

infrastructure & development consulting

Edmondson Park Precinct 3 Infrastructure Report

May 2024

Infrastructure planning master planning civil engineering project management contract administration



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1 Introduction

Infrastructure & Development Consulting (IDC) have been commissioned by Landcom as Principal Civil Engineers for their Edmondson Park Project. This report outlines the likely utilities services requirements for the proposed development of the site. It summarises:

- Sydney Water servicing including potable water and wastewater (with commentary on recycled water)
- Electrical reticulation in accordance with Endeavour Energy requirements
- Telecommunications and Gas

The utilities measures as outlined in this report are based on the information current at the time of writing and are subject to change.

2 Site Description

The proposed development site is located approximately 40km to the south-west of the Sydney CBD at Lot 5 DP1272931 Campbelltown Road and Lots 2-3 DP1272931 Zouch Road, Edmondson Park, and is situated within the Liverpool City Council local government area. The site, which is zoned R1 Residential and RE1 Public Recreation, covers an approximate area of 21 hectares and is bound by Macdonald Road to the east, Campbelltown Road to the south, Zouch Road to the west and undeveloped bushland to the north.



Figure 1 - Site Boundary

The three lots include a mix of RE1 (Public Recreation) and R1 (General Residential) zonings. All proposed development is located within Lots 3 and 5, which will include 158 new residential



dwellings and 8 superlots (within Lot 5), local road network and future Playing Fields within Lot 3 (we note the playing fields are to be delivered by others as part of a separate application).

The site also includes areas of non-certified land as shown on the Growth Centres Biodiversity Certification maps. These areas are shown in Figure 2.



Figure 2 - Non-Certified Land

3 Data

The following data has been resourced to assist with the preparation of this report:

- Dial Before You Dig (DBYD) services search
- Site survey prepared by Calibre
- Sydney Water hydra search
- Endeavour Energy Distribution Annual Planning Report online tool
- Feedback from service providers



4 Water

4.1 Existing Infrastructure

The site is located within the Sydney Water potable water supply zone. Existing infrastructure within the vicinity of the site includes a 300mm diameter trunk main on the northern side of Campbelltown Road and a 150mm diameter reticulation main on the eastern side of Zouch Road.

In addition to the above potable water infrastructure, the site is also located in the vicinity of Sydney Water's recycled water network. A recycled water reservoir is located to the south of the site, at the intersection of Campbelltown Road and Zouch Road. From this reservoir, two trunk recycled water mains extend along the southern side of Campbelltown Road and supply the development site to the south. These mains are 600mm and 450mm in diameter. A 150mm diameter recycled watermain also runs beneath Campbelltown Road near the south-eastern corner of the site and supplies the development site to the east.

The existing potable and recycled water network in the vicinity of the site are shown in Figure 3 below.



Figure 3 - Existing Water Infrastructure



4.2 Proposed Infrastructure

To provide potable water servicing to the proposed development, it is expected that a new main will be taken off from the 300mm diameter main in Campbelltown Road adjacent to the site. In addition to this, a new main could also extend from the existing 200mm diameter main on the eastern side of MacDonald Road, to the east of the site. For recycled water, a new main could extend from the existing 150mm main described in Section 4.1 located near the south-eastern corner of the site.

To service the anticipated development yield, a 150mm potable watermain would likely be required. The new mains would be located 0.6m behind the face of kerb of the new local roads in accordance with general practice. Here each lot in the subdivision will have frontage to a drinking water main, with new mains to be constructed across the full road frontage of each lot as part of the proposed development.

An Anticipated Notice of Requirements has been obtained for the development from Sydney Water under Case No. 208970. Preliminary feedback from Sydney Water has indicated that there may be some constraints within the existing drinking water network. As such, Sydney Water are currently undertaking detailed modelling to determine what network upgrades (if any) are required to service the development, with the results of the modelling anticipated to be available July 2024.



