12 CREEK STREET
BRISBANE
Fit-Out

ELECTRICAL SWITCHBOARD

CHILLER

PIPEWORK

LIVE ENVIRONMENT

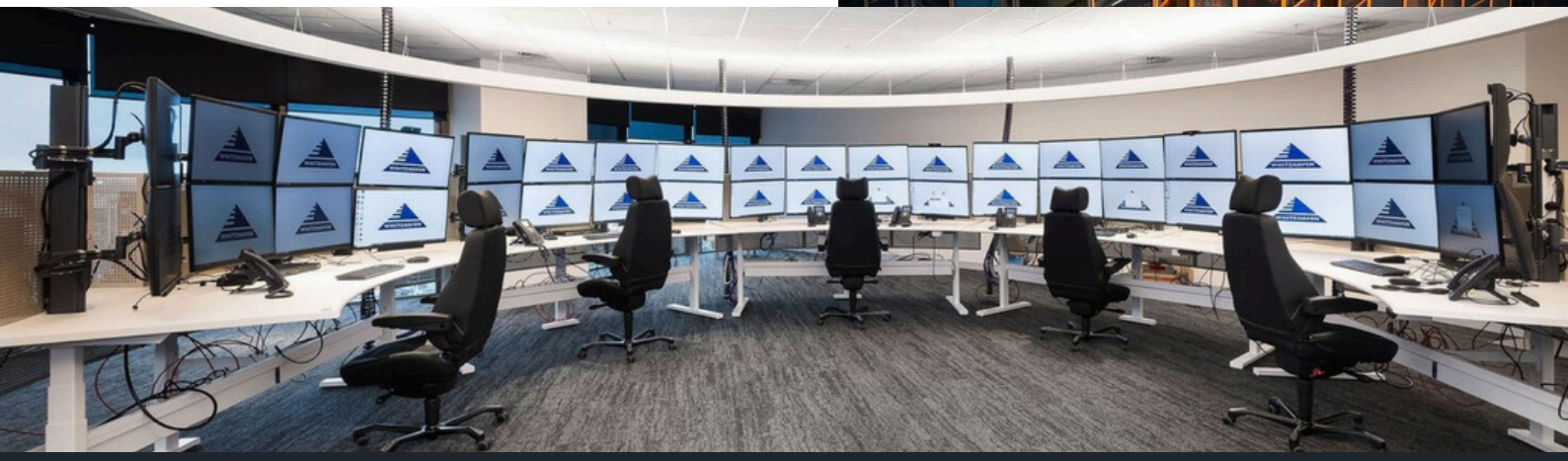
Overview

The 12 Creek Street Fit-Out project highlights the major shift towards remote site facilities occurring throughout the Australian Mining Industry, fueled by the evolving capability to provide cutting edge technology solutions, complimented with human-focused design, to deliver a truly modern facility.

VAE were awarded this fast tracked project by FDC encompassing the comprehensive design, installation, commissioning, and ongoing maintenance of mechanical services across levels 26 and 27, including the rooftop HVAC plant. The project's scope encompassed the installation of air conditioning systems, chilled water systems, and ventilation, as well as the integration of VAE's Building Management System (BMS). This integration was crucial for ensuring efficient operation and continuous 24/7 support for critical areas, including the ROC control center and server rooms.

Project Scope

The fit-out focused on levels 26 and 27 of the building. Level 26 was meticulously designed to facilitate 24/7 operations, featuring N+1 redundancy specifically tailored for the ROC control center. This redundancy ensures that critical operations can continue seamlessly in the event of a system failure. Conversely, Level 27 was allocated for general office spaces, which operated during standard office hours.



Modifications and Installations

To meet the specific needs of the ROC fit-out, both existing building systems were modified, and new mechanical systems were installed. This included advanced air conditioning units and ventilation systems designed for optimal performance and reliability.

Logistics and Execution

VAE leveraged its in-house rigging and logistics capabilities to transport five modular chillers to the rooftop. This process involved utilizing the existing building goods lifts along with available gantries and soft hatches, ensuring a safe and efficient delivery to the installation site. FDC's knowledge of the building and available services expedited this process and allowed for the seamless execution of the logistics, which was crucial in minimizing disruption to ongoing operations and maintaining the project schedule.

Solution

Equipment Profile

- **Chilled Water System**: Consisted of 5x Modular Air Cooled Chillers, Provided cooling in an N+1 arrangement, managed by the BMS for efficient operation with future redundancy capability.
- **Chilled Water Fan Coil Units (FCUs)**: Supplied air conditioning, with the BMS ensuring optimal performance in both critical and general areas (this includes redundancies for critical operations areas)
- **In-Row Cooling Units**: Dedicated to server rooms, with temperature control managed by the BMS.
- **Energy Recovery Ventilator (ERV)**: Supplied outside air and recovered energy, with the BMS adjusting air flow based on demand.
- **Variable Air Volume (VAV) Units**: Regulated airflow according to occupancy and environmental conditions, controlled by the BMS.

Building Management System (BMS) Integration

The BMS monitors and controls all mechanical systems, ensuring energy efficiency, fault detection, and redundancy management in critical areas. It integrated with the building's existing systems and optimized overall system performance throughout the project. The BMS system ties in with the back up generator systems to provide load shedding and visibility of systems during outages.

> ***The successful completion of 12 Creek Street ROC exemplifies what can be achieved when cutting edge technology meets human centric design to create a state of the art facility.***
>
> ***~ FDC Management Team***