## Macquarie

# Sydney Metro Martin Place integrated station development 

# South Tower, SSD DA Stage 2: Utilities Services Infrastructure Assessment 

CSWSMP-MAC-SMS-CE-REP-999902

Revision 02 । 6 September 2018

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party

Job number 247838

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## Contents

1 Introduction ..... 1
2 Utility Services Infrastructure ..... 10
2.1 Existing Information \& Utility Provider Meetings ..... 10
2.2 Scope Delineation of Station and South Tower Works ..... 10
$2.3 \quad$ Protection of Existing Utility Services ..... 12
2.4 Stormwater ..... 12
2.5 Sewerage ..... 13
2.6 Potable Water ..... 14
2.7 Gas ..... 15
2.8 Telecommunications ..... 16
$2.9 \quad$ Electrical Infrastructure ..... 22
3 Agency consultations ..... 24
4 Conclusion ..... 25
Appendix A: DBYD Information
Appendix B: Combined Services Plan

This report takes into account our client's particular instructions and requirements and addresses their priorities at the time. This report is relied upon by third parties at their own risk, third parties must make their own assessment of it and it should not be relied on by any third party without first obtaining independent specific professional advice. No responsibility is undertaken to any third party by Arup in relation to this report.

## 1

 IntroductionThis report supports a State Significant Development (SSD) Development Application (DA) (SSD DA) submitted to the Minister for Planning (Minister) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP\&A Act) on behalf of Macquarie Corporate Holdings Pty Limited (Macquarie), who is seeking to create a world class transport and employment precinct at Martin Place, Sydney.

The SSD DA seeks approval for the detailed design and construction of the South Site Over Station Development (OSD), located above and integrated with Metro Martin Place station (part of the NSW Government's approved Sydney Metro project). The southern entrance to Metro Martin Place station and the South Site OSD above are located at 39-49 Martin Place.

This application follows:

- Approval granted by the Minister for a Concept Proposal (otherwise known as a Stage 1 SSDA) for two OSD commercial towers above the northern (North Site) and southern (South Site) entrances of Metro Martin Place station (SSD 17_8351). The approved Concept Proposal establishes building envelopes, land uses, Gross Floor Areas (GFA) and Design Guidelines with which the detailed design (otherwise known as a Stage 2 SSDA) must be consistent.
- Gazettal of site specific amendments to the Sydney Local Environmental Plan (LEP) 2012 (Planning Proposal reference: PP_2017_SYDNE_007_00) permitting greater building height (over a portion of the South Site) and additional floor space (over both the North and South Sites).

Lodged concurrently with this SSD DA, is a Stage 1 Amending SSD DA to the Concept Proposal (Stage 1 Amending DA), which seeks approval for an amended concept for the Metro Martin Place Precinct (the Precinct), aligning the approved South Site building envelope with the new planning controls secured for the Precinct.

To ensure consistency, the Stage 1 Amending DA must be determined prior to the determination of the subject Stage 2 SSD DA for the South Site.
This application does not seek approval for elements of the Metro Martin Place Precinct which relate to the Sydney Metro City and Southwest project, which is subject to a separate Critical State Significant Infrastructure (CSSI) approval. These include:

- Demolition of buildings on the North Site and South Site;
- Construction of rail infrastructure, including station platforms and concourse areas;
- Ground level public domain works; and
- Station related elements in the podium of the South Tower.

However, this application does seek approval for OSD areas in the approved Metro Martin Place station structure, above and below ground level, which are classified as SSD as they relate principally to the OSD. These components are within the Sydney Metro CSSI approved station building that will contain some OSD elements not already approved by the CSSI Approval. Those elements include the end of trip facilities, office entries, office space and retail areas, along with other office/retail plant and back of house requirements that are associated with the proposed OSD and not the rail infrastructure.

This report discusses utility works to address both the SEAR's item 12 and Condition B14 of the Development consent, Section 4.38 of the Environmental Planning and Assessment Act 1979. Prior to submission of the SSD DA Stage 2, there has been meetings with the major utility stakeholders to discuss the current proposal and appreciate any concerns or changes required prior to submission.

## Context

The New South Wales (NSW) Government is implementing Sydney's Rail Future (Transport for NSW, 2012), a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future.

Sydney Metro is a new standalone rail network identified in Sydney's Rail Future. The Sydney Metro network consists of Sydney Metro Northwest (Stage 1) and Sydney Metro City and Southwest (Stage 2).

Stage 2 of Sydney Metro entails the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and onto Bankstown through the conversion of the existing line to metro standards. The project also involves the delivery of seven (7) new metro stations, including Martin Place.

This step-change piece of public transport infrastructure once complete will have the capacity for 30 trains an hour (one every two minutes) through the CBD in each direction catering for an extra 100,000 customers per hour across the Sydney CBD rail lines.

On 9 January 2017 the Minister approved the Stage 2 (Chatswood to Sydenham) Sydney Metro application lodged by Transport for NSW (TfNSW) as a Critical State Significant Infrastructure (CSSI) project (reference SSI 15_7400). Work is well underway under this approval, including demolition of buildings at Martin Place.

The OSD development is subject to separate applications to be lodged under the relevant provisions of the EP\&A Act. One approval is being sought for the South Site - this application - and one for the North Site via a separate application.

## Site Description

The Metro Martin Place Precinct project relates to the following properties (refer to Figure 1):

- 50 Martin Place, 9 - 19 Elizabeth Street, 8 - 12 Castlereagh Street, 5 Elizabeth Street, 7 Elizabeth Street, and 55 Hunter Street (North Site);
- 39-49 Martin Place (South Site); and
- Martin Place (that part bound by Elizabeth Street and Castlereagh Street).

This application relates only to the South Site, being the land at 39-49 Martin Place (refer to Figure 1).

The North Site is the subject of a Stage 2 SSD DA.


Figure 1: Aerial Photo of the North and South Site of the Metro Martin Place Precinct

## Background

Sydney Metro Stage 2 Approval (SSI 15_7400)
The Sydney Metro CSSI Approval approves the demolition of existing buildings at Martin Place, excavation and construction of the new station (above and below ground) along with construction of below and above ground structural and other components of the future OSD, although the fit-out and use of such areas are the subject of separate development approval processes.
On 22 March 2018, the Minister approved Modification 3 to the Sydney Metro CSSI Approval. This enabled the inclusion of Macquarie-owned land at 50 Martin Place and 9-19 Elizabeth Street within Metro Martin Place station, and other associated changes (including retention of the opening to the existing MLC pedestrian link).
Concept Proposal (SSD 17_8351)
On 22 March 2018, the Minister approved a Concept Proposal (SSD 17_8351) relating to Metro Martin Place Precinct. The Concept Proposal establishes the planning and development framework through which to assess the detailed Stage 2 SSD DAs.

Specifically, the Concept Proposal encompassed:

- Building envelopes for OSD towers on the North Site and South Site comprising:
- 40+ storey building on the North Site
- 28+ storey building on the South Site (see Figure 2)
- Concept details to integrate the North Site with the existing and retained 50 Martin Place building (the former Government Savings Bank of NSW)
- Predominantly commercial land uses on both sites, comprising office, business and retail premises
- A maximum total GFA of $125,437 \mathrm{~m}^{2}$ across both sites
- Design Guidelines to guide the built form and design of the future development
- A framework for achieving design excellence
- Strategies for utilities and services provision, managing drainage and flooding, and achieving ecological sustainable development
- Conceptual OSD areas in the approved Metro Martin Place Metro station structure, above and below ground level ${ }^{1}$

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Figure 2: North Site and South Site Approved OSD Building Envelopes

## Planning Proposal (PP_2017_SYDNE_007_00) - Amendment to Sydney LEP $\underline{2012}$

The Planning Proposal (PP_2017_SYDNE_007_00) sought to amend the development standards applying to the Metro Martin Place Precinct through the inclusion of a site-specific provision in the Sydney LEP 2012. This site-specific provision reduced the portion of the South Site that was subject to a 55 metre height limit from 25 metres from the boundary to Martin Place, to 8 metres, and applies the Hyde Park North Sun Access Plane to the remainder of the South Site, forming the height limit of the tower. It also permits a revised FSR of 22:1 on the South Site and 18.5:1 on the North Site. These amendments were gazetted within Sydney LEP 2012 (Amendment No. 46) on 8 June 2018 and reflect the new planning controls applying to the Precinct.

The Concept Proposal was prepared and determined prior to the site specific Sydney LEP 2012 amendment (PP_2017_SYDNE_007_00) being gazetted and was developed based on the height development standards that applied to the South Site at the time. As a result, the Concept Proposal allows for a tower on the South Site that is now inconsistent with the building envelope envisaged through the amendment to the Sydney LEP 2012. Accordingly, a Stage 1 Amending SSD DA to the Concept Proposal (Stage 1 Amending DA) has been lodged concurrently with this subject Stage 2 SSD DA, which seeks to align the approved Concept Proposal building envelope for the South Site with the revised site specific development standards applying under the Sydney LEP 2012, being increased FSR and building height. This Stage 1 Amending DA seeks to amend the planning and development framework established under the approved Concept

Proposal that is used to assess this Stage 2 SSD DA. The Stage 1 Amending DA is to be assessed concurrently with, and determined prior to the subject Stage 2 SSD DA, with the amended South Site building envelope setting the broad development parameters for the South Site (see Figure 3 below).


Approved South Site OSD Envelope


Proposed Amended South Site OSD Envelope (aligning with site specific amendment to Sydney LEP 2012)

Figure 3: Relationship between the approved and proposed amended South Site building envelope

## Overview of the Proposed Development

The subject application seeks approval for the detailed design, construction and operation of the South Tower. The proposal has been designed as a fully integrated station and OSD project that intends to be built and delivered as one development, in-time for the opening of Sydney Metro City and Southwest in 2024. The application seeks consent for the following:

- The design, construction and operation of a new 28 storey commercial OSD tower (plus rooftop plant) within the approved building envelope for the South Site, including office space and retail tenancies.
- Vehicle loading within the basement levels.
- Extension and augmentation of physical infrastructure / utilities as required.
- Detailed design and delivery of 'interface areas' within both the approved station and Concept Proposal envelope that contain OSD-exclusive elements, such as office entries, office space and retail areas not associated with the rail infrastructure.


