

Attachment A7

Services and Infrastructure Strategy

GPT Group

580 George Street Podium Building Precinct

Preliminary Utility Services Infrastructure Assessment

Reference: 308662_ARUP_Utilities

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1. Introduction

This Preliminary Utility Services Infrastructure assessment report has been prepared by Arup on behalf of GPT Group. It accompanies a planning proposal for the site at 580 George Street, as shown in Figure 1.



Figure 1: 580 George Street, Sydney –

For a detailed site and project description, refer to the Planning Proposal Report and the Architectural Drawings prepared by Curzon + Partners.

The new utility loads were assessed based on the following preliminary areas, noting areas for level 2 and above are additional GFA to the existing podium. The existing podium areas from basement to Level 1 are to remain with some reconfiguration to accommodate the new core. Also, the mix of retail/commercial in the existing podium differs from existing, which has also been considered in the assessment.

Level	Type	No. of Levels	GFA (m ²)
basement	Carpark B1	1	2884
lower ground	Retail	1	2321
ground	Lobby & Retail	1	2033
mezzanine	retail- Destination	1	473
mezzanine	office	1	1441
level 1	retail - Destination	1	973
level 1	office	1	1059
level 2 to L7	Commercial	6	5848
L8 rooftop plant	Plant / commercial	1	700
level 2 to L8	Commercial	7	8400
Total			17732

1.1 Purpose of report

The purpose of this Preliminary Utility Services Infrastructure report is to provide an overview of:

1. The availability, capacity and location of utility services infrastructure that will support the proposed development; and
2. Protection and relocation strategies for infrastructure assets belonging to each of the utility stakeholders.

2. Utility Services Infrastructure

A BYDA ‘dial before you dig’ (formerly 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 near the site:

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

2.1 Electricity supply

The existing building is currently supplied from the existing Substation **S.6198** of **3 x 1000kVA** providing 3200A firm rating and within the upper level L35 Chamber Substation **S.6279** of **3 x 1000kVA** providing 3422A. The HV infrastructure is located along Wilmot Street as shown in the DBYD information below

