

## Preferred Project Report



### Commercial Building C3 (MP11\_0044)

Barangaroo South

Submitted to Department of Planning and Infrastructure  
On Behalf of Lend Lease (Millers Point) Pty Ltd

February 2012 ■ 10752

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This report has been prepared by: Michael Rowe

Signature  Date 29/02/12

This report has been reviewed by: Lesley Bull

Signature  Date 29/02/12

# Contents

<b>1.0</b>	<b>Introduction</b>	<b>1</b>
<b>2.0</b>	<b>Key Issues and Proponent's Response</b>	<b>3</b>
<b>3.0</b>	<b>Preferred Project</b>	<b>4</b>
3.1	Modifications to the Proposal	4
3.2	Overview of Proposal	5
3.3	Design Objectives	6
3.4	Numerical Overview	6
3.5	Gross Floor Area and Use	6
3.6	Building Height and Massing	9
3.7	Building Setbacks	9
3.8	External Materials and Finishes	10
3.9	Public Domain, Landscaping and Public Art	10
3.10	Pedestrian Circulation	12
3.11	Vehicular Access and Parking	12
3.12	Safety and Security	14
3.13	Lighting	14
3.14	Environmentally Sustainable Development	15
3.15	Waste Management	16
3.16	Building Services	17
3.17	Hours of Operation	18
3.18	Staging	19
3.19	Signage Zones	19
3.20	Construction Hoardings and Banners	19
3.21	Piling and Remediation	20
<b>4.0</b>	<b>Environmental Assessment</b>	<b>21</b>
4.1	Consistency with the Concept Plan	21
4.2	Built Form	24
4.3	Other Key Issues	25
<b>5.0</b>	<b>Final Statement of Commitments</b>	<b>28</b>

# Contents

## Figures

---

<b>1</b>	Setbacks to the Block 3 boundaries	10
<b>2</b>	Commercial Building C3 pedestrian circulation	12

## Tables

---

<b>1</b>	Key development information	6
<b>2</b>	Land use and GFA by level	7
<b>3</b>	Building setbacks	9
<b>4</b>	Proposed Loading Dock spaces	13
<b>5</b>	Compliance with Concept Plan (Mod 4) Block 3 GFA and Height Controls	21
<b>6</b>	Compliance with Concept Plan Urban Design Controls	21
<b>7</b>	Location of other key issues	25

# Contents

## Attachments

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- A** Response to Submissions  
*JBA Planning*
  
- B** Architectural Drawings
  - Podium Tower  
*Rogers Stirk Harbour + Partners*
  
  - Basement  
*Lend Lease Design*
  
- C** Design Statement  
*Rogers Stirk Harbour + Partners*
  
- D** *Letter confirming* Wind Report  
*CPP*
  
- E** View Analysis and Photomontages  
*Virtual Ideas*
  
- F** Landscape and Temporary Public Domain Plans  
*Aspect Oculus*
  
- G** *Letter confirming* Fire Engineering Statement  
*ARUP*
  
- H** *Letter confirming* Reflectivity Report  
*ARUP*
  
- I** *Letter confirming* Building Code of Australia Assessment  
*McKenzie Group Consulting*
  
- J** Shadow Diagrams  
*Virtual Ideas*
  
- K** GFA Reconciliation Table  
*Lend Lease*



## 1.0 Introduction

A Project Application (MP 11\_0044) seeking approval for the construction and use of a 49-storey (plus plant) commercial building (referred to herein as Commercial Building C3) within the area of land known generally as Block 3 at Barangaroo South was submitted to the Minister for Planning and Infrastructure by Lend Lease (Millers Point) Pty Limited (Lend Lease) in November 2011.

The Environmental Assessment Report (EAR) for Commercial Building C3 was publicly exhibited for a period of 34 days between 16 November 2011 and 19 December 2011.

In response to the public exhibition, it is understood that the Department of Planning and Infrastructure received a total of 9 submissions from State agencies, councils and the general public.

Pursuant to clause 3(1) of Schedule 6A to the *Environmental Planning and Assessment Act 1979* (EP&A Act), that provides for the continued application of the provisions of the now repealed Part 3A of the EP&A Act, Lend Lease and its specialist consultant team have reviewed and considered the submissions and, in accordance with clause 75H(6) of the EP&A Act, this Preferred Project Report (PPR) sets out the Proponent's response to the issues raised.

The PPR presents a refined proposal for Commercial Building C3. The key refinements, which are a response to submissions made in relation to the public exhibition and the result of further design development, include:

- redesign of the podium facades;
- reconfiguration of the internal layout of the podium and basement;
- slightly enlarged vertical villages on the northern facade;
- introducing louvres on the recessed plant levels; and
- a minor increase in gross floor area (GFA).

The above mentioned refinements do not result in any significant change to the nature of Commercial Building C3 as exhibited.

Further information has been provided in relation to a number of aspects of the Commercial Building C3 proposal, and the Statement of Commitments has also been updated to further respond to matters raised in submissions.

To support the refined Commercial Building C3 proposal the PPR includes refined architectural drawings relating to the podium, tower and basement levels of the building prepared by Rogers Stirk Harbour + Partners, and Lend Lease design. Where relevant, revised or supplementary expert consultant supporting documentation has also been provided.

In addition, the PPR presents an updated environmental assessment in respect of the proposed refinements to the proposal.

This PPR should be read in conjunction with the Commercial Building C3 Project Application Environmental Assessment Report (EAR) prepared by JBA Urban Planning Consultants Pty Ltd dated November 2011 and forms part of that application.

### Submissions (Section 2.0 and Attachment A)

Submissions in response to the public exhibition of the Project were received from City of Sydney and Leichardt Councils, State Government agencies and authorities, and the general public. The source of submissions is summarised as:

- State Authorities and agencies – 4;
- Councils – 2;
- Members of the public - 3 (2 submissions supporting the proposal).

The Proponent's detailed response to all issues raised in submissions is provided at **Attachment A**.

The PPR is structured as follows:

- Section 2 – Proponent's Response to Issues Raised in Submissions;
- Section 3 – Preferred Project;
- Section 4 – Environmental Assessment; and
- Section 5 – Final Statement of Commitments.

### Part 3A Repeal

On 1 October 2011 Part 3A of the EP&A Act was repealed. Despite this, Part 3A continues to apply to certain projects subject to the transitional provisions identified in Schedule 6A of the Act.

Clause 3 of Schedule 6A of the EP&A Act provides that Part 3A continues to apply to "transitional Part 3A projects", relevantly including undetermined projects in respect of which the DGRs were issued before 1 October 2011 and a current major project declaration remains in force. As the DGRs for MP10\_0227 were issued on 24 December 2010 (and modified on 9 September 2011 and further modified on 21 October 2011) and therefore prior to 1 October 2011 and a current major project declaration remains in force, Commercial Building C3 is a transitional Part 3A project.

Clause 3 of Schedule 6A to the EP&A Act also provides that any State environmental planning policy or other instrument made under or for the purposes of Part 3A, as in force on the repeal of that Part and as amended after that repeal, continues to apply, to and in respect of, a transitional Part 3A project (as defined).

## 2.0 Key Issues and Proponent's Response

**Attachment A** identifies each of the matters raised by the councils, public agencies and the general public in submissions made in response to the public exhibition of the Project Application. **Attachment A** also contains a detailed response by Lend Lease to each of the matters raised.

In response to the key issues raised, Lend Lease has refined the design of Commercial Building C3. The further design refinement of the podium is also a result of Lend Lease's commitment noted in the EAR that further design development would be undertaken at this stage to improve the integration of the Commercial Building C3 tower and podium elements as well as providing a strong built form expression through the ground plane. A detailed description of the Preferred Project is located at Section 3.0. Revised architectural drawings illustrating the Preferred Project are located at **Attachment B**.

The key issue raised in relation to Commercial Building C3 by the City of Sydney related to the design of the podium. The City of Sydney considers that the podium remains too low to be effective in wind mitigation and to create a street wall. The City of Sydney feels that the podium is significantly out of proportion with the tower and does not give a sense of enclosure for pedestrians or provide an appropriate human scale for the development.

In response to the submissions made regarding the design of the podium, PTW and Tony Caro Architecture, together with RSHP, have redesigned the podium facades to create three distinct elements: east, west and lobby. The architectural intent behind each element is detailed at **Attachment C**. The refined facades create a higher level of diversity at street level and will enhance the building's human scale.

CPP has reviewed the impact of increasing the height of the podium on mitigating the wind impacts of the tower (see **Attachment D**). It found the wind flow mechanism causing the windiest conditions is downwash from the southern tower, and channeling between the large towers. Increasing the height of the podium is likely to increase the wind speed at ground level for the downwash mechanism due to the lack of disturbance to the flow, and will likely have no impact on the channeling mechanism. Thus contrary to the City of Sydney's submission, CPP's studies have shown that increasing the height of the podium would be less effective for wind mitigation.

## 3.0 Preferred Project

In response to the matters raised by the councils, State authorities and agencies, and the public, and further on-going design development, Lend Lease has refined its proposal for Commercial Building C3.

