

5 star rating



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BENDIGO BANK HEADQUARTERS

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

Through the substantial ESD initiatives in its design, including one of the first large-scale applications of under-floor air-conditioning in Australia, an innovative external screening design to the large north and west façades, solar reflective internal blinds and double-glazed solar control low-E windows, the Bendigo Bank Headquarters will consume less than half the energy of a typical office building.

Its location in an extremely water-stressed region, made reducing the reliance on reticulated water a key design challenge for the building. Water-efficient fixtures and fittings and a recycling water plant that will treat all black- and greywater to Grade A standard for toilet flushing will ensure minimal use of potable water. Surplus recycled water will be distributed throughout the Bendigo area for community and garden use. Rainwater will be also collected from the roof area, filtered, stored and reused in the drip-fed irrigation system that supplies the landscaped gardens at the front of the building.

These initiatives for environmental sustainability are reflected in the projects 5 Star Green Star certified rating, which represents "Australian Excellence", awarded in October 2006.

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Address:

The Bendigo Centre, Bendigo Victoria 3550

Owner:

Bendigo Bank Limited

Design Team:

Gallagher Jeffs (project managers), Bligh Voller Nield / Gray Puksand (architects), Connel Wagner (ESD Consultant), Meinhardt (Vic) (services and structural engineer), WT Partnership (quantity surveyor), Probuild Constructions (builder).

NLA:

13,336m²

MANAGEMENT

- Comprehensive pre-commissioning, commissioning and quality monitoring program contractually required
- 12-month commissioning building tuning period after the handover, with minimum quarterly reviews and a final recommissioning after 12 months
- Appointment of an independent and experienced commissioning agent
- Provision of a Building Users' Guide to enable the building to achieve its intended environmental performance
- Contractor implementing a comprehensive Environmental Management Plan (EMP) for the works
- Diversion of 60% of construction waste from landfill

INDOOR ENVIRONMENT QUALITY

- 50% improvement in fresh air rates from Australian Standards
- Carbon dioxide monitoring and control
- Underfloor air-conditioning system to promote healthy indoor environment by providing effective delivery of clean air with minimum mixing with indoor pollutants
- Daylight provided from both the perimeter of the building and three atriums
- Daylight glare controlled by the use of both external shading devices (northern and western facades) and solar reflective automated internal blinds
- High performance glazing specified throughout the building
- Occupant control of the underfloor air conditioning system
- High frequency ballasts specified to avoid low-level flicker lighting
- Long distance views and visual connection at the perimeter of the building and into the atriums
- Aural comfort for building occupants by providing a low noise air conditioning system and maintaining internal noise levels at an appropriate level in office areas
- Low VOC paints, carpets and adhesives specified
- Dedicated tenants' exhaust riser provided to ventilate tenancy photocopy rooms

ENERGY

- A predicted 5 Star ABGR rating
- Sub-metering for substantive energy uses and for each floor and tenancy
- Lighting power densities of 2.5W/m2 provided to reduce energy consumption while maintaining appropriate lighting levels
- Lighting design offers flexibility for light switching to make it easier to light only occupied areas
- Skylights over atria for increased daylighting
- Underfloor air conditioning to 90.1% of NLA
- Double-glazed solar control low E windows to provide high thermal insulation with internal and external shading

TRANSPORT

- 49 bicycle spaces including 3 for visitors have been allocated with cyclist facilities including showers, lockers and secure storage
- Over a quarter of parking space allocations are for small cars and motor cycles

WATER

- Specification of water efficient (AAA minimum) fittings for wash-hand basins, sinks, showers and toilets
- Installation of a recycling water treatment plant to treat both black and greywater which provides treated Grade A water for use in toilet flushing
- Surplus treated water will be distributed for community and garden use throughout Bendigo minimising discharge to the sewer
- More than 3.5 million litres of drinking water per annum is estimated to be saved
- Water for water efficient landscape irrigation system sourced from rainwater
- No cooling towers installed to reduce potential use of potable water and eliminating the risk of Legionnaire's disease
- Sub-meters installed for all major water uses in the building linking all meters to the BMS to provide a leak detection system

MATERIALS

- Dedicated storage area for separation, collection and recycling of office consumables
- Provision of flexible shell and core with fully integrated fitout to minimise material wastage
- Sustainable timber used for all timber products

LAND USE AND ECOLOGY

- The site has been previously built on and is not of high ecological value
- At least 60% of the planting stock from indigenous sources
- Restoration of the degraded Bendigo Creek and provision of a green boardwalk linked to a new public square

EMISSIONS

- All refrigerants have an ozone depleting value (ODP) of zero
- Reduction in water flows to the sewer
- Light pollution is avoided
- Thermal insulation avoids ozone depletion substances

OVERALL GREEN STAR BUILDING PERFORMANCE

