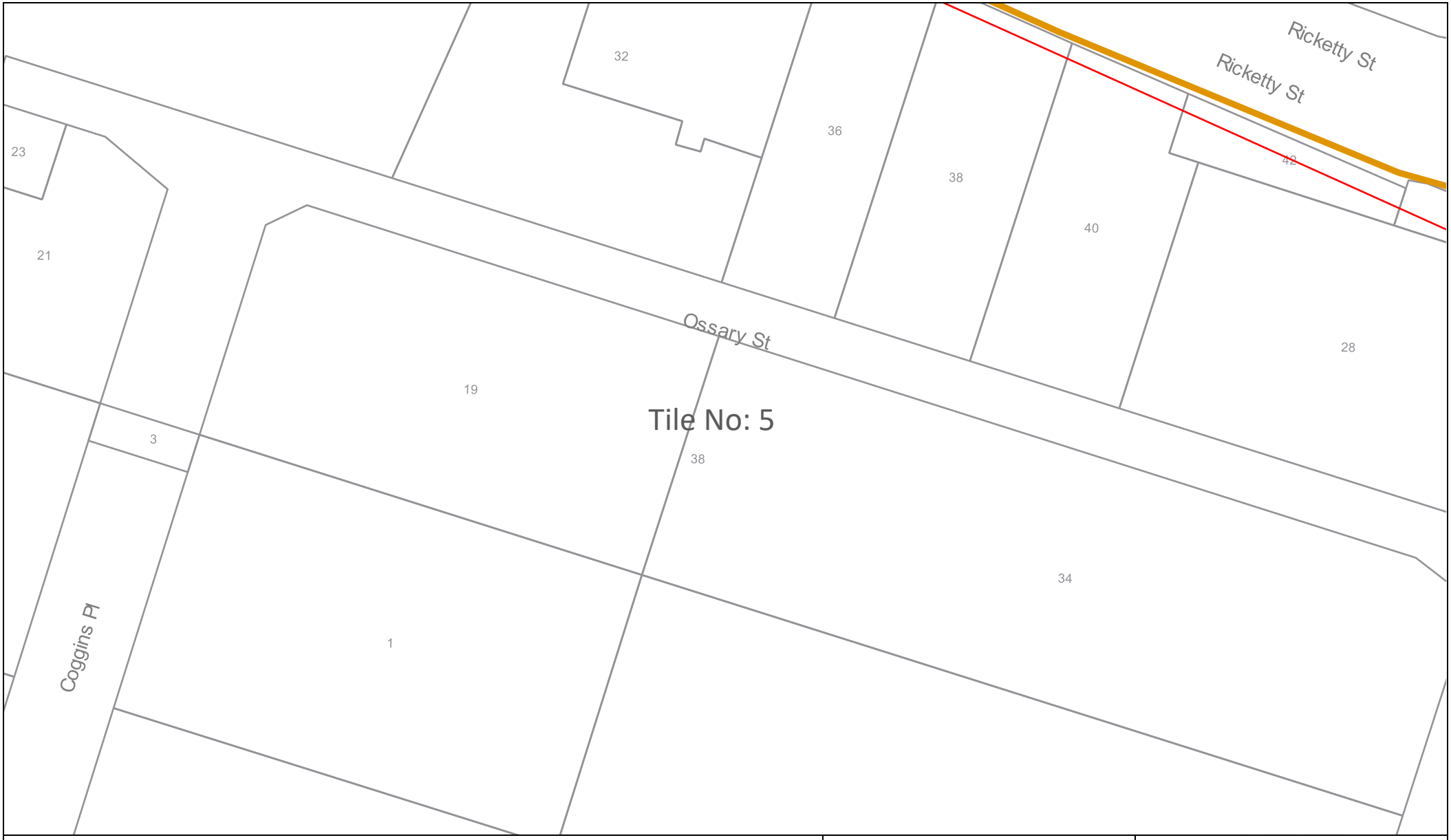
Area

Assets

Cable

3rd Party Duct

Marker Post



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nextgen GROUP

LEGEND

Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post

Sequence Number: 239238667

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nextgen GROUP

LEGEND

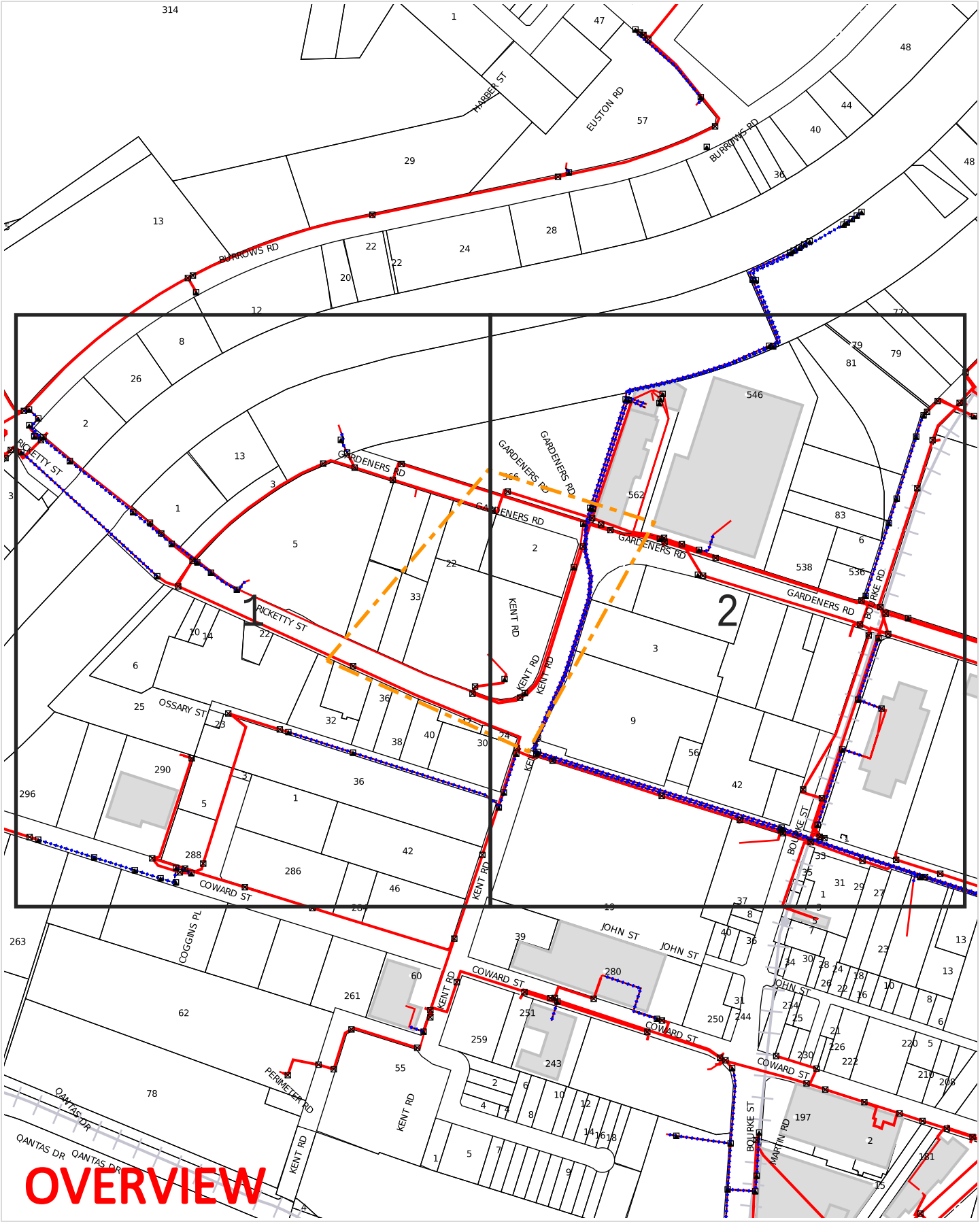
Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post

A.8 Optus

Sequence Number: 239238677

Date Generated: 15 May 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



OVERVIEW

Sequence Number: 239238677

Date Generated: 15 May 2024

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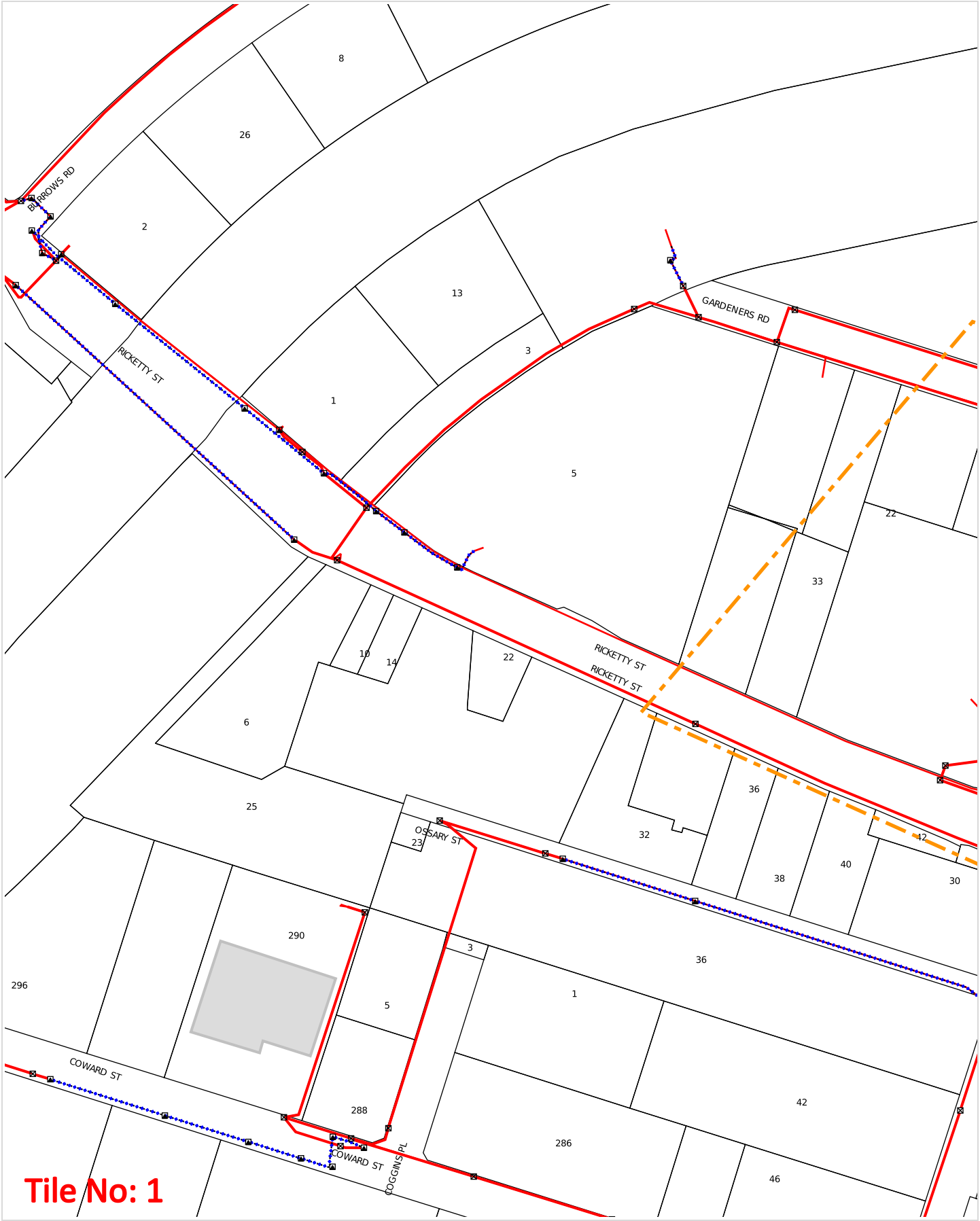

Tile No: 1

Sequence Number: 239238677

Date Generated: 15 May 2024

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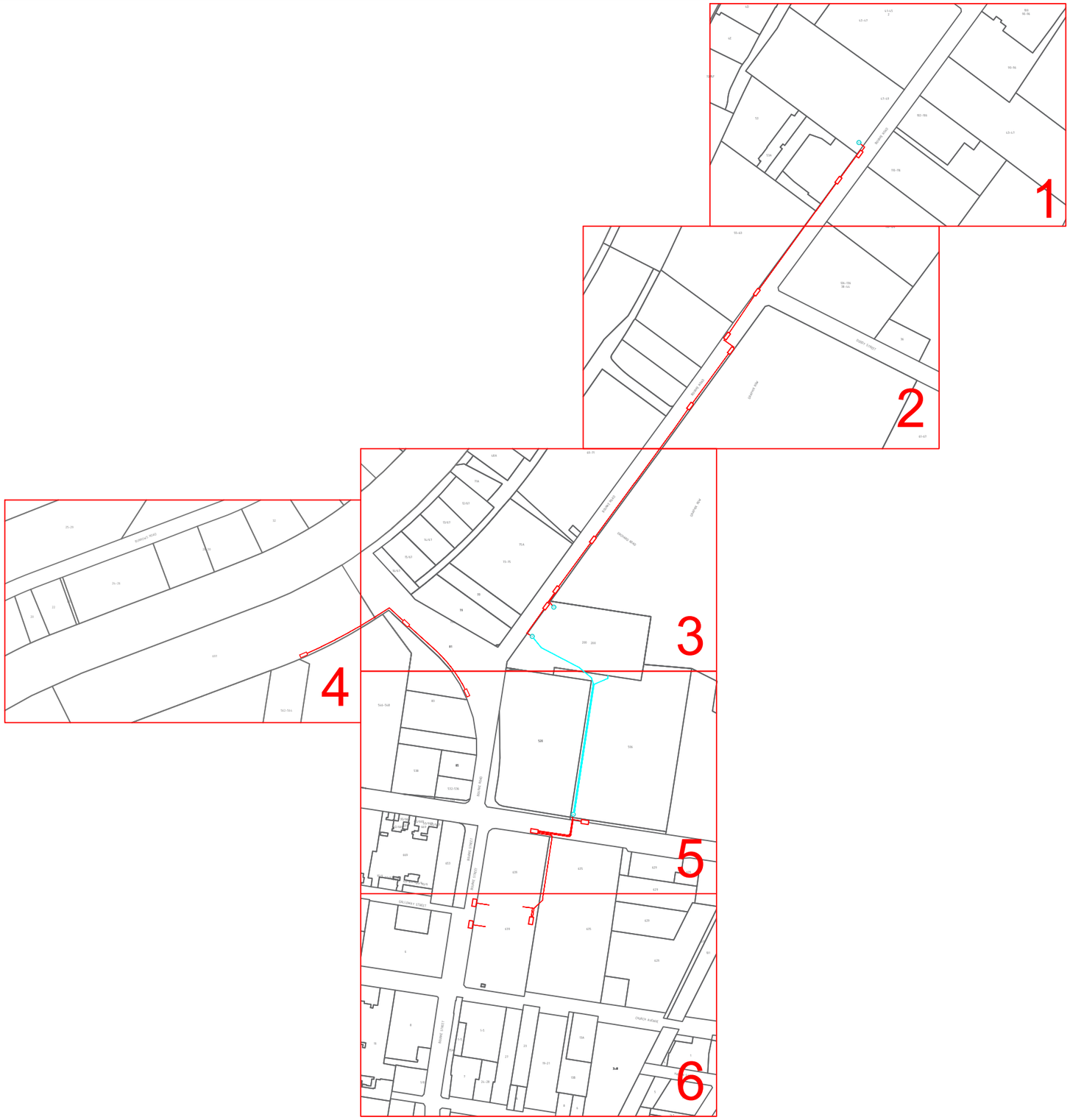
A.9 Polse Pty Ltd



Polse

1300 171 859
assets@polse.com.au

DANGER
BEFORE EXCAVATING CHECK FOR POWER CABLES AND GAS PIPES ENSURE THAT YOU HAVE CALLED
"1100 DIAL BEFORE YOU DIG"
FOR ALL SERVICE LOCATIONS

WARNING
Major fibre optic cables

Indicative Plan

- Polse pit
- Polse conduit containing large fibre optic cable
- Third Party Pit
- Third Party conduit containing large fibre optic cable

A.10 Superloop (Australia) Pty Ltd

Before You Dig Australia (BYDA)
Location Information

Level 1, 545 Queen Street
Brisbane, QLD, 4000
Ph: (07) 3905 2400
www.superloop.com

To:
Arup - Neil Langford
135-151 Clarence Street Level 5
Sydney NSW 2000

Enquiry Details

Utility ID	90428
Sequence Number	239238666
Enquiry Date	15/05/2024 10:50
Response	**AFFECTED**
Address	2-22 Kent Road Mascot
Location in Road	Road,Nature Strip,Footpath
Activity	Planning and Design,Tendering

Enquirer Details

Customer ID	3326983
Contact	Neil Langford
Company	Arup
Email	neil.langford@arup.com
Phone	+61293209028

Disclaimer

Your Enquiry has fallen within the risk area for Superloop's asset.

