Attachment A27

Utility Services Infrastructure Report
Mixed Use Scheme

ARUP

Stockland

Piccadilly Complex

Utility Services Infrastructure Assessment – Mixed-use Scheme

Reference: 295375_ARUP_Utilities

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1. Introduction

This Preliminary Utility Services Infrastructure assessment report accompanies a planning proposal seeking to amend the Sydney Local Environmental Plan 2012 (the LEP) relevant to the land known as 'Stockland Piccadilly Complex' located at 133-145 Castlereagh Street, Sydney (the site) legally described as Lot 10 in DP828419, and shown in Figure 1.

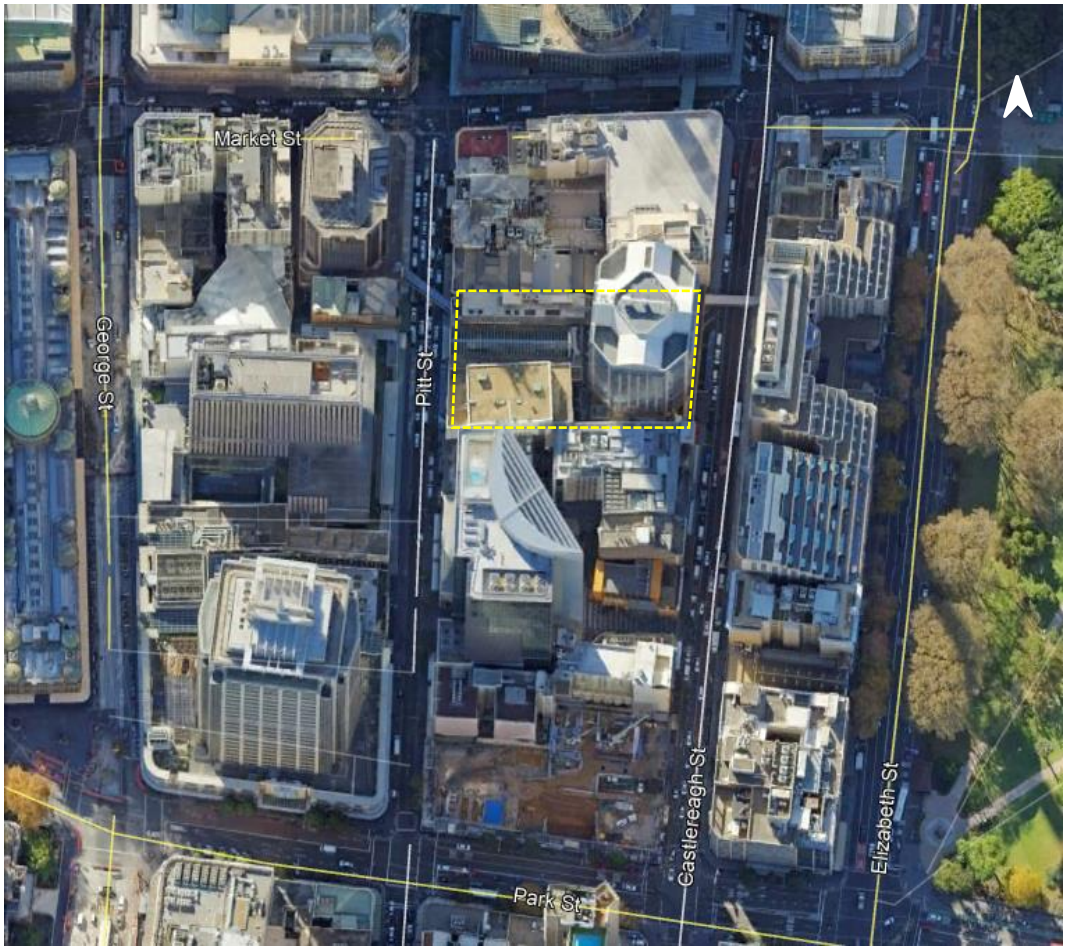

Figure 1: 133-145 Castlereagh Street, Sydney – Stockland Piccadilly Complex

The planning proposal seeks to prescribe site specific LEP provisions, including amending the floor space ratio development standard, as well as concurrently preparing a site specific Development Control Plan (DCP) to guide the future development. The DCP will establish building envelopes for the site, as well as other key assessment criteria including the establishment of a through-site link and parking and vehicular access.

The intended outcome of the proposed amendments to the LEP and DCP is to facilitate the redevelopment of the site for either an all commercial development or a mixed-use development, together with an activated ground plane, basement car parking and associated facilities. The proposal will retain the structure of the majority of the existing commercial tower as well as the basement structure. The proposal facilitates additional commercial floor space capacity in Central Sydney while also delivering improved public domain outcomes. Such outcomes will include a rectified Solar Access Plane breach to Hyde Park, a northerly aligned direct through-site link between Pitt and Castlereagh Street and enhanced pedestrian amenity and activation at the ground plane.

1.1 Subject site

The site currently comprises three buildings known as the 'Piccadilly Complex' completed in 1991 which has been the subject of progressive improvements to upgrade selected elements within the building. The buildings currently occupying the site are detailed in Table 1.

Table 1: Description of existing buildings and improvements

Building	Description
Piccadilly Court	Comprises a 14-storey office building completed in 1975 and first refurbished in 1991 with frontage to Pitt Street.
Piccadilly Shopping Centre	Comprises a 3-storey retail building and the Wesley Mission facilities including the Wesley Church, Lyceum, Wesley Theatre and supporting office space predominately located at basement level. The Wesley Centre facilities comprise the following patron capacity: • Theatre – 950 • Lyceum – 277 • Chapel – 534 A footbridge over Pitt Street connects the building to 55 Market Street to the west.
Piccadilly Tower	Comprises a 31-storey commercial building comprising office floor space and end of trip facilities and four basement levels of car parking accessed from Castlereagh Street. The building includes two lobby spaces, the main Castlereagh Street entrance and a smaller northern entrance to the through site link. A footbridge over Castlereagh Street connects the building to the Sheraton On the Park located to the east of the site.

1.2 Concept Reference Design

To demonstrate that the proposed building envelope can accommodate a viable scheme, a Concept Reference Design accompanies the planning proposal within the Urban Design Study. The Concept Reference Design is indicative only and the final detailed design will be the subject of a competitive design process and detailed development application (DA) which will ultimately result in further refinement. The ground floor plan is shown in Figure 2.

