

Part 3A Preliminary Assessment

Buildings R8 & R9 Barangaroo South

Submitted to
Department of Planning
On Behalf of Lend Lease (Millers Point) Pty Limited

December 2010 ■ 10751

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This report has been prepared by:

Lesley Bull

21 December 2010

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1.0 Introduction

This preliminary assessment is submitted on behalf of Lend Lease (Millers Point) Pty Limited (Lend Lease) to the Department of Planning (hereafter referred to as the Department) to assist the Director General in determining the level and scope of the environmental assessment required to accompany a Project Application for Buildings R8 and R9 at Barangaroo South.

This preliminary assessment includes the following information relevant to the proposal:

- a background to the proposal;
- a description of the project; and
- identification of the key issues associated with the project.

Buildings R8 and R9 are located within Block X of the approved Concept Plan (as modified by Modification Application MP06_0162 MOD 4). The approved Concept Plan (as modified) provides for predominantly residential use within Block X, with up to 18,908 m² of GFA and a maximum RL of 41.5m AHD.

1.1 Background

1.1.1 Approved Concept Plan

The Barangaroo 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 Statements of Commitments have been revised accordingly. MP 06-0162 MOD 4 was most recently approved in December 2010.

The Concept Plan approval (as modified) 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 maximum 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 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.

In addition to the terms of approval, the Statements of Commitment approved under the existing Concept Plan (as modified) require a series of Implementation Plans and Strategies to be prepared prior to the lodgement of relevant future project applications to address:

- Design Excellence;
- Public Domain;
- Transport Management and Access;
- Community and Social Impacts;
- Utility Services and Infrastructure;
- Housing;
- Marketing and Promotion;
- Retail Management; and
- Geotechnical and Environmental Site Remediation.

The Statements of Commitment require the establishment of Technical Working Groups to prepare each Implementation Plan and Strategy. The Technical Working Groups have been convened and meet regularly to consider relevant documentation (refer to Section 4 for further details).

1.1.2 Stage 1 Tender and Bid Process

The 22 hectare Barangaroo site has been divided into three distinct redevelopment areas (from north to south) – the Headland Park, Barangaroo Stage 2 (referred to herein as Barangaroo Central) and Barangaroo Stage 1 (herein referred to as Barangaroo South).

Lend Lease was successfully appointed as the preferred proponent to develop Barangaroo South on 20 December 2009. Lend Lease's appointment follows approximately 18 months of open and subsequently selective tendering by multiple consortia. At each stage of the process, the consortia were required to develop and submit increasingly detailed designs for Barangaroo South, which were evaluated by the Barangaroo Delivery Authority and its evaluation panel.

The Stage 1 bid chronology can be broadly summarised as follows:

- April 2008 Stage 1 Expression of Interest released;
- June 2008 Stage 1 Expression of Interest closes;
- September 2008 Shortlist of 3 proponents (including Lend Lease) announced and invited to participate in the Stage 1 Request for Detailed Proposals (RFDP);
- August 2009 Lend Lease and Brookfield Multiplex chosen as final 2 proponents to participate in the Final Phase RFDP process;
- November 2009 Final Phase bids close; and
- December 2009 Lend Lease announced as winning preferred proponent.

The scheme submitted by Lend Lease and selected by the State Government was chosen as the winning bid on the basis that it exhibits the urban structure, place making, sustainability, and financial drivers required to ensure the viability of Barangaroo's Southern Precinct.

1.2 Project Applications

The following Project Applications have been approved/submitted for approval under the approved Concept Plan (as modified):

Bulk Excavation and Basement Car Parking (MP10_0023);

- Building C4 (MP10_0025);
- Headland Park and Northern Cove Early Works (MP10_0047);
- Headland Park and Northern Cove Main Works (MP10_0048); and
- Block 5 and Hickson Road Pilot Trial Remediation (MP10_0087).

