

Lend Lease Circular Quay

174 - 182 George Street, 33-35 Pitt Street

Multi-Disciplinary Utilities Review

Rev 5 | October 2015

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 232076

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ARUP

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1 Introduction

This infrastructure assessment report has been prepared for Lend Lease Development Pty Limited (Lend Lease) to identify the utility infrastructure local to the site of the proposed Lend Lease Circular Quay (LLCQ) redevelopment located at 174-182 George Street, 33-35 Pitt Street, Sydney. The LLCQ development site is generally located between George St, Underwood Lane, Pitt St, Crane Lane and Rugby Place.

Lend Lease Development Pty Limited (Lend Lease) is the Client / Proponent.

Land to which the proposal relates:

Informal title	Address	Lot and DP	Ownership
The Pitt Street property	33-35 Pitt Street	Lot 7 DP 629694	Lend Lease (Circular Quay) P/L
The George Street Property	182 George Street	Lot 182 DP 606865	Lend Lease (Circular Quay) P/L
Jacksons on George	174-176A George Street	Lot 181 DP 606865	Lend Lease Development is the owner of Jacksons on George.
Mirvac Triangle	Part of 200 George Street development site	Lot 1 in DP 69466 and Lot 4 in DP 57434 The part of the above Lots to which the PP relates is referred to as Lot 2 in the draft plan of subdivision Nov 13, 2012 (Issue 7) contained in the executed VPA between the City of Sydney and Mirvac	Mirvac owns the land. Mirvac will transfer the new Lot 2 to the City of Sydney who will then transfer to LL in return for an equivalent area of completed public realm.
Crane Lane including walkway (aerial bridge)	Crane Lane extending east from George St, then north to Rugby Place	Lot 1 and 2 in DP 880891. Lot 1 is in stratum above Lot 2.	City of Sydney
Rugby Club (Optional Site)	Rugby Place	Lot 180 DP 606866	Wanda 'One' Sydney P/L

The scope of this assessment report includes:

- Assessment of the ability of existing infrastructure to service the proposed LLCQ redevelopment,
- Assessment of augmentation works required to existing utility infrastructure where necessary to service the proposed LLCQ redevelopment,
- Where existing utility infrastructure identified have the potential to prevent the proposed LLCQ development, the assessment of required diversion works where required to facilitate the redevelopment and confirmation that such works are feasible.

The following diagram shows the relative location.

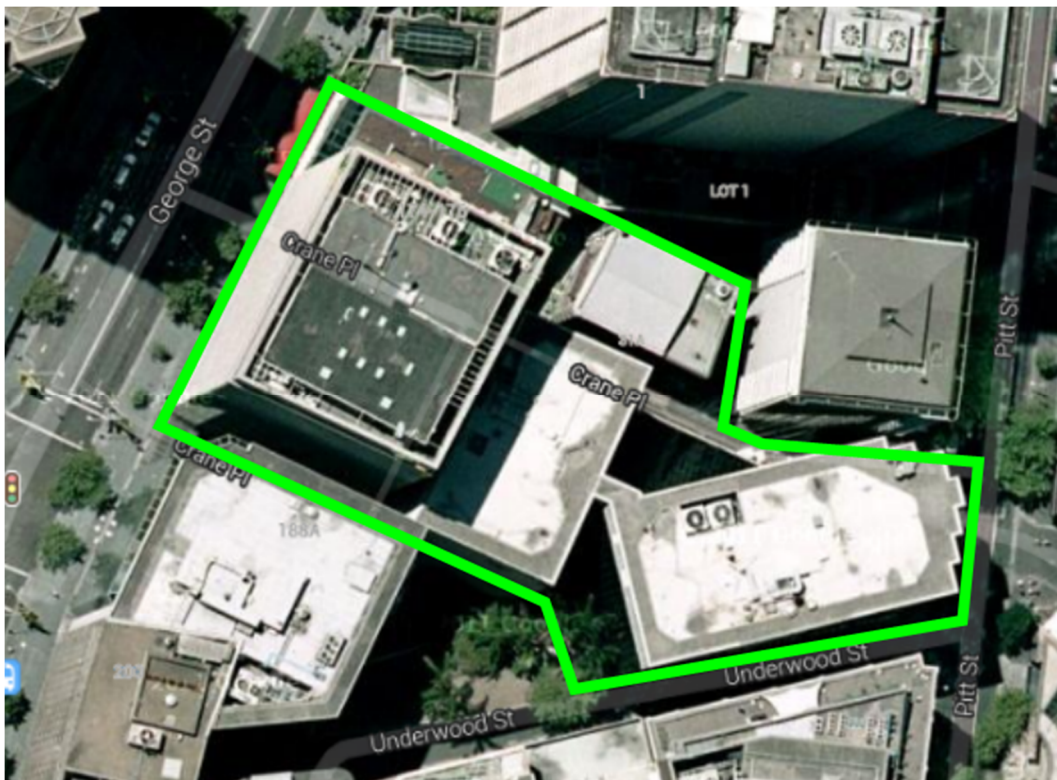


Figure 1: Relative location of proposed site.

For the purpose of this desk top infrastructure assessment, Arup have researched the services from information provided dial before dig (DBYD) enquiries and through verbal phone communication. Our assessments are based on our review of the DBYD information, some correspondence with utility providers, our knowledge of the existing infrastructure in the area retained by ARUP arising from other recent project engagements including 200 George Street (Mirvac) and 1 Alfred Street (Valad) and most recently through verbal communication with those utilities.

Lend Lease propose redeveloping the site deliver a new commercial office tower of total GFA of approximately 70,000 m², together with the creation of new public realms and commensurate improvements to the existing network of laneways both through and surrounding the site.

This assessment report has identified that the following existing utility services currently exist below and across the site which may need to be relocated or protected during the redevelopment of the site subject to further consultation with the relevant utility providers.

- Telstra services run between George St and Underwood St,**
- Optus Services run between George St and Crane Place,**1
- Existing Substations sited beneath both the existing commercial office buildings at 182 George St and 33 to 35 Pitt St.##

** the exact nature of these telecommunications services is not known at this stage nor whether these utilities service the existing 182 George and 33-35 Pitt Street alone. The exact nature of the services will be subject to further review. In any event, ARUP is of the view that these communications services by their nature, can be readily diverted to facilitate the proposed LLCQ development.

It is assumed that Ausgrid and LLD will work to replace these existing HV assets with new HV infrastructure to service the proposed LLCQ development and that the capacity of Ausgrid's existing broader HV network in the immediate district (APDG Block) will facilitate the temporary supply of other third party demands that are currently services from the existing substations located at 182 George and 33-35 Pitt.

The following map identifies the boundaries of the new 182 George and 33 to 35 Pitt St precinct.

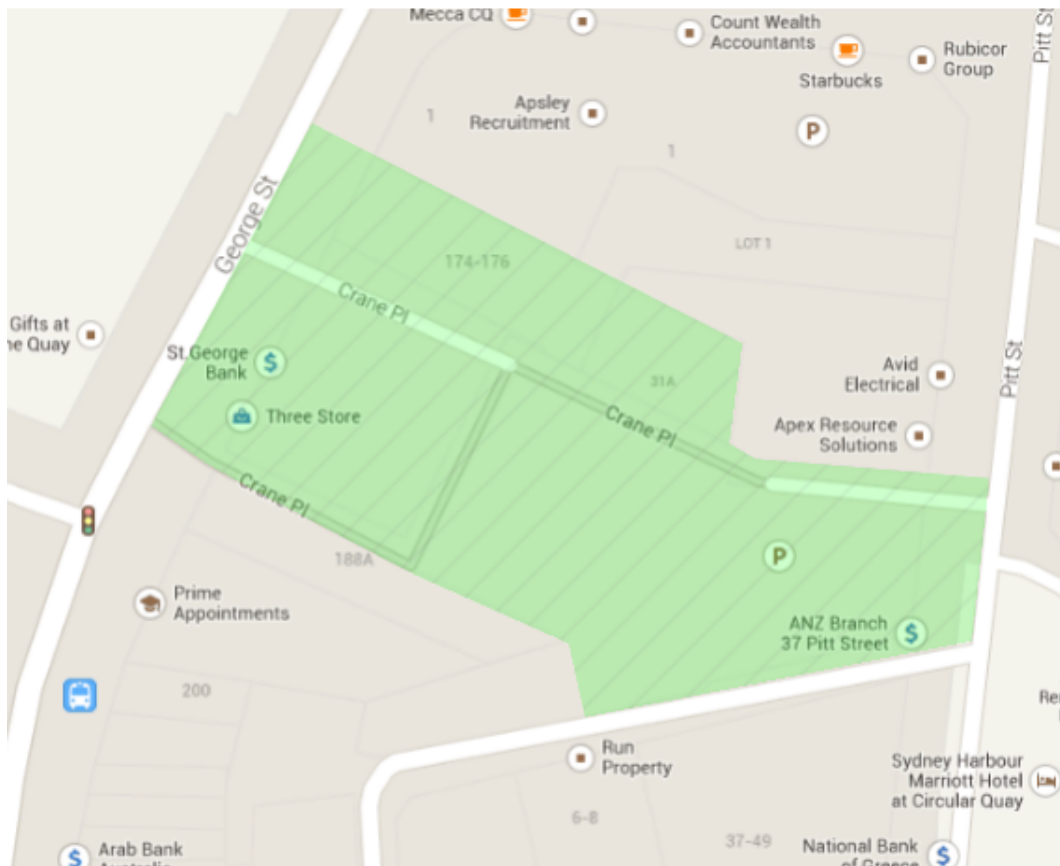


Figure 2: Boundary lines for the proposed site

2 Building Loads

In order to assess the capabilities of the surrounding infrastructure Arup have undertaken a preliminary load take down assessment for the redevelopment.

