APPENDIX C

Concept Plan Approval

Concept Approval

Section 75O of the *Environmental Planning and Assessment Act 1979*

I, the Minister for Planning, under the *Environmental Planning and Assessment Act 1979* (the Act), determine:

a) pursuant to section 75O of the Act, grant concept plan approval referred to in Schedule 1, subject to the terms of approval in Schedule 2 and the modifications in Schedule 3;

b) pursuant to section 75P(1)(a) of the Act, that development relating to Stages 2 and 3 of the Port Kembla Outer Harbour Development require further environmental assessment under Part 3A of the Act, except that development described in item c);

c) pursuant to section 75P(1)(b) of the Act, that development listed in clause 68, 69, 70 and 71 of *State Environmental Planning Policy (Infrastructure) 2007*, being development permitted without consent, development permitted with consent, exempt development, and complying development, and which has a capital investment value of no more than $30 million, or which is not development for any of the following purposes: dredging, reclamation activities, construction and operation of berths, terminals, roads or rail lines undertaken as part of the Port Kembla Outer Harbour Development (as described in Schedule 1), shall be subject to the relevant provisions of the Act and of *State Environmental Planning Policy (Infrastructure) 2007*;

d) pursuant to section 75P(1)(b) of the Act, that development listed in clause 10A of *State Environmental Planning Policy (Major Development) 2005*, being development permitted without consent, and which has a capital investment value of no more than $30 million, or which is not development for any of the following purposes: dredging, reclamation activities, construction and operation of berths, terminals, roads or rail lines undertaken as part of the Port Kembla Outer Harbour Development (as described in Schedule 1), shall be subject to the relevant provisions of the Act and of *State Environmental Planning Policy (Major Development) 2005*;

e) pursuant to section 75P(1)(a) and 75P(2)(c) of the Act, all future projects for the remaining Stages 2 and 3 (under Part 3A or Part 5 of the Act), are subject to further environmental assessment requirements (as specified in Schedule 3 of this approval); and

f) pursuant to section 75P(1)(c) of the Act, that Stage 1 of the Port Kembla Outer Harbour Development requires no further environmental assessment, but is subject to a separate instrument of approval.

Tony Kelly MLC
Minister for Planning

Sydney 2011

SCHEDULE 1

Application No:	08_0249
Proponent:	Port Kembla Port Corporation
Approval Authority:	Minister for Planning
Land:	The project will be located within the Port Kembla Outer Harbour, within the Wollongong local government area.

8 September 2011 Modification (MP 08_0249 MOD 1)

Proposal:

The Port Kembla Outer Harbour Development is comprised of three key stages as follows:

Stage 1 (1A, 1B and 1C)

- demolition of No.3 and No. 4 Jetties;
- reclamation and dredging for the footprint of the total development (except for the northern area of the multi-purpose terminal);
- construction and operation of one new multi-purpose terminal (central area);
- construction of first container berth;
- extension of Salty Creek and Darcy Road drain, through the reclamation area, to the Outer Harbour;
- relocation of utilities for import of sulphuric acid (currently at Berth 206) to the multi-purpose terminal;
- new road link from Christy Drive;
- rail infrastructure upgrade in South Yard, including extension of No.13 siding; and
- civil works for construction of terminal facilities including services.

Stage 1 (Cement Australia Grinding Mill)

- establishment of a processing plant including transfer hoppers, storage bins, grinding mill and storage silos for dispatch;
- a materials transfer system, incorporating extensive covered and closed conveyor systems, transfer chutes, dust suppression system and bag house;
- clinker storage shed;
- truck and ship loading and unloading facilities;
- internal road systems and parking;
- temporary covered stockpile for raw product; and
- associated office amenities, workshop and substation.

Note: The Cement Australia Grinding Mill is subject to its own project approval (10_0102), including a number of monitoring and reporting requirements which are the responsibility of Cement Australia.

Stage 2

- reclamation for the northern area of the multi-purpose terminals;
- operation of the first container berth;
- construction and operation of second container berth;
- construction and operation of second multi-purpose terminal;
- extension of new road link from Christy Drive (and option for a new parallel road to Foreshore Road);
- new road link from Darcy Road to the recreational boat harbour;
- new rail overbridge across Foreshore Road; and
- new rail link and siding to the container terminals.

Stage 3

- demolition of No. 6 Jetty;
- reclamation and dredging for northern area for the multi-purpose terminals and berth;
- dredging to widen swing basin in northern Outer Harbour;
- construction and operation of second and third multi-purpose berth and terminal;

- construction and operation of the eastern container terminals; (including third and fourth container berths); and
- construction of the container terminal northern piled structure.

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DEFINITIONS

Act, the	*Environmental Planning and Assessment Act, 1979*
ARTC	Australian Rail Track Corporation
Concept Plan	The concept plan the subject of this approval
Construction	Construction, dredging, emplacement and reclamation works and activities associated with the project **other than** survey, acquisitions, fencing, investigative drilling or excavation, and building/road dilapidation surveys or other activities determined by the Environmental Representative to have minimal environmental impact such as minor access roads, minor adjustments to services / utilities, establishing temporary construction sites (in accordance with the requirements of this project approval), or minor clearing (except where threatened species, populations or ecological communities would be affected).
Council	Wollongong City Council
CGM	Cement Australia Grinding Mill Project (10_0102)
Department, the	Department of Planning and Infrastructure
Director General, the	Director General of the Department of Planning and Infrastructure (or delegate).
Director General's Approval	A written approval from the Director General (or delegate). Where the Director General's Approval is required, the Director General will endeavour to provide a response within one month of receiving an approval request. The Director General may ask for additional information if the approval request is considered incomplete. When further information is requested, the time taken for the Proponent to respond in writing will be added to the one month period.
DPI	Department of Primary Industries
I&I NSW	Industry and Investment NSW
Minister, the	Minister for Planning and Infrastructure
Mtpa	Million tonnes per annum
OEH	Office of Environment and Heritage
Project	Development as described in the Concept Plan (including development to be assessed under Part 3A, Part 4 and Part 5 of the Act).
Project Approval	Approval granted for a project in accordance with section 75J of *Environmental Planning and Assessment Act, 1979*
Proposal	Port Kembla Outer Harbour Development - Concept Plan
Proponent	Port Kembla Port Corporation
Publicly Available	Available for inspection by a member of the general public (for example available on an internet site or at a display centre).
NSW RTA	Roads and Traffic Authority
Site	Land on which all components of the Port Kembla Outer Harbour Development will be located.
TEU	Twenty foot equivalent units

SCHEDULE 2

1. TERMS OF CONCEPT PLAN APPROVAL

1.1 The Proponent shall carry out the project generally in accordance with:

a) Major Project Application 08_0249;

b) the *Port Kembla Outer Harbour Development Environmental Assessment Report*, Volumes 1 to 7, prepared by AECOM Australia Pty Ltd and dated March 2010;

c) the *Revised Port Kembla Outer Harbour Development Submissions Report*, prepared by AECOM Australia Pty Ltd and dated 27 October 2010;

d) modification application 08_0429C MOD 1, cover letter dated 4 May 2011 and the accompanying Traffic Assessment titled: *Port Kembla Grinding Mill Traffic Assessment*, dated 21 January 2011; and

e) the terms of this approval.

1.2 In the event of an inconsistency between:

a) the terms of this approval and any document listed from term 1.1a) and 1.1c) inclusive, the terms of this approval shall prevail to the extent of the inconsistency; and

b) any document listed from terms 1.1a) and 1.1c) inclusive, and any other document listed from terms 1.1a) and 1.1c) inclusive, the most recent document shall prevail to the extent of the inconsistency.

1.3 If there is any inconsistency between this concept plan approval and any related approvals, this concept plan approval shall prevail to the extent of the inconsistency.

1.4 The Proponent shall comply with any reasonable requirement(s) of the Director General arising from the Department of Planning's assessment of:

a) any reports, plans or correspondence that are submitted in accordance with this concept plan approval or any related approvals; and

b) the implementation of any actions or measures contained in these reports, plans or correspondence.

1.5 For the purpose of this concept plan approval and any approval granted under it, the concept plan shall be defined in components as follows:

a) **Stage 1**, being the development as generally described in Schedule 1 to this approval (including Stages 1A, 1B, 1C and Cement Australia Grinding Mill);

b) **Stages 2 and 3** being the balance of the development required for the concept plan, as generally described in Schedule 1 to this approval, other than those defined as Stage 1 development.

1.6 With the approval of the Director General, the Proponent may prepare and submit any management plan or monitoring program required by this approval on a progressive basis. Where a management plan and monitoring program is required before carrying out any development or stage of development, the plans/programs may be prepared and submitted in relation to either discrete components of the project or for a specified time period.

SCHEDULE 3

2. MODIFICATIONS TO THE CONCEPT PLAN

Limits of Approval

2.1 This concept plan approval shall lapse ten years after the date on which it is granted, unless the works that are the subject of this approval are physically commenced on or before that time.

2.2 This concept plan approval does not apply to the proposed new tug facilities wharf, which will be subject to separate assessment under the Act.

2.3 *Deleted*

Future Projects and Further Requirements

2.4 The construction and operation of Stage 2 and Stage 3 are subject to further assessment under Part 3A of the Act , except as excluded by the terms of this approval.

This assessment shall clearly demonstrate, prior to the construction and operation of Stages 2 and 3, that the following requirements are able to be met:

a) adequate rail infrastructure and intermodal capacity is in place or will be provided in a timely manner to accommodate the transport of the projected volumes of bulk, general and container cargo by rail, including the ability to achieve the transport modal split contained in Table 4.4, Appendix I (Volume 6) of the Environmental Assessment for bulk, general and container cargo; and

b) road traffic generation, is generally consistent with the forecast levels contained in Requirement 2.7.

2.5 Pursuant to section 75P(1)(a) and 75P(2)(c) of the Act , the following environmental assessment requirements apply with respect to any project applications or activity undertakings, for Stage 2 and Stage 3, under Part 3A or Part 5 of the Act:

General Requirements

a) demonstration that the project is generally consistent with the requirements of this approval, the scope and intent of the concept plan outlined in the documents under requirement 1.1 of this approval, and that the project will not unduly impact on the ability of the site and future development to meet acceptable environmental limits;

b) detailed project description, including construction, operation, maintenance, and staging; and the design and location of ancillary infrastructure;

c) details of the consultation process and outcomes with relevant stakeholders potentially impacted by the project;

d) updated assessment of relevant statutory matters and issue specific requirements for both construction and operation phases and the identification of mitigation and management measures; and

e) detailed project-specific Statement of Commitments, generally consistent with the Statement of Commitments prepared for the concept plan, clearly identifying any new or amended commitments relating to the project.

Issue-Specific Requirements

f) an updated **Traffic and Transport Assessment** to address the traffic and transport impacts associated with each stage of the project, including:

   i. consideration of the findings of the Rail Master Plan required by modification 2.6;
   ii. the current traffic performance of the local and regional road network;
   iii. approved and future development that will influence local and regional road network performance;
   iv. rail and road infrastructure upgrade requirements and associated impacts and the availability of rail paths;
   v. access changes, including the proposed closure of Foreshore Road, the rail overbridge of Foreshore Road and impacts to the Darcy Road sidings; and

vi. construction transport routes and associated traffic impacts, including capacity constraints, changes to access and safety impacts.

g) an updated **Noise and Vibration Impact Assessment** addressing both worst case and representative construction and operational noise impacts (including cumulative impacts as relevant). The assessment shall:
   i. identify noise sensitive receivers, baseline conditions, the levels and character of noise, noise criteria and modelling assumptions and outcomes, including on and offsite rail noise impacts;
   ii. include details of the noise attenuation measures to be implemented should the predicted noise emissions from construction and operation exceed project specific noise criteria, along with a schedule for implementing such works;
   iii. take into account the following guidelines or any documents that supersede them: *NSW Industrial Noise Policy* (EPA, 2000) for operational noise; *Interim Construction Noise Guideline* (DECC, 2009) for site establishment and construction; *Environmental Noise Management – Assessing Vibration: A Technical Guideline* (DECC, 2006) for vibration; the *Environmental Criteria for Road Traffic Noise* (Environment Protection Authority, 1999) for traffic noise and the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECC and DoP, 2007) for offsite rail noise;

h) an updated **Air Quality Assessment** that identifies sensitive receptors that may be impacted by particulate matter, total suspended particulates and other air pollutants generated by the project. The assessment shall include specific mitigation and management measures for identified impacts to prevent adverse impact to local and regional air quality and sensitive receptors.

i) an updated **Harbour Sediment Assessment** that details harbour sediment investigations in locations subject to dredging and disturbance, to determine the scope and properties of contaminants, required management and remediation measures, including the suitability of the emplacement of dredged sediment into reclaimed areas.

j) an updated **Soil Contamination Assessment** that details the outcomes of Phase 1 and 2 investigations at the site (as relevant), the remediation strategy for addressing any contamination that has been encountered (if required), and how the environmental and health risks will be appropriately mitigated and managed during the disturbance, remediation (if applicable) and removal of contaminated soil. The assessment shall take into account the requirements of the *Contaminated Land Management Act 1997* and associated guidelines.

k) an updated **Non-Indigenous Heritage Assessment**, including identification of heritage items affected by the project and an assessment of the impact of the project on the heritage significance of the items. The assessment shall be prepared in consultation with the OEH.

l) an updated **Hazards and Risks Assessment** that details a hazards assessment and the identification of risk reduction measures to ensure that risk levels for the projects are maintained within acceptable levels, including taking into account *State Environmental Planning Policy No.33 – Hazardous and Offensive Development* and associated guidelines and the recommendations listed in section 13.4.1 of the Environmental Assessment.

   The assessments shall include but not be limited to hazard analysis, fire safety, construction safety, transport of hazardous materials and shall include a revised Preliminary Hazard Analysis (PHA) prepared in accordance with the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 6: Guidelines for Hazard Analysis.*

   The potential fatality/injury risks from toxic gas release and Ammonium Nitrate explosions shall also be assessed against the Departments criteria set out in *Hazardous Industry Planning Advisory Paper No.4: Risk Criteria for Land Use Safety Planning*.

m) an assessment at an appropriate level of detail, of other environmental issues associated with Stages 2 and 3 projects, but not limited to: coastal hydrodynamics; hydrology (including potential water quality impacts and flooding); erosion and sediment control, ecology, climate change adaptation and waste management. The assessment shall identify the measures for managing and mitigating any impacts, consistent with best environmental practice.

Rail Master Plan

2.6 The Proponent shall prepare a **Rail Master Plan** to provide a strategic framework for the development and implementation of the rail infrastructure and upgrades necessary for Stages 2 and 3 of the concept plan and the achievement of the transport mode splits contained in Table 4.4, Appendix 1 (Volume 6) of the Environmental Assessment for bulk, general and container cargo. The plan shall be developed in consultation with transport agencies, rail and intermodal operators, including but not limited to Transport NSW, RailCorp, ARTC, Pacific National and other relevant agencies and corporations. The Plan shall include, but not necessarily be limited to:

a) the objectives and scope of the plan;
b) identification of stakeholders associated with the development of the plan and the consultation undertaken;
c) forecast demand for freight movement, including a demand and supply analysis and description of the freight supply chain for the concept plan for a range of growth scenarios;
d) consideration of national and state freight and port strategies, including the Maldon to Dombarton Feasibility Study;
e) identification and alignment of freight movement volumes with required rail infrastructure upgrades, access paths, intermodal terminals and any other infrastructure or servicing requirements required to meet desired modal splits set out in Table 4.4 of Appendix I (Volume 6) of the EA and the road volume limits set under requirement 2.7, including the consideration of local, regional and state requirements, as relevant;
f) the economic feasibility, viability and performance of port freight movements utilising existing and identified infrastructure and service provision measures for the proposal;
g) identification of how and when the required infrastructure improvements will be delivered, including bodies responsible for the funding and implementation of the works; and
h) a contingency plan in the event that the necessary rail and intermodal infrastructure and capacity for Stages 2 and 3 are not delivered in a timely manner.

