

Thornton Lot 3003, DP 1184498
North Penrith

Services Availability Report for DA

For

Thornton Operations PTY LTD

Revision C, 24th March 2017

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A	13.03.2017	Preliminary	RB/BGM	LV
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1. Introduction

1.1 Aim of Report

This report investigates the Authorities services available to service the proposed new the mixed use Retail, Commercial and Residential development on the new site located at North Penrith bounded by Lord Sheffield Circuit and Dunshea Street.

1.2 Objective

The objective of this report is to outline the utility connections required for the first Development Application for the development.

1.3 Limitations

The design approach is based upon preliminary estimates of hydraulic and electrical loads as defined in the architectural drawings and project briefings.

DA01 includes the following:

- Basement car park approx. 7,300m²;
- Ground floor retail including 1,989m² supermarket
- Loading dock
- Level 1 Commercial 1,519m²
- Level 1 Residential car park
- Childcare 694m²
- Level 2-4 Residential car park and apartments
- Level 5 Apartments

1.4 Sources of Information

This report is based upon the following information:

1. Dial Before You dig Information package;
 - Endeavour Energy (electricity)
 - Jemina (gas)
 - NBNCo (telecommunications)
 - Optus (telecommunications)
 - Telstra (telecommunications)
 - Sydney Water (water & sewer)
 - Penrith City Council
2. Crone Architects drawings dated March 2017