Our estimates of the demands imposed upon different existing utilities by the proposed LLCQ development are as follows based on LLCQ being:

- Commercial office tower of approximate GFA of some 70,000m² (measured in accordance with SLEP 2012)
- Internal occupancy density of up to 1: 10 sq m NLA
- PCA Premium Grade,
- 5 Star Green Star (V3 commissioned) and 5 Star NABERS,

Utility Service	Load Estimate
Potable Water Supply	11.4 l/s
Gas	4.1 MW
Sewer	7.5 l/s
Power	6.3 MW
General Stormwater;	Roofs 1:100 year ARI to be piped (270mm/hr approx. 128l/s) Roads and Plaza 1:10 year ARI to be piped
Overland flow	1:100 year storm conveyed by overland flow

Table 1: Load estimates for utility services

3 Utilities Services

The following provides an outline of the existing services available to the site and identifies those alterations expected to serve the proposed new LLCQ redevelopment.

Details of the existing services have been determined through the dial before you dig (DBYD) service and initial discussions with the utility authorities indicate the existence of the following services adjacent to or traversing the site:

Electricity Supply – Ausgrid: 2 Existing Substations below 182 George St and 33-35 Pitt St sites. Contact has been made with Ausgrid to confirm the available capacity in the existing substations. Further details of existing substations are outlined in relevant section below.

Communications Services – Optus, Primus Telecom, Nextgen Network, Uecomm, AAPT / PowerTel, Verizon, Soul and Telstra services exist around the site. Further contact has been made with Optus and Telstra beyond DBYD and they have confirmed the locations of the services as shown on the dial before you dig drawings as being current however the exact nature of the services and whether they service the existing 182 George and 33-35 Pitt Street developments is still to be determined.

Various fibre, broadband and mobile services exist in the vicinity of the site.

Sydney Water Services – Sydney Water: Arup have contacted Sydney Water and they have confirmed no onsite detention of stormwater will be required. Sydney Water have also advised that the anticipated water supply flow of 11.4 l/s for the project is unlikely to not be served from the mains in the street. They have reported that the next process would be to make a formal application for feasibility through a water servicing coordinator. Given the high flow capability of the main furnished by the pressure enquiry (47 l/s) it is not considered necessary to progress further with a formal feasibility request.

Gas Supply – Jemena: Arup have made contact with Jemena to discuss the capability of their infrastructure to support the 4.1 MW demand and they have declined to comment further until formal applications are made, it is our experience that this is often the case with Jemena, however, there is no reason to expect the local high pressure 1050 kPa mains will not be able to support this development.

Natural gas supplies exist in all streets around the development site.

3.1 Electricity Supply

Ausgrid DBYD plans show substations below both the 182 George St Building and the 33-35 Pitt St building.

The plans show both incoming HV and outgoing LV supplies.

3.1.1 Existing Services

The following diagram shows the relative location of the existing substations and the incoming and outgoing services.

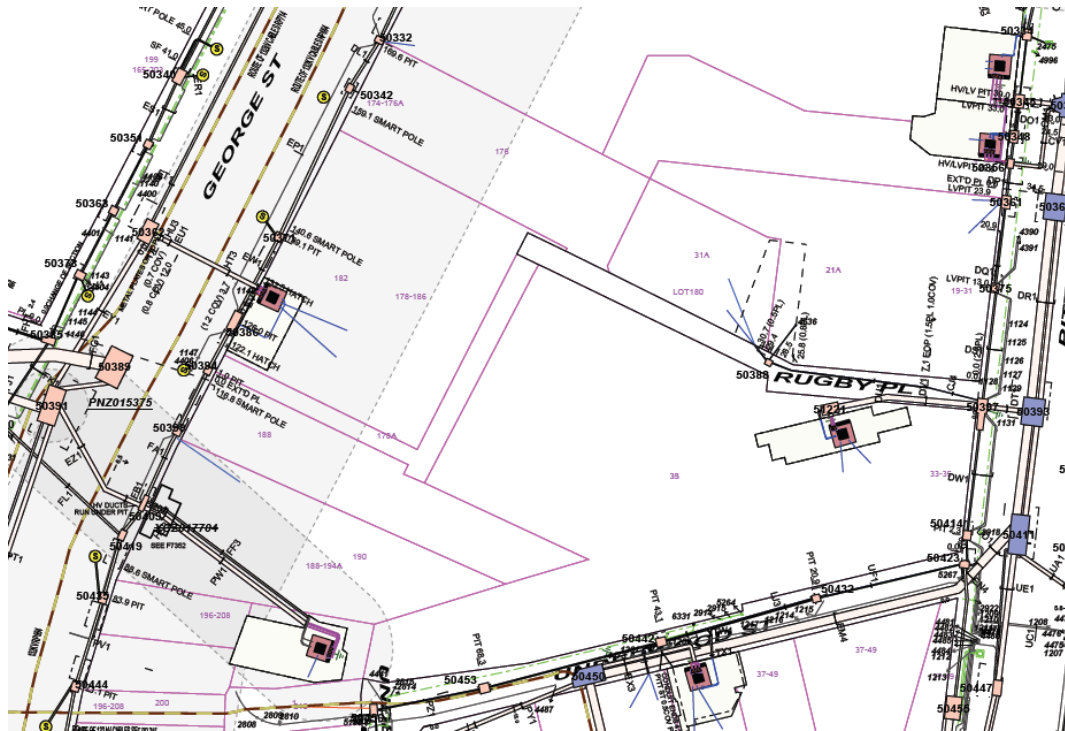


Figure 3: Locations of existing electrical services.

Arup have been in contact with the Ausgrid network planning coordinator for CBD and Eastern Suburbs who has advised the following loads on the existing substations.

S5655 - CRANE PITT

Substation corner of Crane Pl and Pitt St

- Total rating 3000A
- 3x 750kVA transformers

Network Distributors Connected:

- 2 x 400A network distributors
- 1 x 800A direct supply to Premises on Underwood St

Direct Customer Supplies Connected:

- 1x 3000A Busbar supply to 33-35 Pitt St(max demand recorded @ 1200A)
- 1x 800A cable supply to 33 Pitt rated(max demand recorded @290A)

S4216 - GEORGE BLUE ANCHOR

- Total rating 4042A
- 3x 1000kVA transformers

Network Distributors Connected:

- 1 x 400A network distributor

Direct Customer Supplies Connected:

- 1x 2400A cable supply to 182 George St No.1(max demand recorded @ 1450A)
- 1x 1200A cable supply to 182 George St No.2 (max demand recorded @760A)

The capacities detailed in the two substations located under the site illustrate that both substations are supplying surrounding Ausgrid network customers in George St and Pitt St as well as the respective buildings.

ARUP have been advised that prior to these substations being decommissioned to facilitate the proposed LLCQ development, amendments to the existing district HV network will be required to redirect and maintain supplies to third parties currently serviced from 182 George and 33-35 Pitt.

Broader augmentation of the local network is not however required because the existing district network has capacity to service the proposed development and the redirected third party demands both prior to and at the completion of the proposed LLCQ development.

There is therefore no requirement for significant major works or infrastructure to maintain supply to the existing and surrounding customers.

3.1.2 Required Alterations

Both of the substations below the 182 George St site and the 33-35 Pitt St site will require careful consideration in terms of demolition and construction sequencing.

The following is the proposed approach;

- Transfer/redirect the non-development site load to alternate substations to allow demolition of the existing substations and provide new HV substations to service the proposed LLCQ redevelopment

The new building load estimate of 6.3 MW (7.88 MVA assuming a 0.8 Power Factor) is such that more than one substation could be required and this too will need to be negotiated with Ausgrid. We have been given preliminary advice from Ausgrid that the future development supply is preferred to come from the George St property frontage. In addition they have advised that there will need to be a linkage in the form of underground ducts crossing between the George St and Pitt St assets.

The coordination of HV supplies with Ausgrid and the works described above are considered by ARUP to be industry standard.

3.2 Communications

3.2.1 Existing Services

The following communications services networks exist within or in proximity of the boundary of the development zone based on our interpretation of the DBYD information.

The asset arrangements illustrated below by Optus and Telstra have been confirmed as currently up to date.

The utility communications cabling is generally installed in underground conduits on street verges with regular access points through manholes or pits. These services are:

- AAPT - Optic fibre network serves the proposed 33-35 Pitt St site via Crane Place. Optic fibre is also located in George, Pitt and Underwood Streets.

