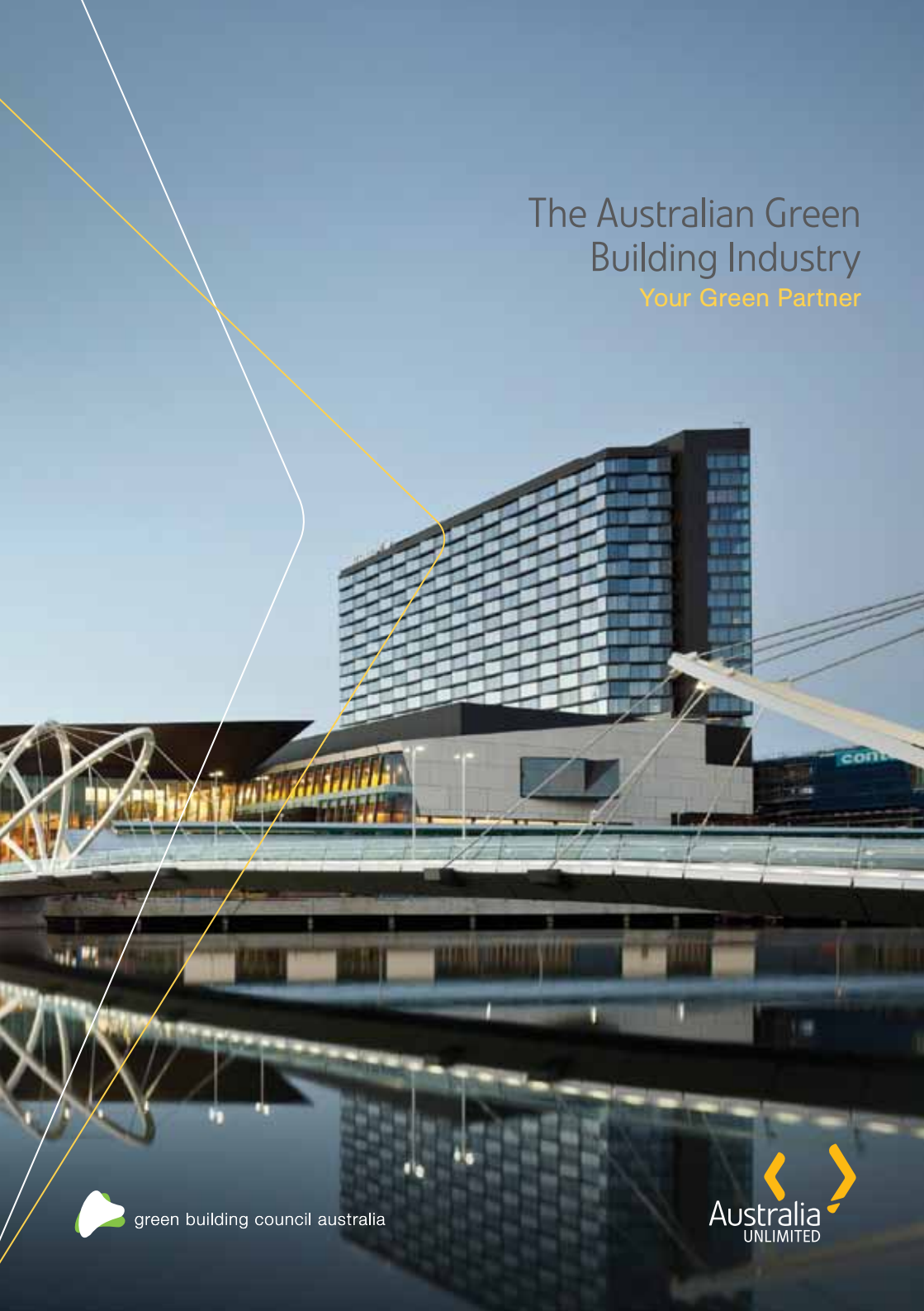


# The Australian Green Building Industry

Your Green Partner



green building council australia



Australia  
UNLIMITED

The Australian Trade Commission – Austrade – is the Australian Government's trade and investment development agency. Through a global network in over 50 countries, Austrade assists Australian companies to succeed in international business, attracts productive foreign direct investment into Australia and promotes Australia's education sector internationally.