5 Sewer

5.1 Existing Infrastructure

The existing residential developments to the east and south of the site are serviced by Sydney Water gravity sewer mains. A 280mm diameter gravity sewer main is located within the central median of General Boulevard, to the east of the site. This main includes a connection point for the site, on the eastern boundary.

The development site on the southern side of Campbelltown Road is serviced by a series of reticulation mains generally ranging in size from 150-250mm in diameter. These mains, and the main in General Boulevard, drain to a 500mm branch main near the intersection of Campbelltown Road and the rail line. The existing sewer network is shown in Figure 4 below.



Figure 4 - Existing Sewer Infrastructure



5.2 Proposed Infrastructure

An Anticipated Notice of Requirements has been obtained for the development from Sydney Water under Case No. 208970. As outlined in the NOR, the proposed development lies within the Hoxton Park SCAMP catchment which has sufficient capacity to service the development via the existing 280mm main which enters the site off General Boulevard. Here the proposed development will be serviced by constructing new sewer mains from this existing main.

Given the proximity of the site to the existing sewer network, no lead-ins will be required as part of the proposed subdivision works, however there could be a deep sewer required to service the isolated low point adjacent the northern site boundary at the creek line. Each lot within the subdivision will have frontage to a sewer main that can be used for connection, with each connection point to be located within the lot boundaries.



6 Electricity

6.1 Existing Infrastructure

The site is located within the Endeavour Energy electrical supply zone. The existing electrical infrastructure in the vicinity of the site consists mostly of below ground low and high-voltage electrical mains that were constructed to support recent developments to the south and north east. Within the site boundary, overhead infrastructure is located adjacent Campbelltown Road. This infrastructure includes both low voltage and 11kV high voltage feeders.

The Edmondson Park 33/11kV Zone Substation (ZS) is located in the south western corner of the site. This ZS includes two 35MVA transformers and is connected to Endeavour Energy's transmission network by a 33kV underground transmission line located on the eastern side of Zouch Road. The existing electrical network is shown in Figure 5 below.



Figure 5 - Existing Electrical Infrastructure



6.2 Proposed Infrastructure

The proposed works are likely to include the undergrounding of the existing overhead lines and/or the extension of the existing infrastructure on the northern side of Campbelltown Road.

High voltage supply for the proposed development could be supported by any residual capacity in existing feeders in the vicinity the site. Alternatively, if there is insufficient capacity in the existing feeders, a new feeder could be constructed from the zone substation to the site.

Endeavour Energy's data indicates that the Edmondson Park ZS is forecast to have approximately 15MVA spare capacity in circa 2024. Assuming the load generated by a low/medium density dwelling is generally 5kVA/unit, we would expect a total load of approximately 1MVA for the development. It is therefore apparent that there is sufficient capacity at the ZS to support the proposed development for the site.

Based on the above load requirements it is anticipated that a minimum of three (3) new padmount substations will be required to support the development, with the location of each substation to be confirmed during the subsequent detailed design phase of the proposal.

Once the Development Application has been lodged an Application for Connection of Load will be submitted and a Level 3 ASP will be engaged to provide an electrical design to Endeavour Energy in the form of a Proposed Method of Supply.



7 Telecommunications

Service records indicate that telecommunication services and conduits for a number of providers are available within the surrounding road network. Development to the east of the site is serviced by OptiComm and areas to the south are serviced by the NBN Co. network. While the site is not currently located within NBN's coverage area, it is anticipated that the network will be extended to support the proposed development.

Following DA lodgement, it is anticipated that an application will be made to NBN to determine the services works required (if any) to support the site.

7.1 5G Network

Rollout of Telstra's 5G network has commenced across western Sydney. The 5G network is available for connection across the whole development site.

8 Gas

It is anticipated that no new gas services will be proposed as part of this development.

9 Conclusion

Following initial review of the existing service infrastructure, it is evident that opportunities exist to adequately service the proposed development.

We note that detailed requirements from the relevant service providers will be obtained as the project progresses and incorporated into the relevant design documentation for service authority approval prior to Subdivision Certificate.