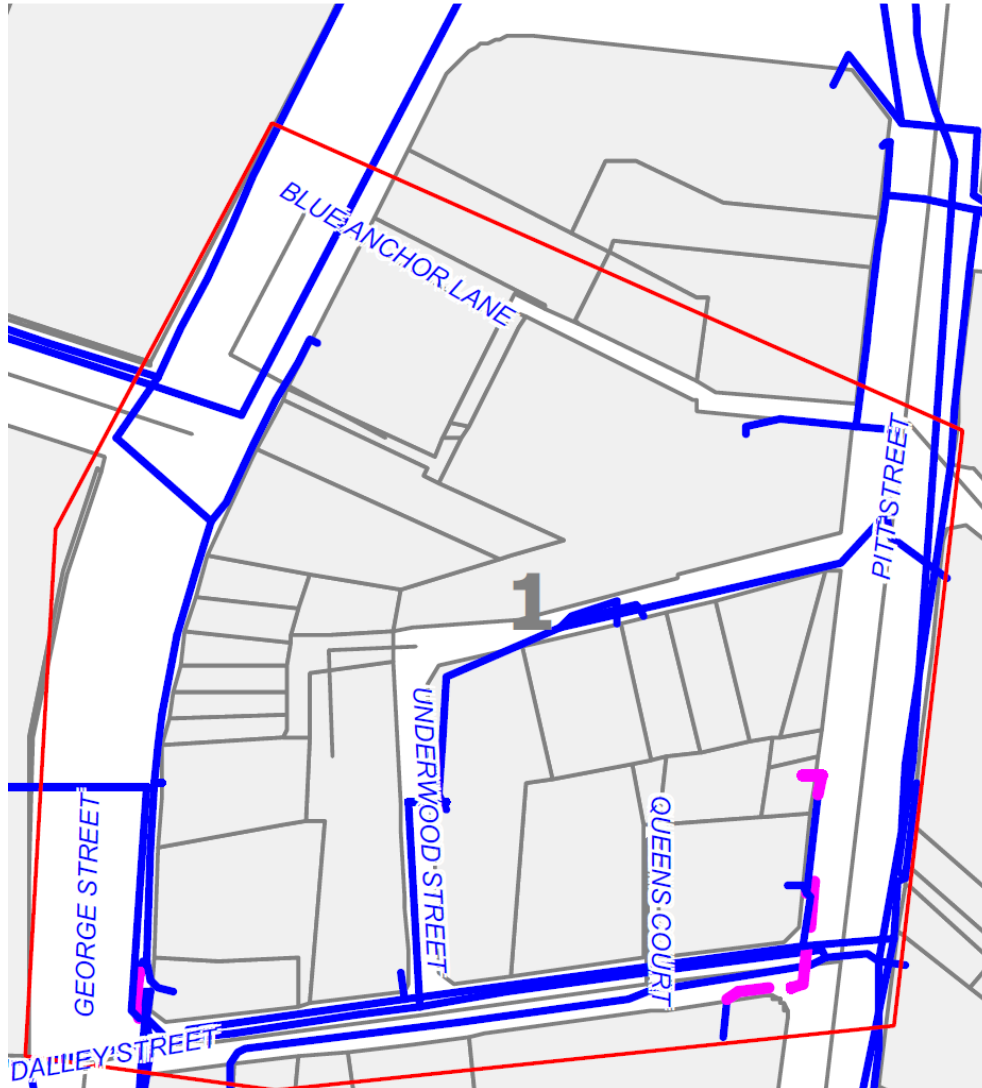


Figure 4: AAPT optic fibre network

- AARNet – Optical fibre asset located on Pitt Street, no existing connections.

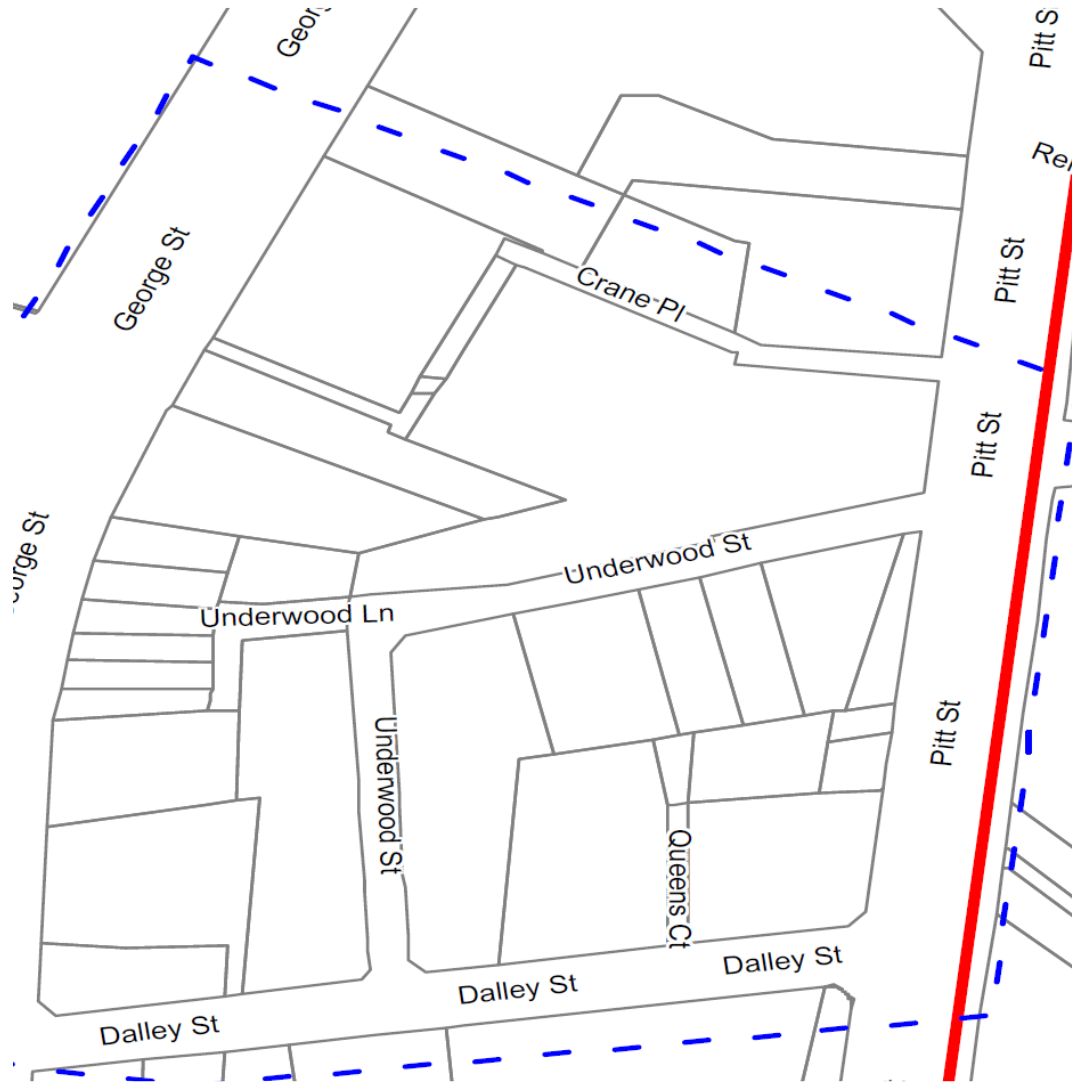


Figure 5: AARNet optic fibre asset

- Nextgen Network – Cable and 3rd party ducts located in George Street and Pitt Street, no existing connections.

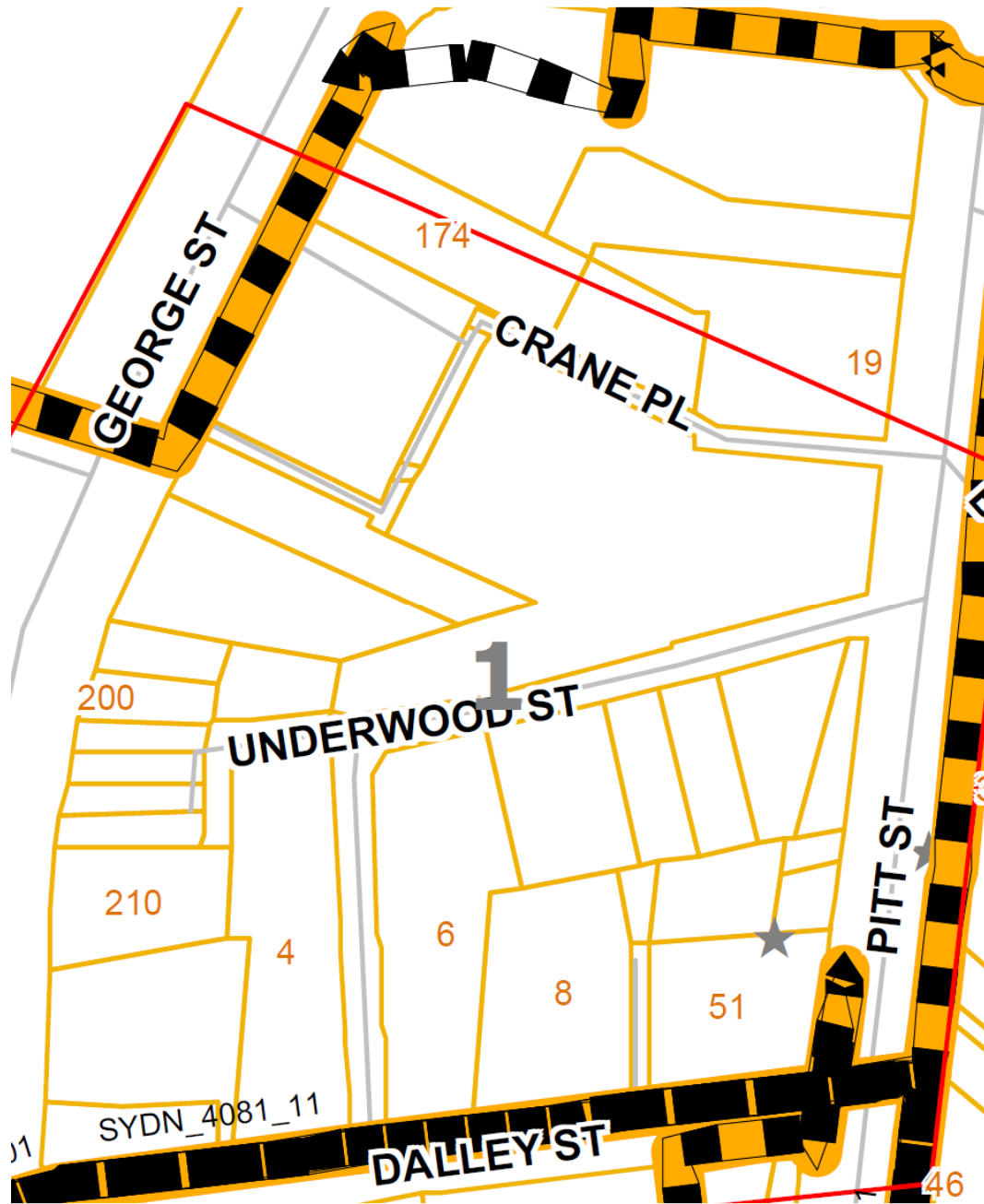


Figure 6: NextGen Network

- Optus – Optic fibre in other utility conduit terminates in utility manhole adjacent the proposed site in Crane Place & George Street. Optic fibre runs across the proposed site from George Street utility manhole to Crane Place utility manhole. These will need to be maintained or relocated.