Of particular relevance to the Project Application for Buildings R8 & R9 are the Bulk Excavation and Basement Car Parking Project Application and the Building C4 Project Application. Further detail on each of these applications is provided below.

1.2.1 Bulk Excavation and Basement Car Parking

A Project Application for Bulk Excavation and Basement Car Parking within Blocks 1-3 was publicly exhibited in July and August 2010 and was approved by the Minister for Planning on 2 November 2010.

The Project Application works include:

- demolition of existing structures and footings and vegetation removal;
- site establishment works;
- bulk earthworks for the purposes of excavating for the basement within Blocks 1,2 and 3 and the adjacent public domain area;
- on-site treatment and remediation of contaminated soils;
- structural works, including the construction of foundations, basement levels and basement walls;
- up to 880 car parking spaces;
- road works, including the extension of Margaret Street (known as Margaret Street West in the approved Concept Plan) and Lime Street;
- construction of temporary vehicular access from Hickson Road and permanent vehicular access from Margaret Street West;
- associated utilities and infrastructure works including decommissioning and/or relocation of services; and
- temporary use of the basement for construction related storage and activity.

Lend Lease has submitted a Section 75W Modification Application seeking to modify MP 10_0023 to extend the area of the approved basement to the south within Blocks 1 and 2. The proposed modified works will include additional excavation and bulk earthworks and on-site treatment and remediation of additional contaminated soils and an extension to the basement structure to accommodate. The Section 75W modification application is currently being assessed by the Department of Planning.

1.2.2 Building C4

A Project Application for the construction of the first building on Barangaroo South has been lodged with the Department of Planning and has been publicly exhibited.

The Building C4 Project Application seeks approval for:

- construction of a new office Building C4 with a maximum 109,952m² GFA that includes retail uses and a child care centre;
- 188 car parking space in the basement car park;
- location and dimensions of streets and laneways including temporary works to surrounding streets and laneways including Globe Street, the future City Walk, Shelley Lane and the southern laneway;
- pedestrian and cycle access and circulation arrangements;
- 708 bicycle spaces; and
- services and utilities provision required to service the building.

Proposed Building C4 is located to the immediate east of proposed Building R8.

2.0 The Project

The Project Application for Buildings R8 & R9 will seek approval for the construction of two predominantly residential buildings within Block X of the approved Concept Plan (as modified), and associated public domain works within the Project Application site. The proposed location of Buildings R8 & R9 within Barangaroo South is illustrated indicatively at **Appendix A**.

Buildings R8 & R9 sit entirely within the Lot 5 and Lot 6 of DP 876514, which are owned by the Barangaroo Delivery Authority. The Building R8 & R9 Project Application site has an area of approximately 11,997 m².

The Project Application will seek approval for:

Building R8

- total Gross Floor Area (GFA) of approximately 8,948 m² including predominantly ground floor retail uses (approximately 1,048 m² GFA) and approximately 80 residential apartments;
- maximum height of approximately RL 41.5;

Building R9

- total Gross Floor Area (GFA) of approximately 8,400 m² including predominantly ground floor retail uses (approximately 1,050 m² GFA) and approximately 70 residential apartments;
- maximum height of approximately RL 36.7.

Basement car parking spaces for each building's future tenants and servicing and loading dock spaces and bicycle spaces (within the basement car park structure approved under Project Application MP10_0023) will be allocated as part of the proposal.

Landscaping and public domain works within the Buildings R8 & R9 Project Application site area will also be undertaken, including landscaping of the waterfront promenade to the west.

Indicative drawings of the proposed built form of Buildings R8 & R9 are included at ${\bf Appendix}~{\bf A}.$

3.0 Statutory Framework

The planning controls for the Barangaroo site are contained in Schedule 3 Part 12 of the Major Development SEPP. The planning controls establish the category of development that is subject to assessment under Part 3A of the EP&A Act and the provisions applying to development within the Barangaroo site.