## Planning Approvals Strategy

The State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) identifies development which is declared to be State Significant. Under Schedule 1 and Clause 19(2) of SEPP SRD, development within a railway corridor or associated with railway infrastructure that has a capital investment value of more than $\$ 30$ million and involves commercial premises is declared to be State Significant Development (SSD) for the purposes of the EP\&A Act.

The proposed development (involving commercial development that is both located within a rail corridor and associated with rail infrastructure) is therefore SSD.

Pursuant to Section 4.22 of the EP\&A Act a Concept DA may be made setting out concept proposals for the development of a site (including setting out detailed proposals for the first stage of development), and for which detailed proposals for the site are to be the subject of subsequent DAs. This SSD DA represents a detailed proposal and follows the approval of a Concept Proposal on the site under Section 4.22 of the EP\&A Act.

Figure 4 below is a diagrammatic representation of the suite of key planning applications undertaken or proposed by Macquarie and their relationship to the subject application (the subject of this report).


Figure 4: Relationship of key planning applications to the Stage 2 South Site DA (this application)

The Department of Planning and Environment have provided Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development. This report has been prepared having regard to the SEARs as follows:

The EIS shall:

- identify and address the existing capacity to service the development proposed and any augmentation requirements for utilities in consultation with relevant agencies
- identify any potential impacts of the proposed construction and operation on the existing utility infrastructure and service provider assets, and demonstrate how these will be protected, or impacts mitigated.

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the EP\&A Regulation 2000. Provide these as part of the EIS rather than as separate documents.

In addition, the EIS must include the following:

- Services and utilities infrastructure report.

Furthermore, the Development consent Section 4.38 of the Environmental Planning and Assessment Act 1979 condition B14 states:

- Future Development Applications for construction of new buildings shall address the existing capacity and any augmentation requirements of the development for the provision of utilities, including staging of infrastructure through the preparation of an infrastructure / utility management plan in consultation with relevant agencies and service providers.


## 2 Utility Services Infrastructure

### 2.1 Existing Information \& Utility Provider Meetings

The utility services assessment for the project is based on 'Dial Before You Dig' (DBYD) information. To date, meetings have been undertaken with utility providers about connections and adjustments required as part of the proposed development. The utility providers met include:

- Sydney Water (Feasibility design submitted to Sydney Water through Sydney Water Services Coordinator (SWSC))
- Ausgrid (Preliminary Design Application submitted to Ausgrid)
- Jemena (Meetings held with general endorsement on current proposal detailed to date)
- Telstra (To date no discussions have been held)

Further to these meetings, further discussions will be held around exact detail before Construction Certificate (CC).

### 2.2 Scope Delineation of Station and South Tower Works

The utility assessment completed relates to the works required for the station development and South Tower. All service adjustments, protection and monitoring required for the station and South Tower shaft excavation are to be completed as part of the Sydney Metro line-wide CSSI. In addition, it is taken all services that are common to both the station and South Tower are to be designed and built as part of combined design and construction. All other services will be built for the tower only. A summary of the required service connections for both developments are shown in Table 1.

Table 1: Utility connection requirements (Station and South Tower)

| Utility Type | Authority Name/s | Station | South Tower |
| :---: | :---: | :---: | :---: |
| Telecommunications | AAPT/ PowerTel, AARNet, NBN, Nextgen, Optus, Uecomm, PIPE Networks, Primus, Soul, Telstra, Verizon, Vocus | Communications required (Currently assumed that Telstra only will be connected to station for mobile network within station) | Communications required from the majority of providers (Refer to NDY OSD communication documentation for details) |
| Electrical | Ausgrid | N/A: High voltage (HV) power provided through running tunnels | HV required (point and details of connection and reticulation to be confirmed in detailed design before CC with ASP3 design and Ausgrid approval) |


| Gas | Jemena Gas South | N/A: No requirement within station | Gas required (Point and details of connection and reticulation to be confirmed in detailed design before Construction Certificate) |
| :---: | :---: | :---: | :---: |
| Electrical | RailCorp | TBC | N/A. RailCorp cabling is within public corridor |
| Sewerage | Sydney Water | Sewage discharge required | Sewage discharge required (point and details of connection and reticulation to be confirmed with Sydney Water prior to Construction Certificate through a Section 73) |
| Potable Water (Required for domestic cold water, fire hose reels, sprinkler and hydrant) | Sydney Water | Potable water required (point and details of connection and reticulation to be confirmed with Sydney Water) | Potable water required (point and details of connection and reticulation to be confirmed with Sydney Water prior to Construction Certificate through a Section 73) |
| Stormwater | Sydney Water \& City of Sydney | N/A (All stormwater will be collected by OSD with the exception of Martin Place which will utilise an existing connection from the boundary) | Stormwater discharge required <br> (Point and details of connection and reticulation to be confirmed with Sydney Water \& City of Sydney prior to Construction Certificate through a Section 73) |

In summary the report below details work required to be completed as part of the separate approvals for the station (CSSI) and the South Tower OSD (SSD):

- Works to be completed as part of the station (not part of this approval):
- Lowering/ protection of services for vehicular crossings;
- Alteration/ lowering/ realignment due to the adjusted footpath levels for pedestrian accessibility, proposed bollards, street trees, street poles and street furniture; and
- Connections into the proposed station including connections to proposed substations within both North and South Towers, stormwater, sewer, water and communications (determined by Sydney Metro) from existing street mains or pits (utilising existing connections where possible) subject to discussions with asset/ authority owners.
- Works to be completed as part of the South Tower:
- Connections into the OSD including connections to proposed substations within the South Tower, stormwater, sewer, water and gas and communications from existing street mains or pits (utilising
existing connection where possible) subject to discussions with asset/ authority owners.

Refer to CSWSMP-MAC-SMP-CE-DRG-308801 and CSWSMP-MAC-SMP-CE-DRG-308802 for indicative new services connections for both the station and South Tower.

### 2.3 Protection of Existing Utility Services

The following process is recommended to ensure existing utility services is adequately considered. Prior to construction the process will be further developed to suit the staging and construction methodology:

- Desktop investigation and review of existing services using DBYD information and site observations. Obtaining Company As-Built Records where possible;
- Non-destructive in-ground services mapping to locate existing assets where practical;
- Intrusive investigations will be undertaken where considered necessary to more accurately locate utilities and investigate unknown services and/or potentially redundant services;
- Utility providers to be consulted to obtain any necessary consents to perform construction work in their vicinity and discuss necessary diversion and/or protection measures and connections for the proposed works;
- Utility technical and hazard requirements will be incorporated into the design and construction documentation;
- Safe work methods statements and inspection and test plans will be prepared by accredited contractors;
- Pre-start work checklists will be developed and implemented;
- Field safety inspectors will be present during critical works as determined by utility providers.


### 2.4 Stormwater

### 2.4.1 Existing

The development has both Sydney Water and City of Sydney stormwater infrastructure within the extent of proposed works.

The infrastructure surrounding the site is as follows:

- Castlereagh Street - $710 \times 1070$ brick oviform drain (heritage listed as part of the Bennelong stormwater channel network) in the middle of the street.
- Elizabeth Street - $710 \times 1070$ brick oviform drain (heritage listed as part of the Bennelong stormwater channel network) in the middle of the street.


Figure 5: City of Sydney and Sydney Water stormwater infrastructure

### 2.4.2 Proposed

There are currently two existing stormwater lines $\varnothing 375$ through Martin Place between Elizabeth Street and Castlereagh Street that will be affected by the works. Stormwater within Martin Place will be redesigned to collect minor events within this area.

In addition, there will be minor adjustments to stormwater infrastructure around the planned kerb extension on Castlereagh Street. Stormwater connections for roof drainage are proposed for the South Towers to the existing network which will connect to the in-ground network. Canopy drainage is proposed to discharge through kerb connections along the length of the development.

The existing building connection to Elizabeth Street will need to be disconnected as part of the existing building demolition.

### 2.5 Sewerage

### 2.5.1 Existing

The development has Sydney Water sewerage infrastructure within the extent of proposed works.

The infrastructure surrounding the site is as follows:

- Castlereagh Street - $711 \times 1066$ and $914 \times 1371$ brick oviform
- Elizabeth Street - $\varnothing 300$ vitrified clay (Concrete Encased) main


Figure 6: Sydney Water sewer infrastructure

### 2.5.2 Proposed

There will need to be separate connections from the existing network for both the South Tower and station. The existing connection will need to be disconnected due to the proposed building demolition and a new connection added to an existing sewer along Castlereagh Street. Further survey and discussions with Sydney Water will be required to determine the full extent of the required works.

### 2.6 Potable Water

### 2.6.1 Existing

The development has Sydney Water potable water infrastructure within the extent of proposed works.

The infrastructure surrounding the site is as follows:

- Castlereagh Street - $\varnothing 250$ cast iron cement lined (CICL) main
- Elizabeth Street - $\varnothing 450$ CICL main


Figure 7: Sydney Water potable water infrastructure

### 2.6.2 Proposed

New connections will be required for the South Tower. Existing connections will require disconnection due to the demolition of the existing buildings. Further survey and discussions with Sydney Water will be required to determine the full extent of the required works.

### 2.7 Gas

### 2.7.1 Existing

The development has Jemena gas infrastructure within the vicinity of the proposed works.

The infrastructure surrounding the site is as follows:

- Castlereagh Street - $\varnothing 150 \mathrm{~mm} 1050 \mathrm{kPa}$ Main and $\varnothing 110 \mathrm{~mm} 7 \mathrm{kPa}$ Main
- Elizabeth Street $-\varnothing 75 \mathrm{~mm} / \varnothing 200 \mathrm{~mm} 7 \mathrm{kPa}$ Main


Figure 8: Jemena gas infrastructure

### 2.7.2 Proposed

New connections will be required for the South Tower. The existing connection will need to be disconnected due to the demolition of the existing building. Further survey and discussions with Jemena will be required to determine the full extent of the required works.

