



# INFRASTRUCTURE, DELIVERY, MANAGEMENT AND STAGING PLAN

47130\_RPT\_01 - 3-5 Help Street, Chatswood

POWERED BY  
neuron

Date 2024-03-10 - Revision 01.

# INTRODUCTION

This report has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a proposed development at 3-5 Help St, Chatswood.

The minister for Planning and Public Spaces, or their delegate, is the consent authority for the SSDA and this application is lodged with the NSW Department of Planning, Housing and Infrastructure (NSW DPHI) for assessment.

This report has been prepared in response to the requirements contained within the Planning Secretary’s Environmental Assessment Requirements (SEARs).

The specific SEARs that this report has been prepared in relation to is listed within Table 1.

**Table 1 - SEARs Requirements**

SEARs Item	Issue and Assessment Requirement	Document	Section of this report which responds to the SEARs requirement
<b>21. Infrastructure Requirements and Utilities</b>	<b>In consultation with relevant service providers:</b> <ul style="list-style-type: none"> <li>● Assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.</li> </ul>	Infrastructure Delivery, Management and Staging Plan	Building Connections - All
	<ul style="list-style-type: none"> <li>● Identify any infrastructure required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained</li> </ul>	Infrastructure Delivery, Management and Staging Plan	Building Connections - All
	<ul style="list-style-type: none"> <li>● Provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be coordinated, funded and delivered to facilitate the development.</li> </ul>	Infrastructure Delivery, Management and Staging Plan	Staging Implications

# SITE OVERVIEW

The existing site is located at 3-5 Help Street, Chatswood, NSW, 2067. The proposed development includes 160 apartments across 36 levels.

Refer to the report inputs section of this report for the specific details of the proposed development used as the basis of this infrastructure assessment.

This report is based on the area schedules and EMBECE reference scheme received on 2024-02-18. These drawings and area schedules were used as the basis of this preliminary analysis.



## AUTHORITY INTERFACE

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## SITE OVERVIEW

## STAGING IMPLICATIONS

## BUILDING CONNECTIONS

- > POWER
- > COMMS
- > GAS
- > WATER
- > SEWER

# STAGING IMPLICATIONS

The site will be built in a single stage. From a utilities connection perspective, the building power, water, communications, sewer & gas connections will be constructed as part of this. This will include all relevant infrastructure, such as substation, meters, fire pumps and the like.

The proposed development has three stages to consider for the infrastructure utility works and the programme for applications, design and construction need to be carefully developed in order to meet the overall development programme.

## Decommissioning Utilities

Decommission of existing services to buildings and then buildings demolished. Clean site for excavation.

- Power: Application to Ausgrid as part of the overall substation application process in conjunction with a Level 3 ASP.
- Communications: Existing connections to be decommissioned.
- Gas: Existing medium pressure gas mains connections to be decommissioned.
- Water: Sydney Water Tapin application to disconnect water (or modify for construction purposes)
- Sewer: Sydney Water Tapin application to disconnect sewer (or modify for construction purposes)

## Early Works Utility Modifications

To allow the early works of shoring and excavation the following scope is to be considered;

- Power: HV Feeder extended to the site in consultation with Ausgrid and a Level 2 ASP. Substation to be designed by an Level 3 ASP
- Communications : Chosen fibre to be extended to the site.
- Gas: No work required.
- Water: Supply - no works required.
- Sewer: Review detailed sewer analysis with Sydney Water to confirm final connection location/s.

## Utility works for the Proposed development

Refer to the subsequent sections of this report for details.

- Power: Builders supply to be further coordinated with Ausgrid. Potential for a temporary power source from a nearby substation, or a temporary substation to be provided during the development phase. New substation arrangement to be built once the site has been developed to the ground floor.
- Communications: NBN, Optus or TPG adjacent to the site.
- Gas: New gas connection to adjacent gas main.
- Water supply: Finalised Section 73 application with proposed connection to the adjacent water main.
- Sewer: Finalised Section 73 Application with confirmation of sewer connection as per early works statement.

