



INFRASTRUCTURE DELIVERY AND MANAGEMENT

SSD-86462209 - 8-24 Nicholson Street, Wollstonecraft

POWERED BY
neuron

Date 2025.10.20- Revision 01.



AUTHORITY
INTERFACE

PROJECT
DESCRIPTION

MITIGATIONS
MEASURES

BUILDING
CONNECTIONS

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

PROJECT DESCRIPTION

This application seeks approval for a residential flat building at 8-24 Nicholson Street, Wollstonecraft for:

- Site amalgamation,
- Demolition of existing structures on the land and excavation of basement levels,
- The construction of an 12-storey residential flat building, comprising:
 - 3-levels of basement car parking,
 - Car parking, waste storage, loading and building services located to the lower ground level,
 - 12-levels of residential dwellings, comprising 1, 2 and 3-bedroom apartments,
 - Rooftop communal open space,
- Rooftop servicing and plant,
- Vehicle access and egress from Oxley Street,
- Landscaping on the ground floor, lower ground floor and on structure to the rooftop communal open space.

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SITE OVERVIEW

The existing site is 8-24 Nicholson St, Wollstonecraft NSW 2065, Australia.





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MITIGATION MEASURES

This Infrastructure Delivery and Management report will identify existing power, communications, gas, water and sewer infrastructure within the area of the site and determine the developments impact on this existing infrastructure.

The following outlines the connection requirements and identifies any mitigation measures needed to facilitate the connection of the development in the future

Power Supply

- The Accredited Service Provider for Ausgrid has undertaken a desktop analysis of Ausgrid available information to determine the proposed connection to the high-voltage feeder main located outside the site on Oxley Street. The next steps to ensure connection and mitigate risk of connection to Ausgrid’s network is to make a formal application for connection. This will occur in the next phase.

Communications

- The project has identified existing and new communication infrastructure across multiple communication providers. The access to pit and pipe infrastructure has been documented in this report and mitigation for connection has been viewed through multiple carrier options. To confirm connection, the developer is to select the preferred communication provider and make a formal application for connection. Removal of existing site connections and connection to cabling on Nicholson Street will be completed.

Gas

- Gas will not be utilised, therefore a new connection will not be required. The design has mitigated the allowance for gas by undertaking electrical demand analysis for a full electric building.

Water

- This report has assessed the availability of water supply for potable water and fire fighting requirements. This assessment has utilised Sydney Water requested pressure and flow requirements to mitigate the need for large onsite storage tanks. There are extension works to be carried out on Oxley Street due to insufficient existing water supply along the site frontages. To further mitigate this solution, a formal Sydney Water Section 73 assessment on DA approval is to be undertaken.

Sewer

- This report identifies an existing Sydney Water sewer main clash with the intended building envelope. This requires a diversion to the sewer. The project team, including a Sydney Water Coordinator has completed a detailed survey of the existing sewer and subsequently integrated a diversion strategy into the design. To confirm this design and allowance for connection, a formal feasibility study is required and building plan approval.