The architectural drawings of the refined Commercial Building C3 development have been prepared by Rogers Stirk Harbour + Partners and are located at **Attachment B**.

The key refinements that have been made to the Preferred Project as a result of further design development and the submissions made during public exhibition are presented in Section 3.1.

For completeness, Sections 3.2 - 3.21 re-state all aspects of the proposed project for which approval is sought as documented in the EAR.

### 3.1 Modifications to the Proposal

Lend Lease has made a number of minor design refinements to its proposal for Commercial Building C3. The key refinements that have been made to the Preferred Project are:

- Internal changes to the ground floor and podium levels to alter the position of lifts, amenities, fire stairs and egresses, back of house and services riser elements. These elements have been altered to improve the overall functionality of the lobby, ground floor and podium levels.
- The mid-rise and high-rise vertical villages have been slightly enlarged to improve the relationship between the tower and the core elements through the widening of the vertical recess. The widening of this recess creates a more defined architectural separation of the two elements and ensures effective access for cleaning and maintenance.
- The extent of the glazing on the recessed plant room floors has been concentrated, with louvered panels framing each side.
- PTW and Tony Caro Architecture, together with RSHP have redesigned the podium facades to create three distinct elements of east, west and lobby. The facades create a higher level of diversity and enhance the building's human scale.
- Revised layout to the basement to improve functionality and reflect more detailed co-ordination of basement facilities including waste and back of house areas.

These changes are shown clouded on the refined Architectural Drawings included at **Attachment B** and explained in further detail in the Architectural Design Statement at **Attachment C**.

The refinements result in a 85m<sup>2</sup> reduction in the GFA of the tower, and a 125m<sup>2</sup> increase in the GFA of the podium. The preferred project also includes 117m<sup>2</sup> of GFA within the basement previously omitted from the calculation. The total increase is 157m<sup>2</sup> GFA as compared to the exhibited Project. The increase in GFA is still consistent with the Approved Concept Plan (see Section 4.1). It is also noted that the number of bicycle spaces set out in the exhibited EAR was not consistent with the Traffic Report. The final number of spaces (336 permanent and 65 temporary) is now consistent with the exhibited Traffic Report.

In addition to the above modifications to the proposal, the Draft Statement of Commitments has also been updated to respond to some of the issues raised in submissions regarding construction. The modifications include:

- Modifying Commitment 33 to include requirements for the management of the barging of soil (if required) as part of the Environment Construction and Site Management Plan (ECSMP).
- Modifying Commitment 33 to include the requirement for preparation of a site wide strategy relating to the preparation of post construction dilapidation reports that includes a requirement for the Proponent to prepare post-construction dilapidation reports at relevant stages of the project.
- A new commitment to provide RailCorp with plans demonstrating the development will have no impact on RailCorp's 33kv power line.

## 3.2 Overview of Proposal

Pursuant to Section 75J(3) of the EP&A Act, approval is sought for:

- piling and associated earthworks and remediation;
- construction and use of a new Commercial Building C3 with a maximum 115,448m<sup>2</sup> GFA accommodating:
  - 7,021m<sup>2</sup> retail floor space;
  - 105,488m<sup>2</sup> commercial floor space;
  - 1,145m<sup>2</sup> office lobby;
  - 1,677m<sup>2</sup> of community uses for the purposes of a child care centre; and
  - 117m<sup>2</sup> basement.
- operation and use of part of the basement car park to accommodate 196 car spaces allocated specifically to the proposed uses within Commercial Building C3;
- 401 bicycle spaces including:
  - 65 spaces to be temporarily located within the landscaped forecourt along the site's Hickson Road frontage; and
  - the use of 336 spaces within the basement car park (the construction of which is the subject of the Basement Car Park Approval);
- pedestrian and cycle access and circulation arrangements;
- signage zones on the building's facade that will accommodate building and business identification signage;
- temporary works and uses, including:
  - creation of a temporary forecourt and landscaping along the Hickson Road frontage which is proposed to accommodate bicycle parking and planter boxes;
  - surfacing of surrounding streets and laneways including part of Globe Street and part of the future City Walk;
  - hoardings that are generally consistent with the City of Sydney's design requirements; and
- services and utilities required to service the building.

Photomontages of the proposed development are provided at **Attachment E**. The development proposal is illustrated in detail by Architectural Drawings prepared by RHS +P included at **Attachment B**. The following description is based on the Architectural Drawings and on information provided in the accompanying Architectural Design Statement at **Attachment C**.

Where required, future applications will be lodged for the fit out of the commercial office space, retail tenancies and the child care centre.

### 3.3 Design Objectives

The design objectives adopted for the proposed development are as follows:

- create a landmark commercial building which incorporates retail and community uses in the lower levels;
- deliver flexible floor plates of approximately 2,500m<sup>2</sup> each comprising communal break out spaces and “vertical villages” to encourage communication and social interaction and provide tenant amenity; inter-floor circulation and meeting spaces;
- maximise orientation to optimise views throughout the entire building;
- integrate materials from the surrounding neighbourhood into the new development;
- achieve a minimum six star Green Star v3 office building; and
- promote innovative and integrated sustainable design strategies such as high performance facades, good access to daylight, photovoltaic panels and solar tubes.

### 3.4 Numerical Overview

**Table 1** outlines the key numeric information of the proposed development.

**Table 1** – Key development information

Component	Exhibited Project	Preferred Project
Project site area	4,733m <sup>2</sup>	4,733m <sup>2</sup>
GFA	115,291m <sup>2</sup>	115,448m <sup>2</sup>
GFA by Use	<ul style="list-style-type: none"> <li>▪ 105,573m<sup>2</sup> – commercial</li> <li>▪ 995m<sup>2</sup> – office lobby</li> <li>▪ 7,164m<sup>2</sup> – retail</li> <li>▪ 1,559m<sup>2</sup> – community uses (childcare centre)</li> </ul>	<ul style="list-style-type: none"> <li>▪ 105,488m<sup>2</sup> – commercial</li> <li>▪ 1,145m<sup>2</sup> – office lobby</li> <li>▪ 7,021m<sup>2</sup> – retail</li> <li>▪ 1,677m<sup>2</sup> – community uses (childcare centre)</li> <li>▪ 117m<sup>2</sup> – basement</li> </ul>
Height <ul style="list-style-type: none"> <li>▪ RL</li> <li>▪ metres</li> <li>▪ storeys</li> </ul>	<ul style="list-style-type: none"> <li>▪ RL 209</li> <li>▪ 205.5 m</li> <li>▪ 49 storeys (plus plant)</li> </ul>	<ul style="list-style-type: none"> <li>▪ RL 209</li> <li>▪ 205.5 m</li> <li>▪ 49 storeys (plus plant)</li> </ul>
Total proposed car parking spaces	Maximum of 196, comprising: <ul style="list-style-type: none"> <li>▪ 178 commercial</li> <li>▪ 18 retail / child care</li> </ul>	Maximum of 196, comprising: <ul style="list-style-type: none"> <li>▪ 178 commercial</li> <li>▪ 18 retail / child care</li> </ul>

### 3.5 Gross Floor Area and Use

The proposed development comprises a total GFA 115,448m<sup>2</sup>. **Table 2** provides a detailed breakdown of the proposed gross floor area and use on a floor by floor basis. In summary, the key uses within Commercial Building C3 are:

- 7,021m<sup>2</sup> retail floor space;
- 105,488m<sup>2</sup> commercial floor space;
- 1,145m<sup>2</sup> office lobby;
- 1,677m<sup>2</sup> of community uses for the purposes of a child care centre; and
- 117m<sup>2</sup> habitable area within basement.

**Table 2** – Land use and GFA by level

Level	Total GFA (m <sup>2</sup> )	Dominant use
Basement 2	17	Basement
Basement 1	100	Basement
Ground	2,460	Retail and office lobby
Podium 1	2,300	Retail
Podium 2	2,261	Retail
Podium 3	31	-
3	1,646	Child care
4	1,906	Office
5	2,110	Office
6	2,372	Office
7	2,372	Office
8	2,372	Office
9	2,372	Office
10	2,372	Office
11	2,372	Office
12	2,372	Office
13	2,372	Office
14	2,372	Office
15	2,372	Office
16	2,372	Office
17	2,384	Office
18	0	Plant and Lift Interchange
19	2,483	Office
20	2,528	Office
21	2,476	Office
22	2,528	Office
23	2,476	Office
24	2,528	Office
25	2,476	Office
26	2,528	Office
27	2,476	Office
28	2,528	Office
29	2,476	Office
30	2,528	Office
31	2,476	Office

Level	Total GFA (m <sup>2</sup> )	Dominant use
32	2,476	Office
33	2,540	Office
34	0	Plant & Lift Interchange
35	2,473	Office
36	2,585	Office
37	2,682	Office
38	2,578	Office
39	2,682	Office
40	2,578	Office
41	2,682	Office
42	2,578	Office
43	2,682	Office
44	2,578	Office
45	2,682	Office
46	2,578	Office
47	2,578	Office
48	2,682	Office
Plant	0	Plant
Roof	0	-
<b>Total</b>	<b>115,448m<sup>2</sup></b>	

### 3.5.1 Commercial Uses

The primary use of the building is for commercial offices. The building has been designed so as to provide A-grade commercial floor plates which can be configured into a range of tenancy sizes. The fit out of these spaces will be the subject of future applications, where required.