The Plan shall be submitted to the Director General, consulted agencies and rail operators prior to the construction of Stage 1B and Stage 1C and any project applications relating to Stages 2 and 3 of this concept plan approval, unless otherwise agreed by the Director General, and shall be made publicly available.

Road Traffic Volume Limits

2.7 The total traffic movements associated with the operation of projects associated with this concept plan approval shall be generally consistent with the limits specified in Table 1, as follows:

Table 1 - Total Road Traffic Volumes

Element	Bulk	General	Containers
Volume per year	4.25 mt	2 mt	1,200,000 teu
Volume by road per year	2.125 mt	1.6 mt	120,000 teu
Truck loading (per truck)	35 tonnes	25 tonnes	2 containers
Trucks per year	60,714	64,000	60,000
Trucks per day (average)	166	175	164
Trucks per hour (peak)	10	11	10
Two-way peak hour truck movements	21	22	21
Total for Stage 1	**70 vehicle movements per hour (62 trucks + 8 employees)**		
Total for Concept Plan	**121 vehicle movements per hour (102 trucks + 19 employee vehicles)**		

Note: The Stage 1 and Concept Plan totals in Table 1, include the 42 truck movements associated with the Stage 1 (Cement Australia Grinding Mill) Project (10_0102). However, the volumes and truck movements for the 'Bulk', 'General' and 'Container' values do not include cargoes and traffic associated with the Stage 1 (Cement Australia Grinding Mill) project.

2.8 The Proponent shall develop a program of periodic monitoring of the road traffic movements resulting from all projects associated with this concept plan approval, including the CGM, to

confirm that the road traffic volumes as presented in Table 1 are not being exceeded. The results of this monitoring shall be submitted to the RTA and the Director General on a six monthly basis, or at such other interval as agreed by the Director-General, and within one month of each six month period of operation. The monitoring and reporting program shall be integrated with the Compliance Tracking Program.

Aquatic Biological Monitoring Program

2.9 The Proponent shall develop and implement an **Aquatic Biological Monitoring Program** including a sessile invertebrate recruitment study to monitor the effects of dredging and dredge spoil emplacement on larval settlement in relation to projects associated with this concept plan approval. The Program shall be developed in consultation with I & I NSW and shall include, but not necessarily be limited to:

a) the objectives of the Program;
b) baseline data set of sessile invertebrates;
c) a timeline for the implementation of the Program;
d) a sampling and monitoring program, including methodology and frequency and reporting mechanisms, including annual reporting to I & I NSW;
e) responsibilities for the ongoing implementation of the Program; and
f) contingency measures to be undertaken should monitoring against the baseline data indicate a detrimental impact to sessile invertebrates.

2.10 The Program shall be submitted to the Director General and I&I NSW prior to the commencement of any dredging or dredge spoil emplacement activities for any project associated with this concept plan approval, unless otherwise agreed by the Director General. The monitoring and reporting program shall be integrated with the Compliance Tracking Program.

Habitat Offsets Package

2.11 The Proponent shall develop and submit for the approval of the Director General, a **Habitat Offsets Package** to detail how the ecological values of the Coastal Saltmarsh and Red Beach soft substrate habitat lost, as a result of the projects associated with this concept plan approval, will be compensated. The Package shall be developed in consultation with OEH, I & I NSW and Council and shall include, but not necessarily be limited to:

a) the identification of the extent of habitat, both terrestrial and aquatic, that would be lost or degraded as a result of the final detailed design of the projects footprint;
b) the objectives and biodiversity outcomes that would be achieved through the Package;
c) details of the offset measures selected to provide compensatory habitat within the region, including options in Tom Thumb Lagoon and Garungaty Waterway;
d) the mechanisms for securing the biodiversity values of the offset measures in perpetuity;
e) a timeline for the implementation of the identified measures;
f) a monitoring program and performance criteria, including methodology and reporting mechanisms;
g) responsibilities for the ongoing management, maintenance and monitoring of offset and rehabilitation measures; and
h) contingency measures to be undertaken should monitoring against performance criteria indicate that the offset/rehabilitation measures have not achieved performance outcomes.

2.12 The Package shall be approved by the Director General prior to the commencement of any construction activity for any project associated with this concept plan approval that would result in the disturbance of Red Beach and/or Coastal Saltmarsh, unless otherwise agreed by the Director General. The monitoring and reporting program shall be integrated with the Compliance Tracking Program.

Green and Golden Bell Frog Master Plan

2.13 The Proponent shall prepare a Green and Golden Bell Frog (GGBF) Master Plan to provide a strategic framework on how GGBF and their habitat will be managed within the working harbour area, and inform the development of GGBF Management Plans for each project associated with this concept plan approval.

The Plan shall:

a) be prepared in consultation with the OEH and by a suitably qualified and independent expert whose appointment has been approved by the Director General;
b) be prepared with consideration of the *Draft Recovery Plan: Green and Golden Bell Frog (Lesson 1829) Recovery Plan* (OEH, 2005), *Management Plan for the Green and Golden Bell Frog Port Kembla* (OEH, 2007) and the *Best Practice Guidelines: Green and Gold Bell Frog Habitat* (OEH, 2008);
c) include the following performance criteria/objectives:
    i) the improvement and protection of GGBF habitat and increasing the viability of the GGBF at key sites key sites across the Outer Harbour;
    ii) the creation of additional habitat components at strategic locations;
    iii) the reduction of current operating threats at key sites;
    iv) the establishment of an integrated habitat rehabilitation, creation and management program (involving the community where possible) to address long term on-going management issues at key sites; and
    v) an increased level of community awareness, knowledge and skills relevant to GGBF conservation issues as wells as increased participation by staff and contractors in recovery initiatives.
d) identify:
    i) existing and potential threats to GGBF habitat;
    ii) existing or potential areas to be protected, managed and enhanced as GGBF habitat, including breeding, shelter, refuge and movement habitat, including security mechanisms for key sites
    iii) actions and measures to be considered to enhance and protect GGBF habitat, including planting and landscaping suitable for GGBF foraging and shelter, and structures to facilitate movement and over wintering habitat;
    iv) an adaptive monitoring program to measure the success of proposed works and actions and the inclusion of baseline data;
    v) person(s) responsible for the protection, management, enhancement and monitoring of each GGBF habitat area;
    vi) resources required for the protection, management and enhancement and monitoring of each GGBF habitat area;
    vii) legal mechanism(s) and/or instrument(s) to secure each GGBF habitat area in perpetuity; and
    viii) demarcated Port Kembla Outer Harbour boundary, internal lot boundaries, land title information and environmental zonings on an annotated map or aerial photograph.
e) include:
    i) a feasibility assessment of retaining and refurbishing existing or potential habitats, including but not necessarily limited to Sites 6, 8, 17 and 18, as identified in the *Assessment of Habitat, Dispersal, Corridors and Management Actions to conserve the Port Kembla key population of Green and Golden Bell Frog* (Gaia Research, 2008); and
    ii) a timeline for the implementation of proposed works and actions.

2.14 The GGBF Master Plan shall be submitted to the Director General and OEH prior to the commencement of construction for any project associated with this concept plan approval, unless otherwise agreed by the Director General. The monitoring and reporting elements of the Plan shall be integrated with the Compliance Tracking Program. In the event that the Proponent seeks to defer the submission of the GGBF Master Plan, the Director General shall consider the extent to which construction works that may occur prior to submission of the GGBF Master Plan are likely to impact upon existing and potential GGBF habitat areas and movement corridors.

Dredging

2.15 The ongoing operational dredging requirements for Port Kembla, including maintenance dredging do not form part of this concept plan approval and are subject to the assessment requirements of the Act.

Non-Indigenous Heritage

2.16 The Proponent shall prior to any project applications or activity undertakings, for Stage 2 or Stage 3, under Part 3A or Part 5 of the Act, prepare and implement a Conservation Management Plan for the ongoing management of the Mobile Block Setting Steam Crane and associated components, consistent with recommendation 3 of the *Historic Heritage Assessment and Statement of Heritage Impact* (Environmental Assessment Appendix M) and shall address requirements of the need to relocate the items as a result of these stages. The Plan shall be prepared by a qualified heritage consultant, in consultation with the OEH and submitted for approval by the Director General.

The relocation of the Mobile Block Setting Steam Crane and associated components shall be consistent with the approved Conservation Management Plan and shall be conserved in accordance with the approved plan prior to any relocation.

2.17 Dredging works shall be subject to a shipwreck mitigation strategy to manage the unexpected discovery of shipwrecks.

2.18 The access road between the Historical Military Museum and gun pill box shall be designed and constructed to minimise impacts on these heritage items. The road shall provide equitable access to and between items for visitors of the Museum and shall be developed in consultation with the Historical Military Museum and the OEH.

Coastal Hydrodynamics

2.19 The Project and each stage of the project (as relevant) shall be designed and constructed to minimise increases in infragravity (long) wave and gravity (ocean swell) wave parameters within both the inner and outer harbours and not to have a detrimental effect on harbour tidal flushing.

Air Quality

2.20 Projects associated with this concept plan approval shall be designed and operated with the objective of meeting the relevant pollutant assessment criteria described in section 3 of the report *Air Quality Impact Assessment Port Kembla Outer Harbour,* dated 10 September 2010, and prepared by AECOM (or as may be updated by the source documents), including in a manner that minimises the potential generation of particulate matter emissions from stockpiles, plant and equipment.

2.21 The Proponent shall install, operate and maintain a **meteorological monitoring station** to monitor weather conditions representative of those on the Site, in accordance with:

a) AM-1 Guide to Siting of Sampling Units (AS 2922-1987);
b) AM-2 Guide for Horizontal Measurement of Wind for Air Quality Applications (AS 2923-1987); and
c) AM-4 On-Site Meteorological Monitoring Program Guidance for Regulatory Modelling Applications.

The meteorological monitoring station shall be installed at or near the site and the Proponent shall use the meteorological monitoring station to undertake the monitoring required under this approval. This requirement does not preclude the Proponent from reaching agreement with any other relevant party for the installation, operation and maintenance of a shared monitoring station, or shared use of an existing monitoring station representative of the Site, provided the outcomes of this requirement are achieved.

2.22 From the commencement of construction of any project associated with this concept plan approval, the Proponent shall continuously monitor, utilising the meteorological monitoring station required under this approval, for each of the parameters listed in Table 2.

Table 2 – Meteorological Monitoring

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Rainfall	mm	Continuous	1 hour	AM-4

Temperature at two metres	^{o}C	Continuous	15 minute	AM-4
Temperature at ten metres	^{o}C	Continuous	15 minute	AM-4
Wind speed at ten metres	m/s	Continuous	15 minute	AM-2 and AM-4
Wind direction at ten metres	^{o}	Continuous	15 minute	AM-2 and AM-4
Sigma theta at ten metres	^{o}	Continuous	15 minute	AM-2 and AM-4
Solar radiation	W/m^2	Continuous	15 minute	AM-4

2.23 Prior to the commencement of operations for any project associated with this concept plan approval, unless otherwise agreed by the Director General, the Proponent shall develop and submit for the approval of the Director General, an **Ambient Dust Monitoring Program**, to outline how the particulate matter impacts of the projects associated with this Concept plan approval will be monitored and proactively managed. The Program shall be prepared by an appropriately qualified person(s). The Program shall include, but not necessarily be limited to:

a) identification of an air quality monitoring network and meteorological monitoring,
b) locations, frequencies and methods for monitoring total suspended particles, PM_{10} and deposited particulate matter;
c) the use of appropriate sampling or monitoring methods to measure the parameters described above and a meteorological station capable of monitoring wind direction and speed;
d) the utilisation of real-time monitoring data to inform environmental management decisions associated with the project;
e) a framework for identifying actual and potential particulate matter impacts, and for applying pro-active and reactive mitigation and management measures to address those impacts;
f) provisions for reporting monitoring results to OEH and the Department and for independent review and auditing of the Program (to be incorporated into the Compliance Tracking Program); and
g) mechanisms for updating the Program as may be required from time to time.

Operational Noise

2.24 Projects associated with this concept plan approval shall be designed and operated with the objective of meeting noise limits as described in the *New South Wales Industrial Noise Policy* (EPA, 2000).

2.25 Prior to the commencement of operations for any project associated with this concept plan approval, the Proponent shall develop and submit for the approval of the Director General, a **Noise Verification Monitoring Program**, to outline how the noise impacts of the projects associated with this concept plan approval will be monitored and proactively managed. The Program shall be prepared by an appropriately qualified person(s) and in consultation with OEH. The Program shall include, but not necessarily be limited to:

a) identification of a noise monitoring network, consistent with the guidelines provided in the *New South Wales Industrial Noise Policy* (EPA, 2000);
b) locations, timing and methods for monitoring noise impacts as operations commence for each stage of the concept plan to assess compliance with cumulative operational noise limits, including identification of monitoring sites at which pre- and post-project noise levels can be ascertained;
c) a framework for identifying actual and potential noise impacts, and for applying pro-active and reactive mitigation and management measures to address those impacts;
d) provisions for reporting monitoring results and complaints and enquiries received to the OEH and the Department and for independent review and auditing of the Program (to be incorporated into the Compliance Tracking Program); and
e) mechanisms for updating the Program as may be required from time to time including a system that allows for the periodic assessment of Best Management Practices and Best Available Technology Economically Achievable to satisfy operational noise limits.

Shore Side Power

2.26 Prior to the completion of the reclamation phase in Stage 1 the Proponent shall prepare a Shore Side Power (cold ironing) Feasibility Report, in consultation with OEH, for shore side power at each berth. The assessment shall be undertaken by an appropriately qualified person(s) and shall include, but not limited to:

a) a discussion of best management practice for Shore Side Power, including any relevant international standards;
b) consideration of all feasible and reasonable measures that could be adopted at the berths, including the consideration and quantification of air quality and noise benefits; and
c) potential options and future recommendations.

The Proponent shall submit the Report for the Director General's consideration and shall comply with any requirements of the Director General.

Hazards, Dangerous Goods and Chemical Storage

2.27 For each project associated with this concept plan approval, the recommendations listed in section 13.4.1 of the Environmental Assessment shall be implemented, as relevant; and shall incorporate the proposed safeguards listed in Appendix A of the report *Port Kembla Outer Harbour Development Preliminary Hazard Analysis,* dated 4 March 2010.

2.28 Twelve months after the commencement of operations of each project associated with this concept plan approval and every three years thereafter, or as otherwise agreed by the Director-General, a comprehensive Hazard Audit of the project, as relevant, shall be carried out.

The audits shall be carried out at by a qualified person or team, independent of the project, and shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, '*Hazard Audit Guidelines'*.

The Proponent shall ensure that audit reports are submitted to the Director General within one month of each audit being undertaken and ensure that the three yearly site Hazard Audits for each project associated with this concept plan approval are consolidated.

Cumulative Impacts

2.29 Prior to the commencement of construction of stage 1(Cement Australia Grinding Mill), stage 2 and 3 of the concept plan approval, or as otherwise agreed by the Director General, the Proponent shall prepare and submit for the Director General's approval a **Cumulative Impact Protocol,** which details the measures to be implemented to manage and monitor the cumulative impacts associated with the concurrent construction and operation of project stages, particularly in relation to road and rail traffic, air quality and noise control. The Protocol shall include:

a) an environmental risk assessment identifying likely cumulative impacts of activities included within the concept plan approval on neighbouring development during construction and operation;
b) management procedures to be implemented during construction and operation where cumulative impacts are identified, specifically focusing on those issues identified to be of high risk:
c) management procedures to allow for the cooperation between project Environmental Representatives; and
d) procedures for periodic review of the Protocol.

