

Environmental Assessment Report

Section 75W Modification



Barangaroo South

Concept Plan Modification 6

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

June 2013 ■ 10051

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This report has been prepared by: Michael Rowe

Signature



Date 05/06/13

This report has been reviewed by: Lesley Bull

Signature



Date 05/06/13

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Statement of Validity

This Environmental Assessment has been prepared and submitted under Part 3A of the *Environmental Planning and Assessment Act 1979* (as amended) by:

Environmental Assessment prepared by

Name	Lesley Bull
Qualifications	BTP(Hons) MEL
Address	Level 7, 77 Berry Street, North Sydney
In respect of	Section 75W Modification to the Barangaroo Concept Plan

Concept Plan

Applicant name	Lend Lease (Millers Point) Pty Limited
Applicant address	The Bond, 30 Hickson Road, Millers Point NSW
Land to be developed	Barangaroo South – refer to Section 2.2
Proposed development	Mixed Uses

Environmental Assessment

Certificate	<p>I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge:</p> <ul style="list-style-type: none">■ It is in accordance with the <i>Environmental Planning and Assessment Act 1979</i> and <i>Environmental Planning and Assessment Regulation 2000</i>.■ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
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Signature



Name

Lesley Bull

Date

05 June 2013

Executive Summary

Background

Concept Plan approval (MP06_162) for the redevelopment of the East Darling Harbour (now known as Barangaroo) was granted in February 2007. The Concept Plan covers urban design and policy initiatives and is the statutory planning approval to guide the urban renewal of Barangaroo.

The approved Concept Plan has been modified four times since originally being approved and the Statement of Commitments has been revised accordingly. The most recent modification, Concept Plan (Mod 4) was approved on 16 December 2010 (Note: Concept Plan (Mod 5) was withdrawn).

As part of the on-going design and development of the Barangaroo South site, Lend Lease has identified a range of opportunities to improve the relationship of the built form with the public domain. In addition, a series of modifications to the terms of approval have been identified as being required to facilitate the implementation of the project. Accordingly, Lend Lease sought the Director General's Environmental Assessment Requirements (DGRs) for the modifications that are now proposed in this application, which were issued on 21 December 2012.

The Proposed Modification

The scope of Concept Plan (Mod 6) to Barangaroo South includes:

- Realignment of the development block boundaries for Blocks 3, 4A and 4B.
- Revisions to the approved Urban Design Controls to reflect the realigned block boundaries.
- Amendment to Condition B4(2) 'Built Form' to clarify the wording of the condition relating to the distribution of community uses floorspace at Barangaroo.
- Amendment to Condition B4 'Built Form' to allow for architectural roof elements and building management units to be excluded from the maximum height limits.

The Concept Plan (Mod 6) does not propose any amendments to Barangaroo Central or the Headland Park.

Environmental Assessment

This Environmental Assessment (see Section 5.0) and the technical supporting investigations provide a detailed assessment of the environmental impact of the proposed Concept Plan (Mod 6). It demonstrates that the proposed modifications are satisfactory, specifically with respect to the relevant key environmental assessment issues set out in the DGRs.

Key benefits of Concept Plan (Mod 6) include:

- clarifying the wording of conditions to ensure that the intent of the approved Concept Plan, to deliver a range of community uses throughout the whole of the Barangaroo site, can be achieved;
- improving the relationship between the built form and the public domain; and
- enhancing the quality of the future built form delivered on the site.

Conclusion

Concept Plan (Mod 6) is the result of a commitment by Lend Lease to deliver a high quality development at Barangaroo South. The Concept Plan (Mod 6) is generally consistent with the approved Concept Plan and will ensure that a superior and more sustainable outcome will be achieved.

1.0 Introduction

This Environmental Assessment Report (EAR) has been prepared to modify the approved Concept Plan (MP06_0162) for the Barangaroo site. This report is submitted to the Minister for Planning and Infrastructure pursuant to clause 3C(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 Section 75W of Part 3A of the EP&A Act. This application seeks to modify the existing Concept Plan approval as it currently applies to Barangaroo South (referred to herein as Concept Plan (Mod 6)).

The EAR has been prepared by JBA, for Lend Lease, and is based on the supporting technical documents provided by the expert consultant team (see Table of Contents).

The EAR describes the site, its environs and the proposed Concept Plan (Mod 6) and includes an assessment of the proposal in accordance with the Director General's Environmental Assessment Requirements (DGRs) issued for Concept Plan (Mod 6) on 21 December 2012 pursuant to Part 3A of the EP&A Act (**Appendix A**). It should be read in conjunction with the studies and other information appended to this report. The studies provide a technical assessment of the environmental impacts of the proposed development, and recommend proposed mitigation measures to manage potential environmental impacts associated with the proposal.

It should also be read in conjunction with the Concept Plan Instrument of Approval MP06_0162 (Mod 4) and the original State Significant Site Study prepared by JBA (dated February 2007), and the Barangaroo South Concept Plan Modification and Major Development SEPP Amendment Environmental Assessment Report prepared by JBA (dated August 2010).

1.1 Approved Concept Plan

An international design competition for Barangaroo was held in 2005, attracting 139 entries from around the world. The winning design by Hill Thalix Architecture +Urban Projects, Paul Berkemeier Architects and Jane Irwin Landscape Architecture was announced in March 2006 together with a naming competition for the new headland precinct. The jury recommended key changes to the winning proposal which were required to be incorporated into the Barangaroo Concept Plan development.

The Concept Plan was approved in February 2007. The Concept Plan covers urban design and policy initiatives and is the statutory planning approval to guide the urban renewal of Barangaroo.

The approved Concept Plan has been modified four times since originally being approved and the Statement of Commitments has been revised accordingly. The most recent modification, Concept Plan (Mod 4) was approved on 16 December 2010.

To accommodate the changes made to the Concept Plan through Mod 4, Schedule 3 of Part 12 of the Major Development SEPP was concurrently amended. The amendment rezoned parts of the Barangaroo site and adjoining areas of land from RE1 Public Recreation, W1 Maritime Waters and Transport to B4 Mixed Use and RE1 Public Recreation. The Amendment also modified the distribution of gross floor area and building heights within the Barangaroo site.

The Concept Plan approval (Mod 4) provides for:

- a 563,965m² mixed use development across the entire Barangaroo site, comprising:
 - a maximum of 514,465m² mixed uses GFA, including residential, commercial and retail uses which includes;
 - a maximum of 128,763m² of residential uses (a minimum of 99,763m² of which will be in Barangaroo South);
 - a maximum of 50,000m² of tourist uses GFA;
 - a maximum of 39,000m² of retail uses;
 - a maximum of 4,500m² of active uses GFA (3,000m² of which will be in Barangaroo South); and
 - a minimum of 12,000m² of community uses GFA (10,000m² of which will be in Barangaroo South);
- approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational functions and includes a 2.2km public foreshore promenade;
- built form principles, maximum building heights and GFA for each development block within the mixed use zone;
- public domain landscape concept, including parks, streets and pedestrian connections; and
- alteration of the existing seawalls and creation of a portion of the new shoreline to the Harbour.

A further modification, Concept Plan (Mod 5), was lodged in February 2011 but later withdrawn.

1.2 Other Barangaroo South Approvals

The lodgement of Concept Plan (Mod 6) by Lend Lease follows Project Approvals for the Bulk Excavation and Basement Car Park (Basement Car Park Approval) (MP10_0023) and Commercial Buildings C3, C4 and C5 (MP11_0044, MP10_0025, MP10_0227) within the Barangaroo South site. A Project Application for Residential Buildings R8 and R9 (MP11_0002) is currently being assessed.

1.3 Summary of Modification

As part of the on-going design and development of the Barangaroo South site, Lend Lease has identified a range of opportunities to improve the relationship of the built form with the public domain. In addition, a series of modifications to the terms of approval have been identified to facilitate the implementation of the project.

The scope of Concept Plan (Mod 6) to Barangaroo South includes:

- Realignment of the development block boundaries for Blocks 3, 4A and 4B.
- Revisions to the approved Urban Design Controls to reflect the realigned block boundaries.
- Amendment to Condition B4(2) 'Built Form' to clarify the wording of the condition relating to the distribution of community uses floorspace at Barangaroo.
- Amendment to Condition B4 'Built Form' to allow for architectural roof elements and building management units to be excluded from the maximum height limits.

- Amendment to Condition C4 'Car Parking' to replace the reference to 'City of Sydney Council rates' for 'other uses' with the specific rates used for other uses in Sydney Local Environmental Plan 2005, which applied at the time of Concept Approval.

1.4 Consultation

The proposed modified development will be placed on public exhibition for 30 days in accordance with *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project.

In addition to the above, Lend Lease met with senior officers from City of Sydney Council on 6 December 2012. The meeting included a presentation on the proposed modification which was then followed by questions and discussion.

1.5 Consultant Team

Concept Plan (Mod 6) has been prepared with the involvement of the following consultant team:

Proponent	Lend Lease (Millers Point) Pty Limited
Urban Planning	JBA
Master Architect	RHSP
Collaborative Designers	Lend Lease Design
Landscape	Aspect Oculus
View Analysis	Virtual Ideas
Wind	CPP

Additionally, a number of consultants involved in Concept Plan (Mod 4) have provided correspondence confirming that this modification does not necessitate a change to reports they prepared for Concept Plan (Mod 4), or the conclusions made at that time.

2.0 Site Analysis

Barangaroo is located on the north western edge of the Sydney Central Business District, bounded by Sydney Harbour to the west and north, the historic precinct of Millers Point (for the northern half), The Rocks and the Sydney Harbour Bridge approach to the east and a range of new development dominated by major commercial tenants to the south.

The 22ha Barangaroo site is generally rectangular in shape and has a 1.4 kilometre harbour foreshore frontage, with an eastern street frontage to Hickson Road. The site location of Barangaroo is shown at **Figure 1**.

The site has been divided into three distinct redevelopment areas (from north to south) – the Headland Park, Barangaroo Central and Barangaroo South - and has been subject to multiple investigations that detail the physical and natural characteristics of the site.

For a detailed description of the existing and surrounding development refer to Section 2.0 of Environmental Assessment Report prepared by JBA dated November 2010.



