

Nepean Hospital Redevelopment: Summary of Campus Wide Utility Services Upgrade – Infrastructure Management Plan

Revision 1 Dated 24/07/2018-Issued for Information only with SSDA submission.

The Infrastructure Management Plan has been prepared to address the Secretary's Environmental Assessment requirements (SEARs) for the proposed Nepean Hospital and Integrated Ambulatory Services Redevelopment (Stage 1), in particular:

"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 Nepean Hospital Campus is currently structured as a 'private' network in regards to utility services.

The campus utility networks then connect to public utility infrastructure assets at or adjacent campus boundaries.

Presently, the campus has multiple incoming power, gas & water separately metered feeds from external utility infrastructure. Design is underway to implement a rationalisation of the number of incoming metered feeds as part of a campus network realignment program to risk mitigation measures, enabling the hospital operations to be maintained and allow site to facilitate proposed new developments

The site is proposed to be connected to the following utilities services:

- Power;
- Telecommunications;
- Sewer;
- Stormwater;
- Water;
- Gas;

The current proposed design includes no proposals to divert public infrastructure.

1. Power

Nepean Hospital is a high voltage customer with Endeavour Energy and is currently being supplied by dedicated 6 MVA feeder and a 5MVA backup feeder from Kingswood Zonal substation. A network of 11 substations spread across the campus supplies power to the existing campus.

A new 6MVA feeder from Kingswood Zonal substation will feed the stage 1 redevelopment power requirement. The proposed project does not intend to disrupt the existing campus power network and will not require any upgrade or relocation of existing network.

The proposed services ring main will facilitate spare conduits for future proofing of the campus power grid for LHD in the event of any planned network amalgamation.

2. Telecommunications

The existing Campus lead-in telecommunications services will be utilized, via new communications tie cabling between the existing Campus Distributor and the new Stage 1 Tower Campus Distributor, to service the telecommunications requirements for the Stage 1 Tower.

3. Stormwater:

Stormwater from new development and its immediate surrounds will connect to the existing site stormwater service mains that discharge into the Sydney Water street main which has sufficient capacity to support the redevelopment project.

4. Sanitary Plumbing and Drainage

Augmentation of Sydney Water street main (which partially serves existing campus) is required to cater to the additional sewer from the Redevelopment project. Section-73 for Augmentation of Sydney Water main sewer line across Somerset street till the Nepean Hospital campus boundary is in progress.

5. Potable Cold Water:

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Potable cold water for the campus is supplied by an existing 250mm dia. Sydney Water watermain at Barber Avenue and has sufficient capacity to cater to the redevelopment project.

6. Natural Gas Service:

Nepean Hospital is supplied by two separate Jemena gas connections from Parker street and Somerset street. The proposed project will require dislodgement of Somerset street connection which is in the close vicinity of the bulk excavation line. The natural gas supply for the campus will be supported by a single supply from Parker street and will be distributed across the campus through a ring main executed as an enabling works for the redevelopment project.

7. Fire Hydrant Services and Fire Hose Reel Services:

The water supply will be extended from existing Sydney Water main from Barber Avenue to the new centralised fire services tank associated with the new building. The centralised fire tank will feed the fire services ring main for the rest of the campus with an ability to be extended to other areas of the campus if required in future.

8. Fire Sprinkler Service:

Sydney Water main from Barber Avenue will be the primary supply feeding directly to the sprinkler pump. It is also backed up by the water from the centralised water tank in emergency.

