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Alland Group
Ausgrid Artarmon



Details

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| Client | : | Ausgrid |
| Category | : | New Build – 10,623sqm |
| Project work | : | Purpose Built Ausgrid Depot |
| Builder | : | Mainbrace |

Project Outline

Alland Group were excited to be engaged by Mainbrace on a purpose built regional depot for Ausgrid at 1 Broadcast Way Artarmon. As a greenfield site, the scope of works was substantial and since its completion, provides state of the art facilities for more than 150 Ausgrid staff. During the 16 months on site, Alland brought to life a full design and construct project over 10,623sqm including 2 carparks, bus depot, warehouse areas, 2 floors of office space and plant room/s.

These works included:

- LED specialty lighting throughout, including outdoor Intelligent Solar Luminaires
- Cat 6 CommScope Krone Communications cabling and Fibre Infrastructure
- CCTV & Access control
- Main Switchboard and Distribution Boards
- C-Bus Intelligent Lighting Control
- Council street lighting (Level 1 electrical works)
- Lightning protection
- Cable Tray support system
- Consumer Mains and sub-main cabling
- General Power and Lighting sub-circuit Cabling
- Emergency & Exit Wireless Monitored Dali Lighting System



Close up of the main Switchboard

Lighting Control System

Alland Group designed and installed a new C-Bus lighting control system to allow full control of all lighting (internal and external) incorporating daylight harvesting that senses daylight to offset the amount of electric lighting needed to properly light a space, in order to reduce energy consumption.

The lighting control system utilises a Clipsal C-Bus microprocessor based control system incorporating relay and DALI modules, touch screens, switches, sensors and interfaces to automatically control various forms of lighting and blinds throughout the project. The C-Bus control equipment is installed within custom built DIN-rail enclosures adjacent to the associated distribution boards. To maintain the necessary system redundancy and stability per level the systems use a backbone network to interlink the different floors.

Power & Lighting Reticulation

All new power and lighting cabling was installed on dedicated support systems reticulated through the entire building footprint. These circuits are able to safely accommodate the new LED lighting and control systems as well as the general power requirements throughout the designated areas.



Main Switchboard & Distribution Boards

Substation upgrades were conducted to supply the new site with a dedicated 1000amp supply. Main Switch Board and distribution boards were custom built in accordance with our design requirements to incorporate all site specific items. This design included ATS control, surge diverters, private and authority metering, generator connection points, essential services and general light and power requirements.

Cat 6 CommScope Krone Communications Cabling & Fibre Infrastructure

The entire building was installed with Cat 6 CommScope structured cabling system to support the audio-visual requirements, wireless internet and office networks. The cabling was installed on dedicated support systems such as cable trays and ducting to provide segregation in accordance with Australian Telecommunications Standards. Fibre optic cabling was used between server racks and outlets in excess of 90mtrs.

On completion Alland Group provided 25 year certification warranty.