2. Infrastructure Services

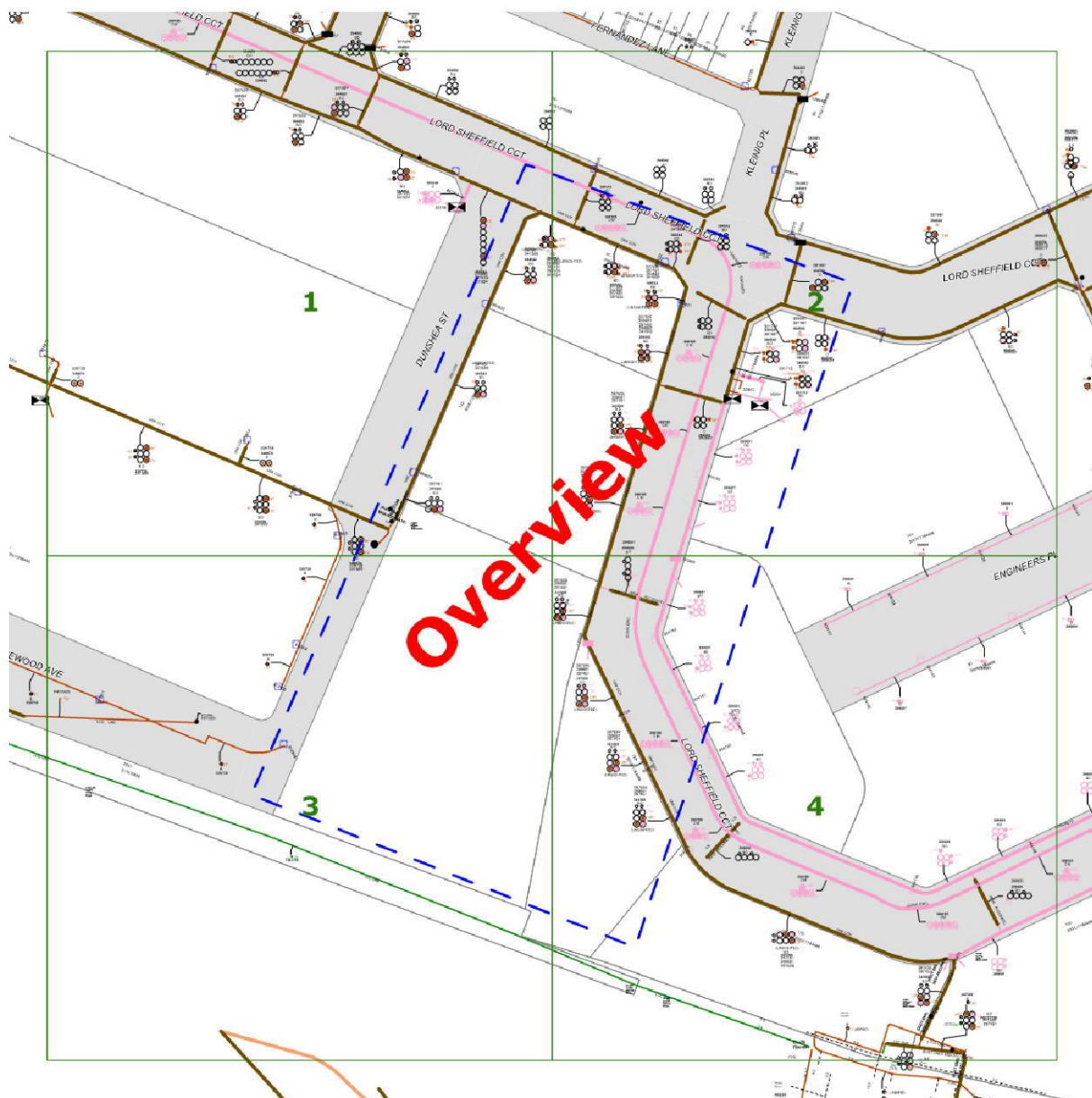
2.1 Electrical Services

The electrical infrastructure connections required for the Thornton development will include the following:

- Electricity
- Telecommunications

2.1.1. Substation Infrastructure

Existing substations are located on the fringe of the developments site on Lord Sheffield Circuit and Dunshea Street. The capacity of these substations will not be adequate for the proposed Thornton Lot 3003 (and future Lot 3004 & 3005) development.



A preliminary electrical maximum demand based on the concept drawings has established a load requirement of:

Lot 3003:

- Residential 500A/ph (347kVA)
- Retail / Commercial 1,350A/ph (936kVA)

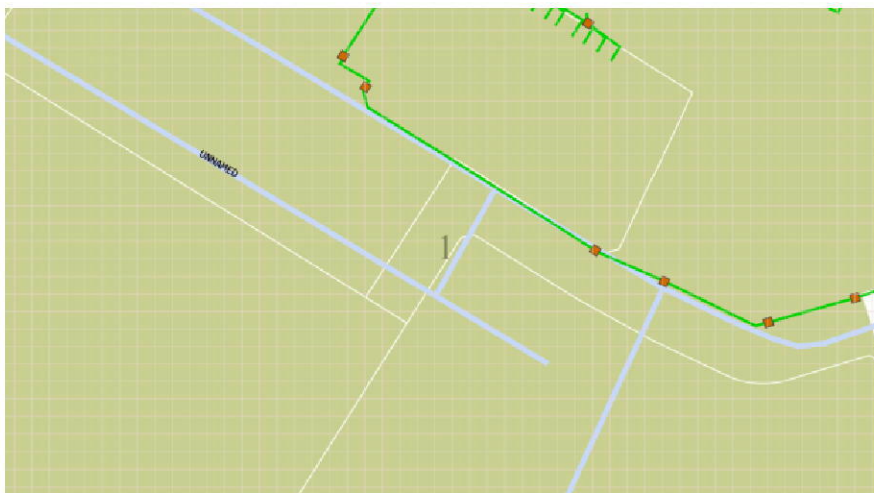
This demand has been based on gas cooking and air conditioning to the apartments.

Multiple substations and therefore multiple transformers may be required. Substation will be either kiosk or surface chamber type in accordance with Endeavour Energy requirements.

Two (2) single transformer substations are proposed on the west side of the site on Dunshae St near the car park ramps. These substations will serve the supermarket, commercial / retail and residential.