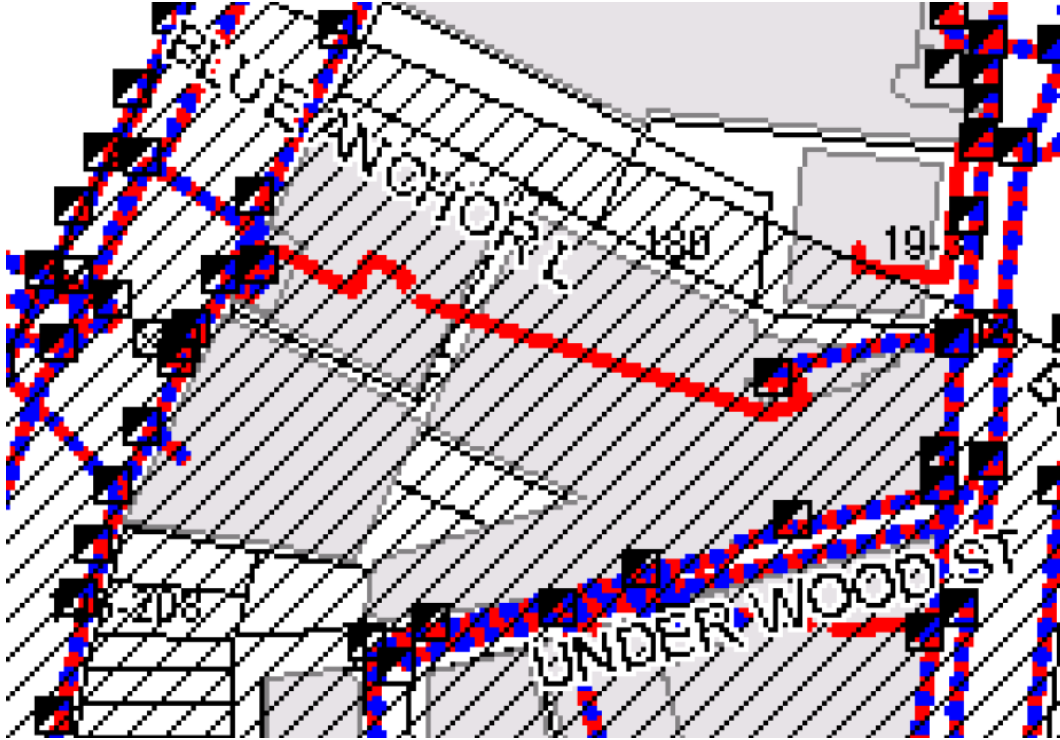


Figure 7: Optus optic fibre network

- Pipe networks – Asset located in Telstra duct in George Street. No Existing Connection. Refer to Telstra diagram below for services. Pipe Networks share ducts with Telstra.

- Primus telecom – Cable located in George Street and Pitt Street, no existing connection.

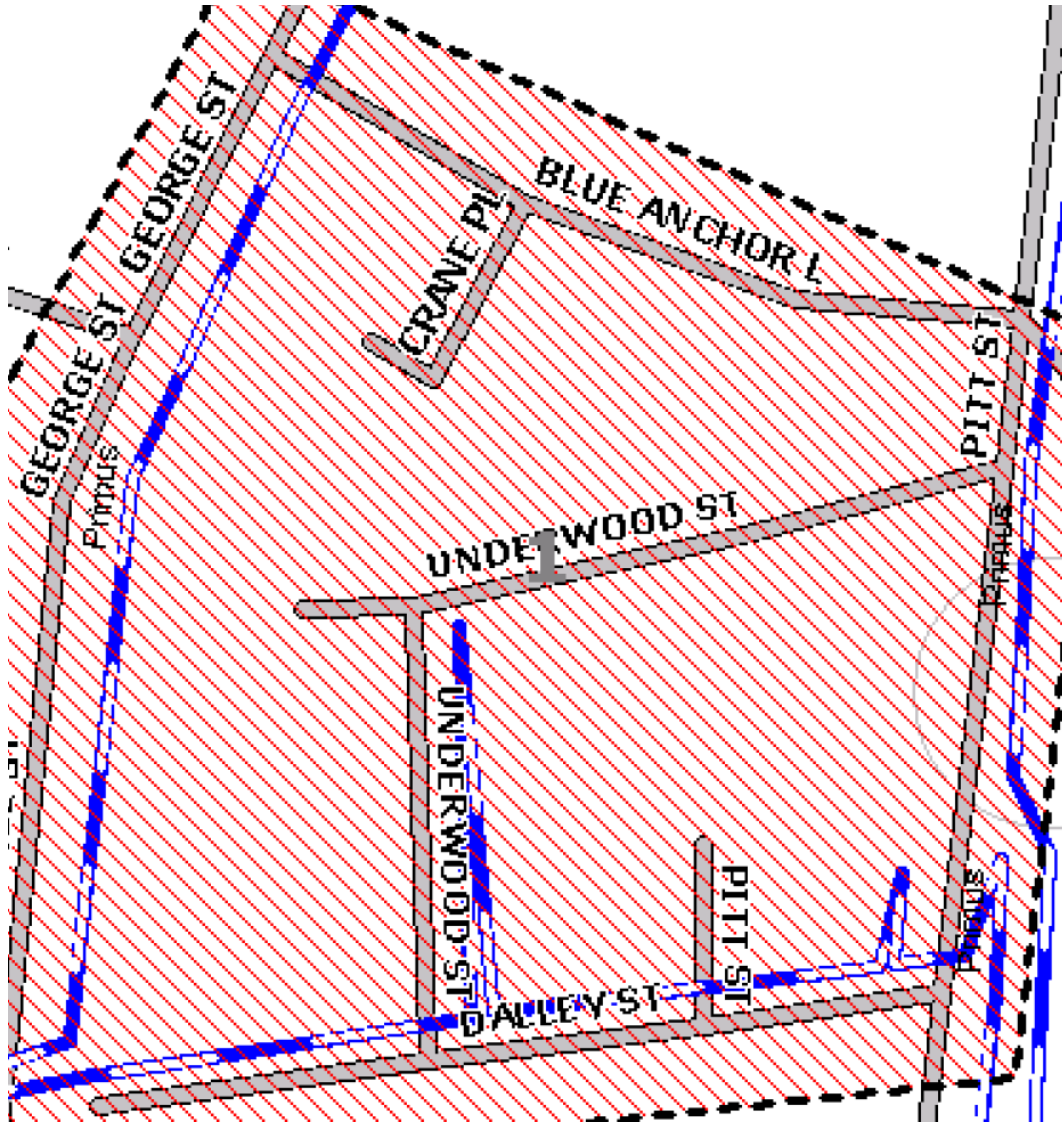


Figure 8: Primus telecom cable network

- Telstra – Telstra ducts are located in George Street and Pitt Street. Telstra services run across the proposed site from George Street utility manhole to Crane Place utility manhole. These will need to be maintained or relocated.