Energy Efficiency

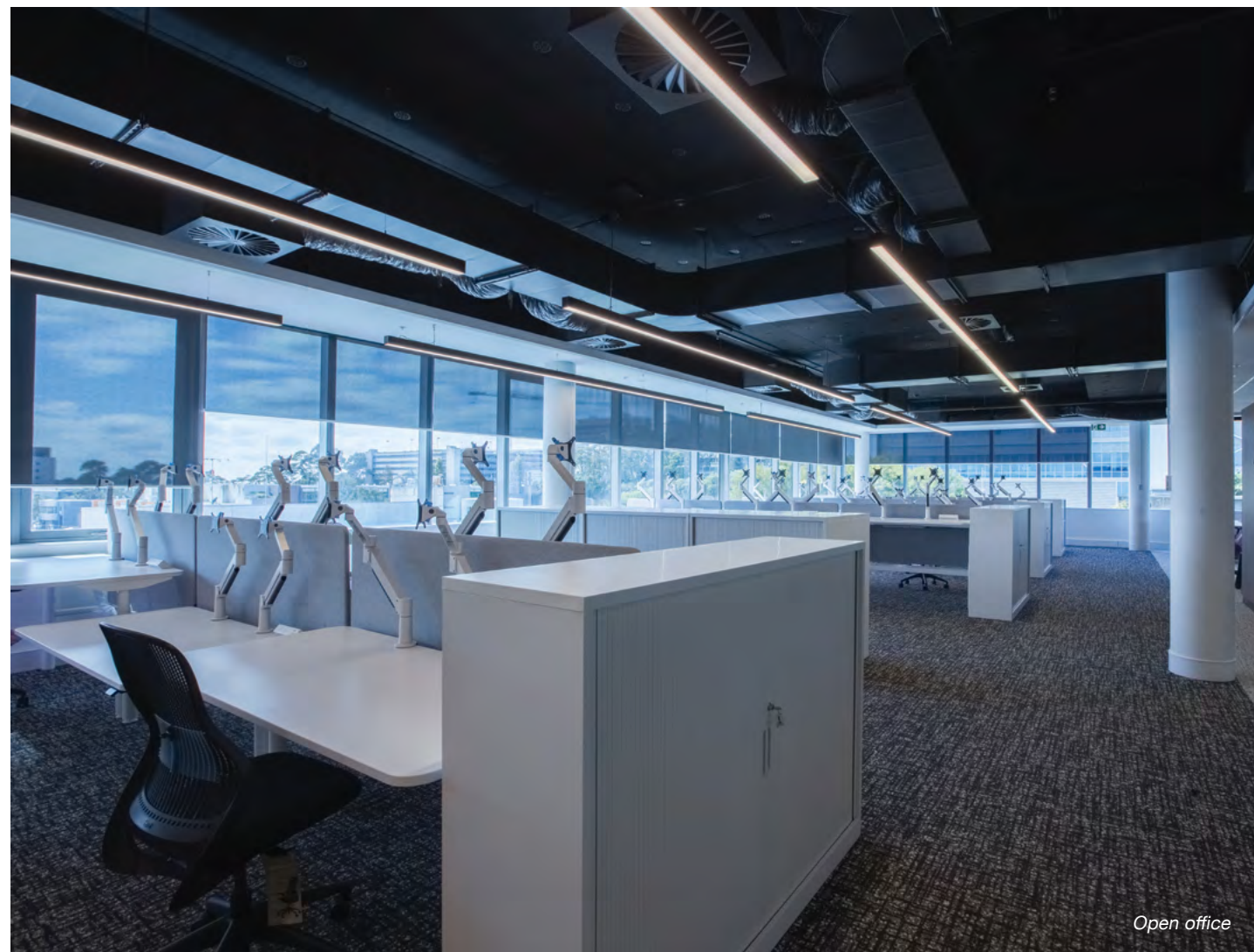
A significant part of the design process centred on ensuring that the whole installation was as energy efficient as possible. With knowledge and experience gained working on diverse commercial projects over many years, Alland Group delivered a project that not only reduces running costs but the carbon footprint of the whole building. Modern technologies such as LED lighting and smart lighting control provide energy efficient lighting that uses less energy without compromising on brightness and quality.

Emergency Lighting

The extensive Emergency Lighting was installed using the state of the art Evolt (Ektor) Dali monitored system. This computer monitoring system allows for testing and maintenance of all emergency lighting via an Advanced Wide Access Controller (AWAC) that automates the site specific emergency test requirements.

With an inbuilt arm processor and a real-time clock, every AWAC not only performs tests but automatically emails reports. All Evolt (Ektor) emergency lighting testing has the flexibility to be performed on or off site.





