

# a six STAR fitout

for BHP Billiton



The Heritage Buildings at Brookfield Place – the WA Trustees and Royal insurance Buildings, Newspaper House and Old Perth Boys School – present the largest intact heritage streetscape on St Georges Terrace. Abandoned for many years, and hidden behind hoardings, these buildings had suffered the ravages of weather, vandalism and theft. But this was set to change when Brookfield Place with a 45 level tower as its centrepiece – came to fruition.

BHP Billiton had been looking to consolidate its 19 sites around Perth within a single CBD building. Brookfield had a site which would suit BHP Billiton perfectly. But the site came with some challenges: namely, the restoration and conservation of the heritage buildings.

When asked about the origins of the development, construction manager at Brookfield Multiplex David Eden says there were two key factors at play. “Primarily BHP Billiton was looking to secure a large lease space that enabled Brookfield to create something on this scale. Secondly, Brookfield had owned the St Georges Terrace site for a number of years and were determined to give the historic buildings a new lease on life. It was the perfect synergy of supply and demand.”

The restoration of these historic buildings was one of the key elements of the Brookfield Place master plan. Other critical components involved the creation of retail space, civic space and the 45 level office tower .

“The form of the tower evolved by actually looking at the workplace first so we designed the building from the inside out,” says Andrew Low, Principal at HASSELL architects.

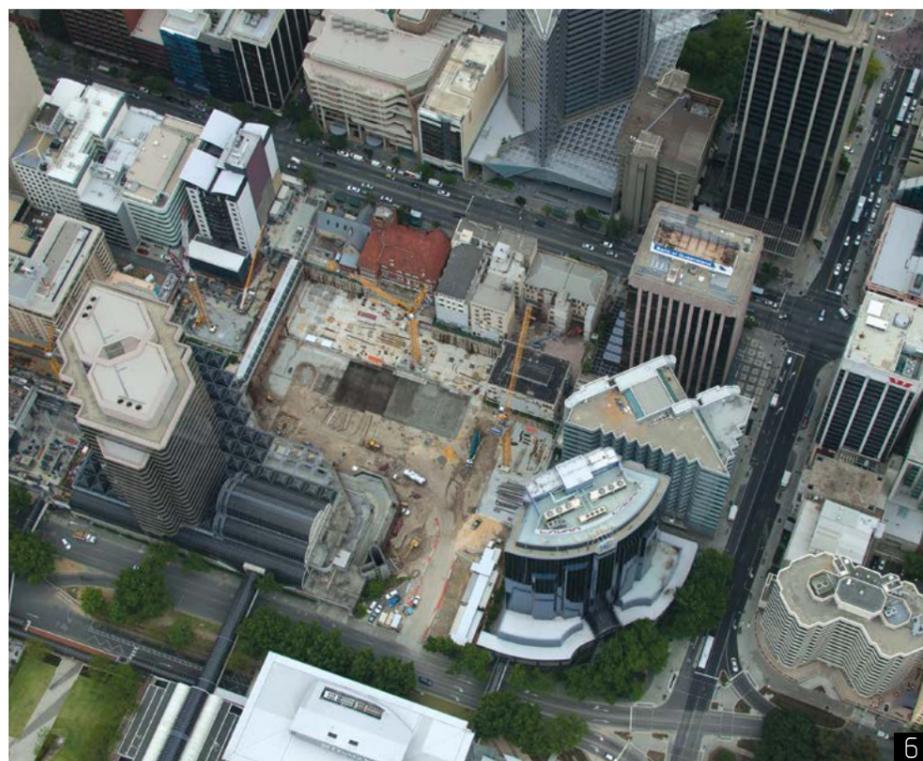
“We essentially looked at moving the core out of the middle of the building onto the outside of the building so it’s on the northern side of the building. This means that the floor plate then sits on the south of the core and it means that everyone gets a view but also a clear view across the floor plate to your colleagues so its easier to feel part of a connected larger organisation.”



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1. At 234 metres tall, the tower makes a statement on the Perth skyline
2. Technology was a key component of the fitout
3. One of the many collaborative spaces on level 45
4. Careful attention was paid to all elements of the fitout
5. The open plan layout and interconnecting stairs encourage staff interaction
6. The Brookfield Place site prior to construction

Beyond just being another glass tower, this building comes with some serious environmental credentials.

“If you look at the layout of the building, this project is the tallest side core building in the Southern Hemisphere,” says Eden. “This offsets the large concrete core to the north of the project thereby providing an enormous concrete heat shield which has really strong passive ESD credentials. Also, the fact that the BHP Billiton fitout of 60,000m<sup>2</sup> was fully integrated into the base building works, greatly assisted ESD and green star by minimising waste and maximising efficiency in what was historically two separate bits of building work.”

NDY associate director Rob Murdoch is quick to reinforce the sustainability objectives of the project. “BHP Billiton is very much environmentally focused. As a design team, we needed to replicate that in every way, shape and form in this fitout.

“BHP Billiton had this philosophy that they started off with to become one,” adds Murdoch. “Part of that philosophy was amalgamating all the businesses which were scattered throughout the Perth CBD and suburbs and consolidating them into one building. Through that they wanted to facilitate communication and reinforce transparent and visible leadership.”

Open communication and a sense of connectedness – both amongst staff and to the views outside – were key design imperatives.