### 2.8 Telecommunications

Telecommunications infrastructure in the vicinity of the development are either owned by or share conduits with AAPT/ PowerTel, AARNet, NBN Co., Nextgen, Optus, PIPE Networks, Primus Telecom, Soul Communications, Telstra, Uecomm, Vocus Communications and Verizon.

The following sections review likely telecommunications impacts by service provider. The project is likely to impact many of the providers due to:

- Proximity to proposed basement excavation and temporary rock anchoring
- Street furniture and bollard footings
- Proposed trees
- Proposed driveways
- Disconnection of services from buildings to be demolished

Note that works on or beneath the ground plane are covered under a separate CSSI approval pathway, however DBYD information on existing telecommunications utilities is included herein and will be used to inform ongoing tower design and engagement with utilities prior to construction.

### 2.8.1 Telstra

Telstra has extensive network beneath Castlereagh Street, Elizabeth Street and through Martin Place Plaza. Demolition of buildings will require existing telecommunication services to be disconnected which is part of a separate approval. Due to the proposed works within the public realm extensive alterations are anticipated as part of the CSSI.


Figure 9: Telstra infrastructure (South Tower)

### 2.8.2 AAPT/ PowerTel

From DBYD records (shown on Figure 10) AAPT/ PowerTel telecommunication lines run around the entire site. Various connections along Castlereagh Street and Elizabeth Street will need to be disconnected and removed due to the demolition to the existing buildings.


Figure 10: AAPT/ PowerTel infrastructure

### 2.8.3 Australia Academic and Research Network (AARNet)

From DBYD records (shown on Figure 11Figure 11) AARNet telecommunication lines run along Elizabeth Street. This provider's lines should be unaffected by the development.


Figure 11: AARNet infrastructure

### 2.8.4 NBN Co.

From DBYD records (shown on Figure 12Figure 12) NBN Co. telecommunication lines run along Elizabeth Street. This provider's lines should be unaffected by the development.


Figure 12: NBN Co. infrastructure

### 2.8.5 Nextgen Network

From DBYD records (shown on Figure 13) Nextgen telecommunication lines run along Elizabeth Street and through Martin Place. This provider's lines should be unaffected by the development.


Figure 13: Nextgen infrastructure

### 2.8.6 Optus

From DBYD records (shown on Figure 14) Optus has extensive network along Castlereagh Street, Elizabeth Street and through Martin Place. The connections to existing buildings will be disconnected and removed as part of a separate approval. Subject to the public domain work proposed in the CSSI these lines should be largely unaffected by the proposed development.


Figure 14: Optus infrastructure

### 2.8.7 PIPE Networks

From DBYD records (shown on Figure 15Figure 15) PIPE Networks telecommunication lines are limited. These lines should be largely unaffected by the proposed development.


Figure 15: PIPE Networks infrastructure

### 2.8.8 Primus Telecommunications

From DBYD records (shown on Figure 16) Primus Telecommunication lines are located on Castlereagh Street, Hunter Street and Bligh Street. No existing connections are shown, except for the existing 50 Martin Place building connections. Telecommunications running beneath Martin Place will need to be permanently diverted to allow for excavation (as part of a separate approval). Due to the extensive changes within the footpaths proposed in the CSSI, alterations may be required along Castlereagh Street.


Figure 16: Primus infrastructure

### 2.8.9 Soul Communications

From DBYD records (shown on Figure 17Figure 17) Soul telecommunication lines are limited. These lines should be largely unaffected by the proposed development.


Figure 17: Soul Communications infrastructure

### 2.8.10 Uecomm

From DBYD records (shown on Figure 18) Uecomm telecommunication lines are limited. These lines should be largely unaffected by the proposed development.


Figure 18: Uecomm infrastructure

### 2.8.11 Verizon

From DBYD records (shown on Figure 19) Verizon lines are located on Castlereagh Street and Elizabeth Street. There appears to be no existing connections to buildings located in the development area. Any adjustment/ relocation/ diversion works required for infrastructure within Martin Place is part of the CSSI approval. These lines should be largely unaffected by the proposed development.


Figure 19: Verizon infrastructure

### 2.8.12 Vocus Communications

From DBYD records (shown on Figure 20) Vocus telecommunication lines are limited. Subject to the design proposed these lines should be largely unaffected by the proposed development.


Figure 20: Vocus infrastructure

### 2.9 Electrical Infrastructure

### 2.9.1 Existing

From DBYD records Ausgrid has extensive network beneath Castlereagh Street, Elizabeth Street and through Martin Place. Power running across Martin Place from Castlereagh Street to Elizabeth Street will need to be redirected/ altered during excavation in this area as part of the CSSI (not covered by this SSD DA).

Alterations to the existing network are anticipated due to the proposed development. The scope is subject to further design development, survey and discussions with Ausgrid.

### 2.9.2 Proposed

The South Tower is proposed to be supplied from the Ausgrid network. Within the South Tower, there will be one basement chamber triplex substation. Detailed HV cable routing and cable entry requirements to the tower will be further coordinated with the Level 3 substation designer and Ausgrid.

## 3 Agency consultations

The Metro Martin Place team met with TfNSW Utilities branch on 10 April 2018, Sydney Water on 17 April 2018, Ausgrid on 19 April 2018, and Jemena on 04 May 2018 to provide a brief on the upcoming SSD DA Stage 2 submission. The contents of this report were discussed with all agencies listed above, and all designs presented were agreed to in principle. No follow-up meetings were required.

## 4 Conclusion

Available survey and DBYD information has been reviewed in the context of the proposed South Tower development.

Utilities existing within and around the Metro Martin Place Precinct have been identified and assessed, and enabling works will be required, as well as future connections to a number of these utilities as part of the South Tower development.

Enabling works including disconnection of existing services and diversion of existing services within the South Tower boundary will be conducted under the separate CSSI Approval works.

Preliminary utilities design solutions for South Tower connections have been developed as reasonable to the current stage of design, through consultation with utilities providers. Issues raised by providers have been addressed and incorporated in the design.

Through the consultation process, Ausgrid has advised that augmentation works may be required to be undertaken by Ausgrid. The extent of any potential works is yet to be confirmed by Ausgrid. At this stage of design development, as a result of agency consultations, it is not considered likely that any other utility providers will need to upgrade or augment existing network capacities beyond immediate works around the site.

## Appendix A: DYBD Information

Note: all reference to smart poles in this appendix are covered under separate CSSI approval

## AAPT/ PowerTel

The Essentiol First Step.

Response Cover Letter

Date: 16/01/2017
AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001 Phone: 1800786306

A/H: 1800786306
To:
Mr Nicholas Rouggos
ARUP
201 Kent Street
Sydney
Email: nicholas.rouggos@arup.com
Phone: 0293209298
Fax: Not Supplied
Mobile: Not Supplied

- Customer ID: 1643225

NSW 2000

## Dear Mr Nicholas Rouggos

The following is our response to your Dial Before You Dig enquiry.

## AAPT ASSETS ARE AFFECTED BY YOUR ENQUIRY 58207253

Sequence Number:
Location:

58207253
Hunter Street
Sydney
NSW
2000
01/03/2018

In relation to your enquiry at the above address, AAPT (PowerTel) advises as follows.
The records of AAPT (PowerTel) Limited disclose that there are underground FIBRE OPTIC / TELECOMMUNICATIONS cables in the vicinity of the above enquiry.

Your enquiry has been dispatched to an AAPT (PowerTel) Route Technician who will contact you ASAP with further information regarding the exact location of the AAPT (PowerTel) network.

It is essential that no excavations are undertaken until you have been contacted by an AAPT (PowerTel) Representative. Your local AAPT (PowerTel) Field Representative can be contacted on ph: 0405133156

Should the scope of your work or the area of your work change, please contact as below to receive further advice. Due to continued network expansion, the network information can only be considered valid and accurate for 28 days from issue.

AAPT will seek compensation for any damage to its network through negligence or ignorance of duty of care. Should you require any further information, please contact as below:

## AAPT

Ph: 1800786306

## DUTY OF CARE

Due to the nature of underground cables and the age of some cables and records the accuracy and/or completeness of the information cannot be guaranteed and, accordingly, they are indicative only and as a result AAPT (PowerTel) does not accept any responsibility for any inaccuracies of its plans. They should not be solely relied upon when undertaking underground works. It is also inaccurate to assume that fibre optic cables follow straight lines and careful onsite investigations are essential to locate an assets exact position.

The following minimum clearances must be maintained.

1) 300 mm when laying asset's inline, horizontal or vertical.
2) 500 mm when operating vibrating equipment. Eg: Vibrating plates.
3) $\mathbf{1 0 0 0} \mathrm{mm}$ when operating mechanical excavators or Jackhammers.

## ON SITE LOCATING OF AAPT'S (POWERTEL) CABLING AND INFRASTRUCTURE MUST BE CONDUCTED BY AAPT'S (POWERTEL) PERSONNEL ONLY. AAPT (POWERTEL) WILL USE ALL LEGAL MEANS TO SEEK DAMAGES AND ANY OTHER REMEDIES AVAILABLE TO IT IN THE EVENT THAT ITS CABLE OR ANY OTHER NETWORK INFRASTRUCTURE IS DAMAGED BY YOU OR YOUR PERSONNEL AND/OR CONTRACTORS. IT IS AN OFFENCE TO OPEN ANY AAPT'S (POWERTEL) PITS OR MANHOLES AND/OR ANY ASSOCIATED INFRASTRUCTURE BELONGING TO OR PART OF AAPT'S (POWERTEL) NETWORK

Due to the inherent dangers associated with excavation in the vicinity of underground cables, precautions should be taken in the undertaking of any underground works, including (but not limited to) the following.

