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MEMO

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FROM:	Allan Wong
PROJECT:	Lismore Base Hospital Stage 3C
PROJECT NUMBER:	29798
DATE:	19 March 2018

SUBJECT: Electrical Services and Telecommunications Services – Director General Requirements

The following information regarding electrical and telecommunications services is provided to assist in the preparation of an Infrastructure Management Plan in accordance with the Director-General's Requirements for the Lismore Base Hospital Stage 3C Redevelopment.

Electrical Services

The relevant supply authority for the region is Essential Energy.

Summary of current Essential Energy supplies serving the Lismore Base Hospital site:

Existing supplies prior to Stage 3 redevelopment works:

- 2x1,000kVA chamber substation located within the existing Block B.
- 1x1,000kVA pad-mount substation located adjacent to the existing Cancer Care building.
- 1x750kVA pad-mount substation located on Hunter Street.
- 1xthree phase overhead low voltage (LV) from the Essential Energy 300kVA transformer located on Hunter Street.

The existing substations had insufficient spare capacity to serve the Stage 3B Redevelopment.

Installed during Stage 3A – South Tower:

- 1 x "new",500kVA pad-mount substation located at the Uralba Street frontage
- Installed in order to supply Stage 3B (South Tower)

Installed during Stage 3B – South Tower:

- 1 x "new" 1,500kVA pad-mount substation located adjacent Stage 3A substation
- Installed in order to supply Stage 3C (North Tower and North Tower Extension)

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New Essential Energy underground high voltage cabling has been provided to the "new" substations. The new building (North Tower including North Tower Extension) will be supplied by the "new" substations via new underground low voltage consumers mains cabling.

The two (2) "new" 1,500kVA pad-mount substations (installed Stage 3A & 3B) have a combined capacity of approximately 4200Amps/phase.
The calculated maximum demand of the existing South Tower and the additional load of Stage 3C (North Tower including North Tower Extension) is 3800Amps/phase.
Therefore, there is sufficient capacity in the two (2) 1,500kVA pad-mount substations to support the existing South Tower and the proposed Stage 3C (North Tower including North Tower Extension) without the need for any additional easements or Essential Energy LV network augmentation works.

Telecommunications Services

The existing site is served by the following telecommunications carriers (lead-in services):

- Telstra
- Australia's Academic and Research Network (AARNET)
- Nextgen (TPG)

Additional carrier service(s) may be provided to the site as part of Stage 3C in order to provide service redundancy (backup).

If you have any queries, please contact the author.

Regards

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