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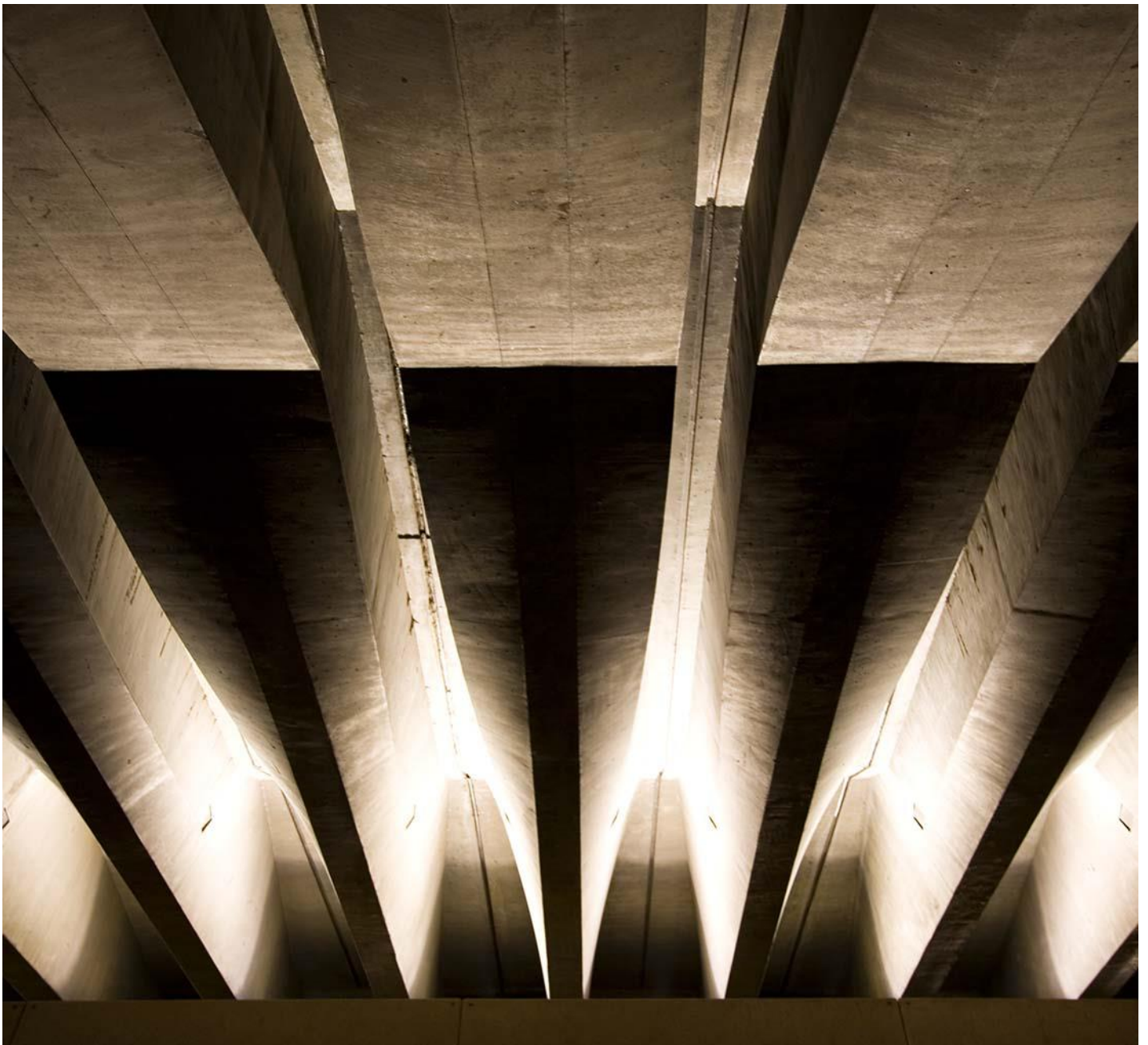
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BUILDING SERVICES

STEENSEN VARMING



Childrens Medical Research Institute Power Supply Upgrade Works Infrastructure Requirements and Utility Assessment



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1.0 Introduction

Steensen Varming has been engaged by the Children's Medical Research Institute (the Applicant) to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements and in support of the State Significant Development Application for alterations and additions to the Children's Medical Research Institute on the Westmead Hospital Campus.

1.1 Project Description

This report relates to the works being undertaken by CMRI to upgrade the existing power supply for the CMRI building.

1.2 Scope of Electrical Services

This report relates to the works being undertaken to upgrade the existing power supply for the CMRI building. The works from an electrical perspective include the installation of a new 2000kVA kiosk transformer, a new submain supply from this kiosk transformer to existing stage 1 main switchboard and the diversion of loads from the exiting stage 0 main switchboard to the existing stage 1 main switchboard. In addition it includes the decommissioning of the existing kiosk transformer, stage 0 main switchboard and existing stage 0 backup generator. Refer to appendix A of this report for a sketch of the assumed scope.

1.3 Description of the site and Locality

The site is located at 214 Hawkesbury Rd, Westmead NSW within the City of Parramatta Local Government Area (LGA), approximately 2km northwest of Parramatta CBD and 21km northwest of Sydney CBD. The site is legally known as Lot 101 in Deposited Plan 1119583.

