

Loreto Normanhurst

Concept Plan Proposal & Stage 1 - State Significant Development Application - Hydraulic Services Infrastructure Assessment



Prepared for:

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Revision

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Contents

<i>Introduction</i>	<i>3</i>
<i>Background.....</i>	<i>3</i>
<i>The Site</i>	<i>4</i>
<i>Legal Description and Ownership</i>	<i>5</i>
<i>Overview of Proposed Development.....</i>	<i>6</i>
<i>Scope of Services.....</i>	<i>6</i>
<i>Project Description.....</i>	<i>6</i>
<i>Section 78A (8) of the Environmental Planning and Assessment Act of the Environmental Planning Assessment Regulation 2000.....</i>	<i>9</i>
<i>Concept Proposal Plan - Section 13 Utilities</i>	<i>9</i>
<i>Mary Ward Wing- Section 13 Utilities</i>	<i>9</i>
<i>Boarding House - Section 13 Utilities.....</i>	<i>10</i>
Appendix A	
<i>Sydney Water Dial Before You Dig.....</i>	<i>12</i>
Appendix B	
<i>Boarding House Authority Sewer Extension</i>	<i>13</i>
Appendix C	
<i>Jemena Dial Before You Dig</i>	<i>14</i>

Introduction

This report supports a State Significant Development Application (SSDA) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

This application is SSD by way of clause 8 and schedule 1 under State Environmental Planning Policy (State and Regional Development) 2011 on the basis that the development is for the purpose of an existing school and has a Capital Investment Value of more than \$20 million.

Specifically, this application relates to a staged SSDA within the meaning of Section 4.12 of the EP&A Act, with this application being the Concept Proposal for a new site wide masterplan for the existing Loreto Normanhurst School at 91 – 93 Pennant Hills Road, Normanhurst. In addition, consent is also sought for the Stage 1 detailed design works for a new on campus student boarding facility, landscaping works, and some demolition works to the buildings between Mary Ward and existing dining room building and associated works to make good existing.

This report has been prepared having regard to the Secretary's Environmental Assessment Requirements issued for the project by DPE, ref no SEAR 8996 issued on 12 January 2018.

Background

Need for a Campus Masterplan

Loreto Normanhurst is an independent, Catholic day and boarding school for girls from Years 5 to 12. The existing school campus was established in 1897 and has evolved in an organic and ad-hoc manner across the span of 120 years.

A new campus wide planning approach offers the opportunity to strategically review and plan for the campus' future in a sustainable and efficient manner such that the campus' unique aesthetic and ecological values are best preserved. The preparation of a campus wide masterplan is also consistent with the School's 'Loreto Normanhurst 2016 - 2020 Strategic Plan' which identified the need for a broader strategic plan to coordinate renewal and orderly development in a feasible and staged manner.

Early Learning Centre

A separate DA (D/1227/2018) has been submitted to Hornsby Shire Council on 23 November 2018 for an 80 place Early Learning Centre (ELC) building and the DA is currently under assessment. The ELC building is consistent with the overall concept masterplan, and was prepared concurrently with the final preferred campus masterplan. However, to meet the School's operational timeframe requirements for the ELC, a separate application was seen to be best pathway to allow the building to be built, fitout and operational by 2021.

The Site

Loreto Normanhurst is located within the suburb of Normanhurst on Sydney's Upper North Shore approximately 3km south of Hornsby and 25km north of Sydney CBD. The school is located in the local government area of Hornsby Shire Council, approximately 750m south of the Normanhurst Railway Station. The locational context of the site is illustrated at Figure 1.

The site comprises the existing campus grounds of the Loreto Normanhurst school at 91 – 93 Pennant Hills Road, Normanhurst. The northern part of the site accommodates much of the school's existing built form, while the rear extent consists of the school's sporting fields, and a portion of largely undeveloped land covered in remnant vegetation.

The campus itself is bound by Pennant Hills Road (to the north), Osborn Road (to the west) and Mount Pleasant Avenue (to the east). Detached dwellings on individual residential lots about the southern boundary of the site. An aerial photograph of the site is provided at Figure 2 below.

