



HYDRAULIC SERVICES INFRASTRUCTURE REPORT

Hammond Care, Wahroonga – Stage 2

PREPARED FOR
Hammond Care

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Hydraulic Services Report

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1. Introduction

1.1 General

This Hydraulic Services report has been prepared by Northrop Consulting Engineers Pty Ltd (Northrop), the hydraulic engineering consultants for the design and documentation of the works to be completed for the Wahroonga Stage 2 development, located at 4-12 Neringah Ave South, Wahroonga.

This report is intended to clarify the project's site infrastructure services and to provide a clear baseline for the engineering designs to be delivered by Northrop during the detailed design phase.

1.2 Project Description

This hydraulic Report is submitted to the Department of Planning and Environment (DPE) in support of a State Significant Development Application (SSD-45121248) for the redevelopment of part of the site at 4-12 Neringah Avenue South, Wahroonga for the purposes of delivering additional health services, aged care and seniors housing, that will contribute to the broader operation of 'Neringah Hospital.' The extent of the site is shown below.



 The Site  Proposed Development

 NOT TO SCALE

Specifically, this SSDA seeks approval for the following:

- Site preparation works comprising:
 - Demolition of the Neringah Hospital building, kiosk, and existing at-grade carparks;
 - Clearing of existing vegetation on the proposed development areas;
 - Bulk earthworks including basement excavation; and
 - Remediation works where necessary across the site.
- Construction and use of an integrated seniors housing and health services facility across two buildings ranging from 4-5 storeys above ground, comprising:
 - basement level containing >90 car parking spaces and service dock;
 - 13 residential aged care facility beds extension to existing Stage 1;

- 18 palliative care hospice beds (Schedule 3 health services facility);
- Community healthcare services, including outpatient palliative care, centre for positive aging and Hammond at Home;
- 57 seniors housing dwellings;
- On-site administration, amenities, and ancillary operations spaces.
- Ground level and on-building landscaping works, including the provision of a through site pedestrian link connecting Archdale Park and Balcombe Park;
- Public domain works, specifically, regrading of part of the pedestrian walkway known as 'Archdale Walk' to provide accessible connection; and
- Extension and augmentation of infrastructure and services as required.

2. Existing Authorities Infrastructure

Northrop has performed non-invasive investigations in regard to the existing site on top of the drawings provided.

Our assessment has been based on the site inspection conducted and information provided by the relevant water and sewer utility authorities, and information provided by the project representatives including but not limited to:

- Sydney Water Sewer and Water Diagram;
- Jemena Infrastructure Diagram;
- Surveyors' Drawings;

2.1 Sydney Water Sewer & Water Infrastructure

The development has access to the following Sydney Water sewer mains:

- DN 225mm vitrified clay sewer main traversing through the middle of the site in a south-north direction. The main is located between the existing Wahroonga Residential Aged Care and proposed aged care seniors housing;
- DN 150mm DICL water main in Woonona Ave (currently serving existing Residential aged care);
- DN 900mm SCL Trunk main in Woonona Ave, main supply Sydney Water reservoir;
- DN 300mm CICL Trunk main in Woonona Ave, main supply Sydney Water reservoir;
- DN 375mm CICL Trunk main in Neringah Ave South, main supply Sydney Water reservoir;
- DN 100mm CICL water main in Neringah Ave South, supplying the existing hospital on site (to be demolished).

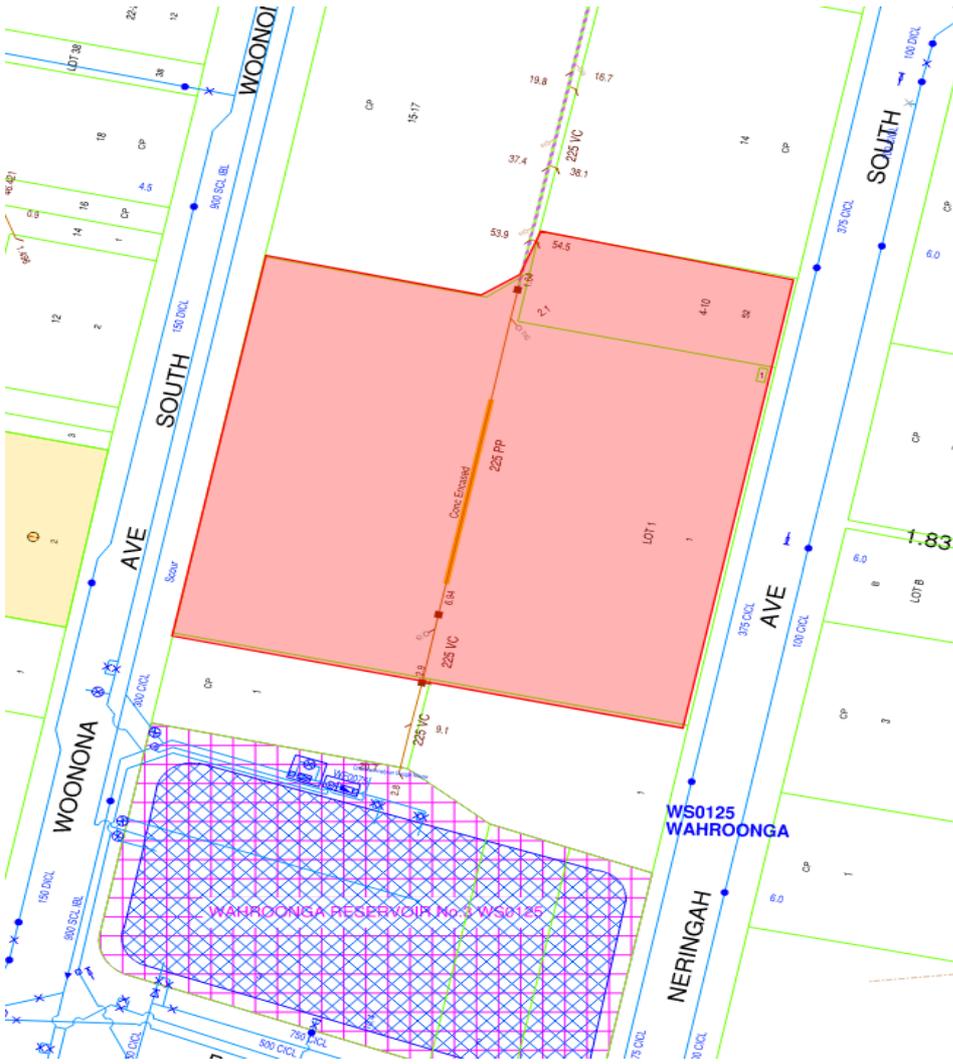
As mentioned above, the existing site has a 225mm sewer main traversing through the middle of the site. Currently the sewer main serves the existing Residential aged care and existing hospital. The existing 225mm sewer main shall be adequate to service the proposed new five storey buildings. Final assessment for the sewer main will be assessed by Sydney Water as part of the section 73 application submission, once DA number has been provided.