All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs \& Manhole covers must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the possibility of damage to the cable.

EG: Blades of hand equipment should be orientated parallel to the line of the cable rather than digging across the cable.
All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.

All excavations must be undertaken in accordance with the relevant legislation and regulations.

## ANY DAMAGE TO AAPT (POWERTEL) NETWORK MUST BE REPORTED IMMEDIATELY TO 1800786306

Any information provided is valid only for 28 days from the date of issue of this document.
If the work operations extend beyond this period, or if the designs are altered in any way, you are requested to re-submit your proposal for re-assessment by contacting Dial Before You Dig ph:1100 or www.dialbeforeyoudig.com.au

Onsite visits by AAPT (PowerTel) agents may incur costs, this would solely depend on the type and extent of the work to be carried out. EG: Major roadwork's, network relocation's, Large planning and design work's.

Overview Map


AAPT (for information specific to this job only) Ph 1800786306

## -AAPT

The Essential First Step.

AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001
Phone: 1800786306 A/H 1800786306


## Enquiry Number: 58207253

Map Sheet: 1
Scale: 1:750
0.008km

## LEGEND:


$\square$ AAPT Manhole

The Essential First Step.

AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001
Phone: 1800786306 A/H 1800786306


The Essential First Step.

## ๑AAPT

AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001
Phone: 1800786306 A/H 1800786306


The Essential First Step.

AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001
Phone: 1800786306 A/H 1800786306


## AARNet

## Dial Before You Dig Response

To:
Mr Nicholas Rouggos (Customer ID: 1643225)
ARUP
201 Kent Street
Sydney, NSW 2000
Email: nicholas.rouggos@arup.com
Phone: 0293209298
Fax: Not Supplied
Mobile: Not Supplied
Sequence No: 58207260
Location: Hunter Street
Sydney, NSW
Commencement Date: 01/03/2018 12:00:00 AM

## Dear Mr Nicholas Rouggos,

This letter is to confirm that the proposed work at Hunter Street is in the vicinity and may impact AARNet fibre optic cable assets.

Attached is a map indicating the approximate location of the AARNet assets in relation to your enquiry area.
There may be additional AARNet assets in this area contained within Telstra duct. No work is to take place until plans have been obtained from Telstra and reviewed as necessary.

Any information provided is valid for 28 days from the date of issue of this document.
Please review the map and if you have any further concerns, contact the AARNet NOC on 1300 APL NOC (1300 275 662).
f you are proposing to carry out digging in the vicinity of AARNet underground infrastructure you will need to carry out these works in accordance with the guidelines below.

## WARNING

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

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

AARNet makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error, omission, lack of detail, transmission failure or corruption in the information provided. AARNet does not accept any responsibility for any loss that you or anyone else may suffer in connection with the provision of these plans, however that loss may arise (including whether or not arising from the negligence of AARNet, its employees, agents, officers or contractors).

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

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet 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.

## All Areas

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

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

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

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

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

## Urban Areas

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

## Rural Areas

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

## ASSET RELOCATIONS

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

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

## FURTHER ASSISTANCE

Assistance can be obtained by contacting AARNet NOC on 1300 APL NOC (1300 275 662)
Where an on-site location is provided by an accredited locator, the owner is responsible for all costs associated with hand digging or use of non-destructive water jet method (pot holing) to visually locate AARNet assets.

If plant location drawings or visual location of AARNet assets by digging reveals that the location of AARNet plant is situated wholly or partly within the owner work area, then AARNet Infrastructure Development Group
apl-infdev@aarnet.edu.au must be contacted to discuss possible engineering solutions.


Create Date: 16/01/2017
Enquiry Area
DISCLAIMER: While every care is taken by AARNet to ensure the accuracy of this data, AARNet makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason.
Exact positions of any assets shown on this map report should be confirmed on site



Create Date: 16/01/2017
Scale 1:1500
DISCLAIMER: While every care is taken by AARNet to ensure the accuracy of this data, AARNet makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason.

Enquiry Area

Exact positions of any assets shown on this map report should be confirmed on site.

## Ausgrid

## Reading Ausgrid Plans

## COMN0119

## 1 Property Lines

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

Typically the PL is the boundary between private property and local council's footpath area or nature reserve. Most residential fences and office blocks are erected along the PL.
"kerb line" (KL) is less frequently referred to on Ausgrid plans, and where used will be identified clearly as KL.

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


Figure 1

## 2 Datum References

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


Figure 2

## 3 Cross Sections

"cross sections" displayed on Ausgrid plans detail information relating to the relative position (ie: distance from the "property line", and the depth of "cover") of Ausgrid assets.
"cover" is a term used to refer to the depth of cables underground.
A "cross section" leader line will be drawn indicating the location of the displayed "cable" or "conduit" information on Ausgrid plans.

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

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

NOTE: Distance and cover where indicated may be different to the actual position of the cables (eg: fill may have been placed at site that has changed the ground level).
"PL" distance shown in cross sections is an indicative measure to the centre of the trench allocation from the adjacent property line.

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


Figure 3


Figure 4

## 4 Cable Joints and Joint Reports

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


Figure 5

| joint location |  |  |  |
| :---: | :---: | :---: | :---: |
| (61.7m east of Pearl Lane East PL) |  |  |  |
| JOINT DETAIL REPORT |  |  |  |
| No. | Bk-Pg | P//Cvt | Joint Location |
| Map: LE912 |  |  |  |
| 31 | 524-24 | 1.14/0.69 | 61.7 E of Pearl Lane EPL |
| 32 | 524-24 | 1.14/0.69 | 57.6 E of Pearl Lane EPL |
|  | osition <br> from PL, 0 . |  |  |

Figure 6

## 5 Cross Section Detail Boxes

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

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


Figure 7

A "cross section" leader line and annotation is drawn on the Ausgrid plan for a reference to "cable" and/or "conduit" information in the "cross section" detail boxes.

## 6 Pits

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


Figure 8

## 7 Proposal Areas

There are areas where underground work may have been issued for construction by Ausgrid, but details are not yet completely displayed on Ausgrid plans. In such cases a shaded "proposal area" is displayed on the Ausgrid plan, indicating underground work may have commenced in the vicinity but is not yet complete.

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


Figure 9

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


Figure 10
NOTE: In cases where these shaded "proposal areas" are displayed on Ausgrid plans.
"Ausgrid's design plans showing the proposed position of its underground cables, overhead lines and structures have been prepared solely for Ausgrid's own planning use. They show the proposed position of such underground cables, overhead lines and structures as proposed at the time of planning and have not necessarily been corrected to take into account any changes to road widths, road levels, fences and buildings subsequent to proposed installation.

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

Any further information regarding information displayed for "proposal areas" can be obtained by contacting the Ausgrid DBYD office at the number indicated on the response to your DBYD enquiry for further information.

## 8 Ausgrid (ISG) Map Grid

The pale grey line indicates the 1:1000 Ausgrid (ISG) map grid border.

The pale grey annotation located in the corners of the Ausgrid plan window, indicates the 1:1000 Ausgrid (ISG) map grid reference.

The 1:1000 Ausgrid (ISG) map grid border and reference on Ausgrid plans should be used when reading the "joint report" (see part 4 of this document for more detail) to accurately locate underground cables.

The buffer area shown on the plan should relate to the area requested on the original Dial Before you Dig request.

The grid index box can be used for reference where necessary (located in the bottom right corner of the Ausgrid plans), and will also indicate the buffer area shown on the plan.

## 9 Ausgrid "Distribution" and "Transmission" Plans

The Ausgrid plans supplied may identify both "distribution" and
"transmission" voltage assets for the area defined in the DBYD request. (refer to figure 11)


Figure 11
In the Sydney region, the Ausgrid plans are separately labelled as "Distribution - nnnnnnn" and "Transmission - nnnnnnn", where "nnnnnnnn" refers to the DBYD sequence number quoted.
In the Hunter region, the Ausgrid plans show combined "distribution" and "transmission" voltage assets, and are clearly labelled as "Distr + Trans - nnnnnnn" where "nnnnnnn" refers to the DBYD sequence number.

In the Hunter region, some DBYD requests are covered by PENGUIN grid references. In such cases, the Ausgrid Plans show the grid quoted with a cross-reference to a corresponding Ausgrid (ISG) map grid (eg: PENGUIN 136B3 - DP711, where DP711 is the Ausgrid (ISG) grid) to optimise the legibility of plans due to PENGUIN grid scale.

Some Hunter plans may have transmission cables in the area, when these cables are present there will be a warning printed at the top of the plan supplied:

WARNING: If there is work in the vicinity of transmission cables, Ausgrid must be contacted at least two weeks before the work is due to commence.

## 10 "Shifting Land Base" on Ausgrid Distribution and Transmission Plans

In some instances, the plans supplied may indicate road or property outlines that appear to have shifted in relation to the Ausgrid assets displayed. (refer to figure 12)


Figure 12
In such instances, always refer to the "property line" (in metres) and depth of "cover" (in metres) references displayed on the nearest relevant "cross sections" to obtain Ausgrid asset location information (see Reading Ausgrid Plans, clause 3, Cross Sections for more detail).

## 11 "Underground Earthing Infrastructure"

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

The "Earth Point" symbol (refer to figure 13) will be shown on plans to minimize risk of disturbance or damage to any Ausgrid underground earthing infrastructure in the vicinity.


Figure 13

## Working near <br> Ausgrid cables

Finding out what's below the surface can save your life.
Call Dial Before You Dig on 1100 or visit 1100.com.au


## Changes in the Law.

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

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

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

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

## Excavating near transmission cables.

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

Phone the Ausgrid Transmission enquiries line on (02) 49519200 to arrange for an Ausgrid representative in your region.

## Be prepared. Wise words for safety at work.

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

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

See also:

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


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

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

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


## Do all power cables look the same?

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

## What else should I look for below ground level?

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

## When in doubt, ask Ausgrid.

If you have any questions about excavating near Ausgrid cables, read NS156 (available at ausgrid.com.au). For further information call 131365.

