



THE SPOT, MELBOURNE UNIVERSITY

IMAGE

The Spot, Melbourne University
5 Star Green Star - Education Design
PILOT certified rating

PROJECT DATA

Owner

The University of Melbourne

Location

198 Berkeley Street, Carlton, Victoria

Size

25,851m² GFA

Façade Engineers

Meinhardt Façade Technology

ESD Consultants

Advanced Environmental

green building council australia



Education PILOT 2008

PROJECT TEAM

Architect

Metier 3

Project Manager

Donald Cant Watts Corke
Management

Contractor

Probuild Constructions

Services Engineer

Lincoln Scott

Structural Engineer

Winward Structures

Hydraulic Engineer

CR Knight

The project at a glance:

- ▶ 46% less energy/m² GFA than the average of comparable university buildings such as the Alan Gilbert building, Law and ICT.
- ▶ Engagement of Green Star Accredited Professionals across all disciplines
- ▶ 100% fresh air with 200- 250% increase on AS rates
- ▶ Use of low-VOC products throughout the project
- ▶ Located near numerous public transport hubs.
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- ▶ Bike racks and shower facilities installed
- ▶ 83% reduction in water use
- ▶ Reduced flow to sewer, via use of a blackwater treatment plant
- ▶ Blackwater recycling system capable of treating 30,000 litres of sewerage per day
- ▶ Re-use of an existing site.



The Spot at 198 Berkeley Street, Carlton, is the University of Melbourne's new certified 5 Star Green Star building and home to the University's Faculty of Business and Economics. Commissioned by Professor Margaret Abernethy and designed by architects Metier3, The Spot is a purpose-built teaching and research centre which will become a hub for business and economics learning and innovation. The building forms an integral part of the growing university campus precinct south of Grattan Street in Carlton.

WHAT THE SPOT, MELBOURNE UNIVERSITY ACHIEVED:

A SHRINKING CARBON FOOTPRINT

In 2007, the University made a commitment to reduce its carbon footprint by 50 per cent by 2010 and achieve carbon neutrality by 2030. To help reach this target, the University decided to benchmark The Spot against the yet-to-be-released Green Star Education tool.

The University committed to achieving the Green Star rating to provide independently-verified evidence of the building's environmental credentials and to help the project team to adopt a holistic approach to the building's design.

To achieve the rating, the project team put aside a margin equivalent to 5 per cent of the project's cost. This consisted of 4 per cent for known works, along with a 1 per cent contingency to cover the unknown implications of the Education tool. This 'green building fund' proved enough to deliver The Spot a 5 Star Green Star rating, recognising Australian Excellence in environmentally sustainable design.

According to the Vice-Chancellor Professor Glyn Davis AC, "The success of The Spot has spurred the University to commit to a minimum rating target of 5 Star Green Star for all new major building developments, and 4 Star Green Star for all major building upgrades."

Green Star enables us to demonstrate our true commitment to sustainability. This is important to reduce our carbon emissions significantly as prospective students increasingly consider the environmental impacts of their university choice. Rating our buildings helps build trust in our commitment. Furthermore, it helps us to reach our performance targets and makes economic sense, as our green buildings outperform existing buildings by large margins."

In keeping with this approach, the University of Melbourne is currently seeking Green Star certification for high-level laboratory uses in the new Melbourne Brain Centre and the Peter Doherty Institute building.

A NEW FACE ON CAMPUS

To improve indoor environmental quality, the project team worked closely with glass manufacturers to develop a unique high performance façade for the building. In an innovative approach, frit - a vitreous substance used in making porcelain, glazes or enamels - was applied to 50 per cent of the external surface. The result is a façade that both maximises daylight penetration and minimises solar heat gain.

By minimising heat gain, The Spot has reduced its overall annual chiller load by 20,645 kWh/annum, a saving of 15 per cent compared to having installed the same glazing unit without frit. This reduction has also allowed for the installation of a chilled beam air conditioning system - a first for an Education building in Australia.

CLEARING THE AIR

Studies in the US have shown consistently that improved indoor air quality leads to better health outcomes, with reductions in illness symptoms ranging between 13.5 to 87 per cent.

The Spot delivers 100 per cent fresh air with a 200-250 per cent increase on AS rates, provides individual thermal control of workspaces and has reduced volatile organic compound exposure through the use of low VOC paints, carpets, and sealants. Each of these improvements will help enhance student wellbeing and focus, and deliver improved educational outcomes.

According to Chris White, the University's Executive Director of Property & Campus Services, "the central environmental focus of the project was IEQ due to its capacity to improve learning outcomes. The great outcomes we achieved in this area were the direct result of having wall-to-wall Green Star Accredited Professionals on the project from Day One".



FLEXIBLE FORM

Modular and soft-wired demountable partitions were installed throughout the academic accommodation areas of the building. Representing 56 per cent of all partitions installed, these demountables can be easily relocated without specialised tools or even specialised contractors such as electricians. This gives a greater flexibility to the space without the need to perform remedial works, thereby reducing both waste and operational impacts. The Spot was awarded one innovation point in recognition of the environmentally-beneficial outcomes of this partition design.

A POWER OF DIFFERENCE

At the end of 2009, The Spot was rated using the NABERS Energy Whole Building rating tool and achieved an impressive 4.5 stars. The most remarkable result, though, was that the assessment showed that The Spot used 46 per cent less energy in its first year than comparable buildings across the rest of the University. According to the report, “the whole building’s energy use is considered to be exceptional”.

This translates to savings of over \$180,000 per annum compared to the average of equivalent buildings on campus, a saving which will more than discount the sustainability premium of 5 per cent, before productivity benefits are even calculated.

