



CIVIL DESIGN REPORT

Hammond Care, Wahroonga Stage 2

PREPARED FOR
Hamond Care

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Civil Report

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Executive Summary

In this report, Northrop Consulting Engineers (Northrop) have been engaged by Hammond Care to provide civil engineering services in support of 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 purpose of this report is to address the stormwater management associated with the re-development.

Yours sincerely,



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1. Introduction

1.1 General

This Civil Design Report has been prepared by Northrop Consulting Engineers Pty Ltd (Northrop), the civil 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 civil 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 Civil Design 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.

1.3 Proposed Development

The proposed 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

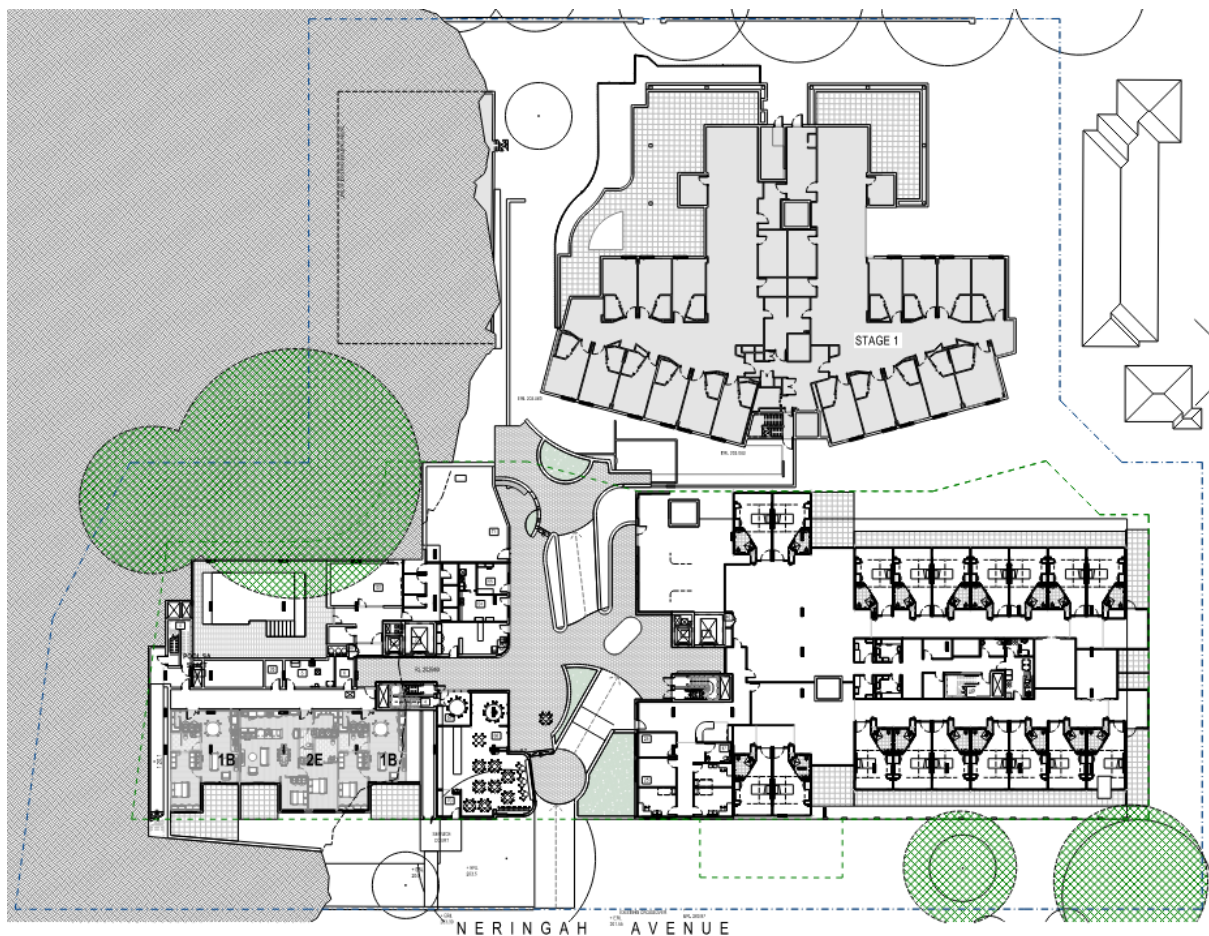


Figure 2. Proposed Ground Floor Plans by BM Architects

2. Civil Design

2.1 Stormwater Management Strategy

The purpose of this section of the report is undertake the following activities in determining an appropriate, site specific stormwater management strategy:

- reviewed the relevant sections of the DCP and accompanying flood information.
- preliminary assessment of existing and proposed site; and

In demonstrating compliance with _____), this proposed stormwater management strategy has considered the following, which will be discussed in this section of the civil design report:

- Onsite Detention.
- Stormwater Quality - Nutrient and Pollution Control.
- Existing Stormwater Layout and Overland Flow Paths.
- Flooding.

2.2 On-Site Detention

In accordance with

2.3 Stormwater Quality - Nutrient and Pollution Control

To minimise and adverse impacts upon the ecology of downstream watercourses, stormwater treatment devices have been interrogated for the design of the development.