### 3.5.2 Retail Uses

The ground and podium levels will accommodate a mix of active retail uses which are likely to be occupied by café / restaurant and a range of specialised retail uses. The fit-out of these spaces will be the subject of future applications, where required.

### 3.5.3 Childcare Centre

A childcare centre of 1,677m<sup>2</sup> is proposed on Podium Level 3. Under the approved Concept Plan (Mod 4), child care centres are categorised as community purposes.

A proportion of the 19 designated retail/child care parking spaces provided within the basement of the building will be available to the childcare centre.

The detailed design and fit out of the childcare centre, including landscape treatment of the outdoor play spaces on the podium roof will be the subject of a separate project application.

### 3.6 Building Height and Massing

Commercial Building C3's design is underpinned by an articulation of the main tower form into three vertical elements whilst also providing a strong design at the lower levels. The proposed building has been designed as one of a series of commercial towers that will form the commercial core of Barangaroo South.

The Commercial Building C3 form comprises an east-west oriented tower element, and aligns with the City Walk. An external service core is proposed to be positioned on the northern boundary. Articulated features include the lift cores, the podium, a structural bracing, recessed facade treatments and landscaping. This approach offers the following benefits:

- the opportunity to anchor the tower form to the ground plane;
- location of the building lobby at the southern side of the building, thereby providing a street address to, and activating, the City Walk;
- linking the lobby to the tower above;
- it ensures the human scale and diversity of uses is located within the most publicly accessible levels of the buildings and draws the eye to the lower levels;
- it creates a variety of experiences, interest and activities at ground level;
- it ensures well defined streets and laneways are created; and
- it prioritises pedestrians rather than vehicles.

The proposed building has an overall maximum height of RL 209, or 49 storeys (plus plant). It has a flat roof form in accordance with the height controls and principles imposed by the approved Concept Plan (Mod 4).

Structural bracing masts which rise up to RL 220 will give presence to the building on the city skyline and create minimal overshadowing.

A three storey podium wraps around the building beyond the extent of the tower form. The podium reaches a height of RL 18, or approximately 14.5 metres above street level. The podium accommodates retail uses that will activate the building's street and land frontages and provide an appropriate human scale.

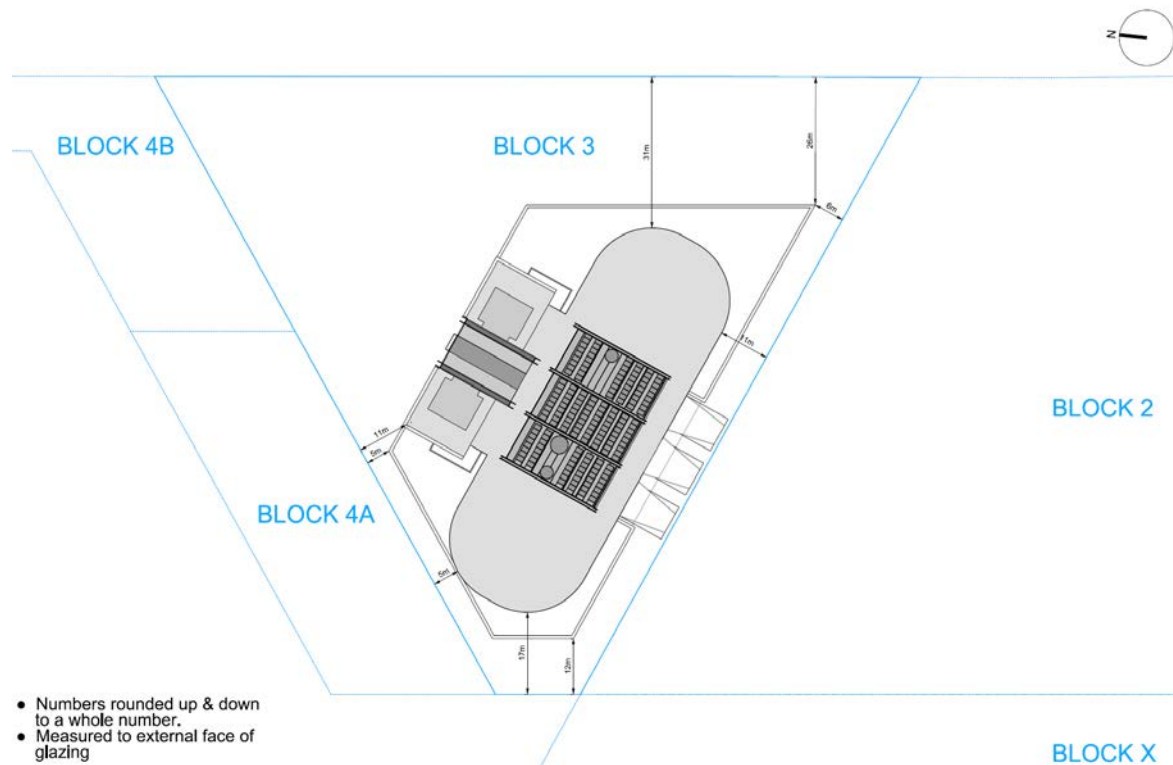
### 3.7 Building Setbacks

The proposed setbacks of the Preferred Project are illustrated on the Architectural Drawings prepared by RSH+P included at **Attachment A**.

The tower above the podium is modulated with a series of setbacks which range in depth from the approved Block 3 boundaries on the Hickson Road and Globe Street frontages. A summary of the Commercial Building C3 setbacks are provided in **Table 3** and at **Figure 1**.

**Table 3** - Building setbacks

Boundary	Podium Setback (m)	Tower Setback (m)
Northern Block 3 boundary	5	5
Southern Block 3 boundary	6	11
Western Block 3 boundary (Hickson Road)	26	5
Eastern Block 3 boundary	12	17



**Figure 1** - Setbacks to the Block 3 boundaries

### 3.8 External Materials and Finishes

The tower will use a mixture of grey glass and metal finishes highlighted by brighter painted metal elements. The podium will use a combination of glazing and sandstone.

Key components of the external materials and finishes include:

- grey metal cladding on the concrete core and curtain wall mullions;
- red painted structural braces on the plant levels and entrance elements;
- orange painted metal elements on the core;
- a sandstone and glass podium;
- light grey glazed tower, lift cores and plant levels; and
- red metal external shadowing devices on the tower.

The façade of the building has been designed such that it is very transparent and allows deep daylight penetration into the office floors and retail spaces. The floor to ceiling height is 3.2m on the perimeter of the office floors, bringing more natural light to the floors and making the building appear less solid.

### 3.9 Public Domain, Landscaping and Public Art

#### Temporary Public Domain and Landscaping

As Commercial Building C3 is one of three major commercial buildings proposed on the Barangaroo South site, the surrounding curtilage of the building will need to strike a balance between providing good amenity and access for tenants and allowing for the construction program to proceed whilst successive stages are

constructed. To that end, a “temporary” public domain solution is proposed for areas external to the building. A full description and illustrations of the proposed temporary public domain works is set out in the Landscape and Temporary Public Domain Design Statement at **Attachment F** of this PPR and Appendix K of the EAR.

Temporary pavements are proposed to all footpaths and pedestrian areas directly adjacent to Commercial Building C3. No road crossings are proposed as part of this Project Application.

The set out of the kerbs and gutters for Globe Street adjacent C3 Commercial Building will be provided as part of the C4 Project Approval. The footpaths adjacent to Commercial Building C3 are proposed as temporary pavements. The surface of the footpaths will be converted to the final finish following the construction of successive stages and in line with the Barangaroo Public Domain Plan, once approved.

Tree pits will be constructed on Globe Street with temporary planting to provide amenity for tenants and pedestrians. Temporary lighting and bench seating will be installed along Globe Street to provide public amenity, safety and comfort.

City Walk will also be treated with temporary paving as part of the works associated with the Commercial Building C4 Project Approval, which also includes temporary lighting and bench seating to provide public amenity, safety and comfort.

## Landscaping

Aspect Oculus has prepared a Landscape and Temporary Public Domain Design Statement (Appendix K of the EAR) which includes details of finishes and indicative planting of the landscaped areas.

The proposed ground plane public domain within the Project Application site has been designed to be generally consistent with the overall public domain vision established by the approved Concept Plan which envisages:

- an appropriately scaled, safer and more activated public domain;
- increased permeability;
- public domain which leads to an active waterfront destination; and
- improved relationship between the public realm and commercial buildings.

The key features of the Commercial Building C3 public domain and landscaping strategy are:

- highly activated retail frontages as well as streets and lanes which are conducive to high pedestrian traffic and connect to the building lobby;
- the use of a high quality material palette;
- part of the Level 3 podium roof top garden which provides a mix of hardscape areas surrounded by ‘extensive’ and ‘intensive’ planting areas;
- two terraces with raised planters and seating to provide communal break-out space for floor tenants; and
- external planting beds that support climbing plants on the building’s northern facade to provide visual and architectural interest.