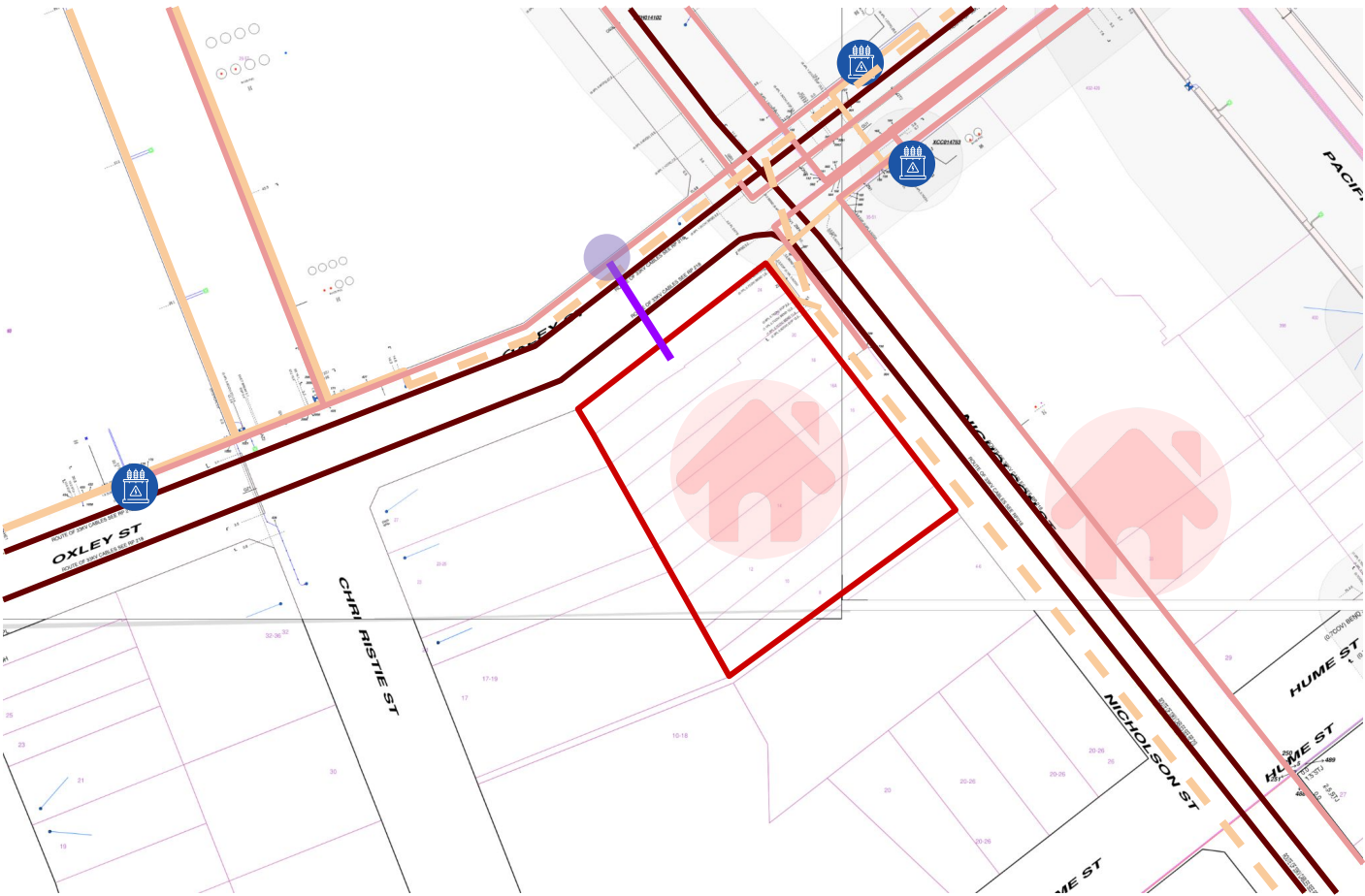
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ELECTRICAL INFRASTRUCTURE

EXISTING POWER INFRASTRUCTURE

The Ausgrid network maps indicate that the nearest High Voltage available for substation connection is adjacent to the site with connection opportunities along Nicholson Street and Oxley Street.

There are overhead power lines running adjacent to the site on Nicholson Street, however these run on the opposite side of the footpath so undergrounding works will likely not be required.



