

Infrastructure Delivery, Management and Staging Plan Report

Project Details

Project Name: Main Works for Waterloo Mixed Use Development (HDA)

Project Address: 881-885 Bourke Street, Waterloo NSW 2017

SSDA Reference: SSDA-80441462

Applicant: Waterloo Property Pty Ltd as trustee for Waterloo Property Unit Trust

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1 Introduction and Project Description

This Infrastructure Delivery, Management and Staging Plan has been prepared by Goldfish and Bay Services on behalf of Waterloo Property Pty Ltd as trustee for the Waterloo Property Unit Trust (the Applicant) in support of a Housing Delivery Authority (HDA) nominated State Significant Development Application (SSDA) for a proposed mixed-use development at 881-885 Bourke Street, Waterloo, with concurrent rezoning (SSD-80441462). The report is submitted to the NSW Department of Planning, Housing, and Infrastructure (DPHI).

This application is preceded by a separate SSDA for Early Works that prepare the Site for the proposed development (SSD-80911502).

Specifically, consent is sought for the following Main Works for the Waterloo Mixed Use Development:

- Site establishment and enabling works (that were not included in the preceding Early Works SSDA);
- Construction of residential and mixed-use buildings across four development parcels, inclusive of;
 - build to rent apartments and associated amenities;
 - affordable apartments;
 - non residential floor space including commercial premises and creative industry;
- Construction of a consolidated basement with below-ground links between development parcels, comprising car parking, plant and storage area;
- Landscaping and publicly accessible open space;
- Works to site frontages; and
- Extension and augmentation of infrastructure and services (that were not included in the preceding early Works SSDA) as required.

Development on the site was declared State Significant Development (SSD) pursuant to State Significant Declaration Order 2025 (Order) dated 17 February 2025. The Order declares development specified in EOI application 229420 dated 8 January 2025, including development for the purposes of mixed-use development (Build to Rent including affordable housing) with ground floor non-residential uses at 881-885 Bourke Street, as identified in Schedule 3, is SSD.

On 5 March 2025, the Department of Planning, Housing and Infrastructure (the Department) issued SEARs and concurrent rezoning requirements for the project.

The site is subject to an existing Voluntary Planning Agreement (VPA) that sets out dedication of public domain between four development parcels. The public domain includes a new east-west street, a through site link and public open space area (comprising future shared zones and park). The development parcels and public domain as set out in the VPA will be delivered notwithstanding the works proposed in this SSDA.

This report has been prepared to address the requirement of SEAR 21 Infrastructure Requirements and Utilities requirements regarding sewer, potable water, natural gas, power and communication services. This report addresses relevant State and local legislation, policies, and guidelines.

2 Site Context and Description

The site is legally described as Lot 1 DP1308636 and Lot 2 DP1308636 and is located at 881-885 Bourke Street, Waterloo. The site has an area of 21,554m². It has an irregular shape, is generally flat and has been cleared of all light industrial and large format commercial buildings. The site currently has vehicle access from Young Street and Bourke Street.

The site is located within Gadigal Land, in the Sydney Local Government Area (LGA) and is approximately 4km south of the Sydney CBD. The site is approximately 950m walking distance east of an entrance to the Waterloo Metro Station, approximately 1.1km northeast of the Green Square Train Station and approximately 1.5km southeast of Redfern Train Station. The site is also immediately adjacent to a bus stop on Bourke Street

There are a number of trees along the Danks and Young Street frontages.. Additional trees on these frontages are located outside the site boundary. There are commercial and business premises to the west, high-density residential and business premises to the north, primarily high-density residential to the east and high density residential under construction to the south.

An aerial of the site is provided in Figure 1 below.



Figure 1 – Site Aerial

3 SEARs Reporting Requirements

This report has been prepared to addresses the Planning Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing and Instructure (DPHI) for the subject SSDA, with specific SEAR(s) identified in the table below.

