



CONSTRUCTION FRAMEWORK ENVIRONMENTAL MANAGEMENT PLAN

BARANGAROO SOUTH

Document No: H010106LLC001

SSD 5897-2013	Remediation and Land Forming Works	-	Yes
MP11_0002	Residential Buildings R8 R9	-	Yes
MP10_0227	Commercial Building C5	MOD 1	Yes
MP11_0044	Commercial Building C3	MOD 1	Yes
MP10_0025	Commercial Building C4	MODS 1,2,3	Yes
MP10_0023	Bulk Excavation and Basement Car Parking	MODS 1,3,4,5	Yes
<i>Approval no.</i>	<i>Project</i>	<i>Modifications</i>	<i>Included in current revision</i>

G	30/08/2013	Revised issue for approvals & modifications, Stage 1B project application
F	14/12/2012	Revised issue for approvals and modifications
E	07/08/2012	Revised issue for approvals and modifications
D	14/05/2012	Revised issue for approvals and modifications
C	20/09/2011	Revised issue for C4 approval and authority comment
B	21/06/2011	Revised issue for construction including authority comments
A	11/01/2011	Initial issue for authority comment
<i>Revision</i>	<i>Date</i>	<i>Description of Change</i>

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Acronyms and Glossary

ANZECC	Australian and New Zealand Environmental and Conservation Council
ASS	Acid Sulfate Soil
BDA	Barangaroo Delivery Authority (formerly part of SHFA)
Blue Book	LLPMC guide to management systems, including the Environmental Management System
CFEMP	Construction Framework Environmental Management Plan (this plan)
Director General	Director General of the NSW Department of Planning & Infrastructure, or nominee
DECCW	NSW Department of Environment, Climate Change and Water (now EPA & OEH)
DOP	NSW Department of Planning (now DP&I)
DP&I	NSW Department of Planning & Infrastructure (formerly DOP)
EA	Environmental Assessment Report
EHS	Environment, Health and Safety
EMS	Environmental Management System
EPA	Environment Protection Authority (previously part of OEH, DECCW)
EPL	Environmental Protection Licence (issued by EPA)
ESCP	Erosion and Sediment Control Plan
GMRs	LLPMC Global Minimum Requirements
HHERA	Human Health & Environmental Risk Assessment
HVAS	High Volume Air Sampler
LLMP	Lend Lease Millers Point
LLPMC	Lend Lease Project Management & Construction
MCOA	Minister's Conditions of Approval
MSDS	Material Safety Data Sheet
NATA	National Association of Testing Authorities
OEH	NSW Office of Environment and Heritage
PPR	Preferred Project Report
RAP	Remedial Action Plan
Sensitive Receivers	Occupants of residential or institutional land uses that may be impacted by dust, noise or vibration
SHFA	Sydney Harbour Foreshore Authority
SMT	Senior Management Team
SPC	Sydney Ports Corporation
TSP	Total Suspended Particulates (airborne)
TSS	Total Suspended Solids (waterborne)
WAT	Work Area Team
SWMS	Safe Work Method Statement

1 INTRODUCTION

The Barangaroo Stage 1 Project involves the creation of a new commercial and residential precinct. The project is being managed by Lend Lease Millers Point (LLMP). LLMP is contracted to the Barangaroo Delivery Authority (BDA) to undertake the Stage 1 works at the southern end of the Barangaroo site. In addition, LLMP is contracted by the BDA to complete remediation of NSW EPA Remediation Site 21122 at Millers Point, which includes part of Barangaroo South, part of Barangaroo Central, and part of the adjoining Hickson Rd. In turn, Lend Lease Project Management & Construction (LLPMC) is contracted to LLMP to undertake design and construction of the project.

1.1 CFEMP Purpose

This Construction Framework Environmental Management Plan (CFEMP) provides specific management measures to ensure that design and construction works have minimal environmental impact and risk, and where possible, enhanced environmental outcomes. The CFEMP:

- captures environmental issues and mitigation measures already identified and assessed through the environmental assessments and conditions of approval relating to the project;
- incorporates these measures into a comprehensive framework to facilitate and ensure their appropriate management throughout the project;
- includes management measures, procedures, monitoring, auditing and reporting and allocates responsibilities;
- provides LLPMC with measures that will be used to manage environmental risks and opportunities;
- captures environmental measures where they relate to sustainability in the agreement between the BDA and LLMP;
- fulfils the requirement of the Minister's condition of approval (MP10_0023) Schedule 2, C1 which states: *'Prior to the commencement of works, the Proponent shall prepare a Construction Framework Environmental Management Plan (CFEMP) to be submitted to DECCW [now EPA] for review and to the Director-General for approval'.*
- fulfils the requirement of the Minister's condition of approval for the C3, C4 and C5 buildings Schedule 2, C2 which states: *'Prior to the commencement of works, the proponent must prepare an updated Environmental Construction and Site Management Plan (ECSMP) consistent with the Statement of Commitments in Schedule 3. The updated ECSMP is to be submitted to the Director-General for approval'.*

1.2 CFEMP Scope

This plan addresses environmental issues and risks associated with design and construction of the project, and impacts that are influenced by construction methodologies and staging. It covers all areas where physical works will occur, or areas that may be impacted by works, and is applicable over the full duration of the construction program.

This CFEMP and the environmental sub-plans will be staged according to each relevant stage of construction under various planning approvals from the Department of Planning and Infrastructure (DP&I). Indicative staging of construction is shown in Table 1.

This plan forms part of Project Development Plans (PDPs) that are prepared for each work area. The PDPs sit under an overall Barangaroo South *Project EHS Plan* and 'Blue Book', which sets out specific LLPMC Environmental Management System (EMS) requirements for the project.

Sub-plans to address specific significant environmental issues associated with the project, and specific conditions of approval, are discussed further in section 5.5.

All LLPMC staff and sub-contractors are required to operate fully under the auspices of this plan and sub-plans.

Note that this CFEMP and related sub-plans do not cover the approved SISCO pilot trial, as these works are being managed under a separate, approved CEMP.

1.3 CFEMP Objectives

The objectives of this plan are that:

- all environmental requirements contained in statutory approvals, licences, agreements, and other controls relevant to LLPMC are clearly defined, and mechanisms for implementation specified;
- processes for resourcing and implementing this plan are set to provide certainty of delivery;
- processes for auditing, monitoring and reporting on performance and effectiveness of the CFEMP are defined; and
- other objectives identified within environmental documents are met.

Environmental objectives and targets have been developed and are described in section 5.3 and Appendix 6. These are based on environmental aspects, impacts and risk as identified in the EHS Impacts and Hazards Risk Assessment.

1.4 Preparation of this CFEMP and Sub-Plans

This plan has been designed to address authority expectations and requirements, and adequately address risks and stakeholder concerns. Consultation with the Department of Planning & Infrastructure (DP&I) and the Environment Protection Authority (EPA, formerly OEH & DECCW) has been undertaken. Further consultation with other relevant authorities and stakeholders will be undertaken if needed for subsequent revisions of this plan and sub-plans.

Consultation with all stakeholders will continue as per requirements in each Minister's Conditions of Approval (MCOA). The requirements for consultation with these agencies, and incorporation of their reasonable requirements, are discussed in section 4.2.1.

All environmental management requirements specified as being the responsibility of LLPMC have been considered and addressed in preparing this plan, as have requirements of LLPMC's EMS (the Blue Book), accredited to AS/NZS ISO14001.

This plan draws on the extensive knowledge of LLPMC acquired from successful environmental management of multiple and varied projects in a range of locations.

1.5 Construction Stage EMP Structure

Construction environmental management plans are phased according to the planned construction stages. These stages are defined in section 2.2 of this plan.

Phasing of environmental plans allows preparation of plans according to the development of permanent and temporary works design, allows consultation over a longer timeframe, and reduces the number of plans for review and comment at any one time by stakeholders.

Figure 1 below shows the structure of the various environmental management plans.

1.6 Project Environmental Policy

The LLPMC Environmental Policy is included in Appendix 1. This policy has been formally approved by LLPMC, and will be revised throughout the project if needed.

1.7 Project Statutory Approval and EA

This project is based on designs described in Environmental Assessments (EAs) prepared by SHFA, BDA and LLMP from 2007 to date. The NSW Minister for Planning granted concept approval for the Barangaroo redevelopment in February 2007, subject to a number of Minister's Conditions of Approval. This approval has been modified after four applications from SHFA, BDA and LLMP in 2007, 2009 and 2010. A number of other approvals have been granted relating to Barangaroo South. These are outlined further in Section 3.1.

Conditions of Approval have been taken into account during preparation of this plan – Appendix 2A identifies where each condition has been addressed in this plan and sub-plans. Similarly, Appendix 2B identifies where Statements of Commitments in the EAs and related documents have been addressed.

Where design and construction methods involve substantial changes to that described in the EA, modification applications will be prepared for approval by DP&I. Modification approvals will be added to this CFEMP when approved.

1.8 Interface with other Project Plans and Procedures

This plan forms part of an integrated set of management plans developed for all key areas of the project. The set of management plans is described in detail in the Project Management Plan, and is illustrated in the management plan structure in Figure 2.

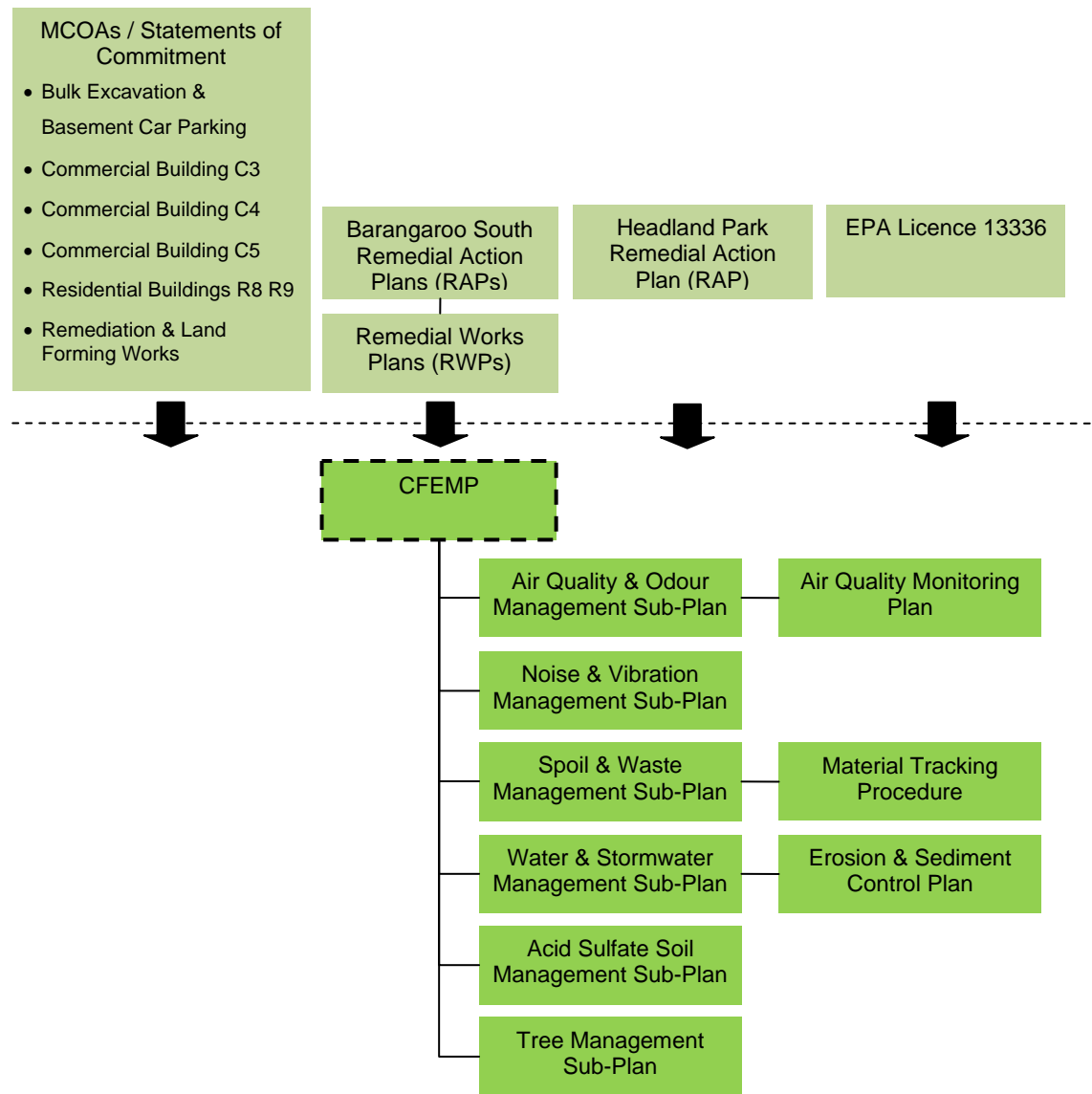


Figure 1: Environmental Management Plan Structure

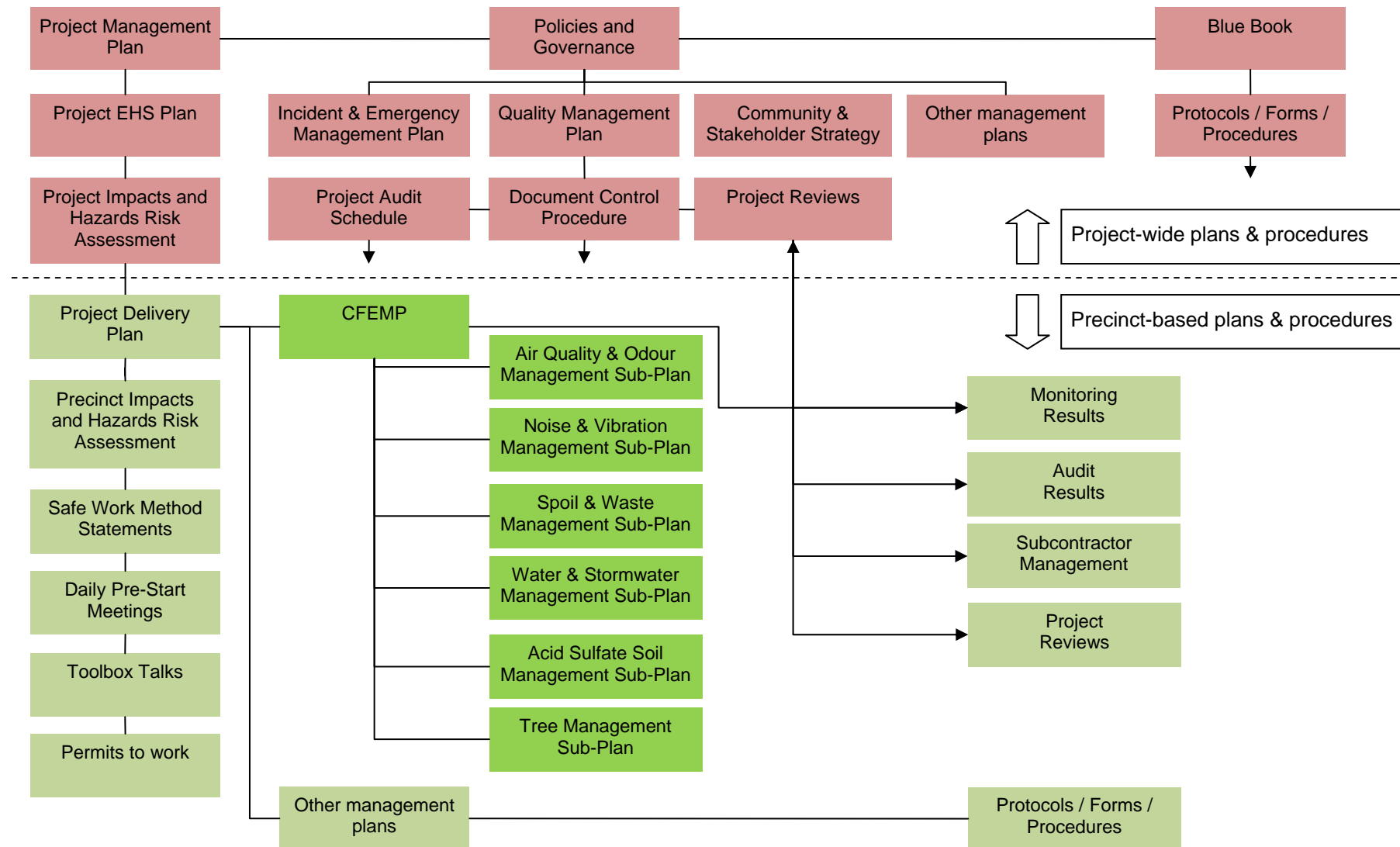


Figure 2: Outline Project Management Structure

2 PROJECT DESCRIPTION

2.1 Project Summary

Barangaroo is located on the north western edge of the Sydney Central Business District. The Barangaroo site is bounded by Sydney Harbour to the west and north, Millers Point and The Rocks to the east; and by a range of new commercial development to the south and east. The Barangaroo site has been divided into three distinct redevelopment areas:

- Barangaroo Stage 1 (Barangaroo South).
- Barangaroo Stage 2 (Barangaroo Central).
- Headland Park.

LLMP was appointed by the BDA as the preferred proponent to develop Barangaroo Stage 1 (otherwise known as Barangaroo South) in 2009. LLMP has also been engaged by the BDA to undertake remediation of NSW Remediation Site 21122 (the 'EPA Declaration Area'), which includes part of Barangaroo South (Stage 1b), part of Barangaroo Central and part of the adjoining Hickson Road. Barangaroo Central and Headland Park are being managed separately by the BDA.

The Barangaroo Stage 1 works are broken down into Stage 1A and Stage 1B 'precincts', which are based on project approvals. The indicative staging of construction based on these precincts is shown in Table 1.

This CFEMP covers construction of building basements, commercial and residential buildings, collectively Stage 1A; and Remediation and Land Forming Works which includes Stage 1B and areas of Barangaroo Central and Hickson Road as part of the Declaration Area. Note that separate development applications will be submitted for Remediation and Landforming Works – the first being Stage 1B. Further information on Stage 1B (Block 4) Remediation and Land Forming Works is provided in Appendix 5.

The CFEMP and other plans will be revised as needed to reflect the various phases of work as shown in Table 1, and Table 2. The Project Management Plan and Project EHS Plan cover all stages of the project.

Table 1: Indicative Construction Staging Summary

Plan	Precinct/Phase					
	Bulk Excavation & Basement Car Parking	Buildings C3, C4, C5	Buildings R8/R9	Remediation & land forming works	Temporary Concrete Batch Plant	Subsequent stages
Project Management Plan				✓		
Project EHS Plan				✓		
Project Delivery Plan	✓	✓	✓	✓	R	R
Construction Framework EMP (CFEMP)	✓	✓	✓	✓	R	R
Acid Sulfate Soils Management Sub-Plan	✓	✓	✓	R	R	R
Air Quality & Odour Management Sub-Plan	✓	✓	✓	R	R	R
Noise & Vibration Management Sub-Plan	✓	✓	✓	R	R	R
Spoil & Waste Management Sub-Plan	✓	✓	✓	R	R	R
Water & Stormwater Management Sub-Plan	✓	✓	✓	R	R	R
Tree Management Plan	✓	-	-	R	-	-

Key: ✓ current version
 R future revision

Table 2: Construction stages covered by current revision

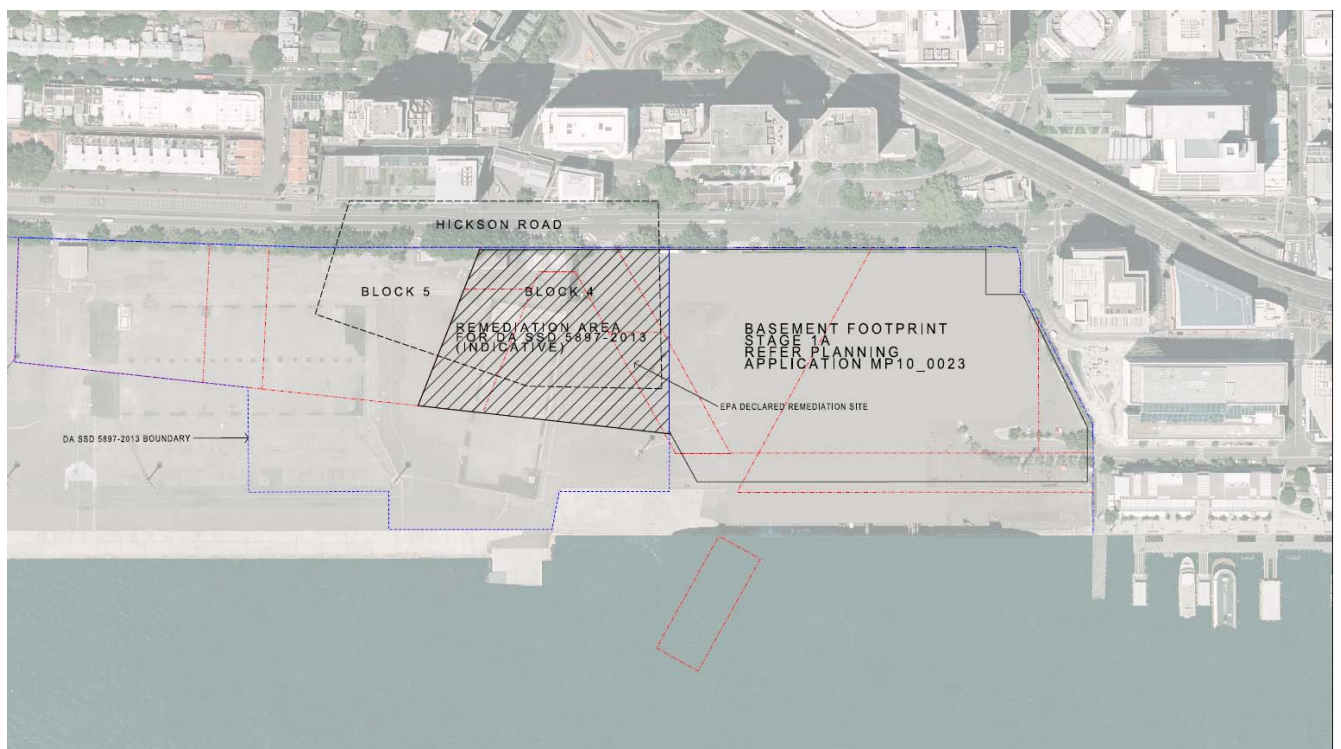
Stage	Approval	Phase	Construction Activities	Incl in this revision
STAGE 1A	MP10_0023 Bulk Excavation & Basement Carparking Including MOD1, MOD3, MOD4, MOD 5	Establishment	<ul style="list-style-type: none"> Site establishment including hoarding, access, amenities, parking and ancillary requirements. Installation of environmental controls including dewatering & water treatment facilities. Demolition of existing in-ground structures, footings & slabs, clearing and grubbing. Removal of existing below ground foundations and structures such as caissons and piles. Archaeological and other investigations. Decommissioning and relocation of existing services. 	Yes
		Perimeter Retaining Wall (PRW)	<ul style="list-style-type: none"> Construction of the PRW using bentonite & concrete. Temporary stockpiling of excavated spoil, prior to transport and disposal off-site. Storm water collection and treatment. 	Yes
		Bulk Excavation and Construction	<ul style="list-style-type: none"> Dewatering operations, including water treatment. Bulk excavation of the basement within Blocks 1, 2, 3 and adjacent public domain area. Classification and off-site re-use of spoil that cannot be reused at Headland Park. Where required, classification and off-site disposal to licensed landfill of spoil unsuitable for re-use. Crushing and screening facilities and operations. Concrete batching and delivery. Stormwater works along Hickson Road, Shelley St and Lime St. Structural works, comprising construction of foundations, basement levels, up to 880 car spaces and associated elements and structures. Harbour heat rejection works. Road works, including the extension of Margaret Street and Lime Street, construction of temporary vehicle access from Hickson Rd and permanent vehicle access from Margaret St. Temporary use of the basement for construction related storage and activity. 	Yes
	MP10_0025 Commercial Building C4, incl. MODS1-3	Piling, Podium and Tower	<ul style="list-style-type: none"> Piling for construction of Building C4 foundations. Construction of the podium and public domain. Construction of the building and facade. 	Yes
	MP11_0044 Commercial Building C3, incl. MOD1	Piling, Podium and Tower	<ul style="list-style-type: none"> Piling for construction of Building C3 foundations. Construction of the podium and public domain. Construction of the building and facade. 	Yes
	MP10_0227 Commercial Building C5, incl. MOD1	Piling, Podium and Tower	<ul style="list-style-type: none"> Piling for construction of Building C5 foundations. Construction of the podium and public domain. Construction of the building and facade. 	Yes
	MP11_0002 R8 R9 Residential Buildings	Piling and building	<ul style="list-style-type: none"> Piling for construction of Building R8 and R9 foundations. Construction of the building and facade. 	Yes

Stage	Approval	Phase	Construction Activities	Incl in this revision
STAGE 1B	SSD 5897 - 2013* Remediation & Land Forming Works	Establishment	<ul style="list-style-type: none"> Installation of environmental controls, including odour control and soil treatment works. Demolition of existing in-ground structures, footings & slabs, clearing and grubbing. 	Yes
		Perimeter Retaining Wall (PRW)	<ul style="list-style-type: none"> Construction of the PRW around Block 4 using bentonite and concrete. Temporary stockpiling of excavated spoil, prior to classification, transport & disposal or reuse off-site. Stormwater works in Hickson Road and Block 4. 	Yes
		Bulk Excavation and Construction	<ul style="list-style-type: none"> Dewatering operations, including water treatment. Bulk excavation of contaminated soils and fill within Block 4. Classification and off-site re-use of Block 4 spoil where possible. On-site or off-site treatment, waste classification and off-site disposal to licensed landfill of Block 4 spoil. Temporary use of the Barangaroo site for construction related storage and activity. 	Yes

* Further information is provided in Appendix 5.

Note that this CFEMP and related sub-plans do not cover the SISCO trial – as environmental management issues are addressed in separate plans for the SISCO trial by relevant contractors (AECOM and Verutek).

The location of the Stage 1 construction works and EPA Declaration Area in relation to the remainder of the Barangaroo redevelopment area and the CBD is shown in Figure 3 below. The footprint of Commercial Buildings C3, C4, C5, and Residential Buildings R8 R9, are entirely within Barangaroo Stage 1A.



Lend Lease (Millers Point)
Pty Limited

Remediation and Land Forming Works
Development Application SSD 5897-2013
Aerial Location Plan

Purpose: Approved: Date:

Scale 1:1000 @ B1 1:2500 @ A3



Drawing No. BB2_PA1_A001
Date 26/07/13 Revision: A

Figure 3: Barangaroo South Site Location

2.2 Schedule of Construction Activities

Table 3 below indicates the planned construction components, along with indicative commencement and completion dates for each component. Items in bold indicate the commencement and completion dates for each stage. Table 3 also indicates those stages of construction requiring on-going environmental management monitoring and reporting.

Table 3: Indicative Construction Schedule Summary

Stage	Work component	Planned start	Planned completion	Associated monitoring
Establishment, Perimeter Retaining Wall	Site establishment including hoarding, access, amenities, parking and ancillary requirements.	September 2011	November 2011	Noise
	Demolition of existing structures, footings & slabs, clearing and grubbing.	September 2011	August 2011	Noise, air
	Archaeological and other investigations.	August 2011	October 2011	Air quality
	Temporary stormwater diversion.	September 2011	October 2011	Noise, air, water
	Installation and operation of controls including dewatering & water treatment facilities.	September 2011	October 2011	Noise, air, water
	Removal of existing below ground foundations and structures such as caissons and piles.	October 2011	December 2011	Noise, air, water
	Decommissioning, capping off and relocation of existing services.	September 2011	October 2011	Noise, air, water
	Construction of the Perimeter Retaining Wall using bentonite and concrete.	November 2011	May 2012	Noise, air, water
	Temporary stockpiling of excavated spoil.	November 2011	May 2012	Noise, air, water
	Transportation and disposal of spoil off-site.	November 2011	May 2012	Noise, air, water
	Dewatering operations, including water treatment.	November 2011	End of project	Noise, air, water
Dewatering, Excavation, Basement Construction	Bulk excavation of the basement within Blocks 1, 2, 3 and the adjacent public domain area.	June 2012	July 2013	Noise, air, water
	Loading and transport of spoil and excavated spoil to the Headland Park site.	November 2012	July 2013	Noise, air, water
	Classification and off-site re-use of spoil deemed unsuitable for on-site re-use.	June 2012	July 2013	Noise, air, water
	Classification and off-site disposal to licensed landfill of spoil deemed unsuitable for re-use.	June 2012	July 2013	Noise, air, water
	Crushing and/or screening.	June 2012	March 2013	Noise, air, water
	Concrete batching and delivery.	August 2013	TBA	Noise, air, water
	Stormwater works Hickson Road, Shelley St, Lime St.	February 2013	December 2013	Noise, air, water
	Structural works for foundations, basement, HHR.	February 2013	TBA	Noise, air, water
	Road works at Margaret St, Lime St, Hickson Rd.	TBA	TBA	Noise, air, water
	Temporary use of the basement for construction related storage and activity.	TBA	TBA	Noise, air, water
Building C4	Piling for construction of foundations.	Nov 2011	February 2013	Noise, air, water
	Construction of the podium and public domain.	February 2013	July 2013	
	Construction of the building and facade.	July 2013	September 2014	
Building C3	Piling for construction of foundations.	August 2012	August 2013	Noise, air, water
	Construction of the podium and public domain.	June 2013	September 2013	
	Construction of the building and facade.	September 2013	March 2015	
Building C5	Piling for construction of foundations.	August 2012	August 2013	Noise, air, water
	Construction of the podium and public domain.	August 2013	November 2013	
	Construction of the building and facade.	November 2013	March 2015	

Stage	Work component	Planned start	Planned completion	Associated monitoring
Buildings R8R9	<ul style="list-style-type: none"> Piling for construction of Building R8 and R9 foundations. Construction of the building and facade. 	February 2014	March 2015	Noise, air, water
Remediation & Land Forming Works	<ul style="list-style-type: none"> Installation of environmental controls, including odour control and soil treatment works. Demolition of existing in-ground structures, footings & slabs, clearing and grubbing. 	May 2014	June 2014	Noise, air, water
	<ul style="list-style-type: none"> Construction of the PRW around Block 4 using bentonite and concrete. Temporary stockpiling of excavated spoil, prior to classification, transport for disposal or reuse off-site. Stormwater diversion works in Hickson Road and Block 4. 	June 2014	November 2014	Noise, air, water
	<ul style="list-style-type: none"> Dewatering operations, including water treatment. Bulk excavation of the basement within Block 4. Classification and off-site re-use of Block 4 spoil where possible. On-site or off-site treatment, waste classification and off-site disposal to licensed landfill of Block 4 spoil. Temporary use of the basement for construction related storage and activity. 	September 2014	November 2016	Noise, air, water

2.3 Risks and Opportunities

A Project EHS Risk Assessment has been prepared as part of the Project EHS Plan. The methodology for the preparation of the risk assessment and its use in project delivery are discussed in section 5.4. The risk assessment is updated by construction staff as needed.

Opportunities for enhanced environmental outcomes for the project have been identified and incorporated into the sustainability checklist attached in Appendix 10.

