



SUPER
PROPERTY

Sustainability Case Study

Conceived and developed by ISPT in partnership with the Attorney-General's Department, the building's performance using conventional technology has demonstrated the value of high quality passive solar design and customised building tuning of plant and equipment.

3-5 National Circuit
Barton ACT



Overview

Completed in March 2009 for the Attorney-General's Department, this 20,000m² office building incorporates a fully integrated fit out, café, crèche facilities and a four storey glazed atrium.

The atrium is the heart of the building, promoting collaboration and interaction between the tenant's employees whilst respecting the secure nature of the facility. The atrium features recycled timber flooring, automated roof louvers to control natural daylight and heat load, open access stairs between floors, interconnecting bridges and glazed lifts.

Efficient LED lighting was installed to highlight the raked ceiling above the bridge in the atrium and the atrium stairs are illuminated by low level LED strips in a translucent diffuser. In floor up lights are integrated within the timber atrium bridges, providing a unique ambiance within the atrium at night.

The tenant utilised a demountable pavilion style office module, which facilitates office reconfiguration in hours at almost zero cost, avoiding materials waste and unnecessary fitout churn.

Aspirations and Achievements

The project originally targeted 4.5 star NABERS Energy and Water ratings. In fact the property is now exceeding 5 star NABERS Energy performance, making it the most energy efficient ACT building at the time, whilst meeting the water rating objective.

We expect to be able to achieve a 5.5 star NABERS Energy rating in due course, with some modest renewable energy consumption.

Key Sustainability Features

3-5 National Circuit incorporates a number of key sustainability features including:

- External shading and passive ventilation to reduce summer heat load and energy consumption;
- In-slab heating to reduce winter energy demands;
- High efficiency chillers, low temperature VAV air-conditioning incorporating swirl diffusers;
- Customised building tuning of the integrated BMCS to maximise efficiency and minimise energy consumption;
- Low VOC products and CO₂ monitoring and control;
- High efficiency T5 fluorescent lighting with C-Bus controls, daylight sensors and occupancy detectors;
- Centralised web/3G based utilities monitoring system "Hydroshare" which includes automated leak detection and maintenance request alarms;
- Reduced potable water consumption through highly efficient fixtures and fittings, rainwater harvesting and fire test water recovery; and
- Secure bicycle racks and change rooms.

Proudly in partnership with:

The Attorney-General's Department.