The site is located within the Westmead Health Precinct and directly adjoins several medical research and clinical services buildings including the Westmead Hospital, the Children's Hospital at Westmead (CHW), the Kids Research building (KR) (where the proposed VVMF is located), the Westmead Institute for Medical Research (WIMR) and the site of the future Paediatric Services Building (PSB) and the new KIDSPARK (CHW forecourt). The project location is indicated on the images on the next page.

As noted above, the site is located within the WSLHD which is in the Eora Region. The traditional owners of the land are the Darug People, one of the twenty-nine clans of the great Eora Nation.

The land that is the subject of the site as shown in Figure 2 below is owned by the Health Administration Corporation (HAC) and is leased to CMRI. Note the site boundary and leasehold boundary are the same.

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CMRI leases the site from the Health Administration Corporation (HAC). They currently have a 50-year lease term due for renewal in June 2042 for an additional 50 years.



Existing Site Plan



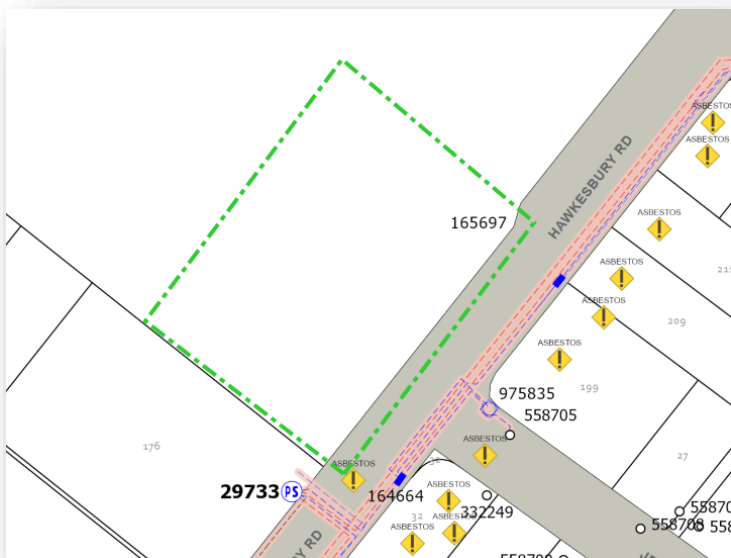
Site and Immediate Context

2.0 Power Supply

2.1 Review of Existing Infrastructure

2.1.1 Endeavour Energy

The DBYD results indicate that no Endeavour Energy services currently exist within the CMRI building footprint. No Endeavour Energy services are impacted upon by the proposed works.



Endeavour Energy Cable Plan - DBYD

2.2 Mitigation Measures

No specific mitigation measures are deemed necessary due to the works required to the electricity network as a result of the development. The works are not considered to be of a significant impact.

2.3 Building Requirements and Proposed Works

The CMRI building has its power supplied directly from the Westmead electrical network. Westmead Hospital is a high voltage customer and therefore owns and maintains their HV network rather than Endeavour Energy. The works therefore have no impact on the Endeavour Energy network. No Endeavour Energy infrastructure is required to facilitate the works. Staging of works relates only to the private work undertaken within the building, there is no staging related to authority infrastructure.

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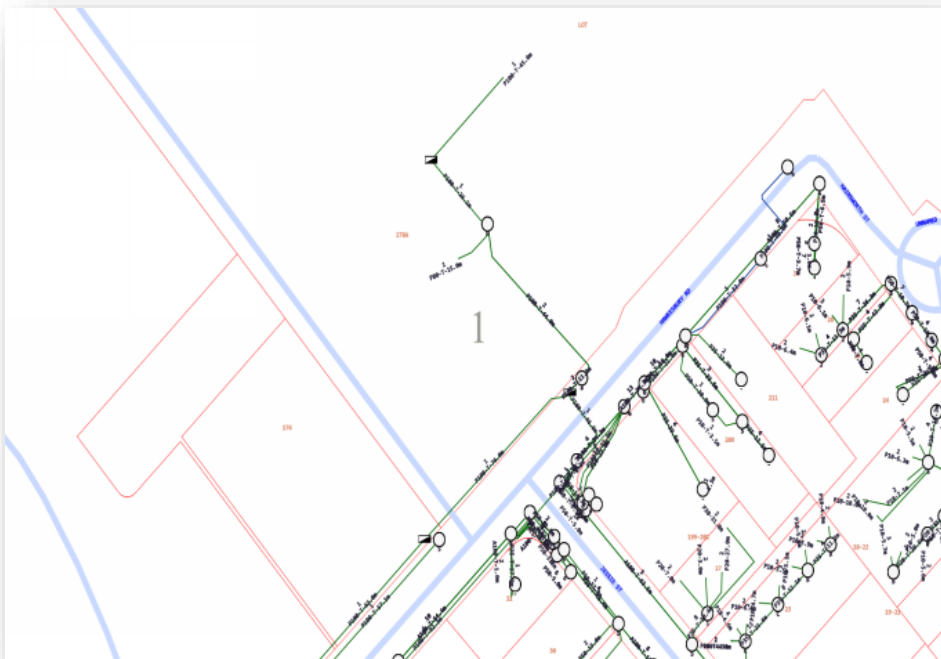
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3.0 Telecommunications

3.1 Review of Existing Infrastructure

3.1.1 NBN

DBYD maps indicate presence of NBN infrastructure in the vicinity of the building and running into the building for their existing NBN service. The scope of works to which this SSDA report relates to has no impact on this existing authority service. No NBN infrastructure is required to facilitate the works.