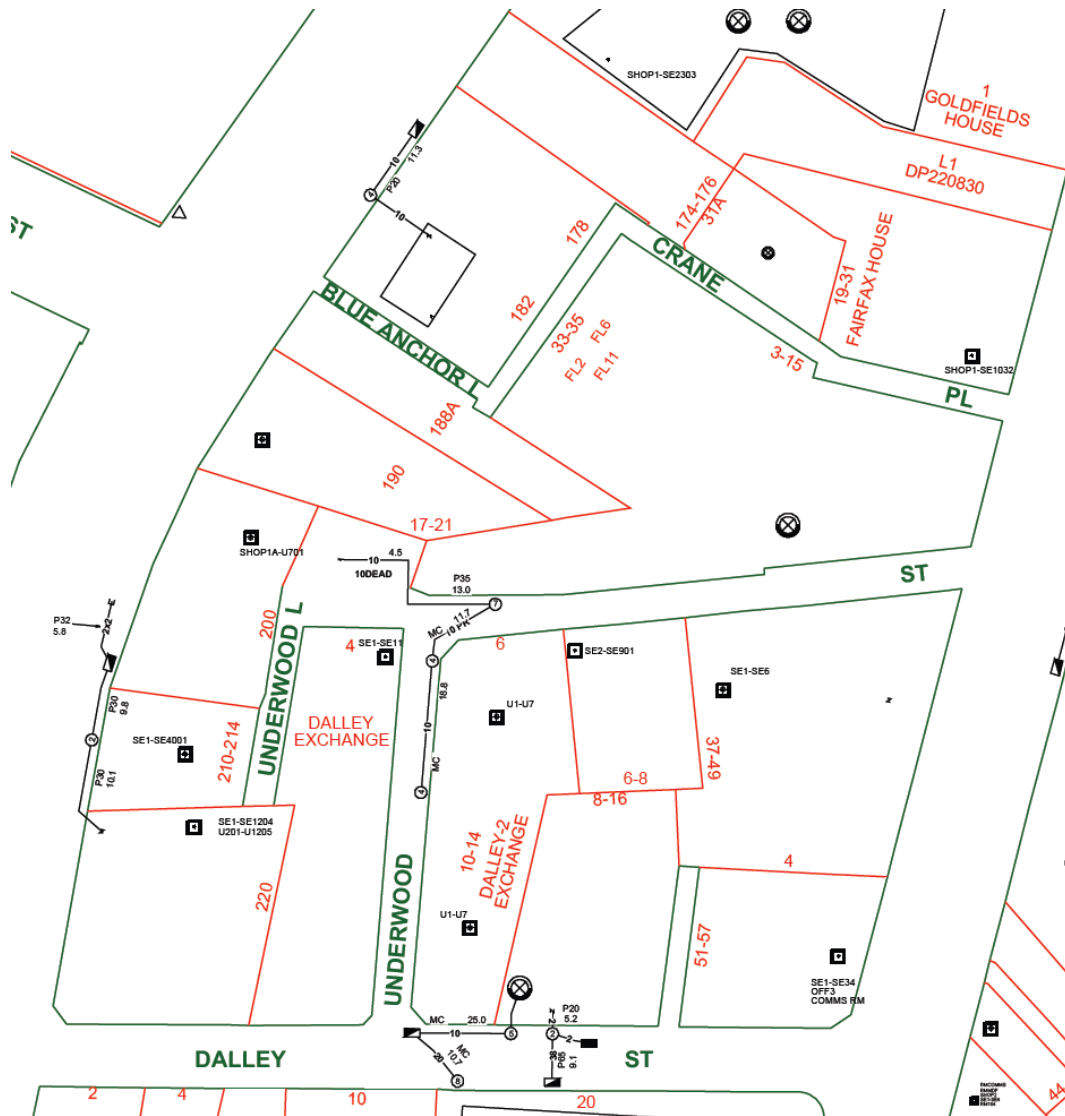


Figure 9: Telstra utility ducts

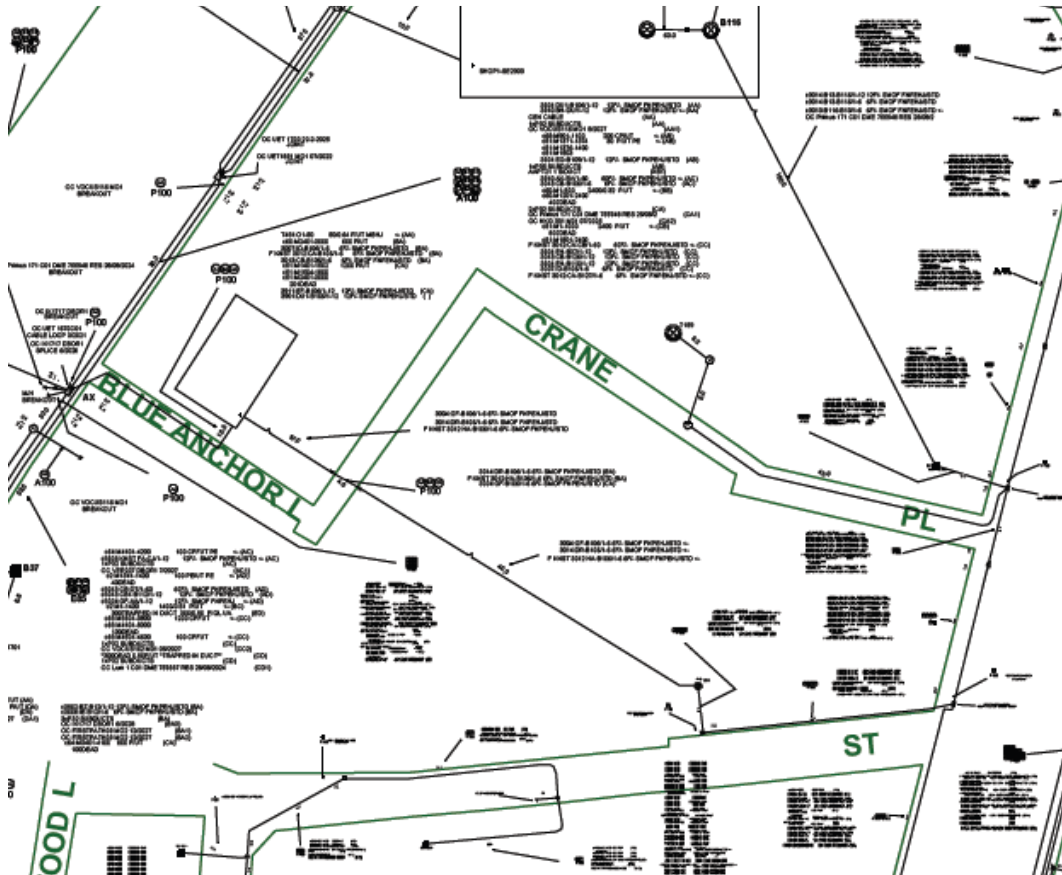


Figure 10: Telstra utility assets

- Uecomm - business broadband on George Street adjacent the proposed site, no existing connection.

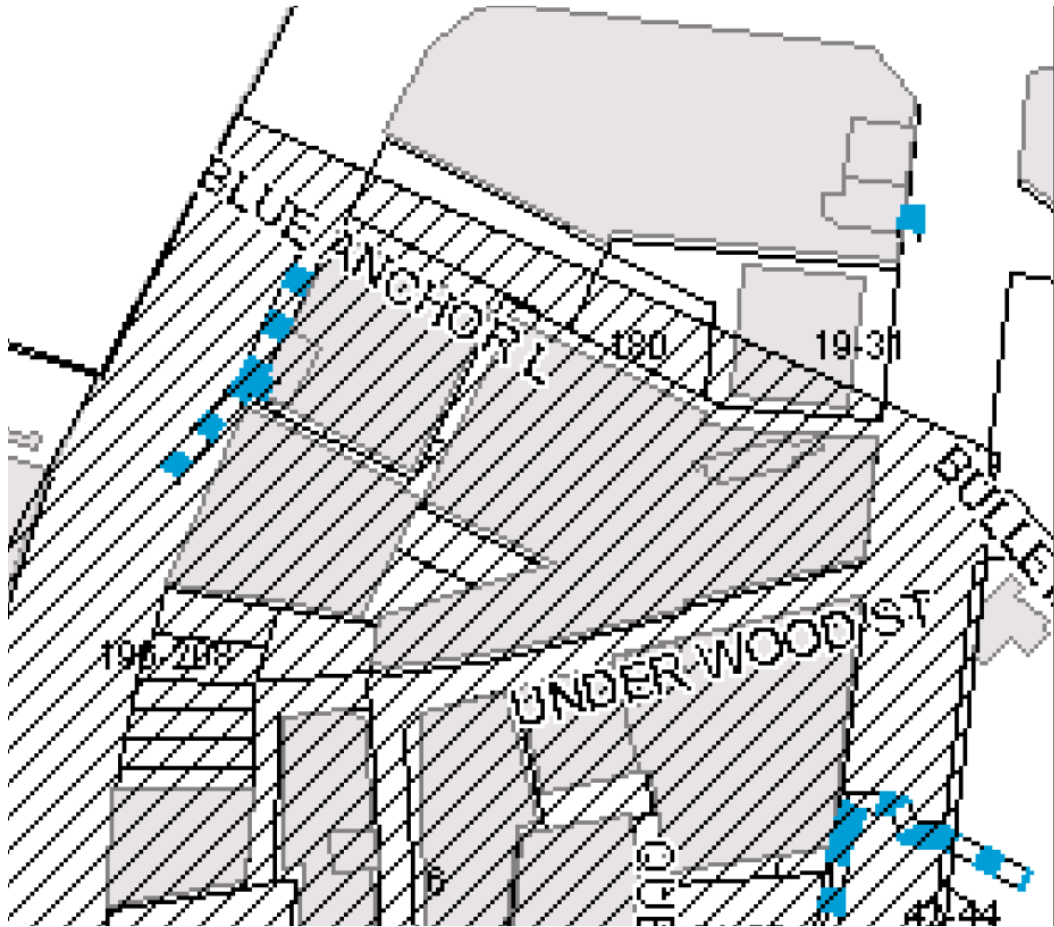


Figure 11: Uecomm business broadband network

- Verizon – Optic fibre network duct located in George Street, Pitt Street and existing connections to proposed site via cable duct in Underwood Street.