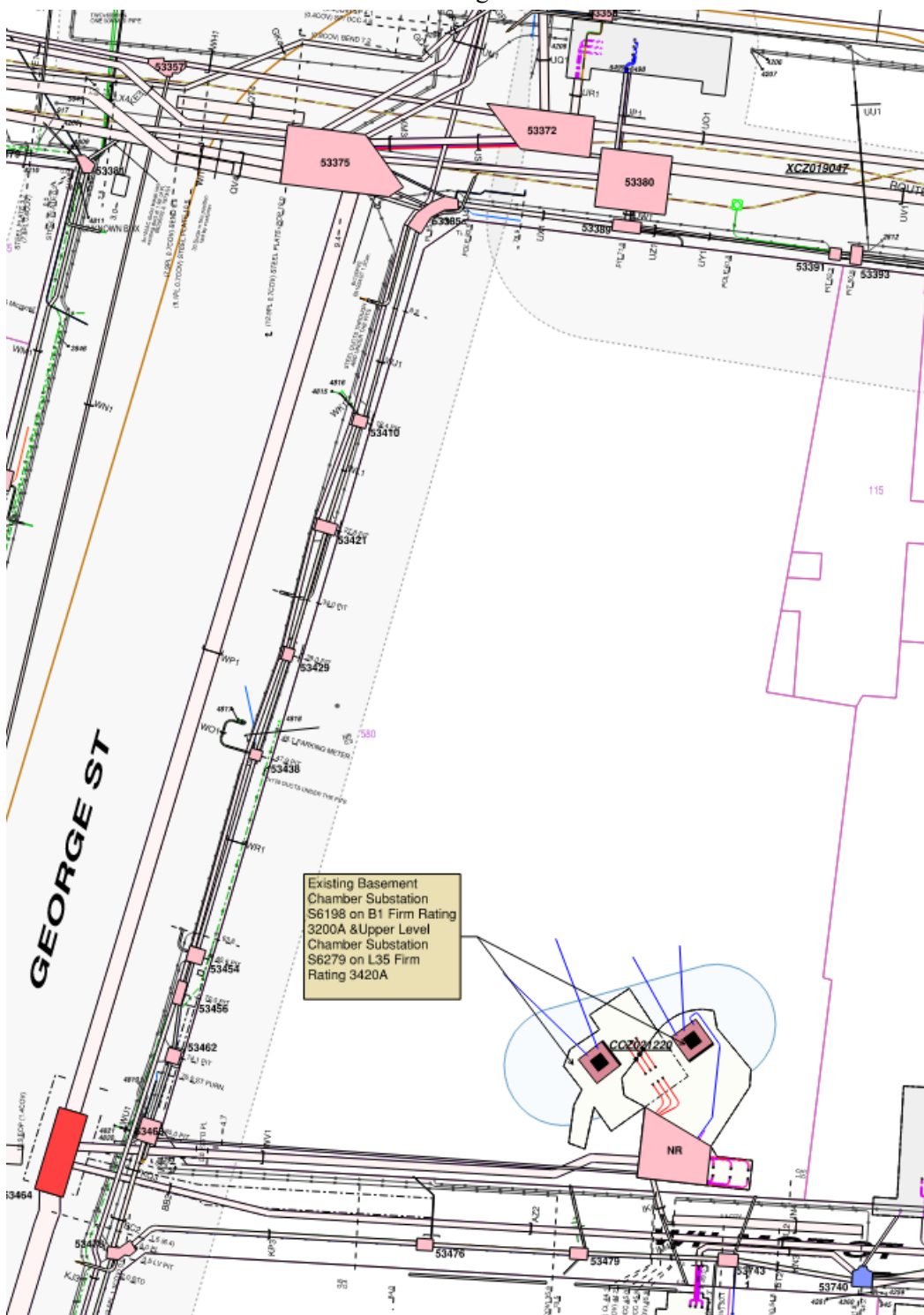


Figure 2: Existing Ausgrid substations and HV cables

2.1.1 Site New Maximum Demand

The following sections outline the maximum demand calculations and assumptions. It should be noted that for further accuracy it is recommended that the final design assessment complete a revised maximum demand calculation using connected equipment loads to AS3000 rather than VA/m² calculations. This will be completed once the detailed development application has been completed and will provide greater accuracy than the initial VA/m² calculations.

The maximum demand calculation was carried out using the following allowances:

- 1) Office NLA: 85VA/m² including diversity with 40VA/m² mech allowance
- 2) F&B Retail NLA: 600 VA/m² including diversity with 100VA/m² mech allowance
- 3) Destination Retail NLA: 250 VA/m² including diversity with 40VA/m² mech allowance
- 4) Lifts: An allowance of 500 kVA for Lifts with diversity applied as per AS3000.
- 5) BOH Lighting & Power: 15VA/m²

Based on the above, a maximum demand calculation was carried out resulting in an electrical power load associated with connected equipment such as motors, lighting and small power of **2256kVA** (diversified), which is equivalent to the current load of **3256A**. This is within the current rating of the existing substation **S6198**.

2.1.2 Proposed electrical supply alterations

Based on the anticipated **2.2MVA** for the load **no change** will be required to the existing substation **S6198**.

The new podium development will modify the existing LV infrastructure to support the podium development.

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 'Before You Dig Australia' (BYDA) 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
- Uecomm
- Verizon
- AARNet
- Nextgen

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.

Services Present - Telstra services are present on both George Street, Wilmot and Bathurst Street running past the development.

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2.2.1.2 Optus Services

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

Connections to the site – A connection is provided to the site on the George Street, Wilmot and Bathurst Street sides.

Other Notes – A cable is indicated crossing the site between George Street and Wilmot Street (highlighted in yellow for reference). We assume that this service is still in use, and of it will have no impact on the proposed podium development.