SEAR	SEAR Description	Relevant Report Section
21. Infrastructure Requirements and Utilities	Assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site	Section 4
	Identify any infrastructure upgrades required on-site and off-site to facilitate the development and any arrangements to upgrades will be implemented on time and be maintained	Section 4
	Provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be coordinated, funded and delivered to facilitate the development	Section 4
	Address any requirements in respect to designated state public infrastructure	Section 4

4 Infrastructure Connections

4.1 HYDRAULIC SERVICES

4.1.1 SEWER

As illustrated in Figure 2, the proposed site has frontage to 2 x possible sewer mains which are available for connection which are:

- 225 VC sewer main in Danks St
- 300 PVC concrete encased sewer main in Bourke St
- 400 SGW concrete encased sewer main in Young St

Based on preliminary calculations, the site is likely to review 2 x 225mm sewer connections to serve Stage 1 and Stage 2. A SWC Water Servicing Coordinator will need to be engaged during detailed design stage of the project to coordination with Sydney Water on if there are any amplifications required and preferred connection site connection points.

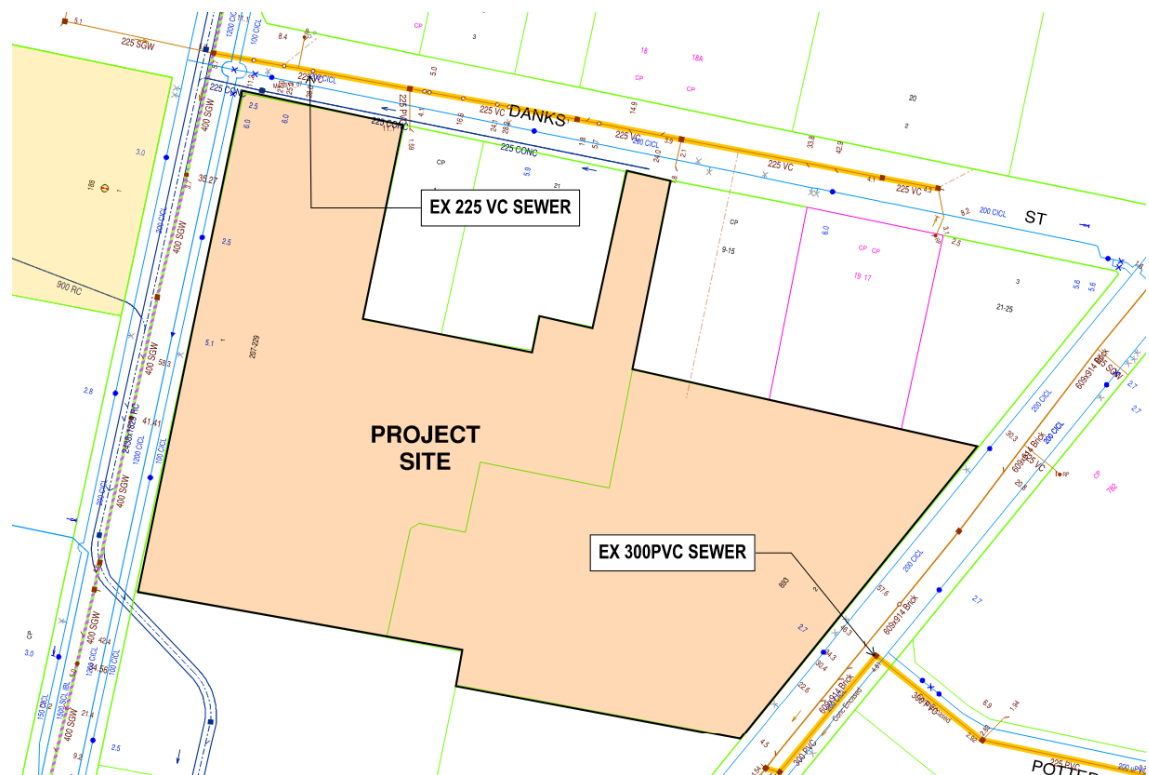


Figure 2 - Hydra Sewer Map (by Sydney Water)