The planning controls for the Barangaroo site included in the Major Development SEPP were amended on 16 December 2010 to accommodate the Concept Plan (Mod 4).

The planning provisions applying to development within the site include:

- Land use zones, objectives and permitted uses;
- Exempt and complying development;
- Consent requirements for subdivision of land;
- Building height controls;
- Gross Floor Area (GFA) restrictions;
- Design excellence requirements;
- Heritage conservation controls; and
- Exceptions to development standards.

Part 12 Schedule 3 of the Major Development SEPP – "Barangaroo site", zones the land part B4 Mixed Use and part RE1 Public Recreation. Buildings R8 and R9 are within the land zoned B4 Mixed Use.

Maximum building heights and gross floor area (GFA) restrictions are established for nominated development blocks within the B4 Mixed Use zone, as illustrated on **Figure 1**.

Clause 19 of the Major Development SEPP (Part 12, Schedule 3) sets the parameters for design excellence on the site. Consideration must be given to:

- Architectural design and materials;
- Form and external appearance of future buildings; and
- Whether buildings will meet sustainable design principles.

Other environmental planning instruments relevant to the proposal are:

- State Environmental Planning Policy (Infrastructure); and
- Sydney Regional Environmental Plan (Sydney Harbour Catchment).



Figure 1 –Existing Barangaroo Land Zoning Map

4.0 Key Issues

The Buildings R8 & R9 Project Application works sit above the basement car parking structure approved under the Bulk Excavation and Basement Car Parking Project Application. The Buildings R8 & R9 project works will be fully integrated in terms of design with both the approved (and proposed modified) basement car park.

The EAR accompanying the approved Bulk Excavation and Basement Car Parking Project Application and the proposed Section 75W modification application provide detailed information and an environmental assessment of a number of planning and environmental issues that are beyond the scope of works proposed for the Building R8 & R9 Project Application. These include:

- demolition and tree removal;
- remediation of contaminated material;
- transportation, re-use and disposal of excavated material;
- non indigenous archaeology;
- indigenous archaeology;
- geotechnical impacts;
- acid sulphate soils;
- de-watering, groundwater treatment and water quality; and
- environmental protection structures.

The Project Application for Buildings R8 & R9 will be informed by the detailed assessments included in the Bulk Excavation and Basement Car Parking Project Application and in the Section 75W Modification Application relating to the Bulk Excavation and Basement Car Parking Project Application.

In addition, the Concept Plan Statement of Commitments requires the following Plans and Strategies to be submitted to the Planning Reference Group prior to lodgement of any relevant Projection Application (other than for demolition or early /site preparation work).

- Design Excellence Strategy;
- Public Domain Plan including Public Art Strategy;
- Transport Management and Accessibility Plan;
- Utility Services Infrastructure Plan;
- Integrated Water Management Plan and Guidelines covered by the Stormwater Plan and the ESD Report;
- Marketing and Promotion Strategy and Retail Management Plan; and
- Community and Social Plan.

In conformance with the Statement of Commitments the above plans and strategies have been submitted to the Planning Reference Group. Where relevant these will be updated and submitted with the EAR for Buildings R8 and R9.

Therefore the key environmental considerations associated with the proposed project are identified to be as follows:

- Consistency with relevant environmental planning instruments, policies and strategies;
- Consistency with the existing Concept Plan Approval (as modified);
- Design Excellence and Urban Design;
- Built Form including visual analysis;
- Public Domain including temporary landscaping works;
- Traffic and Transport (pedestrian, cycleways, public transport, car parking);
- Water Quality;
- Utilities, Services and Infrastructure;
- Climate Change and Sea Level Rise;
- Sustainability;
- Structural Engineering;
- Amenity including wind, noise, overshadowing and reflectivity; and
- Construction Management including noise and vibration, air quality impacts and waste management.

4.1.1 Consistency with relevant environmental planning instruments

The EAR will include an assessment of the proposed buildings / works against the planning controls in the relevant environmental planning instruments and against the other relevant planning policies.