Power Infrastructure Map

- Below Ground High Voltage Power
- Overhead High Voltage Power
- Below Ground Low Voltage Power
- Overhead Low Voltage Power
- Below Ground 33kV Transmission Power Main
- Substation
- Development Location
- Proposed Power Connection Strategy

- > POWER
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ELECTRICAL INFRASTRUCTURE

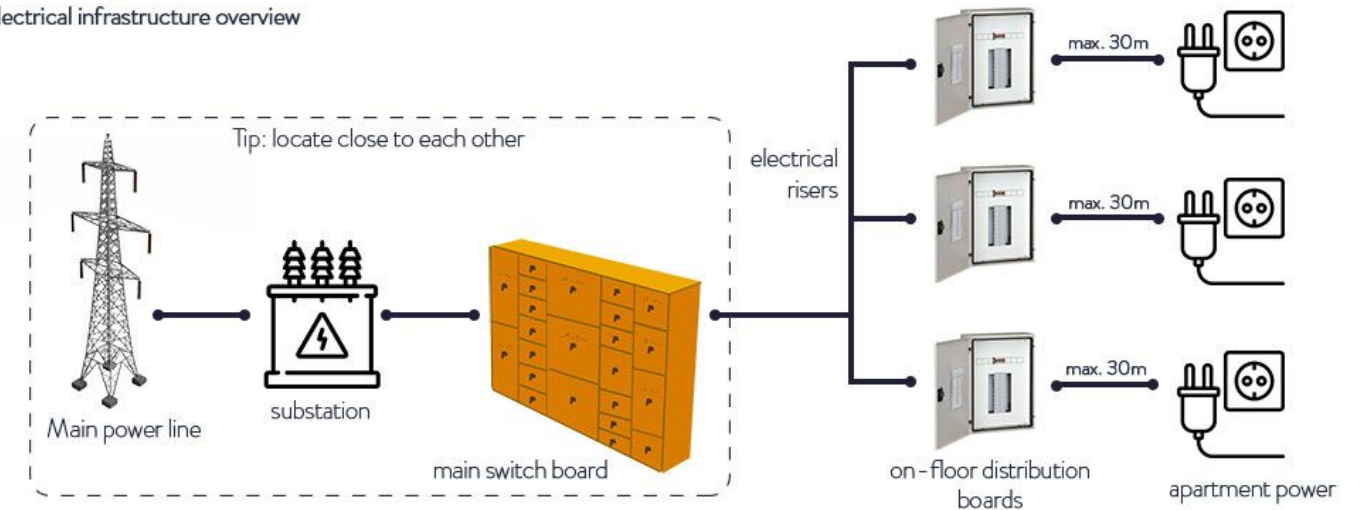
PROPOSED ELECTRICAL SERVICES

The preliminary maximum demand, based on the AS/NZS 3000 calculation method, is 766 amps (531 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 558 amps (387 kVA).

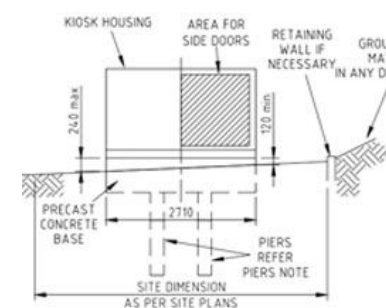
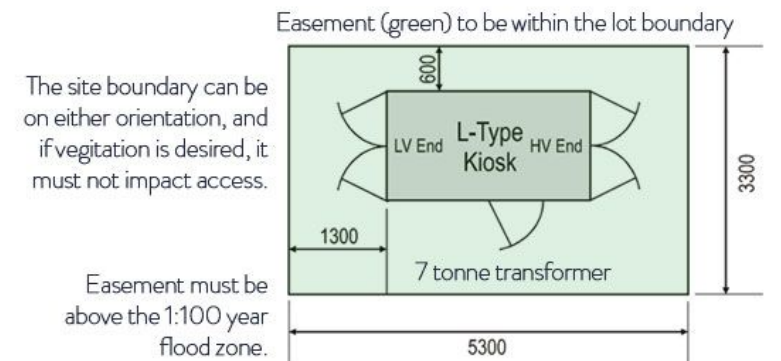
The development will require a new 1,000kVA padmount substation. Allow for 5.3m (l) x 3.3m (w) x 1.7m (h) for this equipment. A formal application to Ausgrid will be required to confirm.

