

5 star rating



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GREEN SQUARE SOUTH TOWER

GREEN BUILDING COUNCIL AUSTRALIA OVERVIEW

The Green Building Council of Australia's mission is to define and develop a sustainable property industry in Australia and to drive the adoption of green building practices through market-based solutions.

The Council's objective is to promote sustainable development and the transition of the property industry to implementing green building programs, technologies, design practice and operations. To do this, it advances and promotes the creation of a green building rating tool, economic incentives, government initiatives and programs, new technologies and industry knowledge.

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GENERAL PROJECT DESCRIPTION

With the 5 Star Green Star – Office Design v2 Certified Rating awarded in July, 2006, Green Square South Tower is the first Green Star certified project in Queensland.

The Green Square development incorporates five buildings on two hectares of land on St Pauls Terrace opposite the Jubilee Hotel. The Green Square master plan, designed by Cox Rayner Architects, also features:

- a 21,000m² A-grade building (North Tower) including basement car parks, ground floor retail and food outlets;
- a 2,500m² high tech utility building (accommodating four Brisbane City Council departments);
- a community centre and proposed childcare facility;
- a vacant site for future affordable housing development; and
- a green 'pocket park' and retail plaza.

South Tower achieved maximum points under the Transport category, for initiatives such as the provision of cyclist facilities and public transport amenity. It also achieved a high score under the Water category, for the use of water efficient fixtures and fittings, water metering, and rainwater harvesting and reuse for landscape irrigation. A 90,000 litre water tank will be installed as part of the water initiatives.

GREEN SQUARE SOUTH TOWER 503 ST PAUL'S TERRACE

Address:
503 St Paul's Terrace, Fortitude Valley QLD 4000

Owner:
Leighton Properties Pty Ltd

Project Manager:
George Georgiu, PDC Project Management

Design:
Cox Rayner Architects (architect); Robert Bird & Partners (structural/civil engineers), Rider Hunt & Partners (quantity surveyor), Bassett Consultants (acoustic consultant), Edaw Gillespies (landscaping consultant), Certis (building surveyor), Norman Disney & Young and Lincolne Scott (electrical and mechanical engineers)

Design and Construction:
Leighton Properties Pty Ltd (project manager), Leighton Contractors Pty Ltd (main contractor)

Total NLA:
17,340m²

Commercial Office NLA:
16,980m²

MANAGEMENT

- Green Star Accredited Professional on consulting team
- Extensive commissioning and involvement of an Independent Commissioning Agent
- Comprehensive environmental and waste management (60% diversion from landfill) plans.

INDOOR ENVIRONMENT QUALITY

- Carbon dioxide monitoring and control
- Daylight glare control
- Lighting system incorporating high frequency ballasts and limiting electric lighting levels to 400 Lux
- Superior thermal comfort of Predicted Mean Vote within -0.5 and +0.5
- Acoustic performance within recommended limits
- Low-emission formaldehyde products and low-VOC finishes

ENERGY

- Predicted Australian Building Greenhouse Rating of 4.5 stars (CO2 emission reduction of 300,000 kg annually), affording annual savings in energy costs of 320,000 kWh, which is equivalent to energy used by 50 households
- Energy efficient T5 lamps used for the office lighting
- Lights installed on 3000 x 2400 grid, rather than traditional 2400 x 2400 grid, whilst providing illumination and glare control that exceed the requirements of Australian Standards
- Electric lighting density of less than 9 W/m2
- Perimeter lighting switched separately to take advantage of the good natural light from the façade
- Amenities' lights on office floors activated by movement sensors in the access corridors
- Lighting in car parks operated after hours by movement sensors
- Separate air handling units for each façade and the interior zone to eliminate reheat and maximize "economizer" operation
- Night purge to reduce the air conditioning load
- Outside air quantity is controlled by CO2 sensors to minimize the air conditioning load
- Low space humidity to reduce supply air quantities and thus conserve fan power
- Variable speed car park ventilation fans controlled by CO2 sensors
- Un-occupied areas isolated to prevent air conditioning to these areas

TRANSPORT:

- Cyclist facilities (secure bicycle storage, changing rooms, showers and lockers) for 10% of staff
- Visitor bicycle storage
- Excellent public transport amenity

WATER

- Full points achieved for occupant amenity potable water efficiency via water-efficient fittings and fixtures resulting in estimated water savings of 1,700,000 litres per year
- Rainwater used for landscape irrigation
- Water-efficient cooling towers
- Reuse of fire system test water

MATERIALS

- Dedicated and adequately sized recycling room
- 30% of NLA delivered as an integrated fitout
- Cement replacement in concrete mixes and 20% recycled aggregate
- 60% of steel with recycled content of 50% or beyond
- 100% of timber either reused, recycled or FSC-certified

LAND USE AND ECOLOGY

- Effective redevelopment of a site
- Preserving ecological value of the site

EMISSIONS

- Zero-ODP refrigerants and insulants
- No light pollution from exterior lighting
- Flow to sewer reduced by 40%

OVERALL GREEN STAR BUILDING PERFORMANCE

