masterplan report
hydraulic services

project
masterplan for maryfields planning proposal
narellan road, camperdown

client / developer
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1. PREAMBLE

This report has been prepared on behalf of our client as part of a Masterplan submission to Campbelltown City Council. The subject site has an area of approximately 444,426 m². It is situated on the southern side of Hume Highway and it is bordered by Maryfields Drive on the Eastern Side and Narellan Road on the Southern Side.

The Masterplan proposes the following:
- Residential dwellings: approx. 540 dwellings
- Seniors / Aged care: approx. 262 independent living units + 100 assisted care beds
- Business / Commercial: approx. 50,000 m²

Subdivided into 6 ‘Sites’

2. SCOPE

The following services have been addressed by this report:
- Stormwater Plumbing & Drainage
- Sanitary Plumbing & Drainage
- Water supply and reticulation
- Fire Hydrant, Sprinkler and Hose Reel supply and reticulation
- Natural Gas

3. INVESTIGATION

Grant Conran from itm design visited the site on Wednesday the 7th of August 2013. Additional site Investigation was carried out by Wayne Camenzuli from Capital Syndications (numerous dates).

Services Diagrams were obtained from the following supply Authorities:
1. Sydney Water (Water and Sewermains)
2. Jemena (Natural Gas)

A meeting was held with Sydney Water’s Growth Strategy Team on Wednesday the 4th of December 2013.

Contact was made with the Gas supply Authority (Jemena).
4. STORMWATER PLUMBING & DRAINAGE SYSTEMS

Existing Situation:

There are a number of Natural Watercourses running from the Hume Highway side across the property in an Easterly direction. They terminate in an existing Pond in the South Western Corner of the Site. The Watercourse continuous in an Easterly direction onto the Neighbouring Property.

Proposed systems:

Road drainage
Complete with collection pits and interconnecting pipe systems discharging to the existing Watercourses via pollution control measures (silt arrestor pits + bio retention basins).

Buildings: Roof Drainage
Complete with downpipes discharging into rainwater tanks (collection for re-use). Overflow to be directed to ‘Road Drainage’ system.

Buildings: (below ground) Basement Drainage
Only applicable for portions of the Developments that can’t gravity drain to the Road Drainage system. Complete with inlet pits, subsoil pipes and pump out stations. Pump out discharge to be directed to the Road Drainage system or Detention Basin as appropriate.

Capacity of existing Watercourse
The exact capacity of the existing Watercourses is not known at this stage. The Bio retention basin(s) could be configured as temporary detention basins complete with gradual release / overflow to the Watercourses.

Refer to appendices for further information / details.
5. SANITARY PLUMBING & DRAINAGE SYSTEMS

Existing Situation:

There are 3 existing Sewer Drainage connections located on the property. Two off Maryfields Drive and one off St. Luke Place.

All three connections appear to be utilized by the existing Buildings. Secondary Dwelling, Monastery and Friary. The Friary appears to be connected via an old / decommissioned Effluent Treatment System.

There is also a Septic Tank and Effluent Dispersment System for the existing Kiosk and Cottage.

Proposed systems:

Gravity Drainage of all ‘Ground Floor Areas’ can be achieved for all 6 Sites by utilizing the 3 existing Sewer Drainage connections. Small (local) Pump out systems might be required to Service Wet areas and Plantrooms in Basement / Carpark areas located below Ground Level.

A meeting was held with Sydney Water’s Growth Strategy Team on the 4th of December 2013.
It was concluded that the proposed systems work from a gravity / ‘logical’ point of view. Additional studies will need to be carried out to assess the impact on the existing Infrastructure beyond the Property Boundaries.

Refer to appendices for further information / details.
6. WATER SUPPLY

Existing Situation:

An existing Watermain is located in Maryfields Drive. It’s size varies (100mm DIA and 150mm Dia).

An additional 500mm DIA Watermain is also located on the Southern Side of Narellan Road.

There are currently three watermeters located on the Property (all in the vicinity of Narellan Road) servicing the existing Buildings.

Proposed system:

A meeting was held with Sydney Water’s Growth Strategy Team on the 4th of December 2013.
It was concluded that Water can be supplied to the proposed Sites. Additional studies will need to be carried out to assess the impact on the existing Infrastructure beyond the Property Boundaries.

Refer to appendices for further information / details.

8. NATURAL GAS

Existing Situation:

An existing 50mm DIA 210 kPa Gasmain is located in Maryfields Drive. There doesn’t appear to be any existing Gas supply pipes located on the Property.

Proposed system:

Gas can be supplied to the proposed Sites. Additional studies will need to be carried out to assess the impact on the existing Infrastructure beyond the Property Boundaries.

Refer to appendices for further information / details.
Appendices
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DATE
ISSUE

0125M

REV A2

CLIENT
ARCHITECT

Maryfields

#Architect City

#Architect Country

#Architect Postcode

Narellan Road

Hume Highway

UWS

John Kidd Reserve

Blair Athol

Blairmount

John Kidd Reserve

Maryfields

UWS

Narellan Road

Hume Highway

Blairmount
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Date

Issue

Rev

A2

FRIARS

NARELLAN ROAD

MARYFIELDS

EXISTING

SEWER MANHOLE

SEPTIC TANK

GROUND RL 87.500

L APPROX. 84.990

GROUND RL 90.000

L APPROX. 87.420

GROUND RL 83.000

L APPROX. 80.760

HUME HIGHWAY

BLAIRMOUNT

JOHN KIDD

RESERVE

BLAIR

ATHOL

EXISTING

SEWER

EXISTING

SEWER MANHOLE

EXISTING

SEWER MANHOLE

EXISTING

SEPTIC TANK

EXISTING

SEPTIC TANK

EXISTING

SEPTIC TANK

UWS

NARELLAN ROAD
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DATE ISSUE

FRIARS NARELLAN ROAD

MARYFIELDS

CONCEPT

#Architect City

#Architect Country

#Architect Postcode

SITE 1

SITE 2

SITE 3

SITE 4

SITE 5

SITE 6

GROUND RL 87.500
L APPROX. 84.990

GROUND RL 90.000
L APPROX. 87.420

GROUND RL 83.000
L APPROX. 80.760

Proposed Sewer Drainage