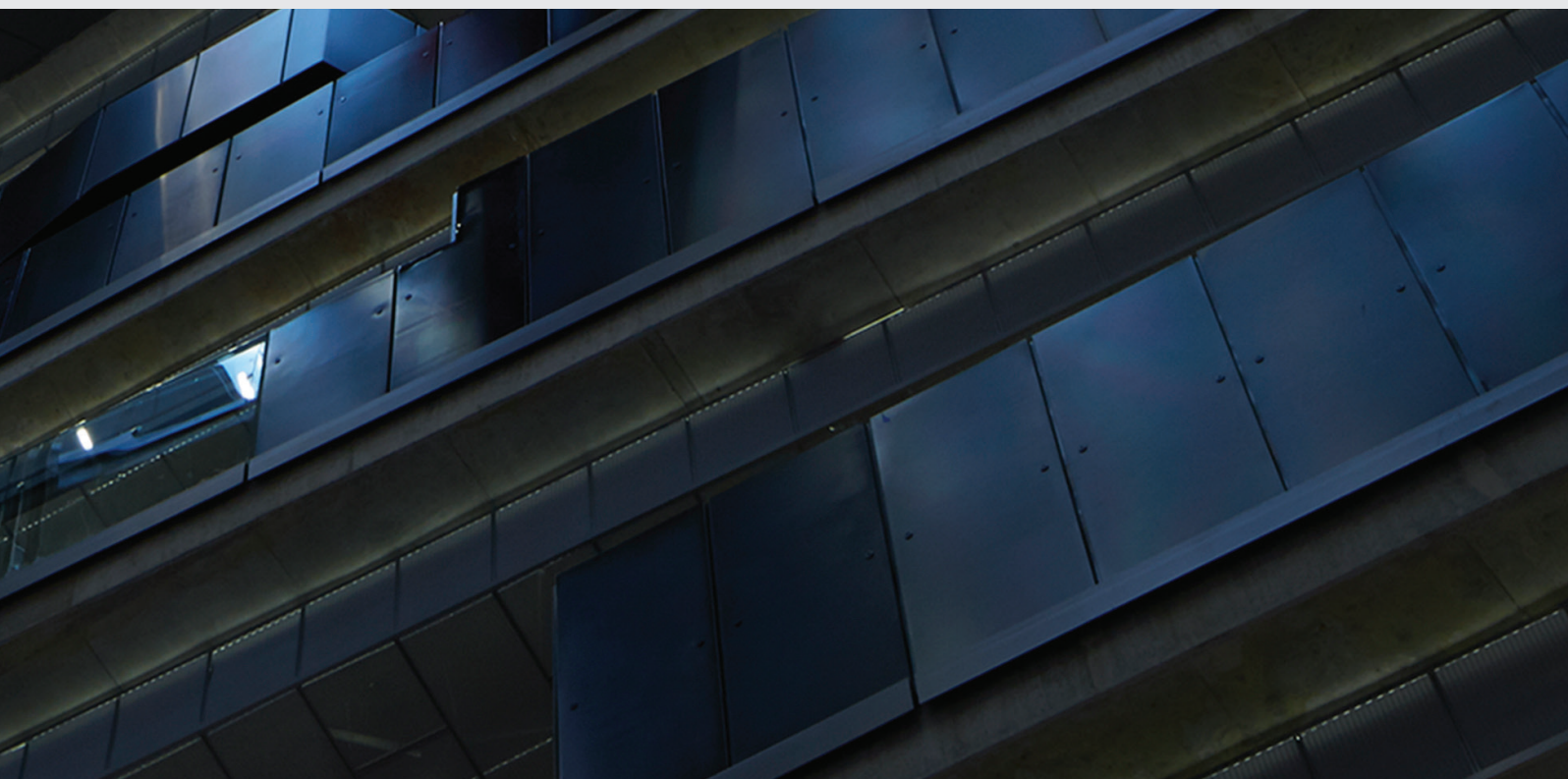


**700 BOURKE STREET**  
**2014 ACAA AWARD**  
INITIAL SUBMISSION

**Brookfield**  
**MULTIPLEX**  
Built to outperform.









# ENTRY FORM

We submit the following entry for consideration for the 2014 Australian Construction Achievement Award