Open office



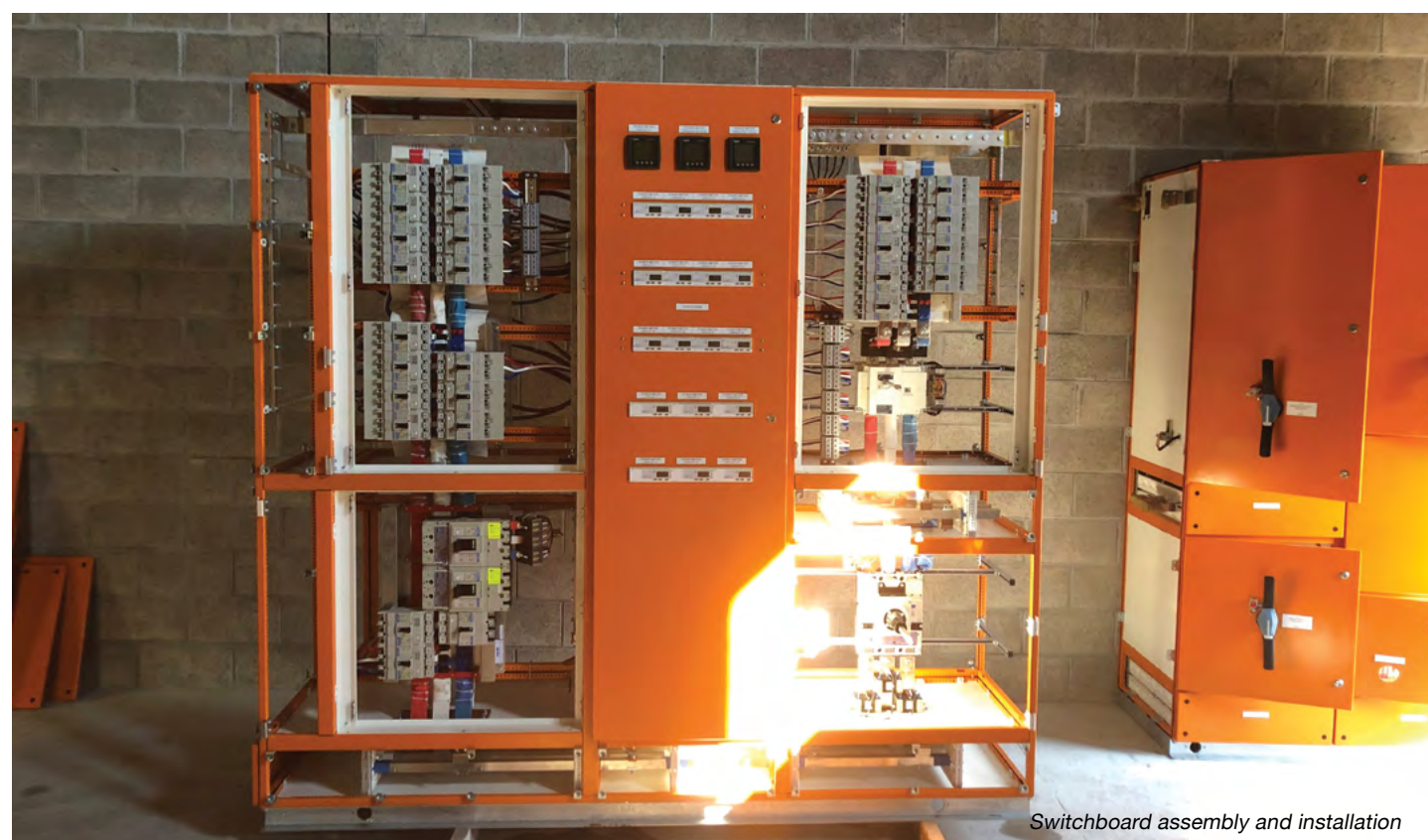
Outdoor Intelligent Luminaires

Energy Monitoring

Smart energy meters were installed throughout the site to monitor and report all electrical usage. This digital two-way communication system records energy use at intervals throughout the day and transmits this information to the nominated electricity retailer. This enables the user to identify cost saving areas, manage greenhouse emissions, reduce peak demand and avoid power factor penalties. Consumers can then participate in load curtailment programs (e.g., demand response), strengthen rate negotiation with their energy supplier and identify billing discrepancies.

Access Control, CCTV & Intercom

Alland Group were responsible for the design and construct of a complete Alarm/Access Control system, in accordance with both Australian and Ausgrid standards. This site safety management tool comprised intercom and cameras across the entire site providing effective monitoring of day to day operations.



Switchboard assembly and installation



Lunch room



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