Figure 2: Stockland Piccadilly Complex – Concept Reference Design - Ground plan

The Concept Reference Design includes the following elements:

- Basement car parking and mechanical plant;
- Loading dock
- Retail
- A northerly aligned east-west pedestrian through-site link connecting Pitt St and Castlereagh St;
- Commercial offices
- Plant
- Residential

1.3 Purpose of report

The purpose of this Preliminary Utility Services Infrastructure report is to provide a review of relevant aspects of the proposed planning amendments and Concept Reference Design, to evaluate their likely suitability, and requirements for future assessment and detailed design. As the planning submission does not seek consent for the specific development, a detailed quantitative assessment of the Concept Reference Design is not considered to be warranted at this stage.

Accordingly, this report provides advice regarding:

- Availability, capacity and location of utility services infrastructure in the vicinity;
- Protection and relocation strategies for infrastructure assets of each utility stakeholders

2. Utility services infrastructure

A ‘dial before you dig’ (DBYD) enquiry was sought (23/09/2024) and the information collated into this report.

The available utility information indicates the existence of the following services serving or traversing the site:

- Electricity Supply – Ausgrid:
    - Existing HV and LV services
- Communications Services:
    - Telstra, Optus, NBN, TPG, Vocus, Uecomm, Verizon, AARNet, Nextgen, Fibreconx
- Optus, NBN and Fibre Networks
    - Fibre, NBN
- Water Services – Sydney Water
    - Sewer
    - Potable Water
    - Stormwater and On-Site Detention

2.1 Electricity supply

Estimated maximum demand will be in the order of 13 kVA. This will require three substations, arranged as 3No. ‘triplex’ chamber substations to Ausgrid standards. To accommodate the proposed load, three new triplex chamber substations will be required within the site boundary. There are existing services within the site, namely 11 kV and 400 V cables including a substation. It is noted that the existing substation does not serve any other developments and therefore can be decommissioned, if required, without impacting other sites. At the next stage a detailed assessment and application to Ausgrid will be undertaken.

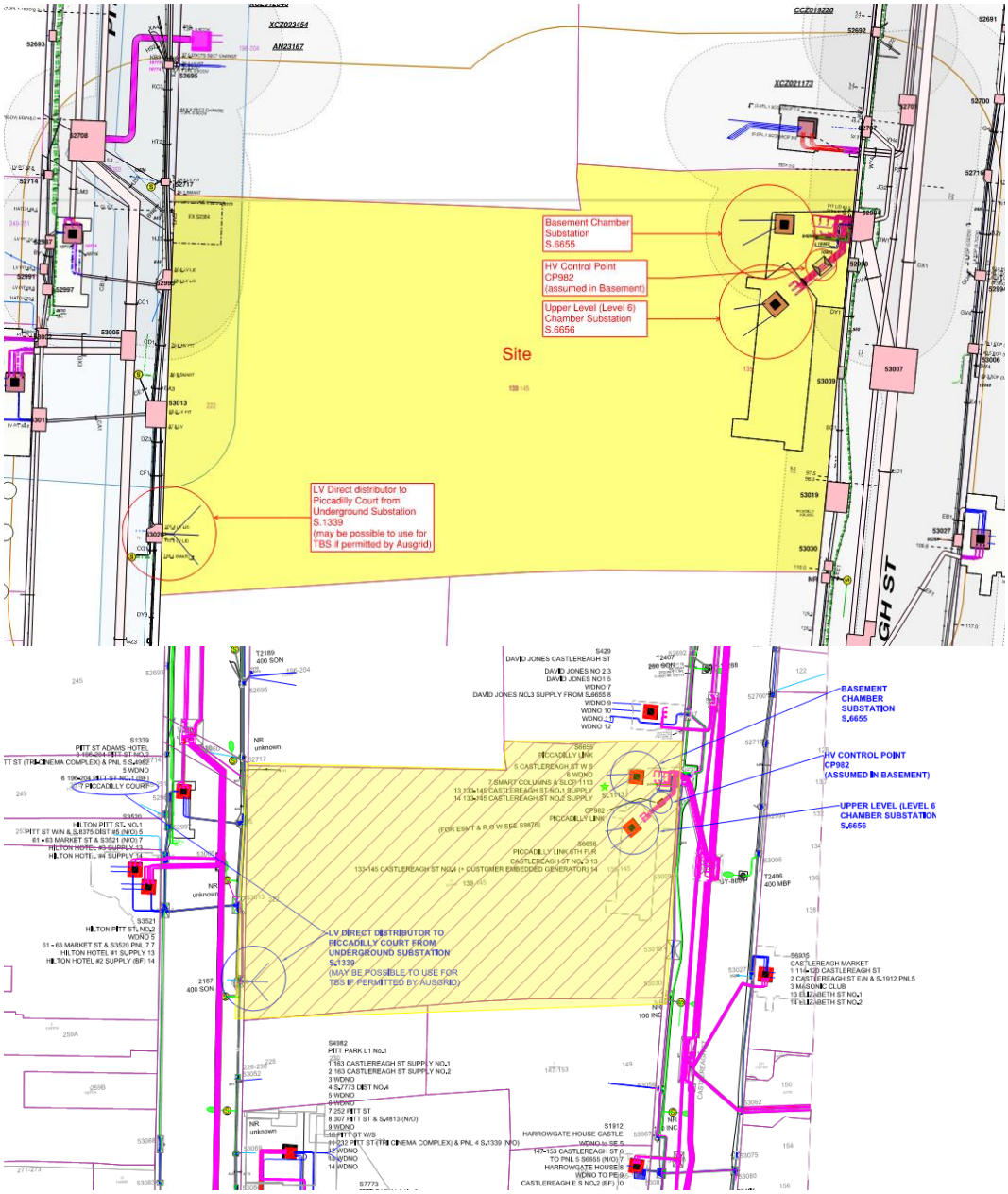

Figure 3: Existing Ausgrid substations and HV cables

2.2 Communications

2.2.1 Existing services

The following communications services networks exist within or in proximity of the boundary of the development site based on our interpretation of the 'Dial Before You Dig' (DBYD) information. The utility communications cabling is generally installed in underground conduits on street verges with regular access points through manholes or pits.