Figure 2 provides an aerial map of the site and its immediate surrounds.

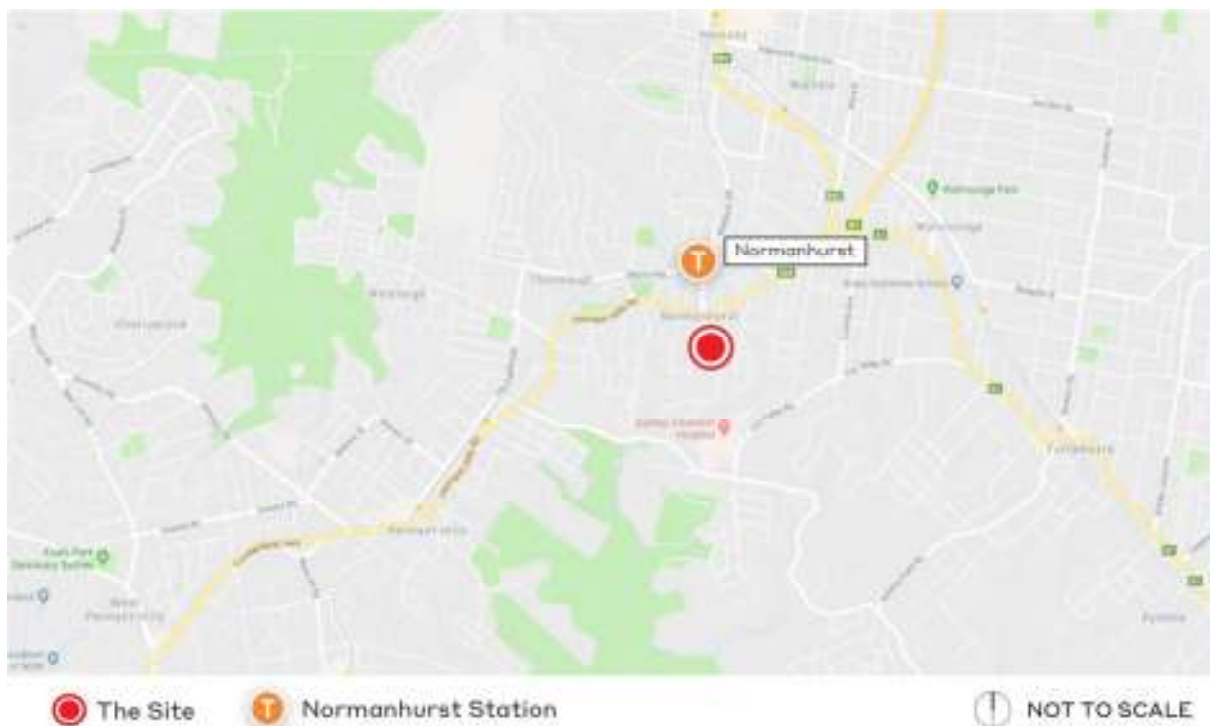


Figure 1 – Loreto Normanhurst Campus Location Context Plan



Figure 2 – Aerial Map of the Loreto Normanhurst Campus

Legal Description and Ownership

The campus comprises several allotments, the legal descriptions of which are provided in Table 1 below. The existing campus has a site area of approximately 13.02ha. The site in its entirety is owned by the Trustees of the Loreto Property Association.

Table 1 Legal Description

Address	Lot	Plan
16 Mount Pleasant Avenue	Lot 5	DP 1218765
	Lot 16	DP 6612
30 – 62 Mount Pleasant Avenue	Lots 20 – 23 and 25 – 36	DP 6612
	Lot 1	DP 34834
91 – 93 Pennant Hills Road	Lot 1	DP 114580
	Lot 3	DP 1217496
	Lot 1 – Lot 3	DP 1218765
	Lot B	DP327538
24 – 28 Mount Pleasant Avenue	Lot 1	DP 809066
6 Mount Pleasant Avenue	Lot C	DP 366271
14 Mount Pleasant Avenue	Lot 4	DP1218765
89 Pennant Hills Road	Lot 1	DP136156