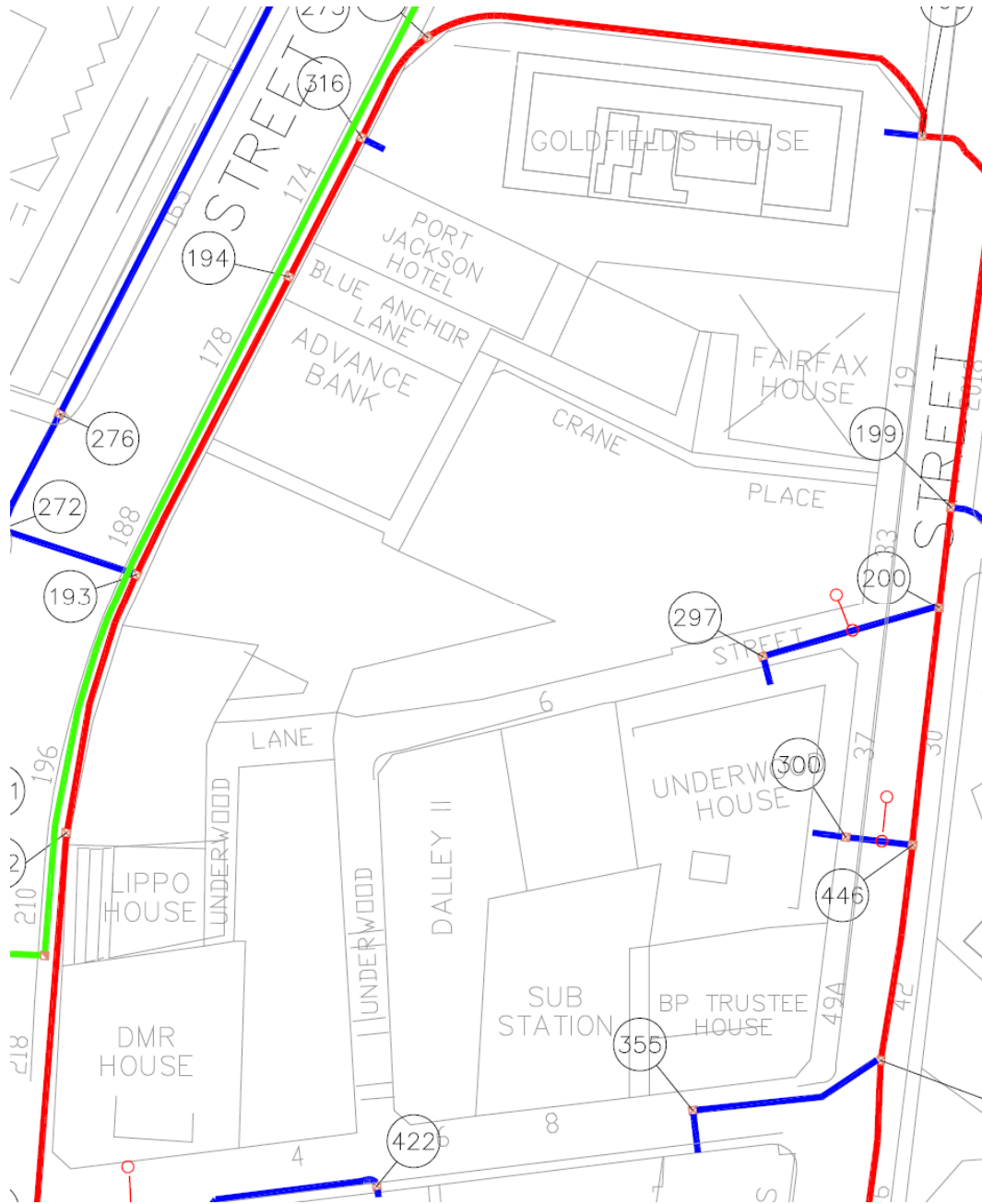


Figure 12: Verizon optic fibre network

- Vocus Communications – Vocus assets reticulate from Telstra pit located on the corner of Underwood and Pitt Street also from Telstra pit located on George Street. No existing connection to proposed site.

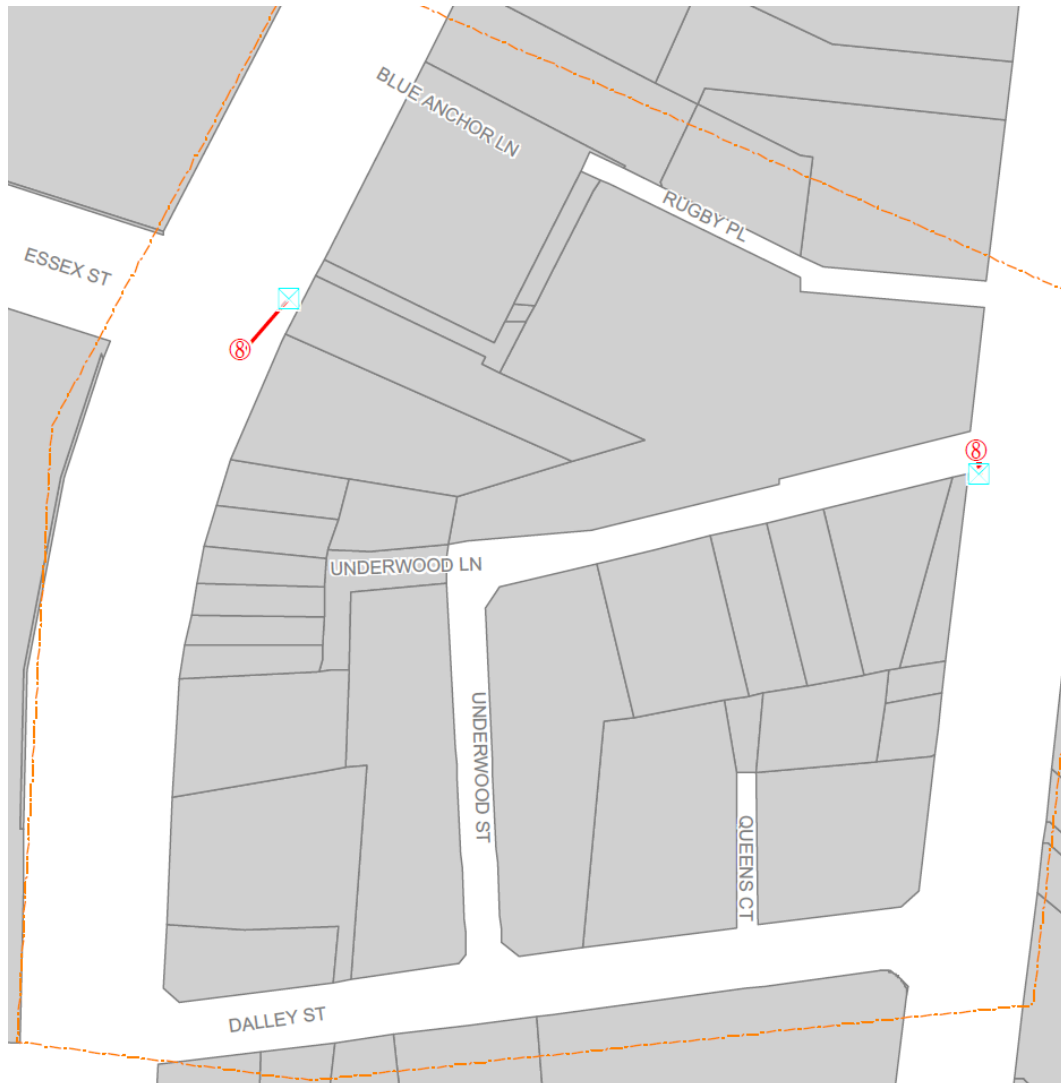


Figure 13: Vocus communications assets

Mobile coverage is currently provided to the precinct from various service providers.

3.2.2 Required Alterations

Both Optus and Telstra services run beneath the development site. These services will need to be maintained and protected during construction unless arrangements can be made to relocate them with the statutory providers.

The protection requirements and potential for relocating/moving the services will need further investigation early in the next phase of the project.

The coordination of communications services and the works described above are considered by ARUP to be industry standard.

3.3 Sydney Water Services

The design team has interrogated the dial before you dig information and requested pressure enquiries from Sydney water for the mains on George St and Pitt Street. These are included in Appendix A.

3.3.1 Existing Services

The existing services are described as follows. Refer to the Figure below for details.

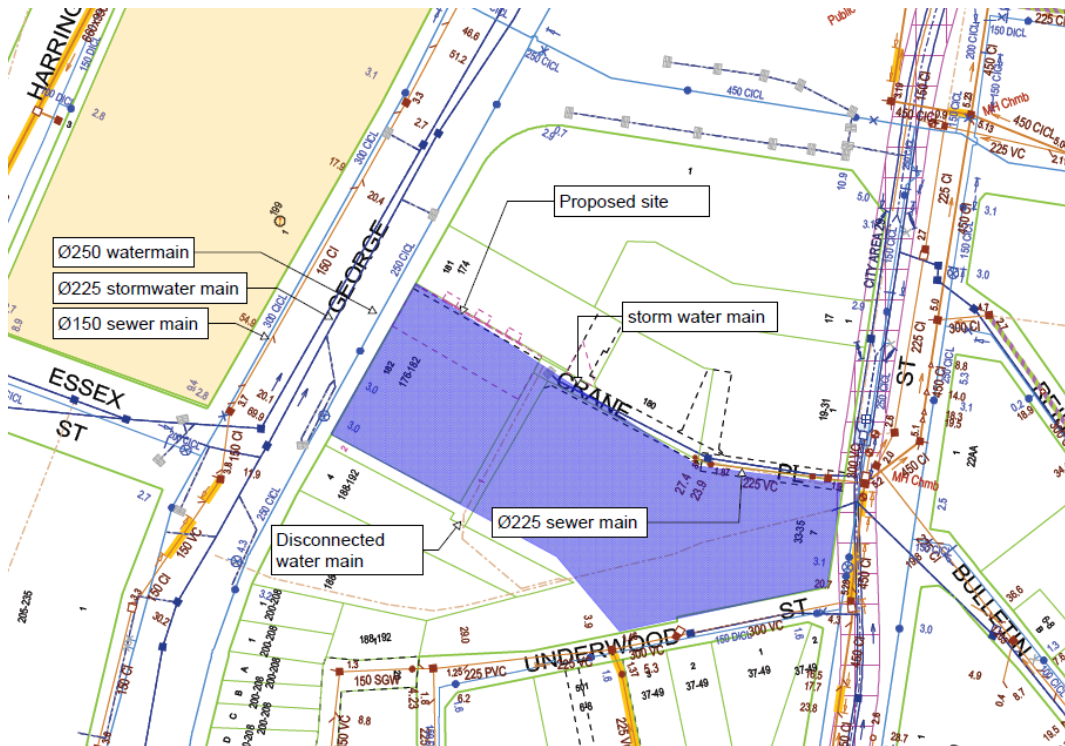


Figure 14: SWC assets

Potable Water Supplies

The development site sits on a block North of Underwood St between George St and Pitt St in the Sydney CBD. To the northern side of the development Crane Place runs to provide vehicular access. All these streets contain water infrastructure as follows;

George St – 250 dia Cast Iron Cement Lined Main

Pitt St- 250 dia Cast Iron Cement Lined Main

Crane Place – None

Underwood St - 150 dia Ductile Iron Cement Lined Main

The Water Supply infrastructure within the Sydney CBD is considered a critical asset by Sydney Water. The mains are heavily interconnected and served from multiple reservoirs. The mains therefore are very reliable and are maintained to a high degree by Sydney Water commensurate with their critical asset status.

