NEW EDGE GROUP
ELECTRICAL | DATA | HVAC

DESIGN INTENT STATEMENT FOR REF SUBMISSION

Date: 6th DECEMBER 2024

To: Marie Trarieux
BESIX Watpac
Level 24, 44 Market Street,
Sydney, NSW 2000

SUBJECT PREMISES: ST GEORGE HOSPITAL – REFURBISHMENT

This document outlines the electrical design intent for the existing hospital buildings, covering services such as electrical, lighting, communications, security, audio-visual, and nurse call systems. It provides a high-level overview of the design approach to the areas listed below.

Overall Description of Works:

1. ***Internal refurbishment works within existing hospital buildings.***
    a. ***Burt Nielson Wing Level 2 – Paediatrics and CYF***
    b. ***Clinical Services Building & Services Block Ground Floor – Back of House***
    c. ***Ward Block Level 2 – Multi-faith, Patient Transit and AAU***
    d. ***Tower Ward Block Level 4 – Renal***
    e. ***Tower Ward Block Level 6 – Surgical***
    f. ***Prichard Wing Various Levels – Sexual Health, Antenatal and Gynaecology***
    g. ***Acute Services Building Level 7 – Palliative Care***
2. ***Minor extension for a new Clinical Waste building within the hospital campus and new covered walkways***
3. ***Services upgrade/ modification works & new services installations as specified in this certification***

Specific Electrical Services Works:

1. ***Internal refurbishment works within existing hospital buildings.***

   a. ***Burt Nielson Wing Level 2 – Paediatrics and CYF***

      The Paediatric refurbishment is a fit-out project in the level 2 of the Burt Nielson Wing building. Internal reconfiguration works will be done to the existing layout.

      The electrical services DB1 (essential and non-essential) will be retained with existing circuits to be reconfigured and new circuits installed. Power meters and Building Management System (BMS) data outlets will be provided for both the essential chassis and non-essential chassis. A wall mount 3kVA Riello UPS rack in the Clinical Workstation to provide UPS fed power outlets in the room.

      Existing fluorescent lighting in the scoped areas will be replaced with new LED lighting with 240V controls. Meeting room will be fitted with trailing edge 240V dimming system.

      The existing emergency lighting system will remain as existing and extended on. Fittings deemed in good condition with be utilised and new fittings supplied as required.

      Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

      Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

      New audio video systems will be provided in the Staff room and Meeting Room meet e-Health meeting room requirement.

      Nurse Call services will include a new 2G stand-alone nurse call system installed to rooms 20602, 20605, 20606, 20701, 20703, 20704, 20705, 20706, 44120, 44121, 44122 and a new annunciator.

b. Clinical Services Building & Services Block Ground Floor – Back of House

Partial refurbishment of the existing Pathology Department in the Clinical Services Building (CSB) Ground Floor, extension of the new Ground Floor Tunnel from the ACB to the CSB. Internal reconfiguration works will be done to the existing layout.

The electrical services DB-GBN (non-essential) and DB-GBE (essential) serve the Plant Room area, DB-GAN (non-essential) and DB-GAE (essential) serve the Collect, Path Treatment, Clinical and Corridor 1206. These DBs will be retained with existing circuits to be reconfigured and new circuits installed. NEG assume the existing submains are fit for purpose. The following could also affect submain sizing and are to be confirmed:

- Pricing for additional scope for this level has been submitted based on BWTP-VPR-000012 and if proceeding, may affect sizing requirements.
- Design only for areas under BWTP-VDRCT-000027 may affect sizing if instructed to proceed with additional scope.

Existing power meter within DB-GBE will be retained. New power meter and BMS data outlets will be provided for DB-GBN, DB-GAN and DB-GAE in an external enclosure within the electrical cupboard. Existing lighting circuits affected by scoped area, which are currently protected by MSBs, will be replaced with RCBOs.

New LED light fittings will be provided except where areas that are recently upgraded with new LED light fittings and existing LED light fittings that are deemed in good condition for reused. Lighting control will be 240V type and trailing edge 240V dimming system in the Meeting Room which is part of the expanded scope.

The existing Clevertronics “Cleverfit” emergency lighting system will remain as existing. Fittings deemed in good condition will be utilised and new Clevertronics L10 emergency Hive fittings will be installed where required. Meeting room is designed with a new audio video system to meet e-Health meeting room requirement.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

c. Tower Ward Block Level 2 – Multi-faith, Patient Transit and AAU

Refurbishment of some of the rooms of the existing patient area of the Tower Ward Block Level 2 West Wing (TWB L2W) for the new Multi-Faith and AAU units. Internal reconfiguration works will be done to the existing layout.

The electrical services DB-2CE (essential) appears at capacity and will be replaced in line with the tender documents. DB-2C (non-essential) does have capacity however in line with the tender documents, will be replaced. On completion of submitted design, NEG will need to audit the existing DB schedule to confirm current sub-main sizing is complaint to today's standards. This is currently to be confirmed and is a potential latent issue.