Figure 1 – Site Location

2.1 Concept Plan Modification Area

Barangaroo South predominantly comprises an open apron which is largely reclaimed over water and identified in the existing approved Concept Plan as Blocks 1 – 4, X and Y, and the immediately adjacent public recreation area (see **Figure 2**).



Figure 2 – Barangaroo South

2.2 Legal Description

The site is legally described as Lots 1-6 DP 876514, Lot 7 DP 43776, Lot 100 DP 83823, Lots 6 and 7 DP 869022 and Lot 110 DP 1061311. The specific area affected by this modification is wholly within the ownership of the Barangaroo Delivery Authority.

3.0 Barangaroo South Concept Plan Modification

Lend Lease is seeking the Minister's approval under Schedule 6A and Section 75W of Part 3A of the EP&A Act to amend the approved Concept Plan (Mod 4) as it applies to Barangaroo South. The scope of Concept Plan (Mod 6) as now proposed is addressed in the following sections, and includes:

- Realignment of the development block boundaries for Blocks 3, 4A and 4B.
- Revisions to the approved Urban Design Controls to reflect the realigned block boundaries.
- Amendment to Condition B4(2) 'Built Form' to clarify the wording of the condition relating to the distribution of community uses floorspace at Barangaroo.
- Amendment to Condition B4 'Built Form' to allow for architectural roof elements and building management units to be excluded from the maximum height limits.

The following elements of the Concept Plan (Mod 4) in relation to Barangaroo South remain unchanged:

- land uses and mix of land uses;
- built form principles, maximum GFA and maximum building heights for each development block;
- provision of infrastructure and services;
- sustainability principles and targets;
- site environmental strategies.

The Concept Plan (Mod 6) does not propose any amendments to Barangaroo Central or the Headland Park. The Concept Plan (Mod 6) also does not propose any changes to the Approved Statement of Commitments.

The Concept Plan (Mod 6) generally has no impact on the broader Concept Plan Approval which will still result in:

- a 563,965m² mixed use development across the entire Barangaroo site, comprising:
 - a maximum of 514,465m² mixed uses GFA, including residential, commercial and retail uses which includes;
 - a maximum of 128,763m² of residential uses (a minimum of 99,763m² of which will be in Barangaroo South);
 - a maximum of 50,000m² of tourist uses GFA;
 - a maximum of 39,000m² of retail uses;
 - a maximum of 4,500m² of active uses GFA (3,000m² of which will be in Barangaroo South); and
 - a maximum of 12,000m² of community uses GFA (10,000m² of which will be in Barangaroo South) (Note: this is changed from a minimum to a maximum);
- approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational function and including a 2.2km public foreshore promenade;
- built form principles, maximum building heights and GFA for each development block within the mixed use zone;

- public domain landscape concept, including parks, streets and pedestrian connections; and
- alteration of the existing seawalls and creation of a portion of the new shoreline to the Harbour.

3.1 Proposed Modifications

3.1.1 Development Block Reconfiguration

The proposed Concept Plan (Mod 6) seeks to realign the approved Concept Plan (Mod 4) Development Block boundaries for Blocks 3, 4A and 4B. The realignment is a result of further design development and progressive refinement of detailed designs for buildings at Barangaroo South. **Figure 3** illustrates the approved (blue) and proposed (red) Development Blocks.

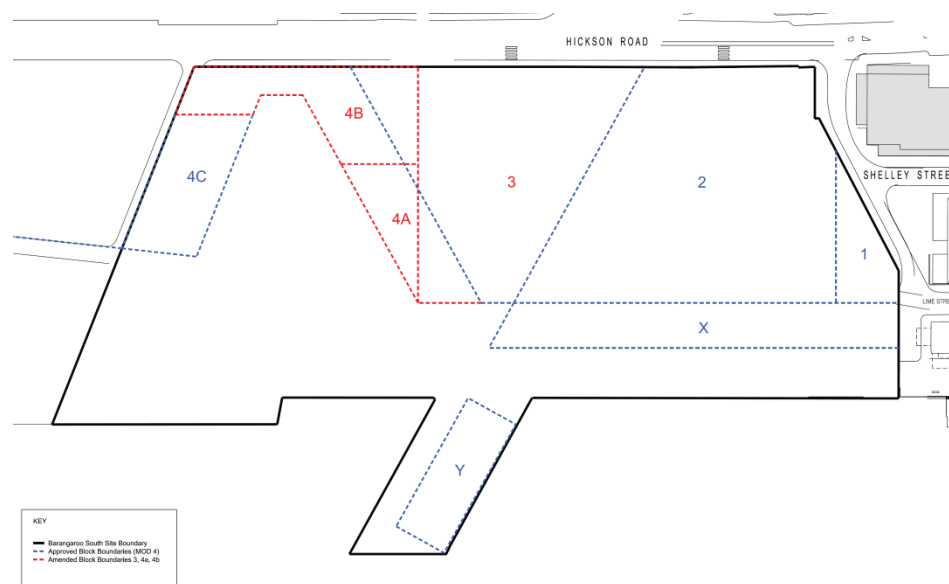


Figure 3 – Approved Mod 4(blue) and proposed Mod 6 (red) Development Block boundaries

A revised indicative design to demonstrate how the site may be developed under the modifications proposed in Concept Plan (Mod 6) is provided to support this application (see **Figure 4** and **Appendix B**). The indicative design does not form part of the Concept Plan Modification for which approval is being sought, rather is provided for information purposes only to illustrate how future development may be pursued within the realigned Development Blocks in accordance with the proposed modified Urban Design Controls. The final form and design of buildings and public spaces will be covered by separate Development Applications.



Figure 4 –Indicative Maximum Building Height, Location and Dimensions Map

The reconfiguration of the Development Blocks as well as the indicative future design / development intent for each of the realigned blocks is set out below:

- **Block 1** – No change
- **Block 2** – No Change
- **Block 3** – Block 3 contains one commercial tower and podium (C3) and one lower scale commercial building (C1) which will front Hickson Road.
- **Block 4A** – Block 4A will accommodate one residential building (R2).
- **Block 4B** – Block 4B will include residential buildings R3, R10 and R11.
- **Block 4C** – No change
- **Block X** – No change
- **Block Y** – No change

Despite realigning the approved Concept Plan Development Block boundaries, no change is proposed to the block boundaries shown in the Major Development SEPP, as the land uses, maximum GFA and maximum heights that apply within the block boundaries as shown on the SEPP maps do not change.

3.1.2 Built Form Principles and Urban Design Controls

Condition B5 of the approved Concept Plan requires that future development proposals demonstrate consistency with the Built Form Principles and Urban Design Controls within the Supplementary Urban Design Statement by Rogers Stirk Harbour +Partners, as amended pursuant to Condition B9. No changes are proposed to the approved Built Form Principles, however, the realignment of the block boundaries detailed in Section 3.1.1 above necessitates some minor modifications to the approved Urban Design Controls drawings to ensure that they relate appropriately to the future development blocks.

In addition to updating the drawings in the Urban Design Controls to reflect the realignment of the Block boundaries, the key differences between the approved and proposed Urban Design Controls are summarised below. Words proposed to be deleted are shown in ~~**bold italics strike through**~~ and words to be inserted are shown in **bold**:

- the Urban Design Controls for Blocks 1, 2, 4A, 5, 6, 7, X and Y remain as per the approved Concept Plan (Mod 4);
- amendment to the approved Block 3 Controls is proposed, including:
 - *Control 1* Objectives (as added by Condition B9): "The northern ~~half part~~ of the Block (~~Building C7~~) shall contain **built form of a** comparatively lower ~~scale buildings~~ (when compared to the tower forms) as generally indicated in the indicative design".
 - *Control 2* Objective 3, delete the reference to "east west laneways".
 - *Control 5* Standard 2: Amended to read: "Provide two north south primary connections, including the Hickson Road Colonnade and two east west primary connections (City Walk and Globe Street)"
 - *Control 5* Standard 3: Amended to read: "Provide one north south secondary public access route through the block"
 - *Control 7* Standard (as added by Condition B9): "There shall be no single plane in the façade 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 as otherwise ~~instructed by the Barangaroo Design Excellence Review Panel determined by the Director General, in consultation with the Barangaroo Delivery Authority~~"
- amendment to the approved Block 4B and 4C Controls, including:
 - *Control 2* Standard 3: Delete reference to Napoleon Street: "All street walls to define Globe Street, Healy Street, ~~Napoleon Street~~ and Hickson Road."

The Block 3, 4B +4C, and X +4A Amended Urban Design Controls are included at **Appendix C**.

3.1.3 Public Domain

The Public Domain Strategy for Barangaroo South has been updated to reflect the proposed modifications (see **Appendix D**). The key modification to the indicative public domain is the realignment of Globe Street at its northern end to meet perpendicular to Hickson Road. This section of road replaces the street previously referred to as Napoleon Street located slightly further to the north. The intersection of the existing Hickson Road and the proposed Globe Street North provides a primary vehicular entrance to the development.

3.1.4 Access and Transport

The Concept Plan (Mod 6) retains the hierarchy of east-west and north-south public streets that provide access and permeability into and within the site (see **Figure 5**).

The proposed realignment of Globe Street (previously referred to as Napoleon Street) to meet perpendicular to Hickson Road will assist orientation, improve legibility of the street network and ease of access.



Figure 5 – Future connections at Barangaroo South

No change is proposed to the approved car parking or public transport arrangements.

3.1.5 Distribution of Community GFA

Prior to the approval of the Concept Plan (Mod 4), the then approved Concept Plan (Mod 3) allowed for:

- a maximum 489,500m² GFA to be located within Development Blocks 1 – 7; and
- an additional 3,000m² active uses and 8,500m² of passenger terminal uses to be located within the RE1 Public Recreation Zone (i.e. outside of Development Blocks 1 – 7).

Concept Plan (Mod 4) amongst other things, sought approval for the reallocation of the 8,500m² of passenger terminal GFA for community uses GFA, and an

increase in the total community uses GFA by 1,500m². This resulted in a maximum total of 12,000m² of community uses GFA to be distributed across the entire extent of the Barangaroo site (i.e. across both the B4 Mixed Use and RE1 Public Recreation zones). A maximum of 10,000m² (of the total 12,000m²) was to be located across the entire extent of Barangaroo South.