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

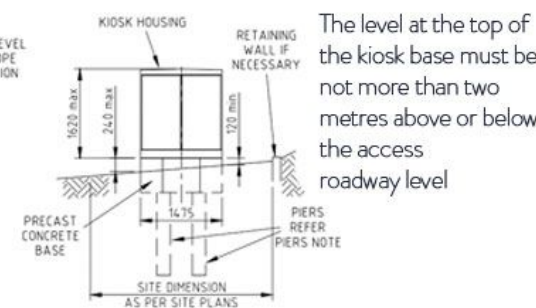


A padmount substation is delivered/replaced via heavy truck with 5m span vehicle mounted crane on all weather surface road.

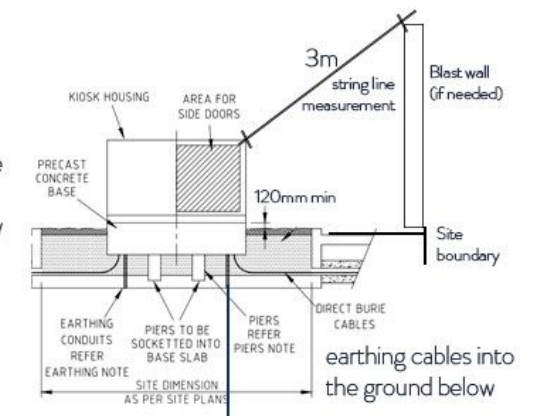


Installing padmount substations on the ground

The level at the top of the kiosk base must be not more than two metres above or below the access roadway level



Installing padmount substations over a supporting structure



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COMMUNICATIONS INFRASTRUCTURE

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

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NBN

The existing NBN carrier service infrastructure is illustrated below. As illustrated, 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.

