

Multi Storey Car Park at The Children's Hospital at Westmead SSDA No. SSD-10434896

Infrastructure Management Plan

Electrical Services

Prepared for: Health Infrastructure C/ PwC

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Revision

Revision	Date	Comment	Prepared By	Approved By
1	22/07/2020	Draft Issue	AW	RBAR
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Design with **community** in mind



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1. Introduction

Stantec has been engaged by Health Infrastructure NSW to prepare an Infrastructure Management Plan for the Electrical and Telecommunications services for the proposed Children's Hospital at Westmead (CHW) Redevelopment located on Redbank Rd, Westmead NSW 2145.

1.1 Proposed Development

The proposed development under this SSDA is a Multi Storey Car Park (MSCP) accommodating both staff and visitor car parking to be located on Labyrinth Way, on the site of The Lodge.

The scope of proposed works includes:

- Demolition of The Lodge
- Construction of a new MSCP to a maximum height of RL 42.10, approximately 8 car parking storeys, which is equivalent to the height of 5 storeys of the hospital.
 - Facilitating up to around 992 car parking spaces for staff and visitors
 - Vehicular access from Labyrinth Way and / or Redbank Road
 - A split-level approach to the MSCP to respond to the natural ground level
- Ancillary retail facilities
- Road works:
 - Realignment of Redbank Road with vehicular access connection to MSCP
- Tree removal
- Associated landscape works

The MSCP is being designed to be constructed in a single stage yet car parking will be staged operationally to come on-line with parking demand across the Precinct:

- The first stage of car parking operation would provide replacement car parking for the demolished P17 car park. There would be no net increase of parking on site under this stage.
- The second stage of car parking operation to serve the growth in hospital activity associated with the future PSB (subject to a separate SSDA) would only come on-line operationally with the PSB SSDA consent becoming operational, specifically at occupation. This would provide growth of around 280 additional spaces in line with hospital activity projections until 2031.

1.2 SEARs Requirements

This report addresses the requirements outlined in the Planning Secretary's Environmental Assessments Requirements (SEARs), issued 20 November 2020 for application SSD-10434896 Multi Storey Car Park at The Children's Hospital at Westmead.

This report addresses SEARs Item 15

- **Utilities**

In consultation with relevant service providers:

- assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.



- identify any infrastructure upgrades required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.

1.3 Design Criteria

The Electrical Services will be designed in accordance with, but not limited to, the following codes, standards and guidelines:

- NSW Health Infrastructure Engineering Services Guidelines
- NSW Health ICT Cabling Standards
- Service and Installation Rules of NSW
- Endeavour Energy Network Standards
- Relevant Australian Standards

1.4 Site

The Children's Hospital at Westmead site is legally described as Lot 101, DP 1119583. The legal description of the site's entrance is off Redbank Road, which crosses Lot 1, DP 1194390.

It is understood the subject site, which makes up a portion of Lot 101 DP1119583 is owned by the Health Administration Corporation.



2. Electrical Utility Services

2.1 Existing Supply Authority Infrastructure

The Supply Authority for the Children's Hospital at Westmead is Endeavour Energy.

Refer to Figure 2.1 for the extent of Endeavour Energy's High Voltage (HV) network in the vicinity of the Westmead Health Precinct.

The Endeavour Energy HV network supplies the Westmead Health Precinct.

The Westmead Health Precinct is a HV customer.

The existing Endeavour Energy Zone Substation 9563 has been recently upgraded.

The High Voltage Operational and Maintenance protocol between Endeavour Energy and HVC 7741 Westmead Hospital dated Sept 2019 allows a maximum total load of 26MVA. The protocol already includes an allowance for the additional load required for the MSCP.

Endeavour Energy Zone Substation 9563 provides supply to the privately owned Westmead Hospital Substation No. 1.

All HV infrastructure downstream of the Zone Substation constitutes the Westmead Hospital Private HV Network. Assets are typically either owned by the Western Sydney Local Health District (WSLHD) or the Sydney Children's Hospital Network (SCHN).

