ANREV

SUSTAINABILITY CASE STUDY

July 2014

PROFESSIONAL STANDARDS

400 George Street, Brisbane

CONTEXT AND DRIVERS

In 2005, recognising the limited supply and pent-up demand for A-grade buildings with environmental credentials, Grosvenor identified a prime site of vacant cleared land – one of the few remaining in Brisbane's CBD.

COST

When the project was priced in 2006 the cost difference was 1 - 2 %, but this green standard is now mandatory for new A-grade office towers.

MAIN STAKEHOLDERS

Ownership was shared equally between Grosvenor and HSBC Trinkhaus. In March 2013 Grosvenor sold its share to Motor Accident Commission (MAC). Development was shared equally between Grosvenor and Leighton Properties. The architect was Cox Rayner Architects and the contractor was Thiess Pty Ltd.

A 34 level, A-Grade commercial office building contributing to the high density of Brisbane's CBD, was awarded a 5 Star Green Star Office As Built v2 rating by the Green Building Council of Australia then a 5 stars NABERS Energy rating and 4.5 stars NABERS Water rating.

The occupiers have participated in new research into the relationship between green environments and occupier's mental and physical wellbeing.

FACT SHEET

Net Lettable Area

TOTAL	43.493sqm	Current Vacancy (% Totl NLA)	0sqm
OFFICE	42.521sqm	Typical Floor plates (approx)	1,350-1,450sqm
RETAIL	972sqm	Car Parking (ratio)	223 (1:195sqm)
TERRACE	485sqm	Site Area	2,902sqm
LOCATION	Brisbane, Australia	NABERS (Energy)	5 stars
TYPE AND SCALE	A large office block		
TIME FRAME	2005 - 2009		

STRATEGY

Vision

A new central high quality office that promotes resource efficiency and active low carbon lifestyles for the tenants' workers and part of Brisbane's new North Quarter vibrant city hub.

Goals and Targets

The nine areas of the Green Star rating: management, indoor environment quality, energy, transport, water, materials, land use and ecology, pollution.
100% recycled steel was used in construction and 40,000sqm of plywood was saved by adopting a new formwork technique. 100% FSC certified timber was used, 20% cement replacement with fly-ash and 80% construction waste was recycled.

Key Features

High performance air conditioning control systems were installed, which allows for multiple zones on each floor and the maximum use of outside air. The lift features regenerative drives, which utilise the heat created by the lift braking to create energy. High performance floor to ceiling window glazing was selected with special fittings inside the windows to minimise heat gain yet allow for maximum natural daylight penertration. Overall 100,000kg of carbon dioxide per annum is saved by these optimisation systems. A comprehensive building users guide and environmental and waste management plans were created to ensure on-going environmental performance.

The property was designed and marketed as a 'future@work' office to promote 'a new era of healthier and more productive work places with superior work environments.' This is because it was carefully designed to promote a low carbon lifestyle and active for the tenants, such as through the provision of 280 bike racks – one for every 10 employees. An excellent ventilation system for example provides 50% more fresh air than a typical office building. Also 95% low volatile organic compounds (VOC) were used for the paints, carpets, sealants and glues.

The site selection was influenced by new local government investment into the transport of the area, and as a result is carefully positioned 200m from a train station, 100m from a bus station and by a new bridge to Brisbane's cultural district.

AAAA Water efficient fitting and fixture, grey water harvesting and a system that captures and re-uses the air conditioning concentrate to flush toilets, save more than 700,000 litres of water per annum. Thus helping towards water security which is a key area of concern in Australia. These efforts have been recognised through the award of the NABERS rating of 4.5 for water performance in use.

Three local artists were commissioned to create sculptures with a brief to explore the relationship between the natural environment and human culture. They were asked to consider the development site's rich history, particularly the absence and presence of water over time, and to create a sense of community. The commission pieces would complement 400 George Street's innovative architecture, while creating a visually interesting and stimulating environment for tenants working in the building, pedestrians at street level, and visitors to the podium-level food court – overall promoting well-being.

Along with retail units, the lower ground floors also have a child care centre, contributing to the needs of the local community and making it easier for parents to work in the area.

IMPLEMENTATION

Critical Success Factors

A site which local government had recently made substantial investment in infrastructure in the area. The Australian property market is reaching a stage whereby unless new office buildings have green credentials they will be of lower value. Striving for the greenest property keeps Grosvenor ahead of the game.

Progress and Outcomes

In November 2012, occupants of 400 George Street participated in research undertaken by Bond University Research Centre for Sustainable Health Communities exploring the influence of green versus non-green environments on occupier's physical and mental wellbeing.
Tenants include Microsoft, a Federal Government Department and the Department of Environment and Resource Management.
At the time this project really pushed the boundaries in terms of what could be achieved in sustainable design. This type of the development is now standard practice in Australia.

INFORMATION SOURCES

www.400george.com