Overview of Proposed Development

This application sets out a new campus masterplan for the existing school campus that will guide and shape the development of the school campus for the next 30 years. This SSDA also includes detailed plans for the first stage of the concept proposal (Stage 1 works). Accordingly, consent is sought for the following:

- The concept masterplan, including:
 - Establishment of 10 new building envelopes across the site for education and ancillary uses including student accommodation;
 - Increase of the student number cap by 850 students from 1150 to 2000 students;
 - The open space and landscape design;
 - Pedestrian and circulation arrangements, and
 - Associated car parking provision.
- Detailed consent for Stage 1 works, being:
 - Construction of a new 3 to 6-storey boarding house to accommodate up to 216 boarders.
 - Excavation works to accommodate partially underground carpark and dock facilities within the proposed footprint of the new boarding house facility;
 - Demolition works to buildings between Mary Ward and existing dining room building and associated works to make good existing;
 - Landscaping works and removal and replacement of approximately 50 trees of varying significance; and
 - Augmentation of connection of services and utilities infrastructure.

Scope of Services

Authority Hydraulic Services included within this assessment are as follows:

Service	Authority
Sewer Drainage	Sydney Water Corporation
Potable Cold Water	Sydney Water Corporation
Gas (Natural)	Jemena

Project Description

In accordance with concept Architectural plans received the proposed development comprises of the following:

Concept Proposal Plan –

- Establishment of 10 new building envelopes across the site for education and ancillary uses including student accommodation.
- Increase of the student number cap by 850 students from 1150 to 2000 students.
- The open space and landscape design;
- Pedestrian and circulation arrangements, and
- Associated car parking provision.

Mary Ward Wing- A Demolition works to buildings between Mary Ward and existing dining room building and associated works to make good existing and landscaping works

Boarding House

Basement 2 - Carpark
 - Back of House

Basement 1	<ul style="list-style-type: none"> - Carpark - Gym - Laundry - Back Of House - Plant Rooms - Amenities
Level 1	<ul style="list-style-type: none"> - Commercial Kitchen - Dining Area - Loading Dock - Plant Rooms - Amenities - Boarding House Accommodation
Level 2	<ul style="list-style-type: none"> - Amenities - Communal Space - Boarding House Accommodation
Level 3	<ul style="list-style-type: none"> - Amenities - Reception - Offices - Boarding - House Accommodation
Level 4	<ul style="list-style-type: none"> - Amenities - Boarding House Accommodation
Level 5	<ul style="list-style-type: none"> - Amenities - Boarding House Accommodation - Terrace
Roof	<ul style="list-style-type: none"> - Roof - Services Plant

Concept Proposal Plan - Section 13 Utilities

Concept Proposal Plan

Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.

Concept proposal plan for hydraulics services are will connect to the school internal potable cold water, fire services and gas services mains for the propose buildings hydraulic demands.

Sydney Water

Potable Cold Water – The potable cold water supply connections for the concept proposal plan will be taken from school internal water mains ,any alterations and additions as part of the concept proposal plan will be in accordance with the relevant Australian Standards.

Fire Services – The fire services supply connections for the concept proposal plan will be taken from school internal water mains ,any alterations and additions as part of the concept proposal plan will be in accordance with the relevant Australian Standards.

Sewer – The sewer system connections for the concept proposal plan will be taken from school internal sanitary drainage system, any alterations and additions as part of the concept proposal plan will be in accordance with the relevant Australian Standards.

Mary Ward Wing- Section 13 Utilities

Mary Ward Wing

Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.

Mary Ward Wing hydraulics services are currently taken off the school internal potable cold water, fire services and gas services mains for the building hydraulic demands.

Sydney Water

Potable Cold Water – With the potable cold water supply connections taken from school internal water main, any alterations and additions to will require connection from the building potable cold water supply to meet proposed changes to the building in accordance with the relevant Australian Standards.

Fire Services - With the fire hydrants system taken from school internal fire hydrant system, any alterations and additions to will require connection from the building fire hydrant system to meet proposed changes to the building in accordance with the relevant Australian Standards.

Sewer – With the sewer system taken from school internal sanitary drainage system, any alterations and additions to will require connection from the building sanitary drainage system to meet proposed changes to the building in accordance with the relevant Australian Standards.

