

Soaring to sustainable heights at 3 Molonglo Drive



Neither Canberra’s climate, nor a tenant with strict security requirements and 24/7 operations, prevented the team behind 3 Molonglo Drive at the Canberra Airport from surpassing its 5 Star NABERS Energy target.

“The NABERS Commitment Agreement helps to focus the whole design team from an early stage, which means fewer variations in later phases. The design review process holds everyone to account, acts as a ‘gap analysis’ and ultimately helps deliver a better, greener building.”

– Karlien Bentley, Sustainability Manager,
Capital Airport Group

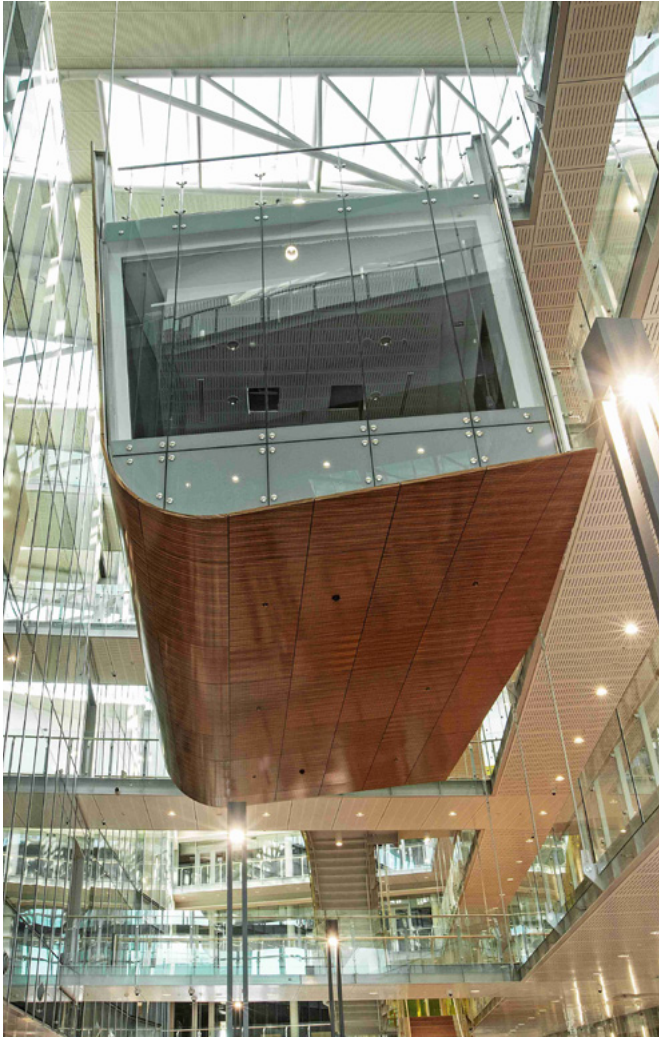
Capital Airport Group has a storied history of leadership in sustainable building. 8 Brindabella Circuit, in the Brindabella Business Park, was the first building in Australia to achieve a Green Star rating and inspired a generation of sustainable building advocates.

Not content to rest on its laurels, Capital Airport Group has continued to challenge best practice benchmarks for sustainability.

“Sustainability is more than a catchphrase for us. It’s a fundamental objective that drives our approach.”

– Karlien Bentley, Sustainability Manager,
Capital Airport Group

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Commitment to excellence

When Capital Airport Group signed a NABERS Commitment Agreement for 3 Molonglo Drive in April 2017, the goal was clear: achieve a 5 Star NABERS Energy base building rating. The building opened in 2019, and by July 2020, Capital Airport Group had surpassed this target, achieving a 5.5 star rating.

Centred around a spectacular 1,200 sqm atrium, 3 Molonglo Drive harmonises striking visual appeal with a steadfast dedication to sustainability. It integrates solar power and advanced water recycling with a design that prioritises natural light, fresh air and attractive sightlines. The result is a building that is good for people and the planet.

Smart, sustainable and secure

3 Molonglo Drive's design balances the strict security and operational requirements of a government tenant alongside the NABERS Energy imperative.

FAST FACTS

A-Grade building

Located in Brindabella Business Park, this A-Grade building features 35,000 sqm net lettable area across five storeys.

An office with the works

The commercial office includes meeting facilities, enclosed theatrette, open amphitheatre and informal gathering spaces, as well as extensive end-of-trip amenities.

5.5 Star NABERS Energy rating

A 5.5 Star NABERS Energy (base building) rating was first achieved in July 2020.