Table 6 on page 100 of the Concept Plan and State Significant Site Listing Environmental Assessment Report prepared by JBA dated August 2010 (Mod 4 EAR) clearly indicates that the maximum of 10,000m² community uses GFA will be provided in both the Mixed Use and Public Recreation zones in addition to the maximum GFAs set out for the development blocks also listed in that table. The distribution of GFA in this intended manner was reflected in Table 1 and the ensuring text on page 11 of the Director General's Environmental Assessment Report dated December 2010, where community uses GFA is referred to as a component of the total maximum GFA of 563,965m², and marked with "(max)".

Condition B4(1) of the Concept Plan (Mod 4) Approval permits a maximum GFA of 563,965m² across the Barangaroo Site (i.e. both in the Mixed Use and Public Recreation zones), including 12,000m² of community uses GFA (10,000m² of which will be in Barangaroo South). This is generally consistent with what was applied for in the Mod 4 EAR and with the assessment documented in the Director General's Environmental Assessment Report, with the exception of the use of the word minimum instead of maximum for the community uses GFA (discussed further below). It is noted that Condition B4(1) specifies that 'Active Uses' are to be provided in the Public Recreation zone while, in contrast, no zone is specified for the community uses GFA.

However, Condition B4(2) does not clearly indicate that the community uses GFA can be provided across the whole of the Barangaroo site in addition to the maximum GFA otherwise provided for in Blocks 1-7 (within the Mixed Use zone) by the table in that condition, which totals 549,465m².

Consequently, under the current wording of Condition B4(2), community uses GFA cannot be provided in the Development Blocks without eroding the GFA available for other uses and inhibiting the ability of the development to achieve the maximum GFA provided for under the Concept Plan. Although clearly not intended, as evident in the Director General's assessment, this inadvertently discourages the provision of community uses GFA in the Development Blocks, an outcome that is inconsistent with the intent of Concept Plan (Mod 4).

Accordingly, a minor amendment is proposed to the wording of Condition B4(2) to appropriately reflect the Concept Plan (Mod 4) proposal. The proposed modification relates to correcting what appears to be a drafting error relating to how the accommodation of community GFA may be distributed across the Development Blocks (in the Mixed Use zone) and/or within the Public Recreation zone, and would not allow for any additional GFA above the maximum GFA that was assessed and approved as part of Concept Plan (Mod 4).

Notwithstanding this, an exception to the GFA Development Standard is provided in Section 5.1.1 because the amendment allows for the provision of Community Uses GFA above the maximums set out in the Major Development SEPP.

It should be noted that the building envelopes (and specifically building heights) do not change, and the potential allocation of community uses GFA within the Development Blocks will continue to be subject to these controls.

As noted above, Concept Plan (Mod 4) sought approval for a maximum total of 12,000m² of community uses GFA. The intention that the community uses GFA

would be a maximum is reflected in multiple locations in the Director General's Assessment Report, including:

- the description of the Concept Plan modification (Section 2.1.3) notes in the text as well as the accompanying table that the proposed modification seeks approval for 12,000m² maximum for community facilities, 10,000m² of which is to be in Barangaroo South; and
- the assessment of social issues (Section 5.2.3) notes that *"the proposal includes a proposed increase in the amount of community uses from a minimum of 2,000sqm to a maximum of 12,000sqm"*.

Notwithstanding this, the final wording of Condition B4(1) used 'minimum' instead of 'maximum' in relation to the community uses GFA. It is likely that this was a drafting error as a result of copying the text from the original Concept Approval, which used a minimum for community uses GFA instead of a maximum. As a result Mod 6 seeks to replace the word minimum with maximum in the consent in order to reflect the Mod 4 proposal and Director General's assessment.

3.1.6 Maximum Approved Height

It is proposed to modify the approved development in order to allow for future detailed applications for development within the B4 Mixed Use Zone to seek approval for building management units, architectural roof elements and the like to exceed the maximum approved height under the Concept Plan (Mod 4).

Concept Plan (Mod 4) specifies maximum building heights. The measurement of height adopted under the Concept Plan (Mod 4) is consistent with that applying to the Barangaroo site under State Environmental Planning Policy (Major Development) 2005, namely:

the vertical distance between ground level (existing) at any point to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

The proposed change to the maximum building height under Concept Plan (Mod 4) will not result in any increase in the future height of the buildings themselves, rather it will enable important elements such as building management units (BMUs) to be located on top of a building that otherwise achieves the maximum height. Further information, including the typical height, dimensions and form of the future BMUs is included at **Appendix I**.

It is noted that any application for such elements to exceed the maximum height will remain subject to satisfying the tests set out in Clause 20 'Exceptions to development standards' of Part 12 of Schedule 3 of State Environmental Planning Policy (Major Development) 2005.

3.2 Proposed Modifications to Instrument of Approval

The following section marks up the specific modifications sought to the Concept Plan Terms of Approval. Words proposed to be deleted are shown in ~~***bold-italics***~~ and words to be inserted are shown in **bold**.

Condition A1. Development Description

*Concept approval is granted only to the carrying out of the development solely within the Concept Plan area as described in the documents titled "East Darling Harbour State Significant Site Proposal, Concept Plan & Environmental Assessment (Volume 1 & 2)" prepared by JBA Urban Planning Consultants & SHFA (dated October 2006) and amended by Barangaroo Part 3A Modification Report (Volume 1 & 2) prepared by MG Planning Pty Ltd & SHFA (dated June 2008) and amended by Barangaroo Part 3A Modification Report – Headland Park and Northern Cove prepared by MG Planning Pty Ltd on behalf of Sydney Harbour Foreshore Authority and dated January 2009 and amended by Barangaroo South Concept Plan Modification and Major Development SEPP Amendment Environmental Assessment Report prepared by JBA Urban Planning Consultants (dated August 2010) and amended by **Barangaroo South Concept Plan Modification Environmental Assessment Report prepared by JBA (dated April 2013)** including:*

- (1) A mixed use development involving a maximum of 563,965sqm gross floor area (GFA), comprised of:

 - (a) a maximum of 128,763sqm and a minimum of 84,595sqm residential GFA;*
 - (b) a maximum of 50,000sqm GFA for tourist uses;*
 - (c) a maximum of 39,000sqmGFA for retail uses;*
 - (d) a maximum of 4,500sqm GFA for active uses in the Public Recreation zone (3,000sqm of which will be in Barangaroo South); and*
 - (d) a ~~minimum-maximum~~ of 12,000sqm GFA for community uses (10,000sqm of which will be in Barangaroo South).**
- (2) Approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational functions and including an approximate 2.2km public foreshore promenade.*
- (3) Built form design principles, maximum building heights and GFA for each development block within the mixed use zone.*
- (4) Public domain landscape concept, including parks, streets and pedestrian connections.*
- (5) Alteration of the existing seawalls and creation of a partial new shoreline to the harbour.*

Reason for Modification:

The condition has been updated to refer to this application in the development description. The word 'minimum' relating to the community uses GFA has been changed to 'maximum' to reflect the intent of Concept Plan (Mod 4) detailed in Section 3.1.5.

Condition A2. Development in Accordance with Plans and Documentation

A2. Development in Accordance with Plans and Documentation

- (1) The following plans and documentation (including any appendices therein) are approved as part of the Concept Plan:*

- (a) *East Darling Harbour State Significant Site Proposal Concept Plan and Environmental Assessment (Volume 1) and Appendices (Volume 2) prepared by JBA Urban Planning Consultants Pty Ltd on behalf of Sydney Harbour Foreshore Authority and dated October 2006.*

Except as modified by

- (b) *Barangaroo Part 3A Modification Report (Volume 1) and Appendices (Volume 2) prepared by MG Planning Pty Ltd on behalf of Sydney Harbour Foreshore Authority and dated June 2008.*
- (c) *Barangaroo Part 3A Modification Report – Headland Park and Northern Cove prepared by MG Planning Pty Ltd on behalf of Sydney Harbour Foreshore Authority and dated January 2009;*
- (d) *Barangaroo South Concept Plan Modification and Major Development SEPP Amendment Environmental Assessment Report prepared by JBA Urban Planning Consultants and dated August 2010; and*

- (e) Barangaroo South Concept Plan Modification Environmental Assessment Report prepared by JBA and dated April 2013.**

(2) *The following Preferred Project Report including a revised Statements of Commitment are approved:*

- (a) *Response to Department of Planning and Revised Statement of Commitments prepared by JBA Urban Planning Consultants Pty Ltd on behalf of Sydney Harbour Foreshore Authority and dated January 2007.*

Except as modified by

- (b) *Preferred Project Report Barangaroo Part 3A Modification – Commercial Floor Space and Revised Statement of Commitments and Preferred Project Report Addendum prepared by Sydney Harbour Foreshore Authority and dated October 2008.*
- (c) *Preferred Project Report Barangaroo Part 3A Modification Report – Headland Park and Northern Cove prepared by MG Planning Pty Ltd on behalf of the Barangaroo Development Authority and dated September 2009 and Preferred Project Report Addendum Map prepared by the Barangaroo Development Authority dated September 2009 (Revision F); and*
- (d) *Preferred Project Report Concept Plan Modification 4 (MP 06_0162 MOD 4) Barangaroo Stage 1 prepared by JBA Urban Planning Consultants on behalf of Lend Lease and dated November 2010 and revised Statement of Commitments (December 2010).*

(3) *In the event of any inconsistencies,*

- (a) *the Statement of Commitments referenced in A2(2)(d) of this approval prevails to the extent of any inconsistency in the plans and documentation identified in (1), and*
- (b) *the modifications of the Concept Plan approval identified in Part B & C Schedule 2 prevail over the documentation listed in (1), (2) and (3)(a) above.*

Reason for Modification:

The condition has been updated to refer to this application in the development description.