2.4 Sustainability and Resource Conservation Initiatives

As part of the agreement with the BDA, LLMP has identified initiatives that enhance the environmental outcomes of the construction phase of this project, or provide positive environmental offsets. These initiatives are listed in Appendix 10. The Sustainability Manager and EHS Manager (Environment) are responsible for implementation of these measures.

Further details relating to sustainability during the construction and operation phases of the project are described in the *Barangaroo South Climate Positive Work Plan*.

3 CFEMP INPUTS

3.1 Statutory Requirements

There are a number of statutory inputs to the project that are the responsibility of LLMP to implement. These are described further below.

3.1.1 Planning Approvals

There are a range of project applications and approvals under the *Environmental Planning & Assessment Act 1979* relating to Barangaroo. Applications have been submitted by SHFA, BDA and LLMP. A summary of project applications and approvals to date relating to Barangaroo South are outlined in Table 4 below. Items relating to this stage of the CFEMP are highlighted in bold text.

Table 4: Barangaroo South Planning Approvals and Submissions

Project Application	Approval No.	Proponent	Approval Date
Concept Plan Barangaroo	06-0162	BDA	09/02/2007
• MOD 1	MP 06-0162 MOD 1	BDA	25/09/2007
• MOD 2 (Commercial floorspace)	MP 06-0162 MOD 2	BDA	16/02/2009
• MOD 4 (Hotel Development, Additional GFA & Height)	MP06_0162 MOD 4	LLMP	16/12/2010
• MOD 6 (Block Boundaries & Built Form)	MP06_0162 MOD 6	LLMP	05/05/2013
Demolition of existing structures East Darling Harbour	MP07_0077	BDA	15/11/2007
Bulk Excavation & Basement Car Parking - Blocks 1-3	MP10_0023	LLMP	02/11/2010
• MOD 1	MP10_0023 MOD 1	LLMP	03/03/2011
• MOD 2	MP10_0023 MOD 2	LLMP	Not used
• MOD 3	MP10_0023 MOD 3	LLMP	19/04/2012
• MOD 4	MP10_0023 MOD 4	LLMP	21/11/2012
• MOD 5	MP10_0023 MOD 5	LLMP	08/08/2013
C4 Commercial Building	MP10_0025	LLMP	03/03/2011
• MOD 1	MP10_0025 MOD 1	LLMP	24/02/2012
• MOD 2	MP10_0025 MOD 2	LLMP	18/02/2013
• MOD 3	MP10_0025 MOD 3	LLMP	28/05/2013
C3 Commercial Building	MP11_0044	LLMP	24/04/2012
• MOD 1	MP11_0044 MOD 1	LLMP	18/02/2013
C5 Commercial Building	MP10_0227	LLMP	24/04/2012
• MOD 1	MP10_0227 MOD 1	LLMP	18/02/2013
SISCO Pilot Trial	MP10_0087	LLMP	03/03/2011
R8 R9 Residential Buildings	MP11_0002	LLMP	28/06/2013
Remediation & Land Forming Works	SSD 5897 - 2013	LLMP	Preparation
Permanent Stormwater Diversion Works	126589	Sydney Water	23/11/2012

Requirements from the relevant planning approvals are described further below.

Demolition of existing infrastructure and service alterations were undertaken between August 2010 and February 2011, under the project approval 07_0077 dated 15 November 2007.

3.1.2 NSW Ministers Conditions of Approval

Minister's Conditions of Approval (MCOA) have been issued as part of the project approvals. These conditions specify a number of measures for implementation during design, construction and operation phases. Construction certification is required from a certifying authority prior to construction commencement and subsequent stages of construction.

Appendix 2A tabulates construction stage environment-related MCOA requirements, and shows where each requirement is addressed in this plan and related documents. This includes measures from the following documents:

- MCOA dated 2 November 2010 issued with the project approval MP10_0023 (basements) under section 75J of the EP&A Act, and subsequent modifications. This includes conditions pursuant to Condition C3(2)(C) of MP10_0023 relating to out of hours shipping operations to remove spoil to Port Kembla.
- MCOA modification dated 16 December 2010 issued with an amendment under approval MP 06-0162 MOD 4 (concept) under section 75W of the EP&A Act.
- MCOA dated 3 March 2011 issued with the project approval MP10_0025 (C4) under section 75J of the EP&A Act, and subsequent modifications. This includes conditions pursuant to Condition D1(C) of MP10_0025 relating to out of hours tower crane installation and removal.
- MCOA dated 24 April 2012 issued with the project approval MP11_0044 (C3) under section 75J of the EP&A Act, and subsequent modification. This includes conditions pursuant to Condition D1(2)(C) of MP11_0044 relating to out of hours tower crane installation and removal.
- MCOA dated 24 April 2012 issued with the project approval MP10_0227 (C5) under section 75J of the EP&A Act, and subsequent modification. This includes conditions pursuant to Condition D1(2)(C) of MP10_0227 relating to out of hours tower crane installation and removal.
- MCOA dated 28 June 2013 issued with the project approval MP11_0002 (R8, R9) under section 75J of the EP&A Act.

3.1.3 EA and related documents

The approved Concept Plan, EA documents, PPR documents, and subsequent modification submissions specify a number of 'Statements of Commitments' to be implemented during design and construction phases. Appendix 2B tabulates these commitments, where each is addressed in this plan and related environmental documents. This includes measures from the following documents:

- Preferred Project Report, Concept Plan Modification 4, dated 12 November 2010.
- Preferred Project Report, Bulk Excavation and Basement Car Parking, dated September 2010.
- Preferred Project Report, Bulk Excavation and Basement Car Parking, Section 75W Modification (MOD1), dated November 2010.
- Preferred Project Report, Bulk Excavation and Basement Car Parking, Section 75W Modification (MOD3), dated February 2012.
- Preferred Project Report, Bulk Excavation and Basement Car Parking, Section 75W Modification (MOD4), dated October 2012.
- Preferred Project Report, Bulk Excavation and Basement Car Parking, Section 75W Modification (MOD5), dated November 2012.
- Barangaroo South Review of Environmental Factors (REF) for Permanent Storm water Diversion Works, dated March 2012.
- Preferred Project Report, Commercial Building C4, dated February 2011.
- Preferred Project Report, Commercial Building C4 Section 75W Modification (MOD1), dated January 2012.

- Preferred Project Report, Commercial Building C3, dated February 2012.
- Preferred Project Report, Commercial Building C5, dated February 2012.
- Preferred Project Report, Residential Building R8 R9, dated May 2013.

3.2 Other Commitments and Requirements

3.2.1 Barangaroo South Remedial Action Plans

LLMP is developing three remedial action plans for the Barangaroo South site and adjacent area. These relate to three distinct parts of the Barangaroo South site titled 'Other Remediation Works South' (OWRS), 'Other Remediation Works North' (OWRN) and to the Declaration Area.

The ORWS RAP was approved by the Minister for Planning & Infrastructure on 17 August 2011. Measures contained in the RAP are to be applied via a Remedial Works Plan (RWP) which specifies actions for implementing and verifying the requirements of the RAP. The RWP will form an input into the environmental management sub-plans. The ORWS RAP has been updated to include addenda for spoil reuse at Headland Park, and for Harbour Heat Rejection.

A RAP relating to the Declaration Area has been prepared for submission with the *Remediation & Land Forming Works* planning approval.

3.2.2 Headland Park Remedial Action Plan

The BDA have developed a remedial action plan for works at Headland Park which specifies acceptance criteria and material tracking requirements for spoil imported from Barangaroo South.

3.2.3 Stage 1 RFDP

LLMP provided commitments relating to sustainability to the BDA as part of the *Request for Detailed Proposals* (RFDP). Appendix 10 tabulates these commitments and where each is addressed in this plan or related environmental plans.

3.2.4 NSW Government EMS Guidelines

The LLPMC EMS is accredited under the NSW Government's EMS Guidelines. Section 3.3 describes the project-based approach to the EMS for the project.

3.3 Environmental Management System

LLPMC has an ISO14001:2004 certified environmental management system, and the project will operate in compliance with this management system. LLPMC EMS policies and procedures are fully described in the 'Blue Book'. The Blue Book describes processes for LLPMC's integrated Environment, Health and Safety (EHS) management system.

LLPMC also operate under a set of Global Minimum Requirements (GMRs) in relation to EHS management, some of which relate to environmental management. These GMRs, and where they are addressed, are shown in Table 5 below. A number of 'Means and Methods' have been developed in relation to the GMR's. Where these relate to environmental management they are included within measures specified in each environmental sub-plan.

Table 5: Environmental GMRs

Plan	Physical Means & Methods									
	Stormwater, Sediment & Erosion Control	Air & Noise Emissions	Soils & Groundwater Contamination	Biodiversity & Natural Habitats	Heritage & Artefacts	Hazardous Materials	Materials Selection	Energy Consumption	Water Consumption	Waste Management
Acid Sulfate Soils Management Sub-Plan			✓							
Air Quality & Odour Management Sub-Plan		✓								
Noise & Vibration Management Sub-Plan		✓								
Spoil & Waste Management Sub-Plan			✓		✓	✓	✓	✓		✓
Water & Stormwater Management Sub-Plan	✓								✓	
Tree Management Plan				✓						

3.4 Legislation

A comprehensive register of environmental legislation and regulations relevant to the project is attached in Appendix 3. The register provides key requirements of relevant legislation and regulation, relevance to the project and mechanisms for compliance. The register will be reviewed and updated during each CFEMP revision by the EHS Manager (Environment).

3.5 Approvals, Permits, Licences

A number of approvals, permits and licences are required for the project. These are described in Table 6 below. Once licences and approvals shown in Table 6 are approved for the project, the *Environmental Licence, Approval and Permit Register* in Appendix 4 will be used.

The EHS Manager (Environment) is responsible for maintenance of this register, renewal and surrendering of licences and permits where relevant. Status of approvals, permits and licences, and compliance with each, will be monitored on a monthly basis and results included in monthly reports.

Table 6: Approvals, Licences, Permits

Approval/Licence/Permit	Relevant Authority	Details	Responsibility / Details
Protection of the Environment Operations Act	Environment Protection Authority (EPA)	Environmental Protection Licence 13336 issued 25 October 2010, as varied for construction activities at Barangaroo South and Headland Park.	BDA is the licence holder. LLPMC to provide supporting information to BDA where required.
Environmental Planning & Assessment Act	NSW Department of Planning & Infrastructure (DP&I)	Additional approvals required for any altered or additional environmental impacts if any alternate designs are incorporated during design development, or construction methods are varied.	LLMP/LLPMC
Water Act 1912	DPI, Office of Water	For basement dewatering.	LLPMC

3.6 Environmental Due Diligence

Environmental due diligence is the systematic identification of the environmental risks and liabilities associated with an organisation's sites and operations.

The principles of environmental due diligence have been applied throughout the preparation of this plan and related environmental documents. Due diligence principles are included in the development of all other environmental management procedures or changes to plans.

3.7 Standards

Relevant policies, guidelines, Australian Standards that relate to the project are specified in the 'References' section of relevant sub-plans.

4 ENVIRONMENTAL MANAGEMENT DELIVERY

4.1 Environmental Management Components

This plan is the key management tool and lead environmental management document in relation to the environmental performance during the design and construction phases. In addition to this plan, there are a number of other documents and sub-plans that provide more specific environmental management detail. Figure 4 outlines the key environmental management inputs, documents and processes.

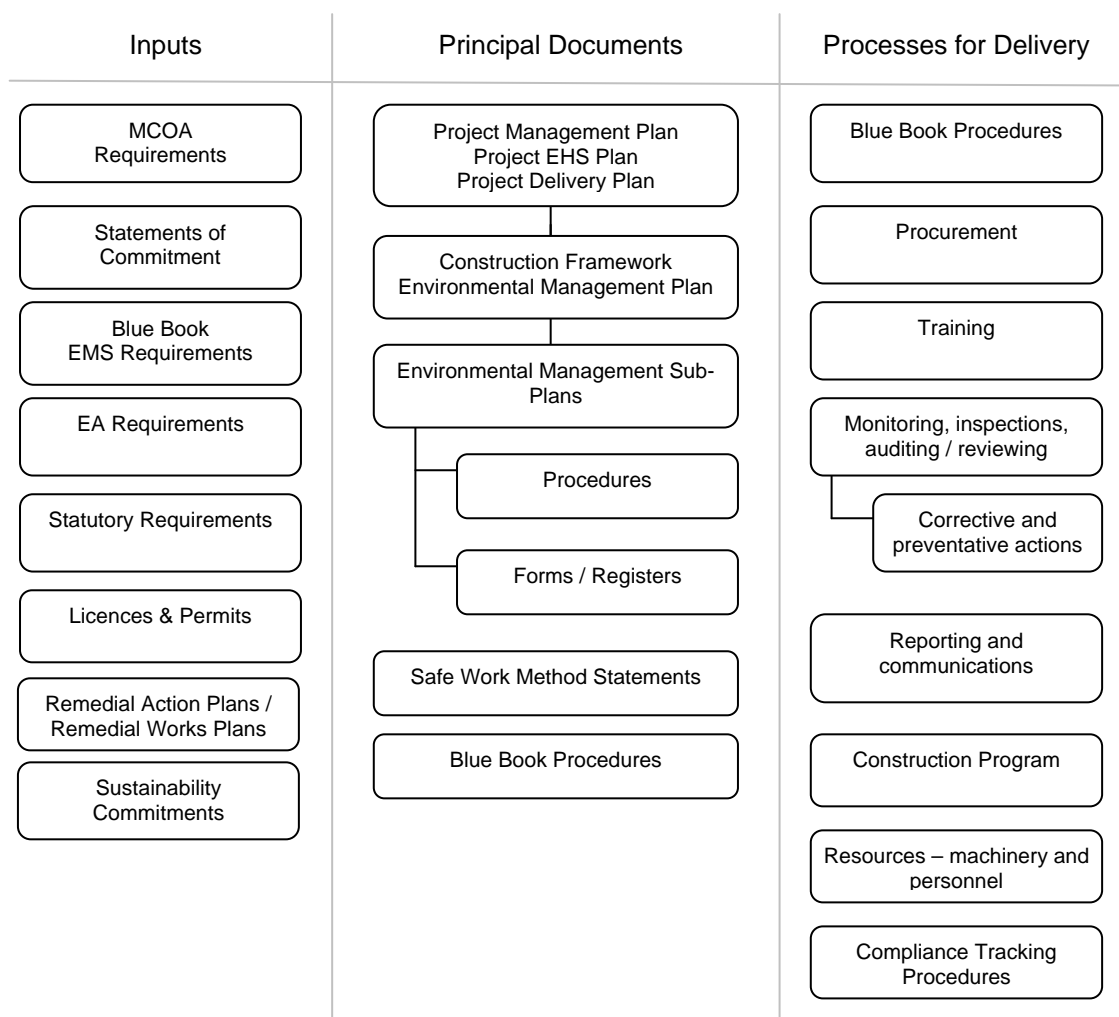


Figure 4: Environmental Management Components

Construction activities and associated impacts occur progressively and change over time as different works are carried out and different locations impacted. Due to the staged construction approach, environmental protection measures are progressively implemented. This plan identifies upfront the desired environmental outcomes and the systems and processes in place to achieve these outcomes. Sub-plans and method statements provide direction on implementation of measures to mitigate impacts. This plan therefore provides the strategic framework for managing environmental impacts associated with construction.

4.2 Consultation and Approval Requirements

4.2.1 CFEMP Consultation

This plan, and environmental sub-plans, have been designed to address authority expectations and requirements, and adequately address risks and stakeholder concerns.

The MCOAs for each project approval require consultation with specific authorities and stakeholders in the preparation of this plan and selected sub-plans. Table 7 indicates approval (A) and consultation (C) required by MCOAs for each environmental management plan. These stakeholders have been and will continue to be consulted during the finalisation/revision of this plan and related plans.

Table 7: Consultation required for the CFEMP and Environmental Sub-Plans

Plan	Primarily required by	Lend Lease	DP&I	EPA	Council
Project EHS Plan	LLPMC EMS	A			
CFEMP	Basement MCoA C1 C3, C4, C5 MCoA C2	A	A	C	
Acid Sulfate Soils Management Sub-Plan	Basement SOC 1.4 C3, C4, C5 MCoA B14/15 R8 R9 MCoA B12 SSD5897-2013 Project Application	A			
Air Quality and Odour Management Sub-Plan	Basement MCoA C5, SOC 1.7 R8 R9 MCoA B16 SSD5897-2013 Project Application	A		C	
Noise & Vibration Management Sub-Plan	Basement MCoA C3, SOC 1.8 C3, C4, C5 MCoA B19/20 R8 R9 MCoA B17 SSD5897-2013 Project Application	A		C	
Spoil & Waste Management Sub-Plan	Basement MCoA C2, SOC 1.6 C3, C4, C5 MCoA B20/21 R8 R9 MCoA B18 SSD5897-2013 Project Application	A		C	
Tree Management Sub-Plan	Basement MCoA D6, SOC 1.11	A	C		C
Water & Stormwater Management Sub-Plan	Basement MCoA C4, SOC 1.4 C3, C4, C5 MCoA B18/19 R8 R9 MCoA B15, B19 SSD5897-2013 Project Application	A		C	

4.2.2 CFEMP Submission

Revisions of this CFEMP will be submitted to DP&I and EPA for comment. Revisions of relevant sub-plans will also be submitted to DP&I and EPA as per section 4.2.1, in a staged manner. The CFEMP and sub-plans will be updated to account for any comments.

When revisions of the CFEMP are approved by DP&I, the approved CFEMP, and sub-plans, will be issued to the certifying authority for construction certification where required, in a staged manner. Documentation as to how stakeholder comments have been addressed following consultation will be available. Relevant construction works will not commence until LLPMC has:

- received approval for the CFEMP and related documents from DP&I;
- received a relevant Construction Certificate issued by the certifying authority.

The CFEMP and relevant sub-plans will be revised:

- in response to future project approvals or modifications,
- in response to major changes in site conditions or work methods, and
- in support of planning approvals or licence variations as necessary.

A copy of any revised CFEMP will be provided to DP&I either for information or approval.

4.3 Organisational Structure

EHS management during construction is the responsibility of each and every member of the Barangaroo South project team.

Management and supervisory personnel in the Senior Management Team (SMT) lead environmental management by example, through provision of suitable resources to implement and monitor environmental measures, identify and correct any non-conforming conditions or behaviours, and actively promote environmental awareness and individual environmental responsibility.

Underneath the SMT, Work Area Teams (WATs) work on individual precincts within Barangaroo South. This breakdown of structure is shown in Figure 6.

Support will be provided to the SMT and WAT by 'Project Support' and 'Construction Support' groups. Project Support will include environmental, EHS and community management, while Construction Support will provide on-ground site assistance to the WATs.

Personnel have clearly defined objectives as well as roles and responsibilities that are specified in the LLPMC Blue Book.

4.3.1 Organisational Structure

The project organisation structure is outlined in the Project Management Plan, and is summarised in Figure 5 below.

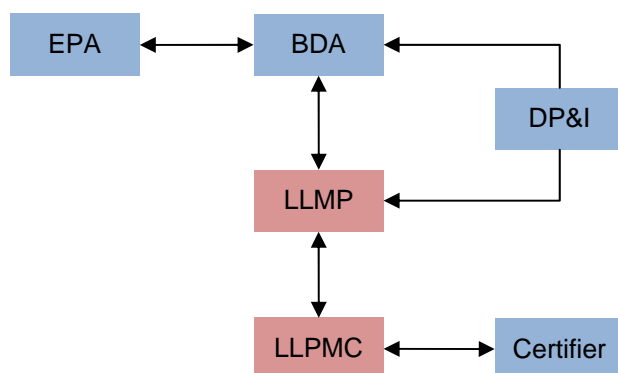


Figure 5: Barangaroo Stage 1 Organisational Structure

The project environmental management structure incorporates the following site personnel:

- EHS Manager (Environment) responsible for overall management of the CFEMP and environmental sub-plans;

- EHS Co-ordinator to assist in implementing and monitoring measures in the Project EHS Plan. Additional support, if required, is available to the project.

The basic environmental management organisational structure within LLPMC is outlined in Figure 6. Project and Construction Managers will be based on a 'precinct' type Work Area Team (WAT) structure, under an overall (Barangaroo South) Senior Management Team (SMT).

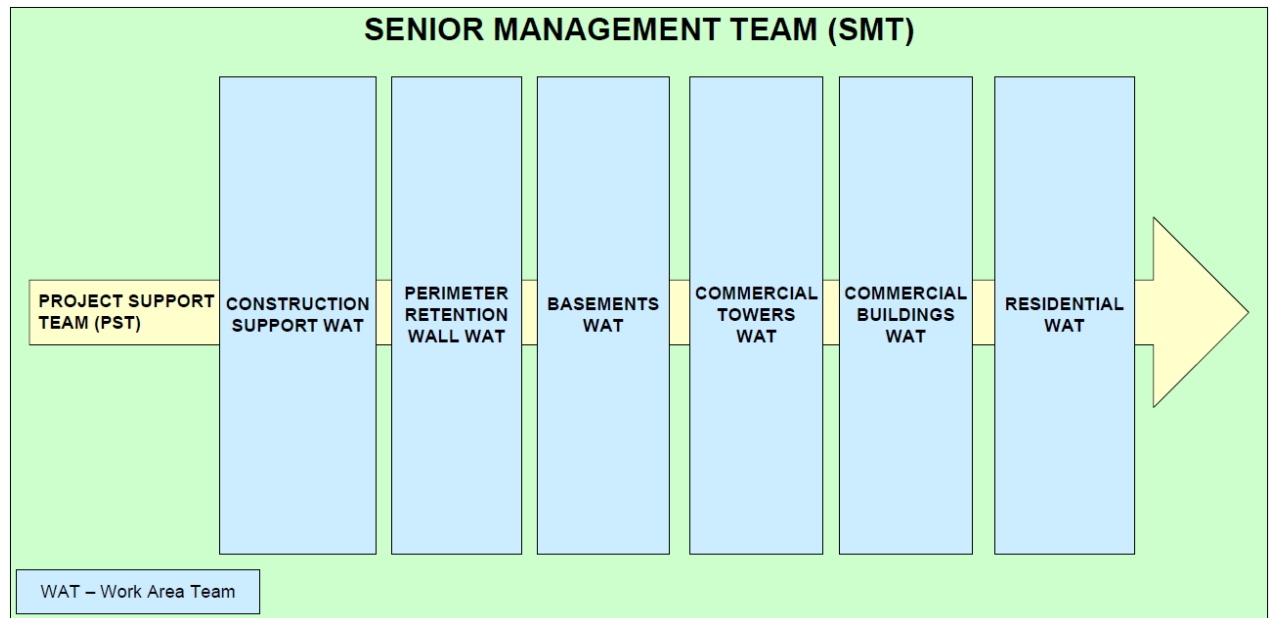


Figure 6: LLPMC Environmental Management Structure

Each WAT is made up of a Construction Manager, Site Manager, Project Engineers, Site Engineers, Foremen and Leading Hands.

EHS, community and environmental support is grouped within the Project Support Team. Specialist external assistance will be provided through this team as needed.

4.4 Roles and Responsibilities

The following roles and responsibilities relate to role descriptions in Blue Book procedure 10.01.03, and section 6 of the Project EHS Plan.

4.4.1 EHS Manager (Environment)

The EHS Manager (Environment) is full-time for the duration of the project to oversee environmental management of the project and be the main point of contact for all environmental issues.

Responsibilities of the EHS Manager (Environment) include:

- establishing and updating this plan, sub-plans, procedures and method statements, and ensuring that they are in accordance with environmental requirements;
- being the primary contact point for the certifying authority, BDA, EPA and other external agencies in relation to environmental performance of construction phase;
- accountability for all management plans and monitoring programs required by the MCOA in relation to construction;
- considering and advising on matters specified in licences and approvals relating to environmental performance and impacts of construction;

- having authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and direct relevant actions to stop immediately should an adverse impact be likely to occur.
- integrating any relevant environmental requirements into detailed design;
- ensuring provision of adequate resources to achieve environmental objectives;
- discussing environmental issues with key stakeholders, and assisting the Community Relations Manager to resolve environment-related complaints and inquiries;
- identifying environmental issues as they arise, and proposing solutions;
- ensuring environmental risks and issues, and obligations and commitments, are identified and effectively communicated to project staff;
- participating in the environmental induction and training program;
- undertaking at least weekly inspections of all works.
- maintaining an environmental audit program and undertaking audits in accordance with it;
- producing and submitting environmental reports.

4.4.2 EHS Co-ordinator

The EHS Co-ordinator undertakes EHS duties. Responsibilities of the EHS Co-ordinator include:

- Undertaking daily assessments to assess compliance with relevant standards and LLPMC GMR's / Means and Methods.
- Support Construction Managers and Foremen in driving EHS performance on the project by identifying trends and compliance issues, and implementing initiatives designed to drive performance and prevent reoccurrence.
- Provide support and guidance to the construction team in adhering to the GMRs, Means and Methods and the EMS System.
- Assist in the monthly construction site inspections, including the close out of actions and communications resulting from the inspections.
- Assist the Construction Managers and WATs in investigating all incidents, ensuring that all root causes are identified. Ensure that the summary of these are reviewed immediately with the EHS Manager responsible for the project or Regional EHS Manager as requested or required. Ensure that the timelines are followed in the Incident Management Flowchart.
- Ensure reporting on incidents meets required timeframes.
- Assist the Construction Managers in ensuring implementation of the skills competency framework and safety passport including planning the facilitation of training and assessments for the project team.
- Regularly review, with the Construction Managers / Foremen for the project, the EHS plan.
- Assist the Construction Managers during quarterly audits on the EHS system and ensure non-conformances are closed out in a timely manner with a robust and relevant close out.
- Conduct regular reviews of work activities against SWMS and assist the Foreman and Construction Managers in identifying any shortfalls or changes required.
- Assist the Foremen in ensuring the safety committee is active and responsible.
- Review all registers regularly to ensure all items are captured including plant, hazardous material, etc.
- Ensure the project follows the EHS plan, and EHS procedures identified in the Blue Book.
- Monitor the implementation of environmental and sustainability requirements for the project.

- Assist the EHS Manager (Environment) or EHS Regional Manager with managing notifiable incidents.
- Assist the EHS Manager (Environment) or EHS Regional Manager in the identification of environmental considerations and the implementation of resulting actions.

4.4.3 Other Environmental Resources

All members of the Lend Lease project team have environmental responsibilities. In general, staff are required to:

- undertake all activities in accordance with the Blue Book, agreed plans of management, procedures, and work methods;
- report any activity that has resulted, or has potential to result, in an environmental incident;
- ensure that they attend environmental induction and task-specific training provided.

4.4.3.1 Project Managers

Project Managers have the following environmental accountabilities:

- Ensure the correct application of LLPMC Safety Management System and GMRs across the project and ensure any significant risks or major non compliances are addressed.
- Apply / assist an effective consultant selection and evaluation procedure.
- Lead the Senior Safety Leadership Team in conjunction with the Construction Managers and ensure this forum adequately addresses issues raised. Raise and discuss safety and environment at forums, preconstruction, project and conversion reviews.
- Ensure the cost plan and pricing takes into account all necessary commitment and resourcing to ensure that the Global Minimum Requirements (GMRs) and Means & Methods are adhered to through successfully managing the Risk and Opportunity at Design (ROAD) process.
- Where applicable, ensure that ROAD sessions are carried out at an early stage of the design process, are detailed and design out risk where possible. Manage risk items that are unable to be designed out throughout the project on a periodic basis.
- Ensure any residual risk from the ROAD is included in the project broad risk assessment.

4.4.3.2 Construction Managers

Construction Managers have the following environmental responsibilities:

- reviewing and endorsing environmental controls contained in the EHS Plan, this plan and sub-plans;
- ensuring all Project and Site Engineers are familiar with environmental plans and associated documents, and responsibilities within them;
- implementing, reviewing and ensuring compliance with environmental plans;
- allocating resources to implement the EHS Plan, this plan, sub-plans and method statements;
- ensuring that all personnel receive appropriate induction training specified in section 5.8, including details of the environmental and community requirements;
- participating and providing guidance in management review of this plan (specified in section 6.5) and associated documents;
- ensuring that complaints are promptly investigated to ensure effective resolution.

4.4.3.3 Design Managers

Design Managers have the following environmental responsibilities:

- ensuring detailed design progressively addresses all relevant requirements;
- ensuring the works are designed to fulfil the requirements and objectives of this plan;

4.4.3.4 Project Engineers

Project Engineers are responsible to the Construction Manager for the environmental performance of the site(s) or construction activities for which they are in charge, including:

- ensuring that environmental requirements are incorporated into construction documents;
- ensuring that instructions are issued and adequate information provided to employees which relate to environmental risks on site;
- ensuring that works are carried out in accordance with this plan, sub-plans and method statements, including the implementation of all environmental controls;
- identifying resource requirements for implementation of this plan and related documents;
- ensuring that complaints relating to their sites or activities are investigated and resolved;
- maintaining all necessary records and reports;
- reporting any activity that has resulted, or has the potential to result, in an environmental incident to the Construction Manager or EHS Manager (Environment);
- communicating with all personnel and subcontractors regarding compliance with this plan and site specific environmental issues;
- undertaking site inspections and toolbox talks.

4.4.3.5 Foremen

Foremen are responsible to Project Engineers, and have the following environmental responsibilities:

- undertaking any environmental duties as defined by Project or Site Engineers;
- co-ordinating implementation and maintenance of environmental protection measures;
- attending to any spills, environmental incidents or other incidents that may occur on site;
- reporting any activity that has resulted, or has the potential to result, in an environmental incident immediately to the site superintendent;
- where necessary, ensuring environmental monitoring or inspections are undertaken and any environmental records are filled in as defined by method statements and work instructions.

4.5 Specialist and Other Environmental Resources

Specialist consultants and subcontractors are engaged for environmental support roles, such as:

- Acid sulfate soil specialist if required, for review of management and monitoring techniques;
- Arborist to prepare the Tree Management Plan and manage trees throughout construction;
- Archaeologists for the non-indigenous archaeological investigation program, and to provide advice if heritage items are uncovered during excavations;
- Archaeologist for indigenous sub-surface testing, liaison with the Metropolitan Local Aboriginal Land Council, and to provide advice if heritage items are uncovered during excavations;
- Air quality specialists for preparation of an air quality monitoring program, establishment and maintenance of specialist monitoring equipment, and ongoing advice throughout construction;
- Contamination specialist for validation of the site according to the requirements of the RAP;
- Specialist sub-contractors to undertake SISCO remediation works, if required;
- Specialist sub-contractors to undertake excavation and/or on-site treatment works for gasworks waste associated with the Declaration Area;

- Noise specialist for noise modelling, establishment and maintenance of monitoring equipment, and ongoing advice throughout construction;
- Water quality specialist for preparation of a water quality monitoring program, establishment and maintenance of monitoring equipment, and ongoing advice throughout construction;
- NATA-certified laboratories for water quality and dust analysis;
- Database and other software as required during the course of the project;
- Environmental monitoring hardware; and
- Other resources as required during the course of the project.

Personnel, plant and equipment are also specified in the 'resources' section of sub-plans.

4.6 Sub-contractors and Suppliers

All sub-contractors are engaged and managed in accordance with relevant procedures defined in Section 8 of the Project EHS Plan.