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

If you damage an electricity cable, it is compulsory to notify Ausgrid on 131388.
Striking power cables can cause serious damage to the cables and endanger the lives of anyone who comes in contact with them. Machinery and hand operated plant such as jack hammers can become alive if it is in contact with electrical cables or equipment. Keep people well away from machinery and the work site if contact is made with a cable.


Flow Chart for work near Ausgrid Cables


## Ausgrid Checklist for work near or around underground cables

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

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

## In the event of DAMAGE to Ausgrid's cable or conduits, call 131388 immediately. PROCEED with CAUTION

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

Signed: $\qquad$ Date: $\qquad$ / $\qquad$ 1 $\qquad$
Responsible person on site















You are working near Transmission Cables. You must contact Ausgrid on (02) 49519200 at least two weeks before work commences. See Ausgrid Network Standard NS156.



You are working near Transmission Cables. You must contact Ausgrid on (02) 49519200 at least two weeks before work commences. See Ausgrid Network Standard NS156.




City of Sydney

## Dial Before You Dig (DBYD): Asset Location Response

## ARUP - Mr Nicholas Rouggos

201 Kent Street
Sydney NSW 2000
nicholas.rouggos@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 | 58207248 |
| Enquiry Date | $16 / 01 / 2017$ 17:01 |
| Response | AFFECTED |
| Address | Hunter Street <br> Sydney |
| Location in Road | CarriageWay,Footpath,Nature Strip |
| Activity | Planning \& Design |

## 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 nondestructive 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 0292659333 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: Don Urquhart, Principal Surveyor via email Surveyors@cityofsydney.nsw.gov.au or phone: (02) 92659819.
- For Stormwater: Terry Kefalianos, Principal Engineer Water Assets via email Stormwater@cityofsydney.nsw.gov.au or phone (02) 92467859.
- For Electrical: Paul Gowans, Principal Engineer Electrical \& Furniture via email Electrical@cityofsydney.nsw.gov.au or phone (02) 92467226.

Yours sincerely,

Don Urquhart
Principal Surveyor

## Overview Map



LEGEND:

$\square$
Affected DBYD Work Area

Detail Map
$0 \quad 0.03 \mathrm{~km}$

## Disclaimer:

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Map 2


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## Jemena Gas

# Network Protection 

## High Pressure - Assets Affected

In reply to your enquiry, there are High Pressure Gas Mains in the vicinity of your intended work, as generally illustrated on the attached map. There may also be other mains or services at the location, as discussed in the warning below. For an explanation of the map, please see the key below.
The following excavations guidelines apply:

## Excavation Guidelines:

Prior to any excavations in this area, you must contact the High Pressure Response Coordinator on 1300665380.
(Appointments will be coordinated with availability of a Jemena Representative) to arrange a survey. For all works in the vicinity of High Pressure Gas Mains you must arrange for a Jemena Representative to attend and supervise all excavations. Charges apply for attendance of any works outside the hours of 7am to 4pm, Monday to Friday ("Standard Business Hours") and for any attendance during Standard Business Hours that is longer than 2 hours.
In accordance with clause 34(5) of the Gas Supply (Safety and Network Management) Regulation 2013 (NSW), you should be informed that all excavation, (including pot-holing by hand to confirm the location of pipes) should be performed in accordance with "Work Near Underground Assets Guideline" published in 2007 by the Work Cover Authority.
A copy of this Guideline is available at: www.workcover.nsw.gov.au


Warning: The enclosed plans show the position of Jemena Gas Networks (NSW) Ltd's underground gas mains and installations in public gazetted roads only. Individual customers' services and services belonging to other third parties are not included on these plans. These plans have been prepared solely for the use of Jemena Gas Networks (NSW) Ltd and Jemena Asset Management Pty Ltd (together "Jemena") and any reliance placed on these plans by you is entirely at your own risk. The plans may show the position of underground mains and installations relative to fences, buildings etc., as they existed at the time the mains etc were installed. The plans may not have been updated to take account of any subsequent change in the location or style of those features since the time at which the plans were initially prepared. Jemena makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error, omission, lack of detail, transmission failure or corruption in the information provided. Jemena does not accept any responsibility for any loss that you or anyone else may suffer in connection with the provision of these plans, however that loss may arise (including whether or not arising from the negligence of Jemena, its employees, agents, officers or contractors). The recipient of these plans must use their own care and diligence in carrying out their works and must carry out further surveys to locate services at their work site. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to Jemena's underground mains and equipment. Jemena advises that you may be required to carry out potholing by hand if required by a Jemena Representative to confirm the location of Jemena's main and installations. This must also be performed by you under the supervision of a Jemena Representative and be carried out in accordance with the Working Near Underground Assets Guideline published in 2007 by Work Cover Authority

In case of Emergency Phone 131909 (24 hours)
Admin
1300880906




| SIAA | SIAB | SIBA |
| :---: | :---: | :---: |
| SIAC | SIAD | SIBC |
| SICA | SICB | SIDA |


| 592 |  |
| :---: | :---: |
|  | 593 |


| SYDNEY |
| :---: |

- 

murpaity amea

## 

## (2)



NBN Co.

| To: | Mr Nicholas Rouggos |
| :--- | :--- |
| Phone: | 0293209298 |
| Fax: | Not Supplied |
| Email: | nicholas.rouggos@arup.com |


| Dial before you dig Job \#: | 11738734 | DIAL BEFORE |
| :---: | :---: | :---: |
| Sequence \# | 58207263 | www 1100 com |
| Issue Date: | 01/16/2017 |  |
| Location: | Hunter Street,Sydney,NSW-2000 | Some impact. <br> No onsite action required. |

## Location of Underground Telecommunications Facilities

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

- nbn's records indicate that there ARE underground fibre optic/telecommunications facility/facilities (owned or controlled by nbn) in the vicinity of the location identified above ("Location").
- nbn indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plans show general depth and alignment information only and are not an exact scale or accurate depiction of the location, depth and alignment of the fibre optic/ telecommunications facilities shown on the Indicative Plans.
- In particular, the fact that the Indicative Plans show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- The information contained in the Indicative Plans is valid for 28 days from the date of issue set out above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your expense to locate nbn telecommunications facilities during any activities you carry out on site).

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. If you are planning to excavate or require further information, please contact nbn on 1800626 762. For any enquiries related to moving assets or Planning and Design activities, please email nbn at RelocationWorks@nbnco.com.au.

## Notes:

1. You are now aware that there are items of telecommunications and/or power facilities in the vicinity of the above property that could be damaged as a result of activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
2. You should have regard to section 474.6 and 474.7 of the Criminal Code Act 1995 (Cth) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by nbn can interact with nbn's network facilities.
3. Any information provided is valid only for $\mathbf{2 8}$ days from the date of issue set out above.

## Indicative Plans





## Referral Conditions

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

1. nbn does not accept any responsibility for any inaccuracies of its plans including the Indicative Plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your cost to locate nbn telecommunications facilities during any activities you carry out on site).
2. You should not assume that nbn cables and assets follow straight lines or are installed at uniformed depths along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.
3. In carrying out any works in the vicinity of nbn facilities, you must maintain the following minimum clearances:

- 300 mm when laying assets inline, horizontally or vertically
- 500 mm when operating vibrating equipment, for example: jackhammers or vibrating plates;and
- 1000 mm when operating mechanical excavators.
- Adherence to clearances as directed by other asset owner's instructions

4. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as nbn fibre optic,copper and coaxial
cables, and power cable feed to nbn assets).Damage to underground electric cables may result in:

- Injury from electric shock or severe burns, with the possibility of death.
- Interruption of the electricity supply to wide areas of the city.
- Damage to your excavating plant.
- Responsibility for the cost of repairs.

5. You must take all reasonable precautions to avoid damaging nbn facilities. These precautions may include ,but not limited to, the following:

- All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likelihood of damage to the cable, for example, the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.
- If any undisclosed underground cables are located, notify nbn immediately.
- All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
- The safety of the public and other workers must be ensured.
- All excavations must be undertaken in accordance with all relevant legislation and regulations.

6. You will be responsible for all damage to nbn facilities that are connected whether directly, or indirectly with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include, without limitation, all losses expenses incurred by nbn as a result of any such damage.
7. You must immediately report any damage to nbn ${ }^{\text {TM }}$ network that you are/become aware of. Notification may be by telephone - 1800626762.
8. Except to the extent that liability may not be capable of lawful exclusion, nbn and its servants and agents and the related bodies corporate of nbn and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any Plans attached hereto. Except as expressly provided to the contrary in this information sheet or the attached Indicative Plans, all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

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

| State/Territory | Documents |
| :---: | :--- |
| National | Work Health and Safety Act 2011 |
|  | Work Health and Safety Regulations 2011 |
|  | Safe Work Australia - Working in the Viciinity of Overhead and <br> Underground Electric Lines (Draft) |


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

Thank You,

## Network Operations Centre - Assurance

Date: 01/16/2017

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

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Nextgen

# Plant Location <br> Details 

16/01/2017

Mr Nicholas Rouggos
ARUP
201 Kent Street
Sydney, NSW 2000
Phone: 0293209298
Fax: Not Supplied

Nextgen Networks Pty Ltd Level 6, 333 Collins Street Melbourne VIC 3000

T 1800032532
E DBYD@nextgengroup.com.au

Dear Mr Nicholas Rouggos,

The following is a response to your Dial Before You Dig enquiry

## Assets Affected: Nextgen Assets

| Sequence No: | 58207252 |
| :--- | :--- |
| Location: | Hunter Street Sydney, NSW 2000 |

## IMPORTANT:

- Please read and understand all the information and disclaimers provided below
- Sketches and Plans provided by Nextgen Networks are circuit diagrams only and indicate the presence of telecommunications plant in the general vicinity of the geographical area shown; exact ground cover and alignments cannot be given with any certainty and cover may alter over time. Telecommunications plant seldom follow straight lines and careful on site investigation is essential to uncover and reveal its exact position
- The accuracy and/or completeness of the information in the plans can not be guaranteed often due to changes in the surrounding land subsequent to Nextgen's deployment and, accordingly the plans are intended to be indicative only