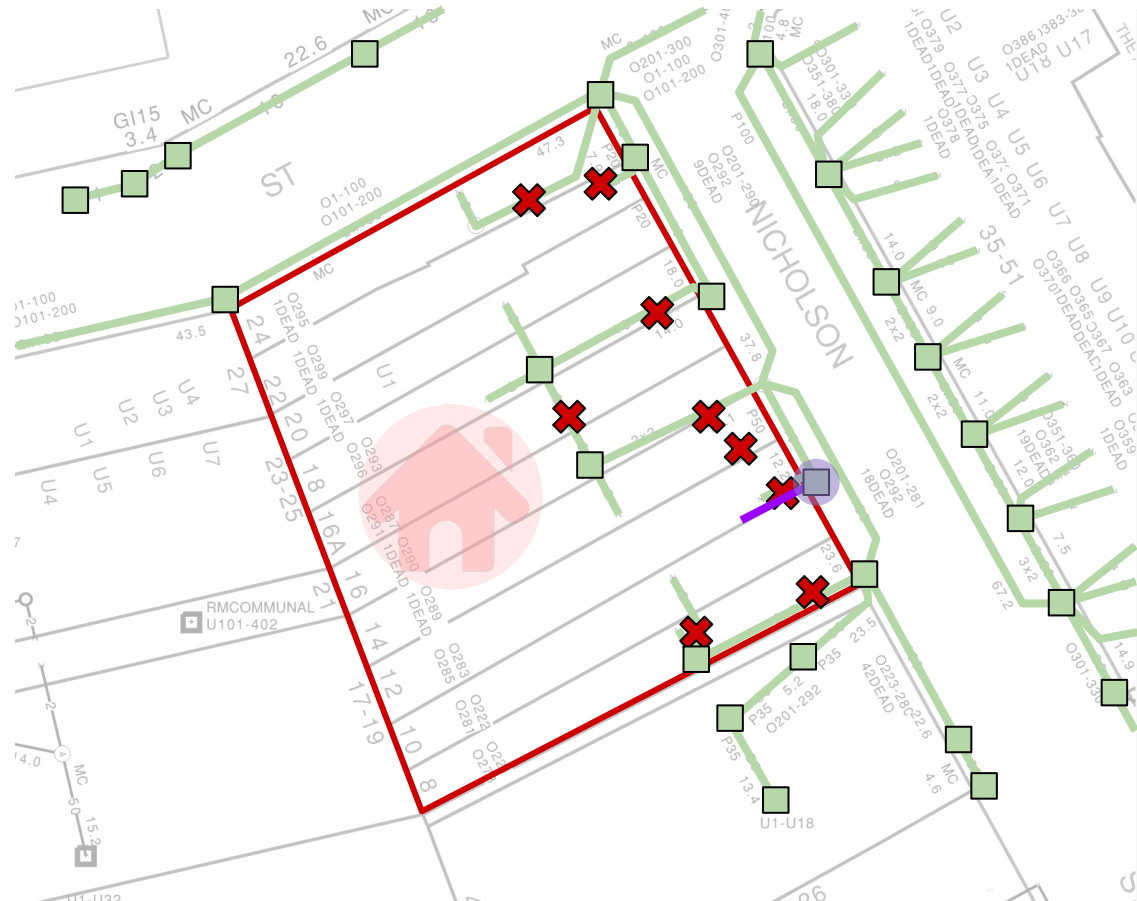


Fibre Infrastructure Map

- Fibre
- Development Location
- Proposed Fibre Connection Strategy
- Existing Pit

Telstra

The existing Telstra carrier service infrastructure is illustrated below. As illustrated, there is a connection opportunity available for this site. There is existing comms infrastructure running within the site that will need to be removed