The rooms within the scoped area are repurposed with new functionality and wall configurations. Existing circuits will be assessed for their suitability for reuse, and new circuits will be installed as necessary. Existing power and lighting will remain as existing. GPOs, switches and light fittings deemed in good condition will be utilised and new fittings supplied as required. Lighting control will be 240V type and trailing edge 240V dimming system will be provided in the Meeting Room and Interview Room.

The existing Clevertronics "Cleverfit" emergency lighting system will remain as existing. Fittings deemed in good condition with be utilised and new Clevertronics L10 Hive fittings be installed for additional emergency lighting as required.

New audio video system will be provided in the Multifaith Room, Meeting Room, Reception, Waiting area and Staff Room.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

Nurse Call services will include a new 2G stand-alone nurse call system installed to rooms 22206, 22205, 22105, 22217, 22211, 22212, 22107, 22115, 22201, 22202, 22222, 22223,22107 and a new annunciator.

d. Tower Ward Block Level 4 – Renal

Upgrade of the existing Renal Unit for additional Consult Rooms and Office areas. Internal reconfiguration works will be done to the existing layout.

The electrical services DB-4A (non-essential) and DB-4AE (essential) will be retained. Circuits will be reconfigured as required and new circuits installed for the refurbishment scope. On completion of submitted design, NEG will need to audit the existing DB schedule to confirm current sub-main sizing is complaint to today's standards. This is currently to be confirmed and may be a potential latent issue. The following could also affect submain sizing and to be confirmed:

- Pricing for additional scope for this level has been submitted based on BWTP-VPR-000012 and if proceeding, may affect sizing requirements.
- Design only for areas under BWTP-VDRCT-000027 may affect sizing if instructed to proceed with additional scope.

New power meters and BMS data outlets will be installed for both DB-4A and DB-4AE within external enclosures located in their respective electrical cupboards. Existing lighting circuits affected by scoped area, which are currently protected by MCBs, will be replaced with RCBOs.

Existing circuits will be assessed for their suitability for reuse, and new circuits will be installed as necessary. Existing power and lighting will remain as existing. GPOs, switches and light fittings deemed in good condition will be utilised and new fittings supplied as required. Existing fluorescent lighting in the scoped areas will be replaced with new LED lighting with 240V controls.

The existing Clevertronics "Cleverfit" emergency lighting system will remain as existing. Fittings deemed in good condition with be utilised and new Clevertronics L10 Hive fittings to be installed for additional emergency lighting where required.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

Nurse Call services will include an extension of the current 2G stand-alone nurse call system installed to rooms 44104, 44105, 44108, 44109, 44111, 44101 44113, 44117, 44118, 44120, 44121, 44122.

e. Tower Ward Block Level 6 – Surgical

Renovation of the existing gym to be aligned with the needs of the Surgical Rehab and providing a 4-bed IPU room. Internal reconfiguration works will be done to the existing layout.

The electrical services DB-6A (non-essential) and DB-6AE (essential) will be retained. Circuits will be reconfigured as required and new circuits installed for the refurbishment scope. On completion of submitted design, NEG will need to audit the existing DB schedule to confirm current sub-main sizing is complaint to today's standards. This is currently to be confirmed and a potential issue. The following could also affect submain sizing and to be confirmed:

- Pricing for additional scope for this level has been submitted based on BWTP-VPR-000012 and if proceeding, may affect sizing requirements.
- Design only for areas under BWTP-VDRCT-000027 may affect sizing if instructed to proceed with additional scope.

New power meters and BMS data outlets will be installed for both DB-6A and DB-6AE within external enclosures located in their respective electrical cupboards. Existing lighting circuits affected by scoped area, which are currently protected by MCBs, will be replaced with RCBOs.

Existing circuits will be assessed for their suitability for reuse, and new circuits will be installed as necessary. Existing power and lighting will remain as existing. GPOs, switches and light fittings deemed in good condition will be utilised and new fittings supplied as required. Existing fluorescent lighting in the scoped areas will be replaced with new LED lighting with 240V controls.

The existing Clevertronics "Cleverfit" emergency lighting system will remain as existing. Fittings deemed in good condition with be utilised and new Clevertronics L10 Hive fittings be installed for additional emergency lighting where required.

New audio video system will be installed in the Gym Room.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

Nurse Call services will include an extension of the current 2G stand-alone nurse call system installed to rooms 66101, 66102, 66103.

f. Prichard Wing Various Levels – Sexual Health, Antenatal and Gynaecology

The Prichard Wing refurbishment is a fit-out project in Ground Level, Level 1, Level 2 and Level 3 of the Prichard Wing building. Internal reconfiguration works will be done to the existing layout.

The electrical services DB-PG/2, DB-PG1/2, DB-PG2/2 and DB-PG3/2 appears at capacity and will be replaced in line with the tender documents. On completion of submitted design, NEG will need to audit the existing DB schedules to confirm current sub-main sizing is complaint to today's standards. This is currently to be confirmed and a potential latent issue. The following could also affect submain sizing and to be confirmed:

- Pricing for additional scope for this level has been submitted based on BWTP-VPR-000012 and if proceeding, may affect sizing requirements.
- Design only for areas under BWTP-VDRCT-000027 may affect sizing if instructed to proceed with additional scope.