Iemena

Gas – With the gas system fire hydrants system taken from school internal gas system, any alterations and additions to will require connection from the building fire hydrant system to meet proposed changes to the building in accordance with the relevant Australian Standards.

Boarding House - Section 13 Utilities

Boarding House

Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.

The Boarding House development will be a separate DP Lot from the school and will require individual connection to the Authority mains (Sewer, Potable Cold Water, Fire Services and Gas).

Sydney Water

Potable Cold Water –Requires individual connection to the Authority water main (150mm) on Mount Pleasant Ave Normanhurst to reticulate to Boarding House to serve sanitary fixtures (amenities, commercial kitchen, hot water plant and laundry) and rainwater reuse tank top up. We have currently lodged a Sydney Water Pressure and Flow Statement to review the capacity for the development requirements for Potable Cold Water Services

Fire Services - Requires individual connection to the Authority water main (150mm) on Mount Pleasant Ave Normanhurst to reticulate to Boarding House to serve fire hydrant and fire sprinkler services in accordance with relevant Australian Standards. We have currently lodged a Sydney Water Pressure and Flow Statement to review the capacity for the development requirements for Fire Services

Sewer - Located on Mount Pleasant Ave is a 150mm Authority sewer main. The sewer main is not directly in front of the site. The sewer finishes approximately 135m north of the site and would require engaging a Water Service Coordinator to design a extend the Authority sewer main to serve the Boarding House (Refer to Appendix B)

Once D.A is approve for the development an application is to be lodge for Section 73 Certificate to Sydney Water.

Iemena

Gas – Requires individual connection to the Authority gas main (32mm @210kpa) on Mount Pleasant Ave Normanhurst to reticulate to Boarding House for the gas service to serve to gas mechanical plant, hot water plant and commercial kitchen in accordance with relevant Australian Standards (Refer to Appendix C).

Prepare an Integrated Water Management Plan Detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water and water sensitive urban design.

Approximately 1260m² of the green roof shall reticulate to the rainwater reuse tank for the development. Once the rainwater reuse tank is full, the overflow from the tank will discharge in stormwater line through the detention tank.

The installation of rainwater reuse tank sized at 120KL is to serve the development irrigation requirements and potable cold water to rainwater tank top up will be required only to serve in periods when there is no rainfall. (Refer to Appendix C)

Job Ref: 4262

Job Name: Loreto Boarding House

Title: Rainwater Harvesting Sizing

Date: 21/06/2018

INSTRUCTIONS <hold cursor over>

Total Roof/Catchment Area

1260 m²

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean monthly rainfall (mm)	102.0	117.0	110.0	129.0	138.0	133.0	86.0	86.0	97.0	76.0	83.0	77.0
Monthly Average Catchment (RL)	125.0	145.0	124.0	163.0	184.0	176.0	115.0	115.0	131.0	113.0	125.0	117.0
Cumulative Average Catchment (RL)	125.0	269.0	393.0	556.0	740.0	874.0	989.0	1075.0	1162.0	1248.0	1323.0	1390.0
Monthly Average Demand (RL)	130.0	144.0	95.0	98.0	70.0	78.0	70.0	75.0	96.0	144.0	144.0	180.0
Cumulative Average Demand (RL)	130.0	274.0	369.0	467.0	537.0	615.0	685.0	760.0	856.0	1000.0	1144.0	1324.0
Monthly Average Demand over a year (RL)	117.0 RL											
Lowest Month catchment (RL)	95.0 RL											
Average monthly rainfall	129.5 RL											
Available Rainfall Contribution to Average Demand	0.0 %											
Optimised Tank Size for Rainwater Usage	117.0 RL											

0 RL Actual Tank Size selected

Irrigation Area Demand

1260 m²

Irrigation Area	1260 m ²
Irrigation Quantity (L/m ²)	4 L/m ²
Building Irrigation Demand	
Number of days irrigated per month	
Monthly Irrigation Demand (RL)	

Appendix A

Sydney Water Dial Before You Dig

Appendix B

Boarding House Authority Sewer Extension

Appendix C

Jemena Dial Before You Dig