prior to excavation. Consultation with Telstra will be undertaken during the next stage of the project to coordinate the required works.



Fibre Infrastructure Map

- Fibre
- Development Location
- Proposed Fibre Connection Strategy
- Existing Pit

COMMUNICATIONS INFRASTRUCTURE

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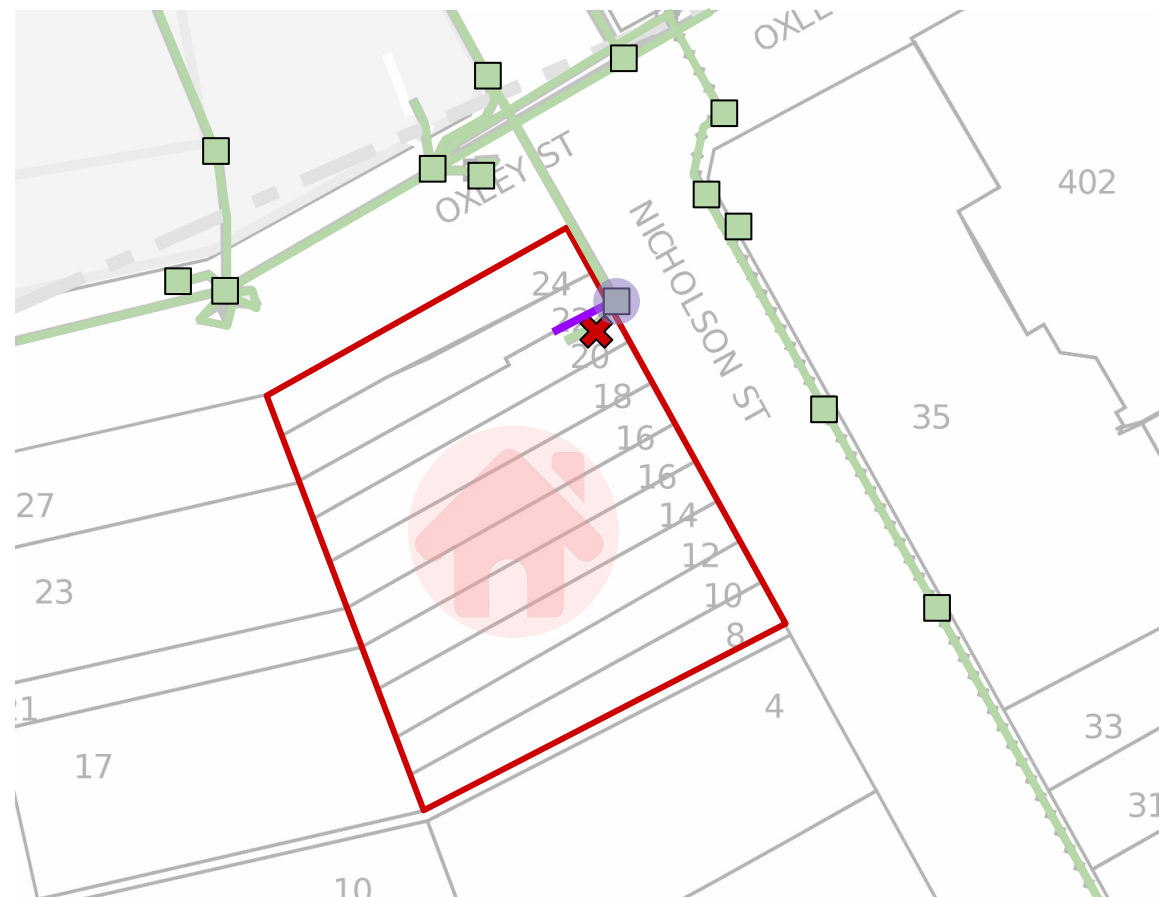
MITIGATIONS MEASURES