Must undertake a stormwater quality assessment to demonstrate that the development will achieve the post-development pollutant load standards shown in Table 1 below.

Table 1: Water Quality Reduction Targets

Pollutant Criteria	Required Reduction Target (%)
Total Suspended Solids (TSS)	85%
Gross Pollutants (GP)	90%
Total Phosphorus (TP)	65%
Total Nitrogen (TN)	45%

2.4 Existing Stormwater Layout

The existing stormwater layout has been mapped with the information available which shows a trunk drainage line that was constructed from the western side of the building north towards Hospital Road. The eastern side of the building is believed to be currently draining also towards Hospital Road.

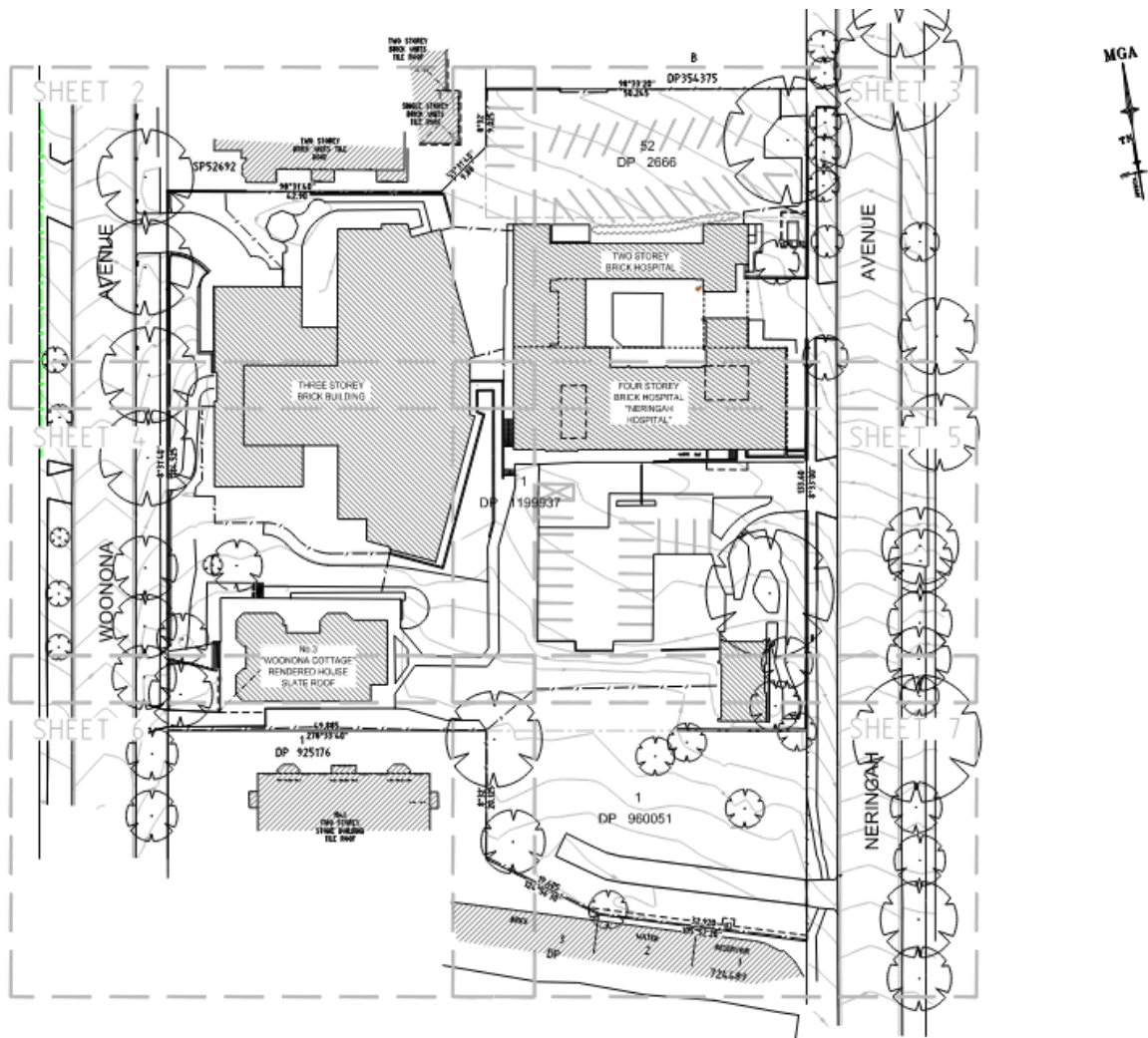


Figure 3. Detail Survey, prepared by LTS Lockley

2.5 Flooding

Flood Hazard Mapping have been sourced from the adopted ____ to provide flood level data and inundation mapping for the 1% ARI flood depths in the immediate site surrounds (refer to Figure 4 below) Upon review of this information, the following conclusions can be made: -

- The site is not considered to be flood affected.
- There is no applicable Flood Planning Level (FPL) for the determination of floor levels.

Figure 4. Catchment Flood Study (Peak Flood Depths, 100 Year ARI)

Appendix A – Civil Engineering Concept Plans