NBN Cable Plan - DBYD

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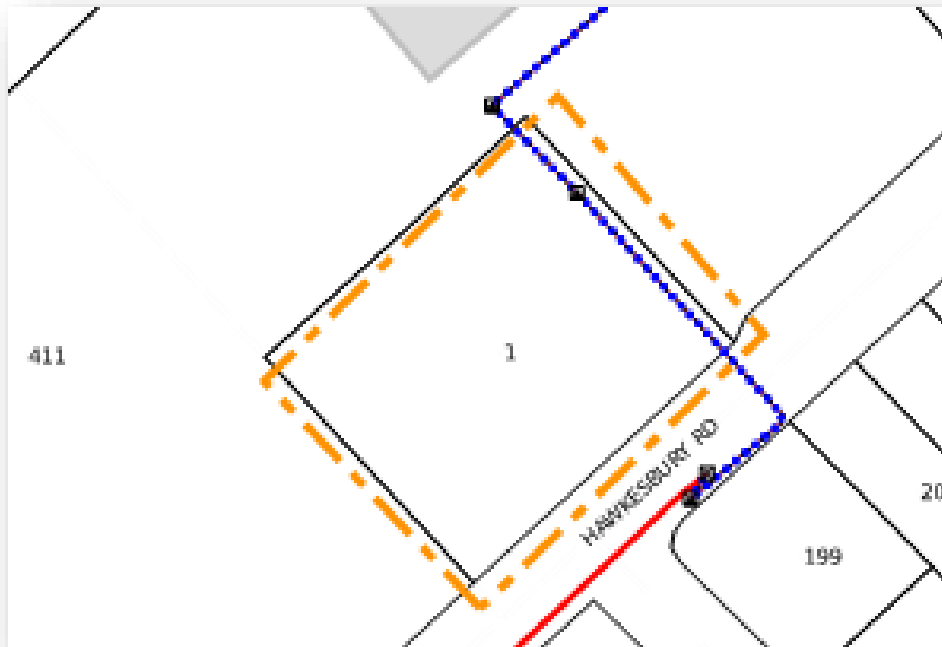
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3.1.2 Optus

DBYD maps indicate presence of Optus infrastructure in the vicinity of the building and running into the building for their existing NBN service. The scope of works to which this SSDA report relates to has no impact on this existing authority service. No Optus infrastructure is required to facilitate the works.



Optus Cable Plan - DBYD

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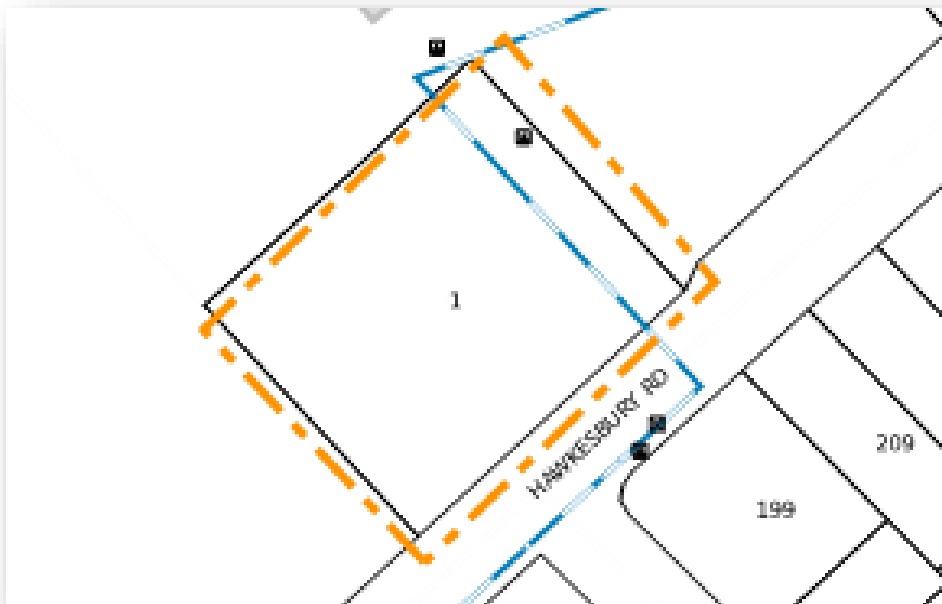
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3.1.3 Uecomm