4.1.2 WATER

As illustrated in Figure 3, it is proposed the site is surrounded by the following potable water mains:

- 100 CICL water main in Young St
- 1200 CICL water main in Young St
- 200 CICL water main in Danks St
- 2 x 200 CICL water main in Bourke St

With the proposed staging of the development, it is envisaged the potable water for the site will be serviced via a 150mm connection to the 200mm CICL water main in Danks Street. Final requirements for any amplification and connection are to be confirmed via the Section 73 application following engagement of a Water Servicing Coordinator.

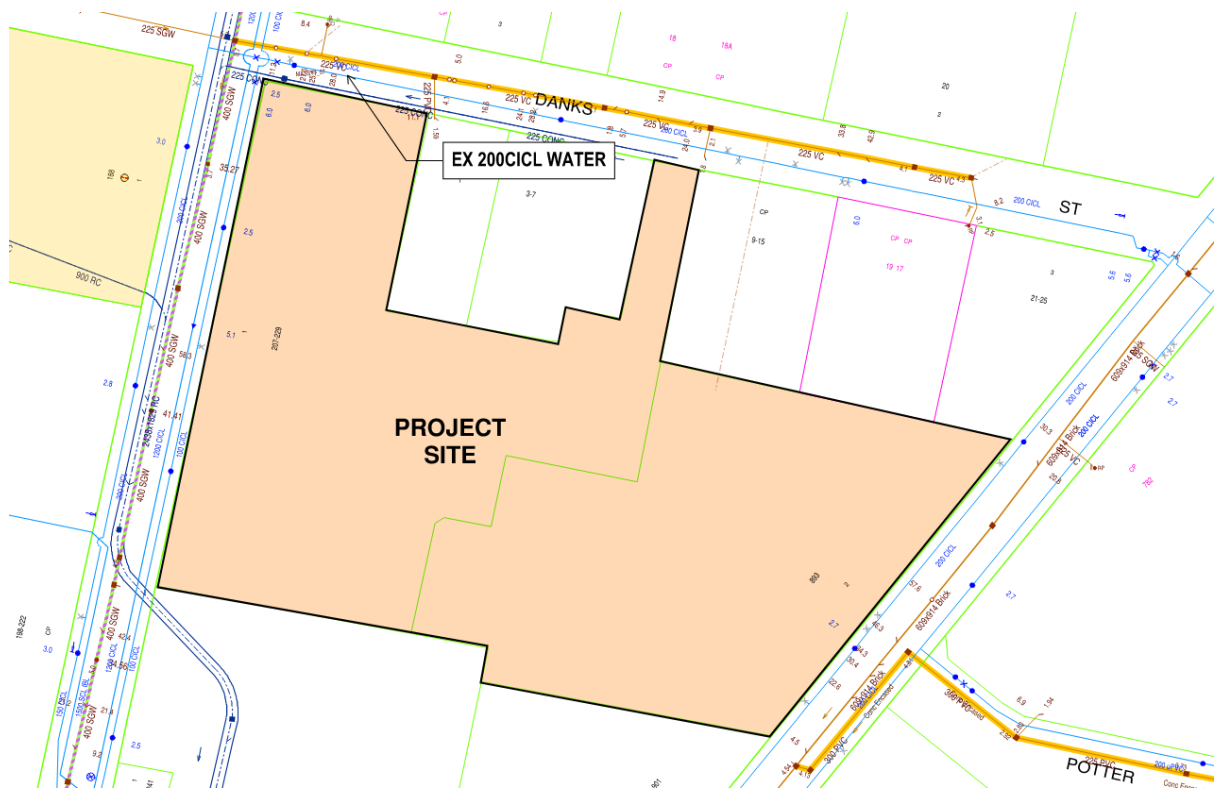


Figure 3 - Hydra Water Map (by Sydney Water)