Services identified include:

- Telstra
- Optus
- NBN
- TPG
- Vocus
- Uecomm
- Verizon
- AARNet
- Nextgen
- FibreconX

Further discussions are required with the service providers to confirm existing arrangements, noting these works can be undertaken at the design stage.

The following sections provide details of existing services for each noted service provider.

2.2.1.1 Telstra Services

Services Present - Telstra services are present on both Pitt Street and Castlereagh Street running past the development. The services on the Castlereagh Street sides do not appears to cross the footpath in front of the site, however enter from the North East and South Est corners.

Connections to the site – Telstra services are provided into the site on both the Pitt Street and Castlereagh Street sides.

Other Notes - A cable is indicated crossing the site between Pitt Street and the 121 Castlereagh Street building adjacent (highlighted in yellow for reference). Further investigation required to confirm if this service is still in use, and of it will have any impact on the proposed development.

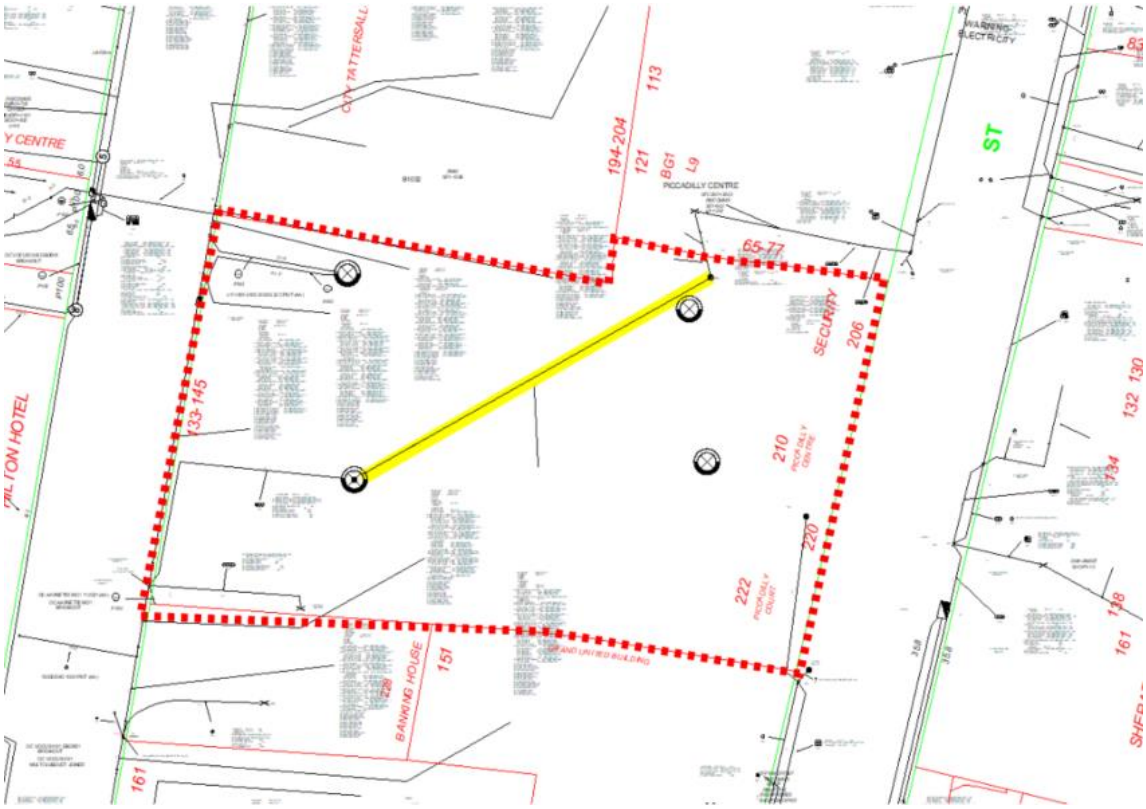

Figure 4: Telstra existing Communications Services adjacent the site

2.2.1.2 Optus Services

Services Present - Optus services are present on both Pitt Street and Castlereagh Street running past the development.

Connections to the site – A connection is provided to the site on the Pitt Street and Castlereagh Street sides.

Other Notes – A cable is indicated crossing the site between Pitt Street and Castlereagh Street (highlighted in yellow for reference). Further investigation required to confirm if this service is still in use, and of it will have any impact on the proposed development.

Figure 5: Optus existing Communications Services adjacent the site

2.2.1.3 NBN Services

Services Present - NBN services are currently within the area on both Pitt Street and Castlereagh Street running past the development. Castlereagh Street services are located on the Eastern side of the street not crossing directly in front of the site.

Connections to the site – There are presently two (2) NBN connections provided to the site on the Pitt Street side only, entering at the North West and South West.