Condition B4 Built Form

(1) *Approval is given to a mixed use development involving a maximum of 563,965sqm gross floor area (GFA), comprised of:*

- (a) *a maximum of 128,763sqm and a minimum of 84,595sqm residential GFA;*

(b) a maximum of 50,000sqm GFA for tourist uses;

(c) a maximum of 39,000sqmGFA for retail uses;

(d) a maximum of 4,500sqm GFA for active uses in the Public Recreation zone (3,000sqm of which will be in Barangaroo South); and

(d) a ~~minimum-maximum~~ of 12,000sqm GFA for community uses (10,000sqm of which will be in Barangaroo South).

(2) Despite B4(1) above future ~~project~~ applications for development within the B4 Mixed Use Zone are not to exceed:

a) the GFA, other than to accommodate up to a total of 10,000sqm of community uses GFA which will be located in Barangaroo South and which is additional to the maximum GFA set out below;

b) the maximum residential GFA; and

c) building heights,

specifically identified in table (2)(a) below.

	GFA (sqm)	Residential GFA (Max) (sqm)	Height (Max AHD)	Height above existing ground level (m)
Block 1	9,400	9,000	RL80	78
Block 2	209,213		RL 180	178
Block 3	142,669		RL209	207
Block 4A	8,150	6,900	RL41.5	39.5
Block 4B	29,900	28,900	RL 175	173
Block 4C	39,000	38,500	RL 160	158
Block X	18,908	16,463	RL 41.5	39.5
Block Y	33,000		RL 170	168
Block 5	41,225	15,000	RL 34	32
Block 6	3,000		RL 29	27
Block 7	15,000	14,000	RL 35	33
Total	549,465	128,763		

(3) ...

(4) Despite B4(2) above, future applications for buildings may exceed the maximum approved height but only if the part of the building which protrudes above the maximum approved height comprises communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues, building management units, and the like.

Reason for Modification:

Condition B4(2) has been amended to reflect the Concept Plan (Mod 4) proposal with respect to distribution of community uses GFA, including replacing the word 'minimum' to 'maximum' as it relates to the community uses GFA, as assessed by the Director-General.

The condition has also been amended to allow for the building management units and those elements ordinarily not included within the definition of height to protrude above the maximum height limits for the blocks set out in Condition B4(2).

Condition B5 Revised Design Principles

(1) Future applications in Barangaroo South are to demonstrate consistency with the Built Form Principles and Urban Design Controls within the Supplementary Urban Design Statement by Rogers Stirk Harbour + Partners (12 November 2010), with required modifications as outlined in B9 and as amended by the Block 3, 4B+ 4C, and X+ 4A Amended Urban Design Controls (April 2013).

Reason for Modification:

The condition has been updated to reflect the modifications to the Urban Design Controls necessitated by the realignment of the Block 3, 4A and 4B boundaries.

Condition B9 Envelope Amendments and Built Form Controls

Barangaroo South

(1) The Built Form Principles and Urban Design Controls within the Supplementary Urban Design Statement by Rogers Stirk Harbour + Partners (12 November 2010) for Barangaroo South are adopted, with required modifications as outlined below and as amended by the Block 3, 4B+ 4C, and X+ 4A Amended Urban Design Controls (April 2013). A consolidated Urban Design Statement shall be provided to the Director General incorporating all of the required modifications set out in B9 (2) to (4).

Envelope Amendments

(2) ...

Urban Design Controls

(3) ...

(4) The following changes shall be incorporated into the Urban Design Controls for each Block:

Block 1...

Block 3

Control 1 Objectives: ~~Add "The northern half of the Block (Building C7) shall contain comparatively lower buildings (when compared to the tower forms) as generally indicated in the indicative design".~~

Control 1 Standards: ~~Delete "maximum of 29m setback from Hickson Road".~~

Control 1 Standards and Control 2 Objectives: ~~Change minimum of 1 storey podium height to "minimum predominant podium height of 3 storeys".~~

Control 2 Objectives: ~~Add "Podium height shall be determined having regard to compatibility of streetscape form with the surrounding area, and appropriate engagement and framing of the public domain, together with environmental considerations on the public domain and surrounding buildings".~~

Control 2 Standards: ~~Add "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".~~

Control 7 Standards: ~~Add "There shall be no single plane in the façade 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 as otherwise instructed by the Barangaroo Design Excellence Review Panel".~~

Control 8 Standards: ~~Add "The width of driveways shall be minimised".~~

Control 9 Standards: ~~Add "Signage shall not be greater than 1 building storey high (between floor slabs)".~~

Block 4, B and 4C

Control 1 Objectives: ~~Add "If two buildings are proposed within 4C they shall be separated by at least 18m and the podium shall be low to allow sunlight penetration through the buildings to the southern water cove and adjoining promenade on the southern side of the water cove".~~

Control 1 Standards: ~~"verified" be corrected to "varied".~~

Control 8 Standards: ~~Add "The width of driveways shall be minimised".~~

Control 9 Standards: ~~Add "Signage shall not be greater than 1 building storey high (between floor slabs)".~~

Block X and 4A

~~**Control 1 Objectives:** Add “The predominant height of the building mass fronting the foreshore promenade shall be 6 or 7 storeys above ground level, with over 70% of the building frontages having a consistent height. Any “pop ups” shall not result in more than 9 storeys above ground level and the overall massing shall be such to create an homogenous yet interesting streetwall”.~~

~~**Control 8 Objectives:** Add “At least 70% of the ground floor frontages to the pedestrian waterfront promenade shall comprise retail or entertainment uses, open to the public to activate the adjoining foreshore pedestrian promenade”.~~

~~**Control 8 Standards:** Add “The width of driveways shall be minimised”.~~

Block Y...

(5) ...

(6) ...

Reason for Modification:

The condition has been updated to reflect the modifications to the Urban Design Controls necessitated by the realignment of the Block 3, 4A and 4B boundaries.

The modifications to the Urban Design Controls set out in Condition B9(4) that relate to Blocks 3, 4A and 4B have been incorporated into the amended Urban Design Controls (included at **Appendix C**) and therefore do not need to remain set out in the condition.

C4. Car Parking

(1) The following maximum car parking rates shall apply to future development within the site:

(a) Commercial: - 1 space/600m² GFA

(b) Residential: - 1 bedroom/bedsitter unit – 1 space/2 units
 - 2 bedroom unit – 1.2 spaces/unit
 - 3+ bedroom unit – 2 spaces/unit

$$\text{Maximum number} = \frac{\text{Total other FSA}}{\text{Total FSA within development}} \times \frac{\text{Site area}}{50}$$

(c) Other Uses: - ~~City of Sydney Council rates.~~

(d) Hotels and Clubs: 1 space per 5 bedrooms and 4 spaces per 100 square metres of function room area

(e) Cinemas, Theatres and Recital Halls: 1 space per 7 seats

(f) Serviced Apartments:

- 1 space per 4 studio apartments/bedsitters
- 1 space per 2 one-bedroom apartments
- 1.2 spaces per two or more bedroom apartment

Reason for Modification:

The condition currently refers to 'City of Sydney Council rates' for the maximum car parking rates for uses other than residential and commercial. In December 2012 the Sydney LEP 2012 was gazetted, repealing Sydney LEP 2005. Car parking rates under LEP 2012 are based on a sites' land use and transport integration (LUTI) classification on the 'Land Use and Transport Integration Map'. The Barangaroo site has not been given a LUTI rating and therefore no car parking rates currently apply to the Barangaroo site under LEP 2012. Accordingly this condition has been updated to reflect the car parking rates for the Barangaroo site which were in Sydney LEP 2005 that applied at the time of the Concept Approval and were the basis for the Concept Plan traffic assessment.

4.0 Director General's Environmental Assessment Requirements

Table 1 provides a detailed summary of the individual matters listed in the Director General's Environmental Assessment Requirements (DGRs) and / or identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

At the time Lend Lease sought the DGRs for Concept Plan (Mod 6), they were considering seeking approval for a temporary concrete batching plant use. Accordingly the DGRs require consideration of the impacts of the temporary concrete batching plant with respect to traffic, soil and water, air quality and odour, waste management, noise, utilities and greenhouse gas and energy emissions. As a result of the declaration of the temporary concrete batching plant for use over the entire site as State Significant Development, its potential approval will now be addressed in a separate, stand-alone combined Concept Plan Modification and State Significant Development Application. As such, these DGR's have not been addressed within this application.

Table 1 - Director General's Environmental Assessment Requirements

Director General's requirements	Location in Report
Relevant EPI's, policies and guidelines	
Address the provisions of State environmental planning policies that would apply as if those provisions applied to the carrying out of the project, including the following: <ul style="list-style-type: none"> – State Environmental Planning Policy (State & Regional Development) 2011. – State Environmental Planning Policy (Major Development) 2005. – State Environmental Planning Policy No 55 - Remediation of Land. – Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005. 	Section 5.1
Development controls and land uses	
An analysis of and justification for the changes to the existing Concept Plan approval (as amended) including built form controls (building envelopes etc.), building heights, zoning, GFA distribution and any subsequent changes that will be required to the MD SEPP for future applications (Part 4 or otherwise).	Section 5.2 & Appendix F
Analysis of proposed bulk and scale of the buildings affected by the changes to Globe. Street as well as the bulk and scale of the building management units.	
View Impacts	
Assess the visual impacts of the changes to building envelopes and building management units on key surrounding residential properties.	Section 5.3 & Appendix F
A view analysis is to be undertaken inclusive of photomontages and perspectives of: <ul style="list-style-type: none"> – Key elements and views of the building management units from Kent Street, Pyrmont, Darling Harbour and Millers Point. – Key elements and views of the changes to the buildings affected by the changes to 'Globe Street taken from Pyrmont, Hickson Road, Southern Cove and Globe Street. 	
Streetscape and Public Domain	
Outline the changes to Globe Street and its relationship with the proposed modified building envelopes	Section 3.1, 5.4 & Appendix D
Outline the changes to public street and public pedestrian connections, in particular the east-west connections between Hickson Road and the foreshore, and north-south connections through large street blocks.	
Clearly identify and distinguish the changes between public spaces and streets, and private spaces/commercial spaces.	
Detail the amendments to the foreshore promenade as a result of building envelope changes.	