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Uecomm Cable Plan - DBYD

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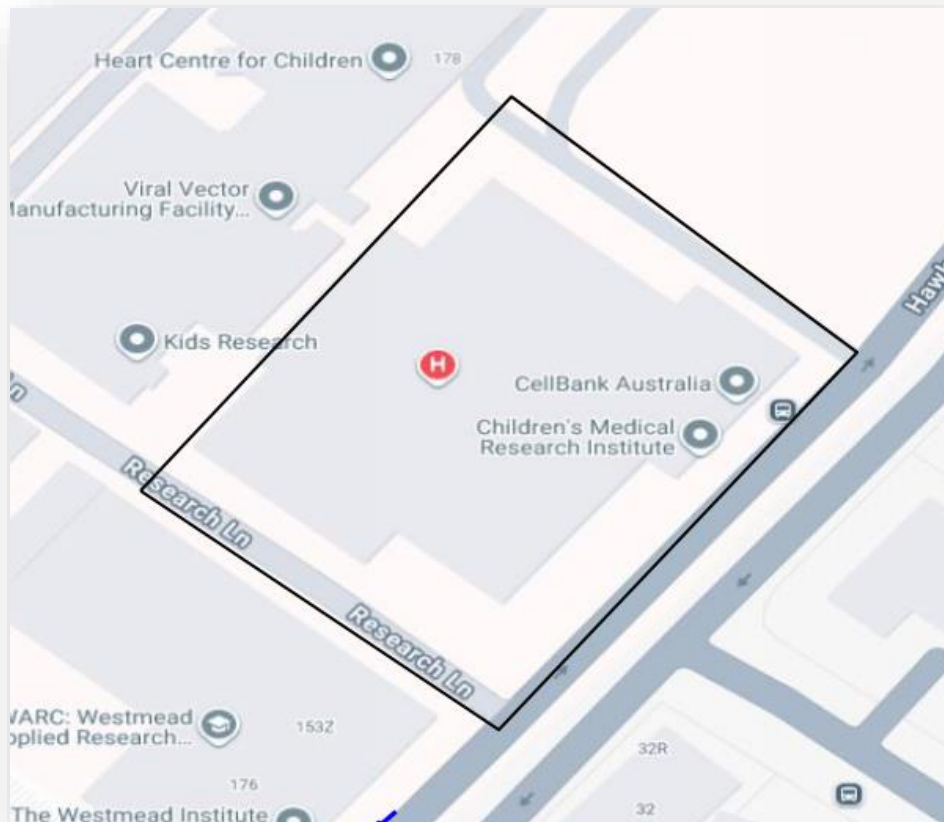
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3.1.4 TPG

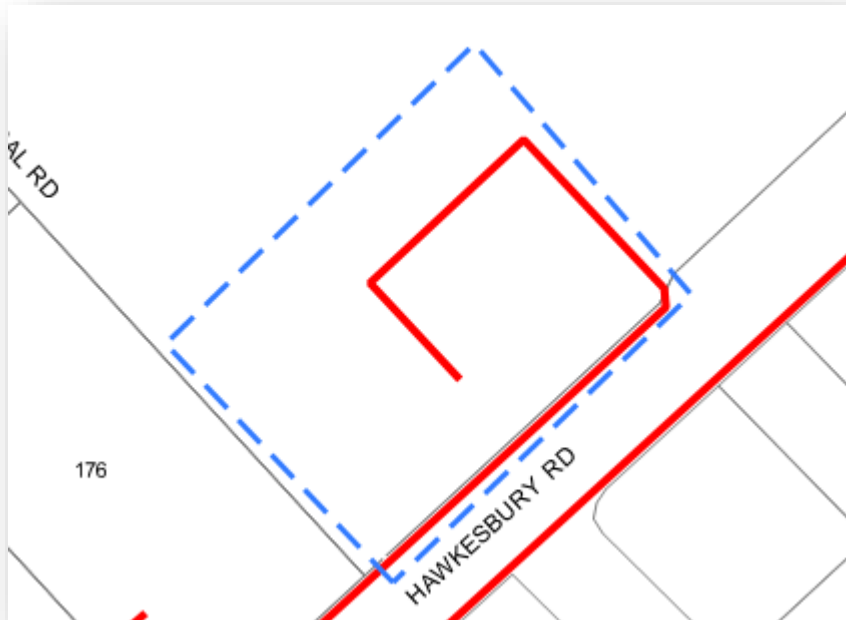
DBYD maps indicate there is no presence of TPG infrastructure either in vicinity or within the building. The scope of works to which this SSDA report relates to has no impact on this existing authority service. No TPG infrastructure is required to facilitate the works.



TPG Cable Plan - DBYD

3.1.5 AARNet

DBYD maps indicate presence of AARNet infrastructure in the vicinity of the building and running into the building for their existing NBN service. The scope of works to which this SSDA report relates to has no impact on this existing authority service. No AARNet infrastructure is required to facilitate the works.