# ELECTRICAL INFRASTRUCTURE

## AUTHORITY INTERFACE

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## SITE OVERVIEW

## STAGING IMPLICATIONS

## BUILDING CONNECTIONS

- > POWER
- > COMMS
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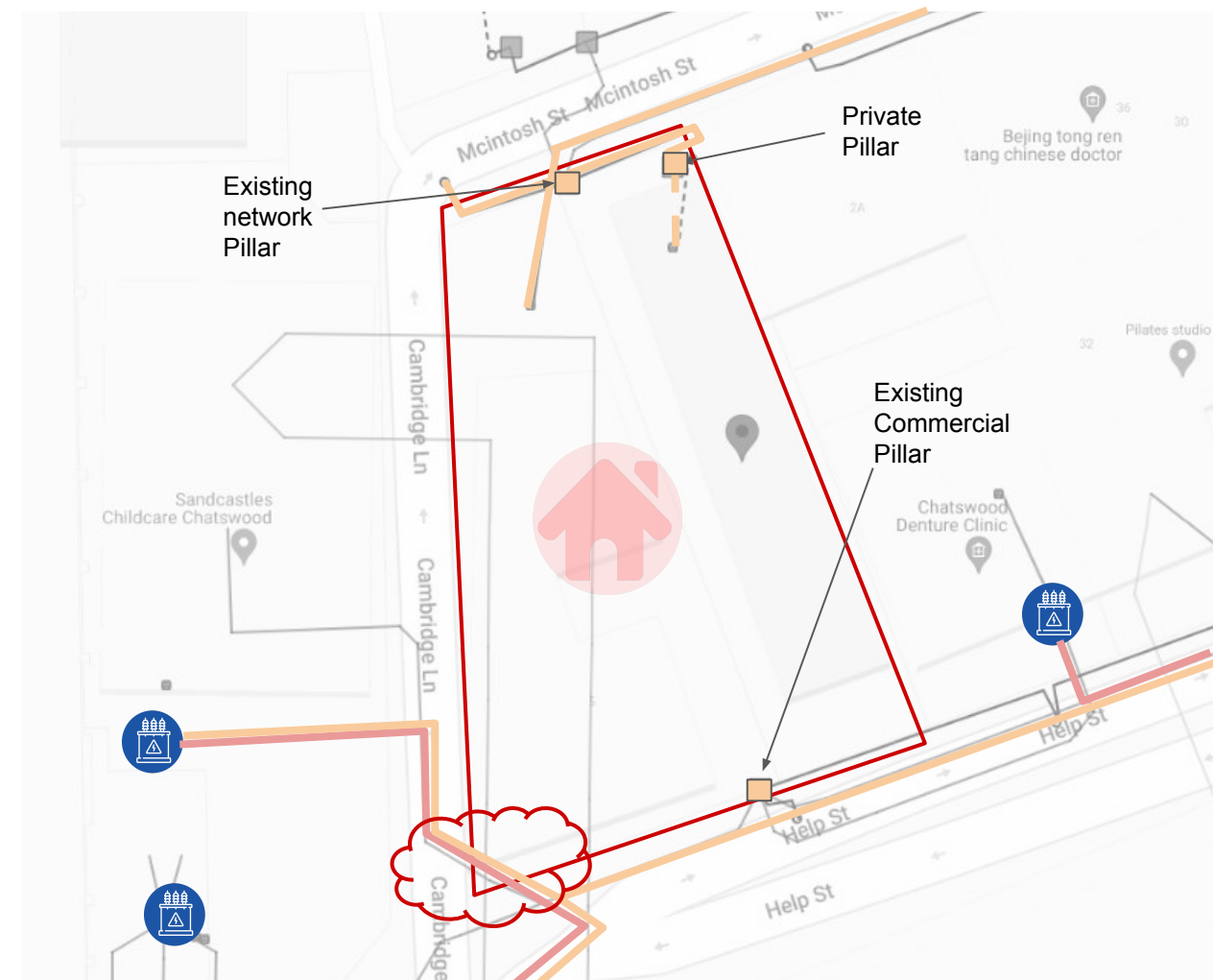
### EXISTING POWER INFRASTRUCTURE

The existing site is supplied by a substation located at 33 Anderson Street and does not have capacity for the supply of the proposed site.

The Ausgrid network maps indicate that the nearest High Voltage available for substation loop-in is adjacent to the site with connection opportunities along Cambridge Lane and Help Street.

There are existing underground LV and HV cables that pass through the South West corner of the site. The basement layouts look to be coordinated with the location of these services. The existing infrastructure will be surveyed to confirm coordination of the basement and relocated if required.

There are no existing substations on the site though there are some existing private, network and commercial pillars that may need to be removed/relocated prior to excavation.



### Power Infrastructure Map

- Overhead High Voltage Power
- Below Ground Low Voltage Power
- Overhead Low Voltage Power
- Substation
- Development Location
- Proposed Power Connection Strategy

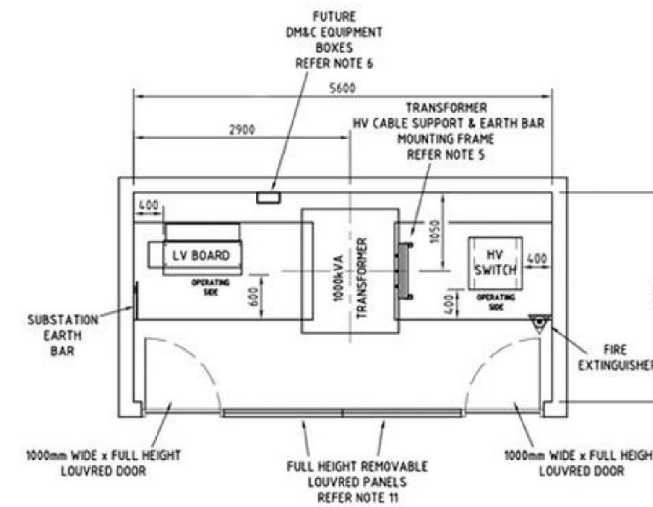
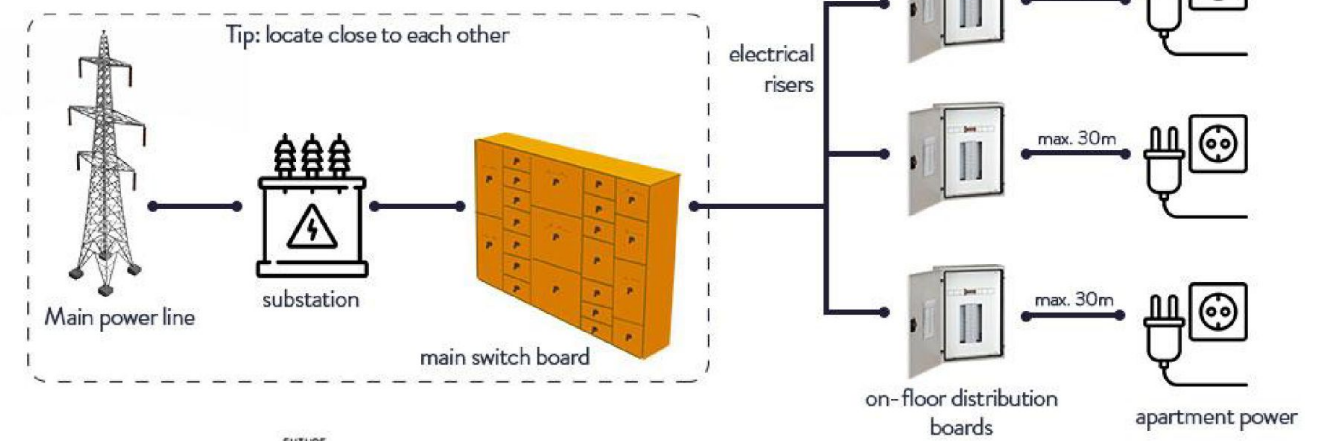
# ELECTRICAL INFRASTRUCTURE