Director General's requirements		Location in Report
Transport Management and Accessibility Impacts		
Prepare Traffic Impact Assessment (TIA) that evaluates: <ul style="list-style-type: none">– Daily and peak movements likely to be generated by the concrete batching plant and any vehicle movement changes caused by amendments the building envelopes (Le. a reduction in GFA).¹– Cumulative impacts associated with other construction activities at Barangaroo.– Details of service arrangements for workers to/from the site, emergency vehicles and service vehicle movements.	Appendix E Note: A concrete batching plant is no longer proposed as part of this modification.	
Soil and Water		
Under an assessment on surface and groundwater, including: <ul style="list-style-type: none">– The potential impacts due to construction and operations of the concrete batching plant on water quality, marine vegetation and aquatic ecology.– Prepare an erosion and sediment control plan for the works and operations.– Prepare a stormwater management plan for the concrete batching plant, including bunding of dangerous goods and services.– Groundwater management, including measures for preventing groundwater pollution.– Details on wastewater disposal.	Appendix E Note: A concrete batching plant is no longer proposed as part of this modification.	
Air Quality and Odour		
The application must include an Air Quality Impact Assessment, including: <ul style="list-style-type: none">– The identification of the pollutants of concern, including individual toxic air pollutants, dust and odours.– The identification and assessment of all relevant fugitive and point source emissions, including cumulative impacts of the operation of the plant in relation to Other construction activities.– Proposed air quality management and monitoring procedures.	Appendix E Note: A concrete batching plant is no longer proposed as part of this modification.	
Waste Management		
Provide details of the scheduled, liquid and non-liquid wastes, and quantities, storage, treatment and 'disposal or re-use' of waste generated.	A concrete batching plant is no longer proposed as part of this modification. Note: The proposed modifications will not affect the likely future waste generated by the future development under the Concept Plan.	
Noise		
The application must include an assessment of noise and vibration impacts, including construction, operation, traffic and cumulative noise. The assessment must also outline proposed noise mitigation and monitoring.	Appendix E A concrete batching plant is no longer proposed as part of this modification.	
Utilities		
Consider how the concrete batching plant can be satisfactorily serviced for utilities and green infrastructure services such as the supply of potable and non potable water, sewerage, stormwater, gas and electricity	A concrete batching plant is no longer proposed as part of this modification.	
Staging		
Provide an updated staging plan for Barangaroo South.	Section 5.5	
Greenhouse Gas and Energy		
Undertake a quantitative assessment of the potential gas emissions of the plant and a qualitative assessment of the potential impacts of these emissions on the environment.	This requirement related to the greenhouse gas emissions generated by the concrete batching plant and is not applicable now that it is no longer proposed as part of this modification.	
Outline the measures that would be implemented on site to ensure that the plant is energy efficient.		
Consultation		
Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007. In particular, you should consult with City of Sydney and the EPA.	Section 1.4	

5.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Concept Plan (Mod 6) proposal. It addresses the matters for consideration set out in the Director-General's Environmental Assessment Requirements (DGRs).

There is no change to the findings of the environmental assessment undertaken as part of Concept Plan (Mod 4) in relation to the following matters:

- Design Excellence
- Social and Economic Impacts
- Soil and Water
- Navigation Impacts
- Air, Noise and Odour Quality
- Contamination and remediation
- Waste
- Traffic
- Heritage
- Climate Change and Sea Level Rise
- ESD
- Developer Contributions

Where appropriate letters from specialist consultants confirming that the proposed modified development remains within the scope of Concept Plan (Mod 4) and that no further investigation or analysis is required in relation to each of these environmental assessment matters at this stage are included at **Appendix E**.

As noted in Section 4.0, as a temporary concrete batching plant use is no longer proposed as part of Concept Plan (Mod 6), the aspects of the DGRs which require consideration of the impacts of the temporary concrete batching plant have not been addressed.

5.1 Consistency with Relevant EPIs, Policies and Guidelines

The DGRs require the following legislation, strategies and planning instruments to be addressed:

- State Environmental Planning Policy (State & Regional Development) 2011;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy No 55 - Remediation of Land; and
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

The Project Application's consistency with the relevant strategic and statutory plans and policies is provided in **Table 2**.

Table 2 – Summary of consistency with key statutory plans and policies

Instrument/Strategy	Comments						
State & Regional Development SEPP	The Barangaroo site is listed in Schedule 2 of the State and Regional Development SEPP, which identifies sites where development has a capital investment value of more than \$10 million become State Significant Development. Therefore all future applications under the Concept Plan with a capital investment value of more than \$10 million will be State Significant Development.						
Major Development SEPP	<p>The Barangaroo site is listed as a State Significant Site under Part 12 of Schedule 3 of the Major Development SEPP.</p> <table border="1"> <tr> <td>Clause 7 - Land use zones</td><td>The proposed modifications to the boundary of Blocks 3, 4A and 4B occur entirely within the B4 Mixed Use zone and are therefore do not affect the permissibility of the future development in the zone.</td></tr> <tr> <td>Clause 17 - Height of buildings</td><td> <p>The revised urban design controls and the indicative building envelopes provide for future buildings that comply with the maximum heights shown on the Height of Building Map.</p> <p>Any future application that relies on Condition B4(4) to exceed the maximum height will require an exception to the development standard under Clause 20 of Part 12 of Schedule 3.</p> </td></tr> <tr> <td>Clause 18 - Gross Floor Area Restrictions</td><td> <p>The revised block boundaries, urban design controls and the indicative building envelopes provide for future buildings that comply with the maximum gross floor areas shown on the Gross Floor Area Map.</p> <p>As detailed in Section 3.1.5, the modification to Condition B4, will provide for a development that potentially exceeds the maximum GFAs for the development blocks commensurate with the GFA for Community Uses that is provided in those blocks. It does not allow for a development to exceed the maximum total GFA approved for the Barangaroo site or for Barangaroo South as specified at Modification B4(1). An exception to the GFA development standard in accordance with clause 20 of the Major Development SEPP is provided in Section 5.1.1.</p> </td></tr> </table>	Clause 7 - Land use zones	The proposed modifications to the boundary of Blocks 3, 4A and 4B occur entirely within the B4 Mixed Use zone and are therefore do not affect the permissibility of the future development in the zone.	Clause 17 - Height of buildings	<p>The revised urban design controls and the indicative building envelopes provide for future buildings that comply with the maximum heights shown on the Height of Building Map.</p> <p>Any future application that relies on Condition B4(4) to exceed the maximum height will require an exception to the development standard under Clause 20 of Part 12 of Schedule 3.</p>	Clause 18 - Gross Floor Area Restrictions	<p>The revised block boundaries, urban design controls and the indicative building envelopes provide for future buildings that comply with the maximum gross floor areas shown on the Gross Floor Area Map.</p> <p>As detailed in Section 3.1.5, the modification to Condition B4, will provide for a development that potentially exceeds the maximum GFAs for the development blocks commensurate with the GFA for Community Uses that is provided in those blocks. It does not allow for a development to exceed the maximum total GFA approved for the Barangaroo site or for Barangaroo South as specified at Modification B4(1). An exception to the GFA development standard in accordance with clause 20 of the Major Development SEPP is provided in Section 5.1.1.</p>
Clause 7 - Land use zones	The proposed modifications to the boundary of Blocks 3, 4A and 4B occur entirely within the B4 Mixed Use zone and are therefore do not affect the permissibility of the future development in the zone.						
Clause 17 - Height of buildings	<p>The revised urban design controls and the indicative building envelopes provide for future buildings that comply with the maximum heights shown on the Height of Building Map.</p> <p>Any future application that relies on Condition B4(4) to exceed the maximum height will require an exception to the development standard under Clause 20 of Part 12 of Schedule 3.</p>						
Clause 18 - Gross Floor Area Restrictions	<p>The revised block boundaries, urban design controls and the indicative building envelopes provide for future buildings that comply with the maximum gross floor areas shown on the Gross Floor Area Map.</p> <p>As detailed in Section 3.1.5, the modification to Condition B4, will provide for a development that potentially exceeds the maximum GFAs for the development blocks commensurate with the GFA for Community Uses that is provided in those blocks. It does not allow for a development to exceed the maximum total GFA approved for the Barangaroo site or for Barangaroo South as specified at Modification B4(1). An exception to the GFA development standard in accordance with clause 20 of the Major Development SEPP is provided in Section 5.1.1.</p>						
SEPP 55	<p>The Overarching Remedial Action Plan (prepared by ERM – refer to Basement Project Application) and the Remedial Action Plan, Barangaroo – Other Remediation Works (South) Area (prepared by ERM – refer to Basement Project Application) have been prepared in accordance with SEPP 55 and set out the detailed methodology for remediating Barangaroo South to make it suitable for the proposed uses.</p> <p>The provisions of SEPP 55 and the contaminated land planning guidelines will be appropriately satisfied as part of the future Development Applications on the site.</p>						
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	<p>Barangaroo is located within the boundaries of the Sydney Harbour Catchment and as such is subject to the provisions of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Sydney Harbour REP). The Sydney Harbour REP aims to provide a clear and consistent planning framework to protect and enhance the unique attributes of the Harbour.</p> <p>Within the Sydney Harbour REP, Barangaroo is identified as being within the Foreshores & Waterways Area Boundary.</p> <p>Part 3, Division 2 of the Sydney Harbour REP refers to matters which are to be taken into consideration by consent authorities before granting consent for development. The propose modification is generally consistent with the relevant provisions and matters for consideration set out in Clauses 20 to 27 of the Sydney Harbour REP.</p>						

5.1.1 Exception to GFA Development Standard

As detailed in Section 3.1.5, community uses GFA is approved across the entire Barangaroo site (in both the Mixed Use zone and Public Recreation zone). The intention was that this GFA was to be 'additional' to the GFA otherwise permitted within Development Blocks 1-7. This intent was clearly expressed in Mod 4 EAR prepared by JBA and Table 1 and the ensuring text on page 11 of the Director General's Environmental Assessment Report dated December 2010.

However, an internal inconsistency within Condition B4 of the Concept Plan (Mod 4) Approval is such that if any of the approved community uses GFA (referenced in Condition B4(1)) is provided in the Development Blocks (Mixed Use zone), it would erode the GFA available within that area for other uses and inhibit the ability of the development to achieve the maximum GFA provided for under the Concept Plan.