2.1.2. Telecommunications

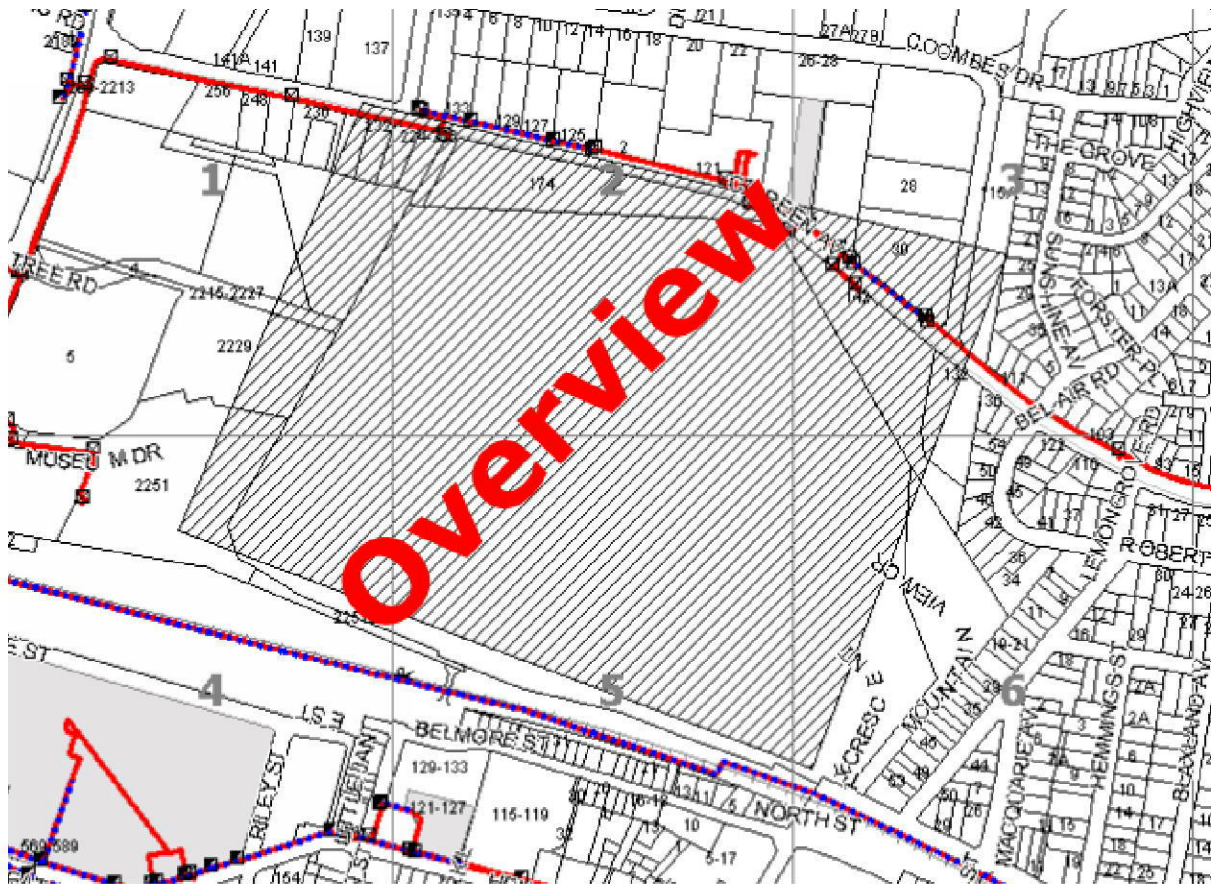
NBNCo has infrastructure to the north of the site. Existing NBN infrastructure will need to be extended to the site boundary.



New NBN cable pathways will need to be established to the Building Distributor Room associated with each building.

NBN compliant cable pathways will be established within each building in accordance with NBNCo standard requirements.

Optus have existing infrastructure to the north of the site in Coreen Ave.



2.2 Hydraulic Services

The hydraulic infrastructure connections required for the Thornton development will include the following:

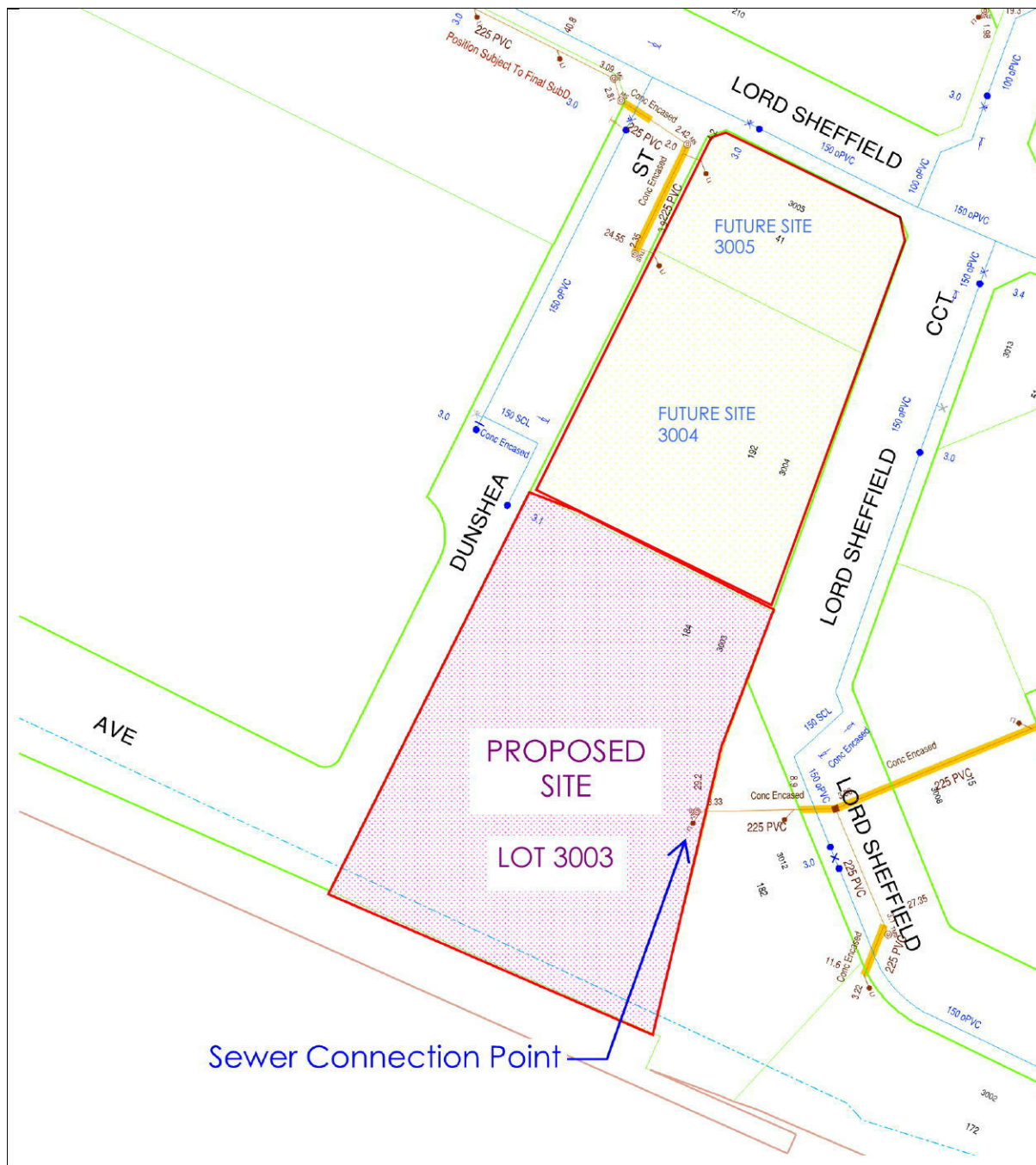
- Sewer Drainage (Sydney water)
- Potable Cold Water (Sydney water)
- Stormwater Drainage (Council)
- Gas (Jemina)
- Fire Hydrant (Sydney water)
- Fire Sprinkler (Sydney water)

2.2.1. Sewer Drainage

The lot is currently served by a 225mm dia Sydney Water sewer stub capped off and ready for connection. The sewer connection point is located at the south-eastern side of the site. The location of the sewer connection identified in the diagram below.

Based on the current development proposal the sewer provision serving the lot appears to be of sufficient capacity without the need for amplifying in size.

A Section 73 application for the anticipated requirements will be submitted to Sydney Water once the design progresses further and we await the notice of requirements to confirm the following assumptions.