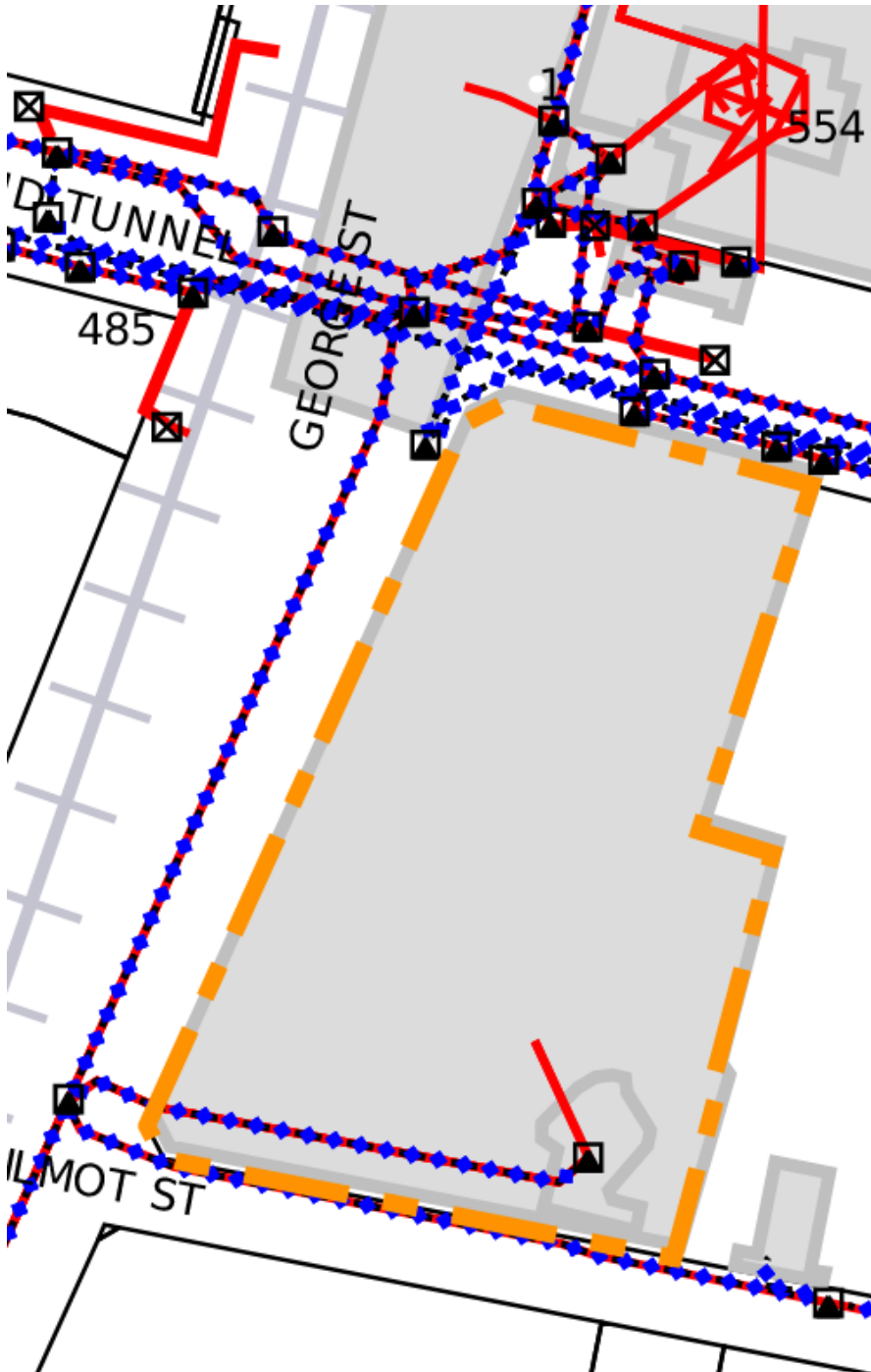


Figure 4: Optus existing Communications Services adjacent the site

Services Present - NBN services are currently within the area on both George/Wilmot Street and Bathurst Street running past the development. George Street services are located on the Western side of the street not crossing directly alongside of the site.

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2.2.1.4 TPG Services

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

Connections to the site – There are no connections to the site.