## PROPOSED ELECTRICAL SERVICES

The preliminary maximum demand based on the AS/NZS 3000 calculation method is 1,613 amps (1,117 kVA). In some instances this calculation can be conservative. Based on a calculation using actual site measured loads, the maximum demand could potentially be diversified to 1,170 amps (811 kVA). The site will require a new 1,000 kVA chamber substations. A formal application to Ausgrid will be required to confirm.

As part of the next phase of works, an ASP Level 03 will be engaged to begin the detailed design of this substation including consultation with Ausgrid.

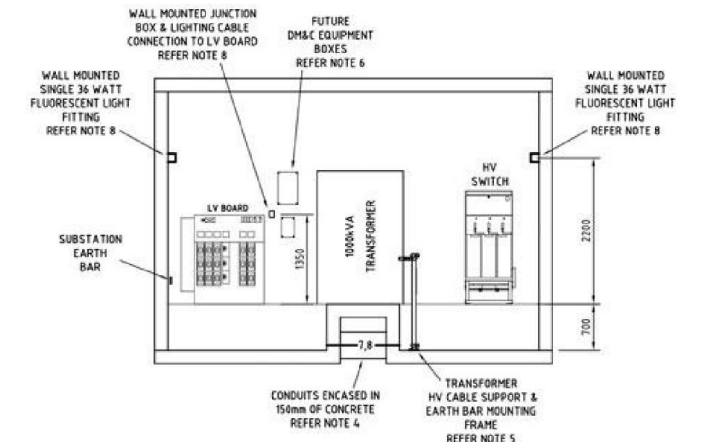
Electrical infrastructure overview



Chamber substation plan



Ventilation louvres on the front of a chamber substation



Chamber substation section



Inside a chamber substation

# COMMUNICATIONS INFRASTRUCTURE

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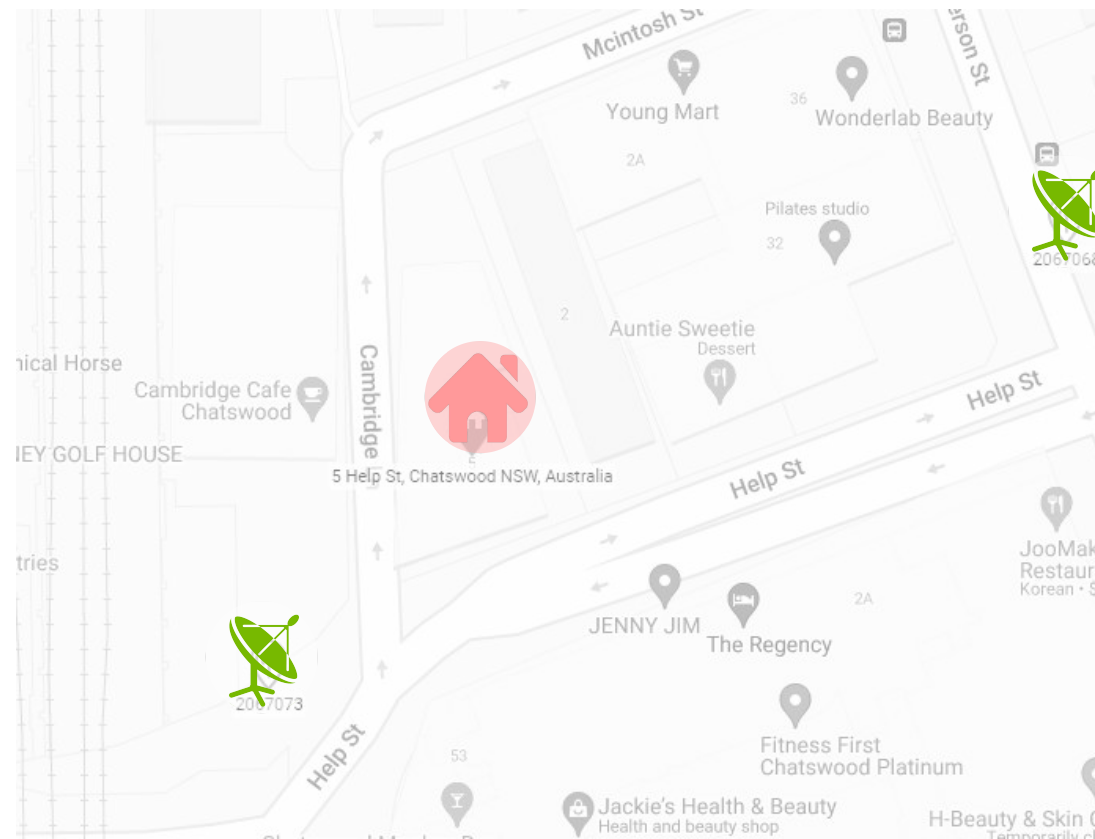
STAGING  
IMPLICATIONS