4.1.3 NATURAL GAS

As illustrated in Figure 4, the proposed site is surrounded by the following gas mains to cater for retail and residential centralised hot water plant:

- A 75 NY 210 kPa gas main located in Danks St, which could serve as a potential connection point for Stage 1 & Stage 2
- A 250 ST 1050 kPa gas main located in Bourke St, which could serve as a potential connection point for Stage 2 should the Danks St main is not suitable to cater for both Stage 1 and Stage 2.
- A 75 NY 210 kPa gas main located in Bourke St, which could serve as a potential connection point for Stage 2 should the Danks St main is not suitable to cater for both Stage 1 and Stage 2.

The embedded networks provider will need to apply for a “complex works” application to obtain formal approval to connect from Jemena (Gas Authority).

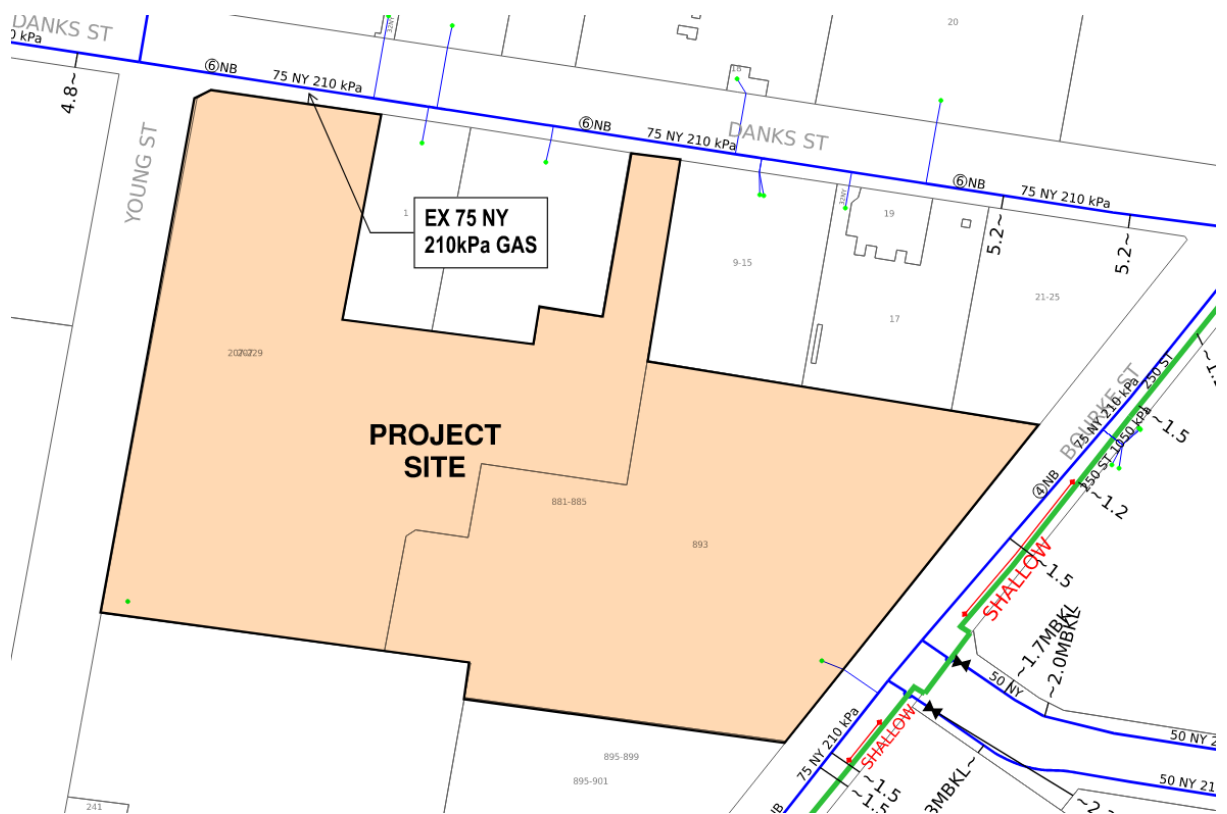


Figure 4- Gas Infrastructure map (by Jemena)

4.2 ELECTRICAL SERVICES

4.3 STANDARDS AND CODES

The electrical design for the development will adhere to the following standards and codes.

