VAE GROUP | SMARTER HVAC SOLUTIONS
Built in certainty

Arana Hills Library

Air Conditioning & Electrical Renewal

Client	City of Moreton Bay
Location	Arana Hills, Queensland
Completed	30 July 2026



Overview

VAE Group completed the air conditioning and electrical renewal of Arana Hills Library for the City of Moreton Bay, delivering a coordinated upgrade across the facility's mechanical, electrical, controls, and associated building services. The project involved the design and construction of new HVAC systems, with VAE acting as Principal Contractor and responsible for the coordination of all related works.

The renewal was designed to improve indoor air quality, system reliability, maintainability and temperature and humidity control across the library.

Scope of Works:

Mechanical Services

- **New chilled-water plant** serving the main library, including an air-cooled chiller, chilled-water air handling unit, pump, expansion tank & associated pipework reticulation.
- **Ducted air conditioning upgrades** to key library spaces, including the workroom, office & toy library/meeting room.
- **New exhaust & transfer-air systems,** controls cabling & environmental sensors, testing, air balancing & commissioning.
- **Cleaning & reuse of existing main-library ductwork** where suitable.

Controls

- **Integrating new mechanical systems** with the existing IELVS building management platform, including new temperature, humidity & CO^2 sensors, updated controls graphics & monitoring.

Electrical Services

- **New main switchboard,** library distribution board, submains, earthing system, internal, external & architectural lighting, emergency lighting, exit signage, cabling & metering.
- **Electrical testing,** certification & as-built documentation.

Associated Building Works

- **New equipment plinths and supports,** access panels for future maintenance, ceiling removal & reinstatement, penetrations, sealing & make-good works.
- **Protection & temporary relocation of library assets** during construction.

Project Outcome

- **Improved temperature and humidity control across the library** through the installation of a new chilled-water system serving the main library.
- **Increased system reliability through replacement of ageing HVAC equipment** & renewal of critical electrical infrastructure.
- **Improved indoor environmental monitoring through new temperature, humidity & CO^2 sensors** integrated with the existing IELVS building management platform.
- **Greater visibility & control of building services** through updated BMS graphics & monitoring.
- **Improved maintainability through new equipment supports**, access panels & coordinated service arrangements.
- **A more dependable environment for library property & assets**, staff & visitors during seasonal changes & varying occupancy levels.
- **Successful completion of the works within shutdown period**, achieving Practical Completion on 30 July 2026.

Sector: Sport & Public Venues

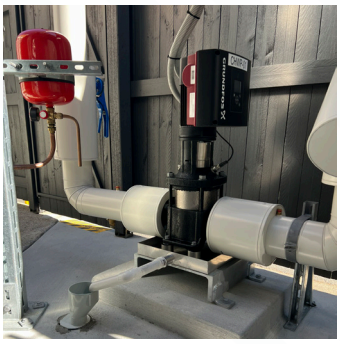
Project Works:



New **Chiller**
serving the main library



New **MSSB** (Mechanical Services Switchboard) supports upgraded building systems



New **Chilled-Water Pump** supporting reliable system circulation



New & Existing Ductwork
cleaned & reused where suitable



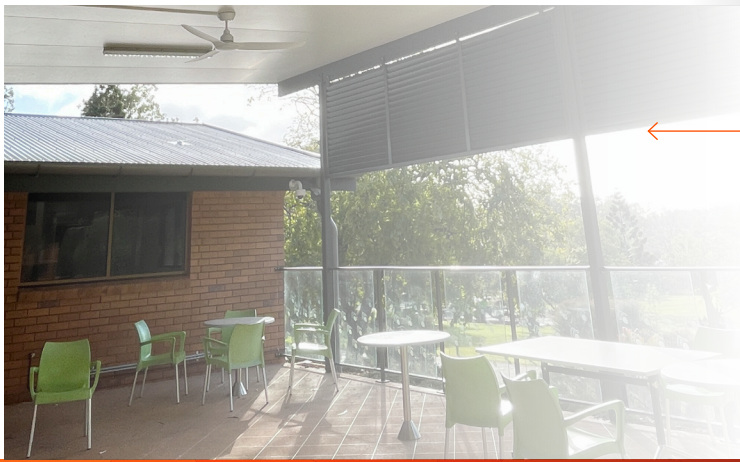
✓ ***The result is a dependable library environment with improved internal control during seasonal changes & varying occupancy levels***

Key Challenges

Working within constrained spaces

Careful coordination was required across mechanical, electrical, controls, and building works, while renewing critical infrastructure in constrained ceiling and plant spaces. The project required the protection and temporary relocation of library assets, ceiling removal, reinstatement and associated make-good works.





Delivering Within the Shutdown Period

Works were required to be completed within the library's shutdown period and to a tight program. VAE coordinated the design, construction, specialist trades, commissioning and handover activities to maintain progress across multiple work areas. Careful staging and coordination were required to achieve Practical Completion on 30 July 2026 and return the facility to operation as scheduled.