“There is a series of stairs and voids that run up the centre of the building so not only are you connected horizontally across the floor plate, you’re connected vertically up through the building,” says Low. “You can actually see up a couple of floors and down a couple of floors from a number of places in the building which adds to the celebration that, as a firm, BHP are a connected single entity. The design encourages people to move through the hub, to the lifts and the stairs so that they actually rub shoulders with each other and share information.”

The 6 Star rating for the BHP Billiton fitout was achieved by fulfilling aspirational sustainability initiatives through the project, the rewarding of innovation points and via BHP Billiton’s adoption of energy efficient measures envisaged in the original design.

“By achieving 81 points overall, the fitout well and truly surpassed the requirements for achieving a six star fitout,” says NDY sustainability & acoustics consultant, Aaron James. This is the first 6 star interiors rating in WA and the BHP Billiton fitout is the largest overall fitout in WA, rated or unrated.”

Achieving a 6 Star Green Star rating is quite an accolade for a building on any scale: to do so for a fitout exceeding 60,000m<sup>2</sup> is extraordinary.

As NDY global director of sustainability and a founding director of the GBCA, Tony Arnel has rarely seen this level of attention to detail of sustainability credentials in his 11 years of Green Star experience.

“This building fitout was originally registered as a 5 Star, but the sustainability initiatives actually implemented meant it has achieved the rare and coveted 6 Star Green Star rating – this represents world leadership in terms of the outcome for the BHP Billiton tenancy.

“One of the impressive features in my view has been the number of innovation points awarded during the certification process. Four points were achieved, which is a much higher number when compared to other projects in the 6 Star league. So the attention to detail has been really impressive in achieving what is a world-leading project for BHP Billiton.”

Just the sheer size and scale of the fitout – which achieved 20 out of a possible 21 points in the Green Star ‘Materials’ category – demonstrates why sustainable procurement policies can have a dramatic impact on environmental outcomes.



- 7. The model reflects a growing city with Brookfield Place as the centerpiece
- 8. The tower is the tallest side core building in the southern hemisphere
- 9. Sensitive refurbishment of the heritage buildings

Services provided by NDY

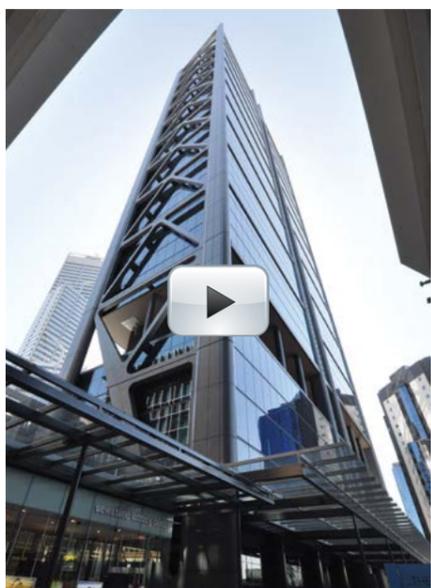
Sustainability	Audio Visual
Green Star Ratings	ICT
Acoustics	Security

Key collaborative team

**CLIENT** BHP Billiton  
**OWNER AND DEVELOPER** Brookfield  
**ARCHITECT** HASSELL  
**BUILDER** Brookfield Multiplex  
**PROJECT MANAGEMENT** Paragon Project Management



Model not necessarily to scale or reflective of recent changes to the Perth city built environment.



More than 17,000 individual furniture items were procured, with 96 per cent low volatile organic materials (VOCs). The project used 21,500 litres of low-VOC sealants and adhesives and 48,760 litres of low-VOC paint. A distinct feature in the building is the recycled Jarrah flooring to lobby and infrastructure levels, procured from a Western Australian timber mill.

BHP Billiton was keen to ensure there would be no offices within the fitout thereby avoiding a hierarchical culture through visible leadership. Access to natural light and views of the Swan River were also paramount. It was decided very early on in the process that the top floor, level 45, would be the staff hub. At nine metres in height, this double height space posed its own unique design challenges.

"Level 45 is clearly not your normal office fitout," says Murdoch. "Standard ceilings in office fit out are 2.7 metres these are actually nine metres high so in order to get the air conditioning to work it needs to increase in capacity, and with the potential to have 400 staff up here for presentations, we had to introduce supplementary cooling. So behind a façade that we've got up high here is actually another set of air handling plant which actually deliver that additional cooling to the space. It works particularly well and everyone's happy - that's what it's about, occupant comfort."

This human connection with the embedded infrastructure and technology acts as a metaphor of the project team's deep sense of collaboration on this development.

"What's interesting is that although you have a contractual document that mandates an integrated approach, this only truly happens through the people involved and so a talented team involving NDY, BHP Billiton, HASSELL, Brookfield and Brookfield Multiplex worked incredibly hard over a five year period to achieve the outcome that we have today," says Eden. "We're all proud to have been part of a team that has created a lasting legacy on the Perth skyline: it makes us incredibly proud."

Vice President Health Safety Environment and Community BHP Billiton Iron Ore, Brett Swayn, echoes these sentiments.

"Our fitout was designed not only with sustainability in mind, but also to provide a modern, open and flexible work space for our employees. The result has provided a world-class workplace that reflects our Company's commitment to environmental stewardship and contributes to creating civic spaces that will leave a legacy for future generations."

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to watch the BHP Billiton  
6 star fitout documentary