An amendment to the Major Development SEPP was published on 16 December 2010 (SEPP Amendment), the same day the approval to Concept Plan (Mod 4) was granted. Somewhat inconsistently, however, the SEPP Amendment only provides for a maximum of 549,465m² of GFA across the whole of the Barangaroo site, being the aggregate of the block-specific GFAs shown on the SEPP map. Its wording is such that it inadvertently does not provide for the 563,965m² of GFA approved under Condition B4(1) of Concept Plan (Mod 4), which comprises the block-specific GFAs, plus the additional 12,000m² of community uses GFA across the site and the 4,500m² GFA for Active Uses in the Public Recreation Zone.

Therefore, whilst the proposed modification does not increase the maximum GFA of 563,965m² approved on the site, it will allow for the approved Community Uses GFA to be located within either the RE1 Public Recreation zone, or within, or partly within, the Development Blocks in addition to the maximum GFA for other uses. The effect of this modification is that the future development could potentially result in a development that is above the maximum GFA limit of clause 18 of Part 12 of Schedule 3 of the Major Development SEPP.

Under clause 20(2) of Part 12 of Schedule 3 of the Major Development SEPP consent may be granted for development even though it would contravene a development standard imposed by the Major Development SEPP or any other environmental planning instrument. The objective of clause 20 is to allow for an appropriate degree of flexibility in application of the relevant development standards, including the maximum permitted GFA, to achieve better outcomes for and from the development.

A request is therefore made for an exception to the GFA standard of clause 18 of Part 12 of Schedule 3 of the Major Development SEPP in accordance with clause 20(3) of Part 12 of Schedule 3 of the Major Development SEPP.

The Mod 4 EAR makes it clear that it was not the intention for the Community Uses GFA to be restricted to the Public Recreation zone. Specifically:

- Page 41 of the Mod 4 EAR states that the Concept Plan Modification includes: *10,000m² of community uses GFA within Barangaroo South which includes:*
 - *provision of the Cultural Centre...;*
 - *a potential gallery or similar facility within the base of the landmark building;*
 - *flexible outdoor venues for city-scale events and activities ...; and*
 - *public art"*

- Page 99 of the Mod 4 EAR refers to a mix of uses proposed to activate the ground floor and public spaces of Barangaroo South:
*Consistent with the approved Concept Plan, the Concept Plan Modification proposes a mix of uses **dispersed over Barangaroo South** to create an integrated development combining residential, office, tourist and retail accommodation. Up to 46,777m² of retail, community and active uses are proposed to activate ground floor and public spaces **across Barangaroo South**. The proposed range of uses across Blocks 1-4(A-C), and X is permissible within each of the Development Blocks and is consistent with the intended development outcomes under both the SEPP Amendment and approved Concept Plan (as modified).*
- Table 6 on Page 100 of the Mod 4 EAR identifies 'Barangaroo Additional Uses' (including Community Uses) in the Mixed Use and Public Recreation Zones.
- Page 101 of the Mod 4 EAR states:
As the State Government has indicated it proposes to relocate the passenger terminal to White Bay, and the 8,500m² of passenger terminal uses are no longer required on the site, it is proposed to reallocate the approved floor space towards community uses. This means that there is a 3,000m² net increase in active and community uses sought. The nominal increase in active and community uses GFA reinforces the activation, vibrancy and destination aspirations of Barangaroo South. The provision of an additional 1,500m² of active uses and 10,000m² of community uses will support and facilitate the civic focus of the key landmark buildings and places, such as the landmark building, Cultural Centre and landside ferry facilities. Further, the additional community uses GFA will encourage the location of uses that are not necessarily restricted to conventional business hours. This will ensure visitors, residents and employees are drawn to, and remain at, Barangaroo South for longer periods of time (i.e.: later in the evening).

The Concept Plan (Mod 4) Approval also reflects the intent that the community uses GFA would not be limited to the Public Recreation zone. This is demonstrated within Condition B4(1) which notably stipulates that the 'Active Uses' are provided in the Public Recreation zone but, in contrast, does not specify any zone for the Community Uses.

The intention that the Community Uses GFA could potentially be distributed across any part of the RE1 or B4 Mixed Use Zones at Barangaroo South is also reflected in the SEPP Amendment proposal. Section 2.3 'Redistribution of Development Blocks, GFA and Height' of the Explanation of Intended Effect Report accompanying the SEPP Amendment Proposal refers to potential future community uses on Block Y, which is located in the Mixed Use Zone of Barangaroo South:

"The proposed Concept Plan Modification also proposes ... Block Y within which the proposed landmark building (including hotel and community uses) will be located."

To achieve this intent, the wording of clause 18, and associated Condition B4(2) of the Concept Plan (Mod 4) Approval instrument, should have made specific provision for the community uses GFA in addition to the general GFA for other uses within the development blocks. However, in an apparent drafting error, it was silent on the spatial distribution of community floor space at the site.

If future development was required to comply with the GFA development standard it would mean that community uses GFA would be counted in the GFA calculations per-block, rather than in addition to the maximum GFA for Blocks 1-7, thereby eroding the GFA that would otherwise be available within that area for other uses. The consequence of eroding the GFA that would otherwise be

available within that area is that it would discourage locating the community uses GFA across the site, and inhibit the ability of the development to achieve the maximum GFA and distribution of GFA, as provided for under the approved Concept Plan. This outcome was clearly not intended and would be inconsistent with the Mod 4 EAR and the Director-General's Report.

Compliance with the standard is therefore considered to be unreasonable and unnecessary in the circumstances of the case because:

- Concept Plan (Mod 4) sought approval for community uses across the entire Barangaroo South site, including the development blocks;
- community uses are encouraged within the objectives of both the Mixed Use Zone expressly and the Public Recreation Zone;
- the Community Uses GFA was approved as part of Concept Plan (Mod 4);
- the non-compliance is a result of an apparent error in the drafting of the Major Development SEPP, which does not fully reflect the intent of the amendment to allow additional GFA within the Public Recreation Zone for active and community uses, and the Mixed Use zone for community uses up to the total maximum approved GFA of 563,965m²; and
- the proposed modifications, and associated exception to the standard, will not allow for the exceedance of the overall approved maximum GFA, nor a change to the approved building envelopes (and specifically building heights).

The environmental planning grounds justifying the provision of the Community Uses GFA, and the public interest and benefit of the proposed community uses floor space provision at Barangaroo was originally detailed in the East Darling Harbour State Significant Site Proposal and Concept Plan and Environmental Assessment (Volume 1) and Appendices (Volume 2), and subsequently within the Barangaroo South Concept Plan and State Significant Site Listing Environmental Assessment Report dated August 2010 (Mod 4 EAR).

The provision of Community Uses GFA within the development blocks of the Barangaroo South site is justified on strong environmental planning grounds as it will reinforce the activation, vibrancy and destination aspirations of Barangaroo South, and will support and facilitate the civic focus of the key landmark buildings and places. Further, the community uses GFA will encourage the location of uses that are not necessarily restricted to conventional business hours in parts of the site which would otherwise not be activated after hours. This will ensure visitors, residents and employees are drawn to, and remain at, Barangaroo South for longer periods of time (i.e. later in the evening).

As required by clauses 20(3)(a) and (b) of Part 12 to Schedule 3 of the Major Development SEPP the circumstances of the case and environmental planning grounds justify the provision of community uses GFA in addition to the maximum GFA for the Development Blocks specified by Clause 18 of the SEPP. To the satisfaction of clause 20(4)(a)(ii), the provision of the community uses GFA in addition to the maximum GFA for the Development Blocks is in the public interest and will deliver a greater public benefit than would not providing the space as it will contribute to encouraging a diverse and compatible range of activities consistent with the objectives of the Mixed Use zone, and a more active and vibrant development.

5.2 Development Controls and Land Uses

5.2.1 Built Form Controls

The proposed modification to the block boundaries, and associated relocation of the indicative alignment of Globe Street and the buildings that front Globe Street and Hickson road, is proposed to improve the relationship between the built form and the public domain (see further assessment in Section 5.2.2).

The modification does not change the approved GFA distributions or Built Form Principles. However, the changes to block boundaries necessitates some minor modifications to the approved Urban Design Controls. The Block 3, 4B +4C, and X +4A Amended Urban Design Controls are included at **Appendix C** and summarised in Section 3.1.2. The amendments to the controls reflect the indicative design concept (**Appendix B**) and what Lend Lease envisage will provide for the best built form outcome on the site.

The maximum building heights for each block established under the approved Concept Plan (Mod 4) are also not proposed to be modified. However, the realignment of the Blocks, which have different maximum heights, does theoretically provide for taller buildings in certain locations within the site. Notwithstanding this, the Major Development SEPP also sets the maximum building heights for each block. As the location of the SEPP blocks remain in-situ, the height of the buildings in these locations cannot exceed the maximum height in the Major Development SEPP.

It is also noted that the modified Urban Design Controls (**Appendix C**) encourage the built form shown in the Concept Plan (Mod 6) indicative design scheme. Specifically, where Block 3 now occupies part of former Block 4B, an additional objective has been included which states:

The northern part of the block shall contain built form of a comparatively lower scale (when compared to the tower forms) as generally indicated in the indicative design.

5.2.2 Bulk and Scale

Condition B5 of the approved Concept Plan (Mod 4) requires future applications at Barangaroo South to demonstrate consistency with the Built Form Principles and Urban Design Controls within the Supplementary Urban Design Statement. This was imposed by the Minister for Planning and Infrastructure to ensure that the design, bulk and scale of the future built form, although ultimately designed within the maximum height and GFA established by the approved Concept Plan (as modified), is acceptable.

As detailed in Section 3.1.2, Concept Plan (Mod 6) does not propose to modify the Built Form Principles. It includes minor amendments to the Urban Design Controls to reflect the realignment of the block boundaries and indicative built form within those blocks.

Whilst the specific location and built form of development under the Concept Plan (Mod 6) will be subject to future development applications, the relocation of the indicative alignment of Globe Street and the buildings that front Globe Street and Hickson Road will result in an improved relationship between the built form and the public domain.