IMPORTANT:

- The proposed work has the potential to impact Superloop underground assets (Optical Fibre) in the area. Diagrams indicating the position of Superloop's underground assets are attached.
- There may be additional Superloop assets in this area contained within Telstra duct which are not shown on these diagrams. No work is to take place until plans have been obtained from Telstra.
- **Superloop does not accept any liability for inaccuracies or any lack of information on the plans, or any damage to Superloop assets resulting from, or in connection with the information provided.**

CONCERNING SUPERLOOP PLANS:

- Drawings and Plans provided by Superloop are reference diagrams which were correct at the time the asset was built. Exact ground cover and alignments cannot be provided with any certainty as these may alter over time. Depths of Telecommunications plant vary considerably as do alignments. It is essential to uncover the asset and positively identify the asset's exact location.
- Superloop plans are provided as a guide only and the completeness of the information cannot be guaranteed.
- The attached diagrams are valid for 28 days from the date of this reply.
- Services belonging to other third parties are not included on these plans.
- Superloop plans are provided for the use of the applicant only and must not be distributed to any third parties.
- Please ensure Superloop plans and information provided remains on-site at all times during construction.

DUTY OF CARE:

- When working in the vicinity of telecommunications plant you have a legal "Duty of Care" that must be observed.
- It is the responsibility of the owner and any consultant engaged by the owner, including an architect, consulting engineer, developer, and head contractor to design for minimal impact and protection of Superloop plant. Superloop will provide plans and sketches showing the presence of its network to assist at this design stage. It is the owner's (or constructor's) responsibility to:
    - ❖ Request plans of Superloop plant for a particular location at a reasonable time before construction begins
    - ❖ Visually locate Superloop plant by vacuum excavation (pot holing) where construction activities may damage or interfere with Superloop plant (see "Essential Precautions and Approach Distances" section for more information)
    - ❖ Contact Superloop, if Superloop plant is wholly or partly located near planned construction activities.

DAMAGE:

IN CASE OF EMERGENCY OR TO REPORT DAMAGE

PHONE 1300 558 406

IMMEDIATELY

- All damage, regardless of severity, must be reported to Superloop immediately.
- The contractor, or other agency, is liable for all damage to Superloop assets when works commence prior to obtaining plans, or failure to follow agreed instructions.
- Superloop reserves all rights to recover compensation for loss or damage to its cable network or other property including consequential losses.
- **Superloop does not accept any liability for loss or damage occurring due to inaccuracy or lack of information on the plans provided.**

ESSENTIAL PRECAUTIONS AND APPROACH DISTANCES:

Note: If the following clearances cannot be maintained, please contact Superloop (see above for details) for advice on how best to resolve this situation.

1. On receipt of plans and before commencing excavation work or similar activities near Superloop plant, carefully locate this plant first to avoid damage. Undertake prior manual exposure such as potholing when intending to excavate or work closer to Superloop plant than the following approach distances:
   - Where Superloop plant is in an area where road and footpaths are well defined by kerbs or other features a minimum clear distance of 600mm must be maintained from where it could be reasonably presumed that plant would reside.
     In non-established or unformed reserves and terrain, this approach distance must be at least 1.5 metres.
   - NOTE: Even manual pot-holing needs to be undertaken with extreme care, common sense and employing techniques least likely to damage cables.
   - If construction work is parallel to Superloop plant, then careful hand digging or using non-destructive water jet method (pot-holing) at least every 5m is required to establish the location of all plant, hence confirming nominal locations before work can commence.

2. Maintain the following minimum clearance between construction activity and **actual location** of Superloop Plant.

Jackhammers/Pneumatic Breakers	*Not within 1.0m of **actual location.***
Vibrating Plate or Wacker Packer Compactor	*Not within 0.5m of Superloop ducts.* *300mm compact clearance cover before compactor can be used across Superloop ducts.*
Boring Equipment (in-line, horizontal and vertical)	*Not within 2.0m of **actual location**.* *Constructor to check depth via vacuum excavation (pot-hole).*
Heavy Vehicle Traffic (over 3 tonnes)	*Not to be driven across Superloop ducts (or plant) with less than 600mm cover.*
Mechanical Excavators, Farm ploughing and Tree Removal	*Not within 1.0m of **actual location.*** *Constructor to check depth via vacuum excavation (pot-hole).*

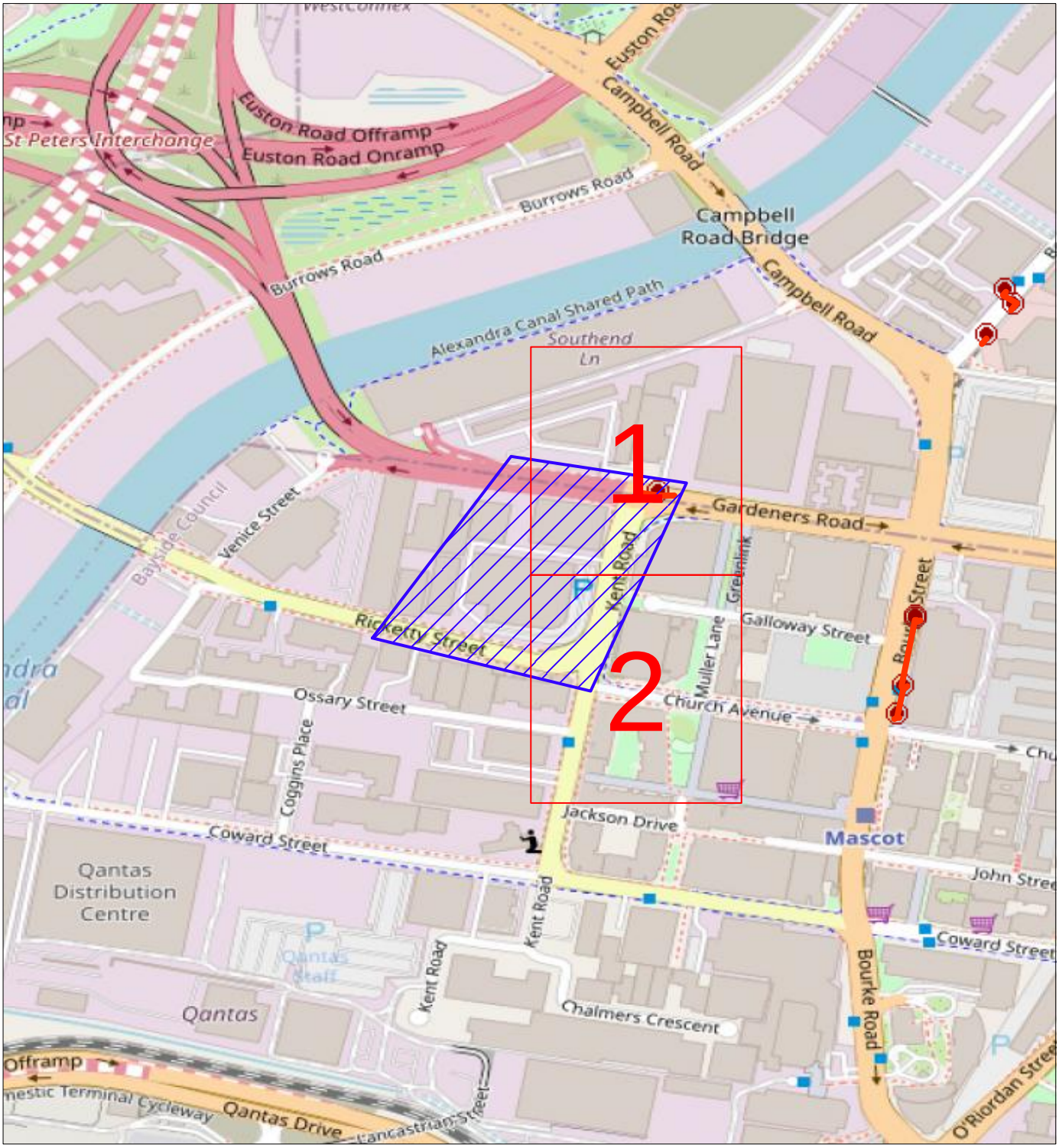
- All Superloop pits and manholes should be a minimum of 1.2m in from the back of kerb after the completion of your work.
- All Superloop conduit should have the following minimum depth of cover after the completion of your work:
  - **Footway 450mm**
  - **Roadway 450mm at drain invert and 600mm at road centre crown**

Date: 15/05/2024

Overview Map

Sequence No: 239238666

2-22 Kent Road Mascot



N

0 0.06km

LEGEND:

Superloop Asset

Property Boundary

Affected BYDA Work Area

1 Detail Map

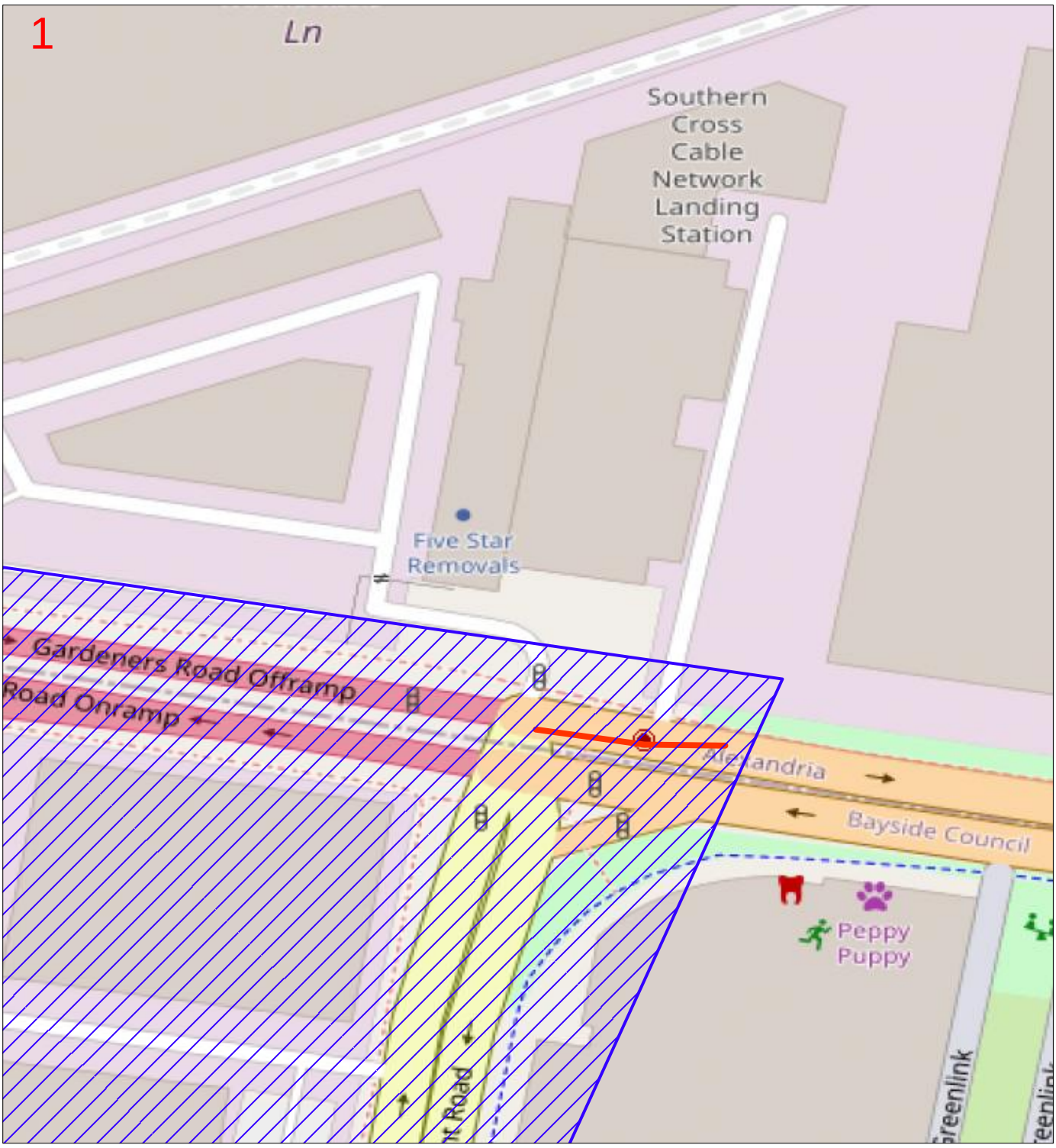
Background layer sourced from Open Street Maps

Date: 15/05/2024

Map 1

Sequence No: 239238666

2-22 Kent Road Mascot



N

0 0.01km

LEGEND:

Superloop Asset

Property Boundary

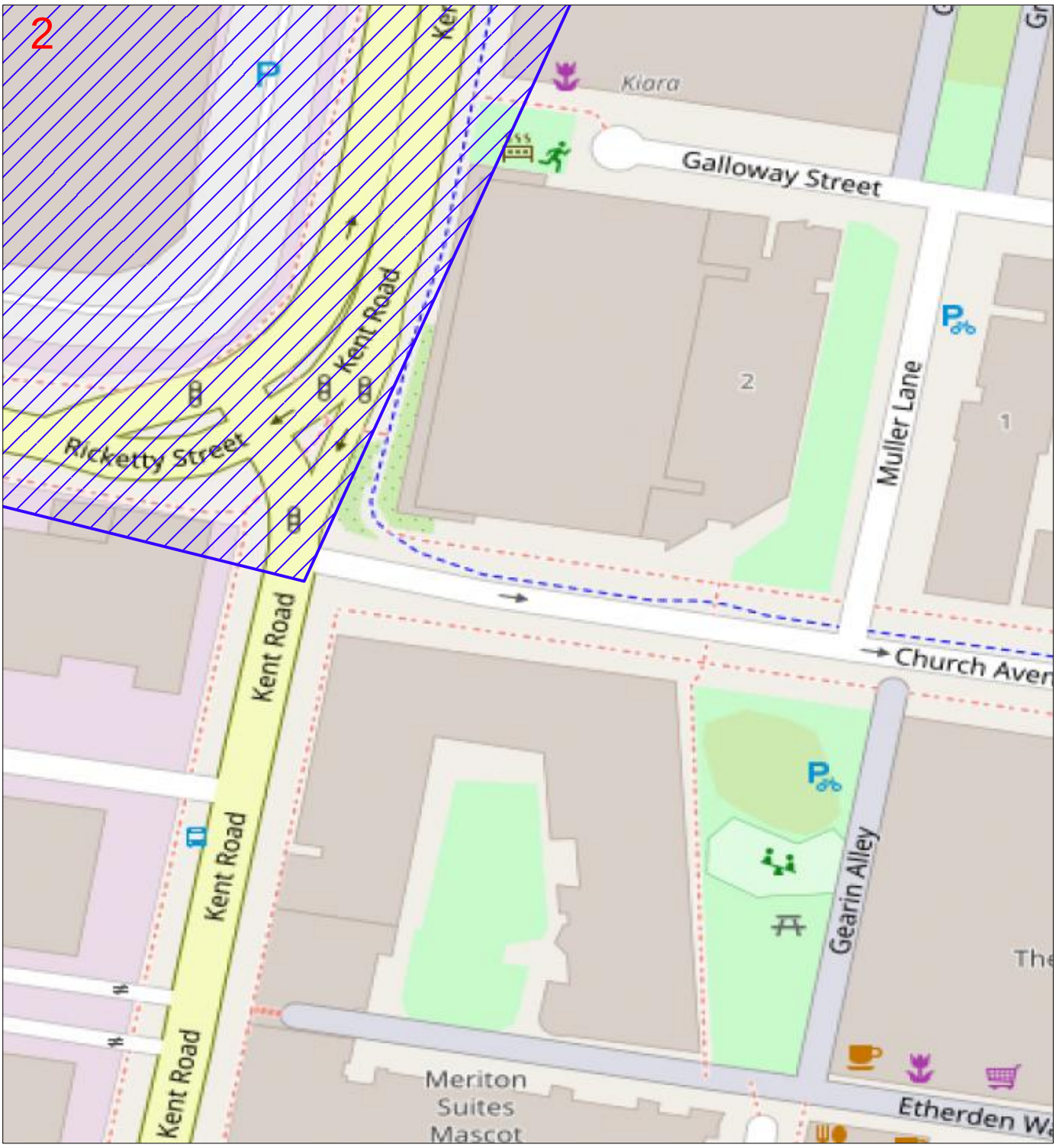
Affected BYDA Work Area

Date: 15/05/2024

Map 2

Sequence No: 239238666

2-22 Kent Road Mascot



LEGEND:

- Superloop Asset
- Property Boundary
- Affected BYDA Work Area

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Background layer sourced from Open Street Maps

A.11 Swoop

LUMINET

1300 LUMINET (586 463) DBYD@LUMINET.COM.AU

DOC: LUM-2020-05-03 | DATE: 09-07-2020

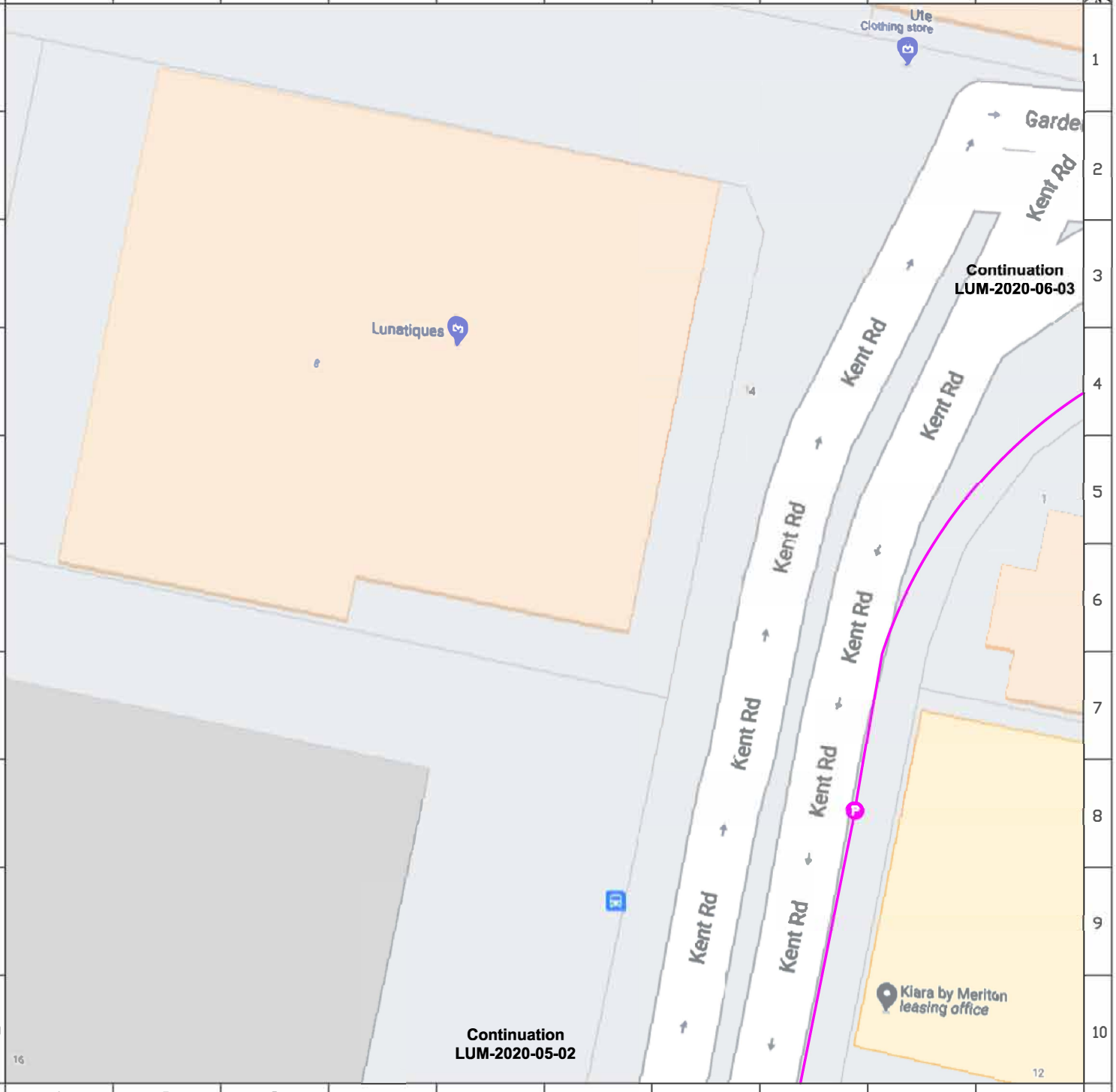
KENT ROAD, MASCOT, NSW 2020

- Luminet cable pit
- Luminet underground white optical fibre telecommunications conduit
- Third party cable pit
- Third party underground telecommunications conduit

DRAWINGS ARE NOT TO SCALE

INTERNAL USE - LUMINET DOCUMENT VERSION:
LUM-2020-05-03-01

DRAWINGS ARE INDICATIVE ONLY. ENSURE THAT YOU LOCATE ALL SERVICES BEFORE EXCAVATING. LUMINET WILL SEEK COMPENSATION FOR ALL LOSS CAUSED BY ASSEST DAMAGE.



LUMINET

1300 LUMINET (586 463) DBYD@LUMINET.COM.AU

DOC: LUM-2020-06-03	DATE: 09-07-2020

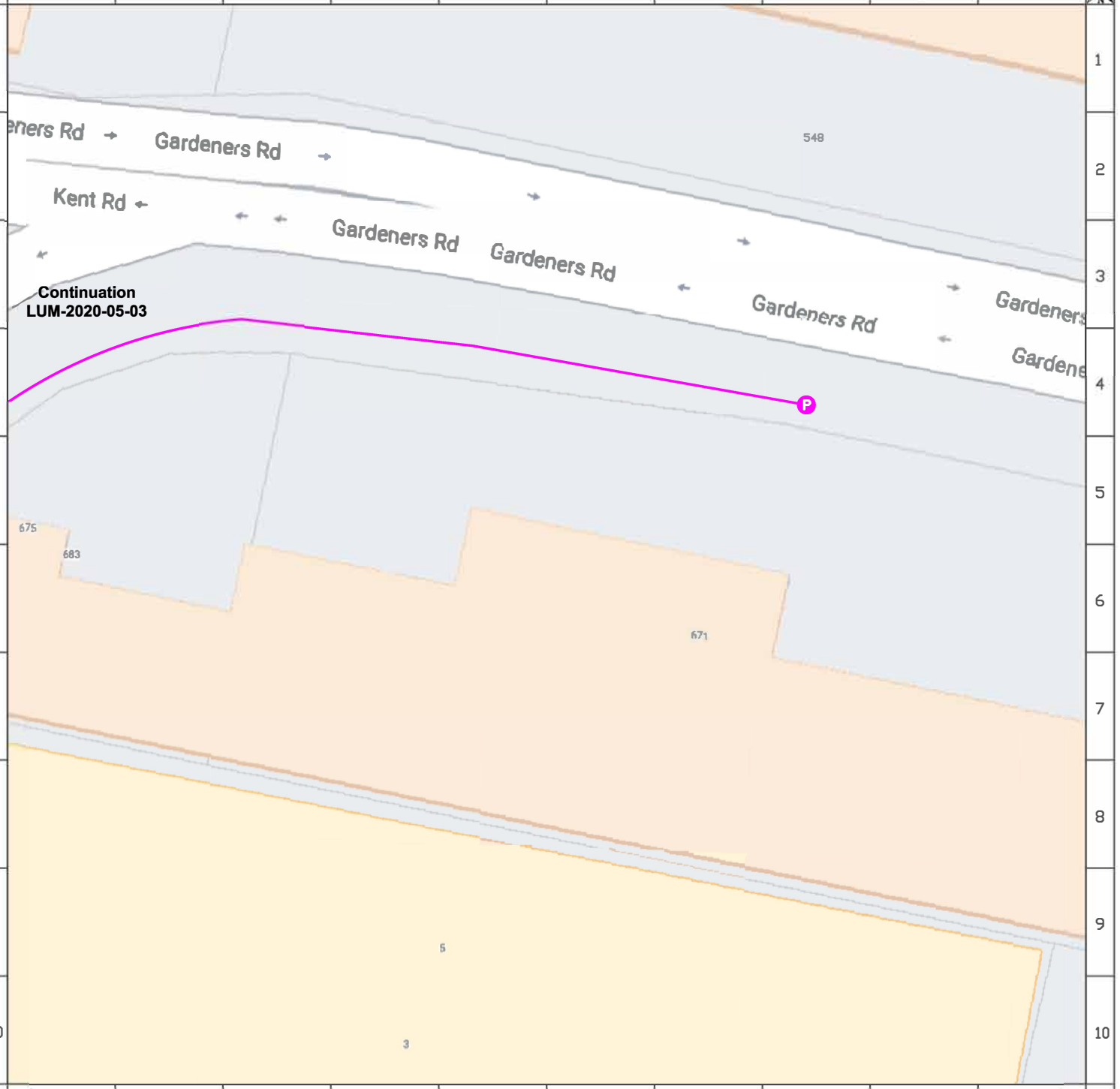
GARDENERS ROAD, MASCOT, NSW 2020

- P — Luminet cable pit
- Luminet underground white telecommunications conduit containing large optical fibre cables
- 3 — Third party cable pit
- Third party underground telecommunications conduit containing large optical fibre cables

DRAWINGS ARE NOT TO SCALE

INTERNAL USE - LUMINET DOCUMENT VERSION:
LUM-2020-06-03-01

DRAWINGS ARE INDICATIVE ONLY. ENSURE THAT YOU LOCATE ALL SERVICES BEFORE EXCAVATING. LUMINET WILL SEEK COMPENSATION FOR ALL LOSS CAUSED BY ASSEST DAMAGE.



LUMINET

1300 LUMINET (586 463) **DBYD@LUMINET.COM.AU**

DOC: LUM-2020-03-02	DATE: 09-07-2020

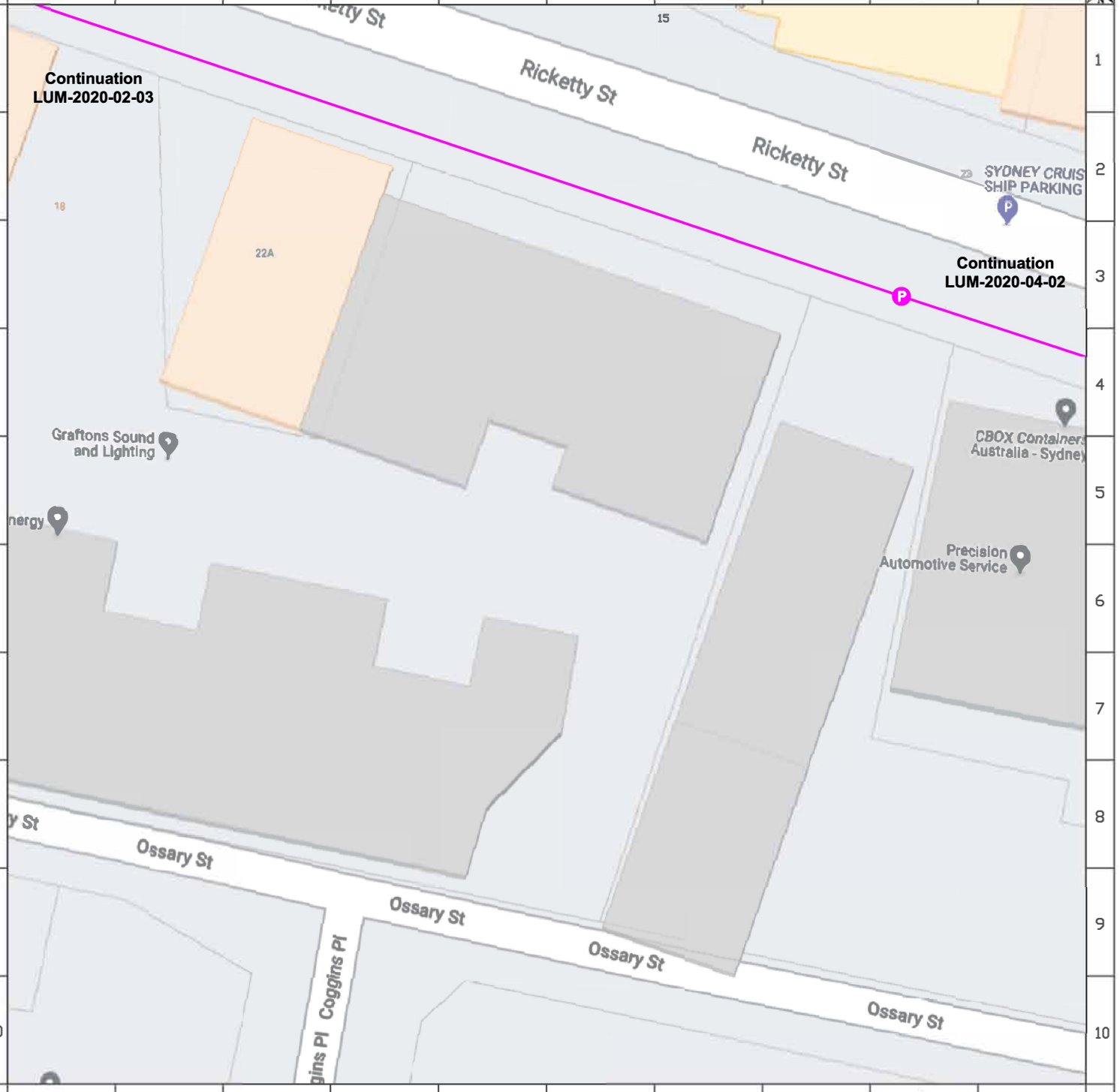
RICKETTY STREET, MASCOT, NSW 2020

- Luminet cable pit
- Luminet underground white optical fibre telecommunications conduit
- Third party cable pit
- Third party underground telecommunications conduit

DRAWINGS ARE NOT TO SCALE

INTERNAL USE - LUMINET DOCUMENT VERSION:
LUM-2020-03-02-01

DRAWINGS ARE INDICATIVE ONLY. ENSURE THAT YOU LOCATE ALL SERVICES BEFORE EXCAVATING. LUMINET WILL SEEK COMPENSATION FOR ALL LOSS CAUSED BY ASSEST DAMAGE.