Sydney Water has management plans in place to redirect supplies should failures occur resulting in a high degree of security for the developments served from this infrastructure. Sydney Water has verbally confirmed that the proposed development loads can be supported by their existing potable water network.

Sewer

The development site sits on a block North of Underwood St between George St and Pitt St in the Sydney CBD. To the northern side of the development Crane Place runs to provide vehicular access. All these streets contain sewer infrastructure as follows;

George St – 150 dia Cast Iron Sewer

Pitt Street- 450 dia Cast Iron Sewer

Crane Place- 225 dia Vitreous Clay Sewer

Underwood St – 225 dia PVC sewer and 300 dia Vitreous Clay Sewer

Sydney Water has verbally confirmed that the proposed development loads can be supported by their existing sewer network.

Stormwater

The development site sits on a block North of Underwood St between George St and Pitt St in the Sydney CBD. To the northern side of the development Crane Place runs to provide vehicular access. All these streets contain storm water infrastructure as follows;

George St- 600X900 Oviform Storm Line and an 800 dia line

Pitt St- 1125X1650 concrete Oviform Storm line

Crane Place-300 dia storm line

Underwood St – 300 dia concrete storm line

Sydney Water has verbally confirmed that the proposed development loads can be supported by their existing SW network.

3.3.2 Required Alterations

Potable Water Supplies

The total NLA of the development site is not altering significantly and nor is the use of the development. The modifications move NLA from the George St site to the Pitt St end of the precinct altering the development sites centre of gravity.

Whilst the overall site demand will alter only marginally it will now be centred on the Pitt street end of the development

The flow and pressure enquiries from Sydney Water show that the mains within Pitt St have the following Capability.

ASSUMED CONNECTION DETAILS

Street Name: Pitt Street	Side of Street: West
Distance & Direction from Nearest Cross Street	10 metres North from Crane Place
Approximate Ground Level (AHD):	4 metres
Nominal Size of Water Main (DN):	250 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	51 metre head
Minimum Pressure	34 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	34
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	34
	10	34
	15	34
	20	33
	30	31
	40	29
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	5	33
	10	33
	15	32
	20	32
	30	30
	40	28
Maximum Permissible Flow	47	26

The new development load estimates suggest a water demand of approximately 11.4 l/s.

As can be seen this is well within the capabilities of the mains within Pitt St and no amplifications are anticipated. The LLCQ development is expected however to require a new connection to meet the relocated demand. Sydney Water has confirmed verbally that the existing infrastructure is able to support this demand.

The coordination of potable water supplies with Sydney Water and the works described above are considered by ARUP to be industry standard.

Wastewater

At present, we anticipate sewer flows to not be significantly altered for the precinct as a whole. The centre of gravity change towards Pitt St will move the sewer load, estimated at 7.5l/s towards Pitt St however the assets in Pitt St are large and we do not anticipate the loads not being able to be accepted into this network.

Formal application through a water services coordinator will be required to take this enquiry further. Given the size of the assets locally and the fact that NLA is similar to the existing buildings this is not considered necessary.

A new connection however is anticipated to accommodate the increased flow due to the centre of gravity change.

The coordination of sewer supplies with Sydney Water and the works described above are considered by ARUP to be industry standard.

Stormwater

The whole development site is currently covered in its entirety with impervious surfaces. The developed site will alter this introducing a new park. The introduction of landscaping alters the discharges from the site in terms of stormwater runoff. Planted areas attenuate runoff considerably reducing the peak flows seen by the stormwater network.

On this basis we are therefore expecting peak flows for the development to reduce from the current discharge.

Council's closely assess site development and redevelopment to ascertain the impact of impermeable areas on the existing stormwater infrastructure. Typically councils will mandate On Site detention to limit the peak site discharges generated by the introduction of hard surfaces. These typically get provided as tanks with discharge controls on the outflow.

The storm systems in Sydney are partly owned by the City of Sydney and Sydney Water. In the area of the development site the critical infrastructure is owned by Sydney Water.

We have spoken to Sydney Water and they have confirmed that they will not mandate OSD for this development. The site is close to the downstream end of the catchment and Sydney Water want such developments to discharge runoff as quickly as possible so that the storm drains are clear for the load generated by catchments far further upstream.

It is however anticipated that new connections from the site will be required to match the redeveloped configuration.

It is proposed that the Roads and Plazas will be piped for the 1:10 year ARI with the 1:100 ARI being conveyed by overland flow.

The coordination of stormwater supplies with Sydney Water and the works described above are considered by ARUP to be industry standard.

3.4 Gas Supply

The development site sits on a block North of Underwood St between George St and Pitt St in the Sydney CBD. To the northern side of the development Crane Place runs to provide vehicular access. All these streets contain gas infrastructure as follows;

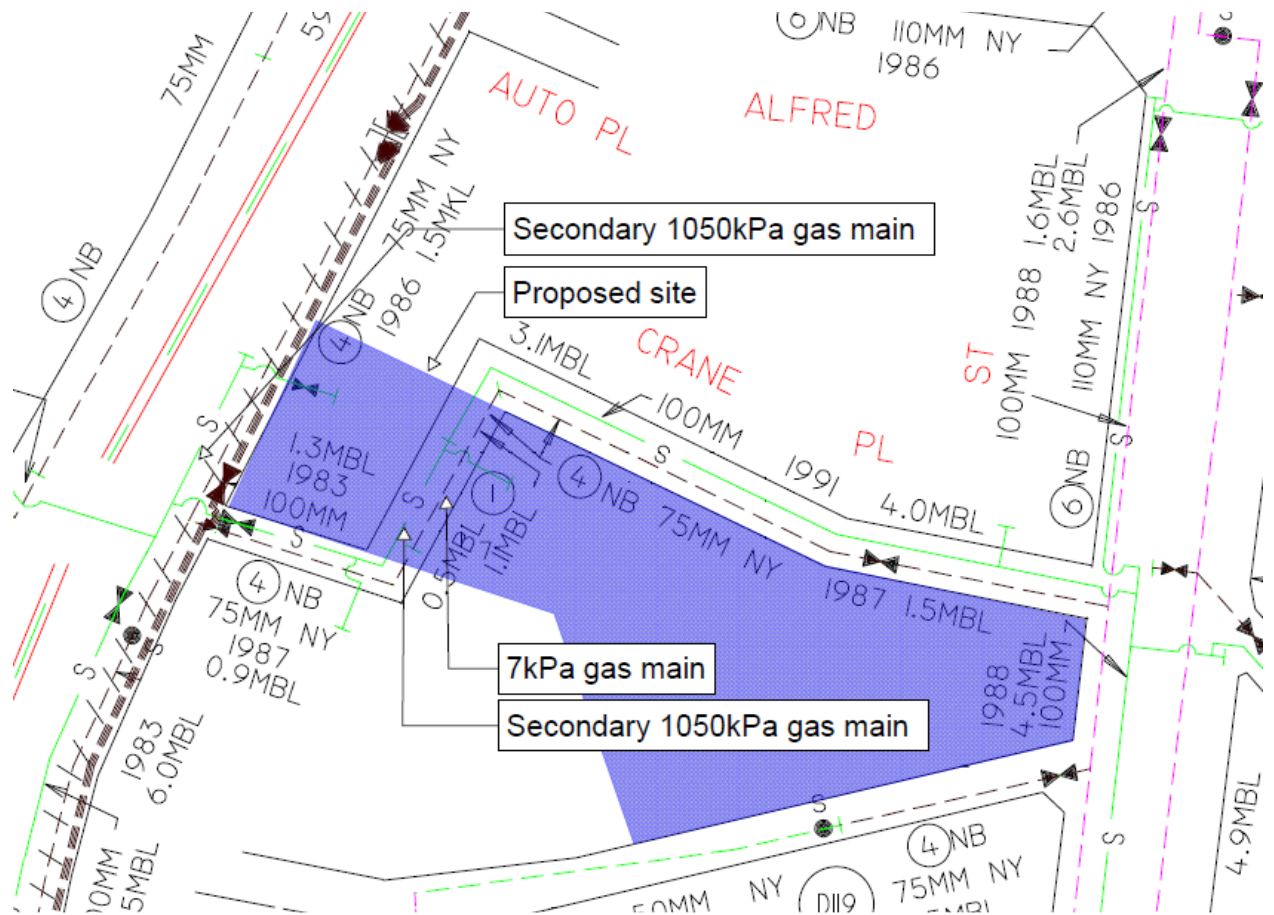


Figure 15: Location of existing gas infrastructure

George St- 75 dia Nylon 1050 kPa

Pitt St- 100 dia 1050 kPa

Crane Place- 100 dia 1050kPa and 75 dia Nylon 7kPa main

Underwood St – 50 dia Nylon 7 kPa main.

3.4.1 Required Alterations

Based on our initial review the site appears to be provided with adequate natural gas infrastructure.