As detailed above, approval is sought for part of the Level 3 podium as a roof top garden. However, as the predominant use of that level will be a Child Care Centre, the remaining part of the podium roof top landscaping will be provided to meet

that specified use as part of the future application for the fit out of the Child Care Centre.

Areas of landscaping within the building are shown on the Landscape Plans at **Attachment F**. The species chosen for the scheme are generally species which require low maintenance and have low water requirements. Plants will be grouped together according to the colour of their foliage and flowers. The planting layout has been arranged to ensure that colour is provided throughout the year.

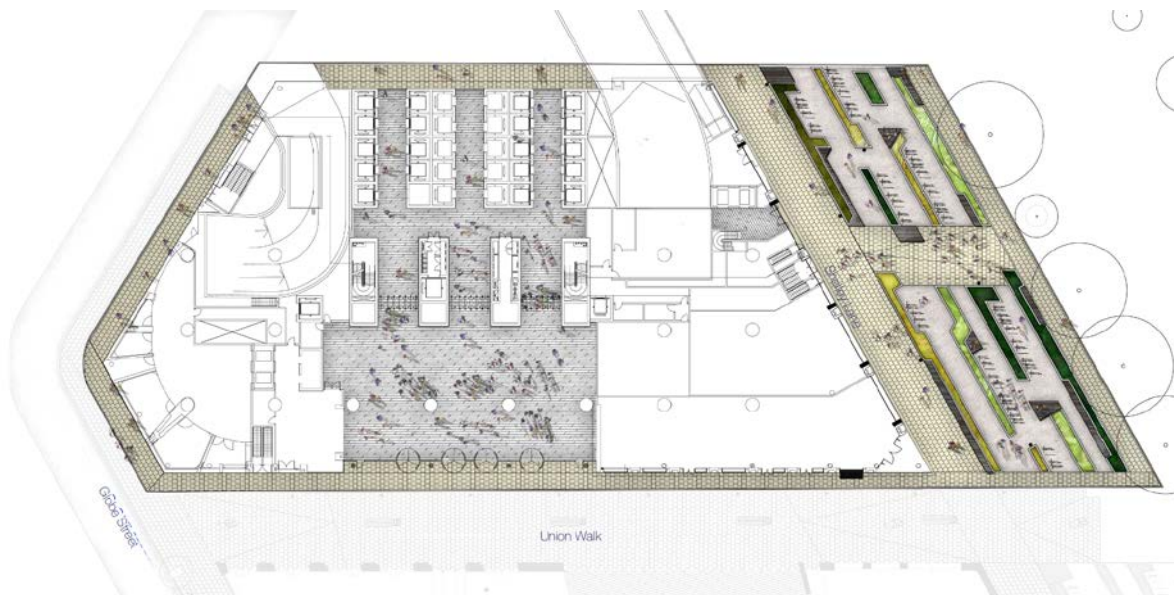
### Public Art Strategy

The Barangaroo Delivery Authority (in conjunction with Lend Lease) has prepared a public art strategy for Barangaroo South and consequently this Project Application.

For this Project Application, potential opportunities to implement artwork include the building fabric and facades; the public domain and landscape; heritage interpretation strategies, stand-alone artworks; and temporary works. The nature and location of public art works will be subject to future approvals.

## 3.10 Pedestrian Circulation

Pedestrian access to, and within the site, is provided as shown in **Figure 2**. The principal street address to Commercial Building C3 is off Hickson Road, however the main pedestrian access is located off City Walk.



**Figure 2** – Commercial Building C3 pedestrian circulation

## 3.11 Vehicular Access and Parking

### Vehicular Access

Globe Street will be constructed as part of the Commercial Building C4 Project Approval. The construction of Globe Street will provide Commercial Building C3 with a street address, and provide drop off and pick up areas for taxis and childcare users. It should be noted that Hickson Road also provides access to the building, and it is anticipated that taxis may use the Hickson Road frontage as an alternative drop off point.

Vehicular entrances to the basement car park will be provided as part of the Basement Car Park Approval and accordingly do not form part of this application. Basement Car Park Mod 3 Application to amend the approved access to the

basement car park is currently being assessed by the Department of Planning and Infrastructure. However, it should be noted that this Project Application does not rely on the proposed modifications under the Basement Car Park Mod 3 Application being approved in order to support the future use of Commercial Building C3.

### Car Parking

The construction of the basement car park is the subject of the Basement Car Park Approval. The Basement Car Park Mod 3 Application, which seeks to amend the design of the basement car parking structure, is currently being assessed by the Department of Planning and Infrastructure. This Project Application seeks approval for the use and allocation of car parking within the revised basement car parking structure as relevant for Commercial Building C3.

It should be noted that the Project Application does not rely on the Basement Car Park Mod 3 Application being approved in order to support the future use of the development as the spaces could be accommodated within the basement car park of the approved Basement Car Park. The design of Commercial Building C3 would need to be modified if the Basement Car Park Mod 3 Application did not proceed.

The approved Concept Plan (Mod 4) promotes the use of public transport and non car borne travel (walk, cycle and ferry). Low car parking provision is considered important as it will also limit the potential traffic generation rates to and around the site.

A total of 196 tenant and visitor parking spaces will be provided within the basement, comprising:

- 178 commercial spaces; and
- 18 retail/child care spaces.

To facilitate pick up and drop off, the development will also utilise the 12 on-street parking spaces on Globe Street which will be provided as part of the Commercial Building C4 Project Approval.

The number of parking spaces has been determined having regard to the approved car parking rates, in particular:

- commercial car parking rate of 1/600m<sup>2</sup>;
- retail car parking rate of as per the City of Sydney LEP 2005; and
- child care (community uses) rates as per the City of Sydney LEP 2005.

A range of shared loading facilities will be provided within the basement as set out in **Table 4** below.

**Table 4** – Proposed Loading Dock spaces

Vehicle Size	Vehicle Length	Use	Number of spaces
Articulated Truck	19m	Retail	1
Heavy rigid truck	12.5m	Office/Retail	2
Medium rigid truck	8.8m	Office/Retail	4
Small rigid truck	6.4m	Office/Retail	4
Van/car	5m	Office/Retail	20
Motor cycle/bicycle	2.5m	Office/Retail	5

Vehicle Size	Vehicle Length	Use	Number of spaces
courier			
<b>Total</b>			36

### Public Car Parking

In the evenings and at weekends, it is proposed that the car park will operate as a public car park for a wider range of users visiting the retail, cultural centre, restaurants and bars. Public use of the car park will not coincide with peak commuter traffic and hence the surrounding road system will provide suitable capacity for this activity. Pricing strategies will be in place to provide suitable parking demand management at all times. The provision for differential parking charges for small, medium and large vehicle emission categories will also be explored.

### Bicycle Parking

A total of 401 bicycle spaces are proposed to be provided as part of the Commercial Building C3 including:

- 65 spaces to be temporarily located within the landscaped temporary forecourt along the site's Hickson Road frontage; and
- 336 spaces within the basement car park that is the subject of the Basement Car Park Mod 3 Application;

Cyclist facilities (showers, lockers, toilets) will also be provided within the basement as shown on the plans at **Attachment A**. The temporary bicycle spaces between Shelley Lane and Hickson Road will be relocated in accordance with the Barangaroo Public Domain Plan when future building works occur on that site.

## 3.12 Safety and Security

CCTV monitoring will be provided to foyers and entry lobbies, main public areas, retail common areas, car park and ground floor lift lobbies, goods lifts, loading docks, building entry and exit points and car park entry and exit points. The CCTV coverage will be viewed and controlled by 24 hour security staff from a centralised security room.

A central supervisory system, access control system, intruder alarms and intercommunication systems are also proposed.

In addition to the above, a concierge desk will be located in the ground level lobby of the building which will be manned by staff during business hours. Passive surveillance will also occur as a result of the operation of retail and child care uses.

## 3.13 Lighting

External and internal lighting will be provided around and throughout the building in accordance with AS 1680. Lighting is also proposed through-out the public domain for security and access requirements.

External luminaries will be installed to provide interest and highlight architectural features and will be selected to be in keeping with the general building design. Internal light fittings within the commercial and retail areas will be provided to comply with AS 1680 and Green Star targets. In addition, specialist lighting will be provided within the building's entrance lobby to enhance the visual environment at ground level. All lighting will be time clock and light level controlled.

### 3.14 Environmentally Sustainable Development

The design team has been set a brief of achieving a 6 star Green Star design and as built certification under version 3 of the Green Building Council's Office rating tools.