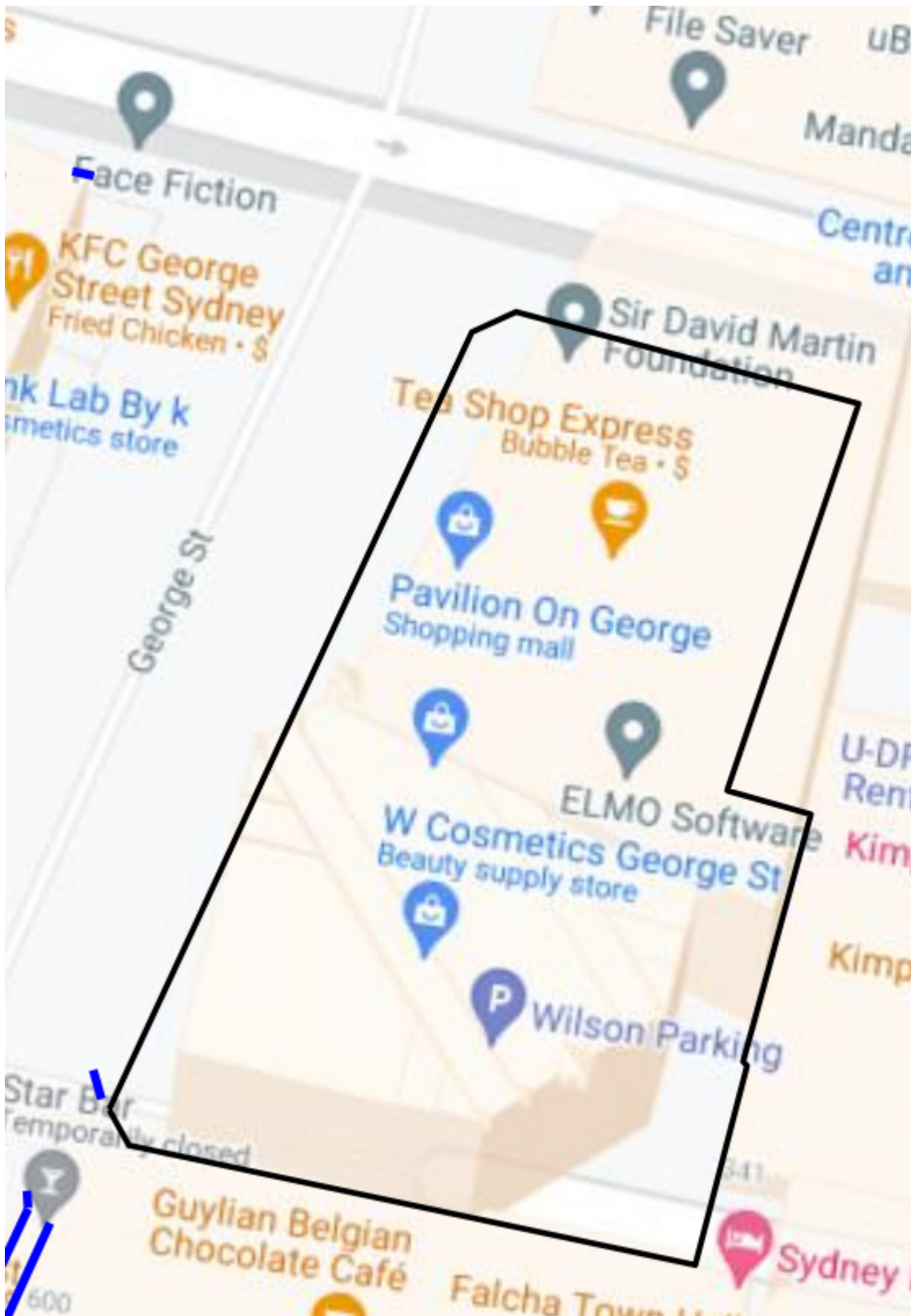


Figure 6 - TPG existing Communications Services adjacent the site

2.2.1.5 Uecomm Services

Services Present - Uecomm services are present on both George Street and Bathurst Street.

Connections to the site – There is one Uecomm services to the site.