3. ENVIRONMENTAL MANAGEMENT

3.1 *Deleted*

4. COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT

4.1 Subject to confidentiality, the Proponent shall make documents required under this concept plan approval available for public inspection on request.

Provision of Electronic Information

4.2 The Proponent shall establish a dedicated website or maintain dedicated pages within its existing website for the provision of electronic information associated with the concept plan approval, subject to confidentiality requirements. The Proponent shall publish and maintain up-to-date information on this website or dedicated pages including, but not necessarily limited to:

a) information on the statutory context of the concept plan approval and the current implementation status of the project;
b) a copy of this concept plan approval, any related project approvals and any future modification to these approvals; and
c) details of the outcomes of compliance reviews and audits of the project.

Community Communication Strategy

4.3 The Proponent shall prepare and implement a **Community Communication Strategy** for the project. This Strategy shall be designed to provide mechanisms to facilitate communication between the Proponent, Council and the local community (broader and local stakeholders) on the progress of the project. The Strategy shall include, but not necessarily limited to:

a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners;
b) procedures and mechanisms for the regular distribution of information to stakeholders on the progress of the project;
c) procedures and mechanisms through which stakeholders can discuss or provide feedback to the Proponent in relation to the progress of the project;
d) procedures and mechanisms through which the Proponent can respond to any enquiries or feedback from stakeholders in relation to the progress of the project; and
e) procedures and mechanisms that would be implemented to resolve any issues/disputes that may arise between parties on the matters relating to the progress of the project. This may include the use of an appropriately qualified and experienced independent mediator.

Key issues that should be addressed in the Community Communication Strategy include (but not necessarily be limited to):

i) transport and traffic monitoring and management;
ii) noise and vibration monitoring and management;
iii) air quality and odour monitoring and management;
iv) heritage; and
v) cumulative impacts.

The Proponent shall maintain and implement the Strategy throughout the development of the concept plan. The Strategy shall be submitted to the Director General prior to the commencement of any construction of the projects associated with this concept plan approval.

Complaints and Enquiries Procedure

4.4 Prior to the commencement of construction of any projects associated with this concept plan approval, the Proponent shall ensure that the following are available for community complaints for the life of the project (including construction and operation):

a) a telephone number on which complaints about construction and operational activities at the site may be registered;
b) a postal address to which written complaints may be sent; and
c) an email address to which electronic complaints may be transmitted.

The telephone number, the postal address and the e-mail address must be advertised in a newspaper circulating in the locality on at least one occasion prior to the commencement of construction and at six-monthly intervals thereafter. These details must also be provided on the Proponent's internet site. The telephone number, the postal address and the email address shall be displayed on a sign near the development site and/or main access roads, in a position that is clearly visible to the public.

4.5 The Proponent shall record details of all complaints received through the means listed under term 4.4 of this approval in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:

a) the date and time, where relevant, of the complaint;
b) the means by which the complaint was made (telephone, mail or email);
c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
d) the nature of the complaint;
e) any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.

The Complaints Register shall be made available for inspection by the Director General upon request.

5. COMPLIANCE MONITORING AND TRACKING

Compliance Tracking Program

5.1 The Proponent shall develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this concept plan approval. The Program shall be submitted to the Director General for approval prior to the commencement of construction of any project associated with this concept plan approval, unless otherwise agreed by the Director General. The Program shall include, but not necessarily limited to:

a) provisions for periodic review of the compliance status of the project against the requirements of this approval;
b) provisions for the notification of the Director General following the determination of, prior to the commencement of construction and prior to the commencement of operation of projects associated with this concept plan approval;
c) provisions for periodic reporting of environmental monitoring and compliance status to the Director General;
d) a program for independent environmental auditing in accordance with *ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing*; and
e) procedures for rectifying any non-compliance identified during environmental auditing or review of compliance.

6.1 – 6.4 *Deleted*

APPENDIX D

Major Project Approval

Project Approval

Sections 75J of the *Environmental Planning and Assessment Act 1979*

I approve the project application referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Tony Kelly MLC
Minister for Planning

Sydney 2011

SCHEDULE 1

Application No:	08_0249
Proponent:	Port Kembla Port Corporation
Approval Authority:	Minister for Planning
Land:	The project will be located within the Port Kembla Outer Harbour, in the Wollongong local government area.
Project:	Stage 1 (1A, 1B and 1C) of the Port Kembla Outer Harbour Development comprising: • demolition of No.3 and No. 4 Jetties; • reclamation and dredging for the footprint of the total development (except for the northern area of the multi-purpose terminal); • construction and operation of one new multi-purpose terminal (central area); • construction of first container berth; • extension of Salty Creek and Darcy Road drain, through the reclamation area, to the Outer Harbour; • relocation of utilities for import of sulphuric acid (currently at Berth 206) to the multi-purpose terminal; • new road link from Christy Drive; • rail infrastructure upgrade in South Yard, including extension of No.13 siding; and • civil works for construction of terminal facilities including services.
Major Project:	The proposal was declared a Major Project under section 75(1)(a) of *the Environmental Planning and Assessment Act 1979* because it is development of a kind described in clause 22 of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005.*

8 September 2011 Modification (MP08_0249)

TABLE OF CONTENTS

DEFINITIONS

Act, the	*Environmental Planning and Assessment Act 1979*
ARTC	Australian Rail Track Corporation
Conditions of Approval	The Minister's conditions of approval for the project
Construction	Construction, dredging, emplacement and reclamation works and activities associated with the project **other than** survey, acquisitions, fencing, investigative drilling or excavation, and building/road dilapidation surveys or other activities determined by the Environmental Representative to have minimal environmental impact such as minor access roads, minor adjustments to services / utilities, establishing temporary construction sites (in accordance with the requirements of this project approval), or minor clearing (except where threatened species, populations or ecological communities would be affected).
Council	Wollongong City Council
Department, the	Department of Planning of Planning and Infrastructure
Director General, the	Director General of the Department of Planning and Infrastructure (or delegate)
Director General's Report	The report provided to the Minister by the Director General of the Department under section 75I of the EP&A Act.
DPI	Department of Primary Industries
EPL	Environmental Protection Licence under the *Protection of the Environment Operations Act 1997*
Minister, the	Minister for Planning and Infrastructure
OEH	Office of Environment and Heritage
Operation	When the project commences operational activity, but not including commissioning.
Proponent	Port Kembla Port Corporation
Publicly Available	Available for inspection by a member of the general public (for example, available on an internet site or at a display centre).
Reasonable and feasible	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. **Feasible** relates to engineering considerations and what is practical to build. **Reasonable** relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.
RTA	NSW Roads and Traffic Authority
Site	Land to which Major Project Application 08_0249 applies.

SCHEDULE 2

PART A – ADMINISTRATIVE CONDITIONS

Terms of Approval

A1. The Proponent shall carry out the project generally in accordance with:
   a) the Major Project Application 08_0249;
   b) the *Port Kembla Outer Harbour Development Environmental Assessment Report*, Volumes 1 to 7, prepared by AECOM Australia Pty Ltd and dated March 2010
   c) the *Revised Port Kembla Outer Harbour Development Submissions Report*, prepared by AECOM Australia Pty Ltd and dated 27 October 2010; and
   d) the conditions of this approval.

A2. In the event of an inconsistency between:
   a) the conditions of this approval and any document listed in conditions A1a) to A1c) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and
   b) any document listed from condition A1a) to A1c) inclusive, the most recent document shall prevail to the extent of the inconsistency.

A3. The Proponent shall comply with any reasonable requirement(s) of the Director General arising from the Department's assessment of:
   a) any reports, plans or correspondence that are submitted in accordance with this approval; and
   b) the implementation of any actions or measures contained in these reports, plans or correspondence.

Limits of Approval

A4. This project approval shall lapse ten years after the date on which it is granted, unless the works that are the subject of this approval are physically commenced on or before that time.

Approval Stages

A5. The project shall be constructed and operated in stages as described in section 6.4 of the Environmental Assessment. The construction of Stage 1B and Stage 1C shall only commence with the approval of the Director General following consideration of the Rail Master Plan and compliance monitoring required under concept plan approval 08_0249.

Statutory Requirements

A6. The Proponent shall ensure that all licences, permits and approvals are obtained and maintained as required throughout the life of the project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals. The Proponent shall ensure that a copy of this approval and all relevant environmental approvals are available on site during the life of the project.

Compliance

A7. The Proponent shall be responsible for environmental impacts resulting from the actions of all persons on site, including contractors, sub-contractors and visitors and shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.

A8. The Proponent shall ensure that all practicable measures are taken to prevent and minimise harm to the environment as a result of the construction and operation of the project and shall ensure that all plant and equipment installed and/ or used in conjunction with the project is:
   a) maintained in a proper and efficient condition; and
   b) operated in a proper and efficient manner.

A9. Prior to each of the events listed below, the Proponent shall certify in writing to the satisfaction of the Director General, that it has complied with all conditions of this approval applicable prior to that event:

a) commencement of any construction works on the land subject of this approval;
b) commencement of any dredging, reclamation or emplacement works permitted under this approval; and
c) commencement of operation of the project (receipt of first cargo).

A10. With the approval of the Director General, the Proponent may prepare and submit any management plan or monitoring program required by this approval on a progressive basis. Where a management plan and monitoring program is required before carrying out any development or stage of development, the plans/programs may be prepared and submitted in relation to either discrete components of the project or for a specified time period.

PART B – GENERAL ENVIRONMENTAL STANDARDS AND DESIGN CONDITIONS

AIR QUALITY

B1. The Proponent shall not permit any offensive odour, as defined under section 129 of the *Protection of the Environment Operations Act 1997*, to be emitted beyond the boundary of the site.

TRAFFIC

Property Access

B2. The Proponent shall ensure that all existing access to property is maintained at a comparable level. Prior to the commencement of construction, which may impact on property access, the Proponent shall consult with the landholder whose property access is impacted by the project regarding the terms and conditions relating to access arrangements during construction and operation activities.

Operation Traffic

B3. The total number of vehicle movements associated with the operation of the project shall not exceed 27 vehicle movements per hour/day. To demonstrate compliance with this condition, the Proponent shall undertake six monthly monitoring and recording, or as otherwise agreed by the Director General, of vehicle movements, including vehicle types and submit the monitoring in accordance with the Compliance Tracking Program required under condition B42.

B4. All public road network changes shall be designed and constructed in consultation with the relevant road authority. All works shall be designed in accordance with appropriate road standards including the RTA's Road Design Guide, RTA's Traffic Signal Design Manual, as relevant, and other relevant Australian Codes of Practice; and endorsed by a suitably qualified engineer to be in compliance with these codes.

B5. The Proponent shall design, construct and maintain all internal road works, including associated parking facilities and loading bays, to meet or exceed the following requirements:

a) compliance with the provisions of relevant Australian Standards, RTA standards and guidelines;
b) installation of clear signage to demarcate all vehicle movements within the site;
c) provision of directional pavement arrows on all internal road, and line-marking and signage to indicate designated truck routes and bays;
d) internal roadways wide enough to accommodate through traffic and turning two-way traffic;
e) design of site ingress and egress points to ensure that B-Double vehicles enter and leave the site in a forward direction;
f) installation and maintenance of any landscaping on the site so as not to affect driver sight distance for vehicles entering and exiting the site; and
g) clear demarcation of all visitor, disabled, ambulance and service vehicle parking areas.

B6. The Proponent shall design, install and maintain all hard stand areas on the site to:

a) allow the operation of heavy machinery without breaking up hardstand surfaces;
b) prevent rutting and surface ponding caused by vehicular traffic; and
c) prevent groundwater pollution.

RAIL ACCESS

B7. The Proponent shall obtain RailCorp approval for access connections to the local and regional rail network, including any upgrading work required, such as the junction between the Port Kembla branch and the Proponent's sidings. Any rail connection upgrades shall be to the satisfaction of RailCorp and shall be subject to further approval under the Act. Operations shall not commence until the upgrades have been constructed to the satisfaction of RailCorp.

Note: Approval for train pathways are to be separately negotiated and granted by Railcorp and/or ARTC.

SOIL AND WATER MANAGEMENT

B8. Except as may be expressly provided under the provisions of an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997,* which prohibits the pollution of waters.

B9. The Proponent shall minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction and operation of the project.

Groundwater

B10. The Proponent shall verify that the design of the berths and reclamation, and the characteristics of the associated reclamation material will not significantly alter groundwater flows and that a similar hydraulic conductivity to the existing outer harbour shoreline will be maintained. The verification shall be submitted to the Director General prior to the commencement of construction of any berth or reclamation.

B11. Prior to the commencement of construction, the Proponent shall develop a groundwater monitoring program to the satisfaction of the DPI. The program shall be submitted to the Director General and be implemented throughout the duration of the construction and operation of the project, or until otherwise agreed by the Director-General.

B12. The Proponent shall ensure that direct contact with groundwater is managed and minimised to reduce risks in relation to intrusive ground maintenance and construction workers.

Storm Water

B13. The Proponent shall, within six months of the start of construction, unless otherwise agreed by the Director-General, prepare and implement an **Integrated Water Cycle Management Plan** for the project to facilitate Water Sensitive Urban Design measures and ensure that storm water systems are designed and built to minimise pollutant discharges into receiving waterways. The Plan shall be prepared in consultation with OEH and I&I NSW and shall include, but not be limited to:

(a) the identification of existing hydrology conditions;
(b) objectives and performance standards for water cycle outcomes that are to be achieved during operation of the project, including the identification and consideration of relevant design guidelines, standards and catchment management plans;
(c) water management measures that may be applied so as to meet the objectives and performance standards, including but not limited to:
    i) on-site storage for rainwater reuse;
    ii) storm water treatment devices to remove gross pollutants, sediments, oils and greases from first flush stormwater run-off;
    iii) the incorporation of pollution control devices (eg gross pollutant traps) in the extensions of Salty Creek and Darcy Road drains;
    iv) bioremediation swales; and
(d) ongoing operation maintenance, management and monitoring measures, for the achievement of the identified objectives and performance standards.

The Plan shall be prepared by a qualified practicing Civil Engineer with relevant experience in storm water and environmental engineering and shall be suitably incorporated into the Operational Environmental Management Plan.

B14. Unless otherwise agreed by the Director General, the Proponent shall design, construct, maintain and operate surface water and storm water management infrastructure on the Site to accommodate a 1 in 100 ARI rainfall event.

B15. All quarantine and machinery wash down waters and amenities wastewater shall be directed to sewer (subject to Sydney Water Corporation approval), or to an appropriately licensed liquid waste disposal facility.

FILL AND WASTE

Demolition

B16. All demolition work shall be carried out in accordance with AS 2601-2001 The Demolition of *Structures.*

Fill

B17. All imported fill material shall be classified as Virgin Excavated Natural Materials (VENM), unless applied in accordance with the terms of a Resource Recovery Exemption under the *Protection of the Environment Operations (Waste) Regulations 2005,* or as otherwise agreed by the Director General.

Waste

B18. All land based waste (including surface waters from disturbed contaminated soils), reclamation and fill materials, whether imported or generated on site, shall be assessed, classified, managed and disposed of in accordance with the *Waste Classification Guidelines* (DECC, 2009) or any future guideline that may supersede that document.