AARNet Cable Plan - DBYD

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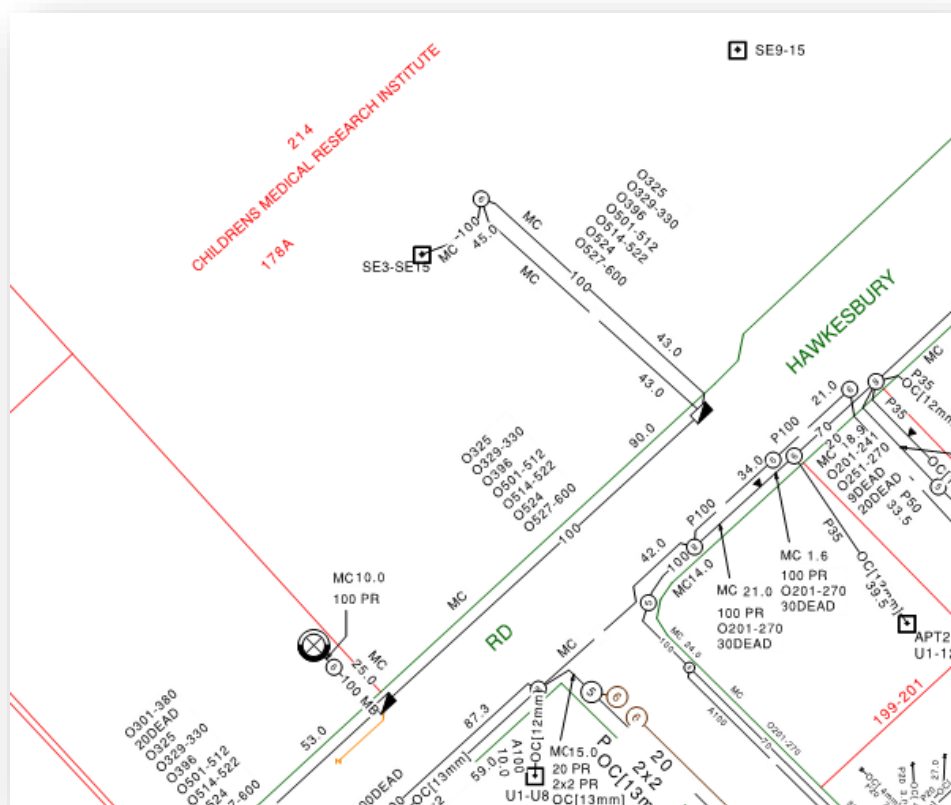
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3.1.6 Telstra - Copper

DBYD maps indicate presence of Telstra copper infrastructure in the vicinity of the building and running into the building for their existing NBN service. The scope of works to which this SSDA report relates to has no impact on this existing authority service. No Telstra infrastructure is required to facilitate the works.



Telstra Cable Plan - DBYD

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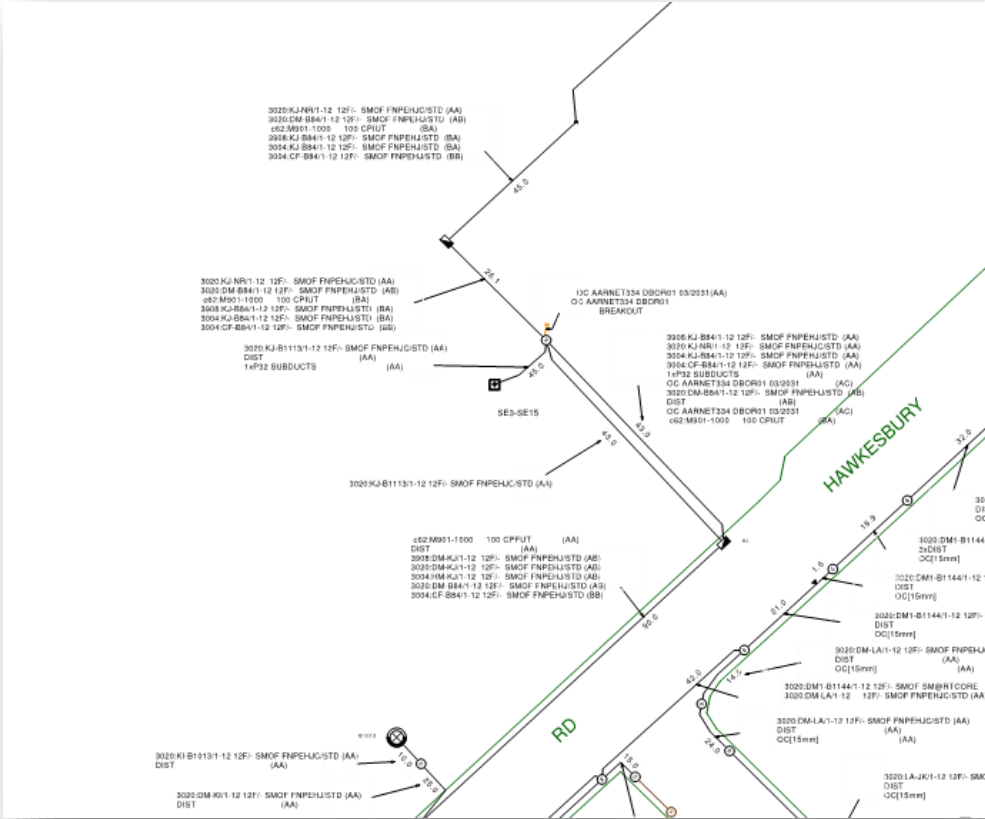
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3.1.7 Telstra - Fibre

building and running into the building for their existing NBN service. The scope of works to which this SSDA report relates to has no impact on this existing authority service. No Telstra infrastructure is required to facilitate the works.