Westmead Hospital Substation No. 1 consists of 2 off HV Main Switchboards (HV-MSB 1 and HV-MSB 2)

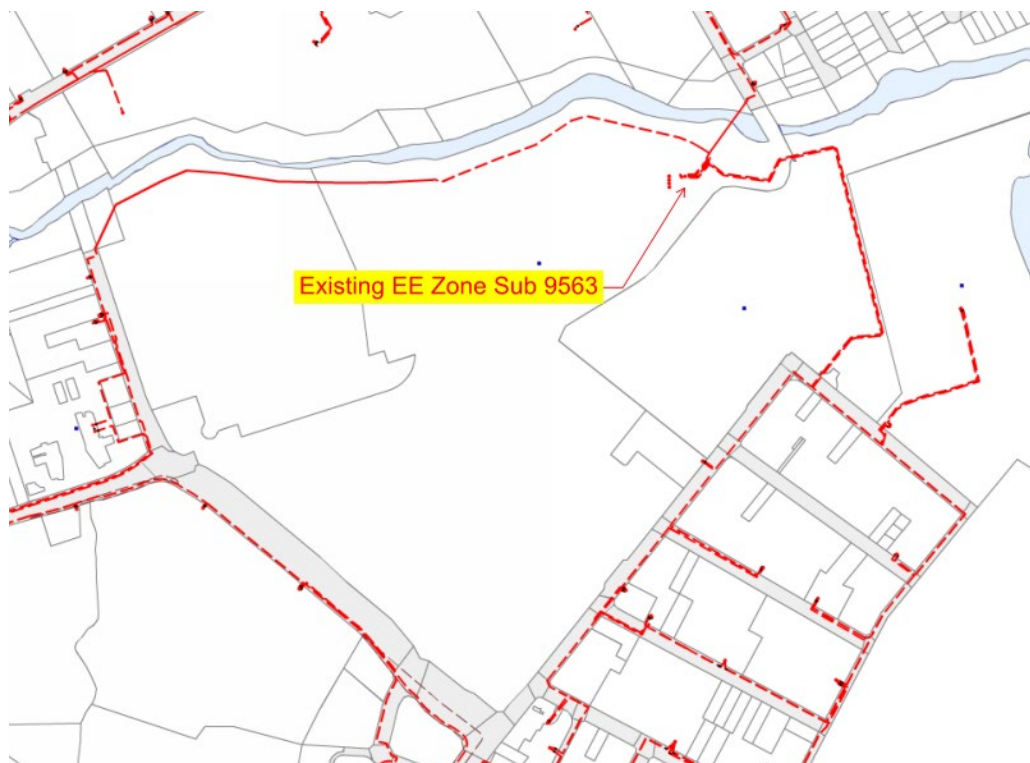


Figure 2.1: Existing Endeavour Energy HV Network and Zone Substation 9563



Westmead Substation No. 1 HV-MSB-02 feeds The Children's Hospital at Westmead (CHW) Kiosk Substation A1, which then supplies the existing Lodge (old Ronald McDonald House). Refer to Figure 2.2.

