



# Case Study

## The Background

### Sutherland Hospital, NSW – Staged Emergency Lighting Upgrade

The Sutherland Hospital and Community Health Service is approximately half an hour's drive south of Sydney, in the suburb of Caringbah. Established in 1958, it is a major metropolitan hospital and teaching hospital with 375 inpatient beds. As with many hospitals, it has undertaken many extensions and renovations over the years, resulting in various emergency lighting products and systems being used within the building. These ranged from manually tested fittings to various automated systems. The Clevertronics Zoneworks XT HIVE system was first introduced to Sutherland Hospital in the Stage 1 upgrade and has proven to be the system of choice for Stage 2 works. ACIA Electrical Services was tasked with conducting this latest upgrade and the remaining building with XT HIVE.

Before the upgrades, the hospital's emergency and exit lighting systems were outdated and inconsistent with current standards. The existing lighting fixtures were inefficient, unreliable, and posed potential risks in the event of an emergency. Recognising the importance of maintaining a safe environment for patients, staff, and visitors, the hospital management invested in a modern, technologically advanced solution.

## The Challenge

Complete emergency lighting upgrades of large or multiple buildings require significant planning and budgeting and can sometimes be financially out of reach. Sutherland is no different, so the ability to incrementally upgrade was important. The biggest challenges for Sutherland were multiple systems, testing regimes, spare parts and replacement products and general support for the incumbent systems. Emergency lighting systems are notorious for being inoperable if they are not supported with training and know-how. Sutherland has been constantly challenged around baseline data, managing the constant maintenance of older NiCd battery-powered fittings, and maintaining testing and compliance records. The goal was to remove the burden around emergency and exit lighting compliance and reduce ongoing maintenance costs. Cameron from ACIA commented, "For something like emergency lighting, you must make it simple for installers and facility managers to understand. If it's complicated, compliance and testing won't happen without a whole heap of pain and money". "At the end of the day, Sutherland Hospital needs to have confidence that we are leaving them with a system that does what it is supposed to do and is supported when required". He added. >>

### Project Name

Sutherland Hospital

### Location

Caringbah, New South Wales

### Industry Application

Health

### Year

Completed June 2023

### Number of Fittings

808

### Contractor

ACIA Electrical Services

### Product Range

LP Premium Lithium

### Testing System

Zoneworks XT HIVE

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For Mark Deluca, Sutherland Hospital Engineering and Maintenance Manager, "Patient and staff safety are paramount to the Hospital. However, the challenge of rising emergency and exit light fitting failures meant that getting replacement parts was becoming more difficult, and maintenance costs continued to increase. We needed a reliable and easy solution within the constraints of a busy operating hospital".

## Solution

After carefully evaluating available options, the hospital upgraded its emergency and exit lighting systems to Clevertronics Zoneworks XT Hive technology. XT Hive offers several advantages over traditional systems, including:

- Advanced automatic-testing capabilities: XT Hive luminaires continuously monitor their performance and report issues in real-time, ensuring compliance and reliability.
- Energy efficiency: The LED technology used in LP Premium luminaires consumes significantly less energy and have a longer design life than previous emergency lighting, resulting in cost savings and reduced environmental impact.
- Easy installation and maintenance: Clevertronics' innovative design simplifies installation and maintenance tasks, minimising disruptions to hospital operations.
- Longevity and reliability: XT Hive luminaires are built to withstand the rigours of a healthcare environment and are backed by comprehensive warranties and lifetime support for peace of mind.

Stage 1 of the Sutherland Hospital Emergency Lighting upgrade was completed with Lithium Premium exit and emergency luminaires and a Zoneworks XT HIVE testing system with excellent results. The advantage of Zoneworks XT HIVE is that each new upgrade extends the system, allowing the hospital to continue building the system with less complexity and more certainty around emergency lighting compliance. "The support around commissioning and ensuring the system works 100% is vital in installing emergency lighting", says Cameron. "Support from vendors is critical as it ensures we deliver to Sutherland Hospital the best outcome, both installation-wise, the final outcome and how the system operates on an ongoing basis".

So far, over 800 Zoneworks XT Hive luminaires have been installed across two stages. Because additions to the communications infrastructure are so easily achieved, future stages will be rolled out following compliance testing of existing luminaires and planned capital works. This allows the hospital to reduce capital budgets because fittings will be replaced gradually as part of the hospital's day-to-day maintenance operation.

## Results

Cameron from ACIA Electrical found the overall process seamless. "It was important to have the manufacturer support to complete this project with limited interruption to the hospital. This was achieved by planning the installation and commissioning and not requiring additional cabling or backbone hardware. We have now installed a state-of-the-art emergency lighting system for Sutherland Hospital that has simplified compliance testing and set the hospital up for further system expansion". >>



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The upgrade to Clevertronics Zoneworks XT Hive technology has yielded significant benefits for Sutherland Hospital:

- Enhanced safety: The new emergency lighting system provides reliable illumination in the event of an emergency, ensuring the safe evacuation of patients, staff, and visitors.
- Improved compliance: XT Hive's automatic testing capabilities help the hospital maintain compliance with relevant safety regulations and standards.
- Energy and maintenance savings: The reliable and efficient LED technology of LP Premium has reduced energy consumption and lower operating costs for the hospital.
- Minimal disruptions: The seamless installation process minimises disruptions to hospital operations, allowing critical services to continue without interruption.

Mark Deluca, Sutherland Hospital's engineering and maintenance manager, says, "The implementation of Zoneworks as an upgrade has been relatively painless, especially given that we have a busy aging hospital. The minimal infrastructure requirements and factory support provided to ACIA gave us great comfort to undertake the emergency lighting upgrade as part of our operational maintenance strategy". He goes on to say, "We are already seeing the results with simplified compliance testing and the reassurance that we have long life fittings that won't need to be touched for many years to come".

The upgrade of the emergency and exit lighting system at Sutherland Hospital to Clevertronics Zoneworks XT Hive technology represents a significant investment in safety, compliance, efficiency, and sustainability. By leveraging the advanced features of XT Hive, the hospital has enhanced its ability to provide a safe environment for patients, staff, and visitors while realising cost savings and ensuring compliance with regulatory requirements. These successfully staged upgrades serve as a model for other healthcare facilities seeking to modernise their emergency lighting infrastructure.

## Find Out More

Sutherland Hospital upgrade is another project delivered by the ACIA Electrical Services and Clevertronics team.

Are you interested in understanding more about an upgrade at your site? Contact Clevertronics for a site audit, demonstration, and cost analysis report.

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**CLP** LITHIUM IRON PHOSPHATE  
PREMIUM  
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