Figure 7 - Uecomm existing Communications Services adjacent the site

2.2.1.6 Verizon Services

Services Present – Verizon services currently pass the site on the George Street side only. The services are located on the Western 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 8 - Verizon Communications Services adjacent the site

2.2.1.7 AARNet Services

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

Connections to the site – There are no AARNET connections provided to the site,

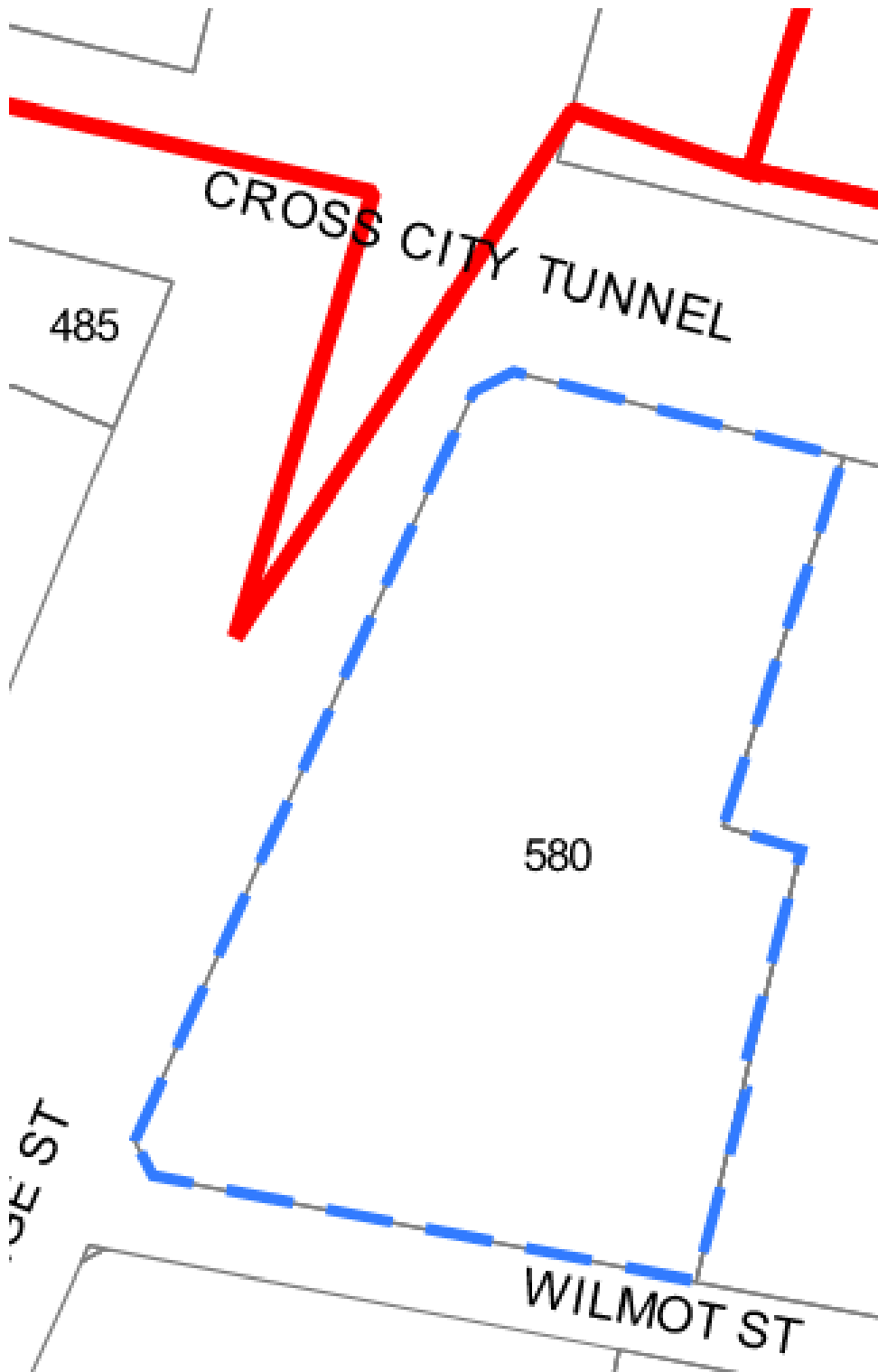


Figure 9 - AARNET Communications Services adjacent the site

2.2.1.8 Nextgen Services

Services Present – Nextgen services are present on both George Street and Bathurst Street

Connections to the site – There appear to be one (1) Nextgen services to the site.