Sub-contractors are required to carry out their work in accordance with contract instructions and in an environmentally sound manner. All sub-contractors will have an EHS plan and risk assessment for their scope of work in place. These documents require approval from LLPMC prior to commencement on site.

All sub-contractor personnel are required to attend a project induction, which includes an environmental component, and task-specific training (if required) before they commence any work on any site.

4.7 Authorities and Stakeholders

4.7.1 Regulatory Authorities

Regulatory authorities that have a direct interest in environmental issues relating to the project's licences, permits and approvals are described in Table 8 below. LLPMC and LLMP will maintain open communications with regulatory authorities identified, and meet their reasonable requirements.

Table 8: Authority Consultation

Agency
DP&I
EPA
Certifier (McKenzie)
Roads & Maritime Services
BDA
City of Sydney Council
SPC

4.7.2 Other External Stakeholders

Stakeholders and community groups with an interest in environmental issues relating to the project are listed in the *Community and Stakeholder Engagement Strategy*.

4.7.3 Ongoing Consultation

LLPMC and LLMP will meet with BDA, authorities and stakeholders throughout construction.

LLPMC meet regularly with BDA and EPA regarding environmental and planning issues, which will be continued throughout construction.

5 ENVIRONMENTAL ISSUES AND CONTROLS

5.1 Overview

As required by the MCOAs, this plan is the overarching plan for environmental management during construction. Under this plan, sub-plans have been developed where an environmental issue requires complex and detailed environmental management, or to address specific significant environmental issues associated with the project as required by approvals, the EA, or design/construction issues.

A number of environmental management sub-plans and method statements support the CFEMP. Construction-related safe work method statements (SWMS) are the means by which specific requirements are addressed at an operational level.

5.2 Environmental Aspects and Impacts

Environmental activities and their corresponding aspects and impacts have been developed according to Blue Book procedures and are in the EHS Impacts and Hazards Risk Assessment.

Refer to the Project EHS Plan for further information.

5.3 Construction Environmental Objectives and Targets

5.3.1 Objectives and Targets

Environmental objectives and targets are set out in Appendix 6, and have been developed based on:

- requirements in statutory approvals;
- legislative requirements identified in Appendix 3;
- Section 3 of the Project EHS Plan; and
- significant environmental aspects and impacts.

Project objectives and targets are consistent with the Project Environmental Policy in Appendix 1. Objectives and targets may be amended as a result of new or revised operations, activities, and/or regulations.

Sub-plans include sections describing goals and intended outcomes for each topic area.

5.3.2 Compliance Management

Compliance during construction is managed through a system of monitoring, inspection, auditing and reporting, as set out in section 14 of the Project EHS Plan, and this CFEMP. Compliance with approvals, licence and permit, and Blue Book requirements are managed using:

- Non-conformance reports;
- Environmental site inspection reports;
- MCOA and EPL compliance tracking schedules; and
- EHS audit reports.

The EHS Manager (Environment) is responsible for managing compliance tracking schedules, which are based on registers in Appendix 2. Schedules are reviewed and updated as required for reporting.

Similarly, compliance with licences and permits is undertaken with compliance tracking schedules, to be prepared after licences and permits are issued.

5.4 Environmental Risk Assessment and Control Identification

5.4.1 Environmental Risk Assessment

EHS risk assessments of construction activities have been prepared using the EHS Impacts and Hazards Risk Assessment Guideline, and forms part of the overall SMT EHS Impacts and Hazards Risk Assessment, and precinct-based WAT EHS Impacts and Hazards Risk Assessment. The risk assessments form part of the Project EHS Plan.

The objectives of the EHS Impacts and Hazards Risk Assessment are to:

- identify activities, aspects, events or outcomes that have the potential to adversely affect the local environment;
- qualitatively evaluate and categorise each risk item;
- assess whether risk issues can be managed by environmental protection measures.

Relevant risks and measures identified during the risk assessment have been included in each of the sub-plans. The EHS Impacts and Hazards Risk Assessments identify environmental aspects, impacts and their associated risk or significance, and measures to reduce risk.

The EHS Impacts and Hazards Risk Assessments will be reviewed according to Blue Book procedures. Risk assessment is undertaken for all major activities and new works and activities. The EHS Manager (Environment) and EHS Co-ordinator are responsible for facilitating risk assessment in consultation with construction teams and specific subcontractors.

5.4.2 Safe Work Method Statements

SWMSs are used to assess safety and environmental risks associated with a specific activity and provide measures to reduce risk and ensure ongoing environmental compliance. These statements are aimed specifically for use by foremen and construction workers.

SWMSs are reviewed by each member of the work team before they commence work. This review provides an opportunity for the work team to contribute to environmental controls and to ensure that the work team is trained in environmental methods. Changes to the SWMSs are documented and communicated to workers prior to commencing the changed methods.

5.5 Environmental Management Sub-Plans

Sub-plans take into account environmental measures identified in, or required by, the MCOA or in reports submitted with the Planning Application for Remediation and Landforming Works (SSD5897-2013).

The purpose of sub-plans is to guide construction in a concise manner, by specifying measures to manage environmental impact. These measures are developed from analysis of aspects and impacts in the EHS Impacts and Hazards Risk Assessment, the EAs and other statutory requirements as specified in section 3. Details of environmental monitoring are defined in sub-plans, to quantify any impact and measure compliance with environmental obligations.

Sub-plans required for Barangaroo South and the Declaration Area outside Barangaroo South are listed in Figure 1 and Table 7. In addition to these sub-plans, a number of MCOA and EA requirements are included in other plans:

- Incident & Emergency Management Plan.
- Public Pollution Incident Response Management Plan.
- Community and Stakeholder Engagement Strategy.
- Traffic Management Plan.

Sub-plans are in a tabular format to provide a concise and comprehensible document for construction personnel. Wherever possible, duplication has been minimised and details such as aspects and impacts used to develop measures have been retained in appendices to the CFEMP or separate documents.

Each sub-plan addresses management of their respective issues with the following minimum content:

- goals and intended outcomes;
- legal & environmental obligations, guidelines and licence, permit and notification requirements;
- relevant environmental control measures, procedures and systems;
- responsibilities for implementation of measures;
- resources (materials/labour) needed to implement and maintain environmental control measures for all parties involved;
- monitoring procedures and requirements; and
- complaints handling and situation management.

5.6 Procurement Processes

All procurement for the project will be conducted in accordance with relevant Blue Book purchasing procedures. The key purchasing requirements are:

- procurement and contract documentation include environmental management requirements as applicable to the product or service. Where relevant, product or service guarantees are obtained.
- products, suppliers and sub-contractors are evaluated as to their capability to meet specified environmental requirements for the project.

5.7 Communication

While community and stakeholder issues are addressed primarily in the *Community and Stakeholder Engagement Strategy*, the following summarises the approach adopted by the project.

5.7.1 Internal Communication

Internal communication within the project team is described in Blue Book procedures, and in Sections 11 and 12 of the Project EHS Plan.

5.7.2 Pro-active Community, Authority and Stakeholder Management

A number of community members, interest or action groups, stakeholders and the general public have been identified as key interested parties in relation to the construction phase of this project. Communication objectives and methods for consulting with these groups are described in the *Barangaroo South Community and Stakeholder Engagement Strategy*.

This strategy will serve as a central tool to guide the consultation and engagement that will be undertaken during the construction phase of the project. This strategy provides an overview of communications tools to be utilised, principles governing engagement, objectives driving the consultation and the key audiences being targeted. The strategy will remain 'active' throughout the life of the project, capturing the changes to programme and will be updated as required to provide an accurate overview of the consultation activities being carried out.

Key aspects of the plan relating to stakeholder management are:

- Using public displays, signs, newsletters, meetings, briefings and fact sheets at the commencement of new stages of construction;
- Meetings with authorities such as SPC, BDA, Roads and Maritime Services and EPA;

- Meetings with specialist, action and interest groups;
- Letterbox drop notifications delivered to adjacent neighbourhoods.

5.7.3 Enquiries and Complaint Response

Reactive strategies for dealing with community issues are addressed in the Complaint Management Procedure. This procedure details the process for receipt, management, addressing and actioning the various forms of communication from stakeholders of the project. A chart showing how complaints are managed is shown in Figure 7, and timing of responses to complaints is shown in Table 9.

As described in this procedure, all community enquiries will be registered in the Customer Relationship Management consultation database. Information captured in the database includes:

- Name, address, contact telephone numbers (including mobiles);
- Time & date of contact;
- Type of contact (telephone, email or mail);
- Nature of the contact;
- Nature of the issue;
- Nature of response, and comments as appropriate;
- Status of the contact (whether it has been resolved).

Enquiries, comments, compliments and complaints will be received through any one of the communication channels available, which include:

- The 24 hour 1300 Enquiry Line number and project email address that are widely advertised through communications such as the newsletter, site signage, notifications and advertising.
- The Barangaroo South website which includes a portal for community members to register their details and have a member of the project team contact them.

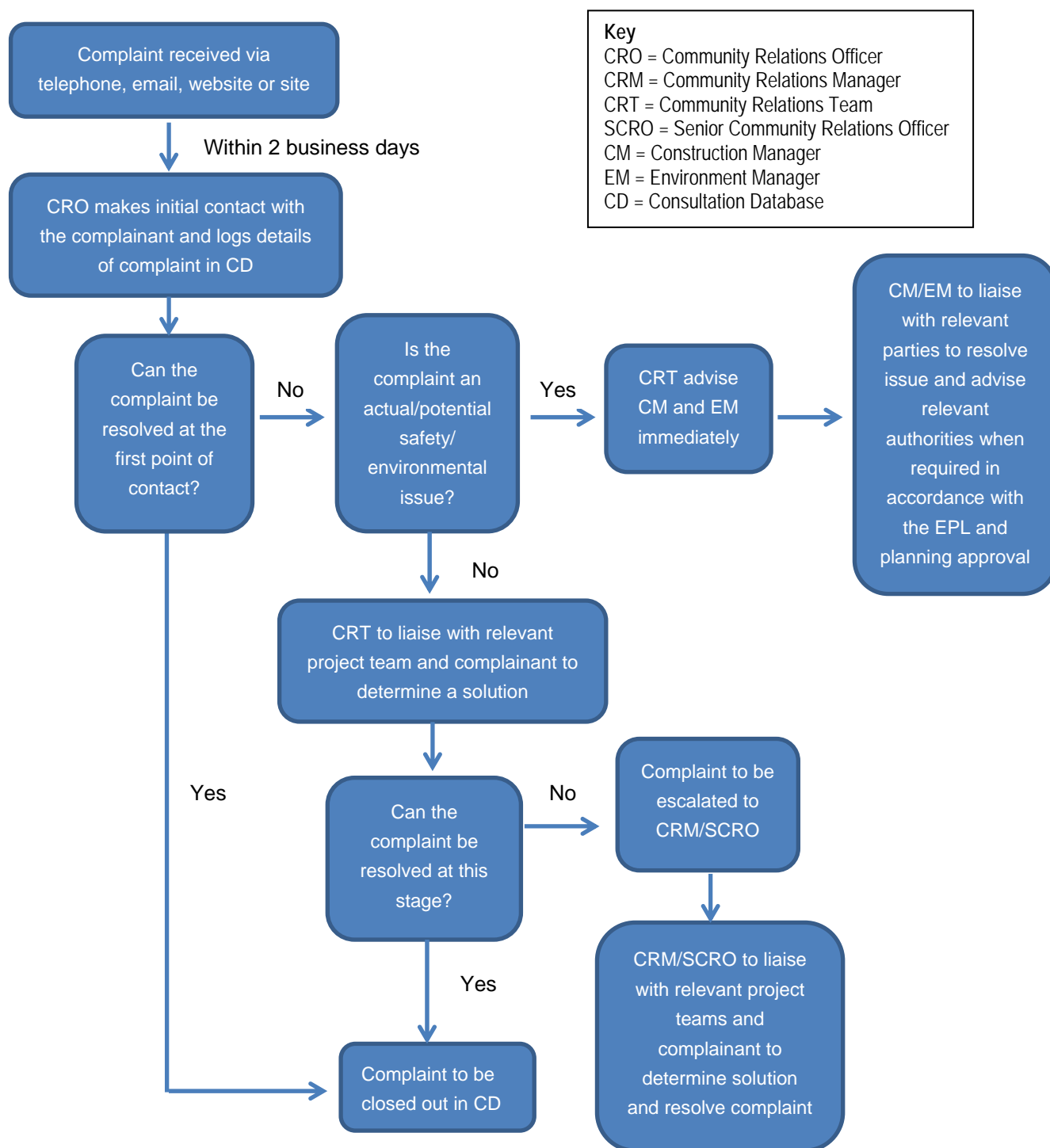
Any community member or stakeholder can approach workers on site (or at the gate house) who have been trained on the protocol to provide a project "Community Relations Card" which contains the details of the 1300 number and email address.

Between the hours of 8.30am and 5:00pm each day the 1300 Enquiry Line will be answered directly by Community Relations staff. Outside of these hours, a professional Contact Centre has been engaged as the initial point of contact for this Enquiry Line.

A detailed after hours response process is in place which involves a member of the Community Relations team being contacted by the Contact Centre if the matter is a construction related enquiry or complaint (as opposed to being expressions of interest from suppliers or enquiries about residential or commercial leasing). The community member will then be called back within a maximum of two hours to in order to address their issue or concern.

Mechanisms for complaint escalation are described in the Complaint Management Procedure.

Reports on all contacts and complaints can be generated through the Customer Relationship Management database on demand.

**Notes**

Status of complaint to be updated in Consultation Database on an ongoing basis

Complaint to be close out within five days whenever practical (excluding compensation claims, etc.)

Figure 7: Complaints Management Procedure

Table 9: Target Complaint Response Times

Communication method	Nature of enquiry and when received	Response time and nature of response
Phone calls or personal contact	Day time hours	An initial response will be provided within two business hours
	General – outside of construction hours	A professional Contact Centre is the initial point of contact and will escalate the matter to a Community Relations team member if the matter relates to a construction related complaint or enquiry.
Written communication – email, fax or letter	Any communication from a stakeholder.	Will be provided with a written response as soon as possible but within five business days unless otherwise discussed with stakeholder.

5.8 Project Induction and Training

Training will be undertaken as per Section 10 of the Project EHS Plan. An example Environmental Training Program is presented in Appendix 7.

5.8.1 Project Induction

The project induction outlines key environmental issues. As per Section 10 of the Project EHS Plan, all personnel working on the project, including sub-contractors, are required to complete the induction prior to starting work, and will be provided with identification to show they have been inducted. The environmental induction will be periodically reviewed for adequacy.

The project induction includes the following environmental aspects:

- key issues relating to the project and existing environment;
- relevant environmental requirements and relevant conditions of planning approvals and environmental licences;
- environmental policy and EMS;
- site specific issues, such as:
 - remedial action plan,
 - water treatment plant,
 - waste management and minimisation,
 - washing, refuelling and maintenance of vehicles, plant and equipment,
 - efficient use of plant, equipment and materials,
 - minimising potential environmental impacts including noise, air and water quality,
- site-specific erosion and sedimentation controls, and use of spill kits to contain spills;
- environmental emergency plans, and incident reporting procedures for environmental harm/incidents.

5.8.2 Task-Specific Training

Task-specific training is required before staff and sub-contractors can commence high risk activities. The EHS Manager (Environment) determines activities and personnel required to have specific instruction, when this training will take place, how it will be delivered and if there is a need to retrain personnel. This includes the following, if required:

- advanced training for staff monitoring and handling acid sulfate soils, by a specialist;
- training on working with contaminated soils and groundwater;
- training on noise minimisation for staff working out of hours;

- any other subjects listed in sub-plans.

The EHS Co-ordinator maintains a register of environmental training carried out including dates, names of people trained, and trainer details.

5.8.3 Toolbox Talks

Where deemed necessary, toolbox meetings and builders briefs are used to highlight specific environmental and community issues relevant to site personnel. A signoff sheet is completed by all personnel in attendance at toolbox meetings to acknowledge understanding of the information provided.

5.9 Incident Planning and Management

An incident is an uncontrolled event or violation with serious or potentially serious negative consequences to people, property, reputation or the environment. Under Section 148 of the *Protection of the Environment Operations Act 1997* (POEO Act), Lend Lease has a duty to immediately report pollution incidents causing or threatening *material harm* to the environment. Material harm is defined in Section 147 of the POEO Act as:

‘involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, and this loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment’.

Response to all incidents will be undertaken in accordance with the *Incident Management Chart* and *Incident & Emergency Management Plan*, *Public Pollution Incident Response Management Plan* and related procedures. Further information is provided in these documents, as well as in Section 13 of the Project EHS Plan.

Key personnel to contact in the event of environmental incidents are contained in the Public Pollution Incident Response Management Plan. The incident reporting procedures and contact hierarchy in the Incident Management Chart will be distributed all project personnel through a number of avenues.

6 MONITORING, INSPECTION & AUDITING ENVIRONMENTAL PERFORMANCE

6.1 Environmental Performance Monitoring

Project environmental performance is measured via regular environmental performance reviews. These are based on the measurable outcomes identified in each sub-plan. The reviews are used to assess progress in meeting environmental objectives and targets. The reviews are undertaken:

- at each key stage of the works,
- in response to new or revised project approvals,
- in response to major changes in site conditions or work methods.

6.2 Physical Environment Monitoring

The EHS Manager (Environment) is responsible for implementing the environmental monitoring program outlined in Appendix 8. The monitoring program is amended and updated to reflect the sub-plans and to any changes to monitoring.

Monitoring locations are defined in relevant sub-plans, and are agreed with EPA prior to monitoring commencing.

6.2.1 Background Environmental Monitoring

Background noise and air monitoring was undertaken by LLMP during the environmental assessment phase. Background water quality monitoring was undertaken by LLPMC over a six week period in October and November 2010.

6.2.2 Monitoring Equipment & Testing Procedures

Turbidity Monitoring

Monitoring stations using multi-probe sensors will be used to continuously monitor turbidity at fixed locations throughout the construction period. The monitoring stations are stand-alone systems on buoys, or fixed to wharves, powered by solar panels. Turbidity monitoring locations are shown in the *Water & Stormwater Management Sub-Plan*.

A correlation will be established between turbidity and total suspended solids (TSS) at a NATA-accredited laboratory. The correlation will be reviewed as needed throughout construction.

Readings from turbidity sensors are logged. Data is downloaded from the data logger to a computer, and combined with other parameters (current, depth, tide) to present the required information in the most suitable format for monthly reporting.

Sensors will be regularly maintained to prevent bio-fouling of probes, and repaired and calibrated whenever necessary to ensure a high degree of reliability of the system throughout the construction period. In the event that the equipment is damaged, lost or must be retrieved for maintenance or repair, comparable equipment will be installed at the same location as a temporary replacement.

Turbidity monitoring is described further in the *Water & Stormwater Management Sub-Plan*.

Water Quality Monitoring

Manual collection of samples and laboratory monitoring of treated water from the water treatment plant is required for parameters and frequencies specified in the EPA licence. Water quality monitoring is described in the *Water & Stormwater Management Sub-Plan*.

Environmental Noise Monitoring

Noise monitoring locations have been selected to be consistent with Environmental Assessments, and to be representative of sensitive receivers. Noise monitoring locations are shown in the *Noise & Vibration Management Sub-Plan*. This Sub-Plan will be updated to incorporate monitoring as part of the remediation of the Declaration Area, as recommended in the Construction Noise and Vibration Assessment for Remediation & Land Forming Project Application SSD5897-2013 (Wilkinson Murray, 2013).

Background noise monitoring has been undertaken at the locations to accurately determine the Rating Background Level (RBL). Construction noise goals and limits have then been determined based on requirements in EPA's Interim Construction Noise Guidelines (DECCW, 2009).

Continuous unattended noise monitoring will occur at fixed monitoring locations using a web-based monitoring system. Noise data and noise samples will be available in real-time, and data will be downloaded as needed for reporting purposes. Attended monitoring will be used to supplement this when required.

A calibrated sound level meter will also be available for attended noise measurements at other locations, or for certain situations.

Noise monitoring, and procedures for response to audible construction noise above criteria, is described in the *Noise & Vibration Management Sub-Plan*.

Air Quality Monitoring

Air quality monitoring will be undertaken using high-volume air samplers (HVAS), Tapered Element Oscillating Microbalance (TEOM), RaeGuards, Summa canisters and field olfactometers. These will be placed at monitoring locations surrounding the construction site, as shown in the *Air Quality & Odour Management Sub-Plan*. TEOM and RaeGuard monitoring will provide continuous air quality data. The Sub-Plan will be updated to incorporate monitoring as part of the remediation of the Declaration Area, as recommended in the Air Quality Impact Assessment for Remediation & Land Forming Project Application SSD5897-2013 (AECOM, 2013).

This equipment will be operated by an air quality specialist, and overseen by the EHS Manager (Environment). Analysis of dust will be undertaken at a laboratory and reported back to the EHS Manager (Environment) for assessment, reporting and any action required.

Odour monitoring will also be undertaken in accordance with the *Air Quality & Odour Management Sub-Plan*. Weather data will be collected from an on-site weather station.

Air quality monitoring is further described in the *Air Quality & Odour Management Sub-Plan*.

Acid Sulfate Soil Monitoring

Field screening of fill from locations identified as potentially containing acid sulfate soil will be undertaken using pH tests. Where field screening indicates possible acid sulfate soils, samples will be taken for laboratory testing at a NATA accredited laboratory. Depending on acid generation and buffering capacity results, spoil may be classed as potential or actual acid sulfate soils. Where acid sulfate soils are found, they will be treated and managed appropriately to ensure no impact upon the local environment.

Acid sulfate soil monitoring is further described in the *Acid Sulfate Soil Management Sub-Plan*.

Contamination Monitoring

LLMP and BDA/SHFA have previously undertaken situ soil and groundwater testing in the construction area to assist in preparation of Remedial Action Plans (RAPs) and Human Health and Environmental Risk Assessments (HHERAs).

In addition to in-situ soil and groundwater testing already undertaken, contaminant testing of soils will be undertaken as part of site validation and prior to any reuse at Headland Park, or reuse/disposal off-site. Validation sampling and testing is further described in Remedial Action Plans.

Detailed groundwater monitoring will be undertaken in accordance with the RAP prepared for the Declaration Area, including monitoring for either in-situ remediation or excavation works, as applicable.

6.2.3 Monitoring Reporting Procedure

Monitoring reports required in Appendix 8 will be prepared within one week of monitoring results being available, and are retained by the EHS Manager (Environment) for the duration of the project construction, and kept for five years after project completion. Monitoring reports indicate:

- date and time of monitoring;
- location of monitoring;
- equipment used and method of monitoring;
- results obtained;
- comparison of results with criteria in relevant sub-plan(s).

Environmental monitoring reports required for the EPL will be submitted to the BDA as the licence holder, for the BDA to submit to the EPA.

6.3 Environmental Inspections

The EHS Manager (Environment) is responsible for ensuring effective environmental inspections are carried out as specified in Appendix 8. Site inspections and weekly environmental inspections are documented in ProjectWeb.

6.4 Environmental Audits

Environmental audits will be conducted and reported in accordance with Section 11 of the Project EHS Plan and the Blue Book.

6.4.1 Internal Audits

Internal audits are carried out by LLPMC internal auditors. These include project EHS management systems audits, taking place quarterly. Project EHS Plan reviews are also undertaken six-weekly.

Audits are planned based on the project phase and the associated environmental risk. Timing of audits are documented in the internal audit schedule. Results of internal audits are distributed to the relevant Project Manager, Construction Manager, EHS Co-ordinator and EHS Manager (Environment).

6.4.2 External Audits

External audits may be undertaken by 3rd party auditors such as government authorities or accreditation agencies. Audits would be likely to cover compliance with project approvals, the environment protection licence, and / or ISO 14001:2004.

The results of external audits will be distributed to the relevant Project Manager, the Construction Manager and the EHS Manager (Environment).

6.4.3 Auditor Competency

Auditors must demonstrate compliance with the qualification criteria in AS/NZS ISO 19011:2002 Guidelines for quality and/or environmental management systems auditing.

6.4.4 Sub-Contractor Audits

Sub-contractor EHS Audits will take place six weeks from commencement on site, and then six monthly. Audits can include the entire subcontract scope of works, or some elements of it. The EHS Manager (Environment) may initiate audits at a greater frequency if performance is not in keeping with project objectives. Subcontractor audits will be undertaken by the EHS Manager (Environment) or other qualified staff.

6.5 Management Review

As per the Project EHS Plan, the project will be reviewed six-weekly. Project reviews assess the status/progress of the project and the plans, controls and tools being utilised to effectively progress the project, including:

- Site walk and project overview.
- EHS & sustainability.
- Client issues.
- Stakeholder engagement.
- Design & authorities issues.
- Programme & procurement.
- Workplace management plan.
- Administration & financials.
- Post-construction / finalisation including lessons learnt.
- Review minutes.

The Construction Manager is responsible for scheduling Project Reviews and the coordination and distribution of agendas, reports and minutes.

The following people are typically required to attend project reviews:

- Operations Manager, Project Manager, Construction Manager, Commercial Manager.
- General Foreman, Senior Project Engineer, Site Engineer, Project Engineer where required.
- Key support staff including EHS Manager (Environment), Finance Manager, as required.
- Other site staff as a training opportunity.

6.6 Non-Conformance, Corrective and Preventive Action

All corrective and preventative actions are undertaken in accordance with the Project EHS Plan and the Project Management Plan. Non-conformances and their rectification are recorded and communicated via ProjectWeb, which is LLPMC's online document management system and collaborative communication tool.

6.7 Documentation and Record Control

6.7.1 Documentation

Revisions to this plan, sub-plans and related documents are made as required, in accordance with planning approvals and changes in the project. The EHS Manager (Environment) reviews any outstanding issues and comments provided by authorities, or that have arisen during construction, and addresses these either:

- prior to commencement of any related activities or work; or
- at the next review of the plan, as outlined in the Project Management Plan.

6.7.2 Record Control

The EHS Manager (Environment) is responsible for maintaining legible environmental records to demonstrate compliance with Blue Book requirements and the CFEMP, including:

- monitoring and inspection reports;
- internal and external audit reports;
- reports of pollution incidents, environmental non-conformances and responses;
- reports of environmental complaints and follow-up action;
- site inspections;
- records of monitoring of subcontractors.

Records are filed electronically on ProjectWeb or the project's shared drive. Environmental records are held for at least five years after construction completion, and are accessible on request to authorised EPA officers.

7 REPORTING

Reporting will be undertaken as per Section 11 of the Project EHS Plan.

The EHS Manager (Environment) is responsible for managing the environmental reporting program and arranging specialist consultants to prepare reports, as required.

The environmental reporting program is attached in Appendix 9.

This includes LLPMC 'EnableOn' and 'Insight' environment databases which provide the platform for sustainability and environment reporting. 'EnableOn' is also used for certain types of incident reporting, as described in the Incident Management Chart.

Appendix 1

Policy Statement

Environment, Health & Safety

Project Management & Construction, Australia

Lend Lease is committed to operating Incident and Injury Free wherever we have a presence. We believe in the values and demand the behaviours that underpin this vision.

We believe each of us is accountable for safety and therefore expect our people to:

- Be accountable for safe outcomes and for helping others achieve safe outcomes.
- Role model safety leadership.
- Exercise integrity in moments of truth.
- Follow up and follow through.

We believe that safety must always come first and therefore expect that:

- Safety is our highest priority and first in all our business reviews and decisions.
- We do not compromise safety, irrespective of the market or the business opportunity.
- We have clear targets and milestones to continuously improve safety performance.

We believe that all incidents are preventable and therefore we:

- Demand and develop safety skills, behaviours and attitudes in everyone we work with.
- Reduce the need to rely on individual behaviours through planning and design solutions.
- Invest appropriately in safety.
- Follow simple, clearly-communicated minimum standards.
- Learn from and implement best practices.

Lend Lease recognises the significant part we have to play in the protection and enhancement of the environment in which we work and live. As a leading construction company, we can promote the use of responsible building techniques and sustainable resources in the delivery of our work as well as acting sustainably in our interaction with the communities in which we work. We recognise the legacy of our activities and we are accountable for what we take, what we create and what we leave behind.

We are committed to eliminating harm to people and minimising any environmental impact and will comply with all environmental work and health and safety legislation, regulation and other requirements as a minimum. We will move well beyond compliance to set new benchmarks in environmental, health and safety management wherever possible.

Lend Lease in Australia is committed to ongoing improvement in relation to environment, health and safety and therefore will continually monitor, analyse and learn from our performance. We commit all our operations in Australia to this policy.