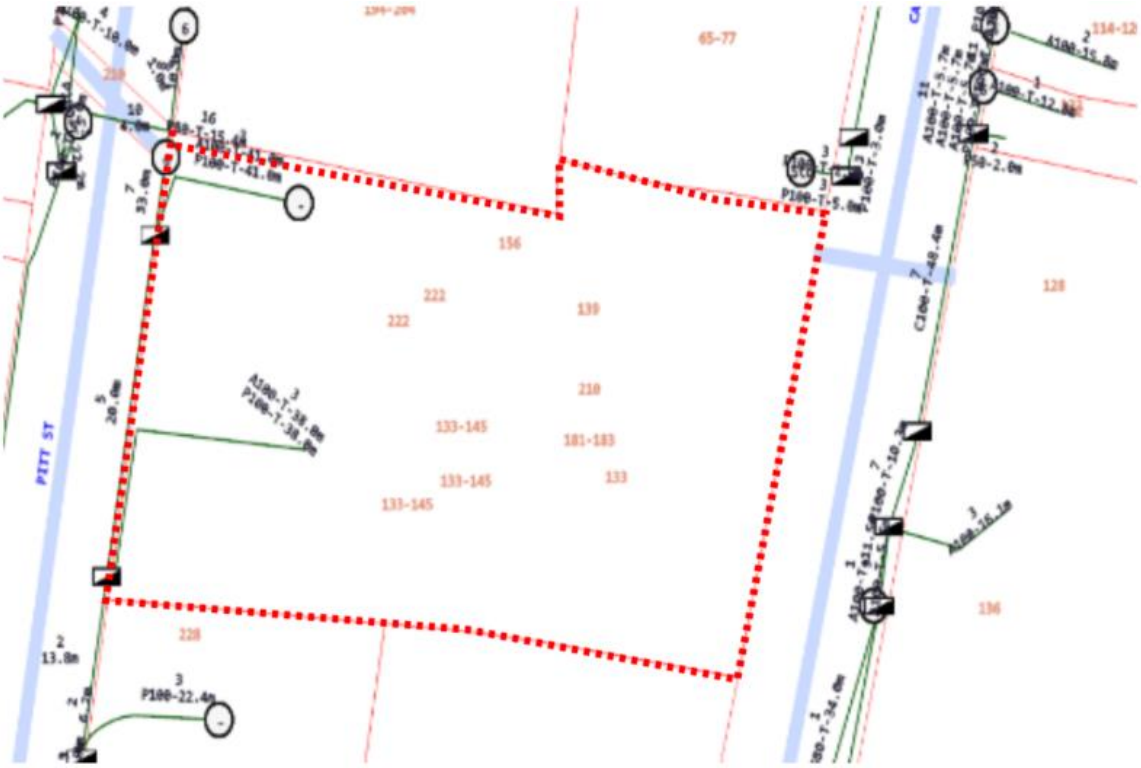

Figure 6: NBN existing Communications Services adjacent the site

2.2.1.4 TPG Services

Services Present - TPG have PIPE Networks services located on the Castlereagh Street side of the site. Note PIPE Networks is presently owned by TPG.

Connections to the site – There is presently a single PIPE Networks connection to the site entering at the South East corner.

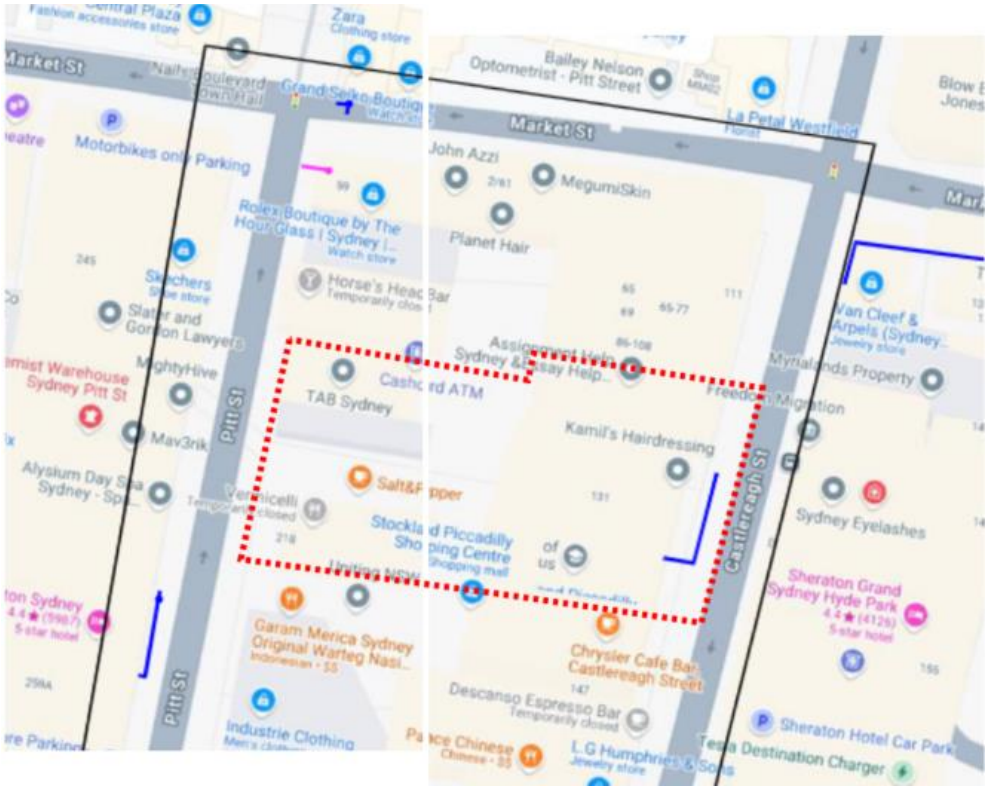

Figure 7 - TPG existing Communications Services adjacent the site

2.2.1.5 Vocus Services

Services Present - Vocus services do not directly pass the site based on Vocus plans, however there are services on Castlereagh St at the adjacent site (149 Castlereagh Street).

Connections to the site – There does not appear to be any Vocus services to the site.

Other Notes – Whilst Vocus plans do not indicate any services on Pitt Street, Telstra plans indicate that there are Vocus services within a subduct passing the site on the Eastern side of Pitt Street.

Figure 8: Vocus existing Communications Services adjacent the site

2.2.1.6 Uecomm Services

Services Present - Uecomm services are currently pass the site on the Pitt Street side only. The Uecomm services are located within the Optus pit and conduit network.

Connections to the site – There does not appear to be any Uecomm services to the site.