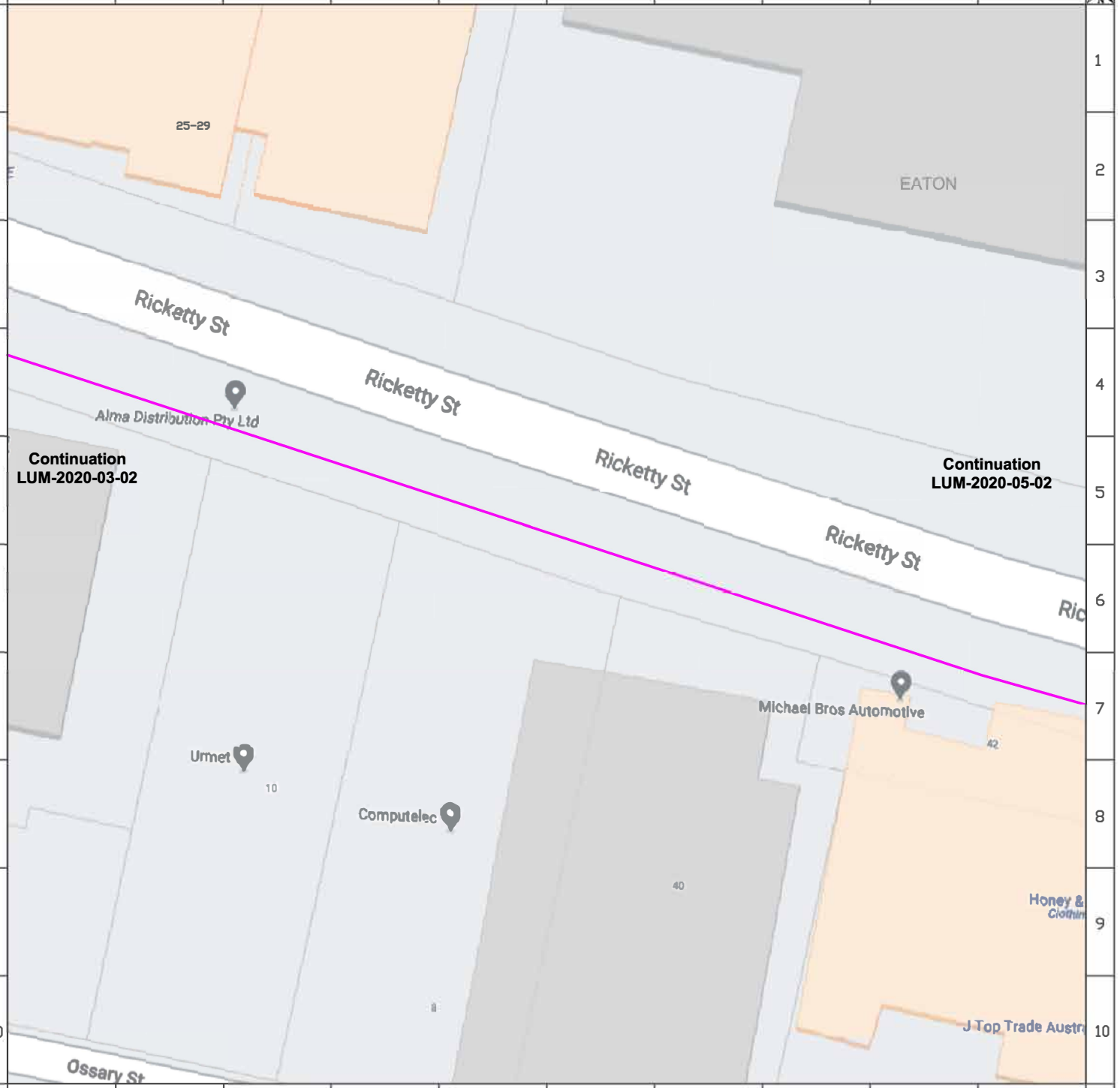
LUMINET

1300 LUMINET (586 463) DBYD@LUMINET.COM.AU

DOC: LUM-2020-04-02 | DATE: 09-07-2020

RICKETTY STREET, MASCOT, NSW 2020

- Luminet cable pit
- Luminet underground white optical fibre telecommunications conduit
- Third party cable pit
- Third party underground telecommunications conduit



DRAWINGS ARE NOT TO SCALE

INTERNAL USE - LUMINET DOCUMENT VERSION:
LUM-2020-04-02-01

DRAWINGS ARE INDICATIVE ONLY. ENSURE THAT YOU LOCATE ALL SERVICES BEFORE EXCAVATING. LUMINET WILL SEEK COMPENSATION FOR ALL LOSS CAUSED BY ASSEST DAMAGE.

LUMINET

1300 LUMINET (586 463) **DBYD@LUMINET.COM.AU**

DOC: LUM-2020-05-02	DATE: 09-07-2020

CHURCH AVENUE, MASCOT, NSW 2020

- Luminet cable pit
- Luminet underground white optical fibre telecommunications conduit
- Third party cable pit
- Third party underground telecommunications conduit

DRAWINGS ARE NOT TO SCALE

INTERNAL USE - LUMINET DOCUMENT VERSION:
LUM-2020-05-02-01

DRAWINGS ARE INDICATIVE ONLY. ENSURE THAT YOU LOCATE ALL SERVICES BEFORE EXCAVATING. LUMINET WILL SEEK COMPENSATION FOR ALL LOSS CAUSED BY ASSEST DAMAGE.

A.12 Sydney Water

A3

CONNECTION A

CONNECTION B

GARDENERS ROAD

RICKETTY STREET

KENT ROAD

GALLOWAY LANE

MULLER CHURCH AVE

GARDENERS ST

RICKETTY ST

OSSARY PL

DBYD Address: 2-22 Kent Road Mascot NSW 2020	DBYD Job No: 36682921 DBYD Sequence No: 239238672	Copyright Reserved Sydney Water 2024 No warranty is given that the information shown is complete or accurate. SYDNEY WATER CORPORATION	Scale: 1:1500 Date of Production: 15/05/2024	Plan 1 of 1 N 0m 9m 18m 27m 36m

A.13 Telstra NSW Central

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 15/05/2024 10:58:31

Sequence Number: 239238676

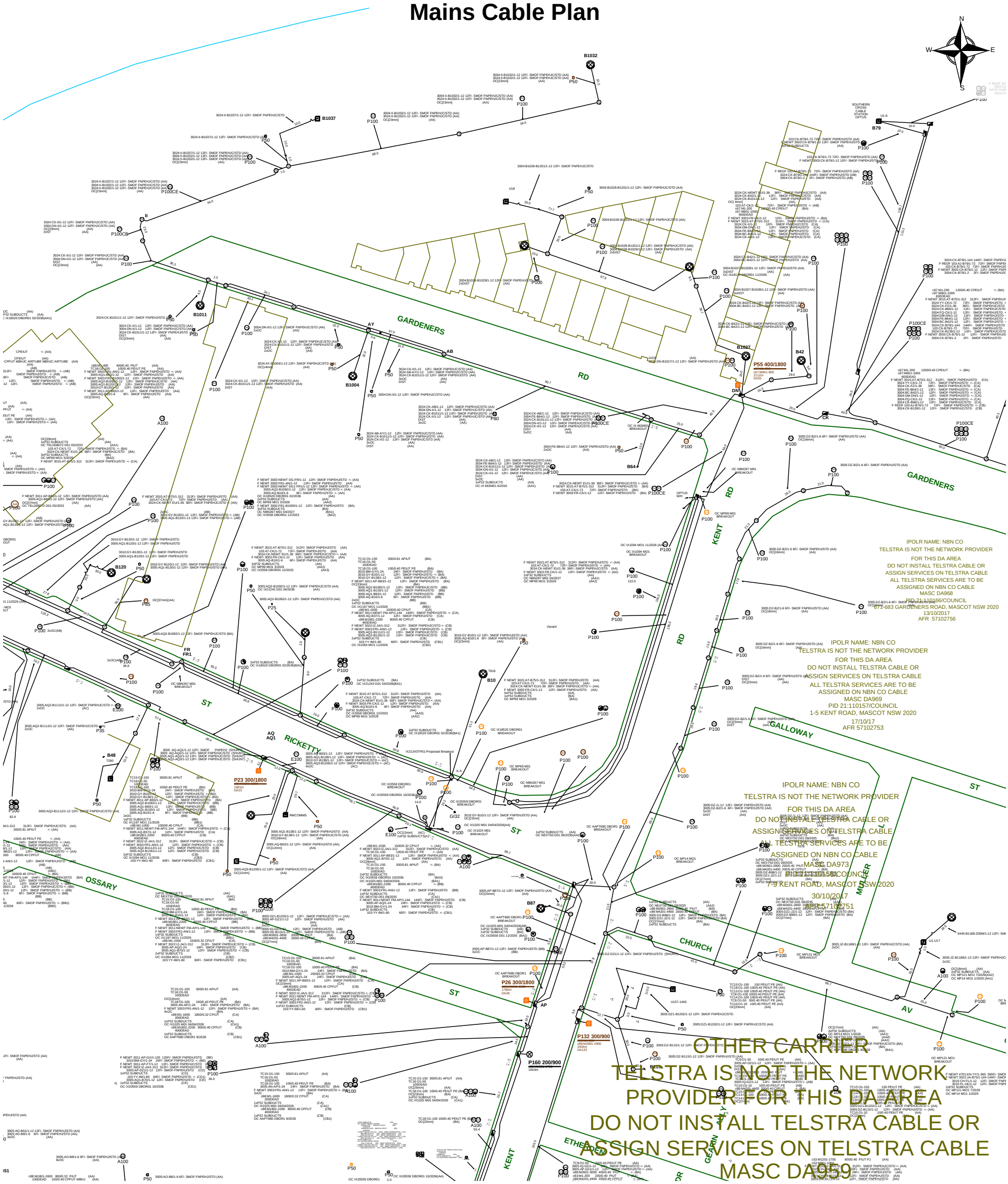
CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

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 15/05/2024 10:58:37

Sequence Number: 239238676

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.
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.

A.14 TPG Telecom (NSW)

TPG Telecom Limited
ABN 76 096 304 620
Level 1, 177 Pacific Hwy
North Sydney NSW 2060
Phone: 1800 786 306 (24hrs)

Date: 15/05/2024

Enquirer Name:Neil Langford
Enquirer Address:135-151 Clarence Street Level 5
Email: neil.langford@arup.com
Phone: +61293209028

Dear Neil Langford

The following is our response on behalf of each of the TPG carriers (listed below) to your Before You Dig Australia enquiry – Sequence 239238670

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: 2-22 Kent Road Mascot

Carriers (each a "TPG carrier") and assets affected:

AAPT/PowerTel, 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.

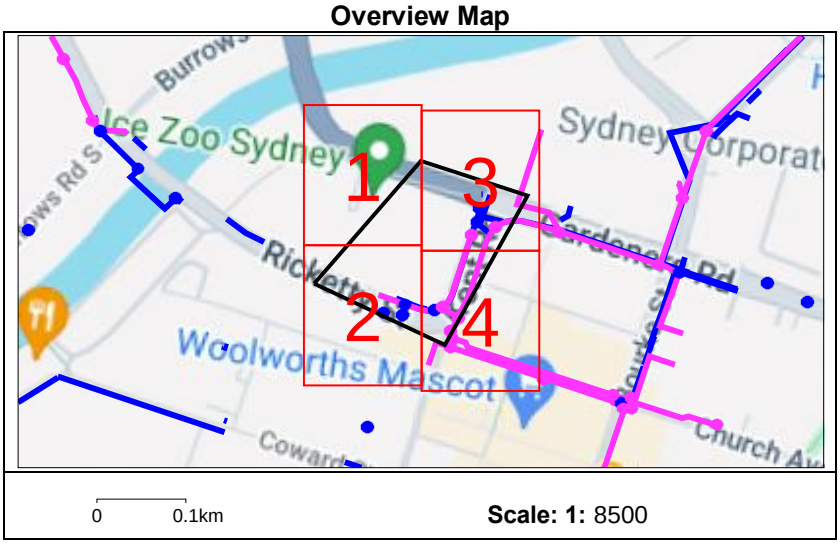
- Reinstate exposed TPG network infrastructure back to original state.