Murray Coleman
Managing Director - Australia

Current as at July 2012



Lend Lease

Appendix 2

Appendix 2A: Environmental Requirements - MCOA

Barangaroo South – Minister's Conditions of Approval

1. MP10_0023 – Bulk Excavation & Basement Car Parking (environment-related conditions, including MOD1,3,4,5)

No.	Condition	Description	CFEMP Reference
Part A - Administrative Conditions			
A8	Site Contamination and Miscellaneous	<p>Prior to the commencement of any works:</p> <p>a) the HHERA and RAP must be prepared in accordance with guidelines produced or approved under s105 of the <i>Contaminated Land Management Act 1997</i>.</p> <p>b) the HHERA must be approved by DECCW, in accordance with guidelines produced or approved under s105 of the <i>Contaminated Land Management Act 1997</i>.</p> <p>c) the RAP must be approved jointly by DECCW and a NSW EPA accredited Site Auditor, in accordance with guidelines produced or approved under s105 of the <i>Contaminated Land Management Act 1997</i>.</p> <p>d) After the RAP is approved by DECCW and the Site Auditor it must be submitted to the Minister for Planning for final approval.</p>	RAP, HHERA
A8a	Remediation – Harbour Heat Rejection System	<p>1. All remediation works for the Harbour Heat Rejection System are to be undertaken in accordance with the following documents:</p> <p>a. Addendum to ORWS Amended RAP: Harbour Heat Rejection System Inlet Area, Barangaroo South, AECOM, 10 October 2012;</p> <p>b. Human Health and Ecological Risk Assessment: Harbour Heat Rejection System Inlet Area, Barangaroo South, AECOM, 28 September 2012;</p> <p>c. Letter from Site Auditor prepared by Environ Australia Pty Ltd dated 15 October 2012.</p> <p>2. Within 6 months of completion of remediation works, and prior to issue of any Occupation Certificate, the proponent shall submit a detailed Site Audit Summary Report, Site Audit Statement and Validation Report to the EPA (OEH), the Director-General, Certifying Authority, and the Council.</p> <p>3. The Site Audit must be prepared in accordance with the Contaminated Land Management Act 1997 and completed by a site auditor accredited by the EPA to issue site audit statements. The site audit must verify that the land is suitable for the proposed uses.</p> <p>4. The site auditor must also verify that any excavation material for use or disposal offsite, including but not limited to the Headland Park at Barangaroo, is managed appropriately and in compliance with the relevant legislation and any relevant approved materials management plans.</p> <p>5. On completion of remediation works, the relevant requirements of clause 17 and 18 of SEPP 55- Remediation of Land, being notification to Council, shall be complied with.</p>	RAP
A12	Barging/shipping of materials	Prior to the commencement of barging/shipping of materials from the site, the proponent shall update the Environmental Construction Management Plan, as outlined in the Statement of Commitments. All 'barging/shipping details must be reviewed by the EPA prior to the commencement of barging/shipping activities. Environment Protection Licence No 13336 must also be varied, where relevant, prior to the commencement of barging/shipping activities to ensure environmental impacts of this activity are appropriately regulated.	Not applicable at this stage
A13d	Temporary Concrete Batching Plant	<p>(d) Prior to the issue of a construction certificate for the installation and operation of the concrete batching plant, the proponent shall update the following Plans in accordance with the terms of the respective conditions and provide a copy to the department and the City of Sydney Council:</p> <p>a. C1 Construction Framework Environmental Management Plan</p> <p>b. C2 Waste Management Plan</p> <p>c. C3 Construction Noise and Vibration Management Plan</p> <p>d. C4 Stormwater and Water Management Plan (Note: the Stormwater and Water Management Plan is to be updated to incorporate the Soil and Water Management Plan prepared by Worley Parsons dated 31 August 2012 and the Water Management Plan prepared by Boral and dated 31 August 2012 to the satisfaction of the EPA).</p> <p>e. C5 Air Quality Management Plan (Note: the Air Quality Management Plan is to include a reactive monitoring and management program to the</p>	CFEMP and sub-plans

No.	Condition	Description	CFEMP Reference
		<p>satisfaction of the EPA).</p> <p>f. 04 Construction Traffic and Management Plan (Note: the Construction Traffic and Management Plan is to include swept path plans for the longest vehicle required to access the site for the concrete batching plant).</p> <p>All management, monitoring and mitigation measures incorporated into the endorsed plans, as relevant to the operation of the concrete batching plant, are to be fully implemented for the term of operation of the concrete batching plant.</p>	
A14	Harbour Heat Rejection System (HHR System)	<p>(a) Prior to the commencement of construction of the HHR System, the proponent shall update the following Plans in accordance with the terms of the respective conditions and provide a copy to the department and the City of Sydney Council:</p> <ul style="list-style-type: none"> a. C1 Construction Framework Environmental Management Plan b. C2 Waste Management Plan c. C3 Construction Noise and Vibration Management Plan. Note: the Construction Noise and Vibration Management Plan is to be updated to incorporate the construction noise and vibration management measures recommended in section 8.0 of the Construction Noise and Vibration Assessment (Report No. 10232 75W5 Version B) prepared by Wilkinson Murray. d. C4: Stormwater and Water Management Plan. Note: the Stormwater and Water Management Plan is to be updated to incorporate water quality monitoring requirements approved by the EPA. e. D4 Construction Traffic and Management Plan <p>All management, monitoring and mitigation measures incorporated into the endorsed plans, as relevant to the operation of the HHR System, are to be fully implemented for the term of construction and or/ operation, as relevant.</p> <p>(b) Notwithstanding condition A14(a) above, all relevant updated Environmental Management Plans associated with the installation and operation of the HHR System, in particular, elements related to the following, are to be submitted to the EPA for review and comment:</p> <ul style="list-style-type: none"> i. The heat rejection inlet construction strategy, including the silt curtain design and depth; and ii. Cooling water discharge quality validation and operational monitoring program. 	CFEMP and sub-plans
Part B - Prior To Issue Of A Construction Certificate			
B17	Pre-Construction Dilapidation Reports	The Proponent is to engage a qualified structural engineer or other suitably qualified professional to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure, roads and public domain areas. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate. A copy of the report is to be forwarded to the Department and Council.	Pre-Construction Dilapidation Report
B21	Dilapidation Survey	<p>A Dilapidation Survey of the following heritage items is to be undertaken (subject to the consent of the property owners):</p> <ul style="list-style-type: none"> (a) SLEP Schedule 8 Part 1 Item No 174: The former Grafton Bond Store at Hickson Road Millers Point; (b) SLEP Schedule 8 Part 1 item No. 376: The former Moreton's Hotel at 20-26 Sussex Street Sydney; (c) SLEP Schedule 8 Part 1 item No 186: The former MWS stores at 2-4 Jenkin Street (Part of 30-38 Hickson Road); (d) SLEP Schedule 8 Part 3 item No 60: The sandstone retaining wall at corner of Sussex Street and Napoleon Street. <p>A copy of the report is to be submitted to Director General, Council and Certifying Authority prior to the issue of relevant Construction Certificate.</p>	Dilapidation Survey Report
B24	Bio Fouling Arrangements for Harbour Heat Rejection System	<p>Prior to issue of a construction certificate for the HHR System, the proponent shall provide a further report to the EPA for review and comment, confirming the final bio-fouling arrangements for the HHR System.</p> <p>If the selected option includes the use of electro-chlorination and /or electrolysis of copper, the proponent is to obtain approval from the EPA. The report detailing this option is to include the results of the further investigations of this technology and its application at Barangaroo in accordance with the Worley Parsons Study Brief dated 04 January 2013.</p> <p>The report to the EPA associated with the use of electro-chlorination and/or electrolysis of copper, if it is to be part of the final bio-fouling arrangements for the HHR System, is also to include the following:</p> <ul style="list-style-type: none"> • proposed mitigation options and where viable, these options must be implemented as necessary to meet desired targets or to improve environmental outcomes. • flexibility in the cooling water system operation, and a review of the discharge structure design to enhance dilution and/or review of the bio-fouling 	HHR Biofouling Report

No.	Condition	Description	CFEMP Reference
		<p>methods. The flexibility in the HHR System design is also to include adaption as needed to respond to ecotoxicology results that may need to be obtained after construction. System flexibility will be important to ensure that the system can be adapted if needed based on the results obtained from the proposed validation study and operational water quality monitoring post construction.</p> <p>Note: the EPA has approved the HHR System bio-fouling arrangements proposing the use of Mexel or Hydrex chemical anti-fouling agents as the primary anti-fouling control as per the Australian Pesticides and Veterinary Medicines Authority registered dosing requirements for these products.</p>	
B25	Environmental Controls and Construction Details for the Harbour Heat Rejection System	<p>Prior to issue of a construction certificate for the HHR System, the proponent is to submit the following details to the EPA for review and comment:</p> <ul style="list-style-type: none"> • The proposed environmental controls for 'wet' area excavation works associated with the installation of the discharge pipes in to Darling Harbour; • Silt curtain placement, materials and depth of curtains to be used for the Harbour side excavation and piping works. 	Water & Stormwater Management Sub-Plan
B26	Testing & Validation on Completion of Construction of the Harbour Heat Rejection System	Prior to the issue of a construction certificate for the HHR System, the proponent is to consult with the EPA regarding their requirements for any systems testing and validation reports at the completion of construction of the HHR System. Any required test results and/or reporting is to be submitted for final review and comment by the EPA prior to the operation of the HHR System.	EPA consultation
Part C - Prior To Commencement Of Works			
C1	Construction Framework Environmental Management Plan	1. Prior to commencement of the works, the Proponent shall prepare a Construction Framework Environmental Management Plan (CFEMP) to be submitted to DECCW for review and comment, and to the Director General for approval. The CFEMP must:	CFEMP
		a. Describe the relevant stages and phases of construction including work program outlining relevant timeframes for each stage/phase.	Sections 2.1, 2.2
		b. Describe all activities to be undertaken on the site during site establishment and construction of the development	Sections 2.1, 2.2
		c. Clearly outline the stages/phases of construction that require ongoing environmental management monitoring and reporting.	Section 2.2
		d. Detail statutory and other obligations that the Proponent is required to fulfil during site establishment and construction, including approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies.	Section 3
		e. Include specific consideration of measures to address any requirements of DECCW during site establishment and construction.	Section 4.2
		f. Describe the roles and responsibilities for all relevant employees involved in the site establishment and construction of the works.	Sections 4.3, 4.4
		g. Detail how the environmental performance of the site preparation and construction works will be monitored, and what actions will be taken to address and identified adverse environmental impacts.	Sections 5.5, 6.1
		h. Documents all sub environmental management plans, studies and monitoring programs required in this approval.	Sections 5.5, 6.2
		i. Include arrangements for community consultation and complaints handling procedures during construction.	Section 5.7, Community & Stakeholder Engagement Strategy
		<p>2. The CFEMP and any sub plans should be revised:</p> <ul style="list-style-type: none"> > at each key stage of the works, > in response to future project approvals, > in response to major changes in site conditions or work methods, and > in support of licence variations as necessary. <p>A copy of any revised CFEMP is to be provided to the Director General.</p>	Sections 1, 2.1, 4.2
C2	Waste Management	Prior to the commencement of each stage of works, the Proponent must develop and submit to DECCW for review and comment a Spoil and Waste Management Sub Plan. The Plan must include (but not be limited to):	Spoil & Waste Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		<p>1. A stockpile, contamination soil and sediment management plan including (at a minimum):</p> <ul style="list-style-type: none"> a. Exact locations where contaminated (incl. Acid Sulphate Soils) and non-contaminated waste material will be stockpiled. Contaminated and non-contaminated waste material must be stockpiled separately and designated areas clearly marked and labelled (on plans and the ground); b. Details of how stockpiled contaminated waste material will be kept separate from non-contaminated waste material; c. Details of how runoff from stockpiled contaminated waste material will be kept separate from non-contaminated runoff; d. Details of measures to be employed to manage leachate runoff from all stockpiles, including bunding, sediment ponds and hay bales. The Plan should include locations of each control measure, its specifications and its capacity to cope with runoff from a designed storm event (to be determined in consultation with DECCW); e. The maximum proposed heights and volumes for each stockpile to reduce the potential for dust and odour and greater detail on stockpile stabilisation and covering to minimise odour and vapour emissions; f. Procedures for minimising the movement of waste material around the site and double handling; and g. Additional information detailing how materials proposed to be recycled / reused will be segregated on the site during operations. Particularly in relation to those wastes categorised as "Building" waste. <p>2. A detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.</p> <p>3. A commitment to retaining all sampling/classification results for life of project to demonstrate compliance with [Waste] Classification Guidelines.</p> <p>4. Details in relation to the "Concrete Crushing and Screening Plant" to be installed at the site and its use, including (at a minimum):</p> <ul style="list-style-type: none"> a. Location and specifications of the concrete crushing and screening plant; b. Estimated quantities of concrete to be crushed per day; c. Measures that will be employed to prevent or minimise the emission of dust from the crushing activity; d. Measures that will be employed to prevent or minimise the emission of noise from the crushing activity. <p>5. Details in relation to the transport of waste material around the site (on-site) and from the site, including (at a minimum):</p> <ul style="list-style-type: none"> a. A traffic plan showing transport routes from the southern to the northern end of the site; b. Location of the stockpiles at each stage as they migrate from the southern end of the site to the northern end of the site; c. Details of any garden waste mulching processes and garden waste stockpiles, including considerations for odour generation; d. A commitment to retain waste transport details for the life of the project to demonstrate compliance with the PoEO Act; and e. The name and address of each licensed facility that will receive waste from the Barangaroo site (if appropriate); <p>6. Details of the de-watering process, including the specifications for any on-site water treatment plant.</p> <p>7. A contingency plan for any event that may affect excavation and contaminated soil treatment operations at the site, particularly in relation to the expected volumes materials excavated/generated at the site.</p>	
C3	Noise And Vibration	<p>1. Prior to the commencement of each stage of works, the Proponent must develop and submit to DECCW for review and comment a detailed Construction Noise & Vibration Management Plan (CNVMP). The CNVMP should include but not necessarily limited to:</p> <ul style="list-style-type: none"> (a) identification of the specific activities that will be carried out and associated noise sources at the premises; (b) identification of all potentially affected sensitive receiver premises; 	Noise & Vibration Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		<p>(c) quantification of the rating background noise level (RBL) for sensitive receivers, as part of the CNVMP, or as undertaken in the EA;</p> <p>(d) the construction noise, ground-borne noise and vibration objectives derived from an application of the DECCW Interim Construction Noise Guideline (ICNG), as reflected in conditions of approval;</p> <p>(e) prediction and assessment of potential noise, ground-borne noise (as relevant) and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in the ICNG and conditions of approval;</p> <p>(f) where the objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts;</p> <p>(g) description of management methods and procedures, and specific noise mitigation treatments that will be implemented to control noise and vibration during construction;</p> <p>(h) where the noise management levels (NML) cannot be met, additional measures including, but not necessarily limited to, the following should be considered and implemented where practicable; reduced hours of construction, the provision of respite from noisy / vibration intensive activities, acoustic barriers / enclosures, alternative excavation methods or other negotiated outcomes with the affected community;</p> <p>(i) where night time noise management levels cannot be satisfied, a report shall be submitted to the Director General outlining the mitigation measures applied, the noise levels achieved and justification that the outcome is consistent with best practice;</p> <p>(j) measures to identify non-conformances with requirements of the CNVMP, and procedures to implement corrective & preventative action;</p> <p>(k) procedures for notifying residents of construction activities that are likely to effect their noise and vibration amenity;</p> <p>(l) measures to monitor noise performance and respond to complaints;</p> <p>(m) measures to reduce noise related impacts associated with offsite vehicle movements on nearby access/egress routes from the site;</p> <p>(n) reporting procedures for occasions of out of hours trade related works, including; hours worked, activities undertaken, justification that the works were essential, results of noise monitoring where undertaken, complaint and response data, corrective and preventative action to potentially avoid out of hours work occurrences and mitigate noise emissions above relevant noise management levels;</p> <p>(o) procedures to allow for regular professional acoustic input to construction activities and planning; and,</p> <p>(p) effective site induction, and ongoing training and awareness measures for personnel (e.g. Tool box talks, meetings etc).</p> <p>2. All construction work at the premises must be conducted between 7.00am and 6.00pm Monday to Friday and between 7.00am and 5.00pm Saturdays and at no time on Sundays and public holidays, unless inaudible at any residential premises. Works outside these hours are not permitted except as explicitly specified below or in other conditions and include:</p> <p>(a) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons;</p> <p>(b) emergency work to avoid the loss of lives, damage to property and/or to prevent environmental harm;</p> <p>(c) other works expressly approved by the Director General;</p> <p>(d) out of standard hours works identified in a CNVMP approved by the Director General.</p> <p>3. Construction noise management levels (NML) derived in accordance with the DECCW Interim Construction Noise Guidelines apply to this project, and are required to be identified in a CNVMP. Any activities that have the potential for noise emissions that exceed the NML's must be identified and managed in accordance with the Construction Noise and Vibration Management Plan. The Proponent must implement all Reasonable and Feasible noise mitigation and management measures with the aim of achieving the NML's.</p> <p>4. Vibration caused by construction and received at any sensitive receiver outside the proposal must be assessed against guidelines contained in DECCW publication "Environmental Noise Management - Assessing Vibration: a technical guideline" and in accordance with the CNVMP.</p>	

No.	Condition	Description	CFEMP Reference
C4	Water	<p><u>Stormwater and Water Management Plan</u></p> <ol style="list-style-type: none"> 1. Prior to the commencement of each stage of works, the Proponent must develop and provide to the DECCW for review and comment a Stormwater and Water Management Plan. 2. All groundwater from excavations must be collected, managed and/or treated in a manner that ensures it can be discharged to sewer or waters. 3. All water discharged from the site to Darling Harbour must comply with the table of limits (see Attachment 3 of DECCW letter to DoP dated 11 October 2010) unless otherwise agreed by DECCW. In addition to the limits (Attachment 3), a total suspended solids (TSS) limit of 50mg/l will be applied to the end of discharge pipe from the project water treatment plant. Monitoring of turbidity in Darling Harbour water adjacent to the project will be required. The locations for turbidity monitoring are to be agreed with DECCW and documented in the Stormwater and Water Management Plan. In the initial stages of the project an interim limit of 50mg/l for TSS would be applied at the monitoring locations. Procedures for visual monitoring for turbidity in adjacent Darling Harbour water and response measures are to be documented in the Stormwater and Water Management Plan. Silt curtain(s) should be employed during the site establishment and construction of the diaphragm wall. The length and location should be documented in the Stormwater and Water Management Sub Plan and agreed with DECCW prior to commencement of these works. Ongoing use of silt curtains in subsequent stages of the works is to be agreed with DECCW prior to the commencement of each subsequent stage. 4. Any discharge structure constructed to allow water to be discharged to Darling Harbour must include a discharge diffuser to allow for dilution. The discharge point must be inside an appropriately installed silt curtain arrangement. Details of dilution of discharge will be included in Stormwater & Water Management Plan. No water that is contaminated may be reused on site for dust suppression or other activities without being treated. 5. The water treatment plant must be designed to remove all relevant contaminants (including petroleum hydrocarbons, PAHs, BTEX, sediments and metals) to levels in the water management plan or as otherwise agreed by DECCW. 6. Untreated water must be held on site until results from monitoring are available for review until otherwise agreed by DECCW <p><u>Monitoring</u></p> <ol style="list-style-type: none"> 1. The water management plan must include a detailed proposal for monitoring water quality. 2. The monitoring program must include at least an on site program for waters held on site prior to discharge and an ambient monitoring program that checks water quality in Darling Harbour. 3. The monitoring on site program needs to cover all types of water on the site that needs to be discharged including clean stormwater, higher turbidity stormwater from areas without much soil contamination, stormwater that has been in contact with contaminated areas and contaminated groundwater from the excavations. 4. The monitoring of ambient waters must include an up & downstream/tide sampling location around the discharge structure as well as a reference location. Water to be discharged to Darling Harbour must be monitored on a daily basis for the first two weeks of operations. The monitoring frequency of subsequent discharges must be not less than weekly unless otherwise agreed by DECCW and/or permitted by licence conditions. 	Water & Stormwater Management Sub-Plan
C5	Air	<p><u>Air Quality Management Plan</u></p> <ol style="list-style-type: none"> 1. Prior to the commencement of each stage of works, the Proponent must develop and provide to the DECCW for review and comment an Air Quality Management Sub Plan. The Plan must include the following elements: <ul style="list-style-type: none"> • Relevant environmental criteria to be used in the day to day management of dust and volatile organic compounds (VOCs)/odour; • Mission statement, objectives and targets; • Dust and VOCs/odour management strategies; • Risk assessment; • Suppression improvement plan; • Monitoring requirements including assigning responsibility (for all employees and contractors); • Communication strategy; and • System and performance review for continuous improvement. 	Air Quality & Odour Management Sub-Plan

No.	Condition	Description	CFEMP Reference																																	
		<p>2. The AQMP must detail management practices for all best practice dust and VOC/odour controls for each source, including (but not limited to) all mitigation measures discussed in the EA (Barangaroo Site Excavation and Preparation Works, Appendix E – Chapter 9, 20 September 2010).</p> <p>3. The AQMP must detail the dust and odour monitoring program to be undertaken. These monitoring arrangements must include as a minimum, all monitoring specified in Chapter 9.3 of the EA (Barangaroo Site Excavation and Preparation Works, Appendix E – Chapter 9, 20 September 2010). Additionally, the monitoring program must also include monitoring of semi-volatile organic compounds (SVOCs) and speciated VOCs.</p> <p><u>Dust Generation</u></p> <p>4. All operations & activities occurring at the premises must be carried out in a manner that will minimise or prevent emission of dust from premises</p> <p>5. The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.</p> <p><u>Odour</u></p> <p>6. The Proponent must not cause or permit the emission of offensive odour beyond the boundary of the premises. Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the Proponent must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.</p> <p><u>Stockpile Management</u></p> <p>7. Maintain all stockpiles manageable sizes which allow them to be covered, if necessary, to control emissions of dust and/or VOCs and/or odour.</p> <p><u>Emission Control System for Treatment Tents</u></p> <p>8. Prior to the commencement of the relevant stage of works where Treatment Tents will be utilised a detailed design plan of the Emission Control System is to be submitted to the DECCW for review and comment. The detailed design plan is to include, but not be limited to, the following information:- Manufacturer's performance specifications which include the particle and VOC control efficiency of the proposed technology;- Proposed monitoring to continuously confirm the performance of the proposed VOC control technology; and- If appropriate, proposed methodology to detect carbon bed breakthrough.</p> <p><u>Stack Emission Limits</u></p> <p>9. Air emissions from the plant must comply with the limits set out in the following table:</p> <table><tr><th>Emission Point(s)</th><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Averaging period</th></tr><tr><td>Treatment tent 1</td><td>Solid Particles</td><td>milligrams per normal cubic metre</td><td>20</td><td>Dry, 273 K, 101.3 kPa</td><td>As per test method</td></tr><tr><td>Treatment tent 2</td><td>Solid Particles</td><td>milligrams per normal cubic metre</td><td>20</td><td>Dry, 273 K, 101.3 kPa</td><td>As per test method</td></tr></table> <p><u>Monitoring Conditions</u></p> <p>10. The Proponent must undertake monitoring as set out in the following table:</p> <table><tr><th>Emission Point(s)</th><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Treatment tent 1</td><td>Solid Particles</td><td>milligrams per normal cubic metre</td><td>Special Frequency</td><td>TM-15</td></tr><tr><td>Treatment tent 2</td><td>Solid Particles</td><td>milligrams per normal cubic metre</td><td>Special Frequency</td><td>TM-15</td></tr></table>	Emission Point(s)	Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Averaging period	Treatment tent 1	Solid Particles	milligrams per normal cubic metre	20	Dry, 273 K, 101.3 kPa	As per test method	Treatment tent 2	Solid Particles	milligrams per normal cubic metre	20	Dry, 273 K, 101.3 kPa	As per test method	Emission Point(s)	Pollutant	Units of measure	Frequency	Sampling Method	Treatment tent 1	Solid Particles	milligrams per normal cubic metre	Special Frequency	TM-15	Treatment tent 2	Solid Particles	milligrams per normal cubic metre	Special Frequency	TM-15	
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No.	Condition	Description	CFEMP Reference
		<p><i>Note:</i> Special Frequency means post-commissioning, followed by every alternative month.</p> <p>11. The applicant must ensure that the design and construction of the facility includes sampling positions that comply with TM-1 as set out in the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW or as agreed with DECCW.</p>	
C10	Vehicle Cleansing	Prior to the commencement of work, suitable measures are to be implemented to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site. It is an offence to allow, permit or cause materials to pollute or be placed in a position from which they may pollute waters.	Water & Stormwater Management Sub-Plan
Part D- During Construction			
D1	Archaeological Discovery During Excavation	(a) Archaeological investigations should be carried out in accordance with the following reports by appropriately qualified archaeologists during excavation works: > Archaeological Research Design and Management Strategy prepared by Casey & Lowe dated May 2010; > Non-indigenous Archaeological Assessment prepared by Casey & Lowe dated June 2010; > Aboriginal Archaeological and Cultural Heritage Assessment prepared by Comber Consultants dated May 2010; > Aboriginal Archaeological Management Plan and Research Design prepared by Comber Consultants dated May 2010;	Archaeological Research Design & Mgmt Strategy Aboriginal Archaeological Management Plan & Research Design
		(b) Should any historical relics likely to be of significance be unexpectedly discovered on the site during excavation that are above and beyond those already identified and assessed in the reports noted above in item (a), all excavation or disturbance to the area is to stop immediately and the Heritage Council of NSW should be informed in accordance with section 146 of the Heritage Act 1977.	Spoil & Waste Management Sub-Plan
		(c) Should any Aboriginal relics be unexpectedly discovered that are above and beyond those already identified and assessed in the reports noted above in item (a), then all excavation or disturbance of the area is to stop immediately and the National Parks and Wildlife Service is to be informed in accordance with Section 91 of the National Parks and Wildlife Act 1974.	Spoil & Waste Management Sub-Plan
		(d) Any relics found on site that are capable of being included in the site's heritage interpretation or public art, are to be kept safe for consideration of their incorporation into site fixtures.	Spoil & Waste Management Sub-Plan
D3	Covering Of Loads	All vehicles involved in the excavation and/or demolition process and departing the property with demolition materials, spoil or loose matter must have their loads fully covered before entering the public roadway.	Spoil & Waste Management Sub-Plan
D5	Demolition, Excavation And Construction Management	<p>(a) Prior to commencement of demolition and/or excavation the following details must be submitted to and be approved by the Certifying Authority:</p> <p>(i) A Demolition Work Method Statement prepared by a licensed demolisher who is registered with the Work Cover Authority. (The demolition by induced collapse, the use of explosives or on-site burning is not permitted.)</p> <p>(iii) An Excavation Work Method Statement prepared by an appropriately qualified person.</p> <p>(iv) A Waste Management Plan for the demolition and or excavation of the proposed development.</p> <p>(b) Such statements must, where applicable, comply with AS2601-1991 Demolition of Structures, Construction Safety Act 1912 and Demolitions Regulations; Occupational Health & Safety Act 2000 & Regulation; Council's Policy for Waste Minimisation in New Developments 2005, Waste Minimisation & Management Act 1995, and all relevant acts & regulations and must include provisions for:</p> <p>(i) A Materials Handling Statement for removal of refuse from the site in accordance with Waste Minimisation & Management Act 1995.</p> <p>(ii) The name and address of the company/contractor undertaking demolition/excavation works.</p> <p>(iii) The name and address of the company/contractor undertaking off site remediation/disposal of excavated materials.</p> <p>(iv) The name and address of the transport contractor.</p> <p>(v) The type and quantity of material to be removed from site.</p> <p>(vi) Location and method of waste disposal and recycling.</p> <p>(vii) Proposed truck routes, in accordance with this development approval.</p>	<p>Spoil & Waste Management Sub-Plan</p> <p>Note that the <i>Construction Safety Act 1912</i>, <i>Waste Minimisation & Management Act 1995</i> and <i>Occupational Health & Safety Act 2000</i> are repealed.</p>

No.	Condition	Description	CFEMP Reference
		<p>(viii) Procedures to be adopted for prevention of loose or contaminated material, spoil, dust and litter being deposited onto public way from trucks & associated equipment and method of cleaning surrounding roadways from such deposits. (<i>Note: With regard to demolition of buildings, dust emission must be minimised for the full height of buildings. A minimum requirement is that perimeter scaffolding, with chain wire and shade cloth must be used, together with continuous water spray during demolition. Compressed air must not be used to blow dust from the building site).</i></p> <p>(ix) Measures to control noise emissions from the site.</p> <p>(x) Measures to suppress odours.</p> <p>(xi) Enclosing and making the site safe.</p> <p>(xii) Suitable Public Liability Insurance as reasonably required by the relevant authority for the duration of the demolition works.</p> <p>(xiii) Induction training for on-site personnel.</p> <p>(xiv) Written confirmation that an appropriately qualified Occupational Hygiene Consultant has inspected the building/site for asbestos, contamination and other hazardous materials, in accordance with the procedures acceptable to Work Cover Authority.</p> <p>(xv) An Asbestos and Hazardous Materials Clearance Certificate by a person approved by the Work Cover Authority.</p> <p>(xvi) Disconnection of utilities.</p> <p>(xvii) Fire Fighting. (Fire fighting services on site are to be maintained at all times during demolition work. Access to fire services in the street must not be obstructed).</p> <p>(xviii) Access and egress. (Demolition and excavation activity must not cause damage to or adversely affect the safe access and egress of the subject building or any adjacent buildings).</p> <p>(xix) Waterproofing of any exposed surfaces of adjoining buildings.</p> <p>(xx) Control of water pollution and leachate & cleaning of vehicles tyres (as per Protection of the Environment Operations Act 1997).</p> <p>(xxi) Working hours, in accordance with this development approval.</p> <p>(xxii) Any Work Cover Authority requirements.</p> <p>The approved work method statements and a waste management plan as required by this condition must be implemented in full during the period of construction.</p>	
D6	Protection Of Street Trees During Construction	All relevant street trees adjacent to the site not approved for removal must be protected at all times during demolition and construction, in accordance with Council's Tree Preservation Order. Details of methods of protection must be submitted to and be approved by Council prior to the issue of the relevant Construction Certificate and such approval should be forwarded to the Certifying Authority. All approved protection measures must be maintained for the duration of construction and any tree on the footpath which is damaged/removed during construction must be replaced.	Tree Management Sub-Plan
D10	Covering Of Loads	All vehicles involved in the excavation and/or demolition process and departing the property with demolition materials, spoil or loose matter must have their loads fully covered before entering the public roadway.	Spoil & Waste Management Sub-Plan
Part E - Post Construction			
E2	Vehicles Enter/Leave In Forward Direction	All vehicles must always be driven onto and off the site in a forward direction.	Noise & Vibration Management Sub-Plan
Advisory Notes			
AN1	Hazardous Material Immobilisation	If any soil needs disposal offsite then it will need to comply with Waste Classification Guidelines. These guidelines may indicate the material will need to be immobilised prior to disposal. If this is the case, the Proponent must apply to DECCW for a site specific immobilisation approval.	Spoil & Waste Management Sub-Plan
AN2	Temporary Dewatering	Licenses under Part 5 of the Water Act 1912 may be required for the purpose of temporary dewatering as part of the proposed construction and excavation. Further consultation is to be undertaken with the NSW Office of Water and any required licences are to be obtained prior to the issue of the relevant Construction Certificate.	Water & Stormwater Management Sub-Plan

1a. Conditions of Approval under Condition C3(2)(C) of MP10_0023

Relating to bulk shipping, dated 10/07/2012

No.	Condition	Description	CFEMP Reference
A1	Time Limited Approval	The granting of extended construction hours for ship loading activities is limited to a period of no more than 30 weeks, commencing from either the date of this approval, or from the first day that loading activities begin, whichever is later. All ship loading activities must cease after this date.	Not applicable at this stage
A2	Construction Hours - Loading Of Excavated Material	All ship loading activity on site is permitted between 6.00 am and 12 midnight, Monday to Saturday, and between 9am and 7pm, Sunday. No ship loading activities of any kind are permitted on Sundays before 9am and after 7pm. No ship loading activities of any kind are permitted on public holidays.	Not applicable at this stage
A3	Loading Activities/ Works	<p>Loading activities that are permitted to be undertaken are restricted to the following:</p> <ol style="list-style-type: none"> 1. Operation of front end loaders and/or excavators to load stockpiled material into conveyor hoppers. 2. Operation of ship loading conveyors between the excavation area and the ship. 3. Personal access to and from the ship. 4. Basic conveyor maintenance (if in the event of a breakdown). 5. On site supervision and first aid. <p>No other forms of work or construction activity are permitted to take place outside of the normal approved hours outlined in Condition C3(2) of the Instrument of Approval.</p>	Not applicable at this stage
A4	Variation to Environment Protection Licence No.13336	No ship loading activities are permitted to take place until a variation to Environment Protection Licence No.13336 has been granted by the Environment Protection Authority.	Not applicable at this stage
A5	Revision of CFEMP	The Construction Framework Environmental Management Plan shall be revised to include all activities associated with loading of spoil and incorporate any conditions (where relevant) of the Director-General's approval pursuant to Condition C3(2)(c). A copy of the revised plan shall be provided to the department.	Not applicable at this stage
A6	Noise and Air Monitoring Reports	<p>Throughout the duration of all ship loading activities, noise and air quality monitoring shall be conducted. After each month of ship loading operations, a summary report shall be provided to the Director-General within 7 days outlining the results of the monitoring, including whether there have been any noise goal or air quality criteria exceedences, and identification of any circumstances in which the environmental impacts have not been generally in accordance with the environmental performance predicted in the documents submitted to the Director-General.</p> <p>The report shall identify mitigation measures which have been used to satisfactorily resolve incidents, and which will prevent a recurrence of exceedences in the future. A copy of the complaints register as required by Condition A7, and details of how these complaints (if any) were addressed and resolved also needs to be included in the report.</p>	Not applicable at this stage
A7	Complaints Procedure	<p>Prior to commencement of ship loading activities, the proponent must ensure that the following facilities are available to handle community complaints.</p> <ol style="list-style-type: none"> 1. A 24-hour, toll free telephone number on which complaints may be registered. 2. A postal address to which written complaints may be sent 3. An email address to which electronic complaints may be registered. <p>The proponent shall ensure that the telephone number, postal address and email address are advertised to the local community and affected neighbouring properties prior to the commencement of ship loading operations.</p>	Not applicable at this stage
A8	Incident Reporting	The proponent must notify the EPA and the Director-General of any incident with actual or potential significant off-site impacts on people or the environment as soon as practicable upon the proponent becoming aware of the incident. The proponent must provide full written details of the incident to the EPA and the Director-General within 7 days of the date on which the incident occurred.	Not applicable at this stage