Future detailed design will resolve the final sustainable development initiatives to be provided. However, the proposed building is being designed with the following energy and water saving features:

- **Healthy Buildings:**
  - World-leading 6-Star Green Star Office Design and Build certification
  - Tuned to Sydney's climate and connected to outdoors
  - Passive design, low energy buildings
  - Use of some sustainable materials, including recycled content and low emissions
- **Energy and Carbon:**
  - A carbon neutral outcome supported by the use of new offsite renewable energy generation
  - Significant reduction in building energy consumption
  - 20% reduction in embodied carbon within the built form
  - Efficient precinct infrastructure using central cooling plant and harbour heat rejection
  - Onsite photovoltaic generation sized for the public domain and black water treatment system
- **Water Positive**
  - a water positive outcome – where more water is exported than potable water is imported
  - treatment and reuse of a proportion of on-site stormwater catchment
  - on-site waste water treatment and water recycling
  - capacity to export recycled water allowing neighbours to reduce their potable water demands
  - sewer mining to reduce network demands
- **Zero Waste:**
  - Greater than 90% diversion of construction waste from landfill
- **Sustainable Transport:**
  - A new connection/entry point for the CBD (light rail, ferries, with provision for Barangaroo Pedestrian Link)
  - Reduced car parking ratios
  - Infrastructure and support for cyclists and pedestrians
  - Real-time commuter updates
  - Green travel plan to promote vehicle sharing, small cars and electric cars
  - Safe, low-speed onsite environment
- **Landscape and Biodiversity:**
  - Use of native flora and encourage habitats for fauna
  - Inclusion of water-sensitive urban design
  - Planning for climate change
  - Landscaped public spaces and selected green roof features

An assessment against the principles of Ecologically Sustainable Development is located at Section 5.13 of the EAR.

### 3.15 Waste Management

A Waste Management Plan has been prepared by ARUP and is included at Appendix L of the EAR. In summary, waste management will generally accord with the City of Sydney's Waste Storage Design requirements and will be managed in the following way:

- A dedicated central commercial garbage room will be located adjacent to the loading dock within the basement. The waste room will provide space for waste sorting and hold separate bins for glass, metal, plastic, electronic equipment and green waste. It will accommodate waste compactors for general waste and recyclable paper products to minimise the volume of waste.
- Intermediate collection points will be provided on the office and retail floors adjacent to the goods lift in these areas.
- Each commercial tenancy will be responsible for separating their waste and transferring the different types of waste and recycling to the central garbage rooms.
- Collection of waste will occur directly from the waste room, inside the basement. Service vehicles will park in the loading bay adjacent to the waste room.
- Separate waste storage areas will be provided for retail tenants. A separate room, adjacent to the main garbage room will be provided for refrigerated waste. Grease traps will be provided in retail areas linked to a grease arrestor storage tank in the basement level. The grease trap will be monitored by the building management.
- The building management will be responsible for the collection of waste from the public domain.

ARUP has undertaken an estimate of the amount of waste that will be generated by the proposed development (see Appendix L of the EAR) and as such the following waste storage is provided for the commercial and retail uses within the basement:

- commercial waste;
  - general waste – 2 x 3,000 litre bins;
  - recyclables – 9 x 660 litre bins;
  - approximately 30m<sup>2</sup> of floor area within the waste room;
- retail waste;
  - general waste – 2 x 3,000 litre bins;
  - recyclables – 9 x 660 litre bins; and
  - approximately 30m<sup>2</sup> of floor area within the waste room;
- childcare;
  - general waste – 1 x 240 litre bins;
  - recyclables – 2 x 240 litre bins; and
  - approximately 4m<sup>2</sup> of floor area within the waste room.

In addition, compactors will also be provided for general waste and cardboard/paper recycling within the basement.

## 3.16 Building Services

Building services are outlined in the Building Services Report prepared by ARUP and submitted at Appendix M of the EAR.

Services in the proposed building have been designed consistent with Lend Lease's commitment to achieving a minimum 6 Star Green Star Office Design Rating under Version 3 of the Green Building Council of Australia's Office tools.

### Mechanical Services

Mechanical services currently proposed by Lend Lease for the commercial and retail uses include chilled beam air conditioning, heating plant and free cooling. All plant and air handling systems will be designed and installed to meet the applicable Australian Standards.

In order to reduce the load on the mechanical plant during non-peak periods, facilities will be provided to enable the economic running of central plant systems and associated air handling plant after hours.

Chilled water will be generated in the district cooling plant and reticulated to a central cooling room dedicated to Commercial Building C3 within the basement of the building. In addition, the individual retail uses will be serviced by metered cooling from the central basement cooling room. Heating will be provided via hot water units in dedicated plant allocated within the individual retail units.

### Vertical Transportation (Elevators)

Commercial Building C3 is proposed to be provided with a high performance elevator system that will be designed and installed in accordance with AS 1735 and the relevant requirements of the BCA.

The lifts will be designed to minimise energy use where practicable. Lifts and escalators shall include Variable Voltage Variable Frequency (VVVF) motor drives which allow the lift to generate power when the out of balance load is assisting the direction of travel.

All elevators will incorporate facilities for persons with disabilities, fire brigade services and stretcher access requirements.

### Electrical Services

Lend Lease proposes to extend the city grid into the site to service Commercial Building C3 via three onsite Energy Australia chamber substations, which are to be located within the basement and mid level plant rooms.

An onsite emergency standby generator is also proposed to be provided for back up electrical supply for emergency and safety services.

Power requirements for the individual retail units will be deferred to the individual tenants and subject to a separate consent for initial use and operation of the individual tenancies.

The main switchboards and tenant distribution boards will be provided with power recording meters to enable NABERS metering functionality, thus meeting the requirements of Green Star.

### Hydraulic Services

Appropriately sized new sewer and water connections will be made to the building in accordance with the relevant requirements and authority specifications. The building's hydraulics design criteria are summarised as:

- stormwater roof drainage shall be based on the 1:100 year rainfall intensity for 5 minute storm event durations;
- complete sanitary systems shall be provided to the commercial building areas, with future tenants of the individual retail units responsible for future fit out connections;
- water conservation measures will be installed to achieve the Green Star rating and 5 Star NABERS water rating;
- domestic hot and cold water systems will be provided to the commercial building areas only; and
- acoustic treatments will be undertaken to all pipe work services running within sound sensitive areas.

In addition, a central black water treatment plant will be provided in the common basement. This will treat waste water to Grade A standard where it will be distributed across the development including to Commercial Building C3. The plant will minimise potable water consumption and minimise sewer discharge.

### Gas Services

A new metered natural gas service will be located within a gas meter room and will be installed to comply with AS 5601. The gas shall be supplied to serve the mechanical services heating plant requirements and the domestic water heating requirements. Sufficient loads will be provided to also service the future retail outlets, including tenant kitchens.

### Communications Services

The proposed building will include two dedicated distributor rooms for the accommodation of equipment from multiple telecommunications carriers.

### Fire Services

Fire detection, emergency warning and fire protection systems are proposed to be installed to comply with BCA requirements and other relevant legislation, in accordance with the measures outlined in Section 6 of the Building Services Report (Appendix M of the EAR) and the fire engineering solutions identified by ARUP as set out at Appendix N of the EAR.

### Site Stormwater Infrastructure

ARUP has prepared a Stormwater Management Plan for the site (see Appendix O of the EAR). The site stormwater system has been designed to accept the 1 in 100 year storm event and will be discharged to Sydney Water's stormwater mains.

Rainwater harvesting within the development has been designed to maximise reuse opportunities in conjunction with the central blackwater treatment plant (the blackwater treatment will be subject to a separate application).

## 3.17 Hours of Operation

### Construction Hours

In accordance with the Environmental, Construction and Site Management Plan prepared by Cardno at Appendix CC of the EAR, construction works are proposed to be undertaken between the hours of 7.00am and 7.00pm Monday-Friday and between 7.00am and 5.00pm on Saturdays. No work will be undertaken on Sundays or public holidays.

## Operational Hours

The tower building will be able to be accessed 24 hours a day/7 days a week, with services provision available on demand. Normal operating hours for the tower services will be 7am to 7pm.

Retail trading hours will generally be between 8.00am-7.00pm, subject to separate approval.

The Childcare Centre hours of operation will also be subject to separate approval.

## 3.18 Staging

Lend Lease proposes to undertake the construction of Barangaroo South in a staged manner, and Commercial Building C3 represents the third stage of that construction following on from the Basement and Bulk Excavation and Commercial Building C4.

It is therefore requested that the Minister for Planning and Infrastructure structure the Instrument of Approval and consent conditions to facilitate a staged construction, so that all the works do not have to be undertaken upfront before issuing of staged Construction Certificates and subsequent Occupation Certificates.

## 3.19 Signage Zones

Signage zones have been designated on the plans. Primary signage zones are located on the podium levels and on the upper level of the tower for building identification purposes.

The detailed design of the building identification signage and business identification signage will be submitted for the approval of the Director-General prior to the issue of the relevant Construction Certificate.

## 3.20 Construction Hoardings and Banners

The construction site will be secured by Class A hoardings. The conceptual treatment of the hoardings will be designed to improve the appearance of the site in the streetscape throughout the construction phase and provide a transparent and open view of the site to the community. It will include information about Barangaroo South and its aspirations, such as sustainability, community engagement, heritage and the overall ambitions of the development, all of which may be updated from time to time.