The Green Building Council of Australia – GBCA – is a national, not-for-profit organisation that is committed to developing a sustainable property industry for Australia by encouraging the adoption of green building practices.

For more information about the Australian green building industry please contact the Australian Trade Commission [greenbuilding@austrade.gov.au](mailto:greenbuilding@austrade.gov.au) or Green Building Council of Australia [www.gbca.org.au](http://www.gbca.org.au)

As world leaders in design, engineering, innovative products and technology, the Australian green building industry is an ideal partner in developing green projects globally.

Australia has a well established and growing green building market, with more than 12 million square metres of Green Star certified or registered green building space.

#### Australian companies are leaders in:

- Masterplanning and precinct planning
- Sustainable building design
- Innovative Environmentally Sustainable Design (ESD) engineering
- Project management and technical services
- Water capture, saving and storage systems
- Energy-efficient lighting, heating, ventilation and air-conditioning (HVAC)
- Insulation – including thermal mass regulation products
- Energy-efficient hot-water systems – including solar and heat-pump systems
- Building management systems
- Provision of recycled, low toxicity and modular building products for construction

To view an in-depth showcase of world-leading Australian green building partners, visit: [www.austrade.gov.au/greenbuilding](http://www.austrade.gov.au/greenbuilding)



## Foundations of green building in Australia

The Sydney Olympic Games marked the beginning of the modern green building movement in Australia. The games were a world-class example of sustainable urban development, incorporating leading techniques in energy and water conservation.

### Green Building Council of Australia's Industry-led transformation

In response, the Green Building Council of Australia was formed in 2002. More than 350 Green Star-certified buildings have been delivered by an industry of world-class architects, engineers and technology suppliers.

*"Australia's building industry has an impressive history of delivering world-leading environmental outcomes.*

*From development, financing and design to engineering and specialist building technologies and products, GBCA member companies are more than qualified to assist in delivering sustainable green building developments."*

**Romilly Madew**  
Chief Executive,  
Green Building Council of Australia



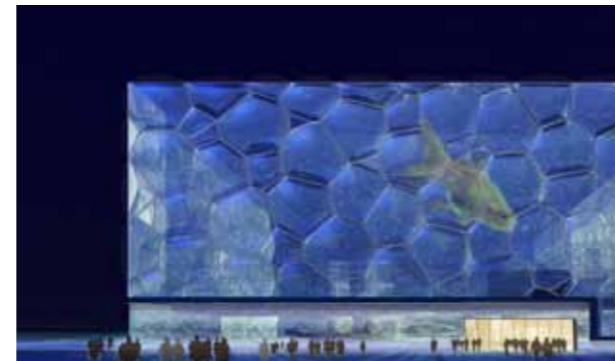
Photography: Bob Peters

## Australian companies delivering green projects globally



### Masdar City

Australian firms LAVA and Kann Finch Group provided green design solutions to the Masdar project in the UAE.



### Watercube, National Swimming Centre

PTW architects designed the Watercube National Swimming Centre for the Beijing Olympics which featured a number of green design aspects including utilising solar energy to heat spaces, energy recovery systems and the use of rainwater harvesting.