Telstra Main Cable Plan - DBYD

3.2 Mitigation Measures

existing telecommunications services that run near or within the building no specific mitigation measures are deemed necessary as a result of the development. The works are not considered to be of a significant impact.

3.3 Building Requirements and Proposed Works

infrastructure associated with the project.

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4.0 Appendix A – Electrical Scope Sketch

New 150mm PVC conduit

HV ring main loop, existing spare conduit

Wall behind the substation to be 120/120/120 FRL. Each substation sitting at a distance of 1.2m between them

WIMR Substation

HV feed from WIMR

Existing Stage 0 Main Switchroom (MSB), 150kVA generator working at 40% loading during peak load

Existing 1000kVA Sub station

New cable trays for stage 2B submains to be fed from Stage 1 MSB

Minimum distance of 1500mm from wall to Transformer

New 2x 2000kVA Sub Stations, 3900m (L)x 2090mm(W)

Tee-Off Boxes installed at High level during stage X2 for connection of existing submains:

- Central Alarm Monitoring Panel
- Access Control Panel
- Main Security Alarm Panel CB3
- Fire Hose Reel Pressure Unit
- FIP
- DB 1DE
- DB 1A(E)
- DB 1C(E)

New submains pulled from the Tee-Off boxes to MSB in stage 1

LV Cable route to be re-installed after works for Stage 2B, newly installed cable trays, size of cable tray TBC

Existing Stage 1 Main Switchroom (MSB), 400kVA generator working at 40% loading during peak load

01 LEVEL 0 FLOOR PLAN

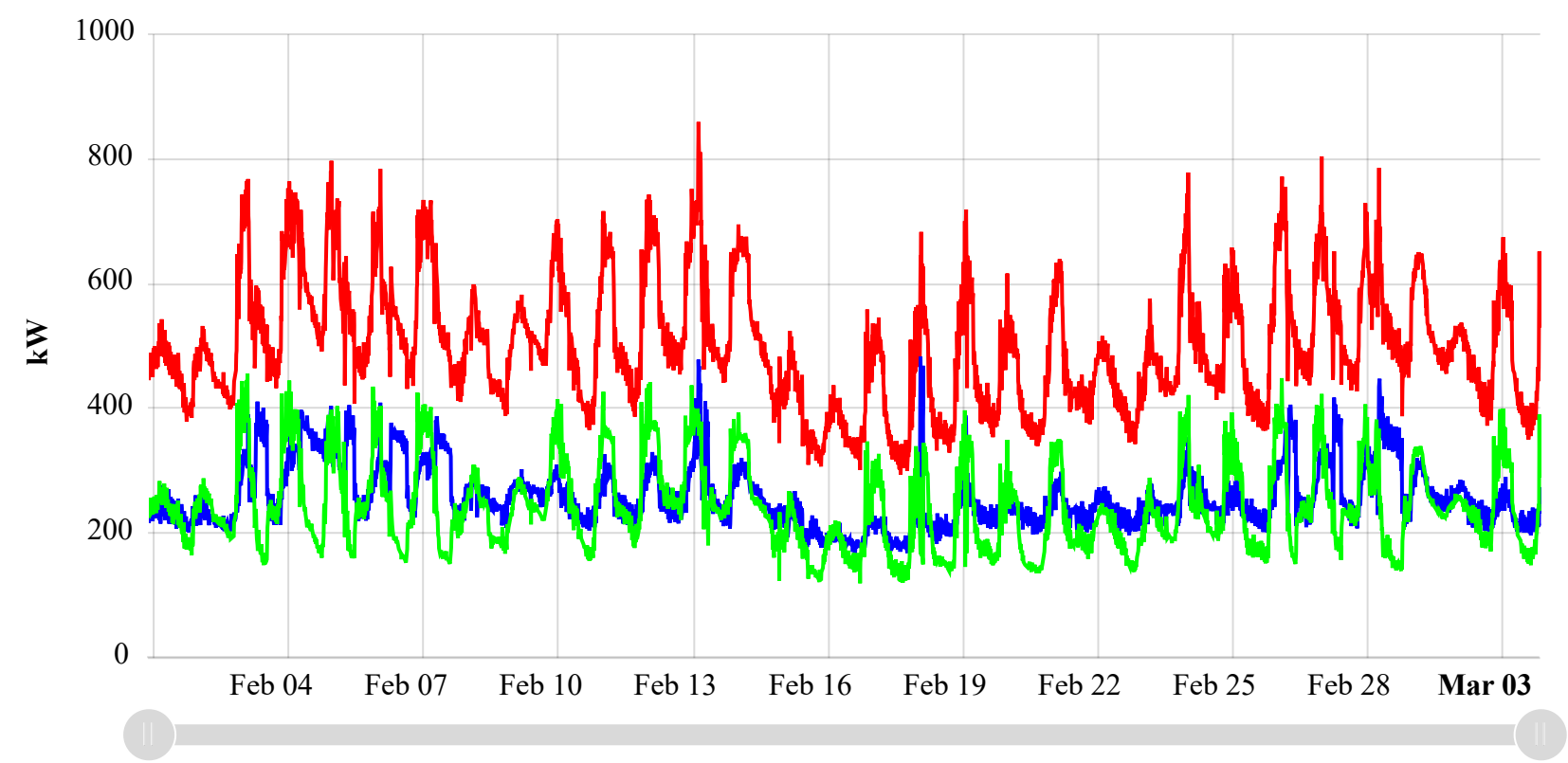
PROJECT CMRI Area Calculations
LOCATION 214 Hawkesbury Road Westmead, NSW 2145
CLIENT Children's Medical Research Institute