The existing sewer main (according to Dial Before You Dig diagrams) will be located between the existing residential aged care and proposed new aged care and seniors buildings. The existing sewer main will need to be concrete encased and out of scope Specialist Engineering assessment report to be prepared and submitted to Sydney Water during the design phase of the project, as part of the final Sydney Water process and approval.

The proposed new buildings will be able to utilize existing water connection currently serving the existing hospital. Incoming water service is connected to the 100mm water main in Neringah Avenue South. The incoming water will service the required potable supply for the new buildings.

For fire hydrant and sprinkler supply, at this stage it is anticipated to connect into the 150mm water main in Woonona Avenue and reticulate new 150mm fire main within the site, to serve the new buildings.

For fire and potable services, pressure pump sets would be incorporated within the building element to meet with the relevant standards.



Sydney Water sewer and water main diagram for the subject site



Proposed Site plan with authorities mains

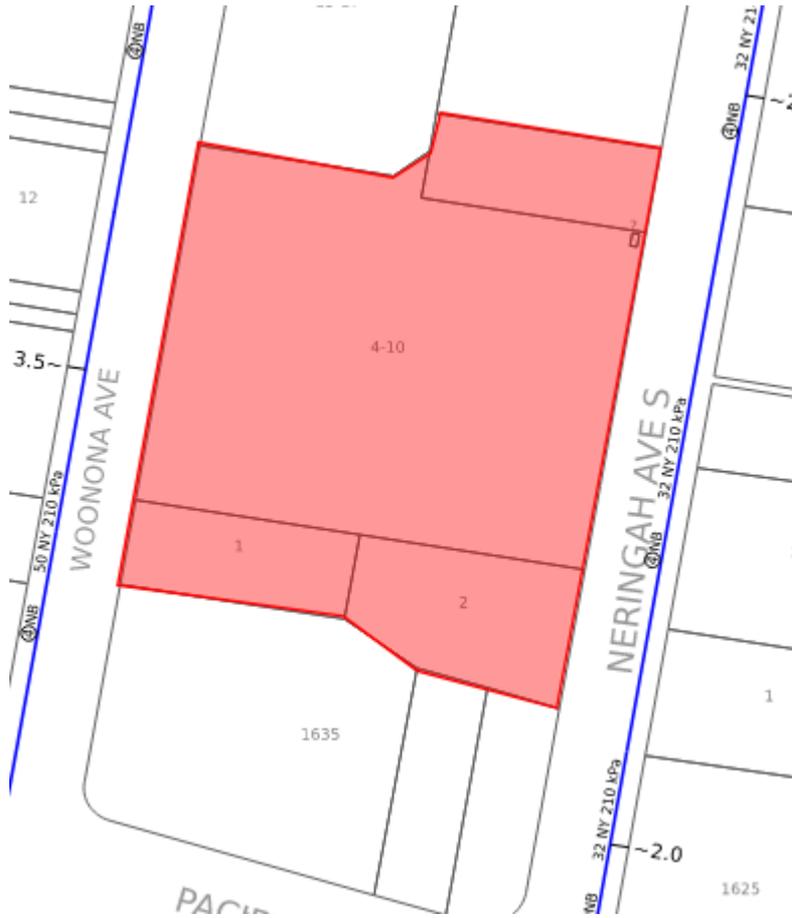
2.2 Jemena Gas Main Infrastructure

The development has access to the following Jemena gas mains:

- 32NY - 210kPa gas main within Neringah Avenue serving the existing hospital Building;
- 50NY – 210kPa gas main within Woonona Avenue serving existing residential aged care.

As mentioned above, the existing site has a access to gas main within Neringah Avenue and Woonona Avenue. There are two separate gas connection serving the site. One of Woonona Avenue serving the existing aged care while the other from Neringah Avenue serving the existing hospital.

The existing connection from Neringah Avenue will be utilized to serve the proposed new aged care and seniors living buildings. From our preliminary telephone discussion, the existing Jemena gas mains shall be adequate to service the proposed development. Final assessment of proposed gas loads for the development to be confirmed during design and once DA has been granted for the , with final consultation with Jemena.



Jemena Gas Diagram

2.3 Conclusion

From the early assessments and desk top reviews, we believe the existing sewer, water and gas main infrastructure for the surrounding area shall be adequate to service the proposed development, considering the existing hospital will be demolished. As outlined above, final consultation with relevant authorities will be undertaken during design phase of the project, for final confirmation.