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Optus

The existing Optus carrier service infrastructure is illustrated below. As illustrated, there is a connection opportunity available for this site. There is existing comms infrastructure running within the site that will need to be removed prior to excavation. Consultation with Optus will be undertaken during the next stage of the project to coordinate the required works.



Fibre Infrastructure Map



AARNet

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



Fibre Infrastructure Map



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

GAS INFRASTRUCTURE

There is an existing medium pressure 210kPa gas mains running adjacent to the site on Nicholson Street and Oxley Street.

There is existing infrastructure running within the site that will need to be removed.

It is understood that gas will not be utilised as part of this development, meaning a new gas connection including associated gas metering and regulator sets will not be required.



Gas Infrastructure Map

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

WATER INFRASTRUCTURE

There are multiple existing water mains running close to the proposed development. There are 100mm water mains running along Nicholson Street and Oxley Street, as well as a 500mm mains along Nicholson Street.

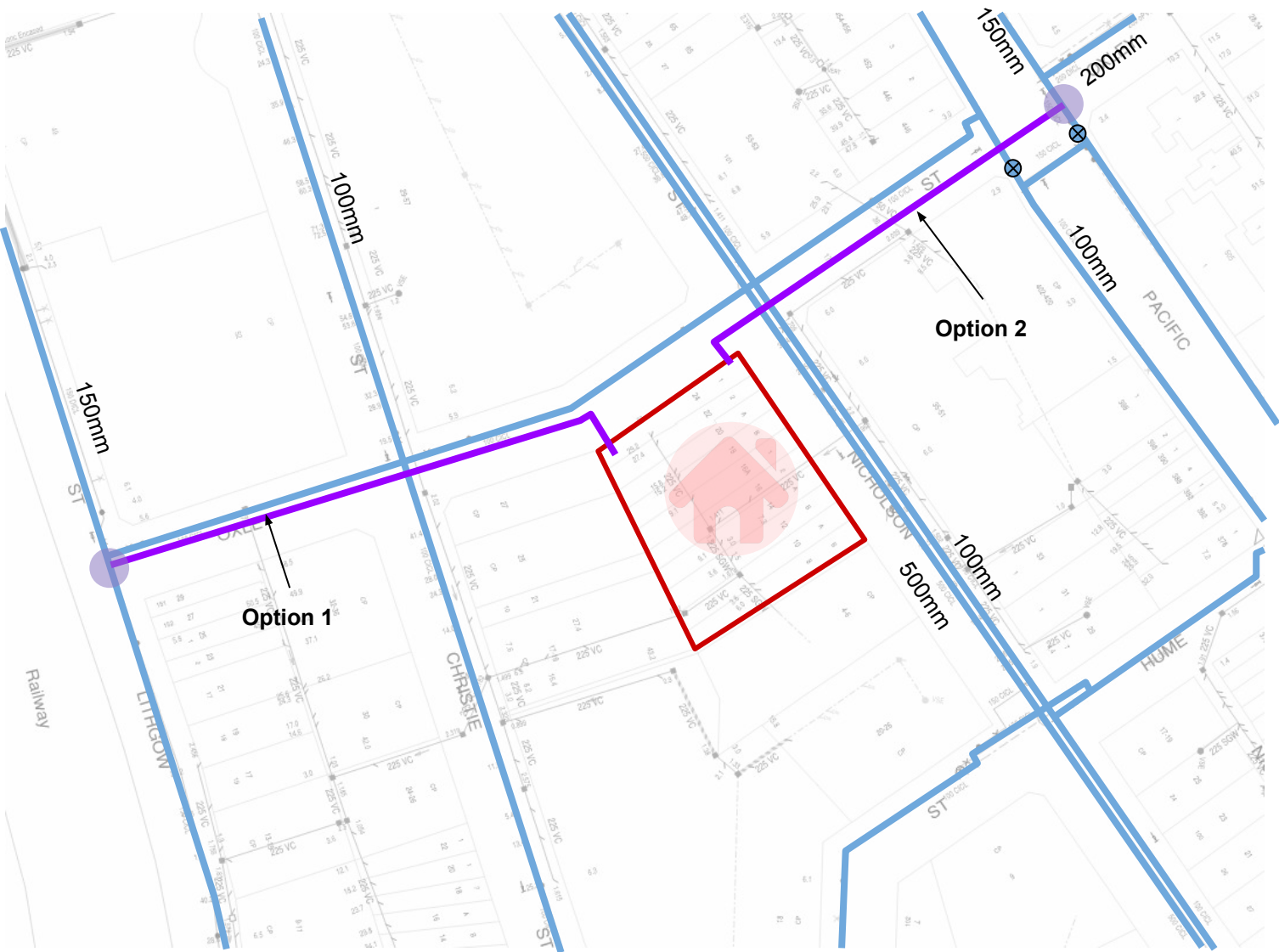
Based on the preliminary calculations, the proposed development is likely to require one new 200mm mains water connection. The existing 100mm water supply on Nicholson Street may not be sufficient to support this development. Two connection options have been detailed below and illustrated in the adjacent image:

- **Option 1:** A connection to the 150mm water mains on Lithgow Street, with an extension down Oxley Street to supply the site. This connection option is dependant on the results of the pressure and flow for the existing main.
- **Option 2:** A connection to the 200mm main on the opposite side of Pacific Highway, with an extension down Oxley Street to supply the site.

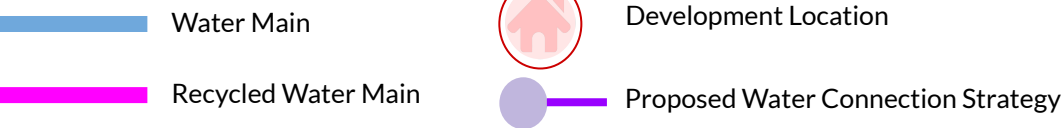
No water-related infrastructure appears to run through this site.

There does not appear to be any existing recycled water mains running close to the proposed development that is appropriate for connecting to.

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.