B19. The Proponent shall maximise the treatment, reuse and/or recycling of excavated soils, vegetation, or solid waste materials associated with the construction and operation of the project, to minimise the need for treatment or disposal of those materials.

B20. All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.

B21. All dredged materials are to be encapsulated within the sediment containment structures. The removal of sediments to facilitate the consolidation of fill material shall be subject to further environmental assessment under the Act.

CONTAMINATION

Contaminated Land

B22. Prior to the commencement of land based excavation activities, the Proponent shall prepare a Soil Contamination Report detailing the outcomes of Phase 2 contamination investigations at excavation locations, to detail whether or not the soil is suitable for the intended land use, or can be made suitable for reuse through remediation (where reasonably practicable), the likely remediation strategy for addressing any contamination that has been encountered (if required), and how the environmental and health risks will be appropriately mitigated and managed during the disturbance, remediation (if applicable) and/or removal of contaminated soil.

Where the above investigations identify that the site is suitable for the intended land use and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils, materials and groundwater shall be incorporated into the Construction Environmental Management Plan prepared in accordance with condition C36 of this approval. Should a remediation strategy be required, the Report shall include a remediation strategy for addressing the site contamination, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater.

The Report and recommendations shall be prepared in accordance with the requirements of the *Contaminated Land Management Act 1997* and associated guidelines. If required, the Report shall be accompanied by a Site Audit Statement(s), prepared by an accredited Site Auditor under the *Contaminated Land Management Act 1997*, verifying that the site is suitable or can be remediated to a standard consistent with the intended land use. A final Site Audit Statement(s), if required, shall be prepared by an accredited Site Auditor, certifying that the contaminated

areas have been remediated to a standard consistent with the intended land use and shall be submitted to the Director-General prior to operation of the site.

Containment Structures

B23. Prior to the commencement of dredging, reclamation and emplacement activities, the Proponent shall submit to the Director General, a **Containment Structures and Emplacement Report**. The Report shall be prepared by an appropriately qualified person(s) and detail the design of and construction methodology for the proposed emplacement cells, the disturbance and relocation of existing emplaced sediment, sediment emplacement and emplacement cell capping, to ensure that the works prevent the dispersal of, or contain contaminated sediment during construction and operation of the project, and to ensure that environmental and health risks will be appropriately mitigated and managed.

MARINE ECOLOGY

Design

B24. The Proponent shall ensure that hard substrate surfaces of the project incorporate marine habitat friendly structures and aquatic habitat improvement features taking into consideration *Environmentally Friendly Seawalls: A Guide to Improving the Environmental Values of Seawalls and Seawall-lined Foreshores in Estuaries* (Sydney Metro CMA and DECC, 2009).

B25. The box culverts for conveying Salty Creek flows shall be designed to the satisfaction of I & I NSW and shall incorporate a V-shaped recess to facilitate the movement of fish and other mobile aquatic species during periods of low flow and be designed so as not to preclude light access as part of future project applications, unless otherwise agreed by the Director General.

HERITAGE

Non-Indigenous Heritage

B26. The Proponent shall, prior to demolition, prepare photographic archival recordings of Jetties No. 3 and No. 4, including a comprehensive history of these jetties. The recordings shall be in accordance with the guideline *How to Prepare Archival Records of Heritage Items* (Heritage Office, 1998), or any superseding document, and shall include copies of current and/or historical plans or drawings. Copies of the recordings are to be lodged with the State Library of NSW, the Department (Heritage Branch) and the Council.

B27. The Proponent shall ensure that all construction contractors, subcontractors and personnel are inducted, prior to construction, as to their obligations and requirements in respect of the protection of non-indigenous heritage items and relics.

PROPERTY IMPACTS

B28. The Proponent shall identify utilities, services and other infrastructure potentially affected by construction and operation to determine requirements for diversion, protection and/or support. Alterations shall be determined by negotiation with the owner. The Proponent in consultation with the owner and/or occupier shall minimise potential disruption to services resulting from the project and are advised to customers.

B29. The Proponent shall rectify or compensate property owner(s) for any property damage caused directly by the construction or operation of the project.

HAZARDS AND RISKS

Dangerous Goods and Chemical Storage

B30. The Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:

a) all relevant Australian Standards;
b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and
c) the OEH Environment Protection Manual Technical Bulletin *Bunding and Spill Management*.

In the event of an inconsistency between the requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

Pre-Construction Studies

B31. At least one month prior to commencement of construction of the project, or within such further period as the Director General may agree, the Proponent shall prepare and submit the following studies for the approval of the Director General:

a) a **Fire Safety Study,** prepared in accordance with all relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall meet the requirements of the NSW Fire Brigades;

b) a **Final Hazard Analysis**, prepared in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Guidelines for Hazard Analysis'. Final Hazard Analysis should also include the review of Sulphuric Acid transfer risk when the transfer operation design is confirmed; and

c) a **Construction Safety Study**, prepared in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety Study Guidelines'. The construction safety study shall identify the hazards from the construction of multi-purpose berth and the relocation of the sulphuric acid pipeline, and shall follow the relevant Australian Standard and the safeguards stated in section 3.3 of the Preliminary Hazard Analysis.

Pre-Commissioning plans

B32. Prior to commissioning, the Proponent shall develop and implement the plans and systems set out under subsections a) to b). The documentation describing the plans and systems shall be submitted to the Director General at least two months prior to the commencement of commissioning of the project, or within such further period as the Director General may agree:

a) a comprehensive **Emergency Plan** and detailed emergency procedures, including detailed procedures for the safety of all people outside of the project who may be at risk from the project. The Emergency Plan shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Industry Emergency Planning Guidelines'; and

b) a comprehensive **Safety Management System** covering all on-site operations. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'. Records shall be kept on-site and shall be available for inspection by the Director General upon request.

Pre-Operation Compliance Report

B33. One month prior to the commencement of operation of the project, the Proponent shall submit to the Director General, a report detailing compliance with conditions B31 and B32, including:

a) dates of study/plan/system completion, commencement of construction and commissioning;

b) actions taken or proposed, to implement recommendations made in the studies/plans/systems; and

c) responses to each requirement imposed by the Director General under condition A3.

Post-Operation Compliance Report

B34. Three months after the commencement of operation of the project, the Proponent shall submit to the Director General, a **Post-Operation Compliance Report** verifying that:

a) the Emergency Plan required under condition B32a) is effectively in place and that at least one emergency exercise has been conducted; and

b) the Safety Management System required under condition B32b) has been fully implemented and that records required by the system are being kept.

Hazard Audit

B35. Twelve months after the commencement of operations of the project and every three years thereafter, or at such intervals as the Director General may agree, the Proponent shall carry out a comprehensive Hazard Audit of the project and within one month of each audit submit a report to the Director General.

The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the project, prior to commencement of each audit and shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'.

URBAN DESIGN

B36. The Proponent shall take all practicable measures to mitigate off-site lighting impacts from the project site and ensure all external lighting associated with the project complies with Australian Standard *AS4282 1997 – Control of the Obtrusive Effects of Outdoor Lighting.*

B37. The Proponent shall minimise the use of reflective building elements and maximise the use of building materials and treatments which visually complement surrounding development.

B38. The Proponent shall prepare a **Design and Landscape Management Plan** to outline measures to minimise the visual impacts of the project and ensure the visual compatibility of the project with the surrounding broader land uses. The Plan shall be submitted to the Director General within six months of the commencement of construction, unless otherwise agreed by the Director General, and prepared in consultation with Council and the community, and shall include, but not necessarily limited to:

a) identification of design principles and standards based on local environmental and heritage values, vistas and land use context, sustainable design and maintenance, security, and relevant design standards and guidelines;
b) consideration of relevant design standards and policies, such as Water Sensitive Urban Design, AS4282-1997 Control of the obtrusive effects of outdoor lighting, Council's Development Control Plan Vol 1 Part B5.10 Shipping Container Storage Facilities and other relevant Agency and Council design standards;
c) design details of the built elements of the project, including (but not limited to):
    i) storage sheds;
    ii) cranes, loaders, conveyors and the like;
    iii) roads and rail infrastructure;
    iv) visible ancillary infrastructure; and
    v) fencing, lighting, landscape screening, etc;
d) location and identification of proposed landscaping through the use of indigenous and endemic species;
e) graphics for key elements including sections, sketches, perspective views, etc;
f) restoration and stabilisation of work sites and rehabilitation measures, including standards, procedures and methods to monitor and maintain landscaped or rehabilitated areas; and
g) remedial measures to maintain landscaping works, including weed control, to the design standard established in the Plan, where necessary.

COMMUNITY INFORMATION

B39. Prior to the commencement of construction, the Proponent shall establish a dedicated website or maintain dedicated pages within an existing website for the provision of electronic information associated with the project approval, subject to confidentiality requirements. The Proponent shall publish and maintain up-to-date information on this website or dedicated pages including, but not necessarily limited to:

a) information on the statutory context of the project approval and the current implementation status of the project;
b) a copy of this approval and any future modification to this approval;
c) a copy of each relevant approval, licence or permit required and obtained in relation to the project; and
d) details of the outcomes of compliance reviews and audits of the project.

Nothing in this approval prevents the Proponent using or modifying the website required under concept plan approval 08_0249 for the purposes of this condition.

B40. Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.

B41. Prior to the commencement of construction, the Proponent shall ensure that a Complaints and Enquiries Procedure is established consistent with the Procedure required under concept plan approval 08_0249. The Complaints and Enquires Procedure shall facilitate contact between the Environmental Representative and the community, where relevant. Nothing in this approval prevents the Proponent from using or modifying the Procedure required under concept plan approval 08_0249 for the purposes of this condition.

COMPLIANCE TRACKING

B42. The Proponent shall develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this project approval. The Program shall be submitted to the Director General for approval prior to the commencement of construction, unless otherwise agreed by the Director General. The Program shall relate to both construction and operational stages of the project, and shall include, but not necessarily limited to:

a) provisions for periodic review of the compliance status of the project against the requirements of this approval and concept plan approval 08_0249 (as relevant);
b) provisions for the notification of the Director General prior to the commencement of construction and prior to the commencement of operation;
c) provisions for periodic reporting of environmental monitoring and compliance status to the Director General;
d) a program for independent environmental auditing in accordance with *ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing*;
e) mechanisms for recording incidents and actions taken in response to those incidents; and
f) provisions for reporting environmental incidents to the Director General during construction and operation; and
g) procedures for rectifying any non-compliance identified during environmental auditing or review of compliance.

Nothing in this approval restricts the Proponent from using or modifying the Program required under concept plan approval 08_0249 for the purposes of this condition.

INCIDENT REPORTING

B43. The Proponent shall notify the Director General of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12 hours of becoming aware of the incident. The Proponent shall provide full written details of the incident, including demonstration that it has notified the appropriate owner of any assets which have been impacted from the incident, to the Director General within seven days of the date on which the incident occurred.

B44. Where an incident involves an actual or potential fish kill, the Proponent shall also notify the OEH and DPI of the incident, consistent with the requirements of condition B43.

B45. The Proponent shall maintain a register of accidents, incidents and potential incidents with actual or potential significant off-Site impacts on people or the biophysical environment. The register shall be made available for inspection at any time by the independent qualified person or team conducting the Environmental Audit and/or the Director General.

B46. The Proponent shall meet the requirements of the Director General to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition B43 of this approval, within such period as the Director General may require.

PART C – CONSTRUCTION

AIR QUALITY

Dust Control

C1. The Proponent shall construct the project in a manner that minimises dust emissions from construction sites, including wind-blown and traffic-generated dust. All construction activities shall be undertaken with the objective of preventing visible emissions of dust from construction sites and the Proponent shall, unless otherwise agreed by the Director General, implement a range of mitigation measures, which may include but is not limited to:

a) covering of truck loads, except during loading and unloading;
b) road sweeping, vehicle speed limits, truck washes and shaker grids at site exits;
c) unloading of fill trains through a below track system;
d) the sealing of trafficable areas and areas susceptible to windblown dust impacts; including the use of stockpile veneers and the watering of dusty areas; and
e) the cessation of relevant works, as appropriate.

The Proponent shall evaluate other dust control mitigations measures, including barriers, internal storage of fine construction materials (less than 3mm), exhaust emission controls and the use of mains electricity. These management measures shall be incorporated into the Construction Air Quality Management Plan.

Odour Monitoring

C2. During dredging activities, the Proponent shall monitor for odours using field screening. The results of olfactory determination of the degree and extent of odour shall be recorded together with a description of concurrent operational activities. Reports shall be kept on the premises and made available to the Director General on request.

NOISE

Construction hours

C3. Construction activities associated with the project (except blasting and dredging activities) and which are audible at sensitive receivers, shall only be undertaken during the following hours:

a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;
b) 8:00 am to 1:00 pm on Saturdays; and
c) at no time on Sundays or public holidays.

Note: Dredging activities may be conducted at all times in accordance with the noise limits specified in condition C6.

C4. Construction outside the hours stipulated in condition C3 of this approval is permitted in the following circumstances:

a) construction work that causes $L_{Aeq(15minute)}$ noise levels that are:
   i. no more than 5dB above rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009); and
   ii. no more than the noise management levels specified in Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses; or
b) for the delivery of materials required outside these hours by the Police or other authorities for safety reasons; or
c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or
d) for out of hours works approved by OEH in an Environment Protection Licence (EPL) applying to the project.

Blasting hours

C5. Blasting shall only be undertaken between the hours of 9:00 am and 5:00 pm, Monday to Friday, and 9:00 am to 1:00 pm on Saturday.

Construction Noise

C6. The Proponent shall implement all reasonable and feasible noise mitigation measures as necessary to achieve the construction noise management levels as described in the *Interim Construction Noise Guideline* (DECC, 2009). Such measures may include, but not limited to efficient silencers, low-noise mufflers (residential standard) to plant and equipment, and screening worksites.

For the purpose of this condition, rating background levels shall be those established in the document referred to under condition A1 of this approval. Where rating background levels were not established in this document, the Proponent shall ensure that rating background levels are determined prior to the commencement of construction.

Any activities that have the potential to exceed the noise objectives must be identified and managed in accordance with the Construction Noise and Vibration Management Plan required under condition C37 of this approval.

C7. The Proponent shall minimise noise emissions from plant and equipment, including the operation of bulldozers, cranes, graders, excavators, dredgers and trucks and the like. The plant and equipment shall have sound power levels consistent with those levels identified in Table 19 of the *Port Kembla Outer Harbour Noise Impact Assessment*, dated 20 September 2010 and prepared by AECOM Australia Pty Ltd, unless otherwise agreed by the Director General.

Construction Vibration

C8. The Proponent shall implement all reasonable and feasible mitigation measures with the aim of achieving the following construction vibration goals:

a) for structural damage vibration, the vibration limits set out in the German Standard *DIN 4150 Part 3-1999 Structural Vibration in Buildings - Effects on Structures*; or

b) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: A Technical Guideline* (DEC 2006).

Blasting limits

C9. The overpressure level from blasting operations at the project shall not exceed 115dB (Lin Peak) for more than five percent of the total blasts over each reporting period and shall not exceed 120dB (Lin Peak) at any time.

C10. Ground vibration peak particle velocity from blasting operations at the project shall not exceed 5mm/sec for more than five percent of the total number of blasts over each reporting period and shall not exceed 10mm/sec at any time.

C11. To determine compliance with the above blasting conditions:

a) the Proponent shall undertake blasting trials;

b) airblast overpressure and ground vibration levels shall be measured and electronically recorded for all blasts carried out in or on the premises;

c) instrumentation used to measure the airblast overpressure and ground vibration levels shall meet the requirements of Australian Standard AS 2187.2-2006; and

d) error margins associated with any monitoring equipment used to measure blasting limits shall not to be taken into account in determining whether or not the limit has been exceeded.