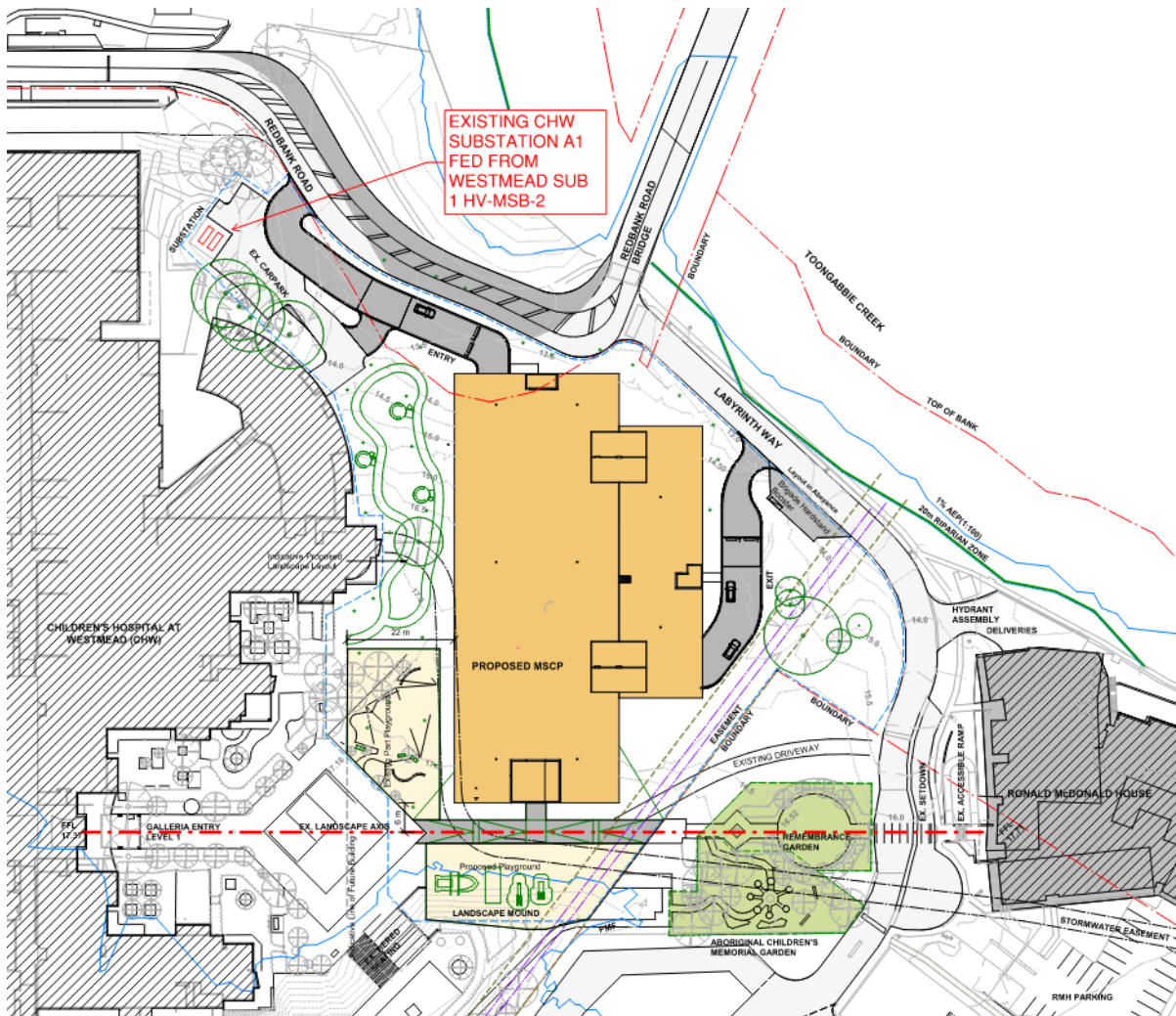


Figure 2.2: Existing Children's Hospital at Westmead Kiosk Substation A1

There is an existing Endeavour Energy easement along the eastern property boundary. The footprint of the proposed MSCP does not impact the existing easement.

The proposed method of supply to the new MSCP is to re-utilise the existing supply to the Lodge (old Ronald McDonald House). The existing supply to the Lodge is provided from SCHN's existing kiosk Substation No. A1.

Upgrades to existing Substation No. A1 are not required to facilitate the development. As Substation No. A1 is privately owned, approvals from Endeavour Energy are not required.

The consumer mains from the existing Kiosk Substation No. A1 will be reticulated via underground conduits to the MSCP main switchboard.

Easements and rights of way will not need to be created for the property as the assets are owned by WSLHD or SCHN.

2.2 Construction Period Services Continuity

Minimal disruption is expected during the new MSCP construction period.



3. Telecommunications Carrier Services

3.1 Existing Telecommunication Infrastructure

There is an existing TPG (Soul Pattinson Telecoms) service as indicated in green in Figure 3.1.