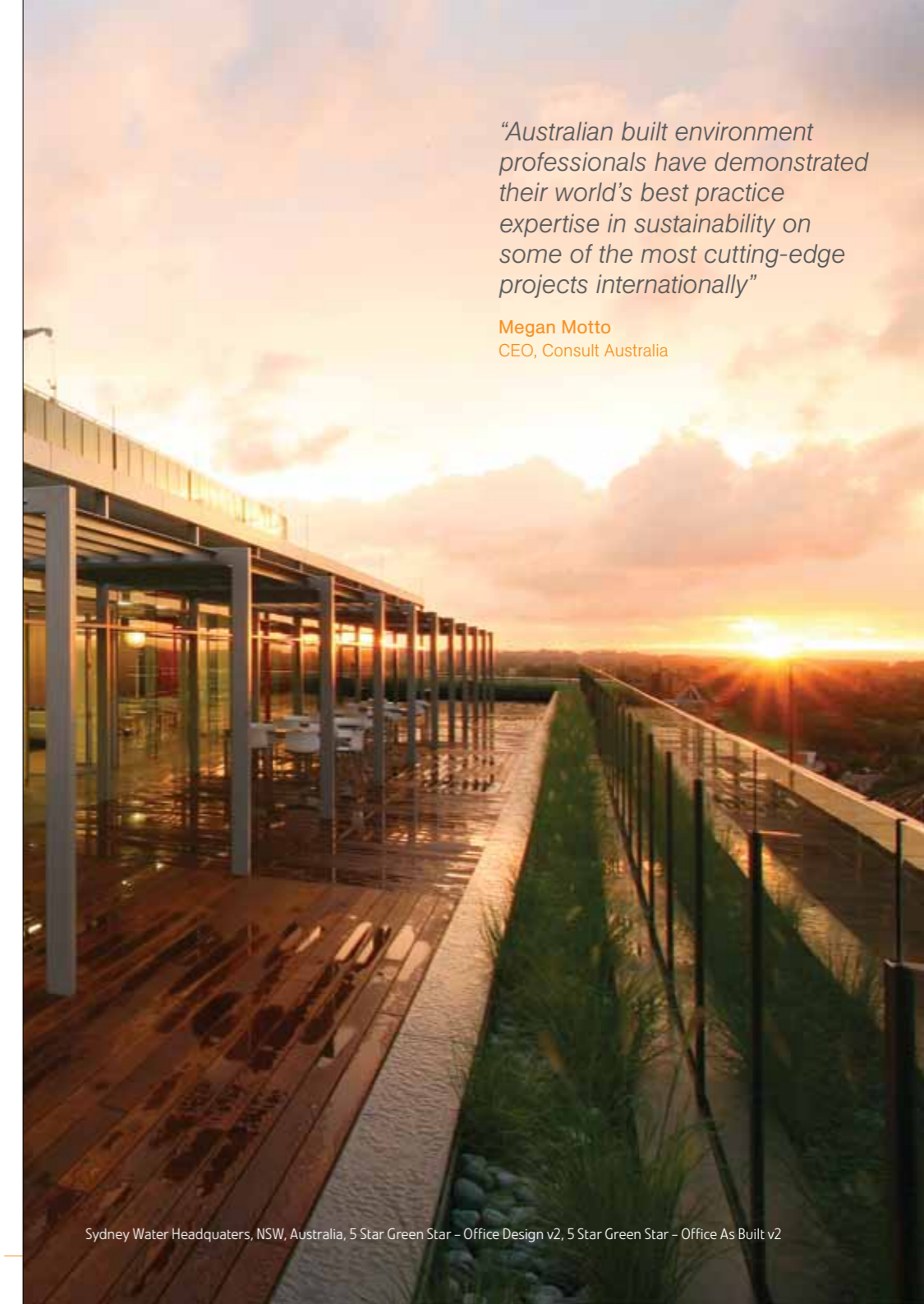


### 313@somerset

Lend Lease opened its A\$1 billion retail development, 313@somerset, on Orchard Road, in December 2009. The centre received the highest sustainability recognition in Singapore receiving a Green Mark Platinum Award from the Singapore Building and Construction Authority.

*"Australian built environment professionals have demonstrated their world's best practice expertise in sustainability on some of the most cutting-edge projects internationally"*

**Megan Motto**  
CEO, Consult Australia



Sydney Water Headquarters, NSW, Australia, 5 Star Green Star – Office Design v2, 5 Star Green Star – Office As Built v2



## The business case

Smart design and optimised building environmental systems can lead to substantial savings in operating and capital costs while providing higher returns and greater advantage in a crowded market place.

- › Capital cost savings
- › Lower operating costs
- › Greater tenant attraction
- › Higher return and increased property value
- › Competitive advantage
- › Enhanced marketability and public opportunities
- › Healthier place to live and work
- › Increased productivity.

*“Australian architecture practices are known internationally for their innovative and creative solutions, addressing sustainability challenges for the twenty first century.”*

David Parken  
CEO, Australian Institute of Architects

## What makes a building green?

1. Energy efficiency
2. Greenhouse gas emission reduction
3. Water conservation
4. Waste reuse and recycling
5. Pollution prevention – noise, water, air, soil and light
6. Enhanced biodiversity
7. Reduced natural resource consumption
8. Productive and healthy environments
9. Flexible and adaptable spaces.