C12. The Proponent shall make all reasonable attempts to advise occupants of receivers located within 500 metres of a blast, of blasting. The advice shall be provided at least 48 hours before a blast and include a schedule of blast time(s) and a telephone number and contact name.

TRAFFIC AND TRANSPORT

Access and Traffic Management

C13. The Proponent shall ensure that construction vehicles associated with the project:

a) minimise idling and queuing on public streets and that all parking is undertaken on-site;

b) avoid the use of local roads to gain access to construction sites and adhere to nominated haulage routes identified in condition C14 and the Construction Traffic Management Plan required under condition C37b) of this approval; and
c) adhere to a Construction Vehicle Code of Conduct prepared to manage driver behaviour along the local road network to address traffic impacts (and associated noise) along nominated haulage routes.

C14. The primary access route for construction vehicles shall be via Flinders Street and Old Port Road and along the new link road off Christy Drive. Construction access to the site via the Five Islands Road and Darcy Road route shall be minimised to the greatest extent practicable.

Construction Vehicle Numbers

C15. The total number of construction vehicles accessing the site shall generally not exceed the volumes prescribed in Table C15, unless otherwise agreed by the Director General after consideration of the matters listed in condition C16.

Table C15: Maximum Construction Traffic Volumes

Construction trucks per hour	Workforce vehicles per hour	Total Traffic per hour
27	11	38

C16. Subject to condition C15, the Proponent shall undertake further assessment of the receipt of fill/spoil material for the approval of the Director General. The assessment shall address, but not be limited to the following:
a) identification of confirmed sources and quantities of fill/spoil that are to be transported by road, rail and/or sea;
b) assessment of these quantities in the context of the total quantities required for reclamation works, as determined in the Environmental Assessment;
c) details of the handling and transport processes from origin to destination;
d) assessment of the impact of this activity on the site and adjacent developments; and
e) in the event that fill/spoil cannot be adequately transported by either rail or sea and has to rely on road transport in excess of the vehicle numbers identified in condition C15, assessment of the additional traffic movements to be generated, including its impact on the road performance on the local and regional road network and road traffic noise impacts.

Road Dilapidation Reports

C17. Prior to commencement of construction and after construction is complete, the Proponent shall commission road dilapidation reports for public roads that are to be used by construction traffic within the vicinity of the site, as nominated in the Construction Traffic Management Plan (as required under condition C37b) of this approval. Copies of the reports shall be provided to the relevant road authority. Any road/footpath damage, aside from that resulting from normal wear and tear, shall be repaired to a standard at least equivalent to that existing prior to the damage, in accordance with the requirements and to the satisfaction of the relevant road authority, and at the full expense of the Proponent.

SOIL AND WATER MANAGEMENT

Erosion and Sediment Control

C18. Soil and sediment is to be managed with consideration of the design and construction criteria for sediment retention basins described in the *Managing Urban Stormwater: Soils and Construction Volume 2B Waste Landfills* and *2E Mines and Quarries* (DECC, 2008).

C19. The Proponent shall install erosion, sediment and pollution controls prior to the commencement of construction of the project and shall maintain all erosion, sediment and pollution control infrastructure at or above design capacity for the duration of construction of the project 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.

C20. All materials stockpiled shall be adequately managed to prevent erosion or dispersal of the materials. Dredged sediments shall not be stockpiled on site, unless as otherwise agreed by the Director-General after assessment of relevant environmental impacts.

Acid Sulfate Soils

C21. The Proponent shall ensure that any construction activities in identified areas of acid sulfate soil risk are undertaken in accordance with *Acid Sulfate Soil Manual* (Acid Sulfate Soil Management Advisory Committee, 1998).

Turbidity Control

C22. Turbidity control measures shall be designed, installed and maintained outside and surrounding all dredging, reclamation and emplacement works to be undertaken as part of the project for the duration of the works and until turbidity in the water column within the measures has fallen to below the turbidity limits specified under condition C24. Turbidity control measures are to be designed, installed and maintained to prevent the release of a visible plume of sediment and contaminants beyond the measures. The design of the measures for dredging and spoil emplacement shall be informed by a human health and ecological risk assessment.

C23. An inspection program shall be prepared and implemented to ensure that all turbidity control measures, are maintained with respect to structural integrity and effectiveness. The program shall include procedures to record dates, times and observations made with each inspection. The program and resultant records shall be made available to the Director General and the OEH upon request.

C24. Unless otherwise specified in an EPL for the project, all dredging, reclamation and emplacement works associated with the project shall be undertaken in a manner that does not cause turbidity outside the turbidity control measures installed as part of the project to exceed the background turbidity by more than an equivalent suspended sediment concentration of 50mgL when measured in accordance with the **Water Quality Monitoring Program** required under conditions C29 and C30.

Water Quality Monitoring

C25. For the purposes of monitoring turbidity during dredging, reclamation and emplacement works, at least four representative reference monitoring points surrounding the works shall be identified and established, unless otherwise agreed by the Director General.

C26. During dredging and dredge spoil emplacement works continuous data loggers shall be deployed at the monitoring points described in condition C25 and used to monitor for turbidity, dissolved oxygen, temperature and pH and shall allow for an immediate measure of turbidity to inform reactive management responses, for example, nephelometric turbidity units (NTUs) or light penetration measured in photosynthetic active radiation.

C27. During dredging and emplacement works, the monitoring of the following water pollutants shall be undertaken in consultation with OEH: metals and metalloids (Antimony, cadmium, chromium (VI), copper, cobalt, lead, mercury (inorganic), nickel, silver, selenium, vanadium, zinc, arsenic, tributyltin, aluminium), and Polycyclic aromatic hydrocarbons (Anthracene, benzo(a)pyrene, fluoranthene, napthalene, phenanthrene, total polycyclic aromatic hydrocarbons). Visual monitoring of sheens and plumes shall also be undertaken.

C28. The OEH and the Director General shall be notified of the location of the water quality monitoring points prior to the commencement of any dredging, reclamation and emplacement works, and if required by either the OEH or the Director General, modify the location of the monitoring points to reflect a representative reference location(s).

C29. Prior to the commencement of any dredging and dredge spoil emplacement works, a **Dredging Water Quality Monitoring Program** to monitor turbidity and pollutant concentrations surrounding the works, and changes to those concentrations as a result of the project shall be developed. The Program shall be developed in consultation with OEH and I&I NSW and include, but not necessarily be limited to:

a) establishment of water quality criteria, consistent with any requirements of this approval and the EPL for the project, against which the water quality performance of the project will be assessed;
b) procedures for monitoring of turbidity at the monitoring points established under condition C25 of this approval and monthly flyovers to assess for turbidity;
c) procedures for monitoring contaminant concentrations as a result of the dredging works;
d) procedures for toxicant monitoring using diffusive gradients in thin-films, including frequency of analysis;
e) a broader sampling program to monitor harbour-wide trends in Outer Harbour water quality;
f) an ongoing ecological monitoring program to assess the ecological health of the Port Kembla Outer Harbour;
g) assessment, management processes, and trigger values to establish whether water quality criteria are being exceeded, or are likely to be exceeded as a result of the dredging reclamation or emplacement works; and
h) contingency measures and actions to be taken in the event that elevated turbidity, pollutant or toxicity levels are detected, including investigations, variation of work methods, installation of additional pollutant controls, stop work, and notification to OEH.

The Program shall be integrated into the Dredging and Reclamation Environmental Management Plan required under condition C35 and implemented for the duration of dredging, reclamation and emplacement works (or each phase of the works).

C30. Prior to the commencement of any reclamation works, which do not include dredging or dredge spoil emplacement, a **Reclamation Water Quality Monitoring Program** to monitor turbidity and other physico-chemical parameters surrounding the works, and changes to those parameters as a result of the project shall be developed. The Program shall be developed in consultation with OEH and I & I NSW and include but not necessarily be limited to:
a) establishment of water quality criteria, consistent with any requirements of this approval and the EPL for the project, against which the water quality performance of the project will be assessed;
b) procedures for monitoring of turbidity and pH at the monitoring points established under condition C25 of this approval and monthly flyovers to assess for turbidity;
c) assessment, management processes, and trigger values to establish whether water quality criteria are being exceeded, or are likely to be exceeded as a result of the reclamation works; and
d) contingency measures and actions to be taken in the event that elevated turbidity levels are detected, including investigations, variation of work methods, installation of additional pollutant controls, stop work, and notification to OEH.

The Program shall be integrated into the Construction Environmental Management Plan required under condition C36 and implemented for the duration of reclamation works (or each phase of the works).

Emplacement Cells

C31. The Proponent shall engage an appropriately qualified person to audit the construction of the emplacement cells and the emplacement of dredged sediments at the practical completion of each of the following stages:
a) construction of bunds within the reclamation footprint;
b) the dredging of the existing spoil emplacement area;
c) new bund walls to encapsulate spoil within the existing spoil emplacement area;
d) deposition of dredged spoil; and
e) the emplacement cell capping.

The audit shall consider the commitments contained in the documents referred to in condition A1 and the conditions of approval, in particular condition B23. The auditor shall provide the Director General with a report within one month of each audit confirming that the cell construction and sediment emplacement are in accordance with the approval and the

Containment Structures and Emplacement Report required under condition B23. The Audit Reports shall be incorporated into the Compliance Tracking Program required in condition B42.

MARINE ECOLOGY

Marine Blasting

C32. The Proponent shall, prior to any underwater blasting, identify pressure thresholds to prevent physical trauma to fish and marine mammals and identify appropriate distances between marine mammals and the project during blasting activities. These thresholds and distances shall be incorporated into Dredging and Reclamation Environmental Management Plan required under condition C35.

HERITAGE

Non-Indigenous Heritage

C33. If during the course of dredging and other construction activities, shipwreck material is encountered, works in the immediate vicinity shall cease and the Department (Heritage Branch) contacted to assess the discovery and provide advice of mitigation or other management measures. A qualified maritime archaeologist shall be engaged to assess the shipwreck and undertake any required underwater archival recording. Relevant works shall not recommence until written authorisation from the Department (Heritage Branch), advising otherwise is received by the Proponent.

C34. If during the course of construction, the Proponent uncovers unidentified non-indigenous heritage items or relics, all works likely to affect the item(s) or relics shall cease in the immediate area to prevent impact to the find(s) and the Department (Heritage Branch) be notified. A suitably qualified heritage consultant shall be contacted to determine the significance of the find(s) and appropriate management measures. Relevant works shall not recommence until written authorisation from the Department (Heritage Branch) advising otherwise is received by the Proponent.

ENVIRONMENTAL MANAGEMENT

Dredging and Reclamation Environmental Management Plan

C35. Prior to the commencement of dredging, reclamation and emplacement works, or each phase of works, a **Dredging and Reclamation Environmental Management Plan** (including a Construction Marine Blasting Management Plan) shall be prepared in consultation with OEH and I&I NSW. The Plan shall outline environmental management practices and procedures to be followed during dredging, reclamation and emplacement works to minimise human health and ecological risks; and to manage impacts from marine blasting activities to minimise physical trauma to fish and marine mammals. The Plan shall be consistent with the Department's *Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004) and shall include, but not necessarily be limited to:

a) a description of all activities to be undertaken during dredging, reclamation and emplacement works, including proposed dredging methods, maps of dredge areas, disposal areas, containment structures and depths for each stage, marine blasting activities and locations;
b) statutory and other obligations that must be fulfilled during dredging, reclamation and emplacement works and associated activities, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
c) a description of the roles and responsibilities for all relevant employees involved in the dredging, reclamation and emplacement works;
d) environmental performance criteria for dredging, reclamation and emplacement works,, including turbidity levels, marine blasting thresholds and safe blasting distances to protect fish and marine mammals; and
e) details of how the environmental performance of the dredging, reclamation and emplacement works will be managed and monitored and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:

i) details of measures that will be employed to manage water quality, dredged materials and sediment impacts during dredging, reclamation and emplacement works,, including details of turbidity controls, barge movement management, and emplacement areas;
ii) a **Water Quality Monitoring Program(s)** as required by conditions C29 and C30;
iii) details of environmental controls to be retained after the completion of works which are likely to cause pollution of waters until the turbidity of the water within the systems return to background levels;
iv) details on how marine blasting will be managed for each stage, including the identification of mitigation, management and monitoring measures, and a marine observer program to halt blasting when marine mammals are within safe blasting distances;
v) measures to monitor and manage odours and dust emissions, including timeframes that barges would store dredged sediment and rock material before placing in reclamation areas;
vi) measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/ or waters;
vii) adoption of best noise practice in the selection, operation and maintenance of dredging equipment and methods to evaluate and monitor ongoing noise performance during dredging, reclamation and emplacement works;
viii) measures to monitor and control odour and air emissions during handling of sediments; and
ix) monitoring, inspections, and contingency actions for risk factors (eg failure of the silt curtains or breakage of dredging pipelines) including a silt curtain monitoring program.

The Plan shall be submitted for the approval of the Director General no later than one month prior to the commencement of dredging, reclamation and emplacement works, or within such period otherwise agreed by the Director General. The Plan may be prepared in stages, however, each stage shall not commence until written approval has been received from the Director General.

Construction Environmental Management Plan

C36. The Proponent shall, prior to the commencement of construction, prepare and implement a Construction Environmental Management Plan. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in accordance *with Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004). The Plan shall include, but not necessarily be limited to:
a) a description of all relevant activities to be undertaken on the site during construction (including staging and scheduling);
b) statutory and other obligations that the Proponent is required to fulfil during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
c) a description of the roles and responsibilities for all relevant employees involved in the construction of the project;
e) details of construction compounds and the management of these sites (including personnel parking);
f) details of the measures to be installed to separate construction areas from publicly accessible areas; and
g) details of how the environmental performance of the construction works will be managed and monitored, and what actions will be taken to address identified potential adverse environmental impacts. In particular, the following environmental issues shall be addressed in the Plan:
i) site preparation and demolition activities;
ii) construction noise and vibration;
iii) construction traffic;
iv) soil and water quality and spoil management, including acid sulfate soil management;
v) air quality and dust management;

vi) Green and Golden Bell Frog Management (including the recommendations made in the Green and Golden Bell Frog Master Plan prepared to meet the requirements of concept plan approval MP 08_0249);
vii) measures for avoiding and/or managing non-indigenous heritage items, including a shipwreck mitigation strategy; and
viii) waste management.

The Plan shall be submitted for the approval of the Director General no later than one month prior to the commencement of construction, or within such period otherwise agreed by the Director General. The Plan may be prepared in stages, however, construction works for each stage shall not commence until written approval has been received from the Director General.