2. MP10_0025 – Commercial Building C4 (environment-related conditions, including MODS1,2,3)

No.	Condition	Description	CFEMP Reference
Part A - Administrative Conditions			
A7	Remediation Action Plan (RAP) and Human Health Ecological Risk Assessment (HHERA)	<p>(1) All remediation works are to be undertaken in accordance with the following Remedial Action Plan (RAP) and Human Health Ecological Risk Assessments (HHERA):</p> <p>(a) 'Human Health and Ecological Risk Assessment, Declaration Site (Development Works) Remediation Works Area - Barangaroo', AECOM, 9 June 2011.</p> <p>(b) 'Human Health and Ecological Risk Assessment Addendum, Other Remediation Works (South) 8arangaroo', AECOM, 4 July 2011.</p> <p>(c) 'Amended Remedial Action Plan, 8arangaroo - ORWS Area', AECOM, 7 July 2011, and as approved by the Minister for Planning and Infrastructure on 17 August 2011.</p> <p>(2) The Proponent shall progressively validate the relevant remediation works to the satisfaction of the site auditor. Interim advice letters from a NSW EPA accredited site auditor must be submitted to the Director-General, City of Sydney Council and the EPA on completion of each staged sign-off in line with the letter from Environ referred AS121111 and dated 7 November 2012.</p> <p>(3) Within 6 months of the completion of the remediation works within the project site, and prior to the issue of any Occupation Certificate, the proponent shall submit a detailed Site Audit Summary report and Site Audit Statement and Validation Report to the EPA, the Director General, the Certifying Authority, and City of Sydney Council.</p> <p>(4) The site audit must be prepared in accordance with the Contaminated Land Management Act 1997 and completed by a site auditor accredited by the EPA to issue site audit statements. The site audit must verify that the land is suitable for the proposed uses.</p> <p>(5) The site auditor must also verify that any excavated material for use or disposal offsite, including but not limited to the Headland Park at Barangaroo, is managed appropriately and in compliance with relevant legislation and any relevant approved materials management plans.</p> <p>(6) On completion of remediation works, the relevant requirements of clauses 17 and 18 of SEPP 55 - Remediation of Land, being notification to the Council, shall be complied with.</p>	RAP, HHERA
Part B - Prior To Issue Of The Relevant Construction Certificate			
B15	Acid Sulphate Soil Management Plan	An Acid Sulphate Soil Management Plan shall be prepared by a suitably qualified person in accordance with the Acid Sulphate Soil Assessment Guidelines (Acid Sulphate Soil Management Advisory Committee, 1998). The Management Plan shall be submitted to the Certifying Authority prior to the issue of a relevant Construction Certificate.	Acid Sulfate Soil Management Sub-Plan
B16	Pre-Construction Dilapidation Reports	<p>The Proponent is to engage a suitably qualified person to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure and roads. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.</p> <p>A copy of the report is to be forwarded to the Director General and Council.</p>	Pre-Construction Dilapidation Report
B19	Water and Stormwater Management Plan/Sub Plan	Prior to the issue of a relevant Construction Certificate, an updated Water and Stormwater Management Plan prepared by a suitably qualified person shall be submitted to the satisfaction of DECCW, and approved by the Certifying Authority. Any effluents/liquid waste streams associated with the construction of the building that are directed to the site Wastewater Treatment Plant are treated sufficiently to ensure compliance with all concentration limits required by Environmental Protection Licence 13336 prior to discharge to Darling Harbour.	Water and Stormwater Management Sub-Plan
B20	Construction Noise & Vibration Mgmt Plan	Prior to the issue of a relevant Construction Certificate, a Construction Noise and Vibration Management Plan prepared in accordance with the Statement of Commitments in Schedule 3 shall be submitted to DECCW for review and comment and submitted to the Certifying Authority.	Noise and Vibration Management Sub-Plan
B21	Waste Management Plan	Prior to the issue of a relevant Construction Certificate, an updated Waste Management Plan prepared by a suitably qualified person shall be submitted to DECCW for their review and comment, and approved by the Certifying Authority.	Spoil & Waste Management Sub-Plan
B22	Erosion and Sedimentation Control	Soil erosion and sediment control measures shall be designed in accordance with Managing Urban Stormwater – Soils & Construction Vol1 (2004) by Landcom. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.	Water and Stormwater Management Sub-Plan

No.	Condition	Description	CFEMP Reference
B28	Sustainability Rating	The building shall be designed to achieve a minimum 6 Star Green Star design rating under version 3 of the Green Building Council of Australia's Office Rating Tool. Prior to the issue of a relevant Construction Certificate, the Proponent shall submit details to the Certifying Authority demonstrating compliance with this requirement.	CFEMP Appendix 10
Part C - Prior To Commencement Of Works			
C1	Environmental Protection Licence	Prior to the commencement of works, the Proponent must ensure that the existing Environmental Protection Licence (EPL) issued to the Barangaroo Delivery Authority is varied, where required, to reflect and permit the works conducted on site. All works undertaken on site must be done in a manner which ensures compliance with EPL conditions at all times.	EPL 13336
C2	Environmental Construction and Site Management Plan	Prior to the commencement of works, the Proponent must prepare an updated Environmental Construction and Site Management Plan (ECSMP) consistent with the Statement of Commitments in Schedule 3. The ESMP is to be submitted to DECCW for review and comment and to the Director General for approval.	CFEMP
C5	Removal of Hazardous Materials	All hazardous materials shall be removed from the site and shall be disposed of at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works. Details demonstrating compliance with the relevant legislative requirements, particularly the method of containment and control of emission of fibres to the air, are to be submitted to the satisfaction of the PCA prior to the removal of any hazardous materials.	Records from demolition undertaken under MP07_0077
C6	Site Audit	Prior to the commencement of building works, a Site Audit conducted by a suitably qualified person shall be undertaken to ascertain that all identified hazardous materials have been removed from the site and shall be submitted to the PCA.	Records from demolition undertaken under MP07_0077
Part D – During Construction			
D1	Hours of Work	The hours of construction, including the delivery of materials to and from the site, shall be restricted as follows: (1) between 7:00 am and 7:00 pm, Mondays to Fridays inclusive; (2) between 7:00 am and 5:00 pm, Saturdays; (3) no work on Sundays and public holidays. Works outside these hours are not permitted except as explicitly specified below or in other conditions and include: (a) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons; (b) emergency work to avoid the loss of lives, damage to property and/or to prevent environmental harm; (c) other works expressly approved by the Director General; (d) out of standard hours works identified in a CNVMP approved by the Director General.	Noise and Vibration Management Sub-Plan
D2	Erosion and Sediment Control	All erosion and sediment control measures, as designed in accordance with Condition B23, are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Water and Stormwater Management Sub-Plan
D3	Disposal of Seepage and Rainwater	Any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system unless separate prior approval is given in writing by the relevant authority.	Water and Stormwater Management Sub-Plan
D9	Protection of Street Trees	All street trees shall be protected at all times during construction. In the event that any tree on the footpath is damaged or removed during construction it shall be replaced to the satisfaction of the relevant authority.	Tree Management Plan
D10	Dust Control Measures	Adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood during construction. In particular, the following measures must be adopted: (1) Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions, (2) Earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed,	Air Quality and Odour Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		(3) All materials shall be stored or stockpiled at the best locations, (4) The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs, (5) All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material, (6) All equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays, (7) Gates shall be closed between vehicle movements and shall be fitted with shade cloth, and (8) Cleaning of footpaths and roadways shall be carried out regularly.	
D11	Vibration Criteria	Vibration caused by construction at any residence or structure outside the subject site must be limited to: (1) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and (2) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6472- Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80 Hz) for low probability of adverse comment. These limits apply unless otherwise approved in the Construction Noise and Vibration Management Plan.	Noise and Vibration Management Sub-Plan
D12	Vibration Management	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above.	Noise and Vibration Management Sub-Plan
D13	Noise Management	For the duration of the works noise must be managed in accordance with the approved Construction Noise and Vibration Management Plan.	Noise and Vibration Management Sub-Plan
D14	Air Emissions Management	For the duration of the works air emissions must be managed in accordance with the Air Quality and Odour Management Plan and Statement of Commitments in Schedule 3.	Air Quality and Odour Management Sub-Plan
D15	Waste	The Proponent must ensure that all waste generated on site during construction and operation is classified in accordance with DECCW's Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes and disposed of to a facility that may lawfully accept waste.	Spoil & Waste Management Sub-Plan
D16	Waste Management	For the duration of the works noise must be managed in accordance with the approved Waste Management Plan.	Spoil & Waste Management Sub-Plan
D17	Impact Of Below Ground (Sub-Surface) Works – Non-Aboriginal Objects	If any archaeological relics are uncovered during the course of the work, then all works shall cease immediately in that area and the Department of Planning's Heritage Branch contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the NSW Heritage Act 1977 may be required before further works can continue in that area.	Spoil & Waste Management Sub-Plan
D18	Impact Of Below Ground (Sub-Surface) Works – Aboriginal Objects	If any Aboriginal archaeological objects are exposed during construction works, the Proponent shall immediately notify the National Parks and Wildlife Service and obtain any necessary approvals to continue the work. The Proponent shall comply with any request made by the NPWS to cease work for the purposes of archaeological recording.	Spoil & Waste Management Sub-Plan
D19	Recycling Of Concrete	Any existing concrete of suitable volume, which is not used as fill, shall be taken to a concrete recycling works and evidence that this has occurred shall be provided to the PCA.	Spoil & Waste Management Sub-Plan
D20	Compliance Report	The Proponent, or any party acting upon this approval, shall, for the duration of construction period, submit to the Department a three monthly report addressing compliance with all relevant conditions of this Part.	Compliance Reports

3. MP11_0044 – Commercial Building C3 (environment-related conditions, including MOD1)

No.	Condition	Description	CFEMP Reference
Part A - Administrative Conditions			
A7	Remediation Action Plan (RAP) and Human Health Ecological Risk Assessment (HHERA)	<p>(1) All remediation works are to be undertaken in accordance with the following Remedial Action Plan & Human Health Ecological Risk Assessments:</p> <p>(a) <i>Human Health & Ecological Risk Assessment, Declaration Site (Development Works) Remediation Works Area</i>, AECOM, 9 June 2011.</p> <p>(b) <i>Human Health and Ecological Risk Assessment Addendum, Other Remediation Works (South)</i>, AECOM, 4 July 2011.</p> <p>(c) <i>Amended Remedial Action Plan, Barangaroo - ORWS Area</i>, AECOM, 7 July 2011, and as approved by the Minister for Planning and Infrastructure on 17 August 2011.</p> <p>(2) The Proponent shall progressively validate the relevant remediation works to the satisfaction of the site auditor. Interim advice letters from a NSW EPA accredited site auditor must be submitted to the Director-General, City of Sydney Council and the EPA on completion of each staged sign-off in line with the letter from Environ referred AS121111 and dated 7 November 2012.</p> <p>(3) Within 6 months of the completion of the remediation works within the project site, and prior to the issue of any Occupation Certificate, the proponent shall submit a detailed Site Audit Summary report and Site Audit Statement and Validation Report to the EPA, the Director General, the Certifying Authority, and City of Sydney Council.</p> <p>(4) The site audit must be prepared in accordance with the Contaminated Land Management Act 1997 and completed by a site auditor accredited by the EPA to issue site audit statements. The site audit must verify that the land is suitable for the proposed uses.</p> <p>(5) The site auditor must also verify that any excavated material for use or disposal offsite, including but not limited to the Headland Park at Barangaroo, is managed appropriately and in compliance with relevant legislation and any relevant approved materials management plans.</p> <p>(6) On completion of remediation works, the relevant requirements of clauses 17 and 18 of SEPP 55 - Remediation of Land, being notification to the Council, shall be complied with.</p>	RAP, HHERA
Part B - Prior To Issue Of The Relevant Construction Certificate			
B14	Acid Sulphate Soil Management Plan	An Acid Sulphate Soil Management Plan shall be prepared by a suitably qualified person in accordance with the Acid Sulphate Soil Assessment Guidelines (ASSMAC, 1998). The Management Plan shall be submitted to Certifying Authority prior to issue of a relevant Construction Certificate.	Acid Sulfate Soil Management Sub-Plan
B15	Pre-Construction Dilapidation Reports	The Proponent is to engage a suitably qualified person to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure and roads. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate. A copy of the report is to be forwarded to the Director General and Council.	Pre-Construction Dilapidation Report
B18	Water and Stormwater Management Plan/Sub Plan	Prior to the issue of a relevant Construction Certificate, an updated Water and Stormwater Management Plan prepared by a suitably qualified person shall be submitted to the satisfaction of EPA, and approved by the Certifying Authority. Any effluents/liquid waste streams associated with the construction of the building that are directed to the site Wastewater Treatment Plant are treated sufficiently to ensure compliance with all concentration limits required by Environmental Protection Licence 13336 prior to discharge to Darling Harbour.	Water and Stormwater Management Sub-Plan
B19	Construction Noise and Vibration Management Plan	Prior to the issue of a relevant Construction Certificate, a Construction Noise and Vibration Management Plan prepared in accordance with the Statement of Commitments in Schedule 3 shall be submitted to the EPA for review and comment and submitted to the Certifying Authority. This Plan must be consistent with all of the relevant requirements of the Environment Protection Licence number 13336.	Noise and Vibration Management Sub-Plan
B20	Waste Management Plan	Prior to issue of a relevant Construction Certificate, an updated Waste Management Plan prepared by a suitably qualified person shall be submitted to EPA for their review and comment, and approved by the Certifying Authority. This Plan must be consistent with all relevant requirements of EPL 13336.	Spoil & Waste Management Sub-Plan
B21	Erosion and Sedimentation Control	Soil erosion and sediment control measures shall be designed in accordance with Managing Urban Stormwater – Soils & Construction Vol1 (2004) by Landcom. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.	Water and Stormwater Management Sub-Plan
B28	Sustainability Rating	The building shall be designed to achieve a minimum 6 Star Green Star design rating under version 3 of the Green Building Council of Australia's Office Rating Tool. Prior to the issue of a relevant Construction Certificate, the Proponent shall submit details to the Certifying Authority demonstrating compliance with this requirement.	CFEMP Appendix 10

No.	Condition	Description	CFEMP Reference
Part C - Prior To Commencement Of Works			
C1	Environmental Protection Licence	Prior to the commencement of works, the Proponent must ensure that the existing Environmental Protection Licence (EPL) issued to the Barangaroo Delivery Authority is varied, where required, to reflect and permit the works conducted on site. All works undertaken on site must be done in a manner which ensures compliance with EPL conditions at all times.	EPL 13336
C2	Environmental Construction and Site Management Plan	Prior to the commencement of works, the proponent must prepare an updated Environmental Construction and Site Management Plan (ECSMP) consistent with the Statement of Commitments in Schedule 3. The updated ESMP is to be submitted to the Director-General for approval.	CFEMP
C5	Removal of Hazardous Materials	All hazardous materials shall be removed from the site and shall be disposed of at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works. Details demonstrating compliance with the relevant legislative requirements, particularly the method of containment and control of emission of fibres to the air, are to be submitted to the satisfaction of the PCA prior to the removal of any hazardous materials.	Records from demolition undertaken under MP07_0077
C6	Site Audit	Prior to the commencement of building works, a Site Audit conducted by a suitably qualified person shall be undertaken to ascertain that all identified hazardous materials have been removed from the site and shall be submitted to the PCA.	Records from demolition undertaken under MP07_0077
Part D – During Construction			
D1	Hours of Work	The hours of construction, including the delivery of materials to and from the site, shall be restricted as follows: (1) between 7:00 am and 7:00 pm, Mondays to Fridays inclusive; (2) between 7:00 am and 5:00 pm, Saturdays; (3) no work on Sundays and public holidays. Works outside these hours are not permitted except as explicitly specified below or in other conditions and include: (a) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons; (b) emergency work to avoid the loss of lives, damage to property and/or to prevent environmental harm; (c) other works expressly approved by the Director General; (d) out of standard hours works identified in a CNVMP approved by the Director General.	Noise and Vibration Management Sub-Plan
D2	Environmental Construction and Site Management Plan	The proponent must undertake all works in accordance with the requirements of the Environmental Construction and Site Management Plan approved by the Director-General.	CFEMP
D3	Erosion and Sediment Control	All erosion and sediment control measures, as designed in accordance with Condition B23, are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Water and Stormwater Management Sub-Plan
D4	Disposal of Seepage and Rainwater	Any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system unless separate prior approval is given in writing by the relevant authority.	Water and Stormwater Management Sub-Plan
D10	Protection of Street Trees	(1) All street trees shall be protected at all times during construction. In the event that any tree on the footpath is damaged or removed during construction it shall be replaced to the satisfaction of the relevant authority. (2) In addition, existing trees should be managed in accordance with the approved Tree Management Plan, and a qualified Aborist with a minimum Australian Qualification Framework (AQF) of Level 5 in Arboriculture shall be appointed to ensure trees are maintained and protected in accordance with AS4790-2009: Protection of Trees on Development Sites, and AS4373-2007: Pruning of Amenity Trees.	Tree Management Plan
D12	Dust Control Measures	Adequate measures shall be taken to prevent dust from affecting neighbourhood amenity during construction. In particular, the following measures must be adopted: a) Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or	Air Quality and Odour Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		activity from generating dust emissions, b) Earthworks and scheduling activities shall be managed to coincide with the next stage to minimise time the site is left cut or exposed, c) All materials shall be stored or stockpiled at the best locations, d) The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs, e) All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material, f) All equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays, g) Gates shall be closed between vehicle movements and shall be fitted with shade cloth, and h) Cleaning of footpaths and roadways shall be carried out regularly.	
D13	Vibration Criteria	Vibration caused by construction at any residence or structure outside the subject site must be limited to: (1) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and (2) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6842- Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80 Hz) for low probability of adverse comment. These limits apply unless otherwise approved in the Construction Noise and Vibration Management Plan.	Noise and Vibration Management Sub-Plan
D14	Vibration Management	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above.	Noise and Vibration Management Sub-Plan
D15	Noise Management	For the duration of the works noise must be managed in accordance with the approved Construction Noise and Vibration Management Plan.	Noise and Vibration Management Sub-Plan
D16	Air Emissions Management	For the duration of the works air emissions must be managed in accordance with the recommendations outlined in Part 8 of the Air Quality Impact Assessment prepared by AECOM and dated 9 November 2011.	Air Quality and Odour Management Sub-Plan
D17	Waste	The Proponent must ensure that all waste generated on site during construction and operation is classified in accordance with EPA's Assessment, Classification and Management of Liquid and Non-Liquid Wastes and disposed of to a facility that may lawfully accept waste.	Spoil & Waste Management Sub-Plan
D18	Waste Management	For the duration of the works noise must be managed in accordance with the approved Waste Management Plan.	Spoil & Waste Management Sub-Plan
D19	Below Ground (Sub-Surface) Works – Non-Aboriginal Objects	If any archaeological relics are uncovered during the course of the work, then all works shall cease immediately in that area and the Department of Planning's Heritage Branch contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the NSW Heritage Act 1977 may be required before further works can continue in that area.	Spoil & Waste Management Sub-Plan
D20	Below Ground (Sub-Surface) Works – Aboriginal Objects	If any Aboriginal archaeological objects are exposed during construction works, the Proponent shall immediately notify the National Parks and Wildlife Service and obtain any necessary approvals to continue the work. The Proponent shall comply with any request made by the NPWS to cease work for the purposes of archaeological recording.	Spoil & Waste Management Sub-Plan
D21	Recycling Of Concrete	Any existing concrete of suitable volume, which is not used as fill, shall be taken to a concrete recycling works and evidence that this has occurred shall be provided to the PCA.	Spoil & Waste Management Sub-Plan
D22	Compliance Report	The Proponent, or any party acting upon this approval, shall, for the duration of construction period, submit to the Department a three monthly report addressing compliance with all relevant conditions of this Part.	Compliance Reports
AN10	Noise Generation	Any noise generated during the construction of the development shall not exceed limits specified in any relevant noise management policy prepared pursuant to the Protection of the Environment Operations Act, 1997 or exceed approved noise limits for the site.	Noise and Vibration Management Sub-Plan
AN14	Asbestos Removal	All excavation works involving the removal and disposal of asbestos must only be undertaken by contractors who hold a current WorkCover Asbestos or "Demolition Licence" and a current WorkCover "Class 2 (Restricted) Asbestos Licence and removal must be carried out in accordance with NOHSC: "Code of Practice for the Safe Removal of Asbestos".	Soil Contaminants and Asbestos Management Plan

4. MP10_0227 – Commercial Building C5 (environment-related conditions, including MOD1)

No.	Condition	Description	CFEMP Reference
Part A - Administrative Conditions			
A7	Remediation Action Plan (RAP) and Human Health Ecological Risk Assessment (HHERA)	<p>(1) All remediation works are to be undertaken in accordance with the following Remedial Action Plan & Human Health Ecological Risk Assessments:</p> <p>(a) <i>Human Health and Ecological Risk Assessment, Declaration Site (Development Works) Remediation Works Area</i>, AECOM, 9 June 2011.</p> <p>(b) <i>Human Health and Ecological Risk Assessment Addendum, Other Remediation Works (South)</i>, AECOM, 4 July 2011.</p> <p>(c) <i>Amended Remedial Action Plan, Barangaroo - ORWS Area</i>, AECOM, 7 July 2011, and as approved by the Minister for Planning and Infrastructure on 17 August 2011.</p> <p>(2) The Proponent shall progressively validate the relevant remediation works to the satisfaction of the site auditor. Interim advice letters from a NSW EPA accredited site auditor must be submitted to the Director-General, City of Sydney Council and the EPA on completion of each staged sign-off in line with the letter from Environ referred AS121111 and dated 7 November 2012.</p> <p>(3) Within 6 months of the completion of the remediation works within the project site, and prior to the issue of any Occupation Certificate, the proponent shall submit a detailed Site Audit Summary report and Site Audit Statement and Validation Report to the EPA, the Director General, the Certifying Authority, and City of Sydney Council.</p> <p>(4) The site audit must be prepared in accordance with the Contaminated Land Management Act 1997 and completed by a site auditor accredited by the EPA to issue site audit statements. The site audit must verify that the land is suitable for the proposed uses.</p> <p>(5) The site auditor must also verify that any excavated material for use or disposal offsite, including but not limited to the Headland Park at Barangaroo, is managed appropriately and in compliance with relevant legislation and any relevant approved materials management plans.</p> <p>(6) On completion of remediation works, the relevant requirements of clauses 17 and 18 of SEPP 55 - Remediation of Land, being notification to the Council, shall be complied with.</p>	RAP, HHERA
Part B - Prior To Issue Of The Relevant Construction Certificate			
B14	Acid Sulphate Soil Management Plan	An Acid Sulphate Soil Management Plan shall be prepared by a suitably qualified person in accordance with the Acid Sulphate Soil Assessment Guidelines (ASSMAC, 1998). The Management Plan shall be submitted to Certifying Authority prior to issue of a relevant Construction Certificate.	Acid Sulfate Soil Management Sub-Plan
B15	Pre-Construction Dilapidation Reports	The Proponent is to engage a suitably qualified person to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure and roads. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate. A copy of the report is to be forwarded to the Director General and Council.	Pre-Construction Dilapidation Report
B18	Water and Stormwater Management Plan/Sub Plan	Prior to the issue of a relevant Construction Certificate, an updated Water and Stormwater Management Plan prepared by a suitably qualified person shall be submitted to the satisfaction of EPA, and approved by the Certifying Authority. Any effluents/liquid waste streams associated with the construction of the building that are directed to the site Wastewater Treatment Plant are treated sufficiently to ensure compliance with all concentration limits required by Environmental Protection Licence 13336 prior to discharge to Darling Harbour.	Water and Stormwater Management Sub-Plan
B19	Construction Noise and Vibration Management Plan	Prior to the issue of a relevant Construction Certificate, a Construction Noise and Vibration Management Plan prepared in accordance with the Statement of Commitments in Schedule 3 shall be submitted to the EPA for review and comment and submitted to the Certifying Authority. This Plan must be consistent with all of the relevant requirements of the Environment Protection Licence number 13336.	Noise and Vibration Management Sub-Plan
B20	Waste Management Plan	Prior to issue of a relevant Construction Certificate, an updated Waste Management Plan prepared by a suitably qualified person shall be submitted to EPA for their review and comment, and approved by the Certifying Authority. This Plan must be consistent with all relevant requirements of EPL 13336.	Spoil & Waste Management Sub-Plan
B21	Erosion and Sedimentation Control	Soil erosion and sediment control measures shall be designed in accordance with Managing Urban Stormwater – Soils & Construction Vol1 (2004) by Landcom. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.	Water and Stormwater Management Sub-Plan
B28	Sustainability Rating	The building shall be designed to achieve a minimum 6 Star Green Star design rating under version 3 of the Green Building Council of Australia's Office Rating Tool. Prior to the issue of a relevant Construction Certificate, the Proponent shall submit details to the Certifying Authority demonstrating compliance with this requirement.	CFEMP Appendix 10

No.	Condition	Description	CFEMP Reference
Part C - Prior To Commencement Of Works			
C1	Environmental Protection Licence	Prior to the commencement of works, the Proponent must ensure that the existing Environmental Protection Licence (EPL) issued to the Barangaroo Delivery Authority is varied, where required, to reflect and permit the works conducted on site. All works undertaken on site must be done in a manner which ensures compliance with EPL conditions at all times.	EPL 13336
C2	Environmental Construction and Site Management Plan	Prior to the commencement of works, the proponent must prepare an updated Environmental Construction and Site Management Plan (ECSMP) consistent with the Statement of Commitments in Schedule 3. The updated ESMP is to be submitted to the Director-General for approval.	CFEMP
C5	Removal of Hazardous Materials	All hazardous materials shall be removed from the site and shall be disposed of at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works. Details demonstrating compliance with the relevant legislative requirements, particularly the method of containment and control of emission of fibres to the air, are to be submitted to the satisfaction of the PCA prior to the removal of any hazardous materials.	Records from demolition undertaken under MP07_0077
C6	Site Audit	Prior to the commencement of building works, a Site Audit conducted by a suitably qualified person shall be undertaken to ascertain that all identified hazardous materials have been removed from the site and shall be submitted to the PCA.	Records from demolition undertaken under MP07_0077
Part D – During Construction			
D1	Hours of Work	The hours of construction, including the delivery of materials to and from the site, shall be restricted as follows: (1) between 7:00 am and 7:00 pm, Mondays to Fridays inclusive; (2) between 7:00 am and 5:00 pm, Saturdays; (3) no work on Sundays and public holidays. Works outside these hours are not permitted except as explicitly specified below or in other conditions and include: (a) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons; (b) emergency work to avoid the loss of lives, damage to property and/or to prevent environmental harm; (c) other works expressly approved by the Director General; (d) out of standard hours works identified in a CNVMP approved by the Director General.	Noise and Vibration Management Sub-Plan
D2	Environmental Construction and Site Management Plan	The proponent must undertake all works in accordance with the requirements of the Environmental Construction and Site Management Plan approved by the Director-General.	CFEMP
D3	Erosion and Sediment Control	All erosion and sediment control measures, as designed in accordance with Condition B23, are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Water and Stormwater Management Sub-Plan
D4	Disposal of Seepage and Rainwater	Any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system unless separate prior approval is given in writing by the relevant authority.	Water and Stormwater Management Sub-Plan
D10	Protection of Street Trees	(1) All street trees shall be protected at all times during construction. In the event that any tree on the footpath is damaged or removed during construction it shall be replaced to the satisfaction of the relevant authority. (2) In addition, existing trees should be managed in accordance with the approved Tree Management Plan, and a qualified Aborist with a minimum Australian Qualification Framework (AQF) of Level 5 in Arboriculture shall be appointed to ensure trees are maintained and protected in accordance with AS4790-2009: Protection of Trees on Development Sites, and AS4373-2007: Pruning of Amenity Trees.	Tree Management Plan
D12	Dust Control Measures	Adequate measures shall be taken to prevent dust from affecting neighbourhood amenity during construction. In particular, the following measures must be adopted: a) Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or	Air Quality and Odour Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		<p>activity from generating dust emissions,</p> <p>b) Earthworks and scheduling activities shall be managed to coincide with the next stage to minimise time the site is left cut or exposed,</p> <p>c) All materials shall be stored or stockpiled at the best locations,</p> <p>d) The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs,</p> <p>e) All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material,</p> <p>f) All equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays,</p> <p>g) Gates shall be closed between vehicle movements and shall be fitted with shade cloth, and</p> <p>h) Cleaning of footpaths and roadways shall be carried out regularly.</p>	
D13	Vibration Criteria	<p>Vibration caused by construction at any residence or structure outside the subject site must be limited to:</p> <p>(1) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and</p> <p>(2) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6842- Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80 Hz) for low probability of adverse comment.</p> <p>These limits apply unless otherwise approved in the Construction Noise and Vibration Management Plan.</p>	Noise and Vibration Management Sub-Plan
D14	Vibration Management	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above.	Noise and Vibration Management Sub-Plan
D15	Noise Management	For the duration of the works noise must be managed in accordance with the approved Construction Noise and Vibration Management Plan.	Noise and Vibration Management Sub-Plan
D16	Air Emissions Management	For the duration of the works air emissions must be managed in accordance with the recommendations outlined in Part 8 of the Air Quality Impact Assessment prepared by AECOM and dated 9 November 2011.	Air Quality and Odour Management Sub-Plan
D17	Waste	The Proponent must ensure that all waste generated on site during construction and operation is classified in accordance with EPA's Assessment, Classification and Management of Liquid and Non-Liquid Wastes and disposed of to a facility that may lawfully accept waste.	Spoil & Waste Management Sub-Plan
D18	Waste Management	For the duration of the works noise must be managed in accordance with the approved Waste Management Plan.	Spoil & Waste Management Sub-Plan
D19	Below Ground (Sub-Surface) Works – Non-Aboriginal Objects	If any archaeological relics are uncovered during the course of the work, then all works shall cease immediately in that area and the Department of Planning's Heritage Branch contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the NSW Heritage Act 1977 may be required before further works can continue in that area.	Spoil & Waste Management Sub-Plan
D20	Below Ground (Sub-Surface) Works – Aboriginal Objects	If any Aboriginal archaeological objects are exposed during construction works, the Proponent shall immediately notify the National Parks and Wildlife Service and obtain any necessary approvals to continue the work. The Proponent shall comply with any request made by the NPWS to cease work for the purposes of archaeological recording.	Spoil & Waste Management Sub-Plan
D21	Recycling Of Concrete	Any existing concrete of suitable volume, which is not used as fill, shall be taken to a concrete recycling works and evidence that this has occurred shall be provided to the PCA.	Spoil & Waste Management Sub-Plan
D22	Compliance Report	The Proponent, or any party acting upon this approval, shall, for the duration of construction period, submit to the Department a three monthly report addressing compliance with all relevant conditions of this Part.	Compliance Reports
AN10	Noise Generation	Any noise generated during the construction of the development shall not exceed limits specified in any relevant noise management policy prepared pursuant to the Protection of the Environment Operations Act, 1997 or exceed approved noise limits for the site.	Noise and Vibration Management Sub-Plan
AN14	Asbestos Removal	All excavation works involving the removal and disposal of asbestos must only be undertaken by contractors who hold a current WorkCover Asbestos or "Demolition Licence" and a current WorkCover "Class 2 (Restricted) Asbestos Licence and removal must be carried out in accordance with NOHSC: "Code of Practice for the Safe Removal of Asbestos".	Soil Contaminants and Asbestos Management Plan