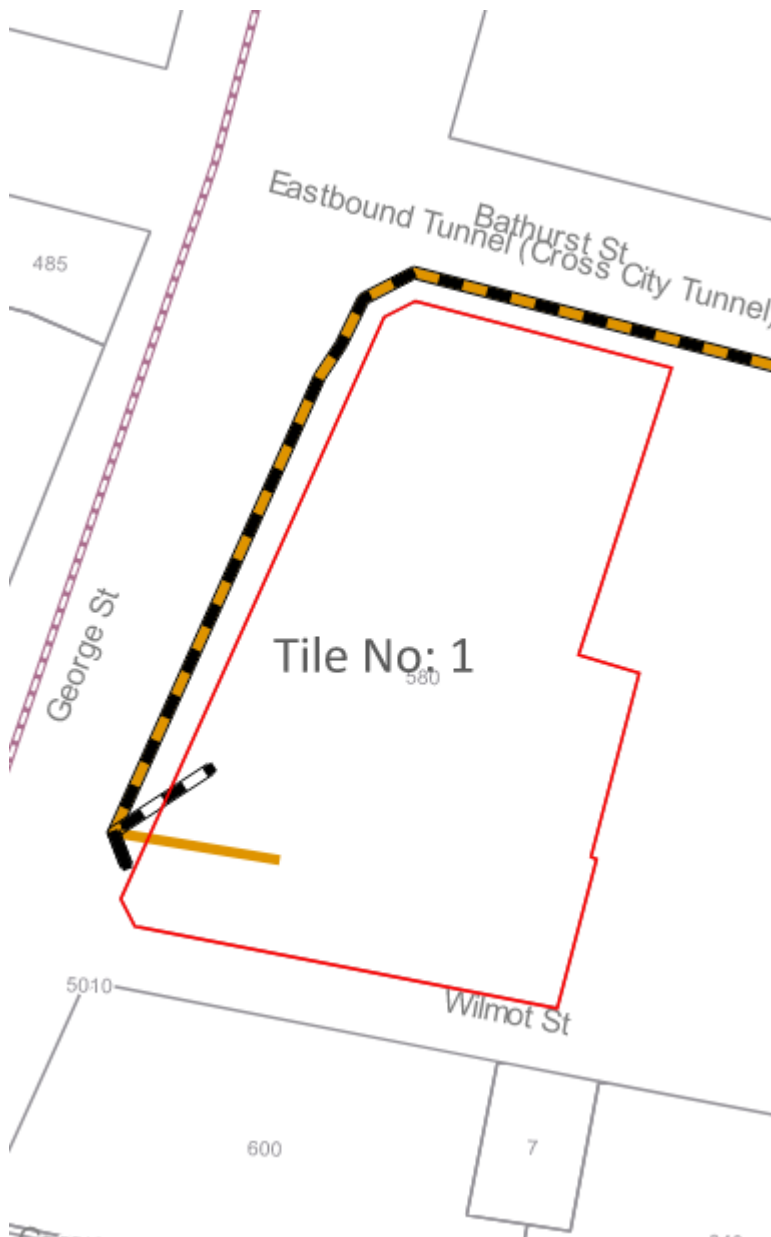


Figure 10 - Nextgen Communications Services adjacent the site

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 new podium 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** – 4 x 100 mm conduits from both George Street and Bathurst 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:

- Bathurst Street – 375 DICL water mains on the south side and 375 CICL water mains on the north side
- George Street – 200 DICL water mains on the east side and 300 CICL water mains on the west side