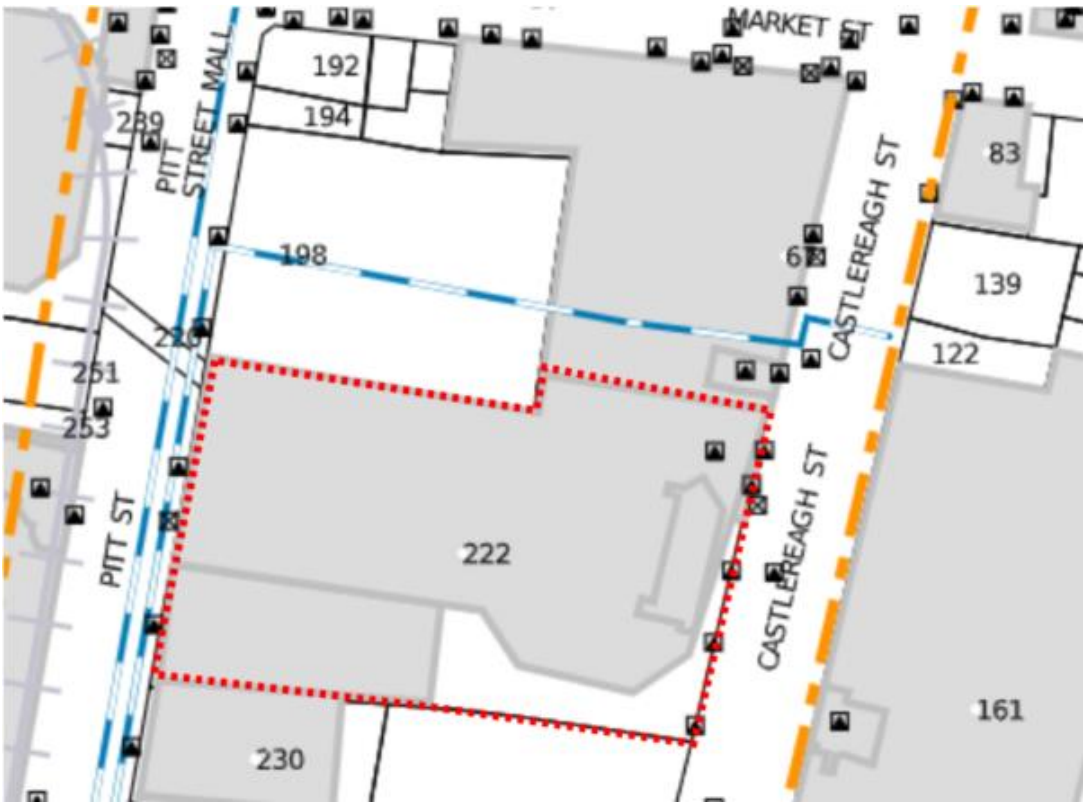

Figure 9 - Uecomm existing Communications Services adjacent the site

2.2.1.7 Verizon Services

Services Present – Verizon services currently pass the site on the Castlereagh Street side only. The services are located on the Eastern side of the street, not crossing directly in front of the site.

Connections to the site – There does not appear to be any Verizon services to the site.

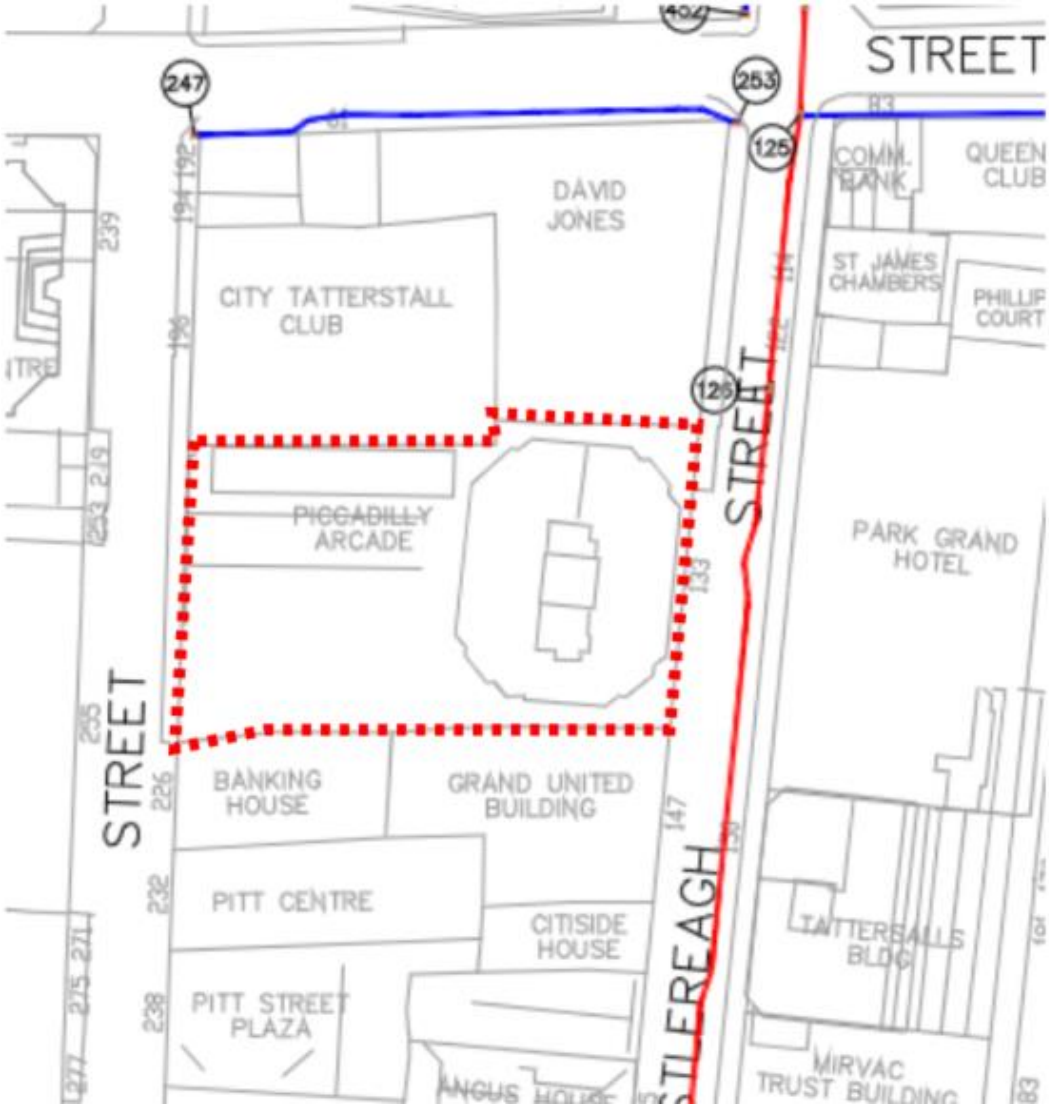

Figure 10 - Verizon Communications Services adjacent the site

2.2.1.8 AARNet Services

Services Present – AARNET services are present on the Pitt Street side only, directly passing the site utilising Telstra conduits.

Connections to the site – There are presently two(2) AARNET connections provided to the site, entering at the South West and mid points on the Western perimeter.

Figure 11 - AARNET Communications Services adjacent the site

2.2.1.9 Nextgen Services

Services Present – Nextgen services are present on the Pitt Street side only, directly passing the site utilising Telstra conduits.