## "DUTY OF CARE"

When working in the vicinity of telecommunications plant you have a legal "Duty of Care" that must be observed. The following points must be considered:

1. 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 Nextgen Networks plant. Nextgen Networks will provide free plans and sketches showing the presence of its network to assist at this design stage.
2. It is the owner's (or constructor's) responsibility to:
a) Request plans of Nextgen Networks plant for a particular location at a reasonable time before construction begins
b) Visually locate Nextgen Networks plant by vacuum excavation (pot-holing) where construction activities may damage or interfere with Nextgen Networks plant (see "Essential Precautions and Approach Distances" section for more information)
c) Contact Nextgen Networks Network (see below for details) if Nextgen Networks plant is wholly or partly located near planned construction activities

## DAMAGE <br> ANY DAMAGE TO Nextgen Networks NETWORK MUST BE REPORTED TO 1800032532 IMMEDIATELY

- The owner is responsible for all plant damage when works commence prior to obtaining Nextgen Networks plans, or failure to follow agreed instructions
- Nextgen Networks reserves all rights to recover compensation for lose or damage to its cable network or other property including consequential losses


## CONCERNING NEXTGEN NETWORK PLANS

- Phone 1100. Dial Before You Dig for free plans of Nextgen Networks plant locations. Please give at least 2 business days notice
- Nextgen Networks plans and information provided are valid for 30 days from the date of issue
- Nextgen Networks retains copyright in all plans and details provided in conjunction with your request. These plans and or details should be disposed of by shredding or any other secure disposal method after use
- Nextgen Networks plans or other details are provided for the use of the applicant, its servants, or agents, and shall not be used for any unauthorised purpose
- Please contact the Network Help Desk (see below for details) immediately should you locate Nextgen Networks assets not indicated on these plans
- Nextgen Networks, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Nextgen Networks against any claim or demand for any such loss or damage
- Please ensure Nextgen Networks plans and information provided remains on-site at all times throughout your construction phase


## ESSENTIAL PRECAUTION AND APPROACH DISTANCE

NOTE: If the following clearances cannot be maintained, please contact the Nextgen Network Help Desk (see below for details) for advice on how best to resolve this situation

1. On receipt of plans and sketches and before commencing excavation work or similar activities near Nextgen Networks plant, carefully locate this plant first to avoid damage. Undertake prior exposure (vacuum excavation) such as potholing when intending to excavate or work closer to Nextgen Networks plant than the following approach distances:

- Where Nextgen Networks plant is in an area where road and footpaths are well defined by kerbs or other features a minimum clear distance of 600 mm 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
- In country/rural areas which may have wider variations in reasonably presumed plant presence, the following minimum approach distances apply:
a) Parallel to major plant: 10 metres (for optic fibre cable)
b) Parallel to other plant: 5 metres

Note: Even pot-holing needs to be undertaken with extreme care, common sense and employing techniques least likely to damage cables. For example - vacuum excavation.

- If construction work is parallel to Nextgen Networks plant, then careful pot-holing at least every 5 m is required to establish the location of all plant, hence continuing nominal locations before work can commence

2. Maintain the following minimum clearance between construction activity and actual location of Nextgen Networks Plant.

| Jackhammers/Pneumatic Breakers | Not within 1.0 m of actual locations |
| :---: | :---: |
| Vibrating Plate or Wackers Packer Compactors | Not within $0.5 m$ of Nextgen Networks ducts 300mm compact clearance cover before compactor can be used across Nextgen Networks ducts, and 600mm clearance across Nextgen Networks cables in the solid |
| Boring Equipment (in-line, horizontal and vertical) | Not within 2.0 m of actual location Constructor to check depth via vacuum excavation (pot-hole) |
| Heavy Vehicle Traffic (over 3 tonnes) | Not to be driven across Nextgen Networks ducts with less than 600mm cover. Not to be driven across Nextgen Networks fibre with less than $1.2 m$ cover <br> Constructor to vacuum excavate(pot-hole) and expose plant |
| Mechanical Excavators, Boring and Tree Removal | Not within $1.0 m$ of actual location Constructor to vacuum excavate (pot-hole) and expose plant |

- All Nextgen Networks pits and manholes should be a minimum of 1.2 m in from the back of kerb after the completion of your work
- All Nextgen Networks conduit should have the following minimum depth of cover after the completion of your work:


## Footway 450mm

Roadway 450 mm at drain invert and 600 mm below the pavement subgrade level invert

- All Nextgen Networks fibre in the solid should have the following minimum depth of cover after the completion of your work:


## Footway 600mm <br> Roadway 1200 mm at drain invert and 1200 mm below the pavement subgrade level invert

- For clearance distances relating to Nextgen Networks above ground infrastructure please contact the Network Help Desk (see below for details)


## FURTHER ASSISTANCE

Over-the-phone assistance can be obtained by calling the Network Help Desk below.
Nextgen require 5 clear business days notice to conduct an on-site location. The initial on site location visit will not normally incur a charge, but at the discretion of Nextgen subsequent site visits may incur a charge to be applied at an hourly rate.
Where an on-site location is provided, the owner is responsible for all vacuum excavation work (pot-holing) to visually locate and expose Nextgen Networks plant.
If plant location plans or visual location of Nextgen Networks plant by vacuum excavation reveals that the location of Nextgen Networks plan is situated wholly or partly where the owner plans to work, then Nextgen Networks must be contacted through the Network Help Desk to discuss possible engineering solutions.
The contact number for the Network Help Desk is 1800032532.

## NOTE:

If Nextgen Networks relocation or protection works are part of the agreed solution, then payment to Nextgen Networks for the cost of this work shall be the responsibility of the principal developer. The principal developer will be required to provide Nextgen Networks with the details of their proposed work showing how Nextgen Networks plant is to be accommodated and these details must be approved by the Nextgen National Operations Manager prior to the commencement of site works.

## RURAL LANDOWNER - IMPORTANT INFORMATION

Where Nextgen Networks owned cable crosses agricultural land Nextgen Networks will provide a one off free-on-site electronic cable location. Please note that the exact location of cables can only be verified by visual proving by pot holing, which is not covered by this service. The Network Integrity HelpDesk Officer will provide assistance in determining whether a free-on-site location is required. Please ring the Nextgen Network Help Desk as listed above.

## PRIVACY NOTE

Your information has been provided to Nextgen Networks by DBYD to enable Nextgen Networks to respond to your DBYD request. Nextgen Networks keeps your information in accordance with its privacy statement entitled 'Protecting Your Privacy' which can be obtained from Nextgen Networks either by calling 1800032532 or visiting our website www.nextgengroup.com.au

Warning: Nextgen Networks plans show only the presence of cables and plant. They only show their position relative to road boundaries, property fences etc, at the time of installation and Nextgen Networks does not warrant or hold out that such plans are accurate thereafter due to changes that may occur over time.
DO NOT ASSUME DEPTH OR ALIGNMENT of cables or plant as these vary significantly.
The customer has A DUTY OF CARE when excavating near Nextgen Networks cables and plant. Before using machine excavators NEXTGEN PLANT MUST FIRST BE PHYSICALLY EXPOSED BY VACUUM EXCAVATION (potholing) to identify its location.
Nextgen Networks will seek compensation for damages caused to its property and losses caused to Nextgen Networks and its customers.

## EXPERIENCED PLANT LOCATORS (for your area)

On-site assistance should be sought from an Experienced Plant Locater if the telecommunications plant cannot be located within 2.5 metres of the locations indicated on the drawings provided. On-site advice should be obtained from a suitably qualified contractor highly skilled in locating Nextgen Networks plant. If there is any doubt whatsoever about the actual location of the telecommunications plant, the best method for locating the telecommunications plant or the correct interpretation of the drawings provided. In the case where Nextgen Networks plant is outside a recognised road reserve Nextgen Networks recommends that the Network Help Desk is contacted for assistance prior to engaging an Experienced Plant Locater.

For the assistance of customers Nextgen Networks has established strict criteria to assess the skill of contractors that may be engaged by owners requiring Nextgen Networks plant locating services to perform any of the following activities if requested to do so by the owner:

- Review Nextgen Networks plans to assess the approximate location of Nextgen Networks plant
- Advise owners of the approximate location of Nextgen Networks plant according to the plans
- Advise the owners of the best method for locating Nextgen Networks plant
- Advise owners of the hazard of unqualified persons attempting to find the exact location of Nextgen Networks plant and working in the vicinity of Nextgen Networks plant without first locating its exact position
- Perform trial hole explorations by vacuum excavation (pot-holing) to expose Nextgen Networks plant with a high degree of skill, competence and efficiency and utilising all necessary safety equipment

Nextgen Networks does not accept any liability or responsibility for the performance of or advice given by any Plant Locater engaged by you but we will, if requested, recommend suitably qualified plant locators.

## GENERAL DISCLAIMER

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Nexgen 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 Number: 58207252

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

Date: 16/01/2017 ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD.

nextgen






Sequence Number: 58207252

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

Date: 16/01/2017 ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD.

nextgen




Optus
dial before YOU DIG
www.1100.com.au

## Network Operations- Asset Analysis

Unit 9, 677 Springvale Road Mulgrave, Victoria, 3178

| Date: | 17/01/2017 |
| :--- | :--- |
| To: | Mr Nicholas Rouggos |
| Company: |  |
| Address: | 201 Kent Street |
|  | Sydney, NSW 2000 |

ENQUIRY DETAILS

Location:
Sequence No.:
DBYD Reference:

Hunter Street, Sydney, NSW 2000
58207257
11738734

In relation to your enquiry of the above address, Optus advises as follows:
The records of Optus disclose that there ARE underground FIBRE OPTIC TELECOMMUNICATIONS cables in the vicinity of the above enquiry as per the attached plan(s). This reply is valid for a period of 30 days from the date above.