PRIVACY & CONFIDENTIALITY

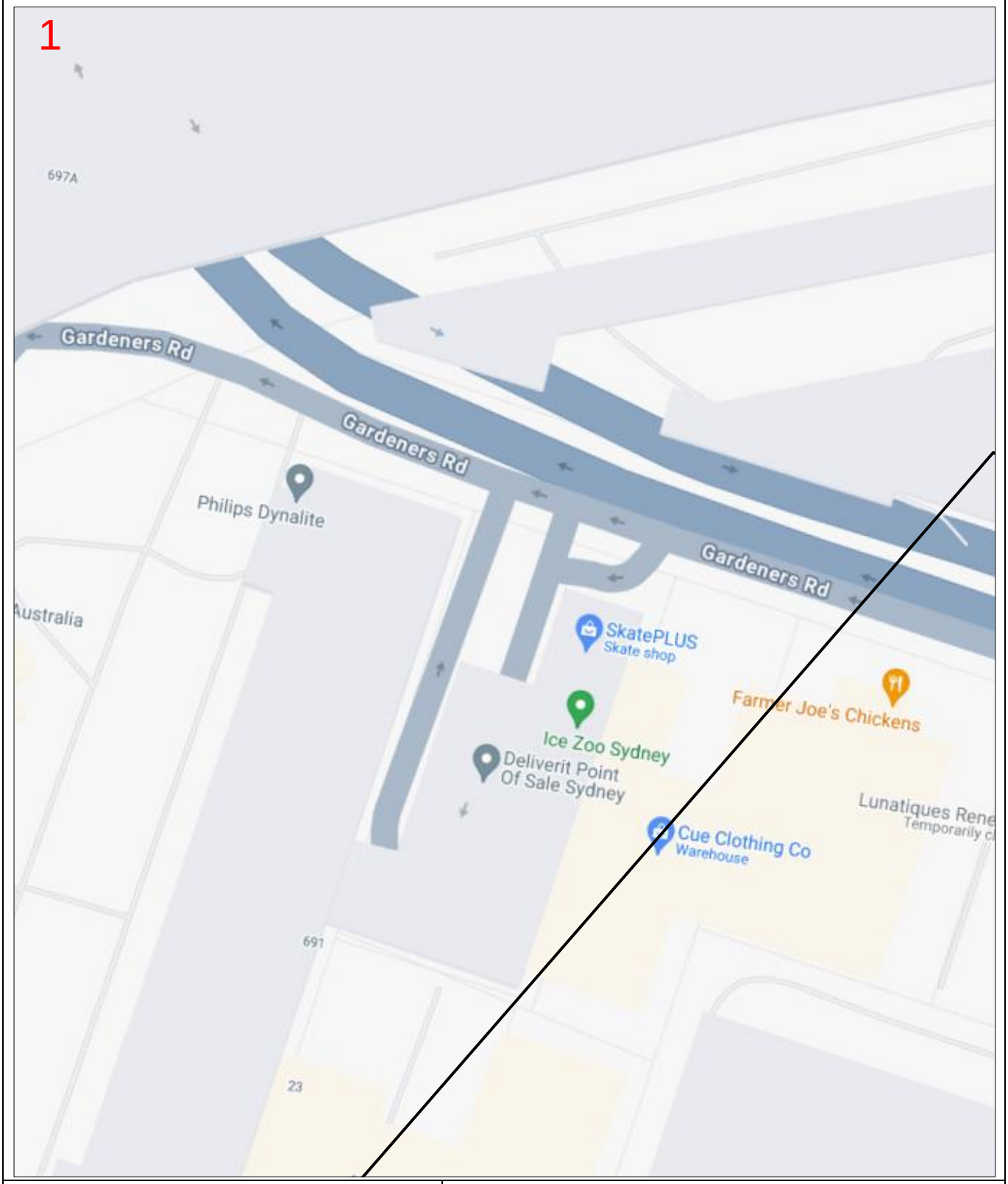
- Privacy Notice – Your information has been provided to us by Before You Dig Australia to respond to your Before You Dig Australia enquiry. We will keep your personal information in accordance with TPG's privacy policy, see www.tpg.com.au/about/privacy.

- 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.