Sewer Drainage

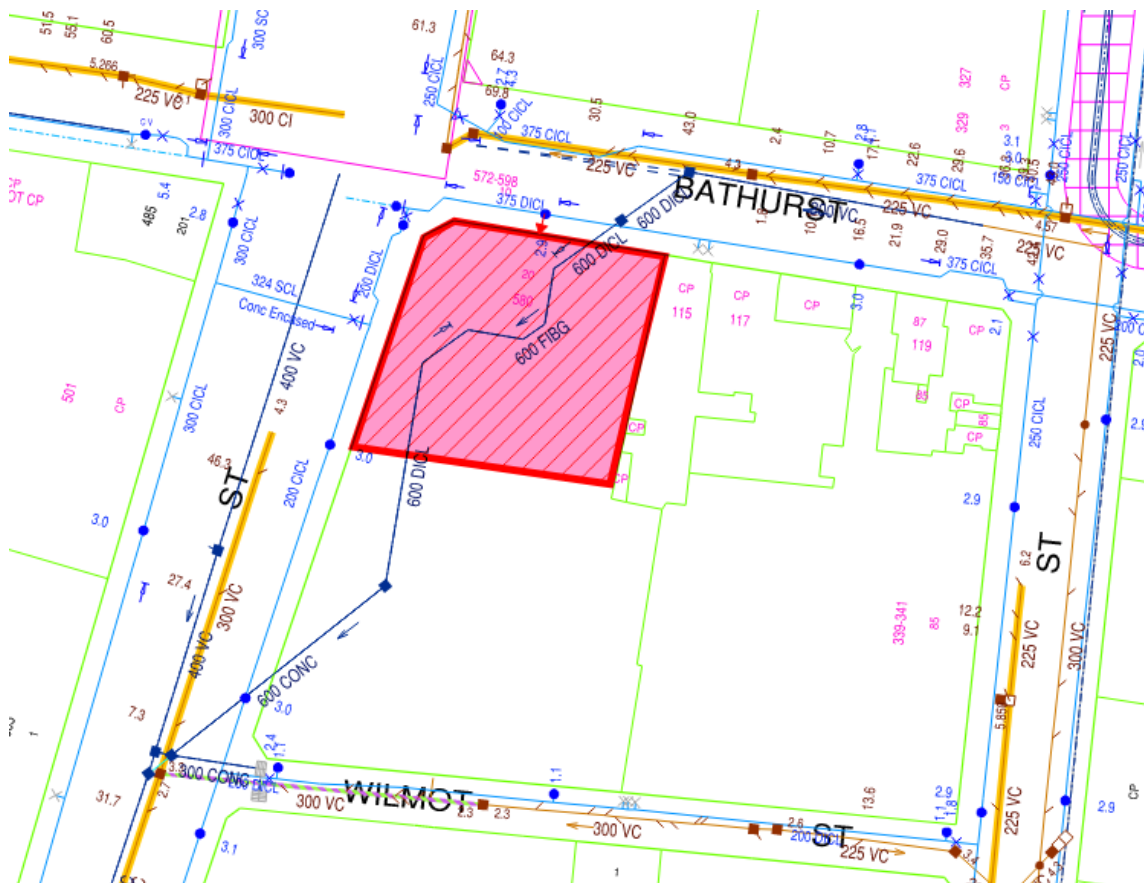
All of the existing services available are described as follows:

- Bathurst Street – 225VC Sewer main running east to west
- George Street – 300VC Sewer main running north to south

Stormwater Drainage

All of the existing services available are described as follows:

- Bathurst Street – 300VC Stormwater Drainage running North to South
- George Street – 400VC Stormwater Drainage running North to South
- 600 DICL Stormwater Drainage running across the site from North to South



2.3.2 Required alterations

Potable Water

The proposed building scheme is nominated to be precinct wide. As such the existing potable water services serving the current building will be extended to serve the new development. As such there will be no new connection made to the Authority mains.

Sewer Service

The proposed building forms part of a precinct-wide scheme. Sewerage from the new development will discharge into the existing sanitary drainage system. It is anticipated that the existing system has sufficient spare capacity to accommodate the additional load. Therefore, no new connection to the Authority mains is required.

Stormwater Drainage

At this stage it is envisaged that rainwater from the project will discharge to the surrounding infrastructure located in Bathurst Street.

3. Protection and relocation strategies for infrastructure assets

A ‘dial before you dig’ (BYDA) 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.