Connections to the site – There does not appear to be any Nextgen services to the site.

Other Notes – Whilst Nextgen plans do not indicate any services on the Eastern side of Pitt Street, Telstra plans indicate that there are Nextgen services on both the Eastern and Western sides of Pitt street within subducts.

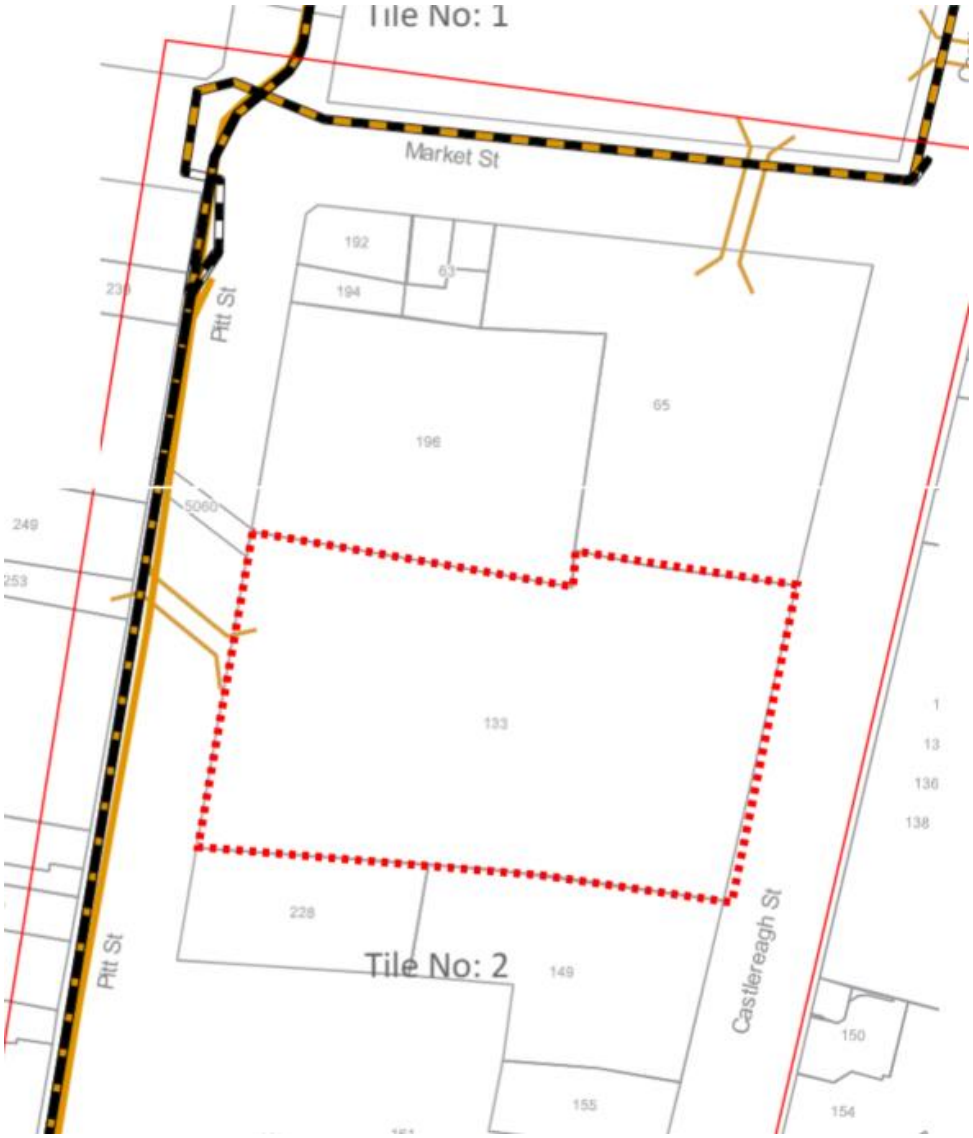

Figure 12 - Nextgen Communications Services adjacent the site

2.2.1.10 FibreconX Services

Services Present – FibreconX appear to have a pit present on the South West corner of the site on Pitt Street. Fibreconx do not appear to have any conduit infrastructure adjacent the site so it is assumed that they are utilising a third party provider such as Telstra.

Connections to the site – It is not clear if services enter the site, however given the current pit location it is assumed that there are FibreconX services presently connected to the site.