C37. As part of the Construction Environmental Management Plan for the project, required under condition C36 of this approval, the Proponent shall prepare and implement the following:

a) a **Construction Noise and Vibration Management Plan** to manage noise and vibration impacts during construction. The Plan shall prepared in consultation with OEH and include, but not necessarily be limited to:
i) details of construction and blasting activities, machinery (and associated sound power levels) and an indicative schedule for works that have the potential to generate noise and/ or vibration impacts on surrounding land uses, particularly sensitive receivers (including maps showing the location of all potentially affected sensitive receivers);
ii) the construction and blasting noise and vibration objectives for the project stipulated in this approval;
iii) details of the reasonable and feasible mitigation and management measures and procedures that will be implemented to control construction noise and vibration impacts where the objectives are predicted and/or are measured to be exceeded;
iv) during blasting activities or where the construction noise and vibration objectives are predicted to be exceeded, provisions for consultation with sensitive receivers, including procedures for notifying such receivers of the nature and duration of construction activities that are likely to affect their noise and vibration amenity as well as procedures for dealing with and responding to noise and vibration complaints; and
v) monitoring measures to assess compliance against the construction and blasting noise and vibration objectives, clearly indicating how often this monitoring would be conducted, the locations where monitoring would take place, how the results of this monitoring would be recorded and reported, and if any exceedances are detected how any non-compliance would be rectified.

b) a **Construction Traffic Management Plan** (including a Heavy Vehicle Management Strategy) to manage the construction traffic and access impacts of the project. The Plan shall be prepared in consultation with the RTA, and Council and include, but not necessarily limited to:
i) details of traffic routes for heavy vehicles, including any necessary route enhancements, traffic control measures, route or timing restrictions for oversized loads,
ii) construction vehicle volumes (construction personnel, heavy vehicle movements and oversized loads),
iii) details of construction activities that would require disruption to traffic such as road closures;
iv) standards and performance measures to minimise traffic impacts and to ensure the safety of road users;
v) measures to manage traffic impacts, including the clear delineation of construction traffic and haulage routes and details of on site vehicle queuing and parking areas;
vi) a Heavy Vehicle Management Strategy to reduce noise impacts on land uses along construction traffic and haulage routes, including a Construction Vehicle Code of Conduct to set driver behaviour controls; and

vii) evidence that all statutory responsibilities with regard to road traffic impacts have and can be complied with, including a monitoring and reporting program that ensures compliance with maximum vehicle movement numbers identified in condition C15 and the requirements of this condition and how any non-compliance would be rectified.

c) a **Construction Soil and Water Quality Management Plan** to detail how excavated and imported materials will be managed and water courses protected throughout construction. The Plan shall be prepared in consultation with OEH and I&I NSW and shall include, but not necessarily be limited to:

i) details of construction activities and locations that have the potential to impact on water courses and water quality, including how land based spoil and fill material required by the project will be sourced, handled, stockpiled, reused and disposed, including identification of source locations;
ii) standards and performance measures and criteria to be met to protect water courses and water quality;
iii) mitigation and management measures including details on how land based soil erosion, discharge of sediment or water pollutants from the site will be managed for each construction stage and in the longer term (ie between construction stages);
iv) consolidation methods that minimise exposed fill material;
v) details of contaminated soil and appropriate management, characterisation, stockpiling, remediation, disposal and monitoring measures, including methods to minimise the erosion and transportation of contaminated sediment and details of how any waters generated from contaminated material will be isolated from stormwater and managed appropriately;
vi) a contingency plan for the discovery of contaminated material, major fuel or other chemical spill;
vii) protocols for construction works in areas of potential or actual acid sulfate soils, including procedures for the investigation, handling, treatment and management of such soils and water seepage; and
viii) a program for monitoring and inspecting, including after heavy rain and reporting on the effectiveness of the sediment and erosion control system against standards and performance measures.

d) a **Construction Air Quality Management Plan** to outline measures to minimise and manage impacts from the construction of the project on local and regional air quality. The Plan shall be prepared in consultation with OEH and shall include, but not necessarily be limited to:

i) identification of all major sources of dust emissions that may occur as result of the construction of the project and relevant regulatory guidelines and compliance criteria;
ii) description of the procedures to manage the dust emissions from the sources identified;
iii) protocols for regular maintenance of plant and equipment, to minimise the potential for fugitive dust emissions and excessive noxious emissions;
iv) procedures and preparatory measures to be followed in preparation for adverse weather;
v) details and procedures for monitoring dust emissions from the project, including:
- real time dust monitors and weather stations, including their locations,
- standards/guidelines to be followed for location/construction of the monitoring stations, equipment calibration, collection of samples and analysis of samples,
- dust fractions to be monitored, and
- duration of monitoring;
vi) action levels and contingency measures in the event that monitoring results approach or are likely to exceed the relevant compliance criteria or a non-compliance is detected.

Environmental Representative

C.38 Prior to the commencement of construction of the project, or as otherwise agreed by the Director General, the Proponent shall nominate for the approval of the Director General a suitably qualified and experienced Environmental Representative(s) independent of the design and construction personnel. The Proponent shall engage the Environmental Representative(s) during construction, or as otherwise agreed by the Director General. The Environmental Representative(s) shall:

a) oversee the implementation of construction-related environmental management plans and monitoring programs required under this approval, and advise the Proponent upon the achievement of these plans/programs;

b) consider and advise the Proponent on its compliance obligations against all matters specified in the requirements of this approval, the documents referred to under condition A.1 of this approval, and all other applicable permits, approvals and licences required and obtained in relation to the project;

c) have the authority and independence to recommend to the Proponent reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts associated with the construction of the project; and

d) have the authority to recommend to the Proponent cessation of activities if there is a significant risk that adverse environmental impacts are likely to occur.

PART D – OPERATIONS

NOISE AND VIBRATION

D1. The Proponent shall design and operate the project with the objective of ensuring that noise contributions do not exceed the project noise limits specified in Table D1 at any sensitive receiver during the periods indicated. The noise limits apply under the following meteorological conditions:

a) wind speeds up to 3 m/s at 10 metres above ground; and/or
b) temperature inversion conditions of up to 3°C/100 m and source to receiver gradient winds of up to 2 m/s at 10 m above ground level

Table D1: Maximum Allowable Noise Contributions

Location	$L_{Aeq\ (15\ minute)}$ dB(A)			$L_{A1,\ (1\ minute)}$ dB(A)
	Day	Evening	Night	Night
Military Road	note 1	39	39	62
Wentworth Street	note 1	42	42	60
Jubilee Road	note 1	note 1	36	59
Any other residential receiver	note 1	note 1	35	note 1
St Patrick's Primary School	39	39	39	note 1
Church on Church Street and Military Road	39	39	39	note 1

Note 1: Noise limits have not been set as predicted noise levels with the mitigation measures proposed in the Environmental Assessment (EA) are below the reported background noise level. Where street locations are mentioned, the noise limit applies to any residential receiver on that street.

D2. For the purpose of condition D1:

a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays
b) Evening is defined as the period 6pm to 10pm
c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

D3. For the purpose of assessment of noise contributions specified under condition D1 of this project approval, noise from the project shall be:

a) measured at the most affected point within the sensitive receiver boundary, or at the most affected point within 30 meters of a dwelling where the dwelling is more than 30 meters from the boundary;
b) measured at one metre from the dwelling façade to determine compliance with $L_{A1(1\ minute)}$ noise limits; and
c) subject to the modification factors provided in Section 4 of the *New South Wales Industrial Noise Policy* (EPA, 2000), where applicable.

Notwithstanding, should direct measurement of noise from the project be impractical, the Proponent may employ an alternative noise assessment method deemed acceptable by the OEH (refer to Section 11 of the *New South Wales Industrial Noise Policy* (EPA, 2000)). Details of such an alternative noise assessment method accepted by the OEH shall be submitted to the Director General prior to the implementation of the assessment method.

D4. The Proponent shall investigate and implement feasible and reasonable mitigation measures to minimise noise impacts from train horns to the greatest extent practicable. This shall include, but not be limited to the use of short duration horn 'toots' and trains passing through the South Yard and rejoining the main line at the Flinders Street Bridge. The measures shall be incorporated into the Operation Noise and Vibration Management Plan.

D5. The Proponent shall design and operate the project with the objective, where reasonable and feasible, of not exceeding the vibration goals for human exposure for existing receivers, as presented in *Assessing Vibration: A Technical Guideline* (DECC, 2006).

OPERATION ENVIRONMENTAL MANAGEMENT PLAN

D6. The Proponent shall prepare and implement an **Operation Environmental Management Plan** to detail environmental management practices and procedures to be followed during operation. The Plan shall be consistent with *Guideline for the Preparation of Environmental Management Plans* (Department of Infrastructure, Planning and Natural Resources, 2004) and shall include, but not necessarily be limited to:

a) a description of all relevant activities to be undertaken on the site during operation;
b) statutory and other obligations that the Proponent is required to fulfil during operation including all relevant approvals, licences and consultations;
c) a description of the roles and responsibilities for all relevant employees involved in the operation of the project;
d) details of measures to be installed to separate operation areas from publicly accessible areas;
e) overall environmental policies, guidelines and principles to be applied to the operation of the project;
f) relevant standards to be applied to the project and details of how the environmental performance of the operation of the project will be monitored and managed to meet the standards. Environmental performance issues shall include, but not be limited to:
    i) air quality and in particular particulate matter;
    ii) noise and vibration;
    iii) traffic management;
    iv) landscape management;
    v) stormwater and water quality management, including the incorporation of the management measures outlined in the Integrated Water Cycle Plan;
    vi) waste management; and
    vii) measures to monitor and maintain biodiversity offset measures implemented in accordance with concept plan approval (08_0249),
g) a means by which environmental performance can be periodically reviewed and improved where appropriate and what actions will be taken to address identified potential adverse environmental impacts.

The Plan shall be submitted for the approval of the Director General no later than one month prior to the commencement of operation, or within such period otherwise agreed by the Director General. Operation shall not commence until written approval has been received from the Director General.

Nothing in this approval precludes the Proponent from incorporating the requirements of the OEMP into existing environmental management systems and plans administered by the Proponent.

D7. As part of the Operation Environmental Management Plan for the project required under condition D6 of this approval, the Proponent shall prepare and implement the following:

a) an **Operation Air Quality Management Plan** to outline measures to minimise and manage impacts from the operation of the project on local air quality. The Plan shall be prepared and include, but not necessarily be limited to:
    i) identification of all major sources of particulate matter emissions that may occur as result of the operation of the project;
    ii) identification of air quality objectives consistent with concept plan approval (08_0249);
    iii) description of the procedures to manage the particulate matter emissions from the sources identified, including minimising open stockpiles of materials and the utilisation of enclosed material handling practices;
    iv) procedures for monitoring particulate matter emissions from the project, consistent with the Ambient Dust Monitoring program required under concept plan approval (08_0249);
    v) protocols for regular maintenance of plant and equipment, to minimise the potential for particulate matter emissions; and
    vi) description of procedures to be undertaken if any non-compliance is detected.

b) an **Operation Noise and Vibration Management Plan** to outline measures to minimise operational noise and vibration emissions from all project components. The Plan shall be prepared in consultation with OEH and adjoining property owners and shall include, but not necessarily be limited to:
   i) identification of activities that will be carried out in relation to the project and the associated noise sources;
   ii) identification of all relevant receivers and the applicable noise and vibration criteria at those receivers commensurate with the noise and vibration limits specified under this approval and implementation of reasonable and feasible measures to address concerns of adjoining properties, including Adelaide Brighton Cement Ltd machinery and operations;
   iii) assessment of project noise and vibration impacts at the relevant receivers against the noise limits specified under this approval, including a review of the acoustic performance of conveyor and material handling systems;
   iv) details of all mitigation measures and management methods and procedures that will be implemented to control individual source and overall noise and vibration emissions from the project;
   v) regular audits of compliance of all plant and equipment with acceptable design noise limits;
   vi) procedures for monitoring noise emissions from the project, consistent with the Noise Verification Monitoring program required under concept plan approval (08_0249); and
   vii) development of reactive and pro-active strategies for dealing promptly with any noise and vibration exceedances or complaints.

c) An **Operation Traffic Management Plan** to outline measures to minimise traffic network and amenity impacts. The Plan shall be prepared in consultation with the RTA and Council and shall include but not necessarily limited to:
   i) identification of preferred routes to minimise noise impacts on the surrounding community, including the routing of vehicles via Christy Drive and Flinders Street;
   ii) identification of traffic volumes consistent with the Road Traffic Volume Limits stipulated in concept plan approval (MP08_0294);
   iii) physical and operational measures (including signage) to mitigate noise impacts from vehicles accessing and leaving the terminal; and
   iv) driver education and information to promote driver habits to minimise noise.

APPENDIX E

Final Statement of Commitments

1.0 Final Statement of Commitments

1.1 Introduction

This section provides the Final Statement of Commitments (SoCs) for the proposed Port Kembla Outer Harbour development in accordance with section 75F(6) of the *EP&A Act*. The commitments for Concept Plan and Major Project have been presented in separate tables.

The draft Statement of Commitments has been revised following consideration of the submissions received during the public exhibition period of the EA.

This section describes the general commitments made as part of this Environmental Assessment for both Concept Plan and Major Project. The Statement of Commitments (SoC) identify a combination of matters that will be dealt with in the next stage of the Major Project (detailed design) and implemented during both construction and operation phases. The SoC for Concept Plan also includes matters that require further assessment and/or that must be dealt with during subsequent stages of the development, based on current knowledge and design resolution.

Tables 1-1 and **1-2** describe the commitments identified by this Environmental Assessment to avoid or minimise adverse impacts on the environment during the Concept Plan and Major Project, respectively.

Table 1-1: Final Statement of Commitments for Concept Plan

Concept Plan	
Issue	**Environmental Commitment**
Environmental Management	The proposed Outer Harbour development will be constructed and operated generally as described in the *Port Kembla Outer Harbour Development, Environmental Assessment*, prepared by AECOM and dated February 2010 and portrayed in **Figure 5-3** (Concept Plan) and in **Figure 5-5** (Major Project). The proponent will prepare and implement a suite of Environmental Management Plan (EMP) Framework documents that will be developed for construction (including dredging and reclamation) and operation for Stages 1, 2 and 3 of the Concept Plan. Each discrete phase of construction activity will have its own CEMP. Similarly, discrete operating units (e.g. terminals) will each have their own OEMP. All CEMPs and OEMPs will include appropriate strategies and management measures to control and manage environmental risks, assess environmental performance and comply with relevant statutory requirements that are applicable to activities to be undertaken within that stage of the Concept Plan. Sub-plans will be included in the CEMP and OEMP Framework and will be included in each relevant stage of the project as appropriate. Sub-plans that will be required to be prepared for either construction or operation of at least one of the stages of the project will include the following: • Soils and Water Management Plan (SWMP). • Stormwater Management Plan (STMP). • Acid Sulfate Soil Management Plan (ASSMP). • Spoil Management Plan (SPMP). • Dredging Environment Management Plan (DEMP). • Site Management Plan (SMP). • Hazardous Substance Management Plan (HSMP). • Emergency Response Plan (ERP). • Green and Golden Bell Frog Management Plan (GGBFMP). • Traffic Management Plan (TMP). • Noise and Vibration Management Plan (NVMP).

Concept Plan	
Issue	**Environmental Commitment**
	• Air Quality Management Plan (AQMP). • Safety Management Plan (SFMP). • Landscape Management Plan (LMP). • Conservation Management Plan (CMP). • Waste Management Plan (WMP). • Demolition Management Plan (DMP). • Refuelling Management Plan (RMP).
Soil Erosion and Sedimentation	Controls and measures to mitigate soil erosion and sedimentation construction and operation impacts as a result of Stage 1 of the Concept Plan are detailed within the Major Project SoC (**Table 1-2**). A *Soils and Water Management Plan* (SWMP) would be prepared prior to the commencement of construction activities and will be included as a sub-plan in the relevant CEMP for that stage. The SWMP will be prepared in accordance with Landcom's *Managing Urban Stormwater; Soils and Construction Manual 2004* and will be maintained for the duration of the construction process and operational period. A *Stormwater Management Plan* (STMP) would be prepared prior to the commencement of operation of activities. Potential impacts to soil erosion and sedimentation as a result of Stages 2 and 3 of the Concept Plan will be identified during environmental assessments undertaken to support project applications for those stages. Controls and measures to mitigate impacts will be incorporated into SWMPs and STMPs to be implemented during construction and operation phases for Stages 2 and 3, respectively.
Hydrology and Water Quality	A SWMP would be prepared prior to the commencement of key project components and will outline specific measures to ensure impacts to water quality and hydrology during construction of each stage of the Concept Plan are minimised. Monitoring programs for water quality and biology will be developed, in consultation with DECCW and the Port Kembla Harbour Environment Group, and implemented for each stage of the Concept Plan. These monitoring programs will outline monitoring frequencies and testing procedures and results will be used to identify emerging trends or problems, provide data for measuring the impact of operational activities, determine whether pollution controls are working and provide a basis for efficient response to emergencies such as spills. PKPC will ensure that hydrological and ecological considerations are taken into account in the stormwater design for terminals for all stages of terminal construction. Water sensitive urban design (WSUD) will be utilised where ever practicable to reduce the volume, velocity and contaminants associated with stormwater runoff. Inclusion of pollution control devices on the future paved surfaces of the development.
Contaminated Sediments	Mitigation measures proposed to manage contaminated sediment impacts associated with Stage 1 will be included within a DEMP and are presented in the Major Projects SoC (**Table 1-2**). A DEMP will also be prepared prior to dredging activities for Stage 3 and will broadly include the following: • Description of extraction methodology and machinery to be employed. • Identification of dredge areas. • Identification of disposal (reclamation) areas. • Turbidity control devices (floating booms, silt curtains). • Erosion and sediment control measures. • Water and air quality monitoring locations.