**BUILDING  
CONNECTIONS**

- > POWER
- > **COMMS**
- > GAS
- > WATER
- > SEWER

## Mobile base stations

There are no carrier mobile base stations located on this site.



## Mobile Base Station Map



Existing Mobile Base Station



Development Location

# COMMUNICATIONS INFRASTRUCTURE

## AUTHORITY INTERFACE

### INTRODUCTION

### SITE OVERVIEW

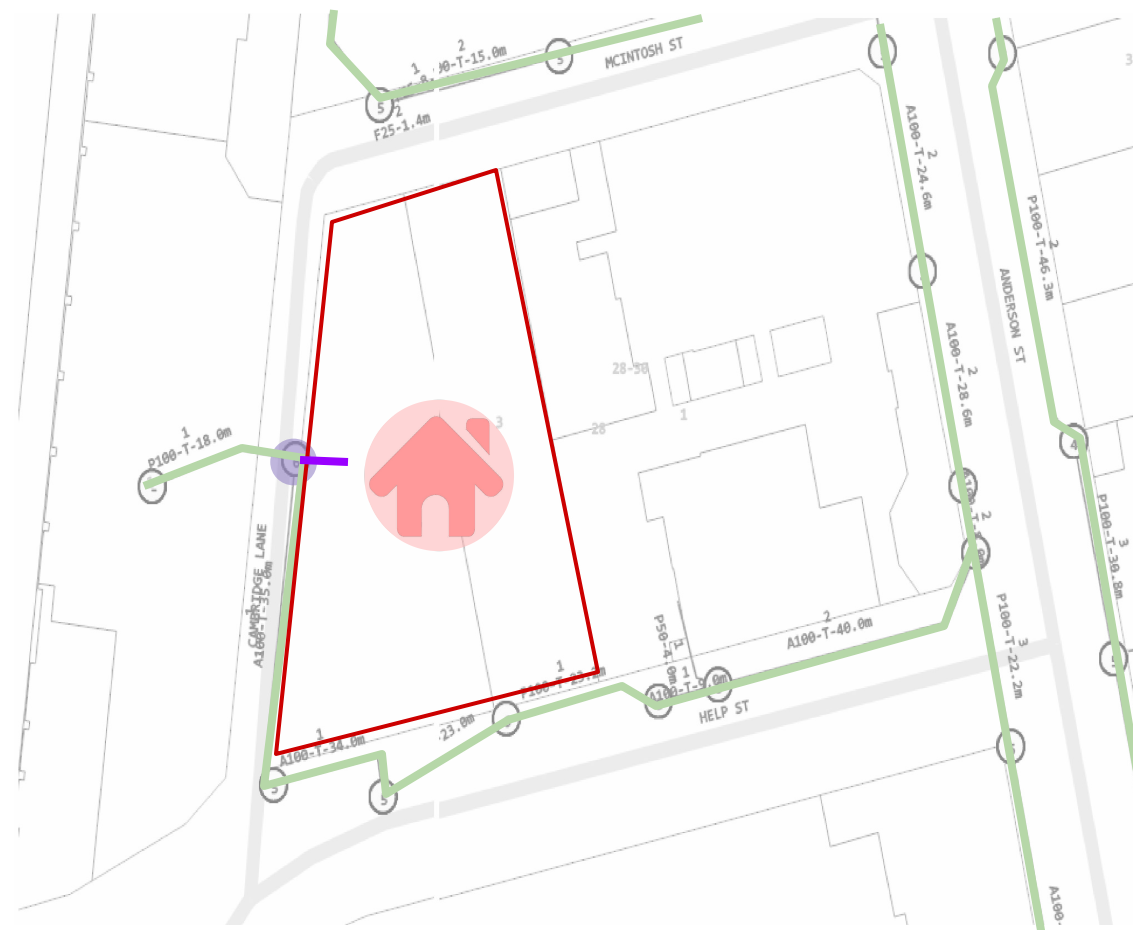
### STAGING IMPLICATIONS

### BUILDING CONNECTIONS

- > POWER
- > **COMMS**
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#### NBN

The existing NBN carrier service infrastructure is illustrated below. As shown, there is a connection opportunity available for this site. Consultation with NBN will be undertaken during the next stage of the project to coordinate the required works.