Project Details		
<b>Project Title</b> 700 Bourke Street		<b>Location</b> Melbourne, Victoria
<b>Summary of scope of work (max 50 words)</b> Design and construction of a sustainable A-grade (6 Star Green Star, 5 Star NABERS) Office Building for the National Australia Bank, the single corporate tenant, featuring 63,000m <sup>2</sup> of floor space over 14 levels, 700m <sup>2</sup> of external roof garden, 310 seat Area Theatre, 250 seat Seminar Room and childcare centre.		
<b>Contract value</b> \$333 million		<b>Contract Type</b> Fixed Lump Sum (Design & Construct)
<b>Contract period</b> 04/04/11 - 17/05/13		<b>Date of Substantial Completion</b> 17/05/13
<b>Purpose of Project</b> A-grade Office Building		<b>Name of client/principal</b> CBUS Property
<b>Address</b> Level 7, 550 Bourke Street, Melbourne Victoria		
<b>Post Code</b> 3000	<b>Contact Name</b> Chris Kakoufas	<b>Title</b> General Manager Developments
<b>Telephone</b> (03) 9639 0131		<b>Facsimile</b> (03) 9663 2033
Description	Data required	Response
<b>Contract</b>	<b>Contract tendered value (TOC)</b>	\$224,490,714.00
	<b>Contract final value (AOC)</b>	\$333,969,112.00
	<b>Principal reasons for variances</b>	<ul style="list-style-type: none"> <li>NAB Fitout</li> <li>CBUS Variations</li> </ul>
	<b>Any unresolved disputes?</b> <b>Status of those disputes?</b>	None
<b>Contract period</b>	<b>Commencement date</b>	04/04/11
	<b>Original completion date</b>	30/04/13
	<b>Actual completion date</b>	17/05/13
	<b>Principal reason for variances</b>	Scope increase
<b>Safety</b>	<b>Total hours worked</b>	2,409,780
	<b>Total Recordable Incident Rate</b>	Lost Time Injury Frequency Rate: 1.89
	<b>Details of any fatalities on the project</b>	Nil

# ENTRY FORM

<b>Details of Entrant</b>		
<b>Name and position (Managing Director or equivalent)</b>		
<b>Name and position (Managing Director or equivalent)</b> Graham Milford-Cottam		
<b>Address</b> Level 2, 32 Lincoln Square North, Carlton		<b>Postcode</b> 3053
<b>Contact name</b> Ross Snowball		<b>Title</b> Regional Director
<b>Telephone</b> 0408 908 536	<b>Facsimile</b>	<b>Email</b> ross.snowball@brookfieldmultiplex.com.au
<b>Contact for Logo Approval</b>		<b>Name of Organisation</b> Brookfield Multiplex
<b>Address</b> Level 22, 135 King Street, Sydney		<b>Postcode</b> 2000
<b>Contact name</b> Suzie Hollott		<b>Title</b> National Marketing Manager
<b>Telephone</b> 02 9322 2965	<b>Facsimile</b>	<b>Email</b> suzie.hollott@brookfieldmultiplex.com.au

# ENTRY FORM

<b>Contact for PR Information</b>		<b>Name of Organisation</b> Brookfield Multiplex	
<b>Address</b> Level 22, 135 King Street, Sydney			<b>Postcode</b> 2000
<b>Contact name</b> Suzie Hollott		<b>Title</b> National Marketing Manager	
<b>Telephone</b> 02 9322 2965	<b>Facsimile</b>	<b>Email</b> suzie.hollott@brookfieldmultiplex.com.au	
<b>Contact for Video Content</b>		<b>Name of Organisation</b> Brookfield Multiplex	
<b>Address</b> Level 22, 135 King Street, Sydney			<b>Postcode</b> 2000
<b>Contact name</b> Suzie Hollott		<b>Title</b> National Marketing Manager	
<b>Telephone</b> 02 9322 2965	<b>Facsimile</b>	<b>Email</b> suzie.hollott@brookfieldmultiplex.com.au	

## ENTRY DECLARATION

We are duly authorised to submit this entry on behalf of the Entrant on this form and:

- ✓ Agree to abide by the rules and conditions governing the Australian Construction Achievement Award as set out in this document, including payment of final entry fees if selected as a finalist
- ✓ Declare that substantial completion of the project has been achieved in the 12 months prior to 30 September 2013



**Signature**

**Company** Brookfield Multiplex

**Name and Position (Managing Director or equivalent)**

Graham Milford-Cottam, Managing Director -Regional

**Date** 30/10/13



# PROJECT OVERVIEW

Brookfield Multiplex's 700 Bourke Street is a building like no other with a façade and structural form that is as unique and dramatic as it is eye-catching: it is also a testament to a project team's focus and commitment to delivering a shared vision and maintaining the integrity of design, regardless of the challenges.

The building is the National Australia Bank's new Melbourne headquarters and is the latest addition to the Melbourne Docklands' thriving commercial sector. The 16-storey building was completed in May 2013, some six weeks ahead schedule, following an almost two-year construction program. At 75,000m<sup>2</sup>, 700m Bourke Street includes retail facilities, a 310-seat theatrette, two podium levels incorporating car park, plant rooms, bicycle parking and saw Brookfield Multiplex deliver the fitout for the National Australia Bank. Environmental sustainability and

accessibility for the local community are key elements of the building design, with a 6 star green star rating achieved for design. Among the environmentally sustainable features are an energy efficient facade, high performance solar glazing, a percentage of 'small car' car parks and a black water treatment plant. Rooftop plant rooms and a garden terrace offer a green contrast to the urban setting, while a continuous atrium between levels two and 14 allows natural light to permeate the design.





# OUTCOMES ACHIEVED AGAINST PLANNED TARGETS FOR KEY PROJECT PARAMETERS

Brookfield Multiplex came to this challenging and high profile project with a very clear focus on achieving excellence in safety, quality, environmental management and ensuring absolute design integrity to enable optimum user amenity. These goals for the project were met, as outlined:

## Safety

Brookfield Multiplex has one of the best safety performance records in the construction and engineering sector across Australia. Brookfield Multiplex Victoria has a target LTI rate of 2, which exceeds national industry standards. Despite numerous challenges, including working in and around high-volume traffic and pedestrian areas, working at heights and in close proximity to other live construction sites, the 700 Bourke Street project team achieved an LTI of 1.89: an exceptional outcome considering the size, scale and complexity of the project. Safety was championed through regular safety meetings and site walks where safety issues were analysed and addressed dynamically. The interior of the building features 16 bridges, which span the Atrium. To promote safety and eradicate the need for birdcage scaffold, the bridges were prefabricated offsite, assembled on-site, pre-cladded and then lifted into position. Another major safety challenge was posed by the adjacent Etihad Stadium, which, on any given weekend, would see upwards of 40,000 people pass virtually through the active site on their way to AFL, ARU and FFA matches that were played at the Stadium. Despite this volume of foot traffic, no safety incidents were recorded and construction goals were scored at the same time as those in the Etihad were being loudly celebrated.



### 700 Bourke Street has:

**14 Floors**

**63,000m<sup>2</sup> NLA**

**700m<sup>2</sup> of external roof garden**

**4000m<sup>2</sup> community places**

**6 Star Green Star  
Office Design v3 rating**

**5 star NABERS rating**



## Quality

Inside and outside the building, the commitment to high-quality workmanship and absolute focus on delivering the very best finish, form and function is evident. The site location, between Southern Cross Station and Etihad Stadium, generates incredible footfall, while its position beside sunken train lines allows the entire north-east façade of the building to be visible from the city. Responding to its triangular site, and ensuring the highest quality finish was achieved, the architectural form of the building embraces the triangle as its primary visual motif, with a magnificent triangular atrium rising through the centre of the building. Five vertical fissures snake their way down the façade of the building, breaking down the scale of the enormous footprint. Triangulated façade panels on the exterior of these “cathedral windows” are coloured red, orange, yellow and green. The project consisted of only 30% ceiling lining with the remaining being exposed services: a unique element of the project and a particularly challenging one. This type of construction was more difficult as the quality of the exposed services and concrete finishes were a focal point. Early emphasis was placed on ensuring client expectations were embedded into sub-contractors’ workmanship. There were also numerous ‘one-off’ type designs within the building, particularly for the common areas within the fitout. These included the theatre ceiling, which has over 800 individual triangular ceiling panels — none the same size or angle. Another example is the reception and meeting area on Level 3 which consists of a number of large timber clad pods, all with complex angles and steel structures presenting numerous challenges and requiring the clad system to be stick built to ensure the highest quality finish was achieved.