Concept Plan	
Issue	**Environmental Commitment**
	Additional Contaminated Sediment Investigations will be undertaken as part of subsequent project applications for Stage 3. The additional investigations will assess potential contaminated sediment impacts associated with the following: • Area to be dredged north of Port Kembla Gateway to accommodate the third multi-purpose berth. • Dredging for expansion of the existing ship turning circle located south of the northern breakwater. • Reclamation for northern portion of the multi-purpose terminals. Mitigation measures that are proposed to manage contaminated sediments that are located in these areas will be included in the SMPs for those stages.
Contaminated Soils and Groundwater	Mitigation measures proposed to manage contaminated soil and groundwater impacts associated with Stage 1 will be included within a SMP and are presented in the Major Projects SoC (**Table 1-2**). Additional Contaminated Land Investigations will be undertaken as part of subsequent project applications for Stages 2 and 3. The additional investigations will assess potential contaminated soil and groundwater impacts associated with the following: • An extension of the road link from Christy Drive to connect with the container terminals. • Reconfiguration of rail in the South Yard to enable efficient operation of the western and eastern container facilities (this is in addition to the rail infrastructure upgrade required as part of Stage 1). • An extension of an existing rail siding into and along the length of the container terminals. • New road link from Darcy Road to boat harbour. • Hard stand of landward extent of development west to existing rail lines and south to Foreshore Road. Any contamination 'hot spots' that are identified during subsequent investigations for Stages 2 and 3 will be included within SMPs for those stages. Develop a groundwater monitoring program to be conducted at the site prior to the commencement of the works and regularly thereafter. This program will be designed and undertaken so as not to impede construction or operation of the development. In developing the groundwater monitoring program PKPC will review and utilise the results for the existing groundwater monitoring program being undertaken for the Outer Harbour.
Human Health and Ecological Risk	Measures proposed to mitigate potential risks for Stage 1 are presented in the Major Project SoC. Where applicable, these measures will also be applied to Stages 2 and 3 of the Concept Plan. *Site Management Plan* PKPC will prepare a SMP for each stage of the Concept Plan which will set our procedures to manage potential risks identified to human receptors and ecological receptors during land based construction works. *Dredging Environment Management Plan* PKPC will prepare a DEMP prior to dredging activities for Stage 3. *Hazardous Substance Management Plan* An HSMP will be prepared for each Stage of the Concept Plan and will contain the following information where it is relevant to the proposed activities: • Work methods to safeguard against hazards such as spills. Any fuel spillage will be reported, documented and immediately remediated. • Appropriate methyl bromide management procedures for the container terminals.

Concept Plan	
Issue	**Environmental Commitment**
	• Separation of the flammable solids and flammable liquids storage areas. • Ammonium Nitrate (AN) storages at the container terminal will be sited and designed to comply with the relevant Australian Standard (AS) in respect to both storage quantities and siting (distance separation). • Transport risk assessment studies which will be conducted for future development at each facility will include an assessment of the transport requirements and risks associated with the transport of Dangerous Goods. • Appropriate training and qualifications for staff involved in the handling of chemicals and in emergency spill response procedures. • Diagrams and descriptions of access and unloading locations will be developed as well as procedures for drivers of vehicles delivering chemicals. • A program of regular monitoring and maintenance of equipment used in the transportation and handling of chemicals. • A register of equipment, responsibilities and procedures for responding to spills. • A program of monitoring of the condition of bunding. *Emergency Response Plan* An Emergency Response Plan (ERP) will be prepared as part of the OEMP for each of the general cargo terminals and container terminals. The ERP will be prepared in accordance with the HIPAP No.1 Emergency Planning Guidelines. *Additional Assessments* A further qualitative risk assessment will be undertaken once dredging methodology has been confirmed, prior to the commencement of dredging tasks in Stage 1 and Stage 3, and will include: • A further qualitative risk assessment of contaminated sediment dispersal to assess potential risks to ecological receptors. • Recommendations and mitigation measures that arise from these additional assessments will be incorporated into the DEMP.
Potential Hazard	*Hazardous Substance Management Plan* PKPC will ensure that the risks that may be associated with potential hazards will be maintained within the permissible levels via mitigation measures included in a HSMP. Measures will include: • The container terminal will be designed with appropriate Methyl Bromide dosing and capture systems and operated in a manner that minimises the risk of release of potentially harmful gas. • The flammable solids storage area will be separated from the flammable liquids storage area by a minimum of 35m. • The risks associated with the potential storage of toxic gases will be specifically addressed in the individual environmental impact assessments conducted for the various terminal operators. Appropriate risk reduction measures that may be determined as a result of this assessment will be included in the terminal design and operational procedures, where applicable. A Final Hazard Assessment will be prepared as part of detailed project applications for operation of the container terminals.

Concept Plan	
Issue	**Environmental Commitment**
Flora and Fauna	*Compensatory Measures* Compensatory measures to offset the loss of soft substrate habitat in the Outer Harbour and the sandy beach area of Red Beach are proposed for Stage 1 of the Concept Plan. A summary of these measures is presented in the Major Project SoC. The need for additional compensatory measures for Stages 2 and 3 will be considered during environmental assessments prepared as part of project applications for those stages. *Green and Golden Bell Frog Master Plan* A GGBF Master Plan will be prepared to provide a strategic framework for how GGBF and its habitat will be managed across the Port Kembla Outer Harbour area. The GGBF Master Plan will focus upon sites with the greatest potential for GGBF habitat and connectivity, particularly freight rail corridors and associated land areas. The GGBF Master Plan will be prepared following preparation of the Rail Master Plan (so that it is compatible with the rail infrastructure requirements of the port) and prior to commencement of Stage 2 operations. PKPC will consult with DECCW and other relevant stakeholders during preparation of the GGBF master plan. *Green and Golden Bell Frog Management Plan* The GGBFMP framework prepared as part of this EA will be developed into a comprehensive GGBFMP in consultation with a suitably qualified ecologist and DECCW prior to the commencement of construction works for Stage 1. The GGBFMP developed for Stage 1 construction works will be reviewed and updated in association with the environmental assessments that will be undertaken as part of project applications for Stages 2 and 3. Each GGBFMP will include the following as a minimum: • Program of works and timeline for all key components of the project. • Undertake a conservation assessment ranking for any known or likely GGBF habitats in the study area, including but not limited to, identification and assessment of breeding, shelter, foraging, and movement habitat components. • Identify any actual or potential threats from construction and operations. • Identify appropriate actions to prevent or minimise actual or potential threats. • Include details of how the proponent will monitor and report on the ongoing effectiveness of the GGBFMP. • A program of works and timeline for planting and landscaping in appropriate areas with vegetation suitable for GGBF foraging and shelter as well as installing structures (such as logs and concrete pieces) to facilitate movement and over wintering habitat. • A feasibility assessment of retaining and/or enhancing shelter, foraging and movement habitat or potential breeding habitat along the proposed road corridor off Darcy Road. Further mitigation measures that will be implemented in relation to the proposed road corridor off Darcy Road during Stage 2 include: • Pre construction frog surveys. • Careful, staged clearing of site and provision of proximate alternate habitat to encourage frogs to seek shelter. • Installation of permanent 1 metre high frog exclusion fencing. • Careful direction of surface water runoff.

Concept Plan	
Issue	**Environmental Commitment**
	• Appropriate signage at entrance and exit of the proposed road alerting staff and visitors that an endangered species has been found in this area and to exercise caution. • Site inductions to educate workers. • Monitoring and regular review of performance of mitigation measures. Mitigation measures proposed to manage impacts on GGBFs for Stage 1 construction works are detailed in the Major Project SoC. The need for additional breeding ponds to be constructed to offset impacts to potential foraging habitat for populations of GGBF (particularly adjacent to Site 8) will be assessed as part of project applications for Stage 2 and Stage 3 of the Concept Plan. Ecological impacts of the Concept Plan will be reviewed as part of project applications for Stages 2 and 3 including impacts on threatened species, populations and ecological communities, and riparian and stream ecology (Salty Creek).
Rail	Recommendations for rail infrastructure upgrades and arrangements for Stage 1 are presented in the Major Project SoC. Adequacy of the existing rail infrastructure and capacity of the regional network will need to be reassessed prior to the construction and operation of Stages 2 and 3. The following commitments are proposed to assess rail infrastructure and network capacity for Stages 2 and 3: • PKPC will provide Department of Planning with updates regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure upgrades prior to commencing the later stages (i.e. Stage 1b and 1c) of the dredging and reclamation works. • PKPC will participate in the Maldon Dombarton Study, ensuring that the Outer Harbour is included as a main destination for goods in the Maldon - Dombarton Study. • PKPC will liaise with RailCorp regarding access from the Outer Harbour to the Unanderra Line (a distance of 4km). PKPC will prepare a rail master plan prior to the commencement of construction of Stage 2 to identify rail infrastructure requirements for Stages 2 and 3 of the Concept Plan.
Traffic	A Traffic Management Plan (TMP) will be prepared by PKPC in accordance with Traffic Control at Worksites (RTA, 2003), prior to construction of Stage 1 in order to minimise impact on pedestrian and vehicle movements. The TMP will include control measures such as designated haulage routes and driver code of conduct to encourage safe driving practices. The proposed content of the TMP is detailed in the Major Project SoC. Future traffic and transport assessments will be undertaken as part of project applications for Stages 2 and 3. This will include an assessment of the traffic impacts associated with the changes to the road network and to separate port related traffic and public traffic accessing the boat harbour. PKPC will progressively assess the volume of truck movements associated with the Project applications for each stage of the Outer Harbour development to ensure that they are consistent with the volumes predicted in the EA. The assessment will take into account actual truck volumes generated from the Outer Harbour development at that point of time. If the volume of truck movements is predicted to exceed the volumes assessed in the EA then further assessment of the likely impacts associated with any additional truck traffic on the road network will be required. All roads constructed as part of the development would be designed to accommodate the number and type of vehicle movements projected and would satisfy relevant design

Concept Plan	
Issue	**Environmental Commitment**
	standards and would consider local guidance publications including the Wollongong City Council's Subdivision Policy for Road Construction. PKPC will ensure that any new road infrastructure required for Stages 2 and 3 of the Concept Plan is planned and designed to ensure adequate access is retained for existing premises and will consult with affected businesses and the wider community in this regard. Car park facilities will be established within dedicated construction areas internal to the site. Car parks will be designed to cater for the number of construction vehicles to reduce or avoid potential overflow impacts on the local road network, such as Foreshore Road.
Noise	*Noise and Vibration Management Plans* A Construction Noise and Vibration Management Plan (CNVMP) will be prepared by PKPC prior to the commencement of construction of Stage 1 in line with DECCW "Draft Construction Noise Guidelines". The content of the CNMP is detailed in the Major Project SoC. PKPC will prepare an Operational Noise and Vibration Management Plan (ONVMP) prior to the commencement of operation of each stage of the Concept Plan. The ONVMP should be prepared in accordance with the relevant DECCW guidelines and should incorporate best practice mitigation measures, *Rail Noise and Sleep Disturbance* An assessment of the acoustic impact arising from changes to the rail infrastructure associated with Stages 2 and 3 of the Concept Plan will be undertaken following completion of the Rail Master Plan when more information is known about the likely train movements in the Outer Harbour. Operational noise and sleep disturbance impacts arising from increased rail movements associated with Stages 2 and 3 of the Concept Plan will be investigated and, if required, appropriate noise mitigation measures will be recommended. To mitigate the potential sleep disturbance impacts associated with the use of train horns, PKPC will commit to use shorter train horn toots rather than standard longer train horn blasts. In addition, for Stages 2 and 3 of the Concept Plan PKPC will investigate the feasibility of further mitigation measures such as: • The removal of the Foreshore Road rail crossing; • Grade separation at the Old Port Road rail crossing. Noise and vibration assessments will be undertaken as part of applications for project applications for Stages 2 and 3 to assess both construction and operation impacts.
Air Quality	An AQMP will be prepared for inclusion in the CEMP and OEMP for each stage of the Concept Plan. The AQMP should include a requirement for on-going dust monitoring during the construction of Stage 1 of the project (for further details refer to Major Project SoC – **Table 1-2**). Site specific best practice mitigation measures for the management of particulate emissions during construction and operation of each of the stages of the Concept Plan will be included in AQMPs. Mitigation measures to be included in the AQMP for Stage 1 are detailed in the Major Project SoC (**Table 1-2**). PKPC will assess future operations at the site on a case by case basis, for potential impacts on the local air shed, with consideration of the regional and local pollution findings of the revised Air Quality Impact Assessment prepared by AECOM dated 10 September 2010. Further analysis and atmospheric dispersion modelling will be undertaken for Stages 2 and 3 of Concept Plan. The reporting of this modelling will be included in separate project applications for Stage 2 and 3 of the Concept Plan.