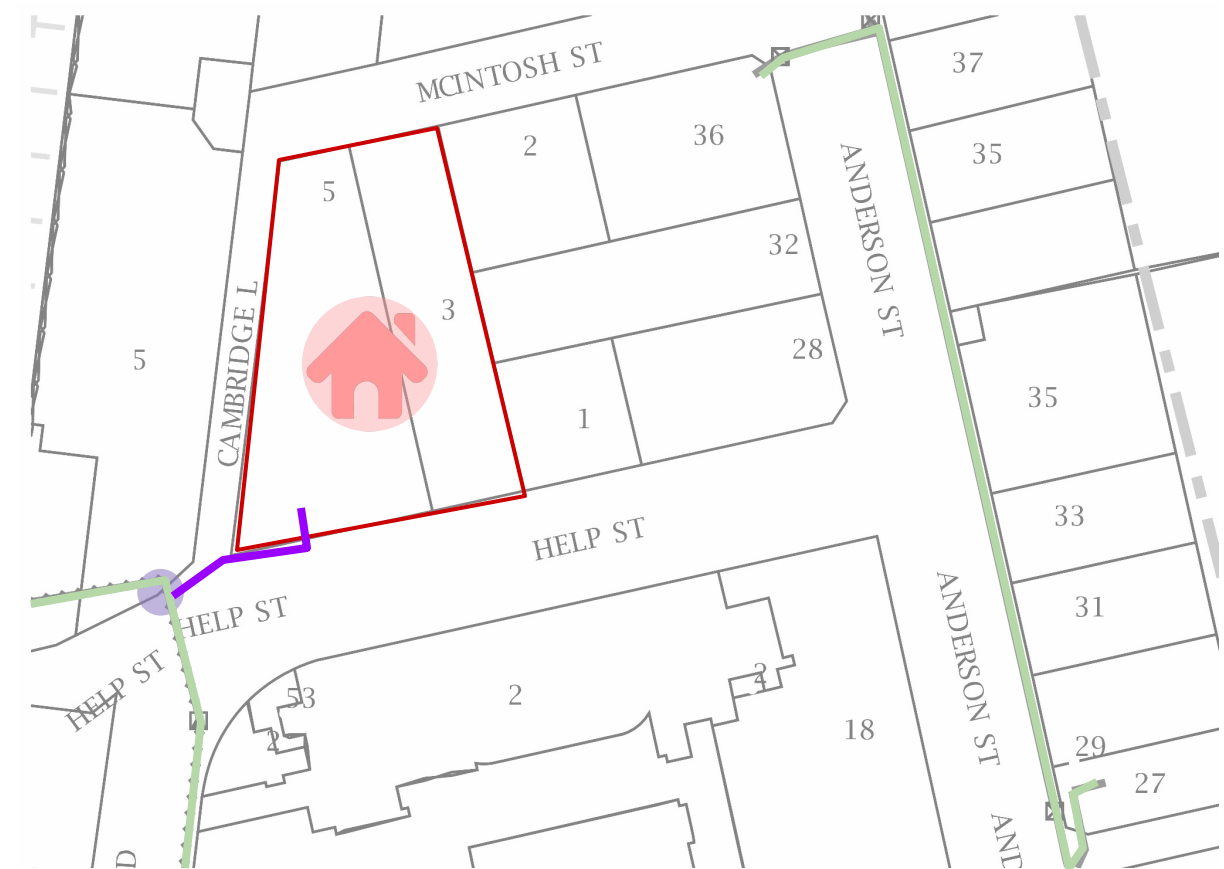


**Fibre Infrastructure Map**



#### Optus

The existing Optus carrier service infrastructure is illustrated below. As shown, there are connection opportunities available for this site, but requires extending the Optus Fibre Network as shown. Consultation with NBN will be undertaken during the next stage of the project to coordinate the required works.



**Fibre Infrastructure Map**



# COMMUNICATIONS INFRASTRUCTURE

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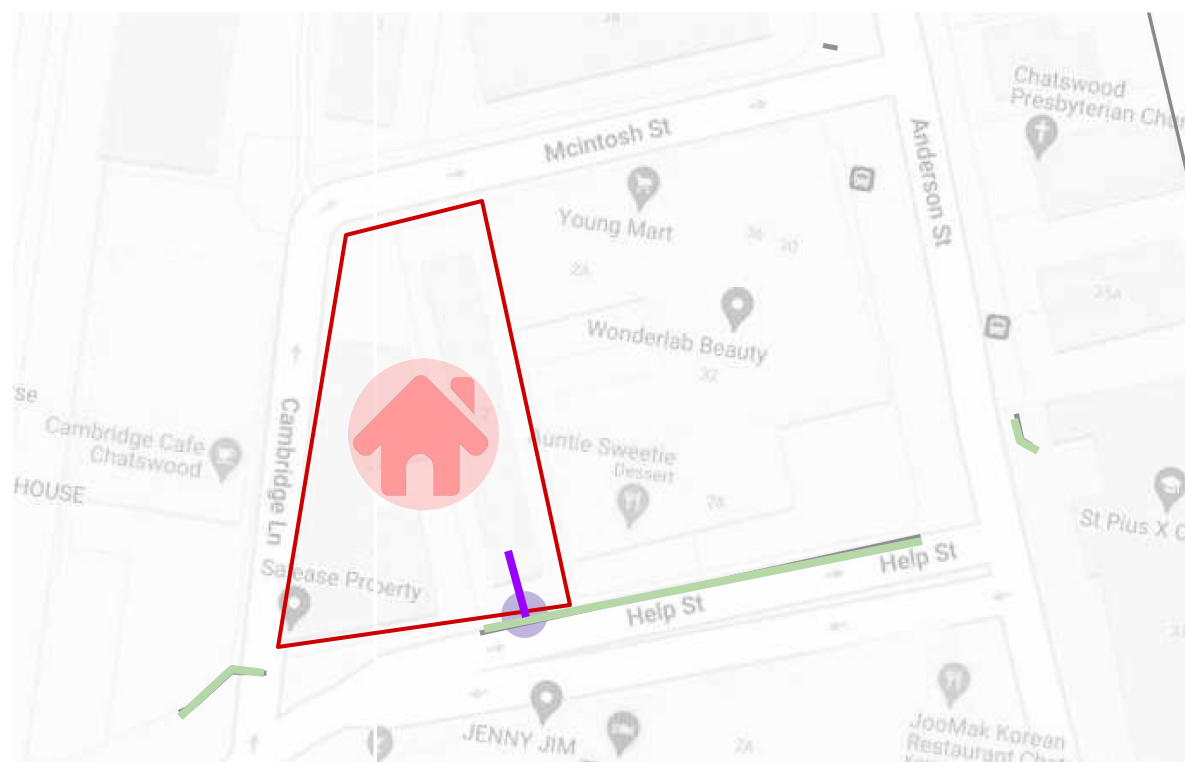
STAGING  
IMPLICATIONS