## Australian tools for change

### Green Star

The Green Star environmental rating system for Australian buildings, developed by the Green Building Council of Australia (GBCA), has created integrated best practice benchmarks for green buildings.

Green Star is a second generation rating tool, which was influenced by the US' Leadership in Energy and Environmental Design (LEED) and the UK's BRE Environmental Assessment Method (BREEAM) but adapted to suit Australia's unique climate and environment.



### Green Star environmental impact categories



### Category scores

Apply environmental weightings

### Green Star Rating

4 Star Rating  
Best Practice

5 Star Rating  
Australian Excellence

6 Star Rating  
World Leadership

### Measuring Performance

NABERS (National Australian Built Environment Rating System) is a performance-based rating system for existing buildings. NABERS rates a building's operational impacts on the environment, and provides a simple indication to building owners and tenants of how a building compares with others.

NABERS is managed by the NSW Office of Environment and Heritage, Department of Premier and Cabinet on behalf of the federal, state and territory governments.

*Under the Australian Government's Commercial Building Disclosure (CBD) program, it is now mandatory to advertise a building's energy performance when selling or leasing a commercial building.*

## Positive Action

### Energy-positive buildings

Did you know that many Australian green buildings are not only making their own energy, but exporting energy to the grid? Through a variety of methods, including solar power and photovoltaics, wind turbines, regenerative lift drives, energy-efficiency measures, and cogeneration and trigeneration systems, buildings are being designed, built and operated to be energy-positive.

#### **Pixel: Melbourne**

The Pixel building has moved beyond 'carbon zero', where operational carbon emissions are offset by renewable energy, to 'carbon neutral' where emissions from construction materials are also offset. By using renewable energy over a 50 year lifecycle, Pixel will deliver a net carbon benefit to the environment.

### Water-positive buildings

Did you know that many Australian green buildings are not only trapping rainwater and treating greywater and blackwater for their own use, but also exporting water for use around the local environment? Through a variety of measures, including rainwater tanks, water-efficiency methods such as vacuum toilets and low-flow installations, greywater and blackwater treatment, anaerobic digestion systems, and retention pits and bio-swales, buildings are being designed, built and run to be water-positive, irrigating local areas and providing water for local uses.

#### **workplace<sup>6</sup>: Sydney**

At workplace<sup>6</sup>, an on-site black water treatment plant with sewer mining capacity processes the building's waste water, transforming it into clean, recycled water for flushing toilets and site irrigation. The system has the capacity to produce approximately 40,000 litres of recycled water each day and provide irrigation water for two neighbouring parks.



Pixel, Melbourne, 6 Star Green Star – Office Design v3. Photography: John Gollings.



workplace<sup>6</sup>, Sydney, 6 Star Green Star – Office Design v2, 6 Star Green Star – Office Design As Built v2



## Positive Results

### Health-positive buildings

Did you know that many Australian green buildings are not only cheaper to run and nicer to look at, but are having a positive impact on the health and satisfaction of their occupants? By considering factors such as external views, levels of pollutants, availability of fresh air and occupant comfort, employees, schools and hospitals are showing lower levels of sickness and absenteeism, higher levels of user satisfaction and greater levels of productivity, all of which adds up to better social, economic and environmental outcomes.

### Wangaratta High School

Achieving 4 Star Green Star – Education PILOT certification, Wangaratta High School in Victoria has utilised environmentally sustainable design (ESD) principles to reduce negative impact on the environment as well as providing students and teachers with a healthier, more productive space.

### Cost-positive buildings

Did you know that many Australian green buildings are showing significant cost benefits against 'traditional' building methods? These range from cheaper operating costs, including energy and water bills, facility management costs and flexibility and adaptability of spaces, to the enormous cost advantage provided by more productive space, lower staff turnover, greater market visibility and improved reputation.

### Umow Lai, Head office

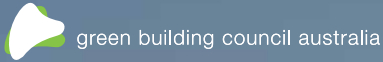
In addition to significant energy usage and cost savings, Umow Lai's head office in South Yarra, Victoria highlights the very real benefits of green buildings as staff productivity levels increase. An independently-conducted occupant productivity study of the building found the new office fit-out has triggered a 13 per cent increase in staff productivity.



Wangaratta High School, 4 Star Green Star – Education PILOT



Umow Lai, Head Office 6 Star Green Star – Office Interiors v1.1



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