1. Building Code Australia 2022 and the referenced Australian Standards
2. DA conditions, to be met and exceeded where required by the BCA
3. AS/CA S009 – Telecommunications Wiring Rules

Standards

1. AS3000 – Wiring Rules
2. AS3008 – Selection of Cables
3. AS2293 – Emergency Lighting and Exit Signs for Buildings
4. AS 1768 – Lightning Protection
5. AS1680 – Interior and Workplace Lighting
6. AS 61439 – Switchgear and Control gear Enclosures
7. Ausgrid NS109 for the location of the main switch rooms adjacent to the substations.
8. NBN Design Guidelines

4.4 DESIGN OVERVIEW

This document will outline key electrical infrastructure and systems proposed for the subject development and provide technical design characteristics forming GFB design intent while considering, cost optimization, performance, end-user satisfaction, safety and compliance to necessary local and national rules, regulations and standards listed above:

1. Site Main Electrical Low-Voltage Infrastructure
2. Site Wide LV Cabling and Distribution
3. General Indoor and External Lighting
4. Emergency and Exit Signage
5. Security, CCTV and Access Control
6. Lightning protection
7. Telecommunications
8. Residential Units Electrical Provisions

4.5 ELECTRICAL DESIGN CRITERIA

GFB have performed a maximum demand calculation with consideration considering full electric building for apartment cooking and gas hot water to the development and utilisation of electrical distribution system for the overall site services provisions including cooking. Summary of the maximum demand allowances are included in the table below following by a summary table indicating the overall demand across the two lots:

4.5.1 MAXIMUM DEMAND CRITERIA

4.5.1.1 Complete Electrification of site

Area/ Equipment	Design Allowance	Calculation Method
Basement Carpark (Including Mechanical Ventilation)	15 VA/m2	Power Density
Communal Internal Areas	15 VA/m2	Power Density
Lobbies & Corridors	15 VA/m2	Power Density
Gym/Pool	200 VA/m2	Power Density
BOH	15 VA/m2	Power Density
Residential SOU's	3.5kVA	Per Unit
Lifts & Escalators	50A/each	125% rating of first lift + 75% rating of second lift + 50% rating of the remainder
EV Charging	1.5kW	Per Bay
F&B retail	250 VA/m2	Power Density
Non F&B retail	150 VA/m2	Power Density

4.5.1.2 Site Main Maximum Demand

RESIDENTIAL CALCULATION - TOTAL 880 APARTMENTS				
	Load Requirement			
BLOCKS	Amps (A)	Apparent Power (kVA)	Chamber Sub Sub-total Amps (kVA)	Comments
BLOCK Parcel 1+RETAIL+EV	3,704 A	2,832 kVA	5,682 kVA	3 x Tx @1500KVA
BLOCK Parcel 2+RETAIL+EV	4,022 A	2,850 kVA		
BLOCK Parcel 3+RETAIL+EV	2,747 A	2,132 kVA	3,524 kVA	3 x Tx @1500KVA
BLOCK Parcel 4+RETAIL+EV	1,859 A	1,392 kVA		
Total Towers	12,333 A	9,206 kVA		

Total Summary 12,333 A 9,206 kVA
 90% diversity 11,099 A 8,285 kVA

Supply Authority Request	12,991 A	9,000 kVA	<----- 6 of TX @ 1.5MVA
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Note:

- 1) Electric Cooktops
- 2) Total QTY of 490 EV chargers allowed.

4.5.2 POWER

As illustrated in Figure 5, the proposed site is surrounded by Ausgrid High Voltage available for substation supply adjacent to the site with connection opportunities on Young St and Bourke Road.