4a. Conditions of Approval under Condition D1(2)(C) of MP10_0227 & MP11_0044 and Condition D1(C) of MP10_0025

Relating to tower crane installation and removal, out of standard hours, dated 28/05/2013

No.	Condition	Description	CFEMP Reference
A1	Time Limited Approval and Restriction on Number of Occasions	The granting of extended construction hours for the installation and dismantling of the tower cranes is limited until 31 October 2015 on no more than 20 separate occasions. All tower crane works must cease after this date.	Noise and Vibration Management Sub-Plan
A2	Construction Hours - Loading Of Excavated Material	All tower crane works (outlined in Condition A3 below) on site are permitted between 9am and 5pm on Sunday. Unless undertaken during standard construction hours, no tower crane works of any kind are permitted on Sundays before 9am and after 5pm.	Noise and Vibration Management Sub-Plan
A3	Tower Crane Works	Works that are permitted to be undertaken are restricted to the following: 1. Slew turret dressed and moved into position or removed. 2. Slew turret installation or removal using mobile crane (350T). 3. Rear deck dressed by the Franna and installed or removed by the mobile crane (350T). 4. Unloading the A frame and dressed by the Franna and then installed or removed with the mobile crane (350T). 5. Counter weights -installation or removal with the mobile crane (350T). 6. Lifting the job and installing or removing the jib tip baskets with the mobile crane (350T) 7. Luff and fall ropes installation or removal. 8. Mobile crane leaves the site (unless needed the next day). 9. Progressive extension of the tower crane. 10. Onsite supervision and first aid.	Noise and Vibration Management Sub-Plan
A4	Variation to Environment Protection Licence No.13336	No tower crane activities are permitted to take place until a variation to Environment Protection Licence No.13336 has been granted by the Environment Protection Authority (if required).	CFEMP
A5	Revision of Noise & Vibration Management Sub-Plan	The Noise and Vibration Management Sub-Plan shall be revised to include all activities associated with installation and dismantling of the tower cranes.	Noise and Vibration Management Sub-Plan
A6	Complaints Procedure	Prior to the commencement of tower crane activities and works, the proponent must ensure that the following facilities are available to handle community complaints. 1. A 24-hour, toll free telephone number on which complaints may be registered. 2. A postal address to which written complaints may be sent 3. An email address to which electronic complaints may be registered. The proponent shall ensure that the telephone number, postal address and email address are advertised to the local community and affected neighbouring properties prior to the commencement of the works.	Noise and Vibration Management Sub-Plan Community & Stakeholder Engagement Strategy
A7	Resident and City of Sydney Council Notification	The proponent must notify City of Sydney Council's Compliance Unit and the surrounding area in writing at least 7 days before each tower crane is installed and/or dismantled if it is undertaken on a Sunday. However, tower crane works undertaken during standard construction hours do not require prior notification. Copies of all notification letters must be saved and be made available to the department upon request.	Noise and Vibration Management Sub-Plan

5. MP11_0002 – R8 R9 Residential Buildings (environment-related conditions)

No.	Condition	Description	CFEMP Reference
Part A - Administrative Conditions			
A7	Remediation Action Plan (RAP) and Human Health Ecological Risk Assessment (HHERA)	<p>(1) All remediation works are to be undertaken in accordance with the following Remedial Action Plan (RAP) and Human Health Ecological Risk Assessments (HHERA):</p> <p>(a) 'Amended Remedial Action Plan - Barangaroo - Other Remediation Works (South) Area,' prepared by AECOM, dated 7 July 2011 and approved by the Minister for Planning and Infrastructure on 17 August 2011;</p> <p>(b) 'Human Health Ecological Risk Assessment prepared by AECOM dated 4 July 2011;</p> <p>(c) 'Site Audit Report and Site Audit Statement' dated 14 July 2011 prepared by ENVIRON Australia Pty Ltd.</p> <p>(2) Within 6 months of the completion of the remediation works, and prior to the issue of any Occupation Certificate, the proponent shall submit a detailed Site Audit Summary report and Site Audit Statement and Validation Report to the EPA, the Director General, the Certifying Authority, and City of Sydney Council.</p> <p>(3) The site audit must be prepared in accordance with the <i>Contaminated Land Management Act 1997</i> and completed by a site auditor accredited by the EPA to issue site audit statements. The site audit must verify that the land is suitable for the proposed uses.</p> <p>(4) The site auditor must also verify that any excavated material for use or disposal offsite, including but not limited to the Headland Park at Barangaroo, is managed appropriately and in compliance with relevant legislation and any relevant approved materials management plans.</p> <p>(5) On completion of remediation works, the relevant requirements of clauses 17 and 18 of SEPP 55 - Remediation of Land, being notification to the Council, shall be complied with.</p>	RAP, HHERA
Part B - Prior To Issue Of The Relevant Construction Certificate			
B12	Acid Sulphate Soil Management Plan	An Acid Sulphate Soil Management Plan shall be prepared by a suitably qualified person in accordance with the Acid Sulphate Soil Assessment Guidelines (ASSMAC, 1998). The Management Plan shall be submitted to Certifying Authority prior to issue of a relevant Construction Certificate.	Acid Sulfate Soil Management Sub-Plan
B13	Pre-Construction Dilapidation Reports	If not already undertaken, the Proponent is to engage a suitably qualified person to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure and roads. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the first Construction Certificate. A copy of the report is to be forwarded to the Director General & Council.	Pre-Construction Dilapidation Report
B15	Water and Stormwater Management Sub-Plan	Prior to the issue of the relevant Construction Certificate, an updated Water and Stormwater Management Sub-Plan prepared by a suitably qualified person shall be submitted to the EPA for review and submitted to the Certifying Authority. Any effluents/liquid waste streams associated with construction of buildings directed to the site Wastewater Treatment Plant must be treated sufficiently to ensure compliance with relevant concentration limits required by Environment Protection Licence number 13336 prior to discharge to Darling Harbour. A copy must be provided to the Director -General.	Water and Stormwater Management Sub-Plan
B16	Air Quality & Odour Management Sub-Plan	Prior to the issue of the relevant Construction Certificate, an updated Air Quality and Odour Management Sub-Plan prepared by a suitably qualified person shall be submitted to the EPA for review and submitted to the Certifying Authority. The Sub-Plan must comply with Environment Protection Licence number 13336. A copy must be provided to the Director-General.	Air Quality & Odour Management Sub-Plan
B17	Noise and Vibration Management Sub-Plan	Prior to the issue of the relevant Construction Certificate, an updated Noise and Vibration Management Sub-Plan prepared by a suitably qualified person shall be submitted to the EPA for review and submitted to the Certifying Authority. The Sub-Plan must comply with Environment Protection Licence number 13336. A copy must be provided to the Director-General.	Noise and Vibration Management Sub-Plan
B18	Spoil & Waste Management Sub-Plan	Prior to the issue of the relevant Construction Certificate, an updated Spoil and Waste Management Sub-Plan prepared by a suitably qualified person shall be submitted to the EPA for review and submitted to the Certifying Authority. The Sub-Plan must comply with Environment Protection Licence number 13336. A copy must be provided to the Director-General.	Spoil & Waste Management Sub-Plan
B19	Erosion and Sedimentation Control	Soil erosion and sediment control measures shall be designed in accordance with Managing Urban Stormwater - Soils & Construction Vol 1 (2004) by Landcom. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.	Water and Stormwater Management Sub-Plan

No.	Condition	Description	CFEMP Reference
B25	Sustainability Rating	The building shall be designed to achieve a minimum 5 Star Green Star rating under Multi-Unit Residential design version 1 of the Green Building Council of Australia's Office Rating Tool. Prior to the issue of a relevant Construction Certificate, the proponent shall submit details to the Certifying Authority demonstrating compliance with this requirement.	CFEMP Appendix 10
Part C - Prior To Commencement Of Works			
C1	Environmental Protection Licence	Prior to the commencement of works, the proponent must ensure that the existing Environmental Protection Licence (EPL) issued to the Barangaroo Delivery Authority is varied, where required, to reflect and permit the works conducted on site. All works undertaken on site must be done in a manner which ensures compliance with EPL conditions at all times.	EPL 13336
Part D – During Construction			
D1	Hours of Work	<p>The hours of construction, including the delivery of materials to and from the site, shall be restricted as follows:</p> <ul style="list-style-type: none"> (1) between 7am and 7pm, Mondays to Fridays inclusive; (2) between 7am and 5pm, Saturdays; (3) no work on Sundays and public holidays. <p>Works outside these hours are not permitted except as explicitly specified below or in other conditions and include:</p> <ul style="list-style-type: none"> (a) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons; (b) emergency work to avoid the loss of lives, damage to property and/or to prevent environmental harm; (c) other works expressly approved by the Director General; (d) out of standard hours works identified in a CNVMP approved by the Director General. 	Noise and Vibration Management Sub-Plan
D2	Environmental Construction and Site Management Plan	The proponent must undertake all works in accordance with the requirements of the Environmental Construction and Site Management Plan prepared by Lend Lease dated October 2012.	CFEMP
D3	Air Quality & Odour Management Sub-Plan	The proponent must undertake all works in accordance with the requirements of the Air Quality and Odour Management Sub-Plan approved under Condition B16 and Air Quality Impact Assessment prepared by AECOM and dated 19 November 2012. This Plan must be consistent with all of the relevant requirements of the Environment Protection Licence number 13336.	Air Quality & Odour Management Sub-Plan
D4	Noise and Vibration Management Sub-Plan	The proponent must undertake all works in accordance with the requirements of the Noise and Vibration Management Sub-Plan approved under Condition B17. This Plan must be consistent with all of the relevant requirements of the Environment Protection Licence number 13336.	Noise and Vibration Management Sub-Plan
D5	Spoil & Waste Management Sub-Plan	The proponent must undertake all works in accordance with the requirements of the Spoil and Waste Management Sub-Plan approved under Condition B18. This Plan must be consistent with all of the relevant requirements of the Environment Protection Licence number 13336.	Spoil & Waste Management Sub-Plan
D7	Erosion and Sediment Control	All erosion and sediment control measures, as designed in accordance with Condition B19 and D2, are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Water and Stormwater Management Sub-Plan
D8	Disposal of Seepage and Rainwater	Any seepage or rainwater collected on-site during construction shall be managed in accordance with the Water and Stormwater Management Sub Plan prepared under Condition B15.	Water and Stormwater Management Sub-Plan
D14	Dust Control Measures	<p>Adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood during construction. In particular, the following measures should be adopted:</p> <ul style="list-style-type: none"> a) Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions, b) Earthworks and scheduling activities shall be managed to coincide with the next stage to minimise time the site is left cut or exposed, c) All materials shall be stored or stockpiled at the best locations, d) The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs, 	Air Quality and Odour Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		e) All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material, f) All equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays, g) Gates shall be closed between vehicle movements and shall be fitted with shade cloth, and h) Cleaning of footpaths and roadways shall be carried out regularly.	
D15	Vibration Criteria	Vibration caused by construction at any residence or structure outside the subject site must be limited to: (1) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings - Effects on Structures; and (2) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6472- Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80 Hz) for low probability of adverse comment. These limits apply unless otherwise approved in the Construction Noise and Vibration Management Plan.	Noise and Vibration Management Sub-Plan
D16	Vibration Management	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above.	Noise and Vibration Management Sub-Plan
D17	Below Ground (Sub-Surface) Works – Non-Aboriginal Objects	If any archaeological relics are uncovered during the course of the work, then all works shall cease immediately in that area and the OEH contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the NSW Heritage Act 1977 may be required before further works can continue in that area.	Spoil & Waste Management Sub-Plan
D18	Below Ground (Sub-Surface) Works – Aboriginal Objects	If any Aboriginal archaeological objects are exposed during construction works, the Proponent shall immediately notify the National Parks and Wildlife Service and obtain any necessary approvals to continue the work. The Proponent shall comply with any request made by the NPWS to cease work for the purposes of archaeological recording.	Spoil & Waste Management Sub-Plan
D19	Recycling Of Concrete	Any existing concrete of suitable volume, which is not used as fill, shall be taken to a concrete recycling works and evidence that this has occurred shall be provided to the PCA.	Spoil & Waste Management Sub-Plan
D20	Construction Waste	Construction waste classification, transportation and management should be conducted generally in accordance with the EPA's brochure titled: "Know your responsibilities: managing waste from construction sites" as well as the relevant waste Management conditions attached to Environmental Protection Licence No. 13336	Spoil & Waste Management Sub-Plan
D21	Water Quality	All works should be undertaken in a manner that ensures the protection of the water quality objectives and environmental values for Sydney Harbour estuarine waters in accordance with the following guideline documents: a) NSW Water Quality Objectives; and b) The Australian and New Zealand Guidelines for Fresh and Marine water Quality (2000) (for environmental values under ANZECC guidelines).	Water and Stormwater Management Sub-Plan
D22	Contaminated and Treated Water	No contaminated or treated site waters (surface, collected groundwater or contaminated construction waters) are permitted to enter Sydney Harbour unless in accordance with the conditions attached to Environmental Protection Licence No. 13336. The existing Water and Stormwater Management Sub Plan is updated to include any additional impacts arising from this proposal.	Water and Stormwater Management Sub-Plan
D23	Compliance Report	The Proponent, or any party acting upon this approval, shall, for the duration of construction period, submit to the Department a three monthly report addressing compliance with all relevant conditions of this Part.	Compliance Reports
AN12	Asbestos Removal	All excavation works involving the removal and disposal of asbestos must only be undertaken by contractors who hold a current WorkCover Asbestos or "Demolition Licence" and a current WorkCover "Class 2 (Restricted) Asbestos Licence and removal must be carried out in accordance with NOHSC: "Code of Practice for the Safe Removal of Asbestos".	Soil Contaminants and Asbestos Management Plan

Appendix 2B: Environmental Requirements - Environmental Assessments

Table 1. Statement of Commitments – MP10_0023 Bulk Excavation & Basement Car Parking (including modifications)

No.	Condition	Description	CFEMP Reference
1.1.1	Administrative Matters	Lend Lease commits to assisting the Barangaroo Delivery Authority in obtaining any required approval for the potential transportation of contaminated materials from the EPA under the Protection of the Environment Operations (Waste) Regulation 2005.	Spoil & Waste Management Sub-Plan
1.1.3	Remedial Action Plan	<p>Remediation works will be undertaken to make the site suitable for the proposed uses as envisaged under the approved Concept Plan (Mod 4). Remediation works will be undertaken in conformance with the Overarching RAP (ERM) and the site specific RAP (AECOM).</p> <p>An Environmental Management Plan (EMP) will be prepared prior to commencement of works. The EMP will detail:</p> <ul style="list-style-type: none"> • surface water and ground water management; • air quality management; and • noise and vibration management. <p>A ground water monitoring plan will be prepared post remediation and provided to EPA and the Auditor prior to the issue of the relevant occupation certificate.</p> <p>Lend Lease will obtain a Section B Site Audit Statement for the proposed remediation works and will provide a copy to EPA prior to obtaining the relevant construction certificate.</p>	<p>RAP, HHERA</p> <p>CFEMP & sub-plans</p> <p>Ground water Monitoring Plan</p> <p>Section B Site Audit Statement</p>
1.1.4	Soil And Water	<p>Lend Lease commits to implementing the recommendations of the revised Water Quality Monitoring Requirements Report prepared by Worley Parsons dated September 2010. Lend Lease makes the following commitments regarding soil and water management:</p> <ul style="list-style-type: none"> • to manage any potential water quality impacts, water quality monitoring will undertaken as described in the Water Quality Monitoring Requirements report at Appendix X of the EAR date June 2010; • the following water quality control measures will be implemented: • appropriate excavation methods, installation of turbidity (silt) curtains, erosion and sediment control measures, dewatering and water treatment, routine visual inspections, stormwater management, water quality monitoring, and monitoring of weather and tides; • water quality monitoring activities required for the bulk excavation and car park basement activities would be incorporated into a Water Quality Monitoring Plan developed for the overall project; • additional water quality monitoring will be undertaken during construction operations in response to potential water quality exceedance events when required; • water quality criteria that will be applied for this project will be generally based on recommendations provided in the ANZECC Guidelines; • manage potential acid sulphate soils, the implementation of the Acid Sulphate Soils Management Plan prepared by AECOM (June 2010) included as Appendix I in the Bulk Excavation and Basement Car Parking PA1 EAR Barangaroo Stage 1 (June 2010). <p>Prior to the issue of the relevant construction certificate, Lend Lease commits to the preparation of a detailed Water and Stormwater Management Plan that addresses the specific water quality and water monitoring matters identified in EPA's submission, as follows:</p> <ul style="list-style-type: none"> • water volume management; • anticipated volumes of water generated on site including potential volumes of groundwater and stormwater discharges; • volumes of wastewater to be treated on site; volumes of recycling/reuse; and volumes to be discharged to sewer <p>The Water and Stormwater Management Plan will also detail:</p>	<p>Water & Stormwater Management Sub-Plan</p> <p>Water and Stormwater Management Sub-Plan</p>

No.	Condition	Description	CFEMP Reference
		<ul style="list-style-type: none"> • criteria for nominating areas and different sources of site water as clean or contaminated • water monitoring protocols and decision criteria for whether site water will be directed to stormwater, a water treatment plant, to sewer or to a liquid waste facility; • water discharge criteria and monitoring frequency for parameters listed in the "Water Quality Monitoring Requirements" document prepared as part of the EA; • details of an initial more intensive monitoring program for sediment basins, stormwater discharges; reuse water and ambient waters to help determine potential water quality impacts and ongoing monitoring protocols; • details of specific discharge and monitoring points for on site waters including for collected groundwater seepage into excavations, sediment basing for clean or contaminated areas, discharge points to stormwater drains, and confirmation of ambient monitoring locations in Darling Harbour and Johnstons Bay; • suitability of chosen reference site(s) based on turbidity data from a proposed monitoring program; • consideration of tidal currents, circulation patterns in Darling Harbour and the position of stormwater discharge points with regard to the positioning of monitoring location(s) outside the turbidity (silt) curtain. Note that the location may not be a fixed point so that it can account for potential plume movement under different conditions. Alternatively, more than one location may be needed; and • Criteria development for wastewater discharges that would trigger a review of water management systems. These criteria will trigger operational responses that help in ensuring licence conditions are not exceeded. <p>The Water and Stormwater Management Plan will also detail:</p> <p>Stormwater and Sediment Controls</p> <ul style="list-style-type: none"> - A detailed description of measures for stormwater and sediment control for specific locations on the site. - Silt curtain arrangements for the protection of Darling Harbour as a secondary protection control. <p>Operational Procedures</p> <ul style="list-style-type: none"> - An operational plan detailing how contaminated water and sediment control systems will be implemented, operated and maintained. - A description of the operation and maintenance of environmental protection structures and the like such as (not limited to) silt curtains, bunding and filtration systems, dewatering plant and methodology etc. - Details of the prevention of contaminated water being discharged to Darling Harbour. <p>Wastewater and Effluent Reuse on site</p> <ul style="list-style-type: none"> - Criteria for wastewater or effluent reuse for either contaminated or clean sources of water. - Management practices for reuse of treated wastewater from contaminated areas. <p>Lend Lease is committed to designing on site stormwater infrastructure at Barangaroo South facilitating either reuse of stormwater via building based rainwater tanks or alternatively treated to National Best Practice with an integrated approach to Water Sensitive Urban Design.</p> <p>Lend Lease commits to entering into the necessary arrangements and obtaining the necessary approvals for water supply, sewer and stormwater connections from the relevant authorities, as required. A Water Servicing Coordinator will be engaged as suggested by Sydney Water in its submission as relevant to the proposed works.</p>	
1.1.6	Waste Management	<p>Construction works will be generally undertaken in accordance with the revised Waste Management Plan prepared by Arup dated Sept 2010. In addition, Lend Lease commits to preparation of a detailed Waste Management Plan prior to commencement of construction that addresses:</p> <ul style="list-style-type: none"> • the management of stockpiles, contamination and sediment; • the in-situ classification of waste material (where practicable), including the proposed sampling locations and methodology that will be used to classify waste, and in particular contamination hotspots; • the concrete crushing and screening plant where proposed to be installed on site during construction, and in particular: <ul style="list-style-type: none"> - the location and dimensions of the concrete crushing plant; - estimated quantities of concrete to be crushed per day; - measures that will be employed to prevent or minimise dust emissions associated from concrete crushing; and 	Spoil & Waste Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		<ul style="list-style-type: none"> - measures that will be employed to prevent or minimise noise impacts arising from concrete crushing activities; • the means and frequency of transporting waste within, and from, the site; • the proposed de-watering process, including details of any on-site water treatment plant; and • any contingencies that will be implemented to manage and mitigate excavation activities and contaminated soil treatment operations, particularly in relation to the expected volumes of materials excavated at the site. <p>In undertaking the bulk excavation and basement car parking works, Lend Lease will apply the EPA's Classification Guidelines; and retain all collected sampling and classification data for the life of the project.</p>	
1.1.7	Air Quality And Odour	<p>Lend Lease commits to undertake the bulk excavation and basement car park construction works generally in accordance with the findings, recommendations and mitigative strategies of the revised Air Quality Impact Assessment prepared by AECOM (10 September 2010) and letter of opinion regarding the proposed inclusion of a batching plant for Barangaroo Block 1-3 dated 3 September 2012.</p> <p>A monitoring program will be implemented that includes monitoring of PM10 levels, which will allow reactive management of elevated dust concentrations, and monitoring of TSP concentrations using high volume air samplers, which will additionally allow the analysis of heavy metals concentrations to validate the modelling results.</p>	Air Quality & Odour Management Sub-Plan
1.1.8	Noise & Vibration	<p>Lend Lease commits to undertaking the bulk excavation and basement car park construction works generally in accordance with the findings, recommendations and mitigative strategies of the Excavation and Construction Noise and Vibration Assessment prepared by Wilkinson Murray (September 2010 and November 2010).</p> <p>The supplementary Construction Noise Impact Assessment states: "Housing NSW's assets are at a distance from the construction site that predicted vibration levels associated with rockbreakers will be well below both structural damage and Human Comfort vibration criteria." Notwithstanding this, prior to commencement of works, Lend Lease will undertake a dilapidation survey of a selected number of dwellings within the Millers Point area that Lend Lease believes are representative of the overall building stock and offer an appropriate benchmark of the condition of all properties.</p>	Noise & Vibration Management Sub-Plan
1.1.10	Non-Indigenous Archaeology	<p>Lend Lease makes the following commitments in relation to non-indigenous archaeology:</p> <ul style="list-style-type: none"> • Undertake a program of archaeological investigation with an excavation director appointed to manage the program. • Testing of areas of impact within the study area should be carried out to determine the nature and depth of archaeological remains and to assist the development of an archaeological management strategy. • Based on the archaeological integrity of the remains, a program of archaeological salvage and recording will be required. Salvage would include sampling sections of the site, such as: <ul style="list-style-type: none"> - Recording a number of sections of the later 19th century wharfage, notably the Grafton wharf. - The maritime infrastructure, stores and reclamation in Portion 20, Block 2. - If possible the remains of Henry Bass' early shipyard and associated reclamation and expansion, dependent on contamination issues. - The nature of the area's reclamation fills should be investigated - these will be present throughout the study area. - Evidence for the early topography and natural landform and how this was modified through time. • Develop a strategy for recording as much of the gasworks as possible within the constraints of contamination to human health and safety. • The archaeological sampling and recording need to be undertaken according to Heritage Branch guidelines and best practice archaeological methodologies. This will then feed into the future interpretation and produce a detailed record of the site. • The proponent or the BDA will need to provide a repository for the artefacts recovered from the site. 	Archaeological Research Design and Management Strategy
	Indigenous Archaeology	<ul style="list-style-type: none"> • A program of Aboriginal archaeological subsurface testing will be undertaken prior to redevelopment of Barangaroo Stage 1. • The program of sub-surface testing will be undertaken in partnership with the Metropolitan Local Aboriginal Land Council. • If any Aboriginal "objects" (as defined under the National Parks & Wildlife Act 1974) are located during the course of the testing program, the Metropolitan Local Aboriginal Land Council should apply for a Care Agreement with the EPA to enable them to keep the objects. 	Aboriginal Archaeological Management Plan and Research Design

No.	Condition	Description	CFEMP Reference
		<ul style="list-style-type: none"> If, during the course of the redevelopment, any previously undetected Aboriginal "objects", artefacts or sites are uncovered, work must cease in the vicinity of that object, artefact or site and further advice sought from the archaeologist who undertook the subsurface testing. Interpretation of the Aboriginal history of the site will be included in the redevelopment proposals. 	
	Interpretation Strategy	<p>An Outline Interpretation Plan has been prepared by Tanner Architects and is located at Appendix FF. The Plan, which was prepared for the entire Barangaroo Stage 1 area:</p> <ul style="list-style-type: none"> identifies the themes and messages considered significant to the Stage 1 area; develops a conceptual approach to interpretation of the Stage 1 area, using a variety of means; proposes locations for specific interpretation to enhance the understanding of the heritage significance of the Stage 1 area; and recommends methods and media appropriate to the interpretation of the Stage 1 area. <p>Where appropriate interpretation options recommended in the Strategy will be implemented through basement areas. During the excavation works any archaeological relics or other cultural artefacts identified will, where appropriate, be incorporated into future public displays.</p> <p>The exhibited Interpretation Strategy prepared by Tanner Architects and dated June 2010 included as Appendix FF in the Bulk Excavation and Basement Car Parking PA1 Environmental Assessment Report Barangaroo Stage 1 (June 2010) may be amended from time to time.</p>	Spoil & Waste Management Sub-Plan
1.1.11	Public Domain And Landscaping	<p>A Tree Management Plan will be prepared to the DoP's satisfaction with the relevant tree protection measures to minimise any potential impacts on the trees proposed to be retained. The Tree Management Plan will be prepared prior to commencement of any works that impact upon trees.</p> <p>Lend Lease commits to providing high quality hoardings around the site, including along the foreshore walk. Hoardings will be treated with graphics and other designs consistent with an overall coordinated high quality Barangaroo communications strategy to be endorsed by the BDA and submitted to the Director General.</p> <p>The conceptual treatment of the hoardings is designed to improve the appearance of the site in the streetscape throughout the construction phase and provide a transparent and open view of the site to the community. It will include information about Barangaroo South and its aspirations, such as sustainability, community engagement, heritage and the overall ambitions of the development, all of which may be updated from time to time. It may incorporate elements of public art as part of the graphic installation but will not include any third party advertising material. A maintenance regime will be implemented to ensure the appearance and integrity of the hoarding is maintained. The final graphic treatment for the hoardings and any future changes will be submitted to the Director General of the Department of Planning for approval prior to its implementation on site.</p>	Tree Management Plan
1.1.17	Environmental Construction and Site Management Plan	<p>The Environmental Construction & Site Management Plan prepared by Cardno and Bovis Lend Lease will be updated to include the following:</p> <p>A requirement for preparation of a site wide strategy relating to the preparation of post construction dilapidation reports that includes a requirement for the Proponent to engage a suitably qualified person to prepare a post-construction dilapidation report:</p> <p>a) At the completion of all excavation and piling works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 works; and</p> <p>b) At the completion of all construction works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 work.</p> <p>In the event that barging of soil is undertaken, requirements, for:</p> <ul style="list-style-type: none"> Management of spillage of spoil during loading I movement of barges; Procedures in the event of an incident (such as a fuel spill or collision with structures I vessels on the water); and Reporting of any incidents, (such as a fuel spill) on the water. <p>A requirement that Lend Lease notify and consult with the Harbour Master prior to material being loaded for transport via the water from the site, particularly in relation to vessel movements.</p>	CFEMP & environmental sub-plans

No.	Condition	Description	CFEMP Reference
MOD5	Environmental Control Measures	<p>The following environmental control measures will be implemented for the duration of the excavation works that will take place within Sydney Harbour under wet conditions:</p> <ul style="list-style-type: none"> • The excavation works will be conducted with parallel silt (sediment) curtains which will be maintained outside and surrounding the 'wet' excavation area to prevent the visible plume of sediment beyond the silt curtain. The curtain will be maintained and kept in place for the duration of the works and until turbidity in the water column within the silt curtain(s) has fallen to acceptable levels. • Excavation methods will be selected based on their ability to minimise the generation of turbidity. • Regular visual inspections of the area outside the silt curtain will be conducted to assess the presence of potential sediment plumes from the excavation area and to ensure the ongoing integrity and effectiveness. • A harbour water quality and turbidity monitoring plan will be developed to confirm that the discussed mitigation measures are successful in protecting the receiving aquatic ecosystem for the duration of the excavation works. • Contingency measures that can be implemented immediately in the event visible turbidity and harbour water quality impacts are identified during routine monitoring. <p>Lend Lease will ensure that the Remediation Contractor implements a site specific EMP for the duration of the remediation works at the Site. The EMP will detail the appropriate environmental management practices and procedures necessary to conduct the remediation works in a manner that will minimise impact on the receiving environment of Darling Harbour and include the above environmental control measures.</p>	Water and Stormwater Management Sub-Plan
MOD5	RAP Validation	<p>Preliminary Validation</p> <p>Preliminary validation investigations will include:</p> <ul style="list-style-type: none"> • Drilling of three soil bores within the Site to an approximate maximum depth of 14 – 15 m bgl. • Validation soil samples will be collected at 1 m intervals and analysis will be selected on approximately 3-4 samples from each location based on field observations and geological considerations. Where practicable, validation samples will be collected as follows: <ul style="list-style-type: none"> - In areas where the Site will be excavated to RL -6 m AHD samples will be analysed from depths greater than 8.5 m bgl; and - where the depth of the excavation slope may extend up to RL -2 m AHD samples will be analysed from depths greater than 4.5 m bgl. <p>Validation</p> <p>A total of approximately 9 samples will be collected and analysed at approximately 10m intervals or such that a minimum of three samples is taken from each of the three excavation areas.</p> <p>Reuse of Excavated Material</p> <p>If material excavated as part of the proposed Harbour Heat Rejection works is to be re-used at Headland Park, it would be done so in accordance with the ORWS RAP Addendum (23 Oct 2012) that has been separately prepared and approved by the Auditor and EPA.</p>	Spoil & Waste Management Sub-Plan
MOD5	Noise Control Measures	<p>Noise control measures that can be adopted to reduce construction noise levels at surrounding receivers will include:</p> <ul style="list-style-type: none"> • Use of rocksaws and rippers where feasible in lieu of hydraulic percussion rock breakers. • Use smaller rockbreakers with quiet "cityhammers". • Selection of plant with noise control kits installed. • Localised treatment such as barriers around excavation areas where practicable. • Use of vibratory sheet piling rather than impact piling. • Noise emission levels of all critical items of mobile plant and equipment should be checked for compliance with noise limits appropriate to those items prior to the equipment going into regular service. To this end, testing should be established with the contractor. • Operators should be trained to raise their awareness of potential noise problems and increase their use of techniques to minimise noise. • All fixed plant at the work sites should be appropriately selected, and where necessary, fitted with silencers, acoustical enclosures and other noise attenuation measures in order to ensure that the total noise emission from each work site complies with OEH guidelines. • Where practical, layout and positioning of noise-producing plant and activities should be optimised to minimise noise emission levels. • Provision of respite from noise producing activities during extended hour's operations where practicable. • Effective community consultation and complaints management. 	Noise & Vibration Management Sub-Plan

