

Project Advice Notice

Alexandria Health Centre – Net Zero Statement

Net Zero Statement	12 December 2023
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A Net Zero Statement is prepared in response to the requirement under the NSW Sustainable Buildings SEPP for non-residential development. This Statement describes how a project will avoid dependence on fossil fuels and be capable of operating at net zero emissions by 2035.

On-site Fossil Fuel Usage

No gas shall be provided to the proposed development, alternate electric powered equipment is being utilised across the site including the following systems:

- Electric hot water systems
- Electric provisions for future kitchens only
- Electric mechanical systems

A standby Diesel Generator is proposed to be installed on Level 7 of the Alexandria Health Facility. This Generator shall have an associated Diesel Fuel tank located within the basement of the proposed building. The tank is sized to hold up to 5000L of fuel on site.

This generator shall not be in operation under normal operations conditions of the building and will only operate when there is a power outage to the building. As this is the case the fossil fuel usage for the building shall only be used in these extenuating circumstances.

Energy Efficiency

Passive Design Features

Refer to the Architectural Documentation for details on Passive Design Features includes building orientation, shadings.

Insulation and Glazing Performance

This project is targeting a certified 5 Star Green Star Buildings pathway. To comply with the minimum expectation of Green Star Credit 22 Energy Use, the building's energy consumption is at least 10% less than a reference building. This will be achieved by incorporating the following:

- Appropriate window to wall ratios to ensure a good access to views, natural daylight, whilst balancing the thermal requirement of heat loss and heat gains.
- External solar shading appropriate to orientations.
- Appropriate thermal performance through insulation performance.
- Window U-values and Solar Heat Gain Coefficients (SHGC) have been considered for the thermal zones. Double glazed units will be installed to façades to reduce solar heat gains whilst balancing visible light transmittance, as well thermal transmittance.

Airtightness

Airtightness is one of the environmental performance targets to be set and documented to satisfy the minimum expectation requirements of Credit 3 Verification and Handover for achieving a certified Green Star Buildings rating. Airtightness is incorporated into the design and be tested during construction and practical completion.

Technical Design Feature

The services design is utilising several technical features to assist in the improving the energy efficiency of the proposed building such as the following:

- LED lighting provided throughout the building.
- Intelligent lighting control system utilising occupancy sensors and a addressable lighting control system shall be implemented.
- A BMS shall be installed for the building to operate the mechanical systems within the building.
- An EMS shall be installed throughout the building to allow for monitoring of the site's energy consumption.
- Central hot water plant shall be utilised for the development.

Renewable Energy Generation and Storage

It is proposed that Photo Voltaic (PV) cells shall be utilised for this development and shall be installed on the roof of the Level 7 Plant room.

These PV cells shall be connected back to the Main Switchboard(s) for the building via inverters to reduce the base load of the building during the day, which is the peak occupancy period for the site.

No Battery storage is currently proposed for the development.

Estimated Energy Consumption and GHG Emissions for Energy Use

Energy modelling using an energy simulation software package will be used for estimating the energy consumption and GHG emissions for energy use during the design phase. The energy model will incorporate the building layout, fabric and orientation together with mechanical system, lighting, occupancy profiles as per the Green Star Energy Consumption and Greenhouse Gas Emissions Calculation Guide.

Yours faithfully,
ACOR Consultants Pty Ltd



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