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# **HORNSBY HOSPITAL ADULT, CHILD & ADOLESCENT MENTAL HEALTH UNIT**

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## **ELECTRICAL INFRASTRUCTURE REPORT** **June 2011**



## **1.0 General**

This report has been compiled following investigations undertaken on site and based on current building planning for the Adult, Child and Adolescent MHU development.

This report will deal with the new facilities.

## **2.0 Electrical Supply**

The new Adult, Child and Adolescent MHU will require the establishment of a new kiosk style substation preferably along either the Palmerston Rd or Lowe Rd frontages.

Existing major electrical switchboard infrastructure on the site is too distant and has insufficient capacity to adequately cater for the proposed development.

A single Padmount transformer of 1,000kVA will be required to be dedicated to the new building.

## **3.0 Generator Supply**

The new Adult, Child and Adolescent MHU will require the establishment of a new dedicated diesel generator to supply essential lighting , power, communications , fire , security and mechanical services equipment in the event of a general Supply Authority power failure.

The new generator system shall be capable of seamless(No Break) transfer of load to/from the generator system.

Existing diesel generators on the site have insufficient capacity to supply the proposed new development.

Existing generator power supply to the old emergency department will be sufficient for its possible reuse to totally or partly accommodate the CAMHS unit if this becomes necessary under the project.

## **4.0 Communications**

A new fibre optic cable and multicore copper telephone backbone cable will be installed between the new Adult, Child and Adolescent Mental Health Unit Building Distributor rack and the existing Hornsby Hospital Campus Distributor /PABX room utilising existing spare underground conduits installed under the MHICU project.



## **5.0 Fire Detection System**

The Hornsby Hospital is fitted with an addressable Fire Detection system. This addressable system will be expanded to serve the new Adult, Child and Adolescent Mental Health Unit complete with all necessary hardware and software upgrades/modifications.

## **6.0 Duress Alarm System**

The Hornsby Hospital currently operates an Ascom Nira wireless duress alarm system. This system currently serves a number of other buildings on the site including the Emergency Dept, MHICU, and Lindsay Madew buildings.

This existing wireless system will be extended to cover the new Adult, Child and Adolescent MHU development.

Additional wireless pendants will be provided under the project to meet staffing requirements.

## **7.0 Security & Access Control System**

Hornsby Hospital currently operates a Honeywell PROWATCH Access Control system across the site.

The system consists of a combination of proximity card readers, electrical strikes, magnetic locks control panels etc installed to suit staffing and operational requirements of each specific department.

This existing Access Control system will be extended to service the new Adult, Child and Adolescent MHU development complete with hardware and software upgrades and alterations as required.

## **8.0 Closed Circuit Television (CCTV)**

The Hornsby Hospital currently operates a LAN based multivision Digital Video Recording (DVR) system.

This system allows continuous recording of images on DVRs installed either locally within departments or centrally located within Security offices.

CCTV cameras will be provided within the new Adult, Child and Adolescent MHU at locations both internally and externally to the buildings. Viewing of recorded images will be available at selected Write up/Nurse Station areas and at Hospital main Security office as appropriate.



The new DVRs installed within the Adult, Child and Adolescent MHU will be interfaced to the Hospital LAN infrastructure to allow for remote viewing of images by authorised persons only.

Existing CCTV services within areas to be refurbished will be altered and rearranged to suit new layouts and staff requirements in consultation with NSCCAHS Security department. Complete integration with the existing Hospital system will be maintained.

## **9.0 Exit & Emergency Lighting**

The Hornsby Hospital currently operates a Whitelite computer monitored emergency and exit lighting system complete with CATS 11 system software.

This existing system will be extended to service the new Adult, Child and Adolescent MHU development complete with hardware and software upgrades and alterations as required.

## **10.0 Nurse Call System**

The Hornsby Hospital currently operates an nurse call system across the majority of the existing buildings on the site.

This existing nurse call system will be expanded to service the new Adult, Child and Adolescent MHU development complete with hardware and software upgrades and alterations as required.