Drawing Title - Level 0 Area Calculations
Drawing No. - 25026-AH002 / 05
Scale - 1:300 @ A3
Date Drawn - Dec 2020
SCIENTIFIC INTERIORS DRAWING REFERENCE
25026-AH002 / 05
DATE OF PLOT: 17 November 2020
CHECKED
VERIFIED

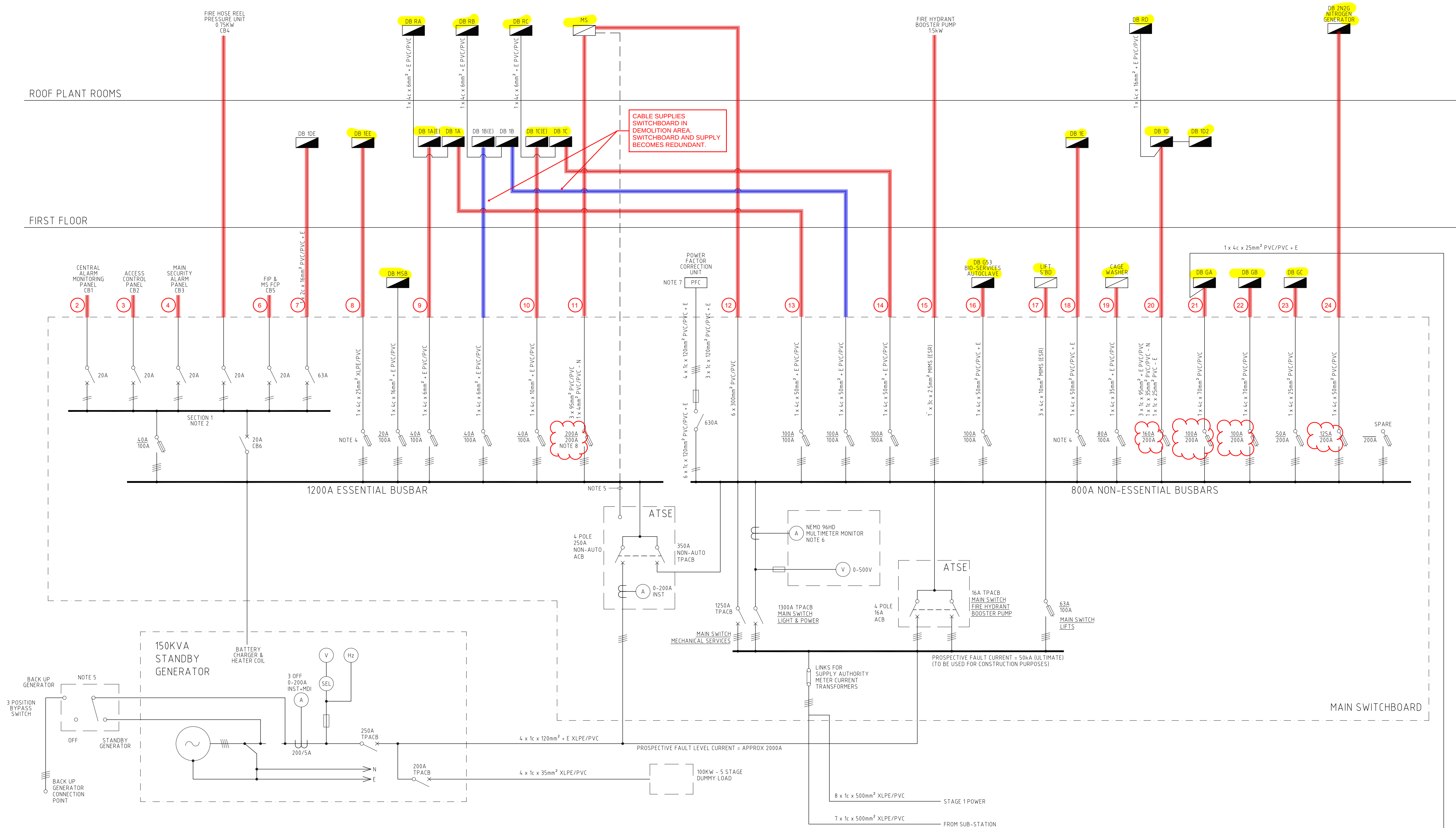
Ground Floor Modbus (1002) on [CMRI]

Combined_Trend (1002.MT10)

Left: ■ [Combined_Power](#) ■ [Stg1_Mains_Power](#) ■ [Stg0_Mains_Power](#)



