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1 September 2014

Andrew Davis
Project Manager
Lend Lease
Level 4, 30 The Bond
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NSW 2000

Dear Andrew

Electrical/Comms/Mechanical Services Design Letter for DA submission

Aurecon are engaged to complete the Electrical and Mechanical design of this building. The electrical and mechanical design shall consist of a fully detailed and coordinated cold shell services design for the building.

The below description provided a brief description of the services incorporated in R7 Barangaroo building:

Electrical and Communication Services shall comprise of the following:

- Base building emergency lighting and exit signage.
- Energy and Water metering and monitoring system
- Protection study and discrimination report
- LV Cable sizing calculations in accordance with AS3008
- Earthing system requirements
- BCA Section J compliance
- Base building structured cabling

R7 building will be provided with a 400V electrical supply from the basement level that will reticulate into a main switchboard located on the first level of the structure. This will be situated within close proximity to an electrical riser which will contain all major cabling and distribution boards / other panels required by the building. Specifically, each level will have both House and Tenant distribution boards, which will be the supply and isolation points for all lighting and small power circuits spread over each floor.

The electrical network is based upon a straightforward and logical design, and is focused on being intuitive to the end user, and service personnel for operation and diagnosis purposes. The design should enable the minimisation of both infrastructure and installation costs, as well as any expected maintenance costs throughout the expected lifetime of the facility.

Mechanical Services shall comprise of the following:

- Base building Ventilation system design

- Chilled, heating water system design
- BMS system design
- Secondary chilled water from heat exchanger in basement
- Connection of services with district cooling and or heating plant
- BCA Section J compliance

The building shall utilise chilled water heat exchangers and pumps located in the Basement to connect to the chilled water district cooling system and provide chiller water for the tenant air conditions system. Hot water heater and pumps shall be located in Plantroom which provide heating hot water for the tenant air conditions system. The chilled and heating hot water shall reticulate from the respective plantrooms to each floor with an isolation vales for future connect by tenant on each floor. An outside air, toilet exhaust and make up air louvre shall be provided on the façade. Louver locations shall be in accordance with AS 1668.2 requirements. Each floor is provided with a kitchen exhaust riser provision for future tenant connection. All kitchen exhaust risers shall terminate at roof level.

Basement risers associated with basement services shall be reticulated through the building and discharged at roof level.

The above Electrical and Mechanical design shall accommodate flexibility for future operations and is suitable for retail purposes.

Regards

A handwritten signature in blue ink, appearing to read 'M. Hogan'.

Mairead Hogan

Project Leader