**BUILDING  
CONNECTIONS**

- > POWER
- > **COMMS**
- > GAS
- > WATER
- > SEWER

## TPG

The existing TPG carrier service infrastructure is illustrated below. As shown, there are connection opportunities available for this site. Consultation with NBN will be undertaken during the next stage of the project to coordinate the required works.



### Fibre Infrastructure Map



# GAS INFRASTRUCTURE

## AUTHORITY INTERFACE

There is a medium pressure 210 kPa gas main and a high pressure 1,050 kPa gas main running adjacent to the proposed site.

The existing gas mains along Help Street may be sufficient to support this development. We recommend a new gas connection, including a gas meter and regulator.

The site currently has multiple existing connection points to the gas main that will be removed. There is also a high pressure gas main and “shallow” gas main running along Cambridge Lane which will be surveyed and coordinated with.

Consultation with Jemena will be undertaken during the next stage of the project to coordinate the required connection works.

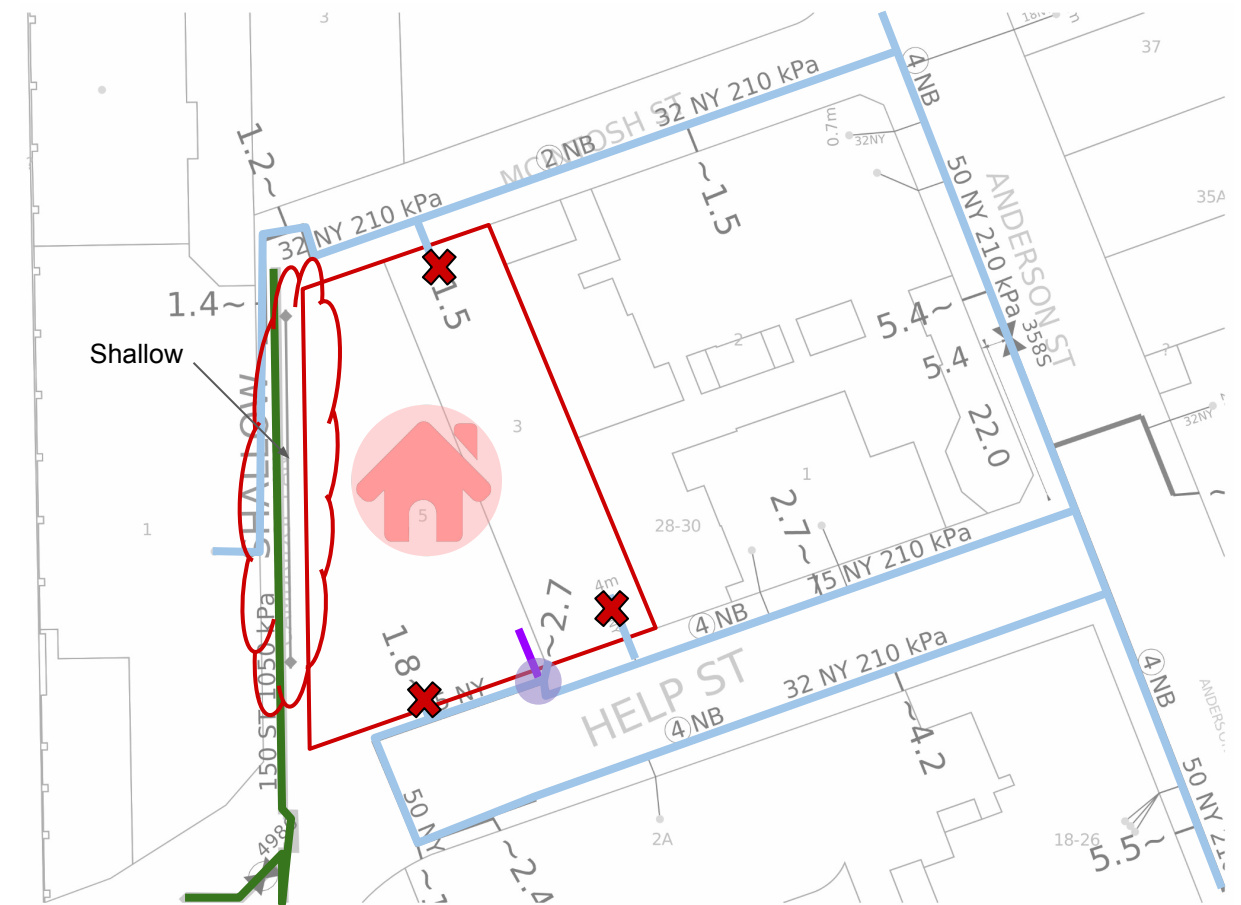
## INTRODUCTION

## SITE OVERVIEW

## STAGING IMPLICATIONS

## BUILDING CONNECTIONS

- > POWER
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- > WATER
- > SEWER



**Gas Infrastructure Map**

- Low/Medium Pressure Gas Main
- High Pressure Gas Main
- Development Location
- Proposed Gas Connection Strategy

# WATER INFRASTRUCTURE

## AUTHORITY INTERFACE

The proposed connection point and existing water mains are illustrated in the adjacent image. The site has an existing 150mm water mains running along Help Street and a 200mm water main running along Cambridge Lane.

## INTRODUCTION

Based on the preliminary calculations, this site is likely to require a new 200mm mains water connection. The existing water supply on Cambridge Lane should be sufficient to support this development.

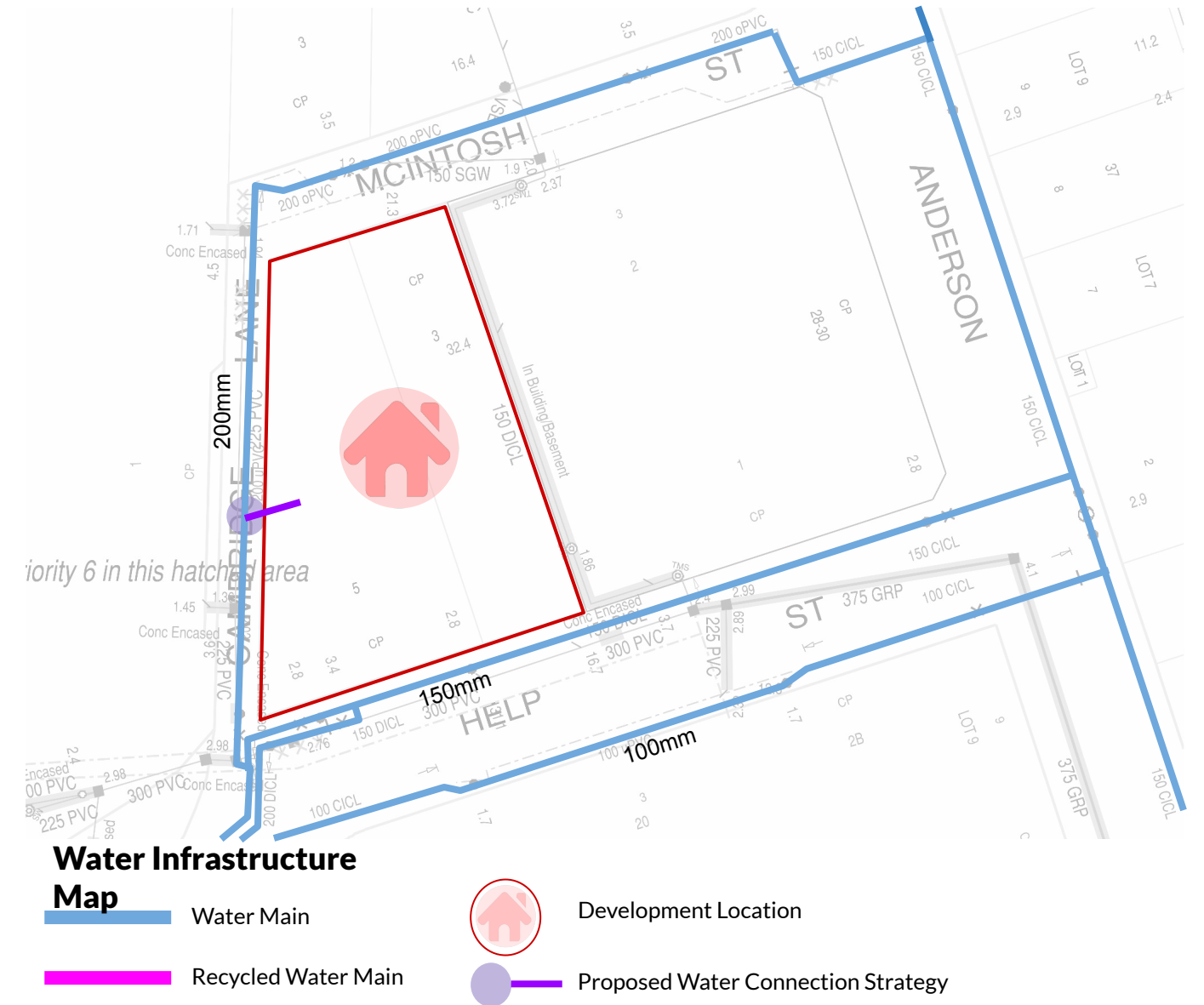
## SITE OVERVIEW

A Sydney Water Coordinator will be engaged during the next stage of the project to begin consultation with Sydney Water and ascertain their preferred connection strategy.