## Design Integrity / User Amenity

Woods Bagot, the project's architects, along with Cbus and NAB had a clear aesthetic vision for the project: one that reflected its “triangular” location and ensured that when complete, delivered NAB a workplace that supported their objective of affecting organisational change and achieving business efficiencies in a stimulating and inspirational environment. The total floor area of 75,000m<sup>2</sup> is positioned around a central, light-filled atrium and divided into eight zones that act as hubs for 50 people, with the added flexibility of 100 drop-in staff, community and consultants. Each of these zones are subsequently sub-dividable into a series of spaces for social, shared, focused and learning environments. Ensuring this vision for user amenity was met involved a comprehensive and clear focus on maintaining absolute design integrity. A Design Review Group (DRG) process was established which consisted of Brookfield Multiplex, the base building and fitout consultants, the client, Cbus and end user NAB. This set the scene of understanding of what was required from both Cbus and NAB which meant that both the design and construction teams were aligned with delivering the overall vision. Presentations were delivered from key consultants to Brookfield Multiplex, Cbus and NAB to demonstrate what the final design intent should be. This was then documented and sub-contracts were let with this vision indelibly etched into the contracts. Weekly design meetings for base building and fitout for integration with both consultants were conducted, while fitout-only meetings were also managed by Brookfield Multiplex (even though the company was not responsible for design) to enable the Brookfield Multiplex team to have a clear understanding and vision of buildability during the design phase for the fitout.

# COMPLEXITY, DIFFICULTY AND OPTIMISATION OF THE CONSTRUCTION TASK

700 Bourke Street is a showpiece building — one that is now an iconic centrepiece of the rapidly evolving Melbourne Docklands area. Delivering an iconic building like this for one of Australia's largest banks and well-known brands and knowing it will be a flagship for that brand is a challenge in itself. Ensuring quality of finish, design integrity and functionality goals were all achieved was a daily challenge. The Brookfield Multiplex project team exceeded these challenges through a high-performance mindset and an exceptional, uninterrupted focus on delivering engineering excellence, everyday.

## Location & Logistics

While the project's location is part of its appeal, it also represented its most complex and logistically challenging element. Traffic and pedestrian management was critical and provided a small footprint for the Brookfield Multiplex team in terms of site logistics, access and egress and drop-off points for materials. The adjacent Etihad Stadium provided a unique scale and scope of challenges not previously seen by the Brookfield Multiplex team, all of which were innovatively and successfully managed. For example, the initial construction phase required Brookfield Multiplex to construct 150m long x 10m wide temporary steel bridge to allow the existing Bourke Street Bridge to be demolished. The demolished bridge section was required so that foundation piles could be installed to the Bourke Street boundary. The timing for the removal of this Bridge was linked to the handover of the adjacent Medibank site to Cbus and the completion of the temporary opening of the Level 2 concourse to the public. Once opened this was used by the public whilst Etihad was in event mode. At any one time 40,000 people would pass through this area whilst construction continued above and around them.

## Façade & Finishes

The look and feel of the building is not only dramatic, but also complex with no one shape, panel or structural element the same. Nowhere was this more challenging than in the façade fissures required for the project. These are the stand out, focal point of the building when the building is seen from the outside and all the panels are individually sized. Seven crews were used to install the façade, with the primary complexity being the “slow” installation of the fissure panels. Each panel was like no other and all placed at a differing angle. To overcome this challenge careful control and management of materials procurement ensured a perfect and seamless fit was achieved each and every time. Crews were also encouraged to set their own performance benchmarks and compete against one another to “push” a fast-track façade delivery. This was one of many approaches that allowed the Brookfield Multiplex team to achieve a project handover ahead of Cbus' anticipated 26-month program.



