

6 star rating



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VICTORIA SQUARE

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

The new VS1 Office Building in Victoria Square, developed by the Catholic Archdiocese of Adelaide is the first building in South Australia to achieve a 6 Star Green Star rating

VS1 will be a World Leader offering a healthy and sustainable environment for its occupants. The new building will enable the co-location of SA Water's three metropolitan operations, including laboratory facilities, which will significantly consolidate and centralise customer access to its various operations.

The building features a range of practical and innovative solutions to achieve SA Water's rigorous ESD performance requirements, while delivering a building at a market rental. In addition to an overall star rating, benchmarks were set within various categories of the rating tool based on staff feedback surveys and corporate direction.

To meet SA Water's expectations for a healthy work environment, the mechanical services provide user control and a 150 per cent increase in outside air quantities with no recirculation.

The building has a strong focus on water conservation and energy reduction and is expected to achieve a reduction of approximately 70 per cent in potable mains water consumption, and a reduction of approximately 50 per cent in greenhouse gas emissions and energy costs compared to a typical office building.

Rainwater and Class A recycled water is used for toilet flushing and cooling towers. Using cooling towers allowed highly efficient water cooled chillers to be used, delivering significant energy savings compared to air cooled chillers. In addition, a gas co-generation plant and absorption chiller is employed to further reduce greenhouse gases and peak electrical demand.

Size: Gross Floor Area is 35,350 square metres comprising

- 21,645 m2 lettable area
- 5000 m2 laboratory space
- 5,500 m2 basement
- 1,730 m2 roof plant areas

VICTORIA SQUARE

Address:

Victoria Square, with frontage to Angas Street in the City of Adelaide

Owner and developer:

15,400 sq. m

Anchor tenant:

SA Water

Architects, Interior Designers, Landscape Architects and Planners:

HASSELL

Construction Manager:

Hansen Yuncken

Project Manager/ superintendent:

Barry Phillis and Associates

Building Engineering Services:

Bestec

Structural / Civil Consultant:

Wallbridge and Gilbert

ESD Consultant:

Cundall

Acoustic Engineers:

Vipac

Traffic Engineers:

Murray Young and Associates

Cost Consultant:

Rider Levett Bucknall

Leasing consultant:

Jones Lang Lasalle

Building certifier:

Katnich Dodd

Specialist lighting:

Electrolight

Site remediation:

Parsons Brinckerhoff

Financial advisors:

Deloitte Touche Tohmatsu

Façade engineer:

Arup

Legal advice:

Thomson Playford

MANAGEMENT

- Building being constructed using Environmental Management System certified under ISO 14001
- Minimum 80 per cent of demolition and construction waste to be diverted from landfill
- Comprehensive Commissioning Plan and building tuning over first 12 months
- Extensive metering and monitoring of energy and water
- Broad recycling and reusing of over 85% of waste
- Commercial floors to be let as "shell and core" to reduce waste during future fitout
- SA Water floors being constructed as integrated fitout to reduce waste

INDOOR ENVIRONMENT QUALITY

- A fritted western veil in front of the building skin is used to reduce solar loads on the western façade while still retaining daylight
- ETFE roof over full height central atrium to allow natural light into heart of building
- Automated blinds on east, north and west façades to control glare
- Vertical fins on south façade (with manual blinds) to control glare in late afternoon
- Underfloor air ventilation system using a raised floor – this gives control to occupants and provides more effective air circulation and reduces tenancy churn costs
- Minimum 150 per cent increase in outside air rates provided to building occupants
- 100 per cent outside air during building occupancy hours (with 20 per cent return air circulation during morning start-up to save energy)
- Carbon Dioxide monitoring of indoor air quality on each floor to increase outside air quantities if required
- Exhaust riser for printer and photocopy rooms
- Humidity sensors in supply air ducts to control humidity and avoid potential for mould growth

ENERGY

- Gas Combined Heat and Power unit on roof connected to absorption chiller and hot water system to reduce peak electrical energy demand by 25 per cent and reduce greenhouse emissions
- High performance double glazing to north, south and east façades with clear double glazing on west façade behind veil
- Spandrel panels on east and west façade to reduce area of glazing and solar loads
- Energy efficient T5 lighting system with electronic ballasts
- Horizontal shading on north façade to reduce solar load on glazing during summer
- Lighting designed not to exceed 400 Lux over 95 per cent of NLA
- Lighting zones limited to 100m² and switch zones labelled
- Work zones having good access to natural daylight through external windows and an atrium to reduce electricity consumption from lights;
- Automated blinds on the external windows to uniformly control glare and heat;
- High performance double glazed windows;
- Light sensors that automatically switch off lights when sufficient natural light is available;
- A strong emphasis on the selection of energy efficient office equipment to complement the base building's energy systems.
- Gas fired combined heat and power plant, providing on site electricity generation to supplement power from the electricity grid and reduce the peak electricity;
- Solar panels for the preheating of domestic hot water.

TRANSPORT

- Storage, lockers and showers for 144 cyclists & cycle racks for visitors
- 25 per cent of car parking spaces are for small cars
- Reduced number of car parks provided compared to planning allowance
- Building has excellent links to public transport

WATER

- Water efficient taps, showers, toilets and urinals
- Use of Class A recycled water and rainwater for toilet flushing, irrigation and cooling towers
- Recycled water used for fire testing

MATERIALS

- Low VOC off-gassing carpets, paints, sealants and adhesives
- Low formaldehyde off-gassing joinery
- Recycling of over 90% of construction and demolition waste
- Non PVC piping, conduits, sub-mains, flooring and blinds
- 20 per cent of Portland Cement in concrete replaced with fly ash

LAND USE AND ECOLOGY

- Re-building on existing built land
- Steps undertaken to decontaminate the site

EMISSIONS

- Waste storage facility provided for recycled waste
- All refrigerants have zero Ozone Depletion Potential
- Stormwater run-off from site meets best practice treatment
- No light pollution to the night sky

OVERALL GREEN STAR BUILDING PERFORMANCE