The following legislation, strategies and planning instruments are considered to be relevant to the application:

- State Environmental Planning Policy (Major Developments) 2005;
- State Environmental Planning Policy No 55 Remediation of Land;
- State Environmental Planning Policy No.65 Design Quality of Residential Flat Development;
- State Environmental Planning Policy (Infrastructure) 2007;
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005;
- Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005;
- NSW State Plan;
- Sydney Metropolitan Strategy; and
- Draft Sydney City Subregional Strategy.

The proposed project will require referral to Transport NSW (Sydney Metro) under the provisions of State Environmental Planning Policy (Infrastructure) 2007 in relation to construction works within proximity to a rail corridor.

4.1.2 Consistency with the approved Concept Plan and Schedule 3 Listing

The EAR will include an assessment of the proposed development against the approved Concept Plan (as modified) and the planning controls listed in Schedule 3 of the Major Development SEPP (as amended on 16 December 2010).

The Concept Plan approval sets out the built form controls for Block X which are:

- Maximum GFA –18, 908 m²
- Maximum height RL 41.5 m
- Built form controls including a minimum height of RL 25, 20 metre building depth and minimum 1 metre setback to the east.

As detailed in Section 2, Building R8 is proposed to comprise approximately $8,948 \, \text{m}^2$ of GFA and will be up to RL 41.5 m in height and Building R9 is proposed to comprise approximately $8,400 \, \text{m}^2$ of GFA and will be up to RL 36.7 m in height. The proposed built form will be compliant with the existing Concept Plan Approval (as modified) and Major Development SEPP provisions.

The EAR will benchmark Buildings R8 and R9 against the Concept Plan Urban Design Controls and built form principles and address building height and modulation, gross floor area, setbacks, building separation, landscape design, solar access and orientation.

4.1.3 Design Excellence

Pursuant to Clause 19, Part 12 of Schedule 3 of the Major Development SEPP, in determining an application for a new building at Barangaroo, the consent authority must consider whether the proposed development exhibits design excellence.

In considering whether the proposed building exhibits design excellence, the consent authority must have regard to the following matters:

- a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved;
- whether the form and external appearance of the building will improve the quality and amenity of the public domain;
- whether the building will meet sustainable design principles in terms
 of sunlight, natural ventilation, wind, reflectivity, visual and
 acoustic privacy, safety and security and resource, energy and water
 efficiency; and
- d) if a design competition is required to be held in relation to the building, as referred to in subclause (3), the results of the competition.

Clause 19(3) requires a design competition to be held for development that will be greater than Reduced Level (RL) 57, or where the erection of a new building is proposed on a site of greater than 1,500 square metres, unless the Director-General certifies in writing that the development exhibits design excellence.

In addition, Condition C2 – Design Excellence of the approved Concept Plan requires a design excellence competition to be held by the Director General and convention of a design review panel for development that exceeds 55 metres in height, or is on land exceeding 1,500m² in area. Under Condition C2, the key matters for consideration are:

- whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved;
- whether the form and external appearance of the building will improve the quality and amenity of the public domain;

- whether the building meets sustainable design principles in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resource, energy and water efficiency;
- a comparison of the proposed development against the indicative building controls identified in Section 13.0 – Built Form of the approved EAR; and
- whether the new development detrimentally impacts on view corridors, particularly from public spaces and streets.

Prior to lodgement the design of Buildings R8 & R9 will be subject review by the BDA, its advisors and the Design Excellence Review Panel and other key stakeholders. The EAR for the Buildings R8 & R9 will detail the design rationale for the building and demonstrate the proposals' consistency with the Concept Plan (as modified) and the relevant SEPP controls.

In accordance with the submitted Design Excellence Strategy the design of Buildings R8 & R9 will be undertaken by one of the nominated architects.