Table 2. Statement of Commitments – MP10_0025 Commercial Building C4 (including modifications)

No.	Condition	Description	CFEMP Reference
35	Environmental, Construction and Site Management	<p>35. Construction and site management relating to the construction of Building B4 will be in generally accordance with the Environmental, Construction and Site Management Plan prepared by Cardno & Bovis Lend Lease included at Appendix EE of the Environmental Assessment Report prepared by JBA Urban Planning Consultants dated November 2010 including the following as updated by this Statement of Commitments (refer to Commitments 37, 38 and 40):</p> <ul style="list-style-type: none"> - Construction Noise and Vibration Assessment and Construction Noise and Vibration Assessment - Supplementary prepared by Wilkinson Murray, which addresses the noise and vibration impacts on and off site (refer to Appendix FF of the Exhibited EAR); - Air Quality Impact Assessment prepared by AECOM, which addresses air quality and odour impacts (refer to Appendix GG of the EA Report prepared by JBA Urban Planning Consultants dated November 2010 and Letter Confirming Air Quality Impact Assessment prepared by AECOM included at Attachment V of the PPR prepared by JBA Urban Planning Consultants dated February 2011); - Waste Management Plan prepared by Arup which addresses construction waste management and included at Appendix N of the EA Report prepared by JBA Urban Planning Consultants dated November 2010 and Letter revised at Attachment K of the PPR. 	CFEMP, environmental sub-plans
36	Environmental, Construction and Site Management	<p>The Environmental Construction and Site Management Plan prepared by Cardno & Bovis Lend Lease will be updated to include the following:</p> <ul style="list-style-type: none"> - The recommendations contained within the Supplementary Construction Noise Assessment accompanying the Bulk Excavation and Basement Car Park Project Application; - The Construction Noise and Vibration Management Plan referred to at Statement of Commitment 37; - The updated Construction Waste Management Plan referred to at Statement of Commitment 39. - A requirement that the wastewater treatment measures associated with the building C4 works are incorporated. - A requirement that all water discharged from the site to Darling Harbour must comply with the table of limits provided by EPA unless otherwise agreed to by EPA. In addition to the table of limits provided by EPA, a turbidity or TSS limit may be applied to the ambient monitoring locations (to trigger site response in the event of an exceedance). Once sufficient ambient data is available from both the ambient locations and the reference location a final limit will be developed which will include consideration of background; - A requirement that no water that is contaminated may be reused on site for dust suppression or other activities without being treated; - A detailed proposal for monitoring water quality that includes at least an on site program for waters held on site prior to discharge and an ambient monitoring program that checks water quality in Darling Harbour. The monitoring on site program will cover all types of water on the site that needs to be discharged including clean stormwater higher turbidity stormwater from areas without much soil contamination, stormwater that has been in contact with contaminated areas and contaminated groundwater from the excavations. - A requirement that the waste water treatment plan be designed to remove all relevant contaminants to levels in the Water Management Plan or as otherwise agreed by EPA. - A requirement that untreated water be held on site until results from monitoring are available for revise or until otherwise agreed by EPA. - A requirement for preparation of a site wide strategy relating to the preparation of post construction dilapidation reports that includes a requirement for the Proponent to engage a suitably qualified person to prepare a post-construction dilapidation report: <ul style="list-style-type: none"> a) At the completion of all excavation and piling works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 works; and b) At the completion of all construction works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 work. - In the event that barging of soil is undertaken, requirements, for: 	CFEMP Water & Stormwater Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		<ul style="list-style-type: none"> Management of spillage of spoil during loading I movement of barges; Procedures in the event of an incident (such as a fuel spill or collision with structures I vessels on the water); and Reporting of any incidents, (such as a fuel spill)on the water. <p>- A requirement that Lend Lease notify and consult with the Harbour Master prior to material being loaded for transport via the water from the site. particularly in relation to vessel movements.</p>	
37	Environmental, Construction and Site Management	<p>Lend Lease will prepare a Construction Noise and Vibration Management Plan with reference to Section 8 of the Wilkinson Murray Construction Noise and Vibration Assessment included at Attachment T of the PPR prepared by JBA Urban Planning Consultants dated February 2010 that includes the following:</p> <ul style="list-style-type: none"> - The appropriate noise and vibration objectives for each identified noise sensitive receiver; - Identification of activities that have the potential to generate noise and/or vibration levels greater than the identified objectives at surrounding sensitive receivers; - Noise and vibration from ancillary activities such as site yards, plan compounds, batch plants and crushing plants; - Approved hours of construction; - Plant and equipment that will operate (e.g pumps) and activities (if any) that will take place outside standard hours of construction; - Respite times to be implemented for particularly noise activities 9such as percussive piling); - Works timetabling in particular works outside standard hours, if any, to minimise noise impacts; - Justification for any activities outside standard construction hours; - All feasible and reasonable noise mitigation measures, including the use of alternative methods to be implemented where potential noise impacts exceeds the relevant objectives; - A detailed description of what actions and mitigation measures will be implemented to ensure that these works would comply with the relevant noise and vibration criteria/guidelines: - A description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often monitoring would be conducted, how the results of the monitoring would be recorded and if any non compliance is detected; - Procedures to notify residents of activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints; - Site contact person and appropriate telephone number; - Description and commitment to work practices which minimise noise; and management and mitigation measures which minimise impact; - Consideration of the cumulative noise and vibration impacts resulting from other activities taking place on Barangaroo at the same time, and all feasible and practicable measures that will be implemented to minimise the cumulative noise and vibration impacts. 	Noise & Vibration Management Sub-Plan
38	Environmental, Construction and Site Management	<p>If required following monitoring of noise levels at the Billabond Childcare Centre in accordance with the Construction Noise Management Plan, suitable noise amelioration measures will be implemented in accordance with the recommendations of the Construction Noise and Vibration Assessment prepared by Wilkinson Murray at Attachment AA of the PPR prepared by JBA Urban Planning Consultants dated Feb 2011.</p>	Noise & Vibration Management Sub-Plan
39	Environmental, Construction and Site Management	<p>The Waste Management Plan prepared by Arup included at Appendix N of the Environmental Assessment Report prepared by JBA Urban Planning Consultants dated November 2010 will be updated to include the following specific requirements:</p> <ul style="list-style-type: none"> -The proponent will ensure that if waste is imported to, or exported from the site, the proponent must ensure that all waste entering or leaving the site can be received and disposed to land in a lawful manner in accordance with the Protection of the Environment Operations Act 1997, the conditions of an Environment Protection License, and the Resource Recovery Exemption Mechanism; 	Spoil & Waste Management Sub-Plan

No.	Condition	Description	CFEMP Reference
		<ul style="list-style-type: none"> - At all times, the proponent will ensure that any waste leaving the site for disposal is transported to a facility that can receive that waste; - The proponent must record all waste being imported to the site (quantities, address of source site, classification, transporter details) and retain records demonstrating the material meets the relevant Resource Recovery Exemption; - The proponent must record all waste being imported to the site (quantities, address of source site, classification, transporter details) and retain original records demonstrating the same as well as lawful disposal of the waste; - Any trackable wastes must be transport and tracked in accordance with POEO Waste Regulation 2005. <p>Waste Management Plan prepared by Arup which addresses construction waste management and included at Appendix N of the EA Report prepared by JBA Urban Planning Consultants dated November 2010 and Letter revised at Attachment K of the PPR.</p>	
45	Environmental, Construction and Site Management	The Building C4 Project Application works be carried out in accordance with the Overarching Remedial Action Plan prepared by ARUP and the Remedial Action Plan – Other Remediation Works (South) Area (including any RAP addendums that are proposed to be prepared and remedial work plan(s) as proposed to be prepared in conformance with these RAPs).	RAP
46	Environmental, Construction and Site Management	That Lend Lease will obtain a Section B Site Audit Statement from the Site Auditor prior to the commencement of remediation works approved under both the Building C4 and Bulk Excavation and Basement Car Parking Project Applications.	Site Audit Statement

Table 3. Statement of Commitments – MP11_0044 Commercial Building C3

No.	Condition	Description	CFEMP Reference
34	Environmental, Construction and Site Management	<p>Construction and site management relating to the construction of Building C3 will be in generally accordance with the Environmental, Construction and Site Management Plan prepared by Cardno & Lend Lease included at Appendix CC of the Environmental Assessment Report prepared by JBA dated November 2011 including the following:</p> <ul style="list-style-type: none"> - Construction Noise and Vibration Assessment prepared by Wilkinson Murray, which addresses the noise and vibration impacts on and off site (refer to Appendix EE of the EAR); - Air Quality Impact Assessment prepared by AECOM, which addresses air quality and odour impacts (refer to Appendix FF of the EAR); - Waste Management Plan prepared by Arup which addresses construction waste management (refer to Appendix L of the EAR). - A requirement for preparation of a site wide strategy relating to the preparation of post construction dilapidation reports that includes a requirement for the Proponent to engage a suitably qualified person to prepare a post-construction dilapidation report: <ul style="list-style-type: none"> a) At the completion of all excavation and piling works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 works; and b) At the completion of all construction works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 work. - In the event that barging of soil is undertaken, requirements, for: <ul style="list-style-type: none"> • Management of spillage of spoil during loading I movement of barges; • Procedures in the event of an incident (such as a fuel spill or collision with structures I vessels on the water); and • Reporting of any incidents, (such as a fuel spill)on the water. - A requirement that Lend Lease notify and consult with the Harbour Master prior to material being loaded for transport via the water from the site. particularly in relation to vessel movements. 	CFEMP, environmental sub-plans
35	Environmental, Construction and Site Management	Lend Lease commits to providing high quality hoardings around the site, including along the foreshore walk. Hoardings will be treated with graphics and other designs consistent with an overall coordinated high quality Barangaroo communications strategy to be endorsed by the Barangaroo Delivery Authority and submitted to the Director-General.	Noise & Vibration Management Sub-Plan
37	Piling & associated works	The Commercial Building C3 Project Application works be carried out in accordance with the Remedial Action Plan – Other Remediation Works (South) Area prepared by AECOM (including any RAP addendums that are proposed to be prepared and remedial work plan(s) as proposed to be prepared in conformance with these RAPs).	RAP
38	Piling & associated works	Lend Lease will obtain a Section A Site Audit Statement from the Site Auditor prior to the issue of an Occupation Certificate for Commercial Building C3.	Site Audit Statement

Table 4. Statement of Commitments – MP11_0044 Commercial Building C5

No.	Condition	Description	CFEMP Reference
33	Environmental, Construction and Site Management	<p>Construction and site management relating to the construction of Building C5 will be in generally accordance with the Environmental, Construction and Site Management Plan prepared by Cardno & Lend Lease included at Appendix CC of the Environmental Assessment Report prepared by JBA dated November 2011 including the following:</p> <ul style="list-style-type: none"> - Construction Noise and Vibration Assessment prepared by Wilkinson Murray, which addresses the noise and vibration impacts on and off site (refer to Appendix EE of the EAR); - Air Quality Impact Assessment prepared by AECOM, which addresses air quality and odour impacts (refer to Appendix FF of the EAR); - Waste Management Plan prepared by Arup which addresses construction waste management (refer to Appendix L of the EAR). - A requirement for preparation of a site wide strategy relating to the preparation of post construction dilapidation reports that includes a requirement for the Proponent to engage a suitably qualified person to prepare a post-construction dilapidation report: <ul style="list-style-type: none"> a) At the completion of all excavation and piling works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 works; and b) At the completion of all construction works associated with the construction of the basement, Commercial Building C3, Commercial Building C4 and Commercial Building C5 work. - In the event that barging of soil is undertaken, requirements, for: <ul style="list-style-type: none"> • Management of spillage of spoil during loading I movement of barges; • Procedures in the event of an incident (such as a fuel spill or collision with structures I vessels on the water); and • Reporting of any incidents, (such as a fuel spill) on the water. - A requirement that Lend Lease notify and consult with the Harbour Master prior to material being loaded for transport via the water from the site. particularly in relation to vessel movements. 	CFEMP, environmental sub-plans
34	Environmental, Construction and Site Management	Lend Lease commits to providing high quality hoardings around the site, including along the foreshore walk. Hoardings will be treated with graphics and other designs consistent with an overall coordinated high quality Barangaroo communications strategy to be endorsed by the Barangaroo Delivery Authority and submitted to the Director-General.	Noise & Vibration Management Sub-Plan
36	Piling & associated works	The Commercial Building C5 Project Application works be carried out in accordance with the Remedial Action Plan – Other Remediation Works (South) Area prepared by AECOM (including any RAP addendums that are proposed to be prepared and remedial work plan(s) as proposed to be prepared in conformance with these RAPs).	RAP
37	Piling & associated works	Lend Lease will obtain a Section A Site Audit Statement from the Site Auditor prior to the issue of an Occupation Certificate for Commercial Building C5.	Site Audit Statement

Table 5. Statement of Commitments – MP11_0002 Residential Buildings R8 R9

No.	Condition	Description	CFEMP Reference
13	Environmental, Construction and Site Management	<p>Construction and site management relating to the construction of Residential Buildings R8 & R9 will be in generally accordance with the Environmental, Construction and Site Management Plan prepared by Lend Lease included at Appendix CC of the Environmental Assessment Report prepared by JBA dated October 2012 including the following:</p> <ul style="list-style-type: none"> - Construction Noise and Vibration Assessment prepared by Renzo Tonin, which addresses the noise and vibration impacts on and off site (refer to Appendix Y of the EAR); - Construction Traffic Management Plan prepared by ARUP, which addresses construction traffic impacts (refer to Appendix EE of the EAR); - Air Quality Impact Assessment prepared by AECOM, which addresses air quality and odour impacts (refer to Appendix DD of the EAR); and - Waste Management Plan prepared by ARUP which addresses construction waste management (refer to Appendix P of the EAR). 	CFEMP, environmental sub-plans
14	Environmental, Construction and Site Management	Lend Lease commits to providing high quality hoardings around the site, including along the foreshore promenade. Hoardings will be treated with graphics and other designs consistent with an overall coordinated high quality Barangaroo communications strategy to be endorsed by the Barangaroo Delivery Authority and submitted to the Director-General.	Noise & Vibration Management Sub-Plan
15	Piling & associated works	The Residential Buildings R8 & R9 Project Application works will be carried out in accordance with the Remedial Action Plan – Other Remediation Works (South) Area prepared by AECOM (including any RAP addendums that are proposed to be prepared and remedial work plan(s) as proposed to be prepared in conformance with these RAPs).	RAP
16	Piling & associated works	Lend Lease will obtain a Section A Site Audit Statement from the Site Auditor prior to the issue of an Occupation Certificate for Residential Buildings R8 & R9.	Site Audit Statement

Table 6. Statement of Commitments – MP06_0162 Concept Approval - Barangaroo (including modifications)

No.	Condition	Description	CFEMP Reference
61	Heritage	An appropriately experienced and qualified heritage practitioner will be engaged to prepare Advice and a Schedule of Conservation Works that will guide the conservation of the sandstone wall on the eastern side of Hickson Road as part of the construction of any proposed pedestrian bridge across Hickson Road. The Advice and Schedule of Conservation Works will inform the design of the proposed Hickson Road bridge and, in particular, how it meets the wall, and shall include conservation works to the palisade fence, sandstone piers/plinth, cutting wall, existing High Street steps (southern end), in-filled steps (northern end), and substation at the southern end. Any new fence elements shall be sympathetic to existing significant fence fabric	Not relevant to this stage of construction
62	Heritage	A Conservation Management Strategy (CMS) will be prepared by an appropriately experienced and qualified heritage practitioner for the Moreton's Hotel in accordance with the NSW Heritage Office's guidelines and in consultation with the NSW Heritage Office. The CMS will provide specific guidelines and conservation policies for the implementation and construction of any pedestrian walkway running through (with owner's consent) or alongside the Hotel, but will not address the whole Moreton's Hotel site.	Not relevant to this stage of construction
66	Heritage	The proposed pedestrian bridges over Hickson Road will include conservation works to the palisade fence, sandstone piers and plinth, the cutting wall, the existing steps (southern end), in-filled steps (northern end), and the substation at the southern end. The conservation works will be implemented through preparation and adoption of a Schedule of Conservation Works. Any new fence elements will be sympathetic to the existing significant fence fabric. An appropriately experienced and qualified heritage practitioner will be engaged to provide advice on the construction of the pedestrian bridge, how it meets the wall, and the conservation of the wall.	Not relevant to this stage of construction
68	Archaeology	All affected potential historical archaeological sites or 'relics' of Local and State significance are to be subject to professional Archaeological Assessment in accordance with Heritage Council guidelines. The assessment must address both terrestrial and maritime archaeological resources and must be prepared by a practitioner (or practitioners) with both terrestrial and maritime experience. The Assessment must consider the desirability and staging of	Archaeological Research Design and Management Strategy

No.	Condition	Description	CFEMP Reference
		any proposed archaeological excavation and/or recording before construction works commence and also other mitigation strategies such as archaeological monitoring (or watching brief) during construction works.	
69	Archaeology	A Research Design including an Archaeological Excavation Methodology will be prepared in accordance with the Heritage Council's guidelines for each site which is impacted by the proposal. Those documents will be prepared for the approval of the Director of the Heritage Branch, Department of Planning. The archaeological Excavation Director will be a qualified archaeologist, and will meet the current Excavation Director Criteria for State significant sites as published by the NSW Heritage Council.	Archaeological Research Design and Management Strategy
70	Archaeology	After archaeological works are undertaken, a copy of final excavation report(s) will be prepared and lodged with the Heritage Branch, Department of Planning, to the State Library of NSW and also to the Local Studies Library in the City of Sydney. The information within the final excavation report will be in accordance with Heritage Branch requirements.	Archaeological Research Design and Management Strategy
72	Archaeology	An appropriately experienced and qualified heritage practitioner specialist consultants in heritage, landscape, interpretation, historical archaeology and maritime archaeology are to be appointed	Archaeological Research Design & Mgmt Strategy
75	Archaeology	Photographic and archival recording of all affected heritage items, as identified in the specialist reports prepared as part of the Environmental Assessment for the project, will be undertaken prior to the commencement of any construction activity. Recording will be completed in accordance with the Guidelines issued by the Heritage Council of NSW. Copies of these photographic recordings will be made available to the Heritage Branch, Department of Planning, to the State Library of NSW and also to the Local Studies Library in the City of Sydney.	Archaeological Research Design and Management Strategy
76	Archaeology	Specialist consultants in heritage, landscape, interpretation, historical archaeology and maritime archaeology will be nominated for the Barangaroo project. The consultants will have appropriate qualifications and experience commensurate with the scope of works. The name and experience of the consultant/s will be submitted to the Director of the Heritage Branch, DoP, for approval prior to commencement of works. The heritage consultant/s will advise on detailed design resolution of new heritage related works, undertake site inductions, and inspect design and installation of services involving heritage items and fabric (to minimise impacts on significant fabric and views) and manage the implementation of the conditions of approval for the project. A report by the principal heritage consultant (illustrated by works photographs) will be submitted to Director of the Heritage Branch, Department of Planning for approval, advice and comment within 6 months of the completion of works, any impacts/damage and corrective works carried out.	Archaeological Research Design and Management Strategy
77	Archaeology	The Director of the Heritage Branch, Department of Planning is to be notified in writing within 14 days of the demolition of any heritage item listed on a Section 170 Register by the relevant government agency responsible for that Register.	Archaeological Research Design & Mgmt Strategy
86	Site remediation	Further site investigations and assessments will be undertaken prior to a Remedial Action Plan (RAP) being prepared. The RAP may be prepared in stages that follow the progressive redevelopment of the site and development blocks. The RAP will address a range of known existing site conditions.	HHERA, RAP
87	Site remediation	A Technical Working Group is to be established to oversee the preparation of the RAP. The membership of the Working Group is to be determined by the proponent team and the Barangaroo Planning Reference Group (under its terms of reference dated 26 November 2006). The Terms of Reference of the Technical Working Group are to be consistent with this Statement of Commitments and endorsed by the Barangaroo Planning Reference Group.	HHERA, RAP
88	Site remediation	The RAP is to be submitted by the Working Group to the Barangaroo Taskforce or equivalent body Barangaroo Planning Reference Group. The Barangaroo Taskforce or equivalent body Barangaroo Planning Reference Group will report to the IPCC on relevant matters as recommended by the Working Group. The Project Team will report to the SHFA Board on recommendations from the Working Group.	HHERA, RAP
89	Site remediation	Following endorsement, the RAP is to be made publicly available in a manner to be determined by the Barangaroo Taskforce or equivalent body Barangaroo Planning Reference Group.	HHERA, RAP
121	Construction	An Environmental and Construction Management Plan will be required as part of any future development on the site.	CFEMP
122		All construction contractors, subcontractors and personnel to be inducted and informed by the nominated heritage consultant/s prior to commencing work on site.	CFEMP
123		Significant heritage items and built elements that are retained to be adequately protected during the works.	Archaeological Research Design & Mgmt Strategy

Appendix 3

Appendix 3 – Environmental Legislation Register

Legislation	Key Requirements	Relevance to the Project	Mechanism for Evaluating Compliance
<i>Contaminated Land Management Act 1997</i>	<p>The main objective of this Act is to establish a process for investigating and remediating land areas where contamination presents a significant risk of harm to human health or some other aspect of the environment.</p> <p>Under this act EPA has the power to:</p> <ul style="list-style-type: none"> • Declare an investigation site and order an investigation • Declare a remediation site and order remediation to take place • Agree to a voluntary proposal to investigate or remediate a site 	Some soils are contaminated as a result of historical activities. Where contaminated material is found, storage, remediation and disposal procedures are to comply with the <i>Contaminated Land Management Act 1997</i> .	Measures for testing, handling and reusing/disposing of contaminated spoil are in the Remediation Action Plan. Testing is used to ensure compliance.
<i>Contaminated Land Management Regulation 2008</i>	<p>This Regulation prescribes a number of matters for the purposes of the <i>Contaminated Land Management Act 1997</i>, including:</p> <ul style="list-style-type: none"> • the form to be used when reporting contamination; and • the amount which the EPA may recover for its costs incurred in relation to investigation and remediation orders. 	No relevance.	-
<i>Environmentally Hazardous Chemicals Act 1985</i>	<p>The purpose of this Act is to control chemicals that are environmentally hazardous. EPA may make chemical control orders (CCOs) with respect to assessed chemicals or declared chemical wastes. The CCOs may regulate the manufacture, processing, conveying, buying, selling or disposal of chemical or declared waste. A CCO may prohibit activities in relation to declared chemical wastes, except under the authority of a licence issued by EPA.</p>	Certain chemicals used or generated may be subject to handling and disposal requirements in this Act.	Measures for handling, identification, disposal of hazardous wastes are in the <u>Spoil & Waste Management Sub-Plan</u> .
<i>Environmentally Hazardous Chemicals Regulation 2008</i>	<p>This Regulation:</p> <ul style="list-style-type: none"> • sets various fees in relation to assessments of technology and prescribed activities by the EPA and in relation to licences to carry on prescribed activities; • specifies the matters to be included in applications for assessment of prescribed activities, in EPA notices about assessments of chemicals, and applications for licences and transfers of licences; • prescribes the information to be included in registers under the Act. 	No relevance.	-
<i>Environmental Planning and Assessment Act 1979</i> (EP&A Act)	<p>The main objective of the EP&A Act is to ensure that proper management and development of land is undertaken incorporating the ecologically sustainable development principles. To achieve this the EP&A Act:</p> <ul style="list-style-type: none"> • Ensures that development consent is obtained prior to construction; • Ensures compliance with planning consents and conditions associated with the consent; • Ensures environmental assessment is undertaken prior to development consent; • Has provision for penalties to be issued should development conditions be breached. 	Lend Lease has satisfied the requirements of the Act to date and has obtained approval for the project.	Conditions to the development approval (Minister's Conditions of Approval) are tracked via <u>CFEMP Appendix 2A</u> .

Legislation	Key Requirements	Relevance to the Project	Mechanism for Evaluating Compliance
<i>Environmental Planning and Assessment Regulation 2000</i>	The regulation provides included practical guidance on items such as preparation of Local Environmental Plans (LEPs), development contributions, BASIX Certificates, certification and relevant fees associated with applications.	Stages of construction require certification prior to commencement.	Conditions to the development approval (Minister's Conditions of Approval) are tracked via <u>CFEMP Appendix 2A</u> .
<i>Heritage Act 1977</i>	Items listed on the State Heritage Register are subject to the provisions of the <i>Heritage Act 1977</i> , which protects items of State heritage significance. Items 50 years or older are also considered heritage items and need to be managed as such. The Act prohibits the demolition, damage or development of or around any heritage item without approval from the Office of Environment and Heritage (OEH).	A program of non-indigenous archaeology is scheduled at the commencement of construction.	Monitoring contained within the <u>Spoil & Waste Management Sub-Plan</u> and <u>Archaeological Research Design and Management Strategy</u> .
<i>National Parks and Wildlife Act 1974</i>	Under this Act, NPWS is responsible for the care, control and management of all national parks, historic sites, nature reserves, reserves, Aboriginal areas and state game reserves. The Act governs various activities including: <ul style="list-style-type: none"> • Protection of flora and fauna, and Aboriginal heritage; • Licences and approvals to modify or destroy flora, fauna or Aboriginal heritage; • Penalties for breaches of the Act. 	Relates to any Aboriginal heritage or relics. No Aboriginal heritage is anticipated in the project area due to previous reclamation. A program of Aboriginal archaeology is scheduled at the commencement of construction.	Aboriginal heritage measures are in the <u>Spoil & Waste Management Sub-Plan</u> and the <u>Aboriginal Archaeological Management Plan and Research Design</u> .
<i>Native Vegetation Act 2003</i>	This Act regulates the clearing of native vegetation on all land in NSW except for National Parks, State Forests and reserves and urban areas. Native vegetation is any species of vegetation that existed in NSW before European settlement. Penalties exist for breaches of the Act.	Sydney City LGA is an excluded urban area for the purposes of the Act.	N/A
<i>Protection of the Environment Operations Act 1997</i> (POEO Act)	The POEO Act is the key piece of environment protection legislation, and is administered by the EPA. The objective of the Act is to protect restore and enhance the quality of the environment in NSW with a need to maintain ecologically sustainable development. To achieve this the following tools are employed: <ul style="list-style-type: none"> • Integrated environment protection licencing; • Regulation of scheduled and non-scheduled activities; • Environmental protection offences and penalties; • Environmental protection notices; • Establishment of a general duty to notify of environmental harm; • Powers for authorised officers to investigate actual or potential pollution events. Schedule 1 of the POEO Act lists activities that are subject to environmental licencing. In addition to the main objective, the POEO Act assists in achieving the objectives of the <i>Waste Avoidance and Resource Recovery Act 2001</i> .	Construction works involve activities that are required to be licenced. Environmental protection offences and penalties, and a duty to notify of environmental harm, apply to all personnel working on the project. Definitions of air, water and noise pollution offences.	Specific requirements for compliance are in the <u>CFEMP</u> and <u>sub-plans</u> . Training on POEO Act offences and penalties, and duty to notify, are included in <u>induction processes</u> .

Legislation	Key Requirements	Relevance to the Project	Mechanism for Evaluating Compliance
<i>POEO (General) Regulation 2009</i>	<p>The Regulation:</p> <ul style="list-style-type: none"> • sets out how to calculate fees for environment protection licences, environment protection notices and noise control notices, and makes provision for adjustment or refunds of those fees; • makes provisions for load reduction agreements (load reduction agreements allow for fee rebates in return for measures taken to reduce pollution in the future); • sets out matters to be included by the EPA for the grant or refusal of a licence application; • makes it an offence to provide false or misleading information in relation to a licence application; • requires licencees to retain records used to calculate licence fees; • prescribes certain matter when placed into water to be water pollution, and the methodology for testing matter in waters; • exempts certain water pollution from the water pollution offence under the <i>Protection of the Environment Operations Act 1997</i>; • prescribes certain forms to be used with respect to warrants relating to noise abatement directions; • declares certain bodies to be the appropriate regulatory authority in relation to certain activities for the purposes of the <i>Protection of the Environment Operations Act 1997</i>; 	Construction activities require an environmental protection licence.	Specific requirements for compliance are in the <u>CFEMP</u> and <u>sub-plans</u> .
<i>POEO (Noise Control) Regulation 2008</i>	<p>This Regulation repeals and remakes, with minor amendments, the provisions of the Protection of the Environment Operations (Noise Control) Regulation 2000:</p> <ul style="list-style-type: none"> • the sounding of sirens and similar devices and the use of sound systems on vessels, • the emission of noise from the engines or exhausts of motor vehicles and vessels, • the maintenance of noise control equipment on motor vehicles and vessels, • the issue of defective vehicle notices and defective vessel notices, • the times during which it is not permissible to use certain articles if they emit noise that can be heard in any residential premises, • the inspection and testing procedures for the purpose of determining noise emission levels of certain motor vehicles, motor vehicle accessories, vessels, articles or equipment. 	Noise emissions from machinery and shipping vessels.	Measures for reducing noise are in the <u>Noise & Vibration Management Sub-Plan</u> .
<i>POEO (Waste) Regulation 2005</i>	Schedule 1 of the regulation sets out the types of waste to which waste tracking requirements apply.	Certain chemicals used or generated may be subject to tracking requirements in this regulation.	Measures for tracking hazardous wastes are in the <u>Spoil & Waste Management Sub-Plan</u> .
<i>POEO (Clean Air) Regulation 2010</i>	<p>This Regulation repeals and remakes, with minor amendments, the provisions of the Protection of the Environment Operations (Clean Air) Regulation 2002:</p> <ul style="list-style-type: none"> • emissions from activities and plant, • the control of volatile organic liquids, • the offences under this Regulation that may be dealt with by way of a penalty notice. 	Air emissions from machinery and plant.	Changes made by this regulation have been included in the <u>Air Quality & Odour Management Sub-Plan</u> .