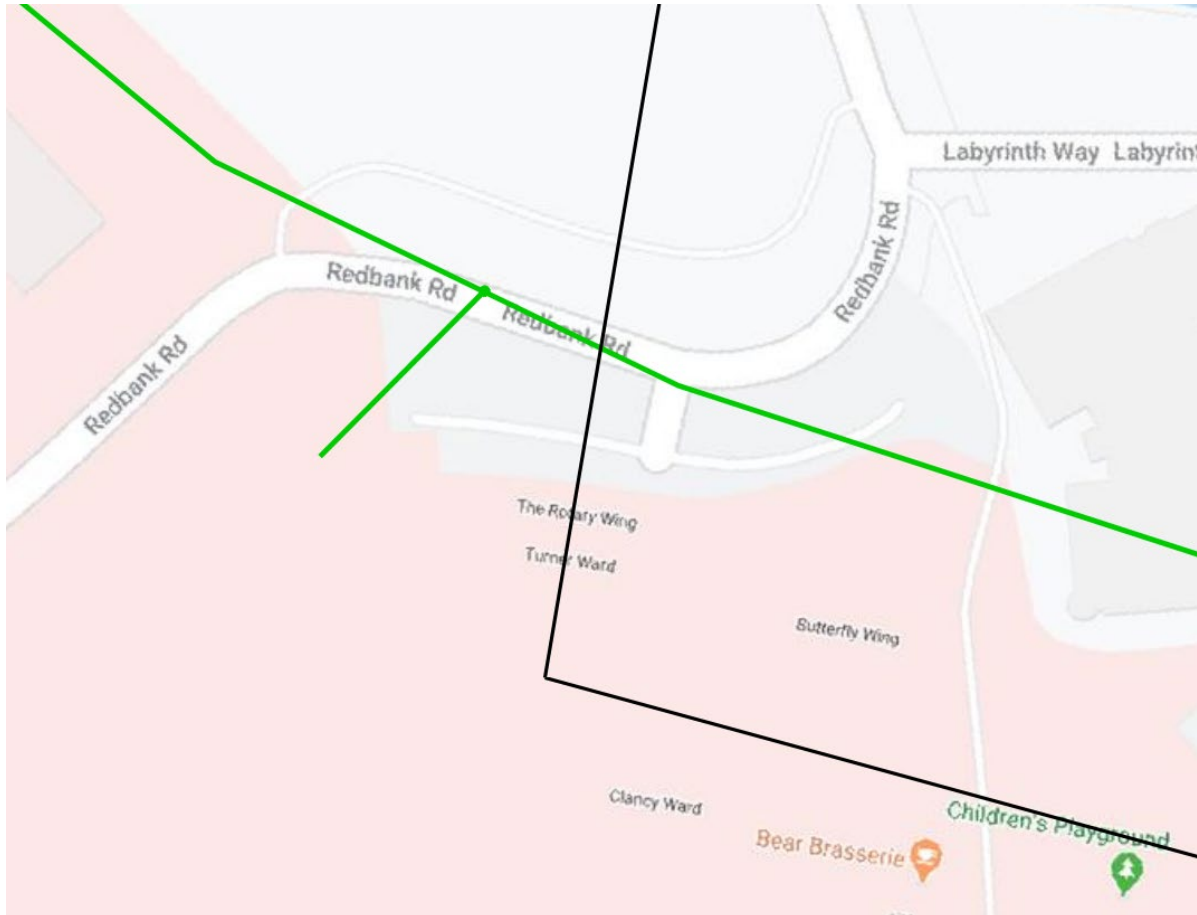


Figure 3.1: Existing PIPE Networks duct network

The existing telecommunications service (TPG Soul Pattinson Telecoms) reticulates through the proposed MSCP footprint and is likely to be affected by construction works. The existing telecommunications service will need to be diverted outside the MSCP construction footprint.

3.2 Proposed Telecommunication Infrastructure

The new MSCP building will be connected to an existing Communications Room on the existing Children's Hospital at Westmead ICT network.

3.3 Construction Period Services Continuity

Diversion of the existing telecommunications service will be required prior to construction of the new MSCP.

This may cause a minor disruption to telecommunication carrier services to the existing Children's Hospital at Westmead buildings.



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