4.1.4 Public Domain

As outlined in Section 2, Lend Lease proposes to undertake public domain works within the R8 & R9 Building Project Application site area, including landscaping of the foreshore promenade to the west.

The Project Application will demonstrate the proposal's response(s) to:

- the relationship of the proposed buildings to urban public spaces, streets and the adjoining built form;
- the relationship between the public domain and the ground floor uses of the proposed building including temporary public domain elements; and
- any potential links, connections and access conditions between the building and its surrounds.

The approved Concept Plan Statements of Commitment require the preparation of a Public Domain Plan prior to lodgement of project applications for building works. A Public Domain Plan for Barangaroo South has been prepared in consultation with the Technical Working Group and submitted to the Planning Reference Group.

An updated public domain plan will be submitted for the Buildings R8 & R9 Project Application site.

4.1.5 Transport and Traffic

A supplementary Transport Management and Access Plan will be prepared for the Project Application by a suitably qualified consultant consistent with the requirements of the Concept Plan Statement of Commitments.

The supplementary TMAP will inform the preparation of the Project Application and will address the impacts of the project including:

- site access arrangements for vehicular access to and from the site;
- likely traffic impacts on local street network and surrounding intersections;
- access to public transport services;
- allocation of car parking spaces within the basement car park;
- loading dock arrangements; and
- provision of temporary and permanent bicycle parking; and
- pedestrian access and safety adjacent to and around the site.

Construction traffic management will be addressed in a Construction Management Plan which will be submitted with the EAR.

4.1.6 Water Quality

The proposed Project Application has the potential to affect water quality by way of stormwater run-off and increased sedimentation, particularly into Sydney Harbour. An Integrated Water Management Plan addressing water demand, wastewater management and stormwater management is required to be prepared under the approved Concept Plan and has been submitted with the Project Application for Building C4.

Lend Lease will prepare an updated Plan in support of the Buildings R8 & R9 Project Application to:

- Identify existing stormwater drainage locations;
- Determine the potential for water pollutants to be generated;
- Nominate measures that will be taken to collect, store and treat stormwater and run off;
- investigate the feasibility of on-site treatment of stormwater;
- consider the potential to harvest stormwater to meet non-potable demands;
- identify treatment measures for stormwater leaving the site to national best practice standards, with the particular aim to reduce average annual loads of total suspended solids by 80% and nutrients by 45%;
- investigate schemes to reduce potable water demand;
- identify water efficient appliances and fixtures for potable water demand management throughout the commercial buildings;
- investigate schemes to manage wastewater from the commercial buildings as a resource for re-use elsewhere on the site;
- identify processes and measures to treat and recycle wastewater as an alternate source of non potable water, especially for the purposes of public open space irrigation;
- identify management methods to ensure that sediment is not transported from the site; and
- address erosion and sediment control mitigation measures.

4.1.7 Utilities, Services and Infrastructure

A suitably qualified expert will be commissioned to:

- determine utilities, services and infrastructure works required to service the new buildings; and
- identify existing infrastructure which also provides services to surrounding development.

The EAR will also detail consultations held with utility providers regarding the existing and future infrastructure to be provided on the site.

4.1.8 Climate Change and Sea Level Rise

A Climate Change and Sea Rise Report will be prepared to assess the potential risks to Buildings R8 & R9 that may arise due to climate change and sea level rises including:

- inundation of basements and ground level during storm surge events;
- accelerated degradation of infrastructure, building materials and structures due to inundation events; and
- impacts to infrastructure and services from storm surge and extreme rainfall events.

4.1.9 Sustainability

The approved Concept Plan requires future applications to be accompanied by sustainability strategies that address water, energy, micro-climate, environmental quality, landscaping, transport, waste and materials.