Water Infrastructure Map



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

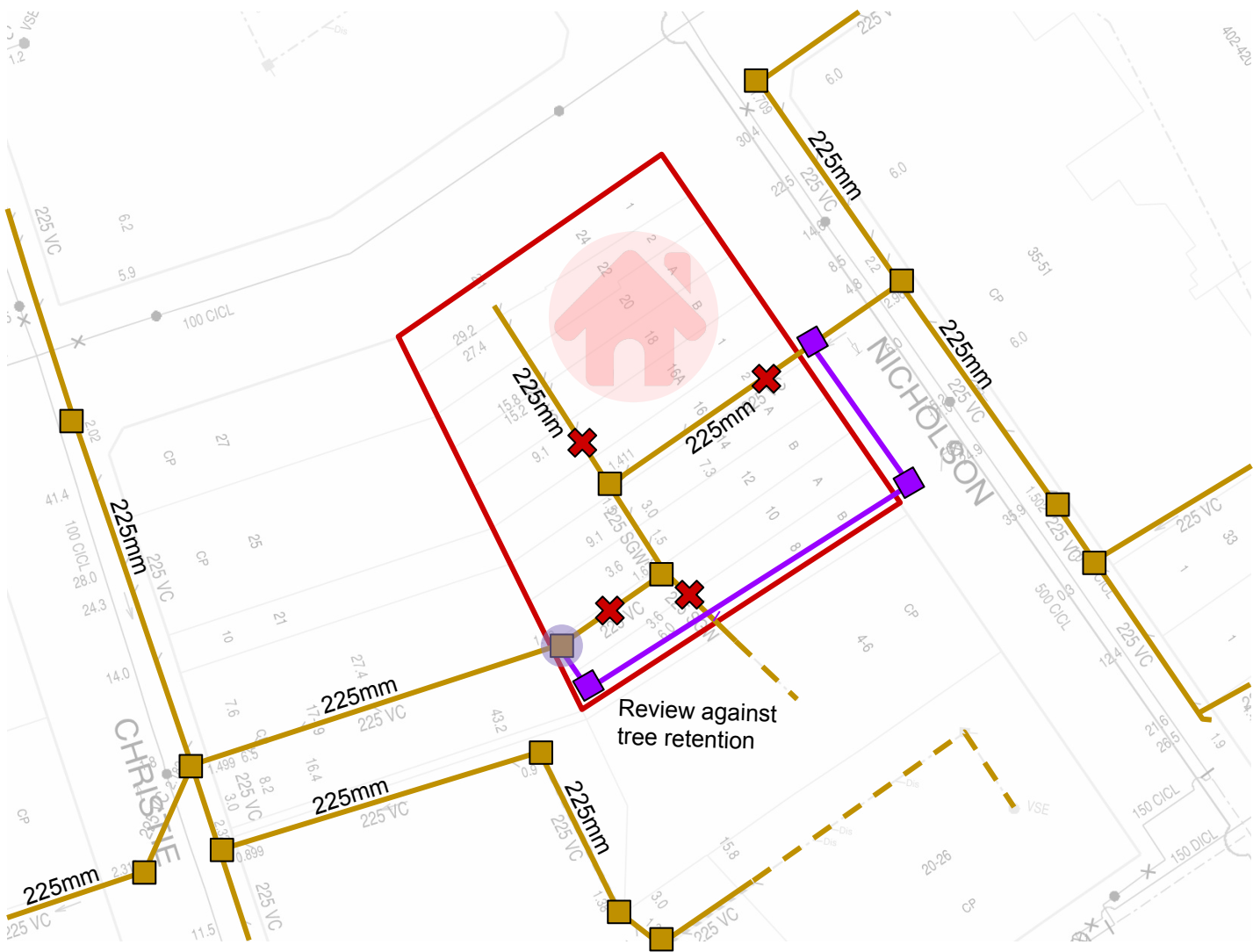
SEWER INFRASTRUCTURE

There is an existing 225mm sewer main running close to the proposed development along Nicholson Street. There is also extensive existing sewer mains running through the site.

Based on the preliminary calculations, the proposed development is likely to require one new 225mm mains sewer connection. The existing 225mm sewer supply may be sufficient to support this development. We recommend a new 225mm sewer main connection, as illustrated in the adjacent image. Careful coordination with Sydney Water will be required.

There is existing sewer infrastructure that appears to run through the proposed development site. It is likely the sewer mains will need to be relocated, we have proposed a relocation strategy 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 and diversion strategy.



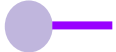
Sewer Infrastructure Map

— Sewer Main

■ Sewer Manhole



Development Location



Proposed Sewer Connection Strategy