Overview Map



TPG Telecom Limited



Enquiry Number: 239238670

Map Sheet: 1

Scale: 1: 750

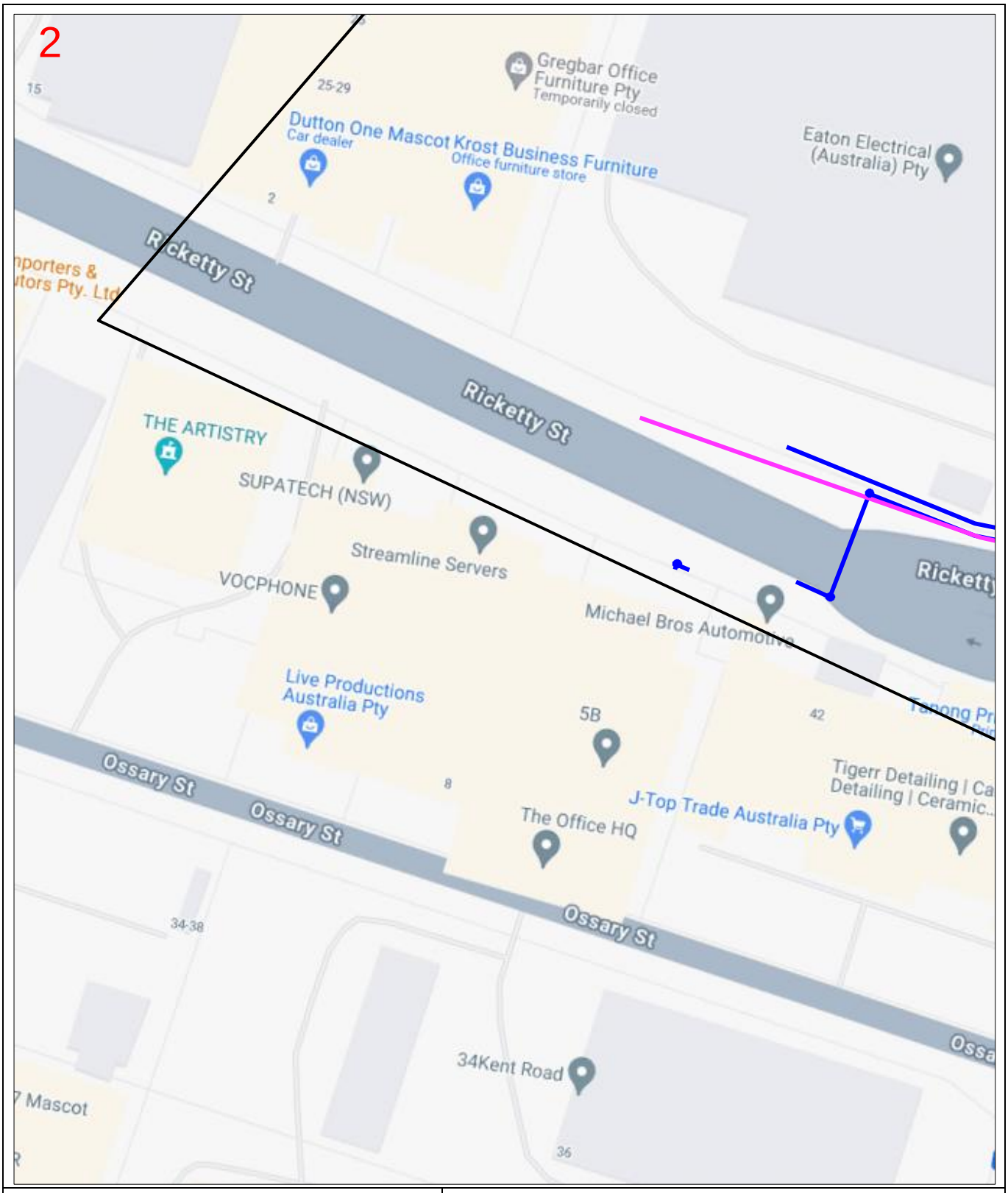
0 0.008km

N

LEGEND

BYDA Work Area

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



Enquiry Number: 239238670

Map Sheet: 2

Scale: 1: 750

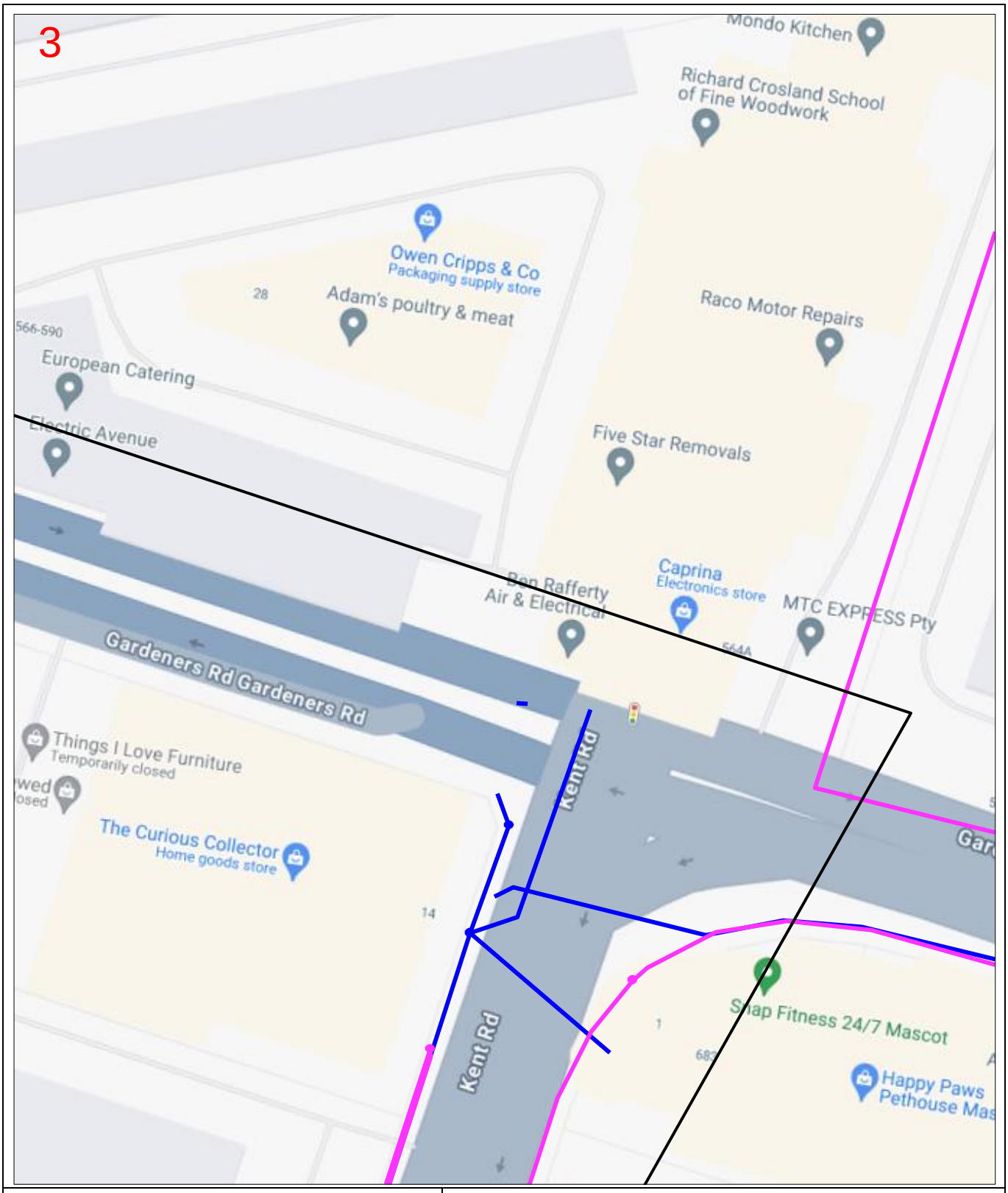
0 0.008km

N

LEGEND

BYDA Work Area

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



Enquiry Number: 239238670

Map Sheet: 3

Scale: 1: 750

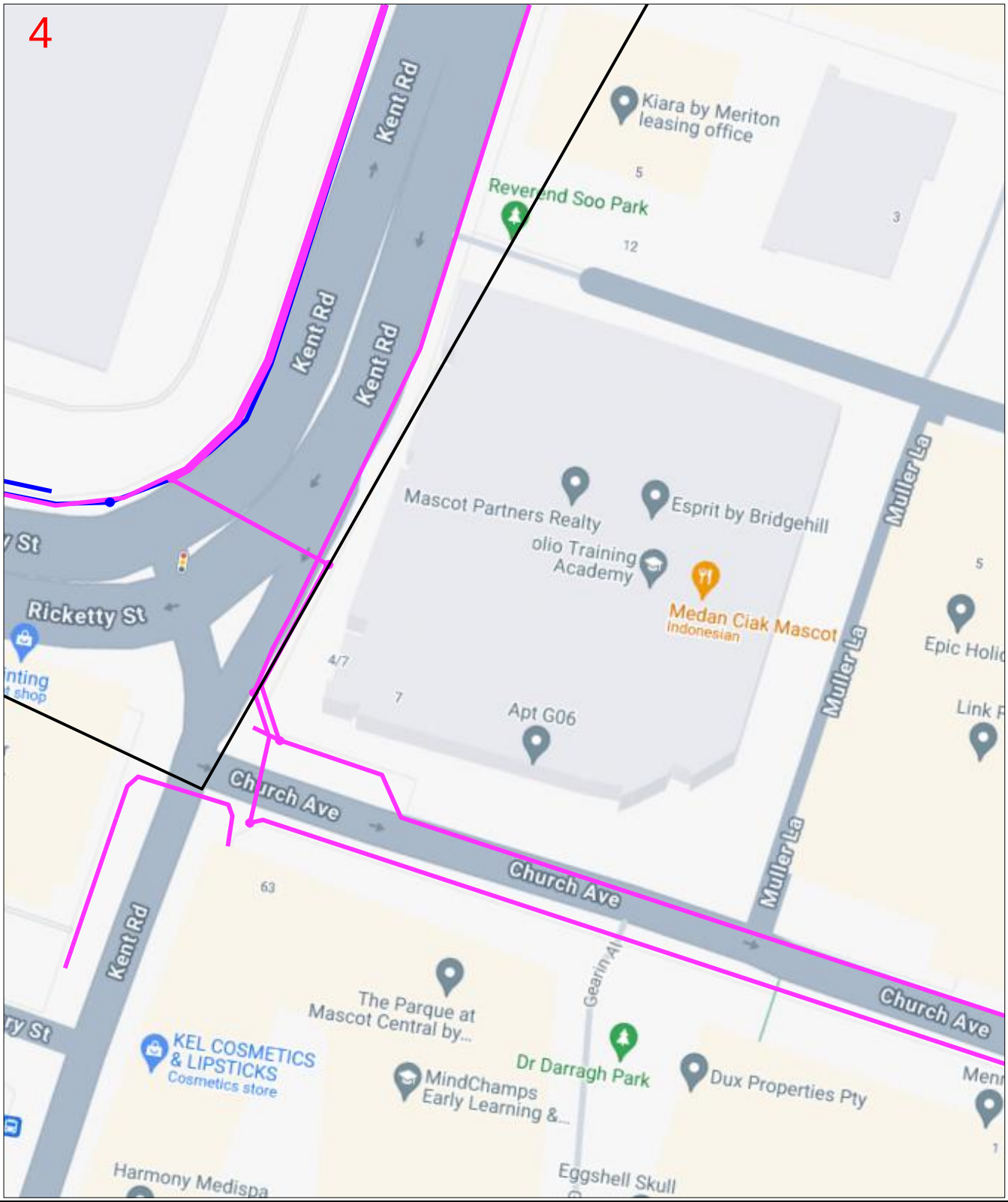
0 0.008km

N

LEGEND

BYDA Work Area

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



Enquiry Number: 239238670

Map Sheet: 4

Scale: 1: 750

0 0.008km

N

LEGEND

BYDA Work Area

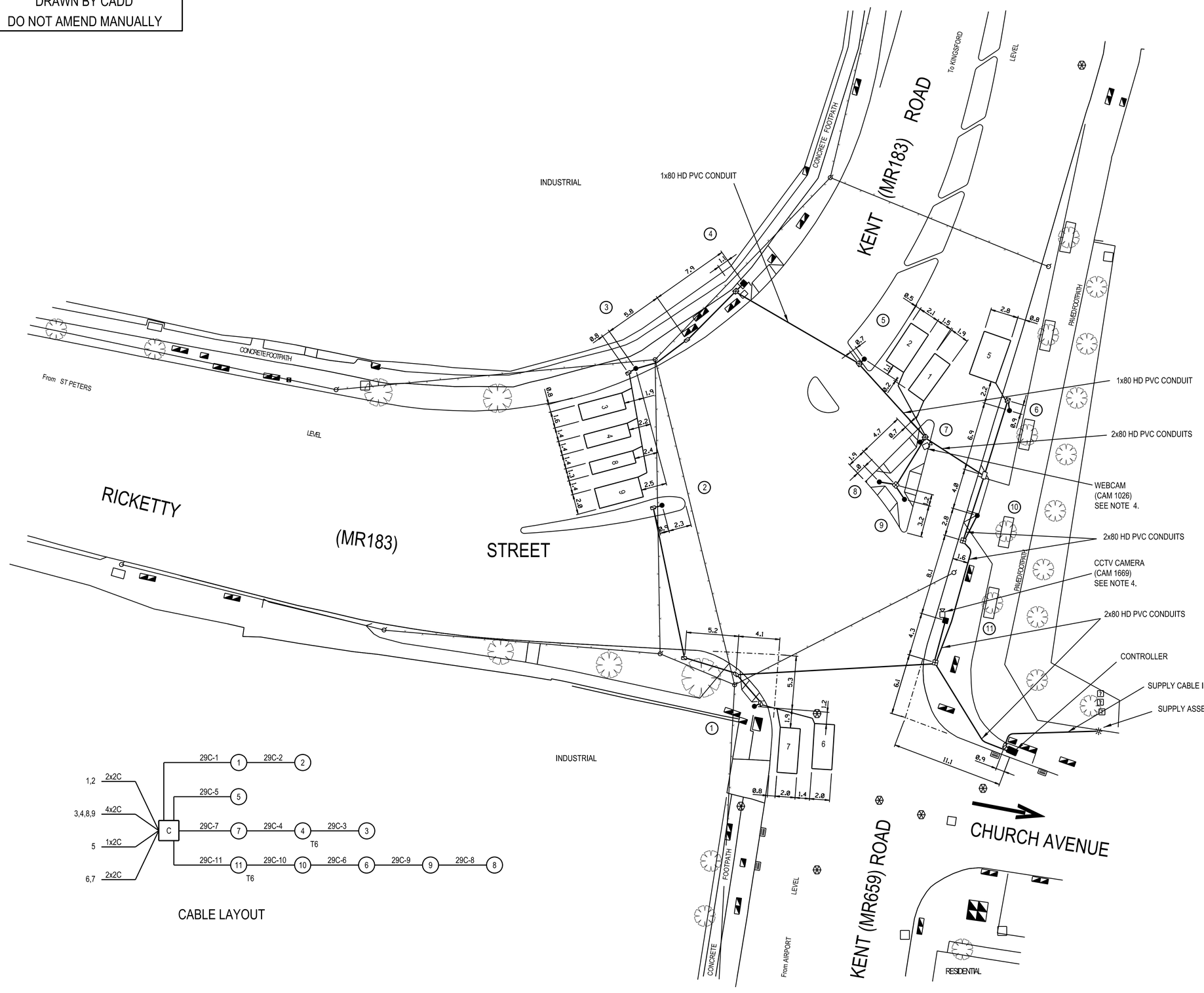
AAPT/PowerTel Pit	TransACT Pit
AAPT/PowerTel Duct	TransACT Duct
DDA Pit	SOUL Pattinson Telecoms Pit
DDA Duct	SOUL Pattinson Telecoms Duct
Agile/Adam Pit	PIPE Networks Pit
Agile/Adam Duct	PIPE Networks Duct

A.15 Transport for NSW

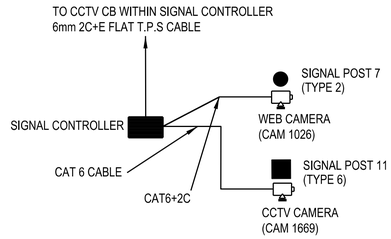
TCS 0723

DRAWN BY CADD
DO NOT AMEND MANUALLY

Transport for NSW



CABLE LAYOUT



CCTV CAMERA LAYOUT

NOTES

1. CABLE COVER ABOVE CONDUITS IS 0.6m IN ROADWAYS AND 0.5m IN FOOTWAYS UNLESS OTHERWISE STATED.
2. ALL FOOTWAY CONDUITS IN 1 x 80 HD PVC UNLESS OTHERWISE STATED.
3. ALL ROADCROSSING CONDUITS ARE 1 x 50 NB GI PIPE UNLESS OTHERWISE STATED.
4. CCTV CAMERA (CAM1669) ON POST 11 (TYPE 6). WEBCAM (CAM 1026) ON POST 7 (TYPE 2). CAMERA EQUIPMENT INSTALLED IN SIGNAL CONTROLLER.

A ORIGINAL ISSUE

B' ISSUE:- WAE
ADDED CAMERAS.
TB MM 14-03-2024

PUBLIC UTILITY LEGEND	
HYDRANT	□
STOP VALVE	▲
GAS VALVE	#
SEWER MANHOLE	⊗
COMMS PIT	◪
ELECT LIGHT POLE	☾
POWER POLE	○
STAY POLE	⊘
TELEPHONE BOX	T
COMMS PILLAR	◕

REFERENCE PLANS	
SYMBOLS/ABRVS	VD003-6
STD POSN CMPT	VD001-5
INSTL STOP DET	VC005-17
VEH GROUP OP	TS-TN-019
DET LOGIC OP	TS-TN-020
PED MVT OP	TS-TN-021
DESIGN LAYOUT	SHEET 14
CABLE CHART	SHEET 16
SURVEYOR : RMS	
DATE : 2016	

U.B.D. Ref. Map 275 L1
I.S.G. CO-ORDS E : 316 960 N : 1 245 060
DESIGNED : COMPLETE ITS
CHECKED : LTJV
SITE CHECKED
JAMES JAVILLONAR
RECOMMENDED

APPROVED
M. Mahinthan
ELECTRICAL DESIGN MANAGER
DATE 21-10-2021

TRANSPORT FOR NEW SOUTH WALES

BAYSIDE COUNCIL AREA
TRAFFIC SIGNALS AT
RICKETTY (MR183) STREET AND
KENT (MR659) ROAD
MASCOT

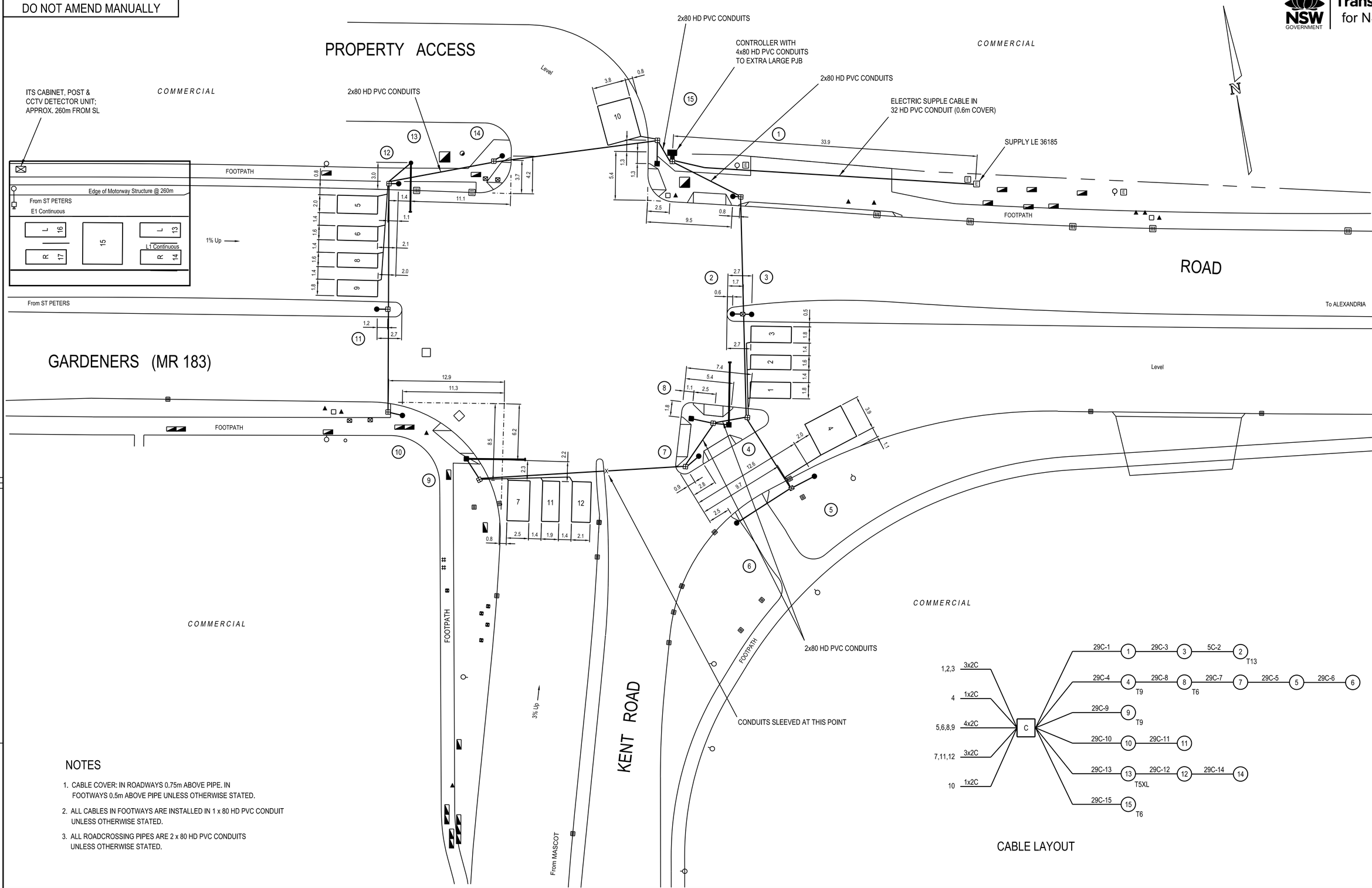
CABLE INSTALLATION

EXISTING ☒ PROPOSED ☐
CADD FILE: VV0723_15B_INS.dgn
SCALE 5 0 (1:200) 5 10
ISSUE B
FILE SF2014/009716
SUPERSEDES SHEET/ISSUE 11/D
REG No. DS2014/001115
TCS No. 0723
SHEET 15

DRAWN BY CADD
DO NOT AMEND MANUALLY

TCS 4822

Transport for NSW
NSW GOVERNMENT



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 1 x 80 HD PVC CONDUIT UNLESS OTHERWISE STATED.
3. ALL ROADCROSSING PIPES ARE 2 x 80 HD PVC CONDUITS UNLESS OTHERWISE STATED.

CABLE LAYOUT

A ORIGINAL ISSUE 02-06-2023
B ISSUE JI-948
POSTS 9 & 10 REMOVED, POSTS RENOED, POST 9 WAS T6. DETS RENOED, ITS CABINET & DETS 15,17 ADDED. UPDATED TO SUIT SITE COND'S. IH MM

PUBLIC UTILITY LEGEND	
HYDRANT	□
STOP VALVE	▲
GAS VALVE	#
SEWER MANHOLE	⊗
COMMS PIT	◪
ELECT LIGHT POLE	☌
POWER POLE	○
STAY POLE	⊘
TELEPHONE BOX	T
COMMS PILLAR	◕

REFERENCE PLANS	
SYMBOLS/ABRVS	VD003-6
STD POSN CMPT	VD001-5
INSTL STOP DET	VC005-17
DESIGN LAYOUT	SHEET 5
CABLE CHART	SHEET 4
SURVEYOR : Riaan Vandermerwe	
DATE : AUG 2016	

U,B,D, Ref, Map 255 L16
I,S,G, CO-ORDS E : 316 975
N : 1 245 246

DESIGNED : COMPLETE ITS
CHECKED : LTJV
SITE CHECKED
JJAVILLONAR
RECOMMENDED

APPROVED
M. MASHMEYHAM
ELECTRICAL DESIGN MANAGER
DATE: 04-04-2022

TRANSPORT FOR NEW SOUTH WALES

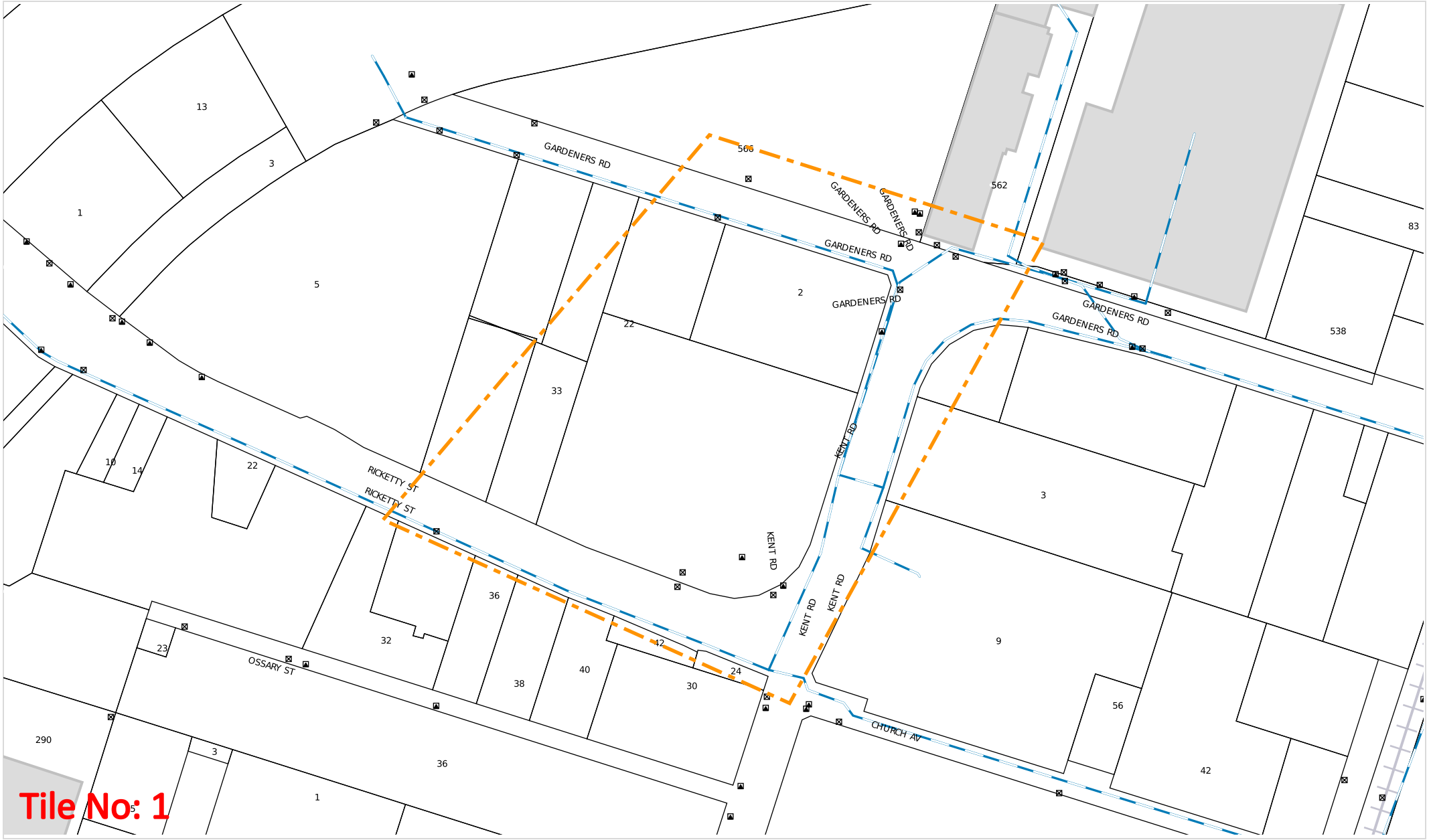
SYDNEY COUNCIL AREA
TRAFFIC SIGNALS AT
GARDENERS ROAD (MR 183) AND
KENT ROAD
MASCOT