### Come inside and see:

- 5947 work floor lockers**
- 5200 work surfaces**
- 9860 chairs at which to work**
- 310 seats in The Arena Theatre on concourse level**
- 250 seats in the Seminar room on level 3**
- 140 car park spaces**
- 600 bicycle park spaces expandable to 1,000**
- Childcare Centre, operated by KU Children's Services, for 60 children**
- Digital wayfinding system**



# LEADERSHIP AND MANAGEMENT OF THE PROJECT DELIVERY

Our aim from day one was to achieve excellence and by establishing very early on a collaborative and open relationship with our client, architect, end user and key consultants, we delivered:

- A ahead of program completion
- A safety performance significantly below the industry standard and average
- A client relationship and pedigree that has seen us earn repeat business to deliver new Cbus assets across Melbourne including the adjacent 720 Bourke Street project
- On budget delivery of the works – with no compromise on quality
- No contractual letters or disputes between Brookfield Multiplex and Cbus
- No disputes between Brookfield Multiplex and key project consultants
- Liaison with Authorities was critical for the success of the project. Our team established early relationships with the required authorities allowing fluid delivery of the project with minimal disruption
- A VicRoads liaison was established to secure Wurundjeri Way as the prime loading bay for crane lifts, and
- Close liaison and communication with the Metropolitan Fire Brigade to agree final safe operation of fire services.

Brookfield Multiplex takes pride in its project delivery approach and leadership and management of any of our projects is undertaken collaboratively and openly with clients. Understanding a client's key objectives and requirements and working with them to meet — or exceed — these targets was a key element of our approach at 700 Bourke Street. This collaborative relationship was fostered through the following methods:

- Maintaining existing relationship with Cbus and consultants was paramount to ensuring that the project was run from start to finish with an open, transparent approach to the delivery
- We developed a new relationship with NAB. The relationship commenced as a collaborative one and continues to be strong post occupation
- Weekly meetings were conducted with Etihad Stadium to keep them updated on what we were doing
- Monthly meetings were undertaken with Places Victoria to inform and update them on progress and key milestones and to manage expectations of traffic controls along Bourke Street while using this as a loading zone

This willingness to be transparent and engender an open book approach fostered a genuine sense of cohesion and collaboration, which not only supported our high performance delivery but also strengthened relationships across all project parties. Relations between senior management at Cbus, NAB and Brookfield Multiplex were extremely positive and this became the foundation for good relationships to flourish all round. There were regular and open communications at senior level to ensure the project's objectives were always at the forefront of everyone's thoughts and actions.

The culture across the project was one of “can do, together”. This was supported and championed across all levels of senior and site management. Finally, robust management systems covering design, construction, safety, quality, risk, environmental and stakeholder management were established. Performance was monitored on a regular basis providing governance and surety throughout all stages of the project.

### **700 Bourke Street has:**

**80,000 Data Points**

**2.5 million metres of copper cabling**

**27km of fibre optic cabling**

**100km of Data Cable per floor**

**50km of Power Cable per floor**

**8000 Motion Sensors**

**Wireless LAN access throughout the building**

**Guest network**

**Interactive projecting screens**

**Large LED displays for information sharing**

**2710 standard desk phones for 5200 work surfaces**

**62 video conferencing rooms**

### **The project team comprised the following entities:**

CLIENT:

**CBus Property**

BUILDER:

**Brookfield Multiplex**

TENANT:

**National Australia Bank**

ARCHITECT:

**Woods Bagot (Base & Fitout)**

PROJECT MANAGERS:

**Project Planning & Management (CBus),  
Montlaur Project Services  
/ APP Corporation (NAB)**

SERVICES MANAGERS:

**Norman Disney & Young (Base & Fitout)**

STRUCTURAL ENGINEERS:

**Winward Structures**

TRAFFIC ENGINEERS:

**Cardno Grogan Richards**

WIND CONSULTANTS:

**MEL Consultants**

QUANTITY SURVEYORS:

**Rider Levett Bucknall / WT partnership**

FACADE ENGINEERS:

**BG&E Facades**

BUILDING SURVEYOR:

**Phillip Chun & Associates (Base),  
McKenzie Group (Fitout)**

LANDSCAPE CONSULTANT:

**Hassell Architects**