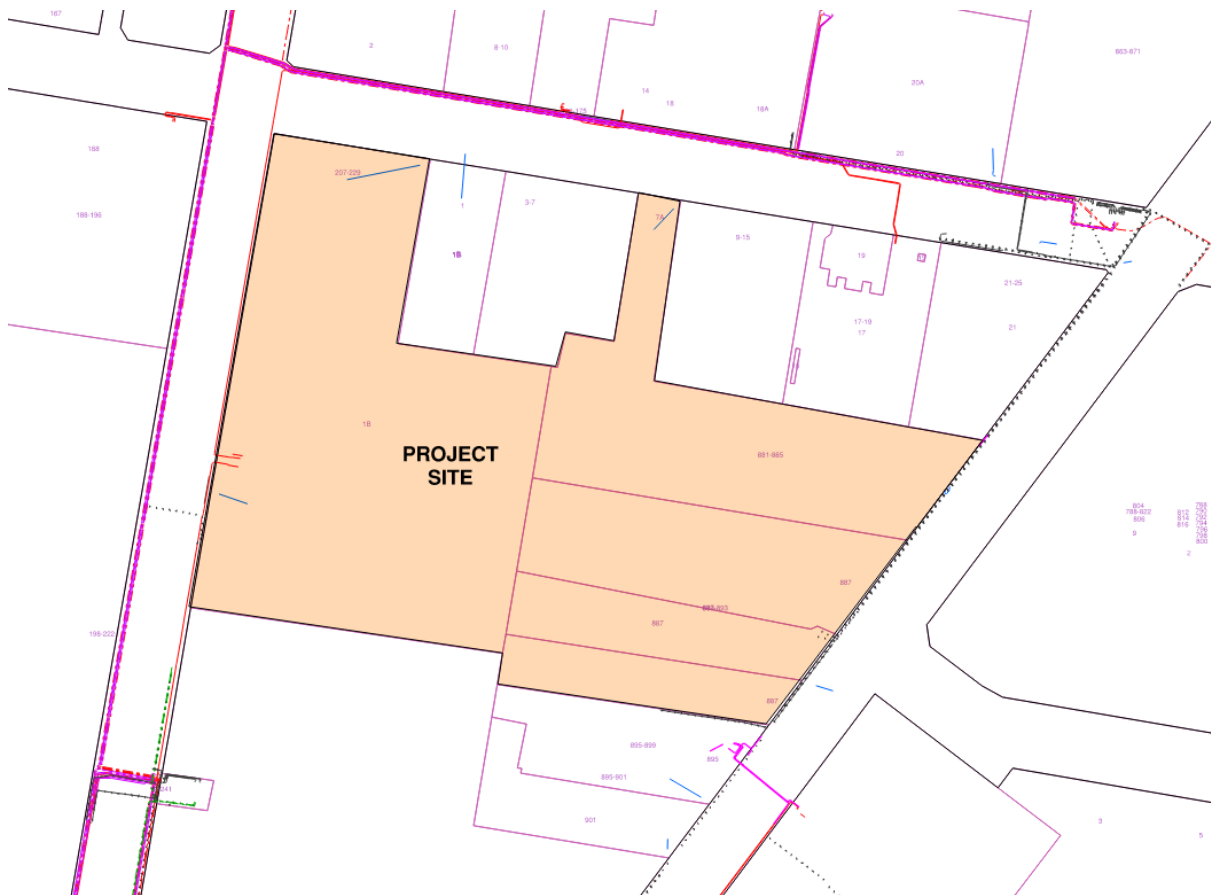


Figure 5- Ausgrid Infrastructure Map

The preliminary maximum demand for this site is 11,099 amps (8,285 kVA diversified). The site will likely require a new 3 x transformer substation in Parcel 4 to serve Stage 1 and 3 x 1500kVa chamber substation required for Stage 2. This will be subject to further development by the Level 3 engineer and negotiations with Ausgrid.