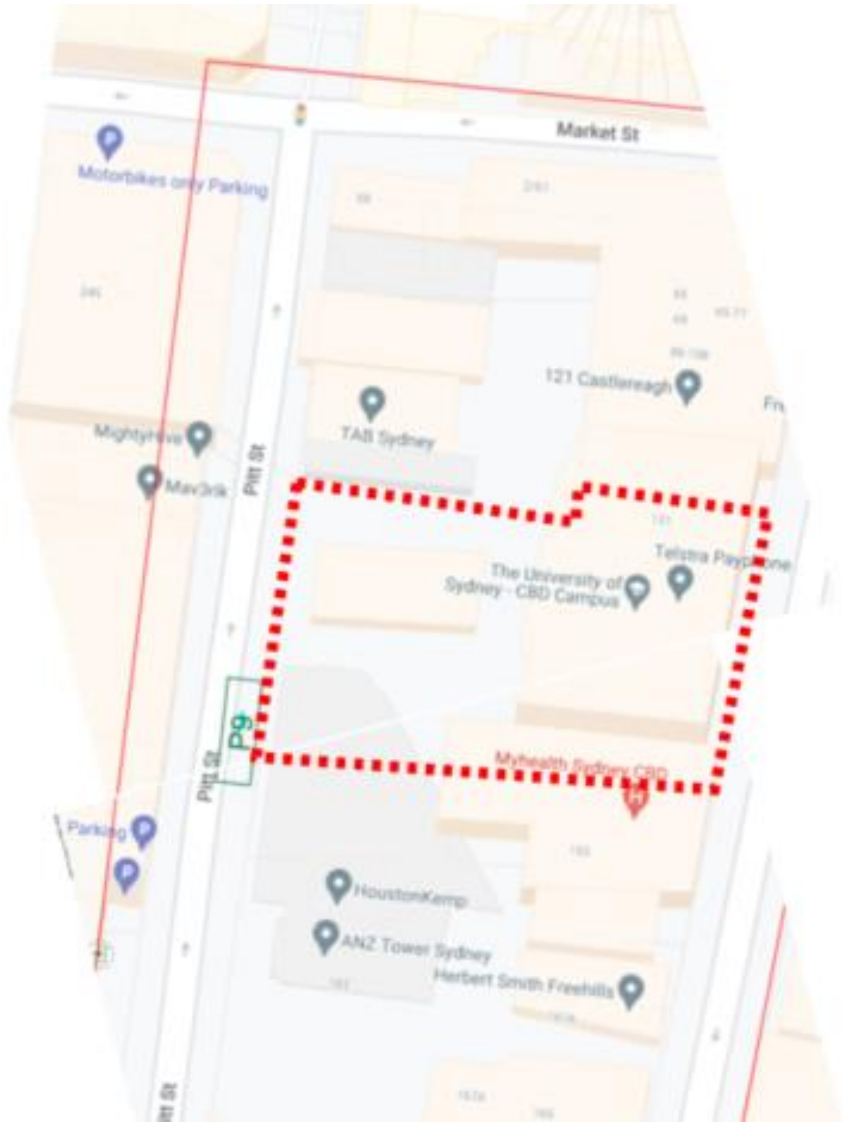

Figure 13 - FibreconX Communications Services adjacent the site

2.2.2 Required alterations

Depending on the proposed tenant communications services requirements, augmentation of the pit and duct systems may be required to facilitate a connection to the development.

The proposed development will require lead in cable routes for multiple service providers. As part of the design process, the existing lead-in provisions will require further investigation to understand entry points and extent of conduits provided.

To align with requirements of a modern building, the following services provisions are recommended:

- **NBN** – Dedicated 100 mm conduit in accordance with NBN design requirements. Noting that there are already existing NBN services available, existing should be capable of re-use
- **Other Providers** – 8 x 100 mm conduits from both Pitt Street and Castlereagh Street sides. It is noted that the majority of tenants don't utilise NBN services, thus the reasoning for quantities of other conduits required.

2.3 Water, sewer and stormwater services

2.3.1 Existing service

The existing services are described as follows and are owned by Sydney Water.

Potable water supplies

All of the existing services available are described as follows:

- Castlereagh Street (West side) – 250 SCL water mains on the west side and 250 CICL water mains on the east side
- Pitt Street (East side) – 250 CICL water mains on the east side and 250 CICL water mains on the west side

Sewer Drainage

All of the existing services available are described as follows:

Castlereagh Street – 225VC Sewer main running south to north

Pitt Street – 225VC Sewer main running south to north

Stormwater Drainage

All of the existing services available are described as follows:

Castlereagh Street – Existing stormwater shown on DBYD plans as 710x1070 Brick

Pitt Street – Existing stormwater shown on DBYD plans as 910x1370 Brick

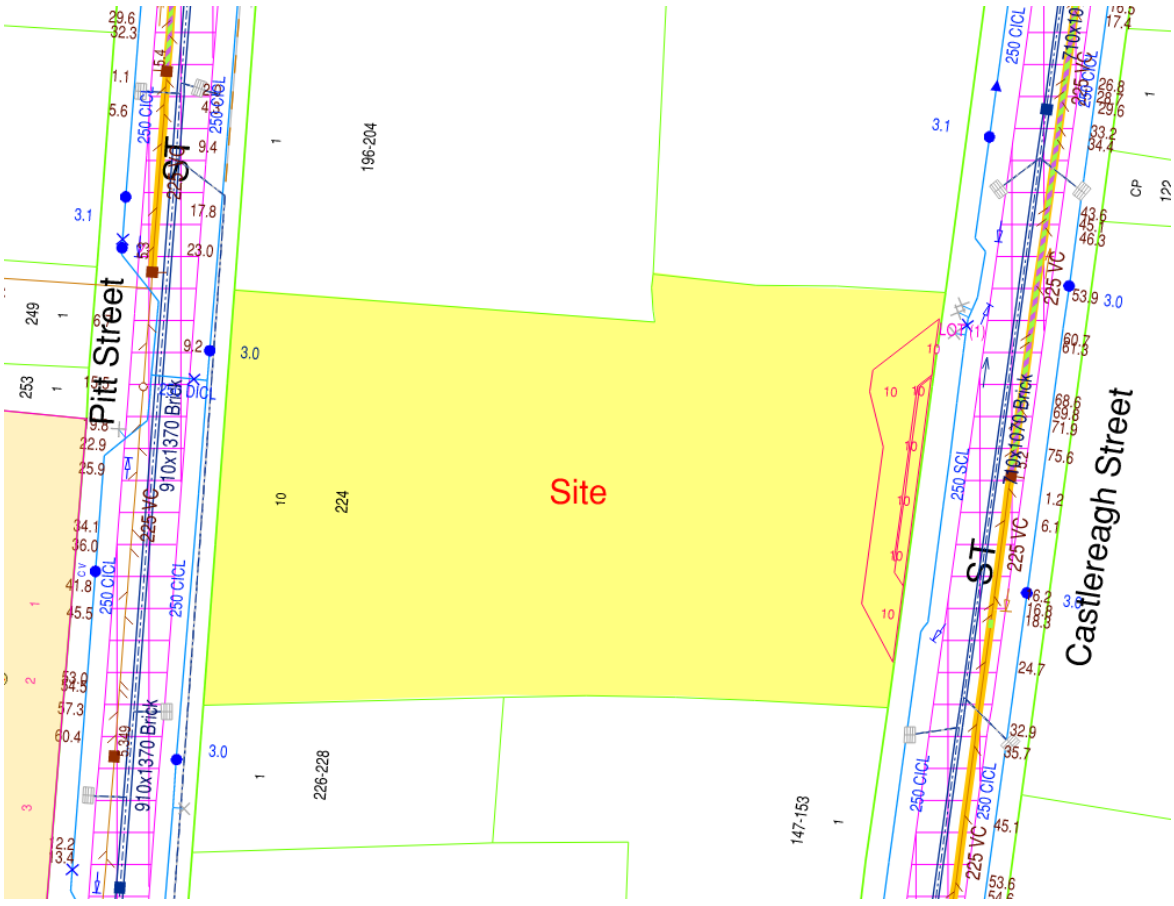

Figure 14: Existing Sydney Water Services shown around the site

2.3.2 Required alterations

Potable water supplies

Given the anticipated increase in water demand, a new connection will be required. Cold water to the building can be supplied from either Castlereagh Street or Pitt Street. The preferred connection point will be determined by the Water Services Coordinator (WSC) and submitted in a formal Sydney Water application at a later stage.