It may incorporate elements of public art as part of the graphic installation but will not include any third party advertising material.

A maintenance regime will be implemented to ensure the appearance and integrity of the hoarding is maintained. The final graphic treatment for the hoardings and any future changes will be submitted to the Director-General of the Department of Planning and Infrastructure for approval prior to its implementation on site.

Approval is sought for banners to be located on the Commercial Building C3 tower during construction. The banners, which will partially screen the construction works, will be temporary and moved around the facades of the building as construction proceeds. The content of the banners is intended to predominantly display messages regarding sustainability initiatives being implemented in the building. There will be a maximum of 3 banners on any given facade at one time. The banners will be removed up to 3 months after practical completion. An indicative design of the banners is shown at Appendix HH of the EAR.

### 3.21 Piling and Remediation

The Project Application seeks approval for piling and associated earthworks work to accommodate piling and core that extends beyond the extent of works already approved as part of the Basement Car Park Approval. The location of the proposed excavation is shown on the Architectural Drawings at **Attachment B**. It is estimated that the quantity of excavated material from the core raft excavation and pile excavation will be approximately 2,200m<sup>3</sup> and 2,500m<sup>3</sup> respectively.

All of the necessary site preparation works required to be undertaken prior to the proposed Commercial Building C3 earthworks being undertaken will be carried out in accordance with the Basement Car Park Approval and do not form part of this Commercial Building C3 Project Application.

The piling and associated works will be carried out in accordance with the Environmental Construction and Site Management Plan. During piling and excavation works, there is potential that contaminated material may be encountered. This Project Application therefore seeks approval for the remediation of the material in accordance with the OWRS RAP.

## 4.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of Preferred Project. It addresses the matters for consideration set out in the Director-General's Environmental Assessment Requirements (DGRs) which are relevant to the Preferred Project.

### 4.1 Consistency with the Concept Plan

The Preferred Project will not affect the proposal's consistency with the Concept Plan (Mod 4) numeric controls, Built Form Principles, Urban Design Controls or Statement of Commitments which were assessed at Section 5.2 of the EAR.

An updated assessment of the Preferred Project against the relevant Concept Plan controls is provided below. A Concept Plan (Mod 4) GFA reconciliation table for the entire Barangaroo South site is included at **Attachment K**.

**Table 5** provides a comparison of the Preferred Project's consistency with the Concept Plan numerical controls.

**Table 5** – Compliance with Concept Plan (Mod 4) Block 3 GFA and Height Controls

Block 3 Concept Plan (Mod 4) Control	Commercial Building C3 Preferred Project	Block 3 Cumulative Total	Compliance
Maximum GFA – 142,669m <sup>2</sup>	115,448m <sup>2</sup>	115,448m <sup>2</sup>	Compliant
Maximum height RL 209	RL 209	N/A	Compliant

**Table 6** demonstrates that the Preferred Project is compliant with the key Urban Design Controls of the Concept Plan (Mod 4).

**Table 6** – Compliance with Concept Plan Urban Design Controls

Concept Plan (Mod 4) Block 3 Control	Commercial Building C3 Project Application	Comment
<b>Control 1 Building Mass and Location</b>		
Maximum horizontal floor plate - 85.5m	85.5	Compliant
Hickson Road minimum setback – 20m	26m	Compliant
Tower form floor plate depth – maximum 30 m	30m	Compliant
Podium height <ul style="list-style-type: none"> <li>▪ Minimum predominant height of 3 storeys</li> <li>▪ Maximum – RL 27</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 storeys</li> <li>▪ Maximum – RL 18</li> </ul>	Compliant
<b>Control 2 Street Wall Establishment</b>		
The width and height of the colonnade along Hickson Road shall be appropriate to encourage its use, and be integrated into the proportions of the buildings of which it is part.	This Project Application does not propose to construct a building along Hickson Road.	N/A
Building form to create a street wall with a one storey minimum height for most of the public accessible ground floor facade.	The Project Application will create a street wall which is above the one storey minimum height control.	Compliant
Building mass to define a street wall on Globe Street, City Walk and Hickson Road.	This Project Application will provide a street wall on Globe Street and City Walk.	Compliant
Shelley Lane Minimum 6m wide	This Project Application does not propose to construct Shelley Lane,	N/A

	however >6m can be provided between Building C3 and Hickson Road to accommodate Shelley Lane.	
<b>Control 3 Building Articulation</b>		
The building envelope and floor plates are to be articulated and modulated, using a range of architectural components such as prows, corner redents, vertical villages, expressed lift cores, bay windows and other structural expression.	The Commercial Building C3 building envelope and floor plates are articulated through measures such as the expression of the core, curved floorplates and vertical external shading.	Compliant
Tower Form to express sustainability features such as access to natural light.	As detailed in Section 3.14 the tower form will express sustainability features such as access to natural light.	Compliant
<b>Control 4 Building Legibility</b>		
The separate primary components of the building will be expressed.	The primary components of the building will be expressed.	Compliant
Visible parts of the towers' primary structure are to extend to the ground plane and be expressed as a separate element from the podium.	Visible parts of the towers' primary structure have been extended to the ground plane and expressed as a separate element of the podium.	Compliant
<b>Control 5 Ground Floor Permeability and Accessibility of Public Realm</b>		
Public access around the Block is to be maintained on all edges.	Public access around the Block edges has been maintained.	Compliant
Provide two north to south and one east to west primary connections including the Hickson Road colonnade, and two east west connections through the block.	The primary connections through the block are being provided as part of other applications.	N/A
Provide one east to west and one north to south secondary public access routes through the block.	Commercial Building C3 will not provide the secondary east to west or north to south pedestrian connections. A justification for the non-compliance is located in the EAR. It is noted that Lend Lease's position regarding this matter has not changed.	Non-Compliant
Shelley Lane must be not less than 50% open to the sky.	This Project Application does not propose to construct Shelley Lane. An awning will be located along the Shelley Lane frontage but will not prevent the achievement of this control.	N/A
For security purposes the secondary routes may be closed at certain times.	No secondary routes are proposed.	N/A
<b>Control 6 Ensuring Quality of Rooftops</b>		
Roof forms to incorporate architectural elements.	The roof form incorporates architectural elements.	Compliant
Lift shafts, overruns and control rooms are to be extruded above the roof line and used to provide architectural articulation to the roof.	The lift shafts, overruns and control rooms have been extruded above the roof line to provide articulation to the	Compliant

	roof.	
Exposed mechanical equipment is to be avoided.	No exposed mechanical equipment is proposed.	Compliant
The architectural treatment of the roof and its form is to be designed, coordinated and remain sympathetic to adjacent context.	The roof form has been designed in response to its current and future adjacent context.	Compliant
Good quality materials (ie durable, hardwearing, sustainable) to be used.	Good quality materials will be used for the roof materials.	Compliant
Roof Design to integrate sustainable features.	The Roof Design integrates PV cells as a sustainable feature.	Compliant
<b>Control 7 Facades</b>		
Depth and layering of facades is to be achieved through relief and protrusions. Mirrored facades should be avoided.	As detailed in Section 3.8 Commercial Building C3 will integrate relief and protrusions to the facade thereby achieving depth and layering. No mirrored facades are proposed.	Compliant
The choice of appropriate materiality for longevity, durability and flexibility. Materials such as steel, glass, concrete, timber and aluminium.	The proposed materials, which include steel, glass, and concrete, have been chosen for their longevity, durability and flexibility.	Compliant
Environmentally sustainable design is to be incorporated on all facades.	As detailed in the Architectural Design Statement at Appendix I of the EAR, ESD has been incorporated in to the design of the facades.	Compliant
Facade components such as external shading shall be used to provide light and shade to the building and to consider and reinforce Control 2+3.	The design incorporates both vertical and horizontal external shading.	Compliant
Facades >60m should be modulated by distinctive architectural elements e.g. vertical villages	The north and south elevations which exceed 60m are modulated with distinctive architectural elements.	Compliant
There shall be no single plane in the facade having dimensions greater than 60m in length and 60m in height (or equivalent area) without articulation, and change in plane from adjoining building elements, unless otherwise determined by the "Barangaroo Design Excellence Review Panel", to the satisfaction of the Director-General in consultation with the Barangaroo Delivery Authority.	The building does not have any planes greater than 60m in length without articulation.	Compliant
<b>Control 8 Active Street Fronts</b>		
At least 60% of the Ground Level is to be active on the primary street wall facades	Over 60% of the ground level will be active on the primary street wall facades.	Compliant
Building entrances to internal areas such as office lobbies, exits and service areas or loading docks shall not count toward the 60% requirement.	Noted.	Noted
Building service areas, parking entrances and loading docks will be	The parking entrances, which form part of the Bulk	Compliant

located on Napoleon Street.	Excavation and Basement Car Parking Project Application are located on Napoleon Street. Some building service areas will be located off Shelley Lane.	
The width of driveways should be minimised.	No driveways are proposed as part of the Project Application.	N/A
<b>Control 9 Signage</b>		
High level signage is to be limited to a maximum of 2 separate faces per buildings and is not to be greater than 1 building story high between floor slabs.	The plans nominate high level signage zones on each face of the tower, however, as reflected in the Statement of Commitments, only 2 of the 4 zones will be used for signage at any one time. The exact location (within the approved zones) and design of the signs will be finalised once the future tenants requirements are known.	Compliant
Signage is not to exceed 60m <sup>2</sup> per sign. Identify signage only to be incorporated within the building facades/structure. Detailed of signage to be considered as part of the overall design of the building for the purposes of design excellence.	Signage zones have been identified on the plans. The detailed design of the signage will be submitted to the Director General for approval prior to the issue of the relevant Construction Certificate.	Noted

## 4.2 Built Form

### 4.2.1 Building Design

As detailed in Section 4.1, the Preferred Project is consistent with the approved Block 3 Urban Design Controls and Built Form Principles and is therefore appropriate to the desired future character of the site in terms of building form, bulk, scale and height.