Enlarging the podium of Commercial Building C3, the tallest building on the site, will reduce the perceived bulk and scale of the tower when viewed from Globe Street. Furthermore, the enlarged podium will replace Commercial Building C7,

reducing the height of the built form in that location by approximately 53m, further reducing the perceived bulk and scale along Globe Street.

A key built form principle of the Concept Plan (Mod 4) is to promote the scale of Hickson Road as a grand boulevard, with buildings providing a constant streetwall to Hickson Road. By removing the secondary east-west link through Block 3, merging Commercial Buildings C1 and C8, and increasing the size of residential building R11 (located in Block 4B), the modified indicative building design increases the length of the streetwall along the Hickson Road frontage, reinforcing the overarching objective to create a grand boulevard.

The current definition of building height allows for communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like to exceed the maximum building height approved under the concept plan. Concept Plan MOD 6 also seeks to modify condition B4 in order to allow for the addition of Building Management Units to this list of items currently allowed to exceed the maximum approved height under the Concept Plan.

Figure 6 illustrates an indicative BMU in both the open position (worst case) on top of top of Commercial Building C4, and **Figure 7** provides a photomontage of a BMU and roof mast above the height plane.

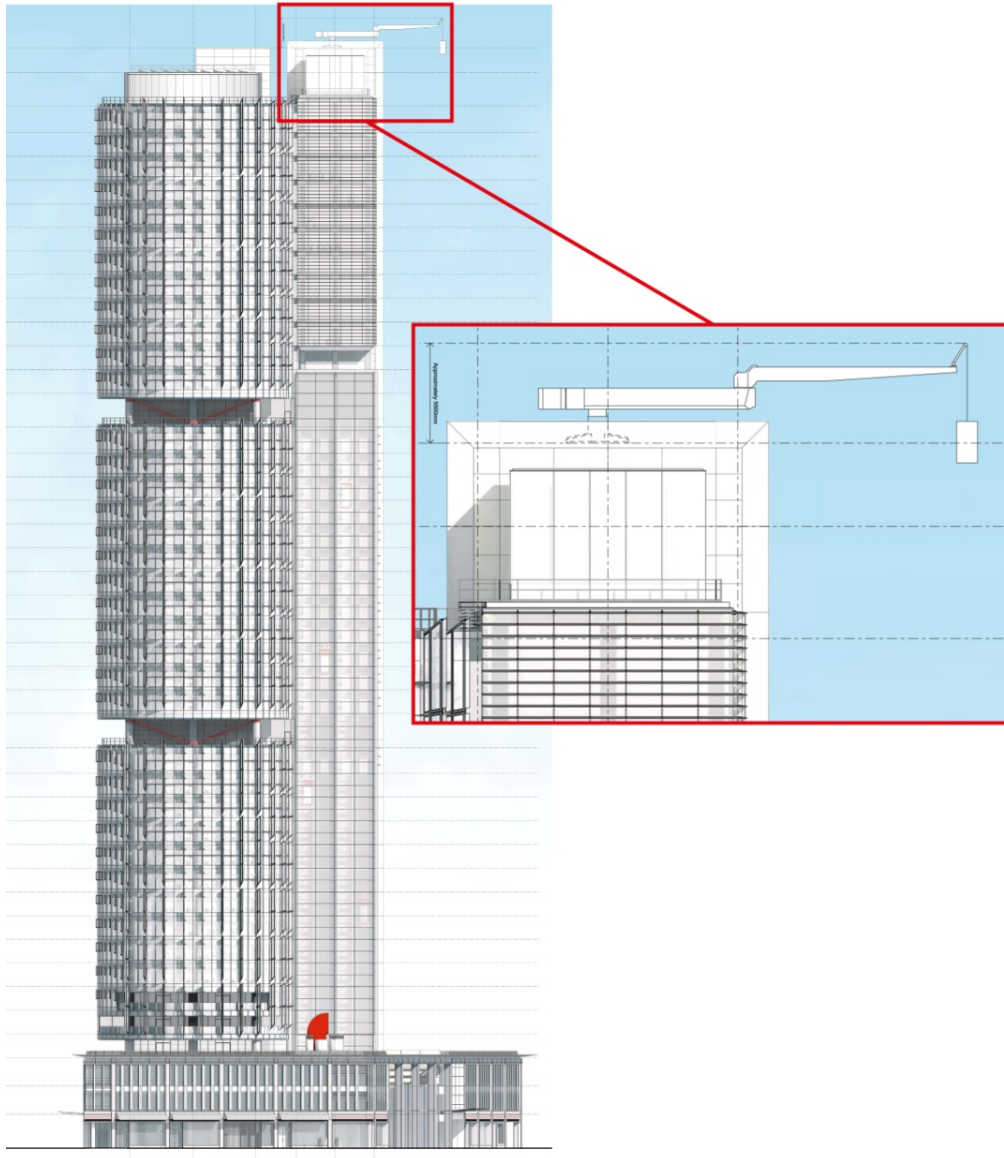


Figure 6 – Elevation of Commercial Building C4 with a BMU (in the open position)

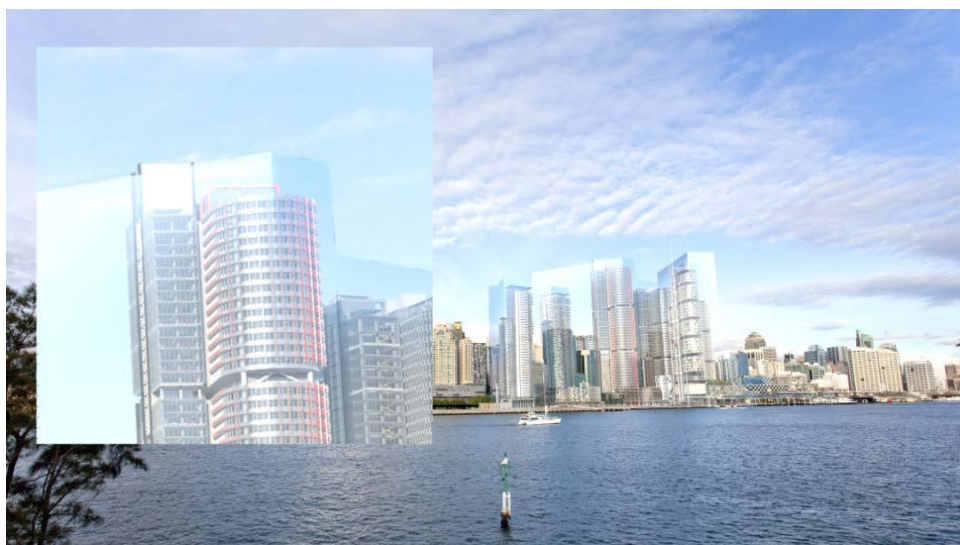


Figure 7 – Photomontage showing the roof masts and BMUs above the approved height limit will not be discernible from the public domain

The above figures demonstrate that the scale of the BMUs/and or roof masts are very minor in relation to the buildings they are sitting on and will not result in any adverse bulk or scale impacts.

An information document on BMUs is included at **Appendix I**. The document provides plans illustrating the typical height, dimensions and form of BMUs. As a BMU is effectively a crane that needs to have full clearance of other structures, it is difficult to fully integrate it into the design of a building. However, BMUs are located at the top of most buildings in Sydney only they are not ordinarily seen from the public domain because of their retractable nature and size, in the context of its location at the top of a building. An example of the BMU at the top of Westpac Place is shown in **Figure 8**.



Figure 8 – Example of a BMU at Westpac Place which is not discernible from the public domain

It is noted that any application for a BMU to exceed the approved height limit would also need to be assessed against the criteria for variations set out in clause 20 'Exception to development standards' of Part 12 of Schedule 3 of the Major Development SEPP and the relevant rooftop controls that form part of the Concept Plan Urban Design Controls.

Accordingly, Concept Plan (Mod 6) will still achieve an acceptable bulk and scale outcome for Barangaroo South.

5.2.3 Solar Access & Shadowing

As the proposed Concept Plan (Mod 6) does not propose to alter the maximum building heights in the Major Development SEPP, there is no change to the maximum potential shadow cast by the development on the Barangaroo site. However, consistent with approach taken for Concept Plan (Mod 4) the shadows cast by Lend Lease's approved and proposed indicative design schemes have been modelled and are included at **Appendix G**.

The shadowing analysis has been prepared for 9am, 12pm and 3pm at the solstice (June 21) and the equinoxes (March 21 and September 21) and compares the existing CBD, Major Development SEPP Block, approved Concept Plan (Mod 4) indicative design and proposed Concept Plan (Mod 6) indicative design shadows.

Concept Plan (Mod 6) affects only the smaller buildings within Blocks 3, 4A and 4B. As a result, Concept Plan (Mod 6) has very little impact on the indicative

shadows cast by the indicative design scheme. In light of the above, it is considered that the shadowing impacts cast by the indicative design scheme are acceptable.

5.3 View Impacts

5.3.1 Residential View Impacts

The revised View Analysis at **Appendix F** illustrates the impacts of the proposed modification on views from residential apartments on Kent Street.

The View Analysis has been prepared using orthogonal and oblique views, consistent with the methodology used for Concept Plan (Mod 4), from the four residential apartment buildings on Kent Street (Highgate, Stamford Marque, Georgia and Stamford on Kent). The views have been prepared for the low, mid and upper levels for each of the buildings. The indicative buildings for Commercial Buildings C3, C4 and C5 also include BMUs to illustrate what view impact the BMU might have if an application to include them on these buildings was submitted in accordance with the proposed modification to Condition B4(4).

The images demonstrate the proposed modification, including any potential future BMUs or roof features above the maximum height limit, will not result in any additional discernible view loss and will in some cases reduce the amount of view loss. In summary, the impact on each building is as follows:

- Highgate: No discernible change to views.
- Georgia: Increased views of the future Southern Cove from Mid and High-rise levels.
- Stamford Marque: Increased views of the future Southern Cove from Low, Mid and High-rise levels.
- Stamford on Kent: Increased views to Darling Harbour from the Mid-rise Levels.