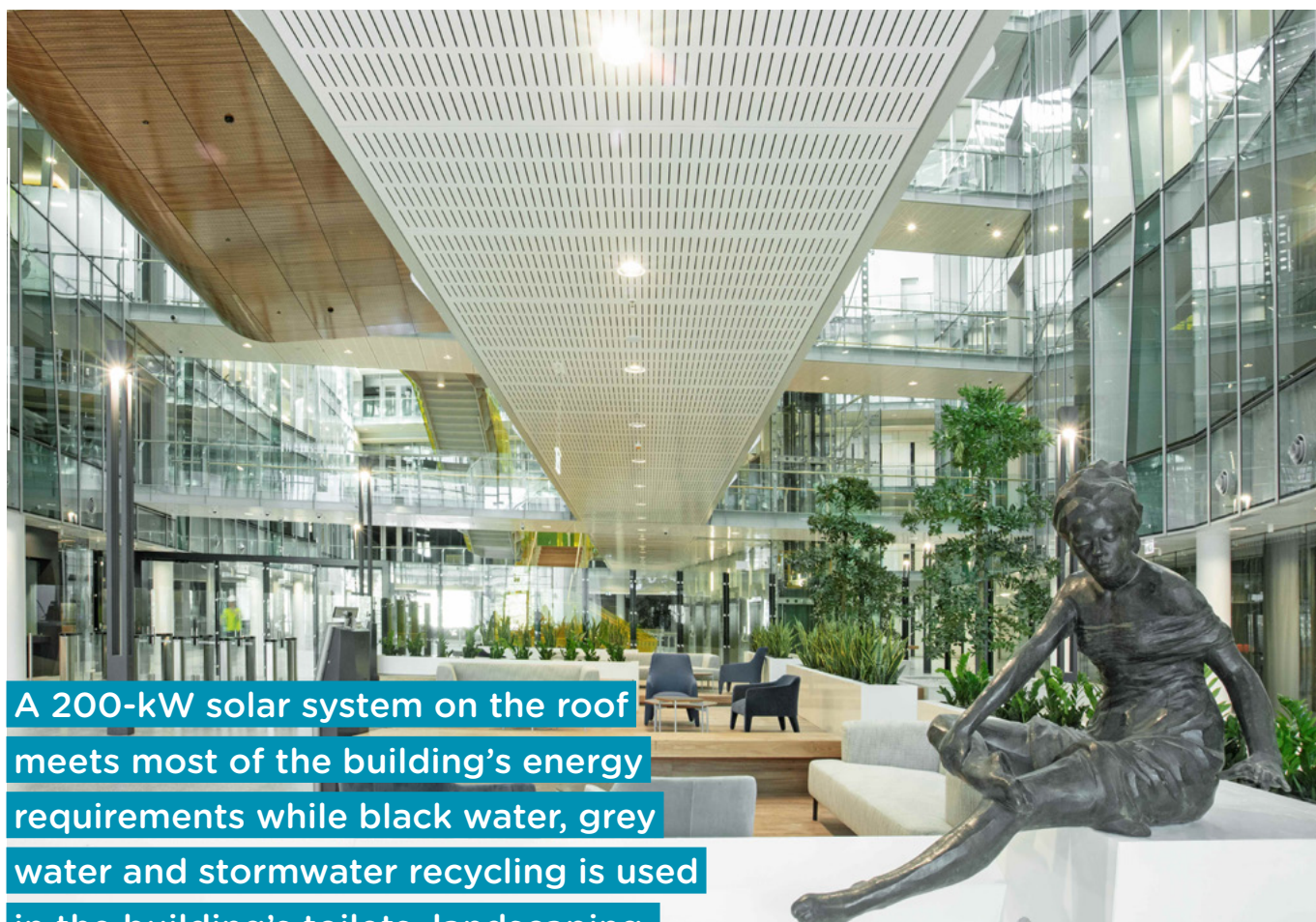
"The building has large floor plates, high-density occupancy and load areas, and it operates 24/7, which all made the NABERS target a challenge," Karlien says.

For instance, 3 Molonglo Drive's main entry leads directly into a four-storey atrium with a partially glazed roof. "To maintain the open atrium feel without compromising our NABERS rating, we enclosed all the levels with glass walls," Karlien notes. This solution floods the building in natural light while maintaining occupant comfort – no mean feat on Canberra's winter mornings.

"Our tenants love the design and openness of 3 Molonglo Drive, as well as the location. The large atrium lets in plenty of natural light, and the suspended staircase and floating meeting room are key features of the building."

– Karlien Bentley, Sustainability Manager,
Capital Airport Group

The tenant, which has occupied the building since 2019, also has its own energy management team responsible for monitoring the ongoing performance of its tenancy spaces.



A 200-kW solar system on the roof meets most of the building's energy requirements while black water, grey water and stormwater recycling is used in the building's toilets, landscaping, and mechanical cooling towers.

Sustainability is never 'set and forget'

"The climate in Canberra means outside air temperatures and pre-heating requirements can be a design challenge," Karlien adds.

Canberra's winters are cold, with frequent frosts, while summers are hot and dry. This variation in temperature means HVAC (heating, ventilation, and air conditioning) systems must work hard to maintain comfortable indoor environments year-round.

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Canberra is also famed for its blue skies and crisp winter days. Building designs often incorporate large windows and atriums to maximise natural light and reduce the need for artificial lighting. However, designs must also manage solar gain to prevent overheating during the summer heat.

External shading, high-performance glass and careful orientation – all design strategies employed at 3 Molonglo Drive – create a comfortable, efficient building every month of the year. This is backed up by sophisticated systems and a skilled team.

"The ongoing achievement of our 5.5 Star NABERS Energy is not possible without the collaboration of our HVAC controls and maintenance teams," Karlien says.

"We use data and analytics to set benchmarks, backed by frequent review mechanisms, to assess the building's ongoing performance. We work closely with our partners to monitor services and maintenance, to detect and rectify faults, and to undertake ongoing energy tuning and optimisation." In other words, a building with a high NABERS rating is never "set and forget".

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Innovation acceleration

“Environmental sustainability has underpinned Capital Airport Group’s design of Brindabella Business Park for nearly two decades”, Karlien says.

“We are always seeking new ways to improve our buildings, and 3 Molonglo is only one of many buildings where we have exceeded expectations.”

“Our experience ensures each successive building is better than the one before, that our benchmarks for sustainable development far exceed what we are regulated to achieve and that we have established ourselves as leaders in economical and environmental developments.”

“3 Molonglo Drive operated efficiently and effectively from the outset, requiring very little tuning through the first 12 months of operation. We think this, in part, is because we laid the foundations through the NABERS Commitment Agreement process.”

– Karlien Bentley, Sustainability Manager,
Capital Airport Group

[Find out more about NABERS Commitment Agreements](#)