4.5.3 COMMUNICATIONS

As illustrated in Figure 6, the proposed site is surrounded by the existing NBN infrastructure. Consultation with NBN will need to be undertaken during detailed design stage.

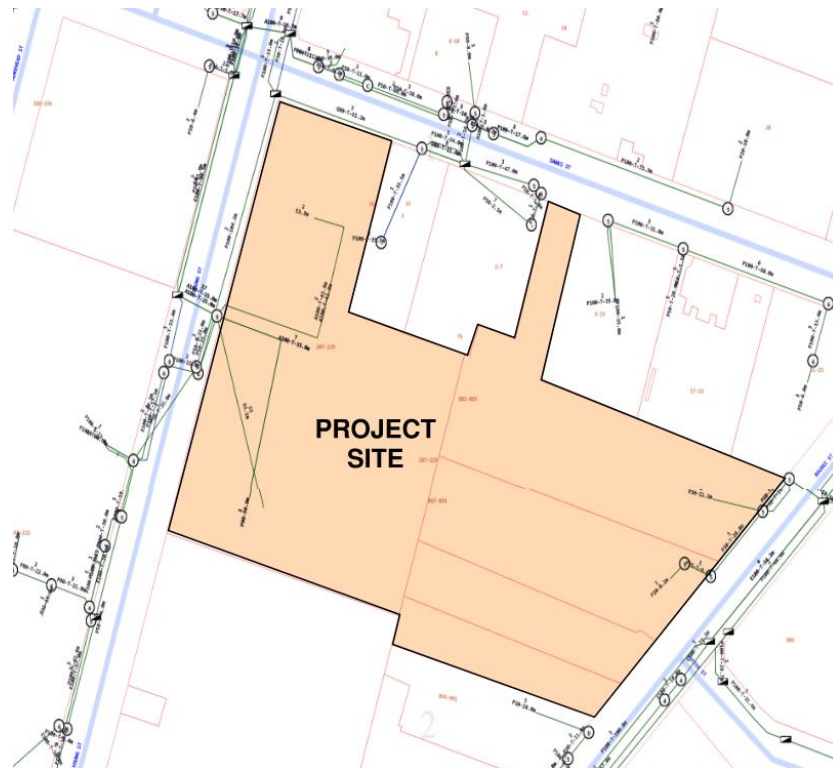


Figure 6- NBN Infrastructure Map

As illustrated in Figure 7, the proposed site is surrounded by the existing optus infrastructure. Consultation with the client and optus will need to be undertaken during detailed design stage.

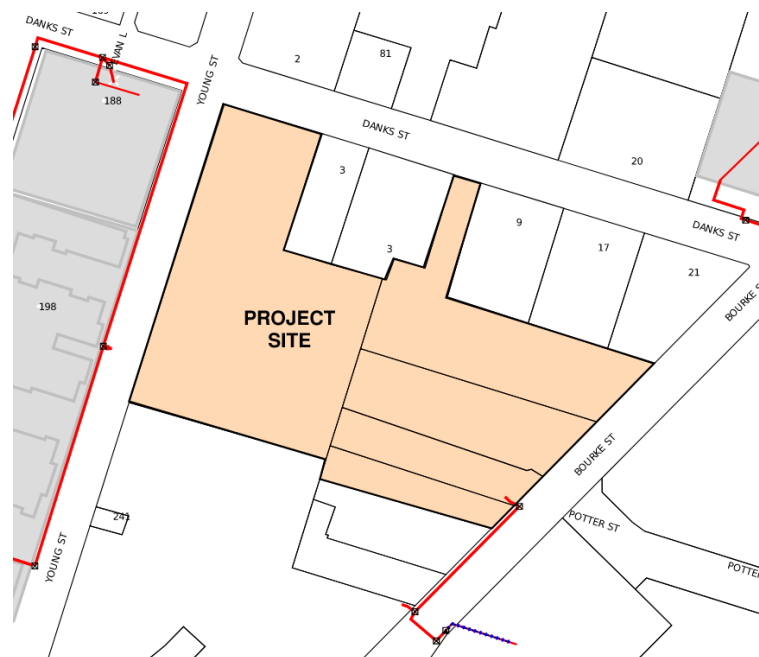


Figure 7- Optus Infrastructure Map

As illustrated in Figure 8, the proposed site is surrounded by the existing Telstra infrastructure. Consultation with Telstra and the client will need to be undertaken during detailed design stage