## IMPORTANT INFORMATION

Drawings and Plans provided by Optus 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 assets exact location.
Optus plans are provided as a guide only and the completeness of the information cannot be guaranteed.

## "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 to Optus plant. Optus will provide assistance at this design stage through the provision of plans and sketches or consultation.

It is the owner's (or constructor's) responsibility to:-
a) Request plans of Optus plant for a particular location at a reasonable time before construction begins. If you have doubts about the presence of Optus assets we strongly recommend that you engage an Optus Accredited plant locator.
b) Visually locate Optus plant by hand digging or using non-destructive water jet method where construction activities may damage or interfere with Optus plant
c) Contact Optus Network Operations - Asset Analyst (details below) if Optus plant is wholly or partly located near construction activities

## CRIMINAL CODE ACT 1995

The following is an extract from the Criminal Code Act 1995 and is applicable to Optus plant
Chapter 10 National infrastructure
Part 10.6 Telecommunications Services
Division 474 Telecommunications offences
Sect 474.6 Interference with facilities

1) A person is guilty of an offence if the person tampers with, or interferes with, a facility owned or operated by:
(a) a carrier; or
(b) a carriage service provider; or
(c) a nominated carrier.

Penalty: Imprisonment for 1 year.
2) For the purposes of an offence against subsection (1), absolute liability applies to the physical element of circumstance of the offence, that the facility is owned or operated by a carrier, a carriage service provider or a nominated carrier.
3) A person is guilty of an offence if:
(a) the person tampers with, or interferes with, a facility owned or operated by:

> i.a carrier; or
> ii.a carriage service provider; or iii. a nominated carrier; and
(b) this conduct results in hindering the normal operation of a carriage service supplied by a carriage service provider.
Penalty: Imprisonment for 2 years.
4) For the purposes of an offence against subsection (3), absolute liability applies to the following physical elements of circumstance of the offence:
(a) that the facility is owned or operated by a carrier, a carriage service provider or a nominated carrier;
(b) that the carriage service is supplied by a carriage service provider.
5) A person is guilty of an offence if:
(a) the person uses or operates any apparatus or device (whether or not it is comprised in, connected to or used in connection with a telecommunications network); and
(b) this conduct results in hindering the normal operation of a carriage service supplied by a carriage service provider.
Penalty: Imprisonment for 2 years.

## DAMAGE

## ANY DAMAGE TO OPTUS NETWORK MUST BE REPORTED TO 1800500253 IMMEDIATELY

The owner is responsible for all plant damage when works commence prior to obtaining Optus Drawings, or failure to follow instructions.

Optus reserves the right to recover compensation for loss or damage to its cable network and other property including consequential loss

## ASSET RELOCATIONS

You are not permitted to relocate or alter any Optus assets or network under any circumstance. For all enquiries relating to the relocation of Optus assets please email Fibre.Locations@optus.net.au

## ESSENTIAL PRECAUTIONS AND APPROACH DISTANCES

Note: If the following clearances cannot be maintained, please contact Optus Network Operations Asset Analysis Team for advice on how to resolve the situation.

1. On receipt of plans and before commencing excavation work or similar activities near Optus plant, carefully locate the plant first to avoid damage. Engage an Optus accredited locator to undertake exposure of the Optus plant when working within the following approach distances.

Where Optus plant is in an area where road and footpaths are well defined by kerbs or other features a minimum clear distance of 1.0 m must be maintained from where it could be reasonably presumed that plant would reside.

In non established or unformed reserves this distance must be at least 3 metres.
In country or rural areas which may have wider variations in reasonably presumed plant presence, the following minimum approach distance applies:
a) Parallel to plant: 5 metres

Note: Indicated depths may vary significantly and pot-holing needs to be undertaken within extreme care, commonsense and using techniques least likely to damage cables. Potholing is only to be undertaken by an Optus accredited plant location contractor.

If construction work is parallel to Optus plant, then carful hand digging or using non destructive water jet method (pot holing) at least every 5 m is required to establish the location of the plant, confirming the location of the plant prior to work commencing.

Under no circumstances is crossing of Optus plant to be performed without first exposing the Optus plant and having an Optus representative present onsite.
2. Maintain the following minimum clearance between construction activity and the actual location of Optus plant.
$\left.\begin{array}{|l|l|}\hline \text { Jackhammers / Pneumatic Breakers } & \text { Not within 1.0m of actual location } \\ \hline \text { Vibrating Plate or Wacker Packer Compactor } & \begin{array}{l}\text { Not within 0.5m of actual location } \\ 300 \mathrm{~mm} \text { compact clearance before compactor can be used } \\ \text { across Optus ducts } \\ 750 \mathrm{~mm} \text { compact clearance cover before compactor can } \\ \text { be used across Optus Direct Buried cable }\end{array} \\ \hline \text { Boring Equipment } & \begin{array}{l}\text { Not within 5.0m of actual location without Optus } \\ \text { representative onsite } \\ \text { Constructor to hand dig or non-destructive water jet } \\ \text { method (pot holing) and expose the Optus plant }\end{array} \\ \hline \text { Heavy vehicle Traffic (over 3 tonnes) } & \begin{array}{l}\text { Not to cross the Optus plant without first exposing the } \\ \text { plant at the crossing point and without Optus } \\ \text { representative onsite }\end{array} \\ \hline \text { Mechanical Excavators, Farm ploughing, Boring, } & \begin{array}{l}\text { Not to be driven across Optus ducts or plant with less } \\ \text { than } 600 m m \text { of cover }\end{array} \\ \text { Tree removal, fencing } & \text { Nepth to be verified via hand digging } \\ \text { Nothin 1.Om of actual location } \\ \text { Constructor to hand dig or use non-destructive water jet } \\ \text { method (pot holing) and expose plant }\end{array}\right\}$

All Optus pits and manholes should be a minimum of 1.0 m in from the back of kerb or within 15 m of street intersection after the completion of your work.

All Optus conduit should have the following minimum depth of cover after the completion of your work:-

- Footway

600mm

- Roadway 1000 mm at drain invert and at road centre crown

In cases where it is considered that these clearances cannot be maintained at the completion of works advice is to be sought form the Optus Damages and Relocations Team

## FURTHER ASSISTANCE

Assistance can be obtained by contacting Optus Network Operations Asset Analysis on 1800505777
Where an on-site location is provided, the owner is responsible for all costs associated with hand digging or use of non-destructive water jet method (pot holing) to visually locate and expose Optus plant.

If plant location drawings or visual location of Optus plant by digging reveals that the location of Optus plant is situated wholly or partly where the owner plans to work, then Optus Damages and Relocates Team must be contacted through Optus Network Operations Asset Locations to discuss possible engineering solutions.

## PRIVATE RESIDENTIAL LANDOWNERS and RURAL LANDOWNERS

Where Optus owned cable crosses private residential property or agricultural land, Optus may provide a once off free onsite electronic cable location. Optus Network Operations Asset Analyst will provide assistance in determining whether a free on-site location is required.

Please note:

- The exact location, including depth of cables can only be verified by pot holing which is not covered under this service
- This service is only available to assist private residential land owners and rural land owners
- The service covers one hour onsite only. Additional time will be charged at the current nominal rate.


## OPTUS ENGINEERING DRAWING SYMBOLS

|  | Optus underground cable | Optus manhole/pit |
| :--- | :--- | :--- | :--- |
| Opther Utility manhole/pit |  |  |



WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

## PipeNetworks

Level 17, PIPE Networks House, 127 Creek Street, Brisbane 4000 PH:(07) 32339895 FAX:(07) 32339885

## DBYD ENQUIRY RETURN:

PIPE Networks DOES own or operate telecommunications network infrastructure within the request area detailed above.

The affected network infrastructure is contained within the Telstra duct network and can be found listed on the appropriate Telstra duct Network plans.

THIS NETWORK IS VITAL TO OUR OPERATIONS AND AS SUCH, IT IS CRITICAL THAT NO WORKS COMMENCE WITHIN THE AREA UNTIL YOU HAVE RECEIVED AND APPRAISED THE TELSTRA DUCT PLANS FOR THIS AREA.

Due to continued network expansion, this network information can only be considered valid and accurate for 28 days from issue.

PIPE Networks will seek compensation for any damage to its network through negligence or ignorance of your duty of care.

PIPE NETWORKS
Ph (07) 32339895
Email: dbyd@pipenetworks.com
(for information specifically on this job only)

# pipenetwarks 

## Response Cover Letter

## PIPE Networks

## To:

Mr Nicholas Rouggos - Customer ID: 1643225

ARUP - Mr Nicholas Rouggos
201 Kent Street
Sydney
NSW
2000
Email: nicholas.rouggos@arup.com
Phone: 0293209298
Fax: Not Supplied
Mobile: Not Supplied

Dear Mr Nicholas Rouggos
The following is our response to your Dial Before You Dig enquiry.
Assets Affected: PIPE Networks, Telstra

| Sequence Number: | 58207254 |
| :--- | :--- |
| Location: | Hunter Street |
|  | Sydney <br>  <br>  <br>  <br>  <br> NSW <br> Commencement Date: |
| 2000 |  |
|  | $01 / 03 / 2018$ |

Please read over the attached documents for more information about your enquiry.

Level 17, PIPE Networks House, 127 Creek Street, Brisbane 4000 PH:(07) 3233.9895 FAX:(07) 3233.9880

Attention: Mr Nicholas Rouggos
Fax: Not Supplied
DBYD Enquiry Number: 58207254
Date: 16/01/2017
Location: Hunter Street
Sydney
NSW
2000

## DBYD ENQUIRY RETURN:

PIPE Networks DOES own or operate telecommunications network infrastructure within the area detailed above.

The affected network is contained in the PIPE Networks duct network and can be found on PIPE Networks own network plans.

This network is vital to our operations and as such, it is critical that no works commence within the area until a PIPE Networks representative has contacted you.

A PIPE Networks representative will contact you within 24 hours to further discuss your intended works. If you do not hear from PIPE networks within 24 hours please call us for assistance.