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Rev.	Description	Date
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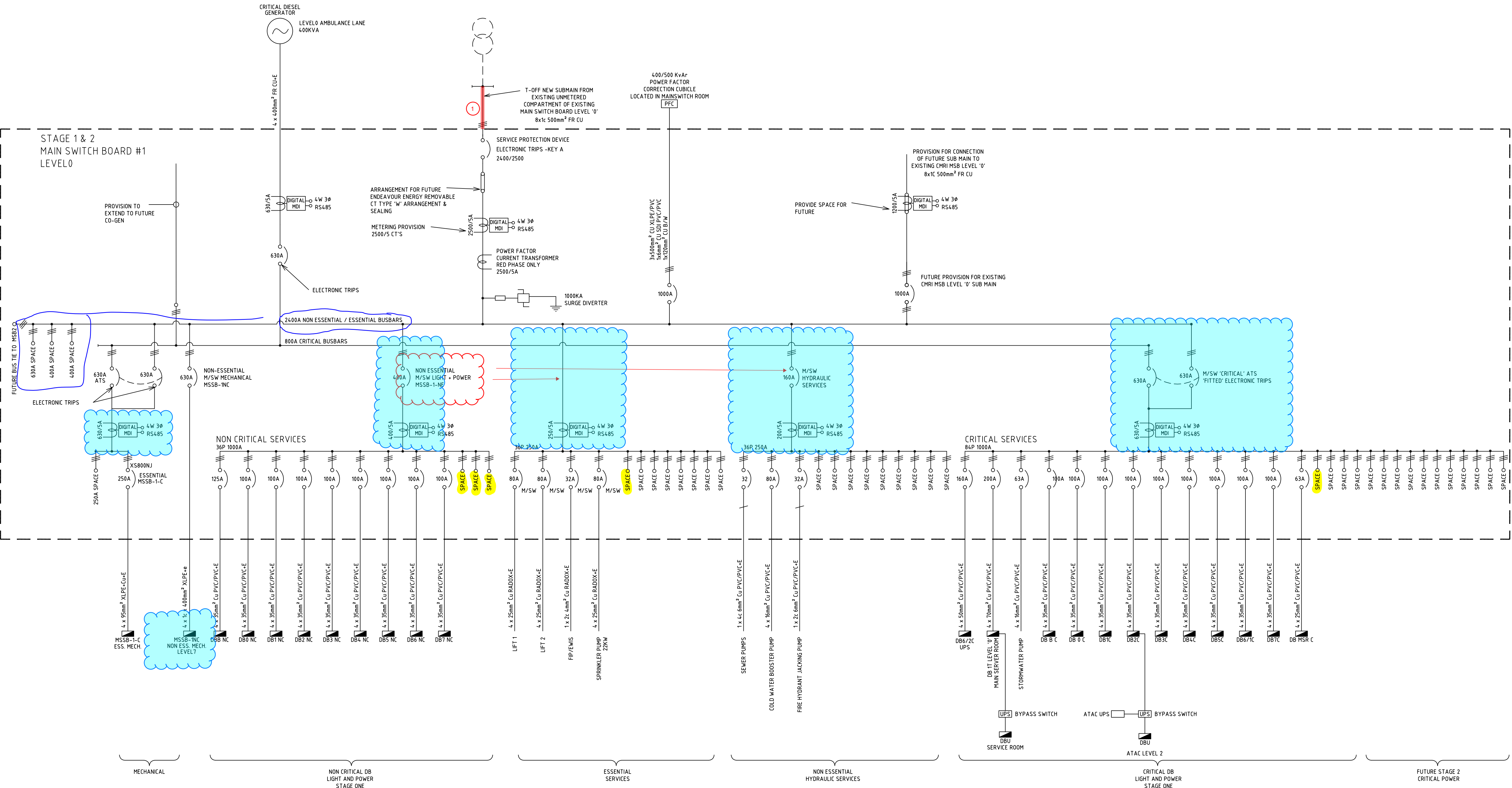
TITLE
ELECTRICAL SERVICES
SINGLE SCHEMATIC DIAGRAM

DRAWN	DESIGNED	CHECKED	SCALE	DATE
CF			NTS	17.1.17
NO IN SET	DRAWING NUMBER			ISSUE
1	E00			AB

Stage 0 MSB

KEB SLD

NOTE:
1.FOR FUTHER DETAILS SEE AS-INSTALLED DWG 7375/1 Rev.G 20.06.14



STAGE 1 MSB TO GEN SET INTERFACE SERVICES
GEN SET 400kVA(LOCATED AMBULANCE LANE LEVEL 0)

LOCATION	GENERAL CONTROL PANEL
MSB (STAGE 1)	1x2.5mm ² TWIN GEN START/STOP SIGNAL FROM ATS 1 "CRITICAL POWER"
MSB (STAGE 1)	1x2.5mm ² TWIN GEN START/STOP SIGNAL FROM ATS "MECHANICAL SERVICES"
DB MSR C	1x6mm ² 2C+E AUX POWER SPARE 1x2.5mm ² 2C+E

MAIN SWITCHBOARD
SINGLE LINE DIAGRAM

N.T.S @ A1
N.T.S @ A3

09.05.2013

E-AI-20

AI

AS-INSTALLED