The Prichard Building does not have an essential supply, as such all supplies will be non-essential.

Existing circuits will be assessed for their suitability for reuse, and new circuits will be installed as necessary. Existing power and lighting will remain as existing. GPOs, switches and light fittings deemed in good condition will be utilised and new fittings supplied as required. Areas without false ceiling will be provided with surface mounted light fittings. Lighting control will be 240V type and trailing edge 240V dimming system will be provided in the Meeting Rooms, Interview Room and Ultrasound Room.

The existing Clevertronics "Cleverfit" emergency lighting system will remain as existing. Fittings deemed in good condition with be utilised and new Clevertronics L10 Hive fittings be installed for additional emergency lighting as required.

New audio video system will be installed in the Meeting Rooms, Staff Rooms, Reception and Waiting area.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

Nurse Call services will include a new 3G system nurse call system connected to main hospital nurse call servers installed to rooms G5210, G5209, G5208, G5207, G5204,

NEW EDGE GROUP
ELECTRICAL | DATA | HVAC

G5202, G5201, G5224, G5222, G5217, G5216, 15101, 15105, 15203, 15205, 15206, 15207, 15208, 15209, 15210, 15211, 15212, 15213, 15214, 15215, 25104, 25105, 25205, 25206, 25222, 35202, 35203, 35204.

g. Acute Services Building Level 7 – Palliative Care

Minor refurbishment to the existing IPU beds to cater for the requirements of the Palliative Care Unit. Internal reconfiguration works will be done to the existing layout.

The electrical services DB-L7-C-N1 and DB-L7-C-E2 non-essential and essential DBs have spare capacity and will remain as existing. New circuits will be installed as required.

New DALI LED light fitting will be installed in the Quiet Room and Subwait.

The existing Legrand emergency lighting system will remain as existing. Fittings deemed in good condition with be utilised and new Clevertronics L10 Hive fittings be installed for additional emergency lighting as required.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

Nurse Call services will include an extension of the existing 3G system to room 77202.

2. ***Minor extension for a new Clinical Waste building within the hospital campus and new covered walkways***

Given the limited scope in the Clinical Waste area, the existing cabling will be utilised and extended on to suit the new layout. GPOs, switches and light fittings deemed in good condition will be utilised and new fittings supplied as required.

New canopies for the existing walkway linked between the CSB and Services Centre, adjacent to the Receiving area in the Loading Dock. The DB-ESSENTIAL and DB-G will be retained. A new power meter and BMS data outlets will be provided for DB-ESSENTIAL.

The existing Clevertronics “Cleverfit” emergency lighting system will remain as existing. Fittings deemed in good condition with be utilised and new Clevertronics L10 Hive fittings be installed for additional emergency lighting as required.

Existing Security LHD campus systems to be expanded to suit new floor layout. This including the Integriti Security Management System, Genetec Video Management System and Jacques IP Intercommunication System.

Existing Wireless Access Point (WAP) will be retained, and data outlets will be provided to suit new room layouts. Removal of old and upgrade to new Cat6A communications cabling.

The Refurbishment Works (all items) will be compliant with normal engineering practice, and will meet the requirements of the National Construction Code (Building Code of Australia), the Environmental Planning and Assessment Regulation, relevant Australian Standards and relevant conditions of the Planning Consent.

In particular, the design will be in accordance with the following:

- NCC 2019 Amendment 1 Section D3.7: Hearing Augmentation
- NCC 2019 Amendment 1 Sections E4.4, E4.5 & E4.8: Emergency & Exit Lighting
- NCC 2019 Amendment 1 Section F4.4: Artificial Lighting
- NCC 2019 Amendment 1 Section J6: Artificial Light & Power
- NCC 2019 Amendment 1 Section J8: Facilities for Energy Monitoring
- AS/NZS 3000:2018: Electrical Wiring Rules
- AS/NZS 3003:2018: Electrical Installations in Patient Areas
- AS/NZS 1680.0:2009: Interior Lighting Safe Movement
- AS/NZS 2293.1:2018: Exit & Emergency Lighting
- NSW Health Engineering Services Guidelines: 2017
- NSW Health Cabling and Equipment Room Standard: Version 2.1
- NSW Protecting People and Property Manual: 2013

NEW EDGE GROUP
ELECTRICAL | DATA | HVAC

I confirm that I am an appropriately qualified and competent person in this area and as such can certify that the design will be carried out as per the design intent detailed within this certificate.

Full Name of Designer:	Zacharia Dalleh
Qualifications:	DEP 0002369
Address of Designer:	5/24 Daniel Street, Wetherill Park NSW 2164
Business Telephone No:	02 9725 5555
Name of Employer:	New Edge Electrical Pty Ltd

Yours sincerely,

Signature

Name: Zacharia Dalleh
Engineering Director