CABLE INSTALLATION

EXISTING ☒ PROPOSED □
CADD FILE: VV4822_3B_INS.dgn
SCALE 5 0 (1:200) 5 10
ISSUE B
FILE SF2016/221333
SUPERSEDES SHEET/ISSUE -
REG NO DS2016/002078
TCS NO 4822
SHEET 3

Revision 6 - July 2017

A.16 Uecomm NSW



Uecomm Underground Cable

Scale: 1:2500

Printed on: 15 May 2024

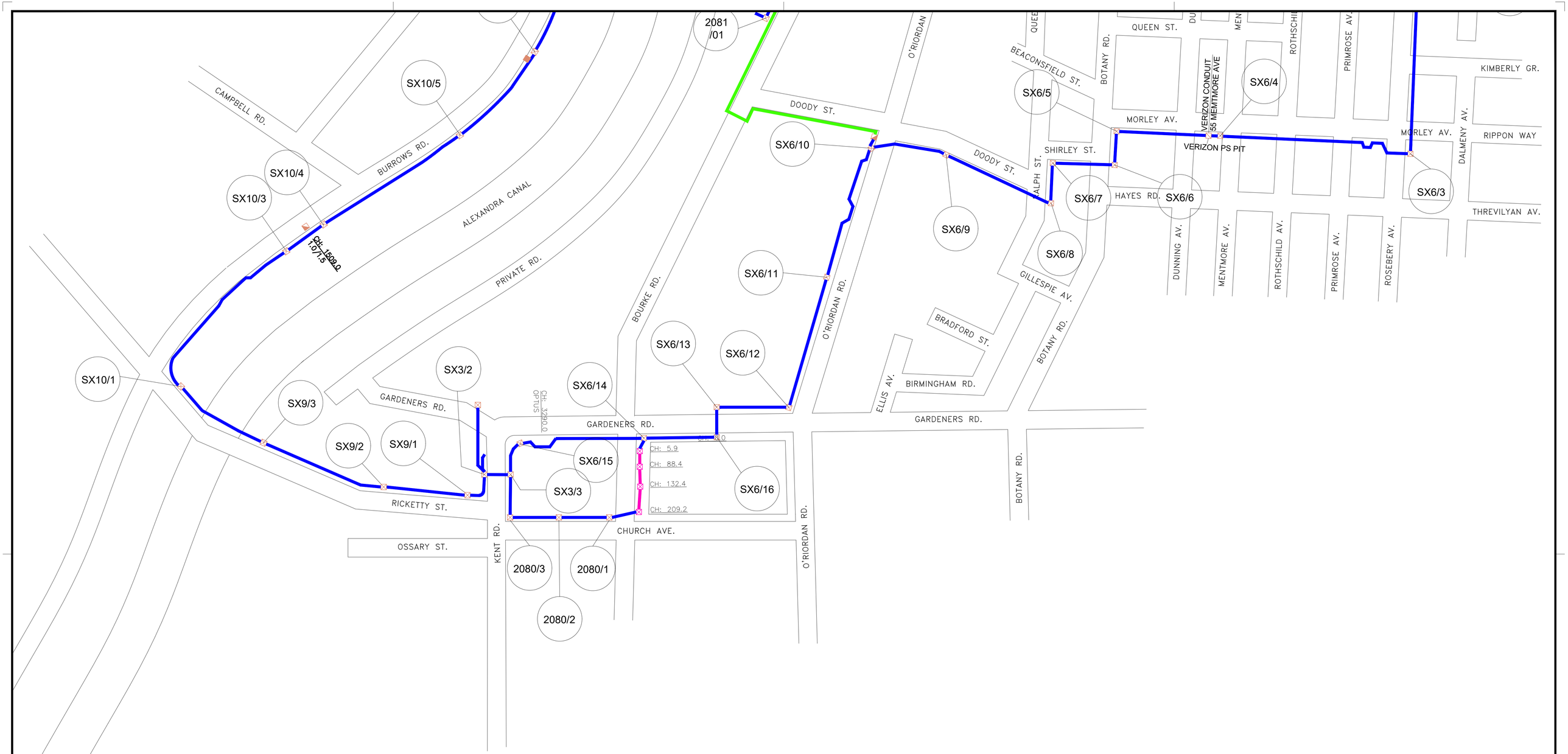
Sequence Number: 239238677

Location: 2-22 Kent Road, Mascot, NSW 2020

Job Location: Line, Point, Area

Undergound Asset: Uecomm

A.17 Verizon Business (NSW)



LEGEND

- VERIZON DUCT
- VERIZON DUCT
- TELSTRA DUCT
- VERIZON PIT
- TELSTRA PIT

REV	DATE(D/M/Y)	DESCRIPTION	DRAWN	CHECKED	APPROVED
C1	22/3/18				

PROJECT
Verizon
SOUTHERN CROSS SOUTH

verizon

DRAWING TITLE
SOUTHERN CROSS SOUTH
SHEET 6 OF 9

REVISION
C1

DRAWING NUMBER
VZ

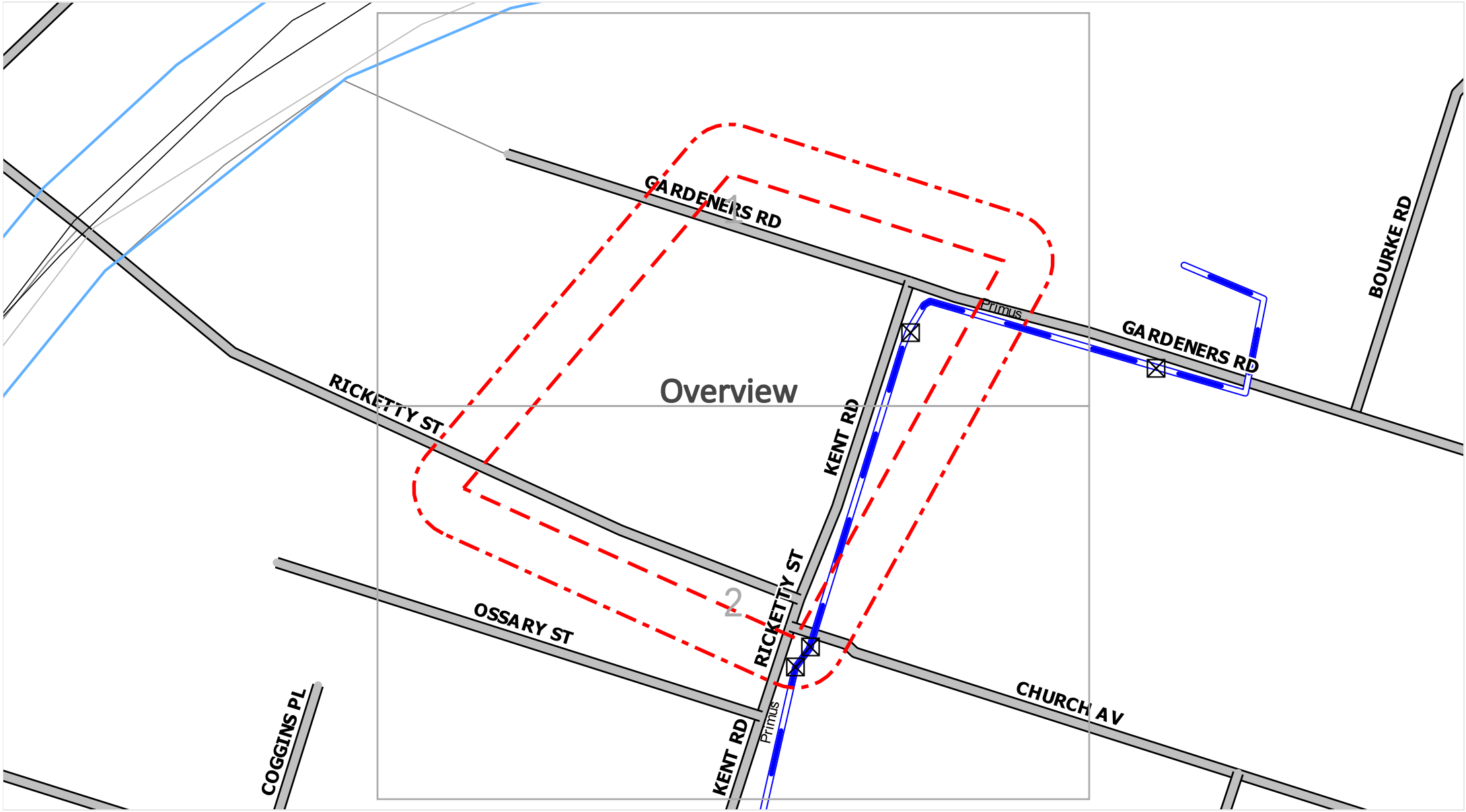
SCALE
N.T.S.

SIZE
A1

A.18 Vocus Communication

Sequence No: 239238669
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend | Scale: 1:3075

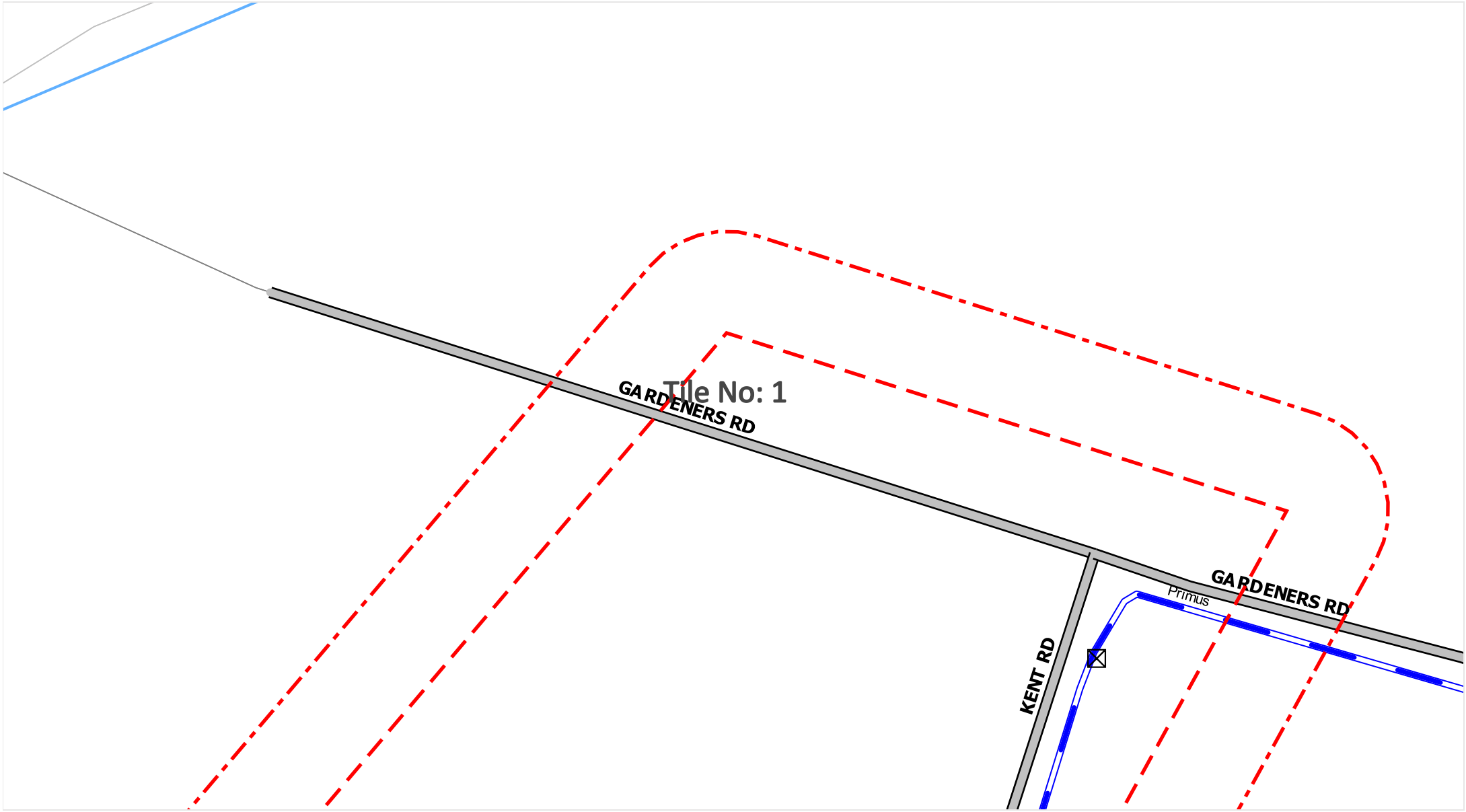
N

Manhole
Cable
Road
Digsite
Buffer

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Primus Telecom or 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.