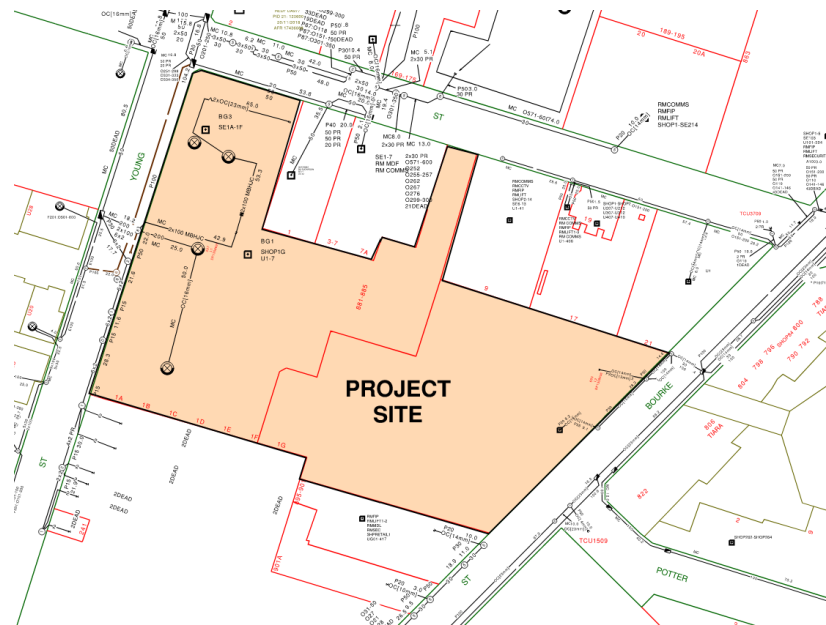


Figure 8- Telstra Infrastructure Map

The current site arrangements NBN, Optus and Telstra is available to the site and it can available to the client at the design stage.

5 Conclusion

This report has provided an analysis with relevant service providers to ensure that the proposed development is supported by the necessary infrastructure. The following key points summarize the conclusions reached:

Notification of Relevant Utility Authorities:

Notification has been undertaken with relevant authorities and service providers, and their guidelines have been incorporated where appropriate. In cases where recommendations are pending, these will be subject to further assessment and confirmation, particularly in the areas of wastewater and power.

Assessment of Development Impacts:

The impact of the development on existing infrastructure has been assessed, with consideration given to both current capacities and the cumulative effects of surrounding existing and future developments. This ensures that the infrastructure supporting the development is robust and future-proof. We have identified that the existing services surrounding the site will be capable of accommodating the development's services needs without disruption to surrounding buildings. This can be achieved with standard upgrades to the Authority infrastructure system.

Infrastructure Requirements (Onsite and Offsite):

The report has identified the necessary onsite and offsite infrastructure to support the development. Where existing infrastructure requires upgrades to meet the demands of this development, those requirements have been defined and are aligned with the recommendations of service authorities and future studies by the WSC and Level 3 ASP designers.

Infrastructure Delivery and Staging Plan:

A concept Infrastructure Delivery and Staging Plan has been provided, outlining how the infrastructure needs will be coordinated and delivered throughout the project build. Where uncertainty exists, contingency options and further assessments are planned to ensure flexibility and compliance with the development's infrastructure requirements.

Where the report has not fully addressed these elements, particularly in terms of detailed assessments or pending recommendations, further consultation and confirmation will be sought in accordance with SEARs 21 requirements.