As detailed in the EAR, the proposed building will make a positive contribution to the visual quality of the site and the city skyline. The design refinements as part of the Preferred Project will further enhance the building as detailed in the Architectural Design Statement at **Attachment C** and as summarised below:

- The reduction in the glazing on the recessed plant room floors strengthens the vertical glazed link and provides a stronger contrast between the glazed offices and the solidity of the plant rooms.
- The proposed adjustment to the vertical villages will increase the width of the recessed connection between the external core and the main tower, enhancing the vertical division between the 'Served and Servant' elements of the tower.
- The internal reconfiguration within the podium allows for uninterrupted street frontages resulting in an activated principle south-east and west corners. This maximises the potential for a vibrant retail waterfront from Globe Street to Napoleon Street and a rich array of cafes and dining on Shelley Lane.

## 4.2.2 Visual Analysis

Updated artist impressions and perspectives of views from the locations used for the EAR are included at **Attachment E**. Due to the nature of the changes to the proposal as part of the Preferred Project, the updated views demonstrate that the findings of the visual analysis undertaken for the exhibited Commercial Building C3 on key elements and views from key locations external to the site, and from within the site, do not change.

As the proposed external changes generally relate to the podium facades and will not affect the view impacts assessed as part of the exhibited project, no further assessment of the cumulative impacts of Commercial Buildings C3, C4 and C5, on views from residential apartments on Kent Street has been provided.

## 4.3 Other Key Issues

The Preferred Project does not alter the assessments and recommendations for the other issues identified in the Director General's Requirements which were addressed as part of the Exhibited Project. **Table 7** provides a summary of these key issues and their location in the EAR. Where relevant, letters confirming the Preferred Project will not alter the assessment and recommendations of the original reports have been attached.

**Table 7** – Location of other key issues

Issue	Exhibited Project		Preferred Project
	Appendix of EAR	Location in EAR	
Consistency with Relevant EPIs, Policies & Strategies	N/A	Section 5.1	No change to the exhibited project assessment.
Consistency with the Concept Plan	N/A	Section 5.2	No change to the exhibited project assessment.
Consistency with the Basement Car Park	N/A	Section 5.3	No change to the exhibited project assessment.
Barangaroo Review	N/A	Section 5.4	No change to the exhibited project assessment.
Design Excellence	N/A	Section 5.5	No change to the exhibited project assessment. The minor design refinements as part of the Preferred Project still represents Design Excellence.
Urban Design and Built Form	Appendix A, I, J, K, W, and GG.	Section 5.6	See Section 4.2.
Remediation and Contamination	Appendix II	Section 5.7	No change to the exhibited project assessment.
Overshadowing Impacts	Appendix Q	Section 5.8	The modifications to the vertical villages has a negligible impact on the shadow cast by the building (see <b>Attachment J</b> ). Therefore no change to the exhibited project assessment.
Wind	Appendix P	Section 5.9	No change to the exhibited

Issue	Exhibited Project		Preferred Project
			project assessment, a letter from CPP confirming this is located at <b>Attachment D</b> .
Reflectivity	Appendix R	Section 5.10	No change to the exhibited project assessment, a letter from ARUP confirming this is located at <b>Attachment H</b> .
Transport and Accessibility	Appendix T, U, and D	Section 5.11	No change to the exhibited project assessment.
Climate Change and Sea Level Rise	Appendix V	Section 5.12	No change to the exhibited project assessment.
Ecologically Sustainable Development	Appendix W	Section 5.13	No change to the exhibited project assessment.
Archaeology	Appendix G, F, H and X	Section 5.14	No change to the exhibited project assessment.
Operational Noise and Vibration	Appendix Y and U	Section 5.15	No change to the exhibited project assessment.
Building Services	Appendix M	Section 5.16	No change to the exhibited project assessment.
BCA	Appendix Z	Section 5.17	No change to the exhibited project assessment, a letter from McKenzie Group Consulting confirming this is located at <b>Attachment G</b> .
Fire Safety	Appendix N	Section 5.18	No change to the exhibited project assessment, a letter from ARUP confirming this is located at <b>Attachment I</b> .
Infrastructure and Utilities	Appendix DD	Section 5.19	No change to the exhibited project assessment.
Access	Appendix AA	Section 5.20	No change to the exhibited project assessment.
Structural Engineering	Appendix S and BB	Section 5.21	No change to the exhibited project assessment.
Geotechnical	Appendix E	Section 5.22	No change to the exhibited project assessment.
Operational Waste Management	Appendix L	Section 5.23	No change to the exhibited project assessment.
Environmental, Construction and Site Management	Appendix CC	Section 5.24	No change to the exhibited project assessment. Additional commitments provided in response to submissions.
Construction Noise and Vibration Impacts	Appendix EE	Section 5.25	No change to the exhibited project assessment.
Construction Air Quality	Appendix FF	Section 5.26	No change to the exhibited project assessment.
Construction Traffic Management	Appendix T	Section 5.27	No change to the exhibited project assessment.
Construction Waste	Appendix L	Section 5.28	No change to the exhibited

<b>Issue</b>	<b>Exhibited Project</b>	<b>Preferred Project</b>
Management		project assessment.

## 5.0 Final Statement of Commitments

In accordance with Part 3A of the *Environmental Planning and Assessment Act 1979*, the following are the commitments made by Lend Lease to manage and minimise potential impacts arising from the proposal. These commitments replace the draft commitments included with the EAR. It is noted that Lend Lease has added a new commitment in response to a submission made by Transport for New South Wales on behalf of RailCorp.

Commitments and Requirement	Responsibility / Timing
<b>Design</b>	
1. Lend Lease commits to ensuring continuity in the design process and realisation of the submitted Commercial Building C3 design in the completed building by ensuring that Rogers Stirk Harbour +Partners has direct involvement in the design documentation phase.	Proponent, ongoing.
2. External building materials and finishes will be generally in accordance with the materials schedule included at <b>Appendix J</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<p>3. The public domain within the Commercial Building C3 site will be generally in accordance with the Landscape Design Statement prepared by Aspect Oculus included at <b>Appendix K</b> and the Public Domain Plan prepared by Aspect Oculus included at <b>Attachment F</b> of the PPR prepared by JBA Planning.</p> <p>The final selection of plantings within the framework of the Public Domain Plan and Landscape Design Statement will take into consideration suitability having regard to the potential impacts resulting from the construction of nearby buildings. The Public Domain Plan will be fully integrated with the Barangaroo South Public Domain Guidelines, once finalised by the Technical Working Group.</p>	To be demonstrated by the proponent at the relevant construction certificate stage(s).
4. Temporary landscaping and lighting will be provided within the Commercial Building C3 site generally in accordance with the Temporary Public Realm plan prepared by Aspect Oculus included at <b>Attachment F</b> of the PPR prepared by JBA Planning. The final selection of plantings within the framework of the Temporary Public Realm Plan will take into consideration suitability having regard to the potential impacts resulting from the construction of nearby buildings.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<p>5. The Architectural Drawings prepared by Rogers Stirk Harbour +Partners included at <b>Attachment B</b> of the PPR prepared by JBA Planning illustrate the maximum extent of signage zones for the tower facades. Within the maximum extent of signage zones:</p> <ul style="list-style-type: none"> <li>▪ no more than two (2) building identification and/or business identification signs will be provided at high level on a maximum of two (2) facades of the building; and</li> <li>▪ a maximum of two (2) building identification and/or business identification signs will be provided at podium level on a maximum of two facades of the building,</li> <li>▪ a maximum of two (2) secondary building identification and/or business identification signs will be provided at podium level for each facade of the building.</li> </ul> <p>The final form and content of any proposed building and business identification signage will be the subject of a separate future</p>	To be demonstrated by the proponent at the relevant construction certificate stage(s).

application (if required under relevant legislation).	
6. External and internal lighting will be provided around and throughout the building in accordance with AS 1680 and the BCA.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
7. Internal light fittings within the commercial and retail areas will comply with NABERS and Green Star targets.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
8. Specialist lighting will be provided within the building’s entrance lobby to enhance the visual environment at ground level.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
9. External building lighting will be installed to provide interest, highlighting architectural features. No light beam will be directed beyond the site’s boundaries or upwards without falling directly on a surface to minimise light pollution. Lighting will be controlled by photoelectric cells or time switches.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
10. Photovoltaic arrays will be provided at the roof level of the building	To be demonstrated by the proponent at the relevant construction certificate stage(s).
11. A complete electronic security system will be provided for the base building including a central supervisory system, access control system, CCTV system, intruder alarm system and intercommunication system.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
12. The detailed design of Commercial Building C3 will address the recommendations of the Wind Report prepared by CPP included at <b>Appendix P</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
13. The design of any temporary structures that may be required (depending on the construction staging of the adjoining future buildings within Block 2 of Barangaroo South) to mitigate wind impacts will be submitted prior to the issue of a Construction Certificate relating to works at the ground plane.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<b>Future separate applications</b>	
14. Future planning approvals will be sought for the following where required: <ul style="list-style-type: none"> <li>▪ Fit out of the commercial office space;</li> <li>▪ Fit out and operation of the retail units;</li> <li>▪ Fit out and operation of the child care centre; and</li> <li>▪ Installation of any site wide infrastructure.</li> </ul>	Proponent, ongoing.
<b>Public art</b>	
15. Opportunities to implement art work within the Commercial Building C4 development will be further explored in accordance with the Public Art Strategy for Barangaroo South.	Proponent, ongoing.