Based on the latest architectural area schedule the high level estimated average daily cold water demand is 219.5 kL/day.

Option 1 – Connection from Castlereagh Street:

- A new town main connection/meter from Castlereagh Street will be established and will be subject to discussion with Sydney Water and coordination with other utilities. The supply requirements and connection point location(s) will need to be confirmed with Sydney Water as part of a future formal Section 73 application by Water Services Coordinator (WSC).

Option 2 – Connection from Pitt Street:

- Consideration will be given to provide a new cold-water supply to the development from Pitt Street and will be subject to discussion with Sydney Water and coordination with other utilities. The supply requirements and connection point location(s) will need to be confirmed with Sydney Water as part of a future formal Section 73 application by Water Services Coordinator (WSC).

The need for amplification of the city water network is considered unlikely.

Sewer Service

Given the anticipated increase in wastewater demand, a new connection will be required. To minimize the gravity pipe run and sewer connection depth, Option 1 (two connections) is recommended. The specific drainage discharge requirements and connection point locations will be confirmed with Sydney Water as part of a future formal Section 73 application by the Water Services Coordinator (WSC).

Based on the latest architectural area schedule the high level estimated average daily sewer demand is 189.5kL/day.

At this stage it is envisaged that sewerage from the development can discharge as per following options:

Options 1 – Pitt Street & Castlereagh Street (Two connections)

- Consideration has been given to provide two separated sewer mains connections in order to minimise the gravity pipe run and therefore the depth of sewer connection. Connections including the existing 225 mm VC Sewer Main in Castlereagh Street and 225 mm VC Sewer Main in Pitt Street, new sewer junctions/pits will be required to allow these connections.
- This is recommended to minimise the gravity pipe run and therefore the depth of sewer connection subject to Sydney Water approval.

Option 2 – Castlereagh Street (Single connection)

- Wastewater will discharge to the existing 225 mm VC Sewer Main in Castlereagh Street and new sewer junction /pit will be required to allow this connection

Options 3 – Pitt Street (Single connection)

- Wastewater will discharge to the existing 225 mm VC Sewer Main in Pitt Street and new sewer junction/pit will be required to allow this connection

The need for amplification of the city wastewater network is considered unlikely based on the preliminary review and will be subject to Sydney Water review and approval.

Stormwater Drainage

At this stage it is envisaged that rainwater from the project will discharge to the surrounding infrastructure located in Castlereagh Street and Pitt Street. Information regarding the project's stormwater design will be contained within the Stormwater Management Plan as part of the future detailed development application (DA).

Sydney Water Stormwater division has preliminary advised that OSD is required for the development, as listed below, and based on the 4,800 m^2 site area. The need for amplification of the council network is considered highly unlikely and will be confirmed via formal application to Sydney Water.

The following figures have been provided:

On Site Detention 75 cubic meter

Permissible Site Discharge 177 L/s

It should be noted that the Sydney Water requirements for OSD relates to the limited capacity of the existing downstream stormwater infrastructure. It does not relate to an increase in stormwater runoff associated with the proposed development.

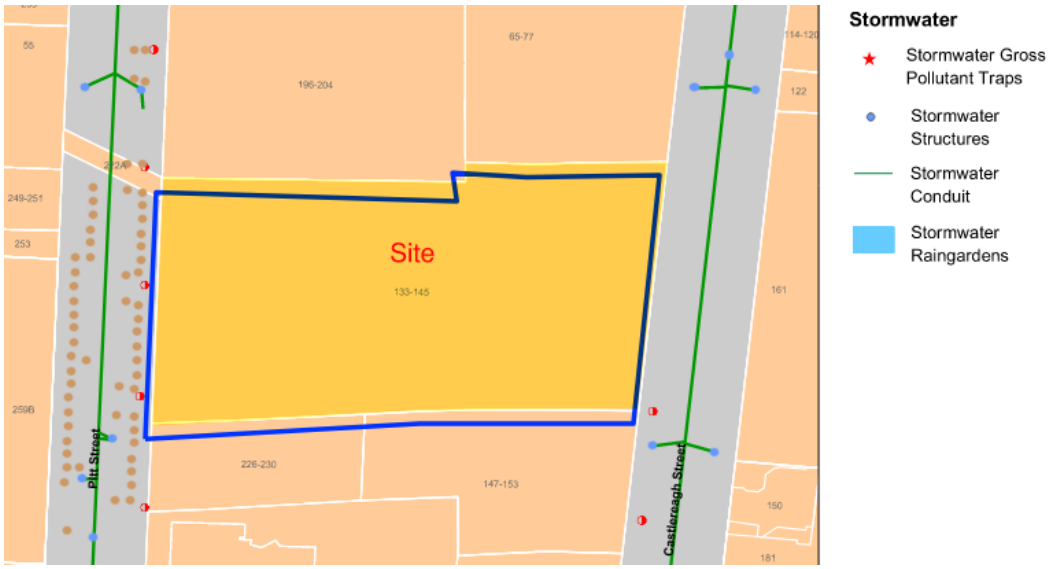

Figure 15: Existing City of Sydney Stormwater Services shown around the site

3. Protection and relocation strategies for infrastructure assets

A ‘dial before you dig’ (DBYD) enquiry was sought and the information collated for proposing preliminary plan of protection and relocation strategies to allow for minimal impact and appropriate protection of infrastructure assets. The following lists strategies.

Being aware of affected utility stakeholders, including: Ausgrid, City of Sydney, Optus, Roads and Maritime Services, Sydney Water, and Telstra.

Locating assets: Assets’ and permanent survey marks’ exact location and assistance will be requested from each utility stakeholders at a reasonable time before work begins. A thorough site examination will be conducted for visible structures through field survey including the use of appropriately qualified personnel and equipment.

Acquiring approvals: Relevant approvals will be obtained prior to commencement of works on or near infrastructure assets of various utility stakeholders. And all works are undertaken in accordance with the requirements of any approval.

Reporting damage: Damage of assets will be reported immediately to utility stakeholders any time, any day.