The main does traverse the development site along Crane Place. This may be able to be retained below the park

The change in centre of gravity will likely require a new connection to be made to the infrastructure in Pitt St however with the presence of a high pressure main in the vicinity it is not anticipated that the new development would illicit an upgrade to the Jemena infrastructure. Jemena have declined to comment further until a formal application is made.

The coordination of gas supplies with Jemena and the works described above are considered by ARUP to be industry standard.

4 Conclusion

ARUP have been engaged by LLD to:

- Assess the ability of existing infrastructure to service the proposed LLCQ redevelopment,
- Assess any augmentation works required to existing utility infrastructure where necessary to service the proposed LLCQ redevelopment,
- Where existing utility infrastructure identified have the potential to prevent the proposed LLCQ development, the assessment of required diversion works where required to facilitate the redevelopment and confirmation that such works are feasible

ARUP have completed the assessment of infrastructure services and have concluded :

1. Generally there is sufficient capacity within utility providers existing CBD district networks in the immediate vicinity of the site to adequately service the proposed LLCQ development
2. In some cases local diversions, modifications or other works to utility providers existing CBD district networks in the vicinity of the proposed LLCQ may be required. ARUP considers that such diversions, modifications and other works are considered industry practice and are manageable utilising proven industry standard engineering techniques
3. Diversions or modifications to utility providers services should be closely coordinated with the relevant service providers and be to their approval such that adjacent landowners are not impacted
4. On the basis that diversions, modifications and other works to utilities are coordinated with and approved by respective utility providers, ARUP is satisfied that the site is suitable for the proposed LLCQ development

Appendix A

Sydney Water Pressure Enquiries

A1 Sydney Water Enquiries

Statement of Available Pressure and Flow

Arup
Level 10, 201 Kent Street
Millers Point, 2000

WMS No: **292771**
Contact No: **8849-3531**
Fax No: **8849-3071**

Attention: **Heath Palmer**

Date: **15/08/2013**

Pressure & Flow Application Number: 8510586
Your Pressure Inquiry Dated: Tue August 13 2013
Property Address: 176-182 George Street Sydney 2000

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

ASSUMED CONNECTION DETAILS

Street Name: George Street	Side of Street: East
Distance & Direction from Nearest Cross Street	25 metres North from Essex Street
Approximate Ground Level (AHD):	7 metres
Nominal Size of Water Main (DN):	250 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	48 metre head
Minimum Pressure	31 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	31
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	32
	10	32
	15	31
	20	31
	30	31
	40	31
	50	30
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	60	29
	5	31
	10	31
	15	30
	20	30
	30	30
Maximum Permissible Flow	40	30
	50	29
	60	28
	120	23

(Please refer to reverse side for Notes)

Robert Wickham
For **Robert Wickham**
Principal Planner
Urban Growth – Asset Services



Statement of Available Pressure and Flow

Arup
Level 10, 201 Kent Street
Millers Point, 2000



WMS No: **292770**
Contact No: 8849-3531
Fax No: 8849-3071

Attention: Heath Palmer

Date: 15/08/2013

Pressure & Flow Application Number: 8510580
Your Pressure Inquiry Dated: Tue August 13 2013
Property Address: 176-182 George Street Sydney 2000

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

ASSUMED CONNECTION DETAILS

Street Name: Pitt Street	Side of Street: West
Distance & Direction from Nearest Cross Street	10 metres North from Crane Place
Approximate Ground Level (AHD):	4 metres
Nominal Size of Water Main (DN):	250 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	51 metre head
Minimum Pressure	34 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	34
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	34
	10	34
	15	34
	20	33
	30	31
	40	29
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	5	33
	10	33
	15	32
	20	32
	30	30
	40	28
Maximum Permissible Flow	47	26

(Please refer to reverse side for Notes)

Andrew Smith
For **Robert Wickham**
Principal Planner
Urban Growth – Asset Services

Appendix B

Ausgrid Enquiries

B1 Ausgrid Enquiries

The following enquiries to Ausgrid were made by Cameron Mckay of Lend Lease dated 10 October 2013 to gain a greater understanding of the existing assets located at the site.

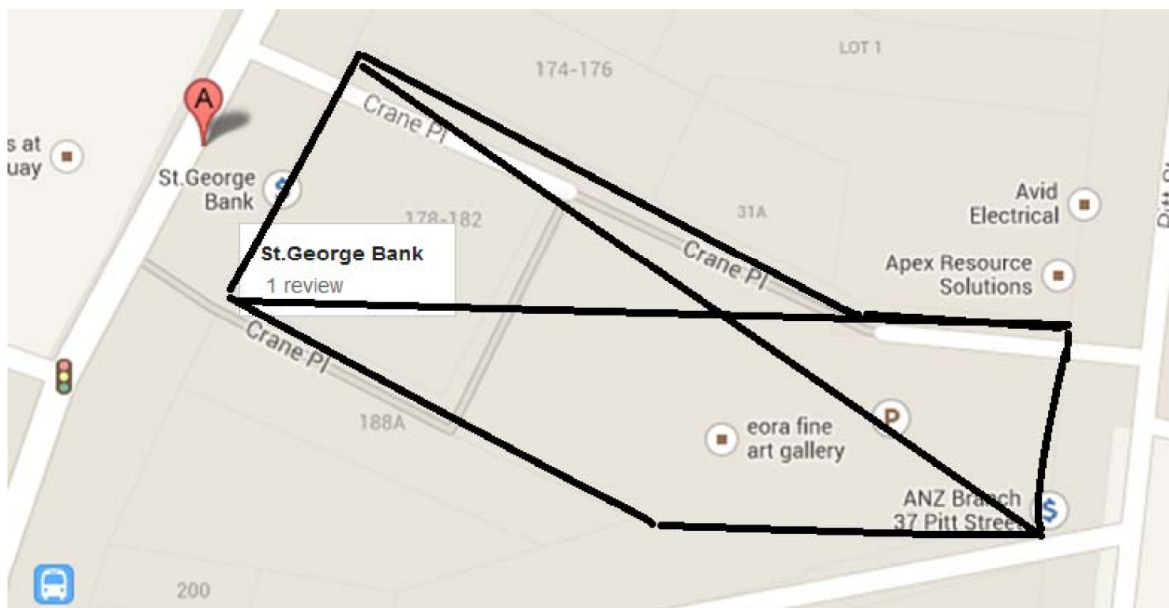
182 George Street & 33-35 Pitt Street, Sydney

We are currently investigating options associated with the potential future redevelopment of 182 George Street and 33-35 Pitt Street, Sydney. As a result of these redevelopments, we anticipate that the existing substations within these buildings would become redundant/demolished. Preliminary considerations result in an anticipated maximum demand on the site to be 5.9MVA. Preliminary considerations are for the re-development to be serviced by 2 off triplex CBD (3 x 1500kVA) Elevated substations complete with ground level HV switchrooms. We anticipate one being located within an above ground 'podium' level with the other being located elevated within the redevelopment.

We request Ausgrid to undertake a Feasibility Study identifying:

- 1.) Existing Maximum Demands on the existing substations serving these sites.
- 2.) Existing customers (other than those directly on the sites identified above) which may be affected by the works.
- 3.) Options to supply the redeveloped site including:
 - a. From George Street infrastructure only
 - b. From Pitt Street infrastructure only
 - c. From Pitt Street and George Street infrastructure (least preferred option).
 - d. Other options as identified by Ausgrid in the course of their study.
- 4.) Likely required upstream network augmentation/modification works (HV and LV) – if and where required

Site/Location Plan





Our Ref: 700000299
Direct Ph: (02) 9663 9519
email: cwong@ausgrid.com.au

570 George Street
Sydney NSW 2000
All mail to GPO Box 4009
Sydney NSW 2001
www.ausgrid.com.au

10 October 2013

Mr. Cameron McKay
30 The Bond, 30 Hickson Rd
Millers Point, NSW 2000

Dear Sir,

**Re: Preliminary enquiry regarding future development at 182 George St
and 33-35 Pitt St, Sydney**

We refer to your enquiry received by Ausgrid on 3 October 2013, regarding future development of the above site.

We are pleased to provide the information you requested in your enquiry as itemised in your submission.

Item 1

The latest electrical maximum demand for each of the substations in George St (S4216) and Pitt St (S5655) properties respectively is 1362A in Dec 2012 and 1313A in March 2013.

Item 2

Both substations are supplying Ausgrid network customers in George St and Pitt St as well as to the respective buildings. However, supply to network customers will not have a major impact on the proposed development.

Item 3

Without undertaking detail feasibility studies on the supply requirements of the site, preliminary investigations have suggested that future supply to the site is preferably on the George St property frontage. In addition, there will be a need to link/connect electrical assets between George St and Pitt St. It is envisaged the linkage is to be in the form of underground ducts which will cross the entire development site.

Item 4

In order to maintain supply continuity to customers, augmentation of the network will be necessary in conjunction with the new connections to the development site.

It should be noted that the above advice is based on Ausgrid's policies and network status as of today. Both of these are subject to change.

Connections to Ausgrid's network are governed by a set of laws and rules referred to as National Energy Customer Framework (NECF). Included in the NECF are the National Electricity Rules. Under these rules, a binding contract may only be formed after a connection application is lodged and Ausgrid has made a connection offer in response to that application. Accordingly, you should lodge a duly completed connection application if you wish to make arrangements for connecting your development to Ausgrid's network. A web link is provided [here](#).

Further, any enquiries beyond your initial enquiry is to be submitted through the application process as detailed above.

I may be contacted on 9663 9519 if you require any further information or clarification.

Yours Sincerely,



A handwritten signature in blue ink, appearing to read 'Chee Wong'.

Chee Wong,
Network Operations, Operations East
Ausgrid