Legislation	Key Requirements	Relevance to the Project	Mechanism for Evaluating Compliance
<i>Waste Avoidance and Resource Recovery Act 2001</i>	<p>This Act promotes waste avoidance and resource recovery by:</p> <ul style="list-style-type: none"> • Encouraging efficient use of resources in accord with ecologically sustainable principles; • Promoting the “Avoid, reuse, recycle, dispose” hierarchy; • Ensuring industry has a responsibility for reducing and dealing with waste; • Providing penalties for breaches of this Act. 	Waste is generated during construction. The principles of the Act are applied to all aspects of construction to reduce impacts from waste.	Measures for minimising, handling, recycling and disposal of wastes are in the <u>Spoil & Waste Management Sub-Plan</u> .
<i>Water Act 1912</i>	An Act consolidating water rights, water and drainage and artesian wells. Provisions include a licence requirement to sink or alter an artesian bore, not to waste water taken from dams, lakes, artesian wells and bores, and not to unlawfully interfere with sub-surface water or obstruct its flow.	Dewatering Bore Licence received from NSW Office of Water.	Licence conditions included in <u>Water & Stormwater Management Sub-Plan</u>
<i>Water Management Act 2000 and Water Management (General) Regulation 2011</i>	<p>The <i>Water Management Act 2000</i> is the main piece of water legislation in NSW and governs:</p> <ul style="list-style-type: none"> • Extraction of water from waterways and bores • The construction of water storage and supply structures • Development or building within the proximity of waterways • Licencing to regulate usage of water resources • Works involving the removal of obstructions from the improvement of rivers and foreshores and the prevention of erosion of lands by tidal and non-tidal waters <p>Permits are required to excavate protected land, remove material from protected land or do anything to detrimentally affect the flow of waters.</p>	Approvals under this Act are not required due to the project approval under Part 3A of the EP&A Act	N/A

Appendix 4

Appendix 4: Environmental Licence, Approval and Permit Register

Note: Details of approvals, licences and permits will be added as they are obtained. This register is maintained by the EHS Manager (Environment).

Licence/Permit/Approval	Ref. No.	Issuing Authority	Holder	Start Date	Expiry Date	Document Reference
Environmental Protection Licence	13336	EPA	BDA	25 October 2010	25 October 2015	Air Quality & Odour Management Sub-Plan Noise & Vibration Management Sub-Plan Water & Stormwater Management Sub-Plan Spoil & Waste Management Sub-Plan
Dewatering Bore Licence	10BL605180	DPI (Office of Water)	LLPMC	4 July 2012	3 July 2014	Water & Stormwater Management Sub-Plan
Construction Commencement Notice for Major Works (for permanent stormwater works)	126589SW	Sydney Water	LLPMC	22 November 2012	NA	Air Quality & Odour Management Sub-Plan Noise & Vibration Management Sub-Plan Water & Stormwater Management Sub-Plan Spoil & Waste Management Sub-Plan

Appendix 5

Appendix 5: Remediation and Land Forming Works (Block 4 part of Declaration Area + Stage 1b)

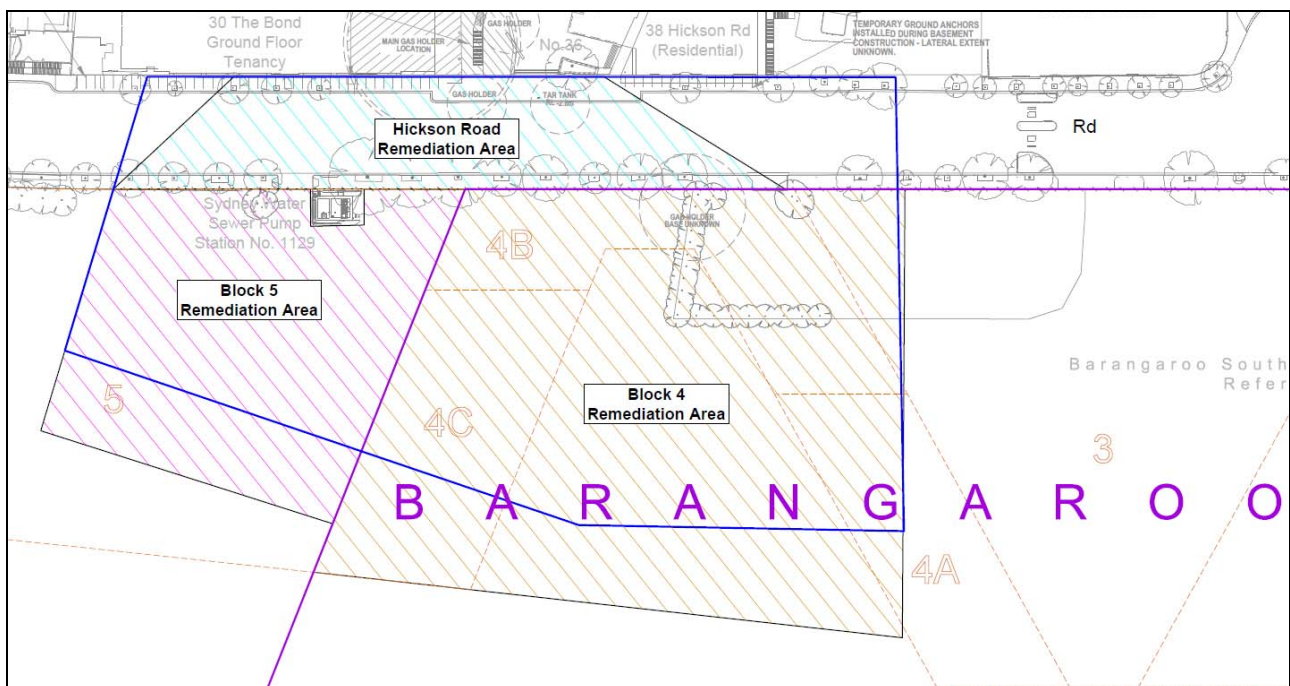
INTRODUCTION

The proposed remediation and land forming works for the Block 4 part of the Declaration Area and Stage 1b site are detailed in the Remedial Action Plan (RAP) (AECOM, 2013) for the site.

The RAP details remediation works required to achieve remediation objectives, including the extent of remediation required, and validation monitoring to confirm completion of remediation works. The RAP also includes remediation of remaining portions of the Declaration Area (Block 5 and Hickson Road). Details of these areas will be included in separate development applications and an update to this CFEMP.

The Site includes Block 4 of the area of Remediation Site Declaration 21122, and some adjoining land to the west and south to be remediated to address the Declaration, or facilitate development for the future Stage 1b basement area. The site comprises the following area:

- Block 4 – the part of the Site on Barangaroo South;



The proposed remediation option, and indicative timeframe for Block 4 of Stage 1B is ex-situ remediation taking 28 months. Further details of this option are provided in the Construction Methodology section below.

ENVIRONMENTAL MANAGEMENT

The environment-related planning application studies that relate to the works are:

- AECOM, **Acid Sulfate Soil Management Plan**, Remediation and Landforming Works, SSD 5897.
- AECOM, **Air Quality Impact Assessment**, Remediation and Landforming Works, SSD 5897.
- AECOM, **Health Impact Assessment**, Remediation and Landforming Works, SSD 5897.
- AECOM, **Remedial Action Plan**, Remediation and Landforming Works, SSD 5897.
- AECOM, **Waste Management Plan**, Remediation and Landforming Works, SSD 5897.

- Arup, Barangaroo South – Remediation and Land Forming Works, SSD 5897: **Construction Traffic Management Plan**.
- Casey & Lowe, **Non-Indigenous Archaeological Impact Statement**, Remediation and Landforming Works, SSD 5897.
- Comber Associates, **Aboriginal Archaeological and Cultural Heritage Assessment**, Remediation and Landforming Works, SSD 5897.
- Wilkinson Murray, Remediation & Land Forming Works, SSD 5897, **Construction Noise & Vibration Assessment**.
- Worley Parsons, **ESD and Climate Change Assessment Report** to accompany Remediation and Land Forming Works, SSD 5897.
- Worley Parsons, **Ex situ Soil and Water Impact Assessment** to accompany Remediation and Land Forming Works, SSD 5897.

Specific environment related construction measures required by these reports, and any additional conditions of approval, would be incorporated in the CFEMP and associated sub-plans.

The CFEMP outlines the following sub-plans:

- Air Quality & Odour Management Sub-Plan;
- Noise & Vibration Management Sub-Plan;
- Spoil & Waste Management Sub-Plan;
- Water & Stormwater Management Sub-Plan;
- Acid Sulfate Soil Management Sub-Plan;
- Tree Management Plan.

Prior to commencement of works, these sub-plans would be prepared and issued to the EPA for review and comment. Sub-plans would first be prepared for the initial works phase (eg. Block 4 retaining walls) then updated as required for future works stages as detailed design is progressed.

CONSTRUCTION METHODOLOGY - BLOCK 4 REMEDIATION AREA

Construction methods for Block 4 remediation are outlined below, and in drawings following text.

Overview - Installation of perimeter retaining wall, excavation of fill materials under odour enclosure, on-site soil treatment and off-site landfill disposal (or beneficial re-use, if applicable).

1 Licences/Approvals

- Obtain all licences/approvals, including variation to existing EPL, any waste approvals (eg. Immobilisation Approval), conditions of planning approval, etc.

2 Site Establishment

- Install hoarding to Hickson Rd boundary.
- Install site fencing/exclusion zones and decontamination areas.
- Removal of site trees, local protection/pruning of Hickson Rd trees, where required for adjacent hoarding and perimeter wall construction.
- Capping/diversion of any existing site services.
- Install environmental controls for excavation and stockpiling works (eg. bunding, sediment controls).

3 Perimeter Retaining Wall

- Construct diaphragm wall or similar on north, west, south and east (Hickson Rd) boundaries of Block 4 (Stage 1b) or to the extent of excavation required to address the Declaration, keyed into bedrock.
- Temporary shoring as required to facilitate excavation of contamination to the south of the perimeter retaining wall.
- Removed spoil to be classified and disposed off-site to landfill, reused off-site under exemptions or licences, or used on-site (where suitable).
- Detailed odour management procedures to be in place for spoil and excavation face for each panel, particularly for east and north walls.

4 Stormwater Diversion & Augmentation

- Decommission existing pipes, and construct new pipe to divert existing stormwater in Hickson Road to existing stormwater west of Block 4.
- Removed spoil to be classified and disposed off-site to landfill, reused off-site under exemptions or licences, or used on-site (where suitable).
- Detailed odour management procedures to be in place for spoil and excavation face.

5 Establish Soil Treatment Area

- If on-site soil treatment of excavated soil is proposed, establish soil treatment area including construction of odour control structure. Odour control structure to be constructed to enable negative pressure maintained, with air exhaust and emissions control system to treat and discharge air.
- Implement sediment controls/water management (bundling, etc) for area.
- Mobilise plant including pug mill.

6 Dewatering and water treatment

- Using temporary Water Treatment Plant (WTP), dewater area, transfer water to WTP, treat water and discharge per EPL requirements.

7 Construct Excavation Odour Control Structures

- Install support piles where required to facilitate future excavation beneath structure. Pile requirements to be based on final structure design.
- Odour control may comprise multiple structures side-by-side to achieve coverage of the remediation area, and appropriate individual span of each structure. Structures to be supported on retaining wall or support piles, as required.
- Structures to be installed to ensure negative pressure maintained. Air exhaust system and associated emissions control, air filters/treatment and stack. Odour control structures may include closable doors and an air lock system at the entrance/exit to minimise odour emissions. Final structures to be subject to future detailed design.

8 Excavation of Block 4

- Excavate contaminated soil per the Remedial Action Plan.
- If approval for a future basement is obtained, excavate remaining fill materials required to create the basement for future development.
- Backfill areas as required outside the future basement (eg. area to the south of proposed retaining wall).
- Excavation of rock not proposed for remediation purposes, except limited excavation (if required) to remove tar seeps to the extent practical.
- Odour control structure to be operated to manage and treat exhausted air.
- Transfer of material to the Soil Treatment Area for stockpiling, waste classification and/or treatment. Transport to be via sealed trucks.
- Water from excavation to be transferred to the WTP for treatment and licensed discharge. Where required, highly contaminated liquids may be pumped by licensed liquid waste contractors (vacuum truck) and disposed offsite.
- Vehicles/plant to be decontaminated in wheel wash/cleaning area, prior to moving to other areas of site or off-site. Waste water transferred to water treatment plant.
- Conduct detailed monitoring (air, noise, water) throughout works.
- Decommission Block 4 excavation odour control structures following excavation.

9 Spoil Treatment / Disposal

- Non-hazardous waste to be classified and transported off-site in covered trucks for landfill disposal, reuse off-site (if available and reused under exemptions or licences) or use on-site (if suitable).
- Hazardous classified material to be treated via soil stabilisation or chemical oxidation (pugmill operation) in the Soil Treatment Area. Alternatively, hazardous classified material could be transported off-site to a licensed treatment facility for treatment.
- Treated spoil to be transported to landfill for off-site disposal.
- Following completion of treatment / spoil management, decommission soil treatment plant.

10 Block 4 Area Validation

- Validate excavation per RAP – inspections and sampling/testing.

Appendix 6

Appendix 6 – Project Environmental Objectives and Targets

Area	Objective	Targets	Implementation and Planning Mechanism
Compliance with Environmental Approvals	Project constructed as per planning, environmental and other approvals	<ul style="list-style-type: none"> 100% compliance with statutory approvals. 	Six-monthly compliance reports Review compliance audit reports and monthly reports
Legal Compliance	Comply with all legal requirements	<ul style="list-style-type: none"> No regulatory infringements (PINs, prosecutions). No formal regulatory warnings (pre-cursors to PIN or prosecution). 	Review records of regulator correspondence
Best practice environmental management	Achieve best practice environmental management through effective implementation of sub-plans	<ul style="list-style-type: none"> Achieve >90% in all measurable outcomes identified in environmental sub-plans. 	Environmental Performance Reviews
Resource conservation and waste minimisation	Minimise resource consumption and waste generation	<ul style="list-style-type: none"> Achieve targets set in the Spoil & Waste Management Sub-Plan. 	Environmental Performance Reviews
Environmental complaints	Minimise and adequately address environmental complaints in a timely and pro-active manner	<ul style="list-style-type: none"> Respond to all environmental complaints as per CFEMP. Address and close out environmental complaints within the designated timeframe. 	Review of 'Consultation Manager' database
Incidents and non-conformance	Minimise, pro-actively identify and appropriately manage all client environmental non-conformities	<ul style="list-style-type: none"> Environmental incidents reported and logged as per the Incident Management Chart or non-conformance system. Incidents and non-conformances requiring investigation or action are appropriately investigated, and corrective actions assigned. 	Review of ProjectWeb non-conformance register
Audit and Inspection	Ensure compliance to project environmental requirements by undertaking required inspections and audits effectively and in a timely manner.	<ul style="list-style-type: none"> Non-conformances identified in audits are logged into the Project non-conformance system. Inspections undertaken weekly at all zones. Scheduled audits are completed as per the audit/inspection schedule. 	Review of audit schedule Review of non-conformance register / monthly reports
Environmental awareness, training and competence	All staff and contractors are aware, trained and competent in relation to their roles on the projects	<ul style="list-style-type: none"> Project inductions and specific environmental training delivered by competent staff or trainer/s. All staff and contractors have undertaken project induction prior to commencement of work. Staff requiring specific environmental training have completed the required training. 	Review of training records Outcome of audits and monthly report

Appendix 7

Appendix 7 – Example Environmental Training Program

Personnel / training	Construction Management	Administration Staff	Environmental Staff	Community Relations Manager	Foremen	Leading Hands	Labourers	Sub-contractors	Specialists	Design Staff	Visitors
Short Induction											✓
Project Induction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Hazardous Materials Induction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Erosion and Sediment Control	✓		✓		✓						
Acid Sulfate Soil	✓		✓								
Spill Kit Use	✓		✓		✓						
Emergency Response	✓		✓		✓						
Complaint Handling	✓		✓	✓							
Waste Management	✓		✓		✓						

Appendix 8

Appendix 8 – Environmental Monitoring and Inspection

Table 1 – Air quality monitoring

Parameter	Equipment	Frequency	Locations	DECCW Criteria	Sampling Method	Reporting
TSP	HVAS	24 hours every 6 days, during excavation	3 – see Air Quality & Odour Management Sub-Plan	90 µg/m ³ as an annual average.	AM-15 AS3580.9.3 – 2003	Monthly report
PM ₁₀	TEOM	Continuous	3 – see Air Quality & Odour Management Sub-Plan	50 µg/m ³ as a 24 hour average. 30 µg/m ³ as an annual average.	AM-16 AS3580.9.6 - 2003	Monthly report Immediate for exceedance
Heavy Metals	HVAS	12 hours every 6 days, during excavation	3 – see Air Quality & Odour Management Sub-Plan	Refer to Air Quality & Odour Management Sub-Plan	AM-15 AS3580.9.3 – 2003	Monthly report
PAH	HVAS	12 hours every 6 days, during excavation	3 – see Air Quality & Odour Management Sub-Plan	Refer to Air Quality & Odour Management Sub-Plan	AM-15 AS3580.9.3 – 2003	Monthly report
VOC (speciated)	Summa	As required	3 – see Air Quality & Odour Management Sub-Plan	Refer to Air Quality & Odour Management Sub-Plan	USEPA TO-15	Monthly report
VOC (total)	AreaRae	Continuous	3 – see Air Quality & Odour Management Sub-Plan	NA	NA	Monthly report Immediate for exceedance
Odour	Field Olfactometer	1 round per day, during excavation	All locations – see Air Quality & Odour Management Sub-Plan	NA	NA	Monthly report Immediate for exceedance
Meteorological station		Continuous	On site near the passenger terminal.	A site that complies with the <i>Approved Methods</i>	AM-1 to AM-4, USEPA (2000), EPA 454/R-99-005	Monthly report

Table 2 – Water quality monitoring

Activity	Purpose	Parameters	Location	Timing / Frequency	Resources	Reporting
Onsite water quality sampling	Confirm EPL 13336 discharge criteria are being met	Phys-chem, metals, PAHs, BTEX as per Water and Stormwater Management Sub-Plan.	Immediately prior to discharge	Daily during commissioning and testing, then weekly	Land based sample collection and laboratory analysis	Monthly report
Harbour Turbidity Monitoring	Comparison of water quality parameters adjacent to operations ('near field') with those at control ('background') sites	Turbidity, conductivity, temperature, pH	Two near field and one reference site - fixed stations (on buoys)	Continuous (every 15 minutes)	Automated water quality monitoring stations, technicians and vessel for servicing.	Monthly report
Harbour water quality sampling	Detect impact on harbour water quality in event of breach of discharge criteria	Phys-chem, metals, PAHs, BTEX as per Water and Stormwater Management Sub-Plan.	Two near field and one reference site, plus one at outlet inside silt curtain	Reactive – as required	Vessel or land based sample collection and laboratory analysis	Monthly report
Weekly inspections	Identify hazards and compliance	General	Construction site and stormwater discharge outlets	Weekly	ProjectWeb diary entry	Immediate if issue noted
Visual plume inspections	Compliance with water quality objectives	Turbidity and visual plume (oil / grease).	Around curtains at construction area/discharge outlet/s	Minimum daily during retention wall works, with subsequent frequency depending on nature of works being carried out	ProjectWeb diary entry	Immediate if plume noted
Silt curtain inspections	Compliance with water quality objectives	General	In the vicinity of the curtains around the construction area/discharge outlet/s		ProjectWeb diary entry	Immediate if issue noted
Turbidity exceedance and visual plume reporting	Compliance with water quality objectives	Turbidity and visual plume (oil / grease).	Construction site and stormwater discharge outlets	As required	Environmental Response Form	Monthly report

Table 3 – Noise & vibration monitoring

Detail	Frequency	Standards	Reporting	Responsibility
Continuous unattended noise monitoring at sensitive receiver locations as per Section 6 of Noise & Vibration Management Sub-Plan.	Real-time monitoring using a web-based system.	As per Section 6 of Noise & Vibration Management Sub-Plan	Monthly	EHS (Environment) Manager Noise Specialist
Construction equipment monitoring to assess compliance with expected noise levels, and to allow any increase in noise levels to be detected and addressed.	If equipment is perceived as being noisy or noisier than other similar equipment, or in response to complaints.	Typical Plant & Equipment Noise Levels. AS 2012	N/A	EHS (Safety) Manager EHS (Environment) Manager Noise Specialist
Attended noise monitoring: <ul style="list-style-type: none"> in response to complaints, as per Section 6 of Noise & Vibration Management Sub-Plan to refine construction methods to minimise noise, to differentiate between construction noise sources and other sources (eg. road traffic or Headland Park works), or to assess internal construction noise levels at commercial premises. 	As required.	As per Section 6 of Noise & Vibration Management Sub-Plan	Monthly	EHS (Environment) Manager Noise Specialist
Attended vibration monitoring at two sensitive receiver locations.	Initial two weeks of significant vibratory activity. Frequency to be reassessed following data interpretation. As required for changes in works or complaints.	EPA guidelines BS6472 DIN4150 Part 3	Monthly	EHS (Environment) Manager Vibration Specialist

Table 4 – Environmental Inspections

Type	Location(s)	Parameter(s)	Frequency	Technique	Reporting	Responsibility	Duration
EHS (Environment) Manager Inspections	All	See example weekly site inspection checklist below	Weekly	Observation	Immediate if observed	EHS (Environment) Manager	All construction phase

Example EHS Site Assessment Checklist

Project Name: _____

Assessment Date: _____

Assessor Name: _____

Signature: _____

N/A		Satisfactory		Action Priority			Brief description of Action if required	Close out (Sign and date)
		Yes	No	1	2	3		
<input type="checkbox"/>	Air quality							
<input type="checkbox"/>	Stock piled materials protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Site roads (adequate surface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Noise							
<input type="checkbox"/>	Machinery & equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Hours of operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Management of adjoining neighbours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Vibration/blasting controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Stormwater Run off/Discharge							
<input type="checkbox"/>	Silt curtain and fencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Water treatment plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Stormwater inlet protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Protection of water bodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Erosion control measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	All weather site measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Vegetation							
<input type="checkbox"/>	Fencing of retained trees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Stockpile of topsoil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Maintenance of drainage to vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Protection from dust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Stockpiling material/machinery around tree bases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Waste Management							
<input type="checkbox"/>	Project Waste Reduction Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Subcontractor involvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Demolition Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Waste Contractor involvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Record keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Paint disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Site litter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Contaminated soil/waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Hazardous Materials							
<input type="checkbox"/>	Bunded storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Handling/transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Identification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Refuelling of machinery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Site entry/exit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Wheel wash-down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Concrete equipment wash-down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	All weather surfaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Adequate drainage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Public road condition (mud/dirt)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

<input type="checkbox"/>	Risk Assessment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	MSDS/Codes of Practice/Quality								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Design Risk Assessment Available								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	All activities covered?								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Close out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	Statutory Licences/Notices		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Compliance								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Action:	1. Immediate	2. Within 24 Hours	Within 7 Days											
<input type="checkbox"/>	Housekeeping		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Materials stacked								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Work area lit								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Bins available & used								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Barricading in place								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Signage in place								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Leads suspended								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Access walkway & stairs clear								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Over/under	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	Personal Protective Equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Availability/condition								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Appropriate								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Correct use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	Plant & Equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Plant Register up to date								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Records of Maintenance								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Pre-use sign-off								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Daily checklist								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Manufacturer's recommendation								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	No excessive emissions from exhaust >10 seconds								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Operator competency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
<input type="checkbox"/>	Electrical		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Temporary boards								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Register of tagging								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Leads & tools tagged								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Earth Leakage protection functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	First Aid/Emergency Procedures		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	First Aid facilities								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	First Aider								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Evacuation procedure								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Emergency numbers								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Fire protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	Reporting – Incidents/Accidents		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Records & P1's								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	First Aid book								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Third Party notification								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Investigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	Public Protection		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Site security								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	Overhead protection								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Segregation of workplace from public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
<input type="checkbox"/>	Training		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
	<input type="checkbox"/>	Provided for risk assessment								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	MESH								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Environmental awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							

Inductions							
<input type="checkbox"/>	Record of induction – safety & environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Subcontractor inductions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Documented induction material (Quality)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Working at Height							
<input type="checkbox"/>	Perimeter protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Handrails in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Penetrations Covered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Catenary Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Manual Handling							
<input type="checkbox"/>	Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	Work Methods appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 9

Appendix 9 – Environmental Reporting Program

Table 1: Regular Reporting

Report title	Required by	Frequency	Prepared	Approved	Submit to	Scope
Monthly project report - environmental aspects	LLPMC	Monthly	Construction Manager / EHS (Environment) Manager	Construction Manager	LLMP	As per the 'GMR Self Assessment Checklist'. Environmental monitoring results.
Air Emissions Monitoring Report	EPL Section E1.1	Monthly	EHS (Environment) Manager	Environment Manager	BDA/EPA	Reporting: <ul style="list-style-type: none"> review all air monitoring data collected in compliance with the EPL and Air Quality Monitoring Plan. provide an interpretation of those results and any relevant site management responses.
WTP Performance Report	EPL Section E2.1	Monthly	EHS (Environment) Manager	Environment Manager	BDA/EPA	Reporting: <ul style="list-style-type: none"> review and compare the performance of the WTP against EPL requirements, including concentration limits, discharge volumes, recycled water quantities and quality. circumstances which triggers additional monitoring arrangements. details about incidents and responses. results of visual inspections of water quality controls including silt curtains. any remedial action undertaken to ensure compliance with licence conditions.
Ambient Water Quality Monitoring Report	EPL Section E5.1	Monthly	EHS (Environment) Manager	Environment Manager	BDA/EPA	Reporting: <ul style="list-style-type: none"> all results for ambient water quality monitoring around the site, an interpretation of those results any relevant site management responses.
Environmental Monitoring Summary Reports	POEO Act section 66(6)	Monthly	EHS (Environment) Manager	Environment Manager	BDA for website	Reporting: <ul style="list-style-type: none"> Results of monitoring required by a EPL condition.
EPL Annual Return	EPL Section R1	Annually, 12 months after issue of licence.	EHS (Environment) Manager	General Manager	BDA/EPA	Reporting: <ul style="list-style-type: none"> Statement of compliance; Monitoring and complaints summary (water quality and turbidity; and noise and vibration).
'EnableOn' reporting	LLPMC	Weekly	Project Engineer	Project Manager	LLPMC	EHS statistics.
NGERS reporting	LLPMC	Monthly	Project Engineer	Project Manager	LLPMC	NGERS requirements.
Quarterly Compliance Report	C3, C4, C5, R8 R9 planning approvals	Quarterly	EHS (Environment) Manager	Project Manager	DP&I	Compliance with all relevant conditions of Part D of each of the planning approvals.

Table 2: Irregular Reporting

Report title	Required by	Frequency	Prepared	Approved	Submit to	Scope
WTP Commissioning Report	EPL Section E2.2	Once, 60 days after commissioning. Updated as works progress	Contractor/ EHS (Environment) Manager	Environment Manager	BDA/EPA	<ul style="list-style-type: none"> details about plant performance when treating a representative range of influents during the initial stage of works - establishment works and installation of the perimeter retaining wall. update as works progress and as other influents are encountered at the site and directed to the WTP for treatment (for example contaminated groundwater, clean storm-water/surface water; contaminated storm-water/surface water; stockpile leachate, etc).
Night-time Noise Non-Compliance Report	MP10_0023 MCOA C3	As required	EHS (Environment) Manager	Environment Manager	DP&I Director General	Where night time noise exceeds management levels: <ul style="list-style-type: none"> mitigation measures applied, noise levels achieved, and justification that outcomes are consistent with best practice.
Out Of Hours Trade-related Works Report	MP10_0023 MCOA C3	As required	EHS (Environment) Manager	EHS (Environment) Manager	ProjectWeb	<ul style="list-style-type: none"> hours worked and activities undertaken, justification that the works were essential, results of noise monitoring where undertaken, complaint and response data, corrective and preventative action to potentially avoid out of hours work occurrences and mitigate noise emissions above relevant noise management levels.
Environmental Incident Report	EPL Sections R2 and R3	As required	EHS (Environment) Manager	Project Manager	BDA/EPA Harbour Master	Immediately notify BDA/EPA as per established reporting procedures in the <i>Incident Management Chart</i> .
Final Archaeological Excavation Report	MP10_0023 SOC 70	At completion of archaeological works	Archaeologist	Project Manager	Heritage Branch, OEH State Library of NSW Local Studies Library, CoS	As per Heritage Branch requirements.
Construction Archaeological Report	MP10_0023 SOC 76	Within 6 months of project completion	Archaeologist	Project Manager	Heritage Branch, OEH	<ul style="list-style-type: none"> any impacts/damage and corrective works carried out, works photographs.
Heritage Item Demolition Report	MP10_0023 SOC 77	Within 14 days of demolition of any item on a Section 170 Register	Archaeologist	Project Manager	Government agency responsible for Register.	Requirement to notify the Director of the Heritage Branch, Office of Environment and Heritage in writing within 14 days.
Dewatering information	Dewatering Licence - 10BL605180 Sections 4 & 11	Within two months of completion	EHS (Environment) Manager	EHS (Environment) Manager	NSW Office of Water	(a) details of the work as set out in form "a" (must be completed by a driller licenced in NSW). (b) a plan showing the location of work in relation to portion and property boundaries, (c) details of any pumping tests carried out, (d) details of any water analysis; All raw monitoring data for pumping authorised by the licence in an electronic format that is compatible with Microsoft Office and Adobe Acrobat software.

Appendix 10

Appendix 10: Sustainability Measures

Measure	Source			How has it been addressed?	Where addressed
	Green Star	EA/PPR	RFP		
Environmental Management Plan (EMP) as per NSW guidelines	✓	✓		Preparation & implementation of a Construction Framework EMP (CFEMP)	CFEMP
Certified Environmental Management System (EMS), which includes sub-contractors	✓	✓		Implementation of the LLPMC Blue Book	LLPMC Blue Book
Waste Management Plan, waste records and reports	✓	✓		Preparation & implementation of a Spoil & Waste Management Sub-Plan	Spoil & Waste Management Sub-Plan
> 90% reduction of C&D waste to landfill (by weight)	✓	✓			Spoil & Waste Management Sub-Plan
> 97% recycling of C&D waste to landfill (by weight)			✓	This is an overall Barangaroo target, to be used for Stage 1A/1B C&D waste.	Spoil & Waste Management Sub-Plan
60% reduction in greenhouse gas emissions compared to business as usual waste disposal		✓			Spoil & Waste Management Sub-Plan
Remediation	✓	✓		Remediation of soils	Remedial Action Plan, Remedial Works Plan
Landscaping/habitat improvement	Option				Concept Plan
Innovation	✓				Barangaroo South Climate Positive Work Plan
Exceeding Green Star, and implementing a measure outside criteria for Green Star	Option				Barangaroo South Climate Positive Work Plan
Supply chain transformation			✓		Barangaroo South Climate Positive Work Plan
Barangaroo Green Skills Exchange			✓		Barangaroo South Climate Positive Work Plan
LLPMC sustainability training, including sub-contractors			✓		Barangaroo South Climate Positive Work Plan
LLPMC Sustainability Core Skills Program			✓		Barangaroo South Climate Positive Work Plan
Community engagement			✓		Community and Stakeholder Engagement Strategy
Materials reuse and selection			✓		Barangaroo South Climate Positive Work Plan
Transport management			✓		Barangaroo South Climate Positive Work Plan
Sustainable site facilities			✓		Barangaroo South Climate Positive Work Plan
Groundwater treatment and reuse			✓		Water & Stormwater Management Sub-Plan