<b>Ecologically sustainable development</b>	
16. Commercial Building C3 will be designed to achieve a 6 Star Green Star Office Design rating. In order to achieve a 6 Star Green Star Office Design rating, Lend Lease will target the initiatives set out in the ESD Report prepared by ARUP included at <b>Appendix W</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
17. Commercial Building C3 will achieve the ESD Performance Indicators for potable water consumption, reduction in flow to sewer, reductions in Greenhouse Gas emissions, use of renewable energy, micro climate, landscaping, transport, and waste as detailed in the approved Concept Plan (Mod 4) Statement of Commitments.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<b>Operational waste management</b>	
18. Commercial Building C3 operational waste will be managed generally in accordance with the methodology outlined in the Waste Management Plan prepared by ARUP included at <b>Appendix L</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	Proponent, ongoing.
<b>Building Services and Fire Safety</b>	
19. Electrical services will be completed in accordance with the relevant standards and applicable statutory requirements.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
20. The detailed design of mechanical services will satisfy the relevant requirements of AS 1668.1-1998 and AS1688.2 – 1991 as applicable.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
21. Fire detection, emergency warning and fire protection systems will be installed to comply with BCA requirements and other relevant legislation, generally in accordance with the measures outlined in Section 6 of the Building Services Report included at <b>Appendix M</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
22. A detailed Fire Safety Strategy will be prepared and submitted as part of the relevant Construction Certificate documentation. The Fire Safety Strategy will be prepared in consultation with the NSW Fire Brigade, building certifiers, and relevant stakeholders.	To be prepared and submitted as part of the documentation for the relevant Construction Certificate (s).
<b>Infrastructure and Services</b>	
23. Appropriately sized new sewer and water connections will be provided to the building in consultation and agreement with Sydney Water.	To be demonstrated by the proponent prior to release of any occupation certificate.
24. Stormwater discharge will be generally in accordance with the Stormwater Management Plan prepared by ARUP included at <b>Appendix O</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
25. A suitably sized rainwater tank is to be provided for the collection and re-use of rainwater flows from the building's roof areas.	To be demonstrated by the proponent at the relevant construction certificate stage(s).

<b>Accessibility</b>	
26. The detailed design of Commercial Building C3, including access, emergency egress, paths of travel, lifts, ramps, stairs, accessible toilets, accessible parking, lighting and signage, will generally comply with the recommendations set out in the Accessibility Report prepared by Morris-Goding Accessibility Consulting included at <b>Appendix AA</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<b>Building Code of Australia</b>	
27. The detailed design of Commercial Building C3 will comply with all relevant BCA requirements and Australia Standards generally in accordance with the recommendations of the BCA Assessment prepared by McKenzie Group Consulting included at <b>Appendix Z</b> of the Environmental Assessment Report prepared by JBA Urban Planning Consultants dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<b>Operational Noise and Vibration</b>	
28. Operational noise emissions from the site will comply with the noise limits and amenity and intrusiveness criteria detailed in Wilkinson Murray's Operational Acoustic Study included at <b>Appendix Y</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
29. Commercial Building C3 will be designed in accordance with Australian Standard 2107 Internal Design Sound Levels to ensure appropriate internal amenity is achieved.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
30. The detailed design of Commercial Building C3 will meet the vibration levels specified in the DECCW Assessing Vibration technical guideline.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
<b>Travel Demand</b>	
31. Lend Lease will prepare a Work Place Travel Plan for Commercial Building C3 to be completed prior to the first occupation certificate for the commercial tenant occupation.	To be prepared by the proponent prior to the first occupation certificate for the commercial tenant occupation.
<b>Geotechnical and Structure</b>	
32. Further detailed geotechnical site testing will be undertaken in accordance with the requirements of Australian Standard 2159 Piling – Design and Installation and Australian Standard 3600 – Concrete Structures, to determine the exposure classification and durability design requirements. The further detailed geotechnical testing will be used to inform the detailed structural design and documentation of Commercial Building C3.	To be demonstrated by the proponent at the relevant construction certificate stage(s).
33. The structural design and documentation of Commercial Building C3 will comply with all relevant Australian Standards and the BCA as outlined in the Structural Engineering Report prepared by ARUP included at <b>Appendix BB</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011.	To be demonstrated by the proponent at the relevant construction certificate stage(s).

<b>Environmental, Construction and Site Management</b>	
<p>34. Construction and site management relating to the construction of Commercial Building C3 will be in generally accordance with the Environmental, Construction and Site Management Plan prepared by Cardno &amp; Lend Lease included at <b>Appendix CC</b> of the Environmental Assessment Report prepared by JBA Planning dated November 2011 including the following:</p> <ul style="list-style-type: none"> <li>▪ Construction Noise and Vibration Assessment prepared by Wilkinson Murray, which addresses the noise and vibration impacts on and off site (refer to <b>Appendix EE</b> of the EAR);</li> <li>▪ Construction Traffic Management Plan prepared by ARUP, which addresses construction traffic impacts (refer to <b>Appendix T</b> of the EAR);</li> <li>▪ Air Quality Impact Assessment prepared by AECOM, which addresses air quality and odour impacts (refer to <b>Appendix FF</b> of the EAR); and</li> <li>▪ Waste Management Plan prepared by ARUP which addresses construction waste management (refer to <b>Appendix L</b> of the EAR).</li> <li>▪ A requirement for preparation of a site wide strategy relating to the preparation of post construction dilapidation reports that includes a requirement for the Proponent to engage a suitably qualified person to prepare a post-construction dilapidation report: <ul style="list-style-type: none"> <li>- At the completion of all excavation and piling works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 works; and</li> <li>- At the completion of all construction works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 works.</li> </ul> </li> <li>▪ In the event that barging of soil is undertaken, requirements for: <ul style="list-style-type: none"> <li>- Management of Spillage of spoil during loading / movement of barges;</li> <li>- Procedures in the event of an incident (such as a fuel spill or collision with structures / vessels on the water); and</li> <li>- Reporting of any incidents, (such as a fuel spill)on the water.</li> </ul> </li> <li>▪ A requirement that Lend Lease notify and consult with the Harbour Master prior to material being loaded for transport via the water from the site, particularly in relation to vessel movements.</li> </ul>	<p>Proponent, ongoing</p>
<p>35. Lend Lease commits to providing high quality hoardings around the site, including along the foreshore walk. Hoardings will be treated with graphics and other designs consistent with an overall coordinated high quality Barangaroo communications strategy to be endorsed by the Barangaroo Delivery Authority and submitted to the Director-General.</p>	<p>Proponent, ongoing</p>
<p><b>Consultation</b></p>	

<p>36. Lend Lease will continue to undertake consultation in relation to the proposed Commercial Building C3 in accordance with the methodologies identified at Table 2 of the Environmental Assessment Report prepared by JBA Planning dated October 2011.</p>	<p>Proponent, ongoing</p>
<p><b>Piling and associated works</b></p>	
<p>37. The Commercial Building C3 Project Application works will be carried out in accordance with the Remedial Action Plan – Other Remediation Works (South) Area prepared by AECOM (including any RAP addendums that are proposed to be prepared and remedial work plan(s) as proposed to be prepared in conformance with these RAPs).</p>	<p>To be demonstrated by the proponent at the relevant construction certificate stage(s).</p>
<p>38. Lend Lease will obtain a Section A Site Audit Statement from the Site Auditor prior to the issue of an Occupation Certificate for Commercial Building C3.</p>	<p>To be demonstrated by the proponent at the relevant construction certificate stage(s).</p>
<p><b>Rail Corp 33kV Power Line</b></p>	
<p>39. Detailed plans demonstrating that the proposed development will have no impact on RailCorp 33KV power cable will be provided to RailCorp.</p>	<p>To be demonstrated by the proponent at the relevant construction certificate stage(s).</p>