5.3.2 Visual Impact

A copy of the Visual Analysis is included at **Appendix F**. The methodology for preparation of the visual impact images, including the rationale for lens selection is documented in the material included at **Appendix F**.

The view impact of the Concept Plan (Mod 4) assessment was based on the maximum extent of the permissible block envelopes within Barangaroo South. As no changes are proposed to these envelopes, the proposed modification will not have any adverse view impacts beyond those already considered under the approved Concept Plan (Mod 4).

In terms of the indicative buildings which will fill these envelopes, the Visual Analysis at **Appendix F** demonstrates that the impacts on views associated with indicative buildings in Concept Plan (Mod 6) are generally consistent with those assessed under the approved Concept Plan (Mod 4) and from most views will not result in any discernible difference.

The indicative building envelopes for Commercial Buildings C3, C4 and C5 also include BMUs and architectural features to illustrate what the view impact of these elements on top of the building might be if an application was submitted to include them in accordance with the proposed modification to Condition B4(4), which would allow for such elements to protrude above the maximum approved heights in the Concept Plan. The analysis demonstrates that these roof elements are generally not discernible from the study locations and will not result in any additional visual impact.

5.4 Streetscape and Public Domain

Globe Street

As discussed in Section 5.2.2, the modification to the indicative alignment of Globe Street and associated indicative building layout will improve the relationship between the future buildings and Globe Street. In addition to this, at street level, the modified indicative design will:

- provide for a more active retail edge;
- allow more solar access into the Commercial Building C3 lobby; and
- supply building envelopes which provide a key street address on Hickson Road.

Indicative views, using the modified Indicative Maximum Building Height, Location and Dimensions Map (see at **Appendix B**) have been prepared from the Southern Cove / Foreshore Promenade looking south east (see **Figure 9**) and from Hickson Road looking west down Globe Street (see **Figure 10**).

The views illustrate that the modified indicative building layout will:

- still provide strong east-west visual connections through the site;
- create a strongly defined streetwall along Hickson Road;
- provide an appropriate transition between the tower and podium elements on the site;
- frame Globe Street and the public spaces beyond; and
- provide for a visually interesting urban environment.

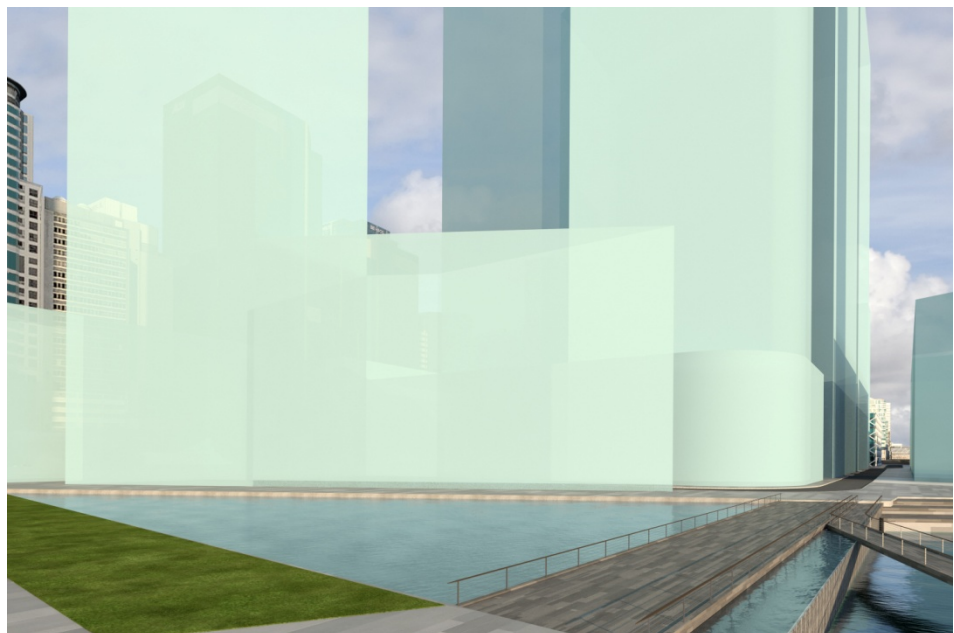


Figure 9 – Indicative view south east taken from the Southern Cove / Foreshore Promenade

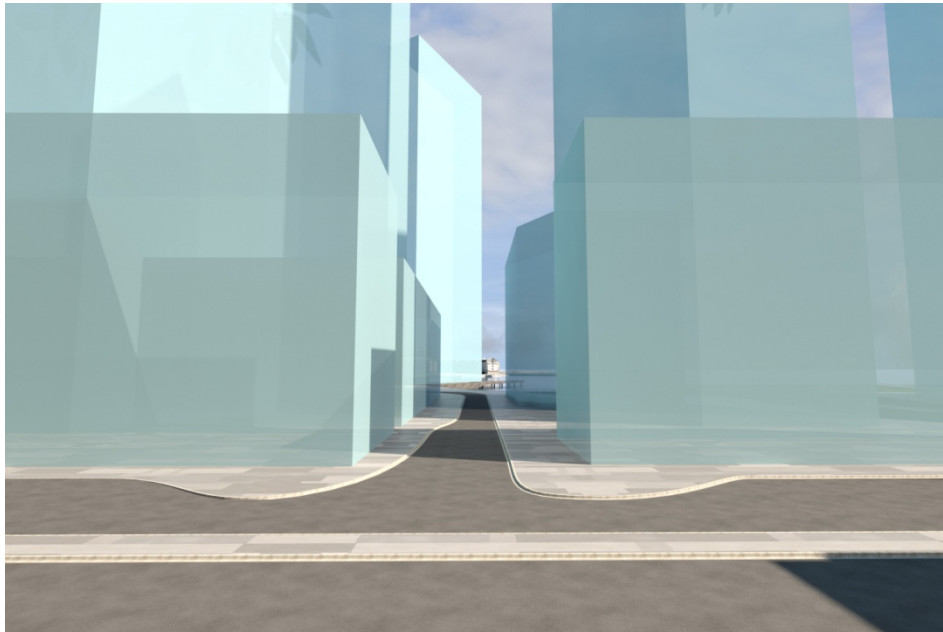


Figure 10 – Indicative view west down Globe Street taken from Hickson Road

Pedestrian Connectivity

As Globe Street is now located further south, the indicative secondary east-west connection that previously ran through Block 3 has been removed (noting that the location of the approved basement car park ramp prevents the provision of this indicative link anyway).

The indicative secondary east-west connection ran from Hickson Road along the southern boundary of C1 and C7 before intersecting half way up Globe Street north. As the connection was located in very close proximity to the other east-west connections, it did not provide any substantial additional permeability. With the realignment of Globe Street further to the south, the secondary connection is now no longer needed. The removal of the secondary route will also consolidate pedestrian movements along the primary routes, increasing safety and activation in the public domain.

Further the realignment of Globe Street to run directly east-west rather than diagonally, will improve pedestrian connectivity by providing a more direct connection to the foreshore as well as an improved visual connection to the water, enhancing way-finding and legibility through the site.

The amended Urban Design Controls do not modify the number of north-south connections through the street blocks.

Public and Private Domain

The realignment of Globe Street results in some minor changes to the indicative location of the public spaces and streets, and private spaces/commercial spaces. As noted above, now that Globe Street is located further south, the east-west connection that previously ran through Block 3 is no longer necessary and accordingly has been removed.

The public space that made up the link has been redistributed to the north of Globe Street in the form of a new public square (Shelley Square). Shelley Square, which is framed by the taller buildings that surround it, will create a recognisable meeting point at the entrance of the site. The new square will enhance vistas through the site, in particular from Shelley Lane which now terminates with a public space that connects to the foreshore promenade.

Foreshore Promenade

The Foreshore Promenade remains unaffected as a result of the proposed modifications and will continue to provide high quality public access to the harbour foreshore.

Wind Impacts

Cermak Peterka Petersen (CPP) prepared a Wind Impact Assessment to accompany Concept Plan (Mod 4). CPP has prepared a letter which reviews and assesses the wind impacts of the Concept Plan (Mod 6) indicative design scheme (see **Appendix H**).

In summary, it is expected that the proposed modifications are expected to have a beneficial impact on the local wind conditions. All ground level locations are expected to meet the 'pedestrian walking' comfort criterion. The increase in the size of the podium of Commercial Building C3 is expected to improve the wind conditions at ground level from a distress perspective. The wind conditions around the residential towers to the north of the site are not expected to change significantly.

5.5 Staging

To date, Lend Lease has commenced construction on:

- Stage 1A Bulk Excavation and Basement Car Parking - expected completion March 2015
- Commercial Building C3 - expected completion 2016 - subject to tenant being committed
- Commercial Building C4 - expected completion 2015
- Commercial Building C5 - expected completion 2015

In addition, Lend Lease has submitted a Project Application for the first residential stage, Residential Buildings R8 and R9. Subject to obtaining approval, construction is expected to commence on R8 and R9 in the third quarter of 2013 and completed in 2015.

The Lend Lease plan for the remainder of the site will be driven by market demand, and the rate of residential take up. It is anticipated that the indicative project staging for buildings and associated basements will be as follows:

- between 30,000m² – 50,000m² by 2016;
- between 50,000m² – 100,000m² by 2019; and
- between 50,000m² – 100,000m² by 2022.

6.0 Conclusion

Concept Plan (Mod 6) is the result of a commitment by Lend Lease to deliver a high quality development. Concept Plan (Mod 6) is generally consistent with the approved Concept Plan (as most recently modified pursuant to Mod 4) and will ensure that a superior and more sustainable outcome will be achieved, and is therefore in the public interest.

This Environmental Assessment and the technical supporting investigations demonstrate that the proposed modifications are satisfactory, specifically with respect to those key environmental assessment issues set out in the DGRs.

Key benefits of the Concept Plan (Mod 6) include:

- clarifying the wording of conditions to ensure that the intent of the approved Concept Plan, to deliver a range of community uses throughout the whole of the Barangaroo site, can be achieved;
- improving the relationship between the built form and the public domain; and
- enhancing the quality of the future built form delivered on the site.

In light of these planning merits, it is recommended that the project be approved in accordance with the submitted documentation.