Lend Lease is committed to achieving sustainability standards that are beyond what has been achieved on other Australian development sites. The Project Application will outline the sustainability measures proposed for the building. ESD strategies relating to water, energy, micro-climate, landscape, transport, waste and wind, required by the approved Concept Plan ESD Commitments will include:

- Minimum 5 star Green Star Rating for the residential building;
- 35% reduction in potable water consumption and 40% reduction in flow to sewer;
- Reduction in greenhouse gas emissions, or alternatively purchase of carbon off sets;
- Planting of non-invasive species;
- Implementation of initiatives that encourage public transport use; and
- Centralised recycling areas within building and throughout the associated public domain.

4.1.10 Amenity

Wind Impacts

The Project Application will be accompanied by a wind impact assessment which will demonstrate how wind impacts will be mitigated and managed through detailed design and articulation of the building. The wind impact assessments will be benchmarked against the Australian Wind Engineering Society Quality Assurance Manual as required by the approved Concept Plan Wind Commitment.

Reflectivity

The Project Application will be accompanied by a reflectivity assessment which will demonstrate that the proposed materials will not generate any harmful glare for pedestrians, vehicular traffic, ships or nearby residents.

Acoustics (Operational)

An Acoustic Impact Assessment will be prepared by a suitably qualified consultant and will detail appropriate mitigation measures to minimise potential operation noise impacts. Similarly, assessments on potential vibration impacts will also be prepared.

Overshadowing

The Project Application will be accompanied by shadow diagrams and analysis which will demonstrate the overshadowing impacts of the proposal during the winter solstice (June 21) and the equinoxes (March 21 and September 21) and summer solstice (December 21).

Visual Analysis

A visual analysis will be undertaken, including photomontages and artists impression of key elements and views of the development from key locations including from Shelley Street, Lime Street, Pyrmont, East Balmain, Darling Harbour and Blues Point.

4.1.11 Construction Management

An Environmental, Construction and Site Management Plan (ECSMP) will be prepared to address environmental issues associated with the construction of Buildings R8 & R9. The ECSMP will address the following issues:

- Community consultation, notification and complaints handling;
- Impacts of construction on adjoining development and proposed measures to mitigate construction impacts;
- Noise and vibration impacts on and off site;
- Air quality and odour impacts on the surrounding neighbourhood;
- Water quality management for the site; and
- Waste management.

Construction Noise and Vibration

A construction noise and vibration assessment will be prepared which will identify potential noise and vibration generated from the building works including construction plant and activities.

The noise and vibration assessment will assess background noise levels, identify noise sensitive receivers, estimate noise levels likely to be associated with the proposed works, assess impacts, and identify mitigation measures where required.

Construction Air Quality

The construction works for Buildings R8 & R9 have the potential to affect air quality. An Air Quality Impact Assessment will be undertaken to assesses the potential air and odour emissions. The following potential emissions will be addressed:

- Construction works;
- Diesel emissions from vehicles, plant and equipment used in construction activities;
- Odour emissions associated with the operations of the building.

The air quality assessment will include mitigation measures where required.

Construction Waste Management

During construction it is anticipated that a significant volume and variety of waste will be generated. A Construction Waste Management Plan will be prepared for the Project Application and include the following waste management measures:

- Waste avoidance and reduction;
- Resource recovery;
- Waste education / training;
- Waste utilisation on alternate sites;
- Good house keeping;
- Monitoring and reporting;
- Materials and procurement; and.
- Transportation of Waste.

Lend Lease is committed to minimising waste to landfill and greenhouse gas emissions associated with waste generation and the movement of waste from the site. The project will adopt a waste management target to reduce the amount of waste to landfill and seek to achieve 80% reuse or recycling of construction materials by weight.

5.0 Conclusion

The information contained in this preliminary assessment is to assist the Director General in determining the level and scope of any requirements for environmental assessments to accompany a Project Application for Buildings R8 & R9 and adjoining public domain areas, located within Block X at Barangaroo South.

In accordance with provisions of Part 3A of *the Environmental Planning and Assessment Act, 1979*, it is requested that the Director General issue the requirements for the preparation of the EAR to accompany the Project Applications for Buildings R8 & R9.