## STAGING IMPLICATIONS

## BUILDING CONNECTIONS

- > POWER
- > COMMS
- > GAS
- > **WATER**
- > SEWER



# SEWER INFRASTRUCTURE

## AUTHORITY INTERFACE

## INTRODUCTION

## SITE OVERVIEW

## STAGING IMPLICATIONS

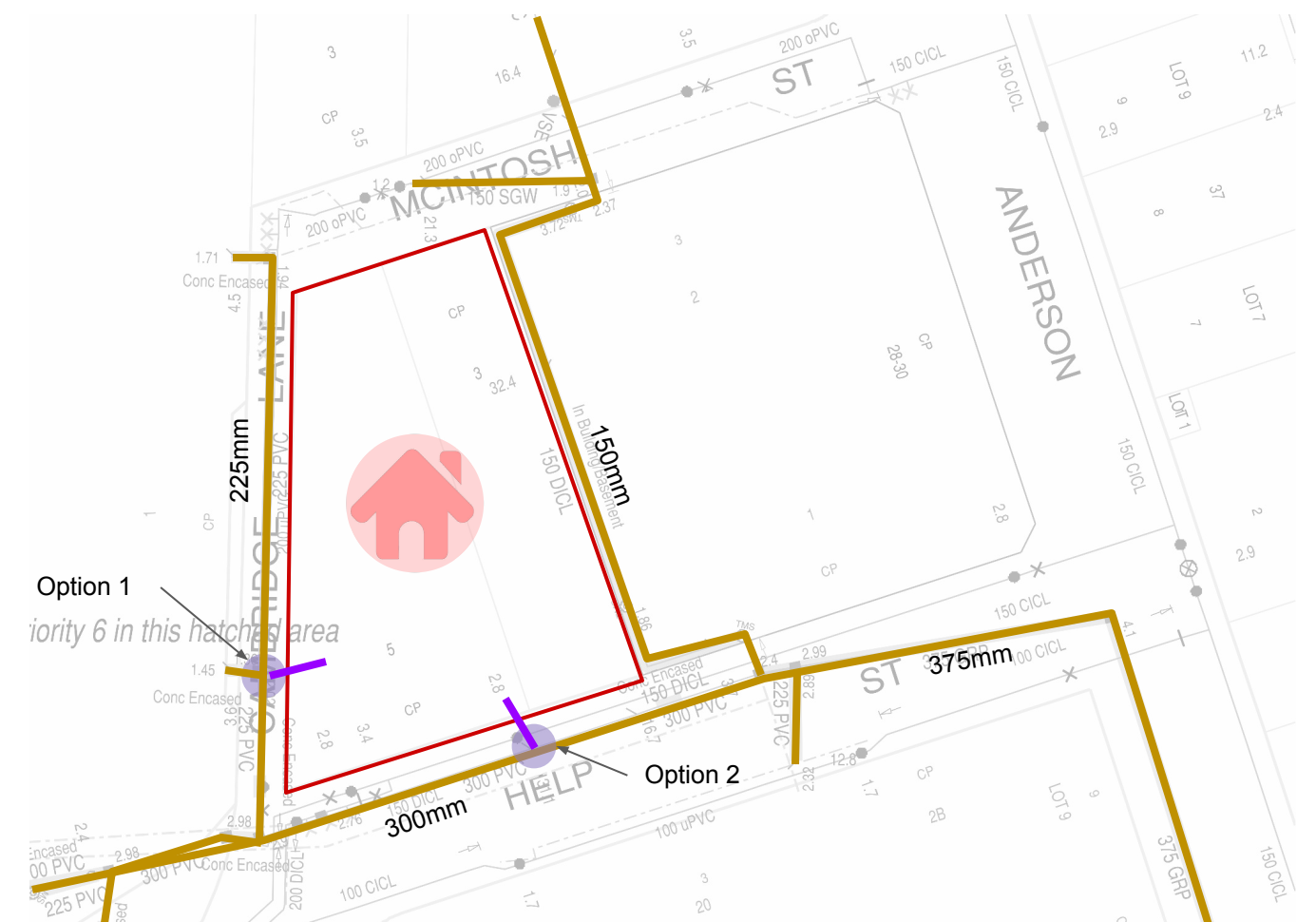
## BUILDING CONNECTIONS

- > POWER
- > COMMS
- > GAS
- > WATER
- > SEWER

There is a 300mm sewer main on Help Street, a 225mm sewer main on Cambridge Lane and a 150mm sewer main running between the site and the adjacent lot.

Based on the preliminary calculations, this site is likely to require a new 225mm mains sewer connection. The existing sewer main on Help Street or Cambridge Lane may be sufficient to support this development. We recommend a new sewer main connection to either of these mains, as illustrated in the adjacent image.

A Sydney Water Coordinator will be engaged during the next stage of the project to begin consultation with Sydney Water to agree on the preferred connection strategy.



### Sewer Infrastructure Map

- Sewer Main
- Development Location
- Proposed Sewer Connection Strategy