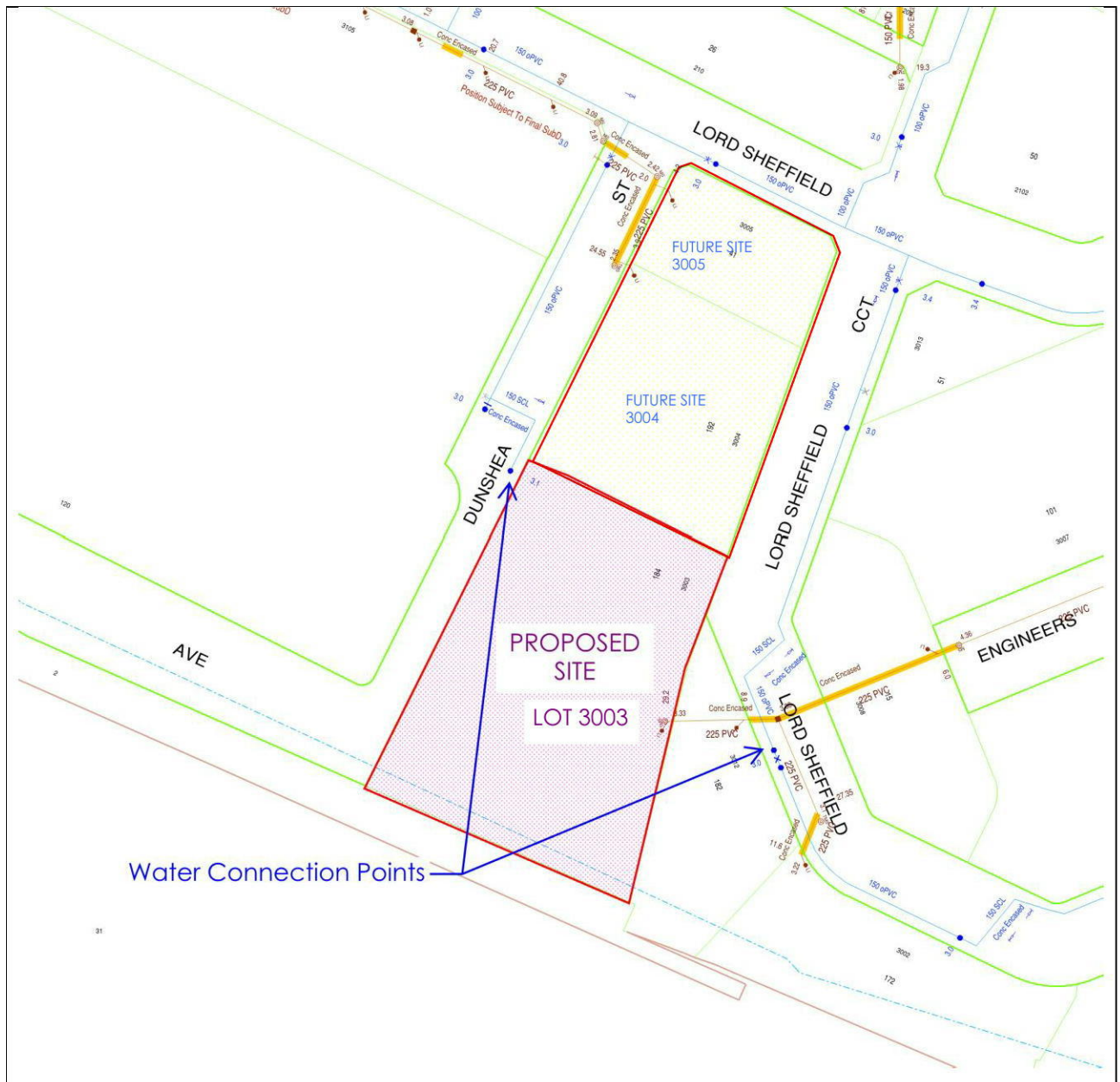
Sydney Water Authority Sewer Mains Diagram

2.2.2. Domestic Water

The site has frontage to the following existing Sydney Water authority water mains:

- (i) 150mm uPVC main in Dunshea Street
- (ii) 150mm uPVC main in Lord Sheffield Circuit

A Section 73 application for the anticipated requirements will be submitted to Sydney Water once the design progresses further and await until the notice of requirements are issued to confirm the following assumptions.



Sydney Water – Authority Water Mains Diagram

2.2.3. Natural Gas Service

Jemena has a medium pressure 210kPa natural gas network, that reticulates to more than 50% of the site boundaries. The size of the mains range from 50mm diameter down to 32mm diameter pipe mains. The gas supply reticulation around the site has high pressure that are adequate to serve the development.