Due to continued network expansion, this network information can only be considered valid and accurate for 28 days from issue.

PIPE Networks will seek compensation for any damage to its network through negligence or ignorance of your duty of care.

Overview Map


PIPE Networks (for information specific to this job only)
Ph (07) 32339895
Email: dbyd@pipenetworks.com
DISCLAIMER: No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence.

Note: If the works fall in an area that adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time, NO WORKS TO COMMENCE PRIOR TO INSPECTION.

## pipenelwnrks

Only PIPE Networks' duct displayed.
For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.


DISCLAIMER: No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence. © 2013 PIPE Networks ttd.

Noter If the works fall in an area that is adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. NO WORKS TO COMMENCE PRIOR TO INSPECTION.

## pipernewvorks

Only PIPE Networks' duct displayed.
For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.


## pipernewnarks

Only PIPE Networks' duct displayed.
For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.


[^1]
## pipernetwarks

Only PIPE Networks' duct displayed.
For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.


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Note: If the works fall in an area that is adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. NO WORKS TO COMMENCE PRIOR TO INSPECTION.

## Primus

## primus

## To:

Mr Nicholas Rouggos
ARUP
201 Kent Street
Sydney, NSW 2000
Phone: 0293209298
Fax: Not Supplied

Dear Mr Nicholas Rouggos,
The following is our response to your Dial Before You Dig enquiry.

## Assets Affected: Assets

Sequence Number: 58207261
Location:
Hunter Street Sydney, NSW 2000
Commencement Date: 01/03/2018 12:00:00 AM
Please have a read over the attached documents for more information about your enquiry.

## Disclaimer:

This document has been prepared solely for the use of Primus Telecom Pty Ltd for use in maintaining primus facilities it has not been created for any other use. It should be scaled to locate primus assets. No warranty is given that the information is accurate or complete.

## Dear Sir/Madam,

Sequence Number: 58207261

Primus Telecom have existing underground assets located within the area you have identified.
The Primus asset is contained in the Telstra duct / conduit network and to an adjacent Primus Pit. It is your responsibility that this duct is physically located by Telstra.

The Primus conduit has a minimum 450 mm cover to the Finished Ground Level.
Attached is a drawing identifying the location of the Primus Pit and conduit.
Please ensure excavating within two (2) metres of Primus assets is by hand method only.

Thank you for your inquiry.
Primus Telecom


This document has been prepared solely for the use of Primus Telecom Pty Ltd for use in maintaining Primus facilities it has not been created for any other use. It should be scaled to locate Primus assets. No warranty is given that the information is accurate or complete.

## Assets Affected



Create Date: 16/01/2017
Scale: 1:1500

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Create Date: 16/01/2017
Scale: 1:1500
DISCLAIMER:
This document has been prepared solely for the use of Primus Telecom Pty Ltd for use in maintaining Primus facilities it has not been created for any other use. It should be scaled to locate Primus assets. No warranty is given that the information is accurate or complete.

## RailCorp











Soul Communications


Sydney Water

# IMPORTANT INFORMATION - DIAL BEFORE YOU DIG 

## Attention: You must read the information below

The material provided or made available to you by Sydney Water (including on the Sydney Water website) in relation to your Dial Before You Dig enquiry (Information) is provided on each of the following conditions, which you are taken to have accepted by using the Information:

1 The Information has been generated by an automated system based on the area highlighted in the "Locality Indication Only" window on your Caller Confirmation. It is your responsibility to ensure that the dig site is properly defined when submitting your Dial Before You Dig enquiry and, if the Information does not match the dig site, to resubmit your enquiry for the correct dig site.

2 Neither Sydney Water nor Dial Before You Dig make any representation or give any guarantee, warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Information. The Information, including Sydney Water plans and work-as-executed diagrams, amongst other things:
(a) may not show all existing structures, including Sydney Water's pipelines, particularly in relation to newer developments and in relation to structures owned by parties who do not participate in the Dial Before You Dig service;
(b) may be out of date and not show changes to surface levels, road alignments, fences, buildings and the like;
(c) is approximate only and is therefore not suitable for scaling purposes; and
(d) does not show locations of property services (often called house service lines) belonging to or servicing individual customers, which are usually connected to Sydney Water's structures.

3 You are responsible for, amongst other things:
(a) exposing underground structures, including Sydney Water's pipelines, by pot-holing using hand-held tools or vacuum techniques so as to determine the precise location and extent of structures before any mechanical means of excavation are used;
(b) the safe and proper excavation of and for underground works and structures, including having regard to the fact that asbestos cement pipelines, which can pose a risk to health, may form part of Sydney Water's water and sewerage reticulation systems;
(c) protecting underground structures, including Sydney Water's pipelines, from damage and interference;
(d) maintaining minimum clearances between Sydney Water's structures and structures belonging to others;
(e) ensuring that backfilling of excavation work in the vicinity of Sydney Water's structures complies with Sydney Water's standards contained on its website or otherwise communicated to you;
(f) notifying Sydney Water immediately of any damage caused or threat of damage to Sydney Water's structures;
(g) ensuring that plans are approved by Sydney Water (usually signified by stamping) prior to landscaping or building over or in the vicinity of any Sydney Water structure; and
(h) ensuring that the Information is used only for the purposes for which Sydney Water and Dial Before You Dig intended.

You acknowledge that you use the Information at your own risk. In consideration for the provision of the Dial Before You Dig service and the Information by Sydney Water and Dial Before You Dig, to the fullest extent permitted by law:
(a) 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 and to the extent that those statutory guarantees cannot be excluded, the liability of Sydney Water and Dial Before You Dig to you is limited to either of the following as nominated by Sydney Water in its discretion, which you agree is your only remedy:
(i) the supplying of the Information again; or
(ii) payment of the cost of having the Information supplied again;
(b) in no event will Sydney Water or Dial Before You Dig be liable for, and you release Sydney Water and Dial Before You Dig 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:
(i) whether arising under statute or in contract, tort or any other legal doctrine, including any negligent act, omission or default (including wilful default) by Sydney Water or Dial Before You Dig; and
(ii) regardless of whether Sydney Water or Dial Before You Dig are or ought to have been aware of, or advised of, the possibility of such loss, costs or damages;
(c) you will indemnify Sydney Water and Dial Before You Dig against any Loss arising from or in connection with Sydney Water providing incorrect or incomplete information to you in connection with the Dial Before You Dig service; and
(d) you assume all risks associated with the use of the Dial Before You Dig and Sydney Water websites, including risk to your computer, software or data being damaged by any virus, and you release and discharge Sydney Water and Dial Before You Dig from all Loss which might arise in respect of your use of the websites.

5 "Sydney Water" means Sydney Water Corporation and its employees, agents, representatives and contractors. "Dial Before You Dig" means Dial Before You Dig Incorporated and its employees, agents, representatives and contractors. References to "you" include references to your employees, agents, representatives, contractors and anyone else using the Information. References to "Loss" include 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). To the extent of any inconsistency, the conditions in this document will prevail over any other information provided to you by Sydney Water and Dial Before You Dig.

## In an emergency, or to notify Sydney Water of damage or threats to its structures, call 132090 (24 hours, 7 days)

Further information and guidance is available in the Building Development and Plumbing section of Sydney Water's website at www.sydneywater.com.au, where you will find the following documents under 'Dial Before You Dig':

- Avoid Damaging Water and Sewer Pipelines
- Water Main Symbols
- Depths of Mains
- Guidelines for Building Over/Adjacent to Sydney Water Assets
- Clearances Between Underground Services

Or call 132092 for Customer Enquires.

Note: The lodging of enquiries via www.1100.com.au will enable you to receive colour plans in PDF format 24 hours a day, 7 days a week via email.

This communication is confidential. If you are not the intended recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying or distribution of this communication.

## Guide to reading Sydney Water DBYD Plans



## Asset Information

## Pipe Types

| ABS | Acrylonitrile Butadiene Styrene | AC | Asbestos Cement |
| :--- | :--- | :--- | :--- |
| BRICK | Brick | CI | Cast Iron |
| CICL | Cast Iron Cement Lined | CONC | Concrete |
| COPPER | Copper | DI | Ductile Iron |
| DICL | Ductile Iron Cement (mortar) Lined | DIPL | Ductile Iron Polymeric Lined |
| EW | Earthenware | FIBG | Fibreglass |
| FL BAR | Forged Locking Bar | GI | Galvanised Iron |
| GRP | Glass Reinforced Plastics | HDPE | High Density Polyethylene |
| MS | Mild Steel | MSCL | Mild Steel Cement Lined |
| PE | Polyethylene | PC | Polymer Concrete |
| PP | Polypropylene | Polyvinylchloride |  |
| PVC - M | Polyvinylchloride, Modified | PVC - O | Polyvinylchloride, Oriented |
| PVC - U | Polyvinylchloride, Unplasticised | RC | Reinforced Concrete |
| RC-PL | Reinforced Concrete Plastics Lined | S | Steel |
| SCL | Steel Cement (mortar) Lined | SCL IBL | Steel Cement Lined Internal Bitumen |
| SGW | Salt Glazed Ware | SPL | Steel Polymeric Lined |
| SS | Stainless Steel | STONE | Stone |
| VC | Vitrified Clay | WI | Wrought Iron |
| WS | Woodstave |  |  |

## Further Information

Please consult the Dial Before You Dig enquiries page on the Sydney Water website

For general enquiries please call the Customer Contact Centre on 132092

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 132090 (24 hours, 7 days)



[^0]:    ${ }^{1}$ Refers to those components within the Metro CSSI approved station envelope that will contain some OSD elements not approved in the CSSI consent. Those elements include the end of trip facilities, office entries, office space and retail areas, along with other office/retail plant and back of house requirements that are associated with the proposed OSD and not the rail infrastructure.

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    Noter If the works fall in an area that is adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. NO WORKS TO COMMENCE PRIOR TO INSPECTION.