Sequence No: 239238669
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend | Scale: 1:1500

N

Manhole
Cable
Road
Digsite
Buffer

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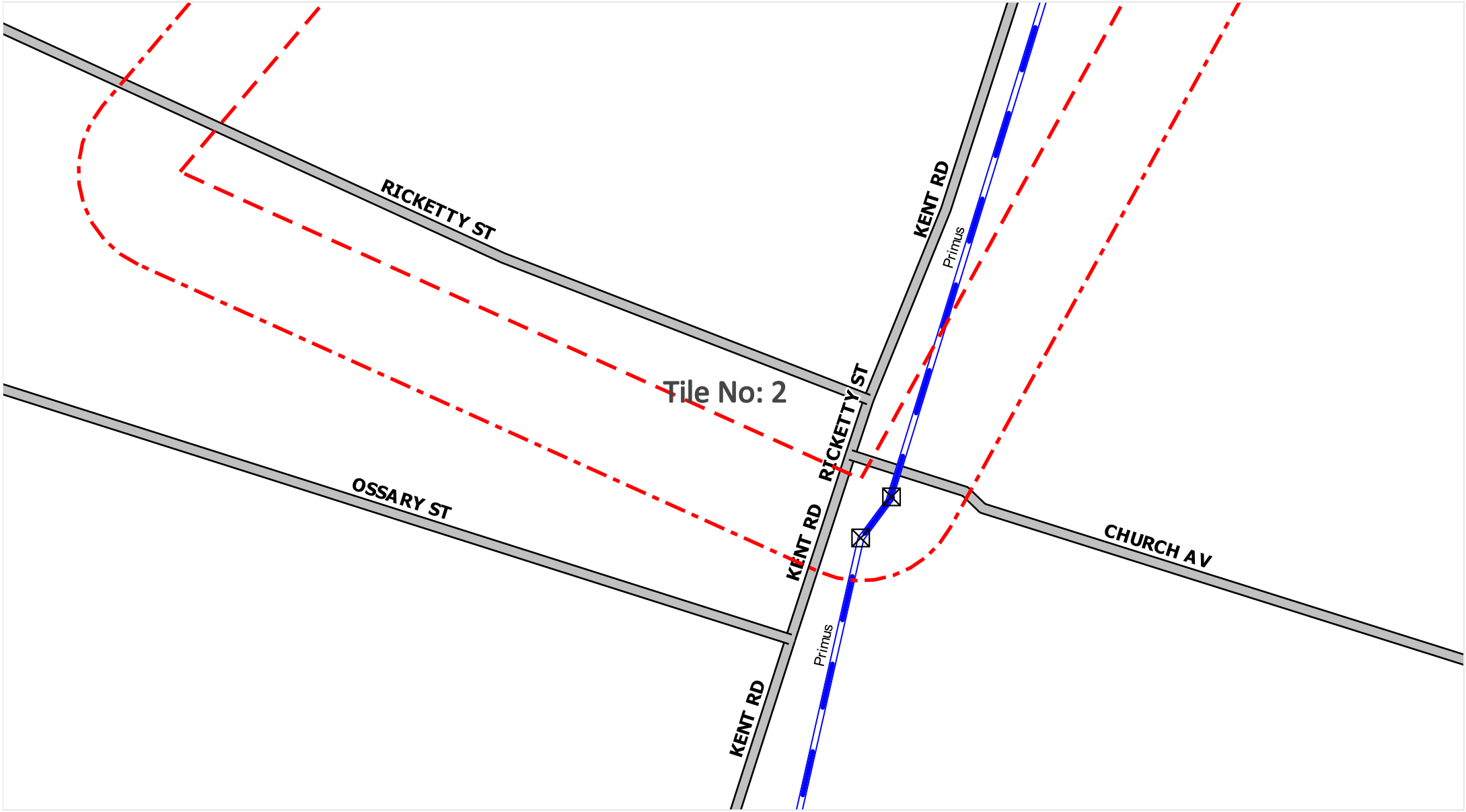
Sequence No: 239238669
Job No: 36682921
Location: 2-22 Kent Road, Mascot, NSW 2020

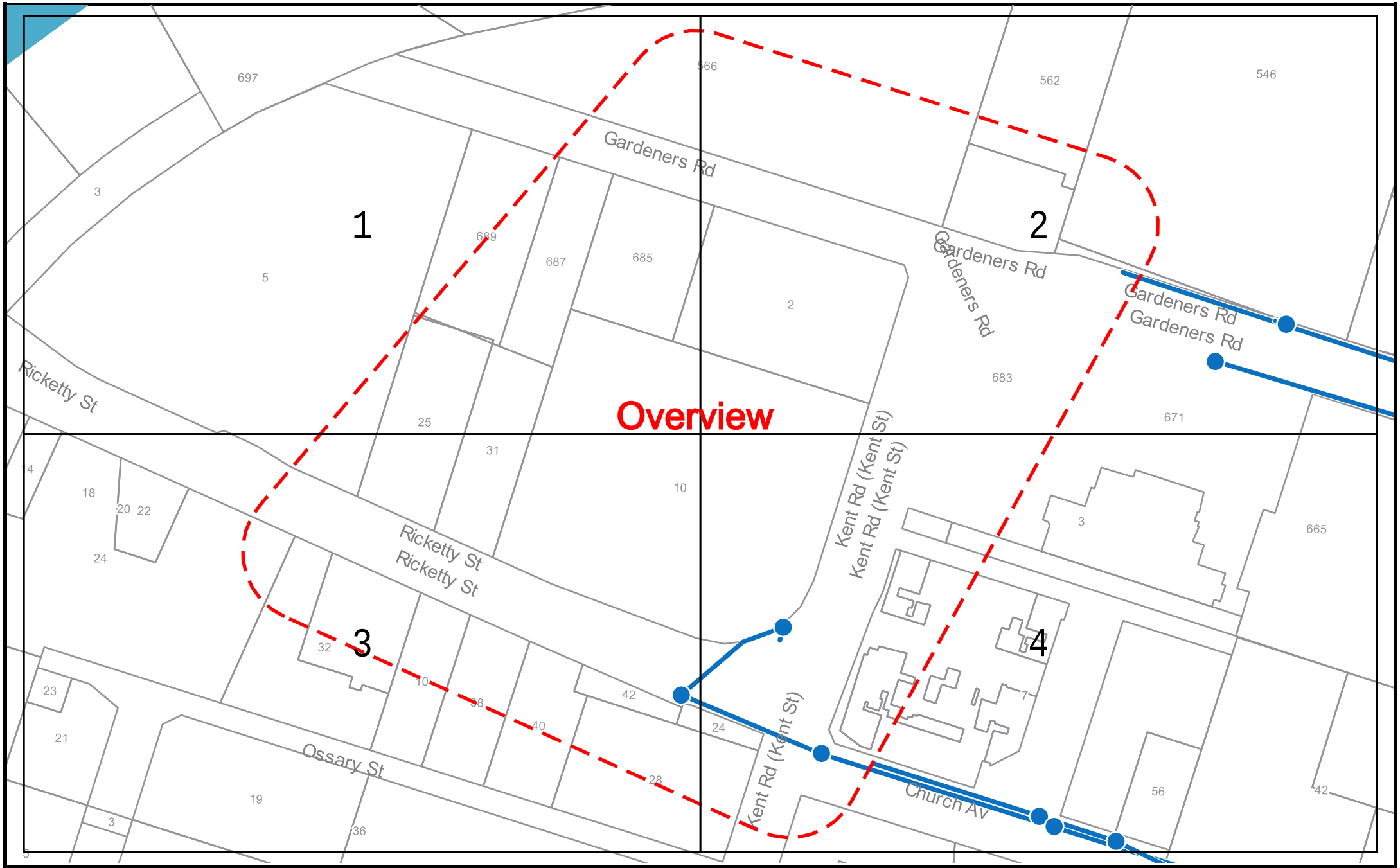


Legend | Scale: 1:1500

N

Manhole
Cable
Road
Digsite
Buffer

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Primus Telecom or 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.



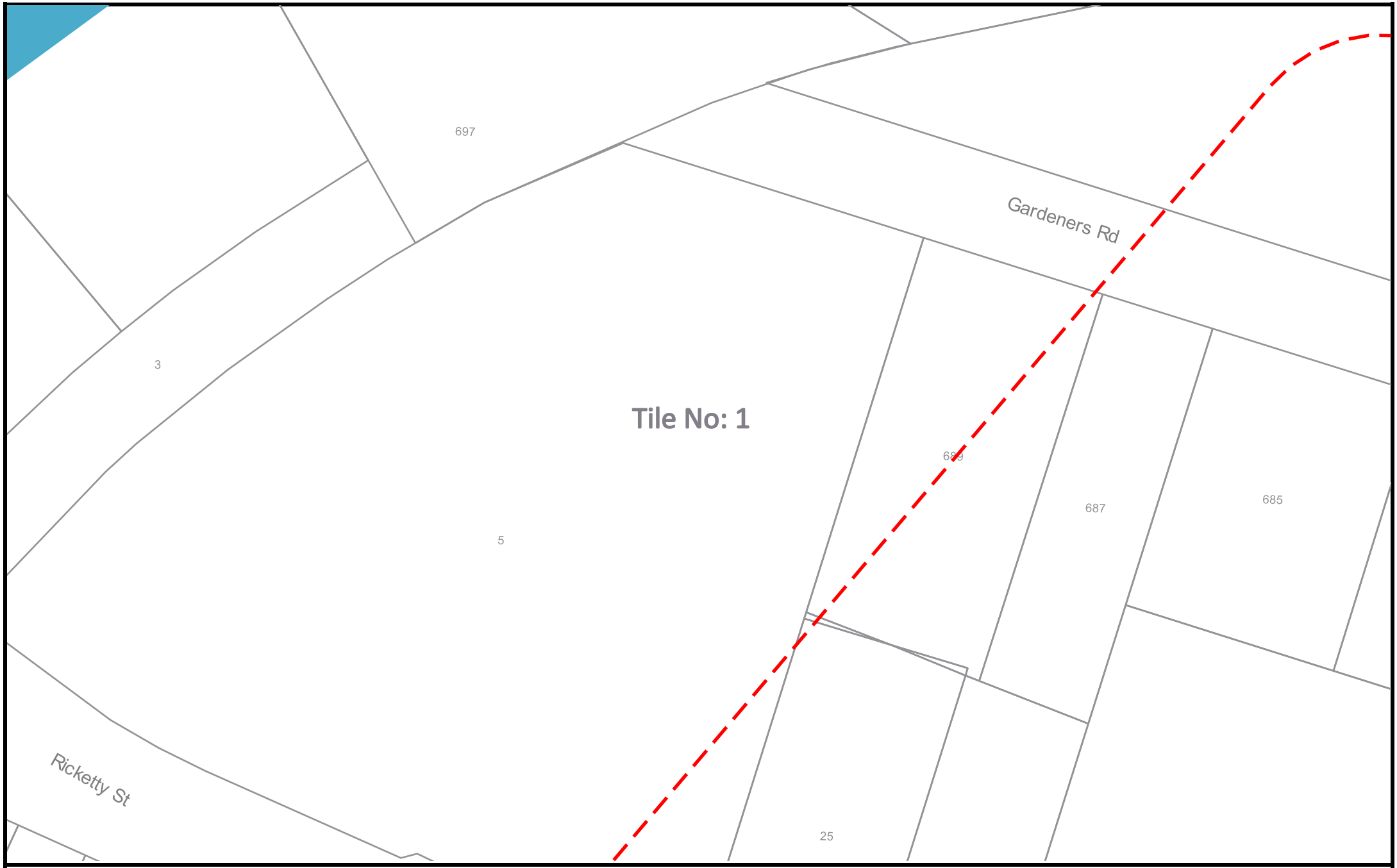
VOCUS communications

N W E S

SEQUENCE NUMBER: 239238671
JOB NUMBER: 36682921
ADDRESS: 2-22 Kent Road, Mascot, NSW 2020

LEGEND
Vocus Group Pit
Vocus Group Conduit

SCALE: 1:2050



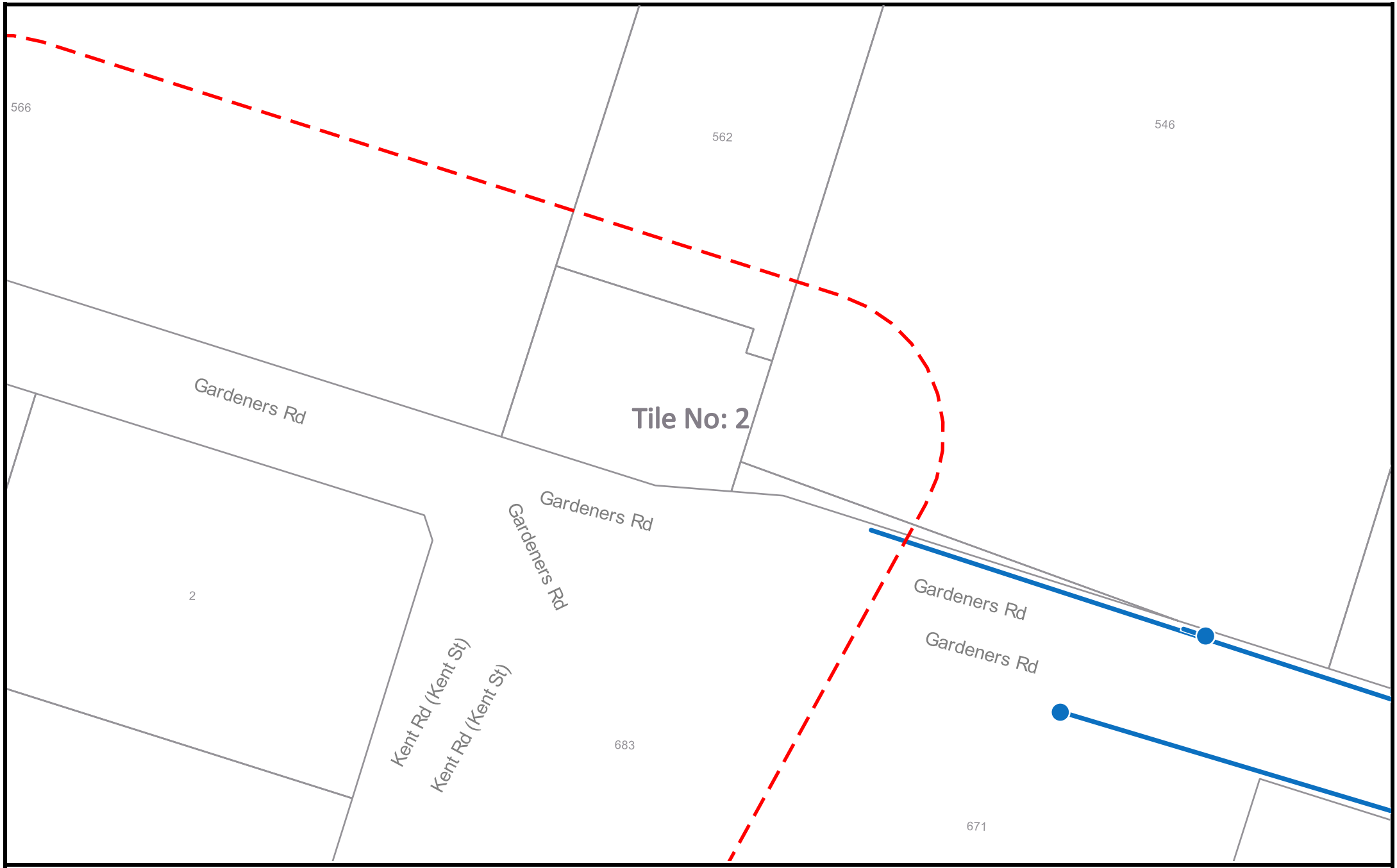
VOCUS communications

N
W E
S

SEQUENCE NUMBER: 239238671
JOB NUMBER: 36682921
ADDRESS: 2-22 Kent Road, Mascot, NSW 2020

LEGEND
Vocus Group Pit
Vocus Group Conduit

SCALE: 1:1000



VOCUS communications

N
W E
S

SEQUENCE NUMBER: 239238671
JOB NUMBER: 36682921
ADDRESS: 2-22 Kent Road, Mascot, NSW 2020

LEGEND
Vocus Group Pit
Vocus Group Conduit

SCALE: 1:1000

SEQUENCE NUMBER: 239238671
JOB NUMBER: 36682921
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LEGEND
Vocus Group Pit
Vocus Group Conduit

SCALE: 1:1000

SEQUENCE NUMBER: 239238671
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LEGEND
Vocus Group Pit
Vocus Group Conduit

SCALE: 1:1000