Concept Plan	
Issue	**Environmental Commitment**
Socio-Economic	Throughout the progressive development of the Concept Plan PKPC will ensure that access to the existing small boat harbour and associated facilities is not affected during either the construction of operational activities of each stage. In addition, PKPC will include appropriate measures in a SFMP to ensure that safe access is provided for recreational boaters entering and exiting the small boat harbour. PKPC will continue to liaise with community groups to inform them about project status throughout the development of the Concept Plan.
Landscape and Visual Amenity	PKPC will prepare a Landscape Management Plan to ensure visual impacts associated with Stage 1 are minimised. The content of the LMP is detailed in the Major Project SoC. LMPs will be prepared as part of CEMPs and OEMPs for each stage of the Concept Plan and will include the following: • Lighting used for evening and night time work will be projected downward and onto the proposed works. • Construction timing should be programmed to ensure efficiency of works and minimise period of disturbance. • Construction areas and plant/machinery and materials storage areas will be clearly designated and clearly defined. • Lighting for terminals and other operational areas, including the new road link, will be carefully selected to minimise light spill. • A Landscape Management Plan (LMP) will be prepared to guide any landscaping works that are proposed across the area of development. Suitable colours and materials will be selected for the terminal pavement, buildings and other structures to minimise reflectivity and contrast. Landscape and Visual Amenity assessments will be undertaken as part of project applications for Stages 2 and 3.
Heritage	*Archival Photographic Recording* An archival photographic recording will be prepared prior to demolition of No. 3 and No. 4 Jetties (part of Stage 1) and a comprehensive history of the jetties prepared. An archival photographic recording will be prepared prior to demolition of No. 6 Jetty (part of Stage 3) and a comprehensive history of the jetty prepared. *Historical Shipwrecks* Should any evidence of shipwreck material be encountered during dredging or other activities during Stages 1 and 3, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified maritime archaeologist will be contacted to assess the discovery and provide advice on mitigation and recording. *Other Heritage Items or Archaeological Relics* Should unidentified European heritage items and/or archaeological relics be encountered during construction, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified heritage consultant will be contacted to assess the discovery and provide advice on mitigation and recording. The environmental assessment to be undertaken as part of a project application for Stage 2 will further consider the intrusion of the new road link connecting Darcy Road with the boat harbour on accessibility between the concrete pillbox and the Historic Military Museum. PKPC will ensure the design of the new road limits intrusion on the listed heritage items including consideration of the use of landscaping to ensure that any visual impact is

Concept Plan	
Issue	**Environmental Commitment**
	minimised. PKPC will prepare a Conservation Management Plan (CMP) for the Mobile Block Setting Crane prior to commencing construction activities within the proximity of the item during Stage 2. PKPC will restore the crane in accordance with the recommendations of the CMP, relocate the crane to a safe and prominent location nearby and provide interpretive signage for the public.
Waste	*Waste Management Plan* WMPs will be prepared for inclusion in relevant CEMPs and OEMPs for all stages of the Concept Plan and will emphasise potential for recovery and reuse of waste, minimise waste generation, and include specific requirements for each of the waste types identified. *Demolition Management Plan* A Demolition Management Plan (DMP) will be prepared to include appropriate management measures for the dismantling, removal and disposal of structures and materials during Stages 1 and 3. Waste assessments will be undertaken for Stages 2 and 3 as part of project applications for these stages.
Sustainability	Throughout all stages of the Concept Plan PKPC is committed to the following: • Consider the potential for incorporating local renewable power generation (e.g. from micro and large scale wind turbines) as part of future design and construction works. • Consider the potential for power generation from the sun by encouraging future tenants and lessees to install panels on structures to take advantage of the solar potential. • Investigate the potential for water capture and reuse during the detailed design of terminals. Recommendations and mitigation measures to manage sustainability issues identified during this environmental assessment will be reviewed as part of environmental assessments for Stages 2 and 3, and revised to incorporate new technological innovations that could be considered and implemented as part of the total development. The design of berths and terminal areas will include allowance for the provision of alternative marine power (AMP) for vessels while at berth to allow for possible future use of ship to shore power.
Climate Change	Throughout all stages of the Concept Plan PKPC is committed to the management of the impacts of a variable climate and extreme weather conditions as follows: • The proposed reclamation and pavement levels will be set above predicted extreme sea level rises (i.e. including storm surges and extreme events) for the 100 year design life, with a freeboard suitable to cater for further sea level rise beyond that time. • Risk management strategies will be in place for extremely hot days to manage potential rail buckling. • Maintenance regimes will take accelerated degradation of infrastructure into account. Assessments for Stages 2 and 3 will review the findings of this assessment in light of the latest climate change projections and statistics.

Table 1-2: Statement of Commitments – Major Project

Major Project	
Issue	**Environmental Commitment**
Construction Phase	
Major Project - General	The proposed Outer Harbour development will be constructed and operated generally as described in the *Port Kembla Outer Harbour Development, Environmental Assessment*, prepared by AECOM and dated February 2010 and portrayed in **Figure 5-3** (Concept Plan) and in **Figure 5-5** (Major Project). The proponent will prepare and implement a suite of Environmental Management Plan (EMP) Framework documents that will be developed for construction (including dredging and reclamation) and operation for Stage 1. Each discrete phase of construction activity will have its own CEMP. Similarly, discrete operating units (e.g. terminals) will each have their own OEMP. All CEMPs and OEMPs will include appropriate strategies and management measures to control and manage environmental risks, assess environmental performance and comply with relevant statutory requirements that are applicable to that part of Stage 1. A number of sub-plans will be included in relevant CEMPs and OEMPs and will include the following, where relevant: • Soils and Water Management Plan (SWMP) • Stormwater Management Plan (STMP) • Acid Sulfate Soil Management Plan (ASSMP) • Spoil Management Plan (SPMP) • Dredging Environment Management Plan (DEMP) • Site Management Plan (SMP) • Hazardous Substance Management Plan (HSMP) • Emergency Response Plan (EMP) • Green and Golden Frog Management Plan (GGFMP) • Traffic Management Plan (TMP) • Noise and Vibration Management Plan (NVMP) • Construction Noise and Vibration Management Plan (CNVMP) • Operational Noise and Vibration Management Plan (ONVMP) • Air Quality Management Plan (AQMP) • Safety Management Plan (SFMP) • Landscape Management Plan (LMP) • Conservation Management Plan (CMP) • Waste Management Plan (WMP) • Demolition Management Plan (DMP) • Refuelling Management Plan (RMP)
Soil Erosion and Sedimentation	*Soils and Water Management Plan* SWMPs will be prepared by PKPC prior to commencement of construction of Stage 1 and will be included where relevant in the CEMPs for that stage. The SWMPs will be prepared in accordance with Landcom's *Managing Urban Stormwater; Soils and Construction*

Major Project	
Issue	**Environmental Commitment**
	Manual 2004. *Erosion and Sedimentation Controls* Management controls aimed at containing, redirecting, and stabilising soils that are unavoidably disturbed by construction activities will include: • Installing water diversion structures to ensure surface water runoff does not enter zones of exposed soils during construction, particularly in the vicinity of the new road link from Christy Drive, and rail infrastructure upgrade in the South Yard. • Installation of erosion and sedimentation control devices prior to excavation at the site, that will remain in place until the bare soils and surfaces are stabilised temporarily or permanently (by suitable surface materials, revegetation or other means) and removed when redundant. • Installing sediment traps around areas of soils that will be exposed as a result of construction activities to protect downstream water quality. Sediment traps will be maintained and will remain in place until all works are finalised and surfaces are stabilised. • Installing buffers to the riparian zone, for example sediment fences, to prevent sediment laden water from entering Salty Creek, Darcy Road Drain, and the Outer Harbour. • Installing filter rolls at stormwater drain locations to minimise potential for sedimentation of drains and subsequent flooding during heavy rainfall. • Implementation of site management procedures including watering or covering of unsecured stockpiles of reclamation material (if stockpiles contain fines) anticipated to be exposed and unused for a period longer than two continuous weeks. • Limiting the area of disturbance to those locations necessary to construct the new roads, reclamation area and rail infrastructure upgrade. • Disturbed areas will be restored (sealed or covered with pebbles/gravel or vegetated, as appropriate) upon the completion of the works in that area to ensure that soils are exposed for as short a time as possible. • Daily visual inspections of erosion and sediment control devices to determine the condition and effectiveness of control measures. Immediate action will be taken to repair any control devices that have failed to work adequately. Emergency procedures will be detailed for high rainfall events that could increase soil erosion during construction. *Fill Materials, Dredging and Reclamation* • Environmentally suitable fill materials will be used for reclamation only. • Appropriate soil enhancement procedures and treatments will be implemented, as required, to facilitate consolidation of soft material and minimise slumping. • Soils confirmed to be Actual ASS will be handled in accordance with the Acid Sulfate Soil Management Plan (ASSMP). • PKPC will carefully consider the disposal/placement of potential ASS and preference will be given to disposal/placement of Potential ASS in locations beneath the water to avoid exposure to oxygen. • Where feasible, reclamation will be undertaken with a material which will allow for a similar groundwater flow to the current flow regime into the Outer Harbour.

Major Project	
Issue	**Environmental Commitment**
	Terminal Hardstand and Temporary Unpaved Surfaces • The surface material of reclaimed areas that are to remain unpaved until Stage 2 will be selected and prepared to minimise potential erosion. If surface fill material is susceptible to erosion a suitable surface layer with low erosive qualities will be laid.
Hydrology and Stormwater Design	*Soil and Water Management Plan* A SWMP will be prepared to document mitigation measures to manage hydrology and water quality impacts associated with construction of Stage 1. The SWMP will include the following measures: • A control system to ensure that bulk material stockpiles and materials within handling areas are contained onsite, through the use of containment walls, bunding, stormwater and dust controls. Any excess sediment laden runoff will either be contained within the bunded storage areas or directed to a land based treatment area. A program of regular monitoring and maintenance of the storage and handling of bulk materials will be implemented. • Measures to minimise excess materials being deposited offsite during loading and transportation of bulk materials from the material handling area. Controls such as vehicle shaker pad, use of vacuum road sweepers, covering loads during transport and dust suppression. • Emergency spill response procedures will also be included in the Emergency Response Plan (ERP). *Dredging Environment Management Plan* A DEMP will be prepared and implemented for all stages of Stage 1, incorporating: • Description of extraction methodology and machinery to be employed. • Identification of dredge areas. • Identification of disposal areas. • Turbidity control devices (floating booms, silt curtains). • Erosion and sediment control measures. • Water and air quality monitoring locations. *Salty Creek and Darcy Road Drain* PKPC will design and size channel structures or culverts to convey flows from Salty Creek and Darcy Road Drain through the reclamation area for flood events up to the 100 year ARI design storm event. The design of these structures will consider: • Potential climate change impacts due to increasing sea levels and rainfall intensities. • Possible hydraulic impacts due to flows greater than the 100 year ARI storm and up to the Probable Maximum Flood and/or due to blockage of the structure. • Fish passage. Consideration should be given for the incorporation of a V-shaped recess in the floor of the culverts to facilitate movement of fish and other mobile aquatic species during periods of low flow. • Water sensitive urban design (WSUD) will be utilised where ever practicable to reduce the volume, velocity and contaminants associated with stormwater runoff.

Major Project	
Issue	**Environmental Commitment**
	Potential Pollutants Handling The handling of oils and fuels, washing of all equipment, (including all concreting equipment) will be undertaken within bunded areas or containers and pollutants trapped in bunded areas will be disposed of in accordance with the waste management section of the CEMP. Any fuel spillage will be reported, documented and immediately remediated. Collected contaminated material will be disposed of as per the management section of the CEMP and in accordance with the NSW Waste Classification Guidelines 2008. *Water Quality and Biological Monitoring Pprograms* PKPC will develop water quality and biological monitoring programs, in consultation with the Port Kembla Harbour Environmental Group and DECCW, during construction and operation. The water quality and biological monitoring programs will form part of the CEMP and will: • Identify monitoring parameters. • Identify representative monitoring locations and frequency of monitoring. • Identify testing procedures (ensuring chemical testing is undertaken by NATA accredited laboratory). • Outline the framework and format for reporting monitoring results.
Contaminated Sediments	*Acid Sulfate Soils* An ASSMP will be prepared prior to the dredging and reclamation works. Measures for the appropriate management of Acid Sulfate Soils, in line with the ASSMAC. These measures will either ensure that future works avoid exposing Potential Acid Sulfate Soils (PASS) to air or provide for appropriate management of the PASS. *Dredging Environmental Management Plan* A DEMP will be prepared based on the measures recommended by the AECOM Sediment Investigation, 2010 and will include: • Procedures for sediments to be dredged and emplaced in the reclamation area at essentially the same time (to avoid the need for land storage and wastewater management, and avoid the exposure of PASS). • Dredged sediments deposited as part of the proposed reclamation will be contained and effectively encapsulated and confined in an engineered containment structure which will be constructed of clean imported fill. • Dredged sediments will be placed at depth, below the depth of wave action at the base of the reclamation fill. • Dredging and reclamation will be undertaken within the protection of parallel silt curtains encompassing the dredging and placement areas. • Dredging technologies will be selected in consideration of their ability to minimise the generation of turbidity. • Turbidity monitoring will be employed in conjunction with twice daily observations by personnel undertaking the dredging and reclamation activities to assist in early identification of problems and proactive implementation of mitigation measures. • Regular monthly flyovers will be undertaken to assess the presence of potential sediment plumes and algal blooms from the dredging or placement areas. • Contingency measures will be implemented immediately in the event visible turbidity and harbour water quality impacts are identified during routine monitoring.

Major Project	
Issue	**Environmental Commitment**
	The DEMP will refer to the ASSMP and will include appropriate management measures for: • Handling and transportation of PASS below water. • Any PASS dredged material will be encapsulated and confined within an engineered containment structure (bunded area) at a lower harbour depth within the reclamation. • The removal of PASS from dredged material to land (if encapsulating and confining the material underwater is not possible). • Any mobilisation of disturbed soils that are confirmed to be AASS. Twice-daily manual measurements of turbidity will be carried out in conjunction with observations by personnel undertaking the dredging and reclamation activities to assist in early identification of problems and proactive implementation of mitigation measures. *Human Health Risk Assessment* The risk to human health and the environment associated with the contaminated sediment (in particular the identified sediment contamination hotspots) should be evaluated by a further qualitative risk assessment. If the risk assessment concludes that the contamination hotspots present an unacceptable risk to the environment, a Remedial Action Plan will be prepared to appropriately manage the identified materials of concern. *Groundwater Considerations* The reclamation will be designed to ensure that the existing groundwater flow regimes are not significantly altered and that there is no increased risk of harm associated with groundwater contamination.
Contaminated Soils and Groundwater	*Site Management Plan* PKPC will prepare a SMP prior to the commencement of construction to manage excavation works and to address the following: • Contamination 'hotspots' based on visual observations and through detailed soil sample analysis if required. • Appropriate management of contamination including selective excavation (to minimise quantities), stockpiling, characterisation and disposal (likely to an off-site soil remediation facility) assuming that the material is not suitable for inclusion within the reclamation area. • Develop a groundwater monitoring program to be conducted at the site prior to the commencement of the works and annually thereafter. This program will be designed and undertaken so as not to impede construction or operation of the development. In developing the groundwater monitoring program PKPC will review and utilise the results for the existing groundwater monitoring program being undertaken for the Outer Harbour. *South Yard* A Limited Phase Two Environmental Site Investigation will be undertaken prior to the commencement of works at the proposed site for the extension of the railway siding at the South Yard, to assess potential contamination issues in this area.

Major Project	
Issue	**Environmental Commitment**
Human Health and Ecological Risk	*Dredging Environment Management Plan* Prior to commencing dredging a further qualitative assessment will be undertaken to address potential risks to ecological receptors associated with contaminated sediment dispersal. The assessment will consider the following: • Potential indirect effects or risks to marine ecosystem or communities outside the heavily impacted PKOH area. • Potential indirect risks to human health due to toxic dinoflagellate blooms or bioaccumulation of contaminants into edible fish or shellfish. • The extent to which protected or recreationally important species are present within the PKOH. This assessment should be based on detailed design of the dredging works and specific environmental management safeguards aimed at minimising and containing contaminated sediment dispersal. Recommendations and mitigation measures that arise from the additional assessment will be incorporated into the DEMP. PKPC will prepare a HSMP for construction of Stage 1 that will address the following: • Handling of oils and fuels and the washing of all equipment, including all concreting equipment, in accordance with the following DECCW Bunding and Spill Management Guideline documents: - Storing and Handling Liquids: Environmental Protection - Participants Manual; and - Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation. • Disposal of any pollutants trapped in bunded areas in accordance with the waste management section of the CEMP and DECCW waste guidelines. • Any fuel spillage will be reported, documented and immediately remediated. *Refuelling Management Plan* PKPC will prepare a Refuelling Management Plan (RMP) which will address on site refuelling if required and which will identify appropriate refuelling locations, proximity to infrastructure, bunding required, location, use of spill kits and monitoring.
Flora and Fauna	*Compensatory Measures* Compensatory measures to offset the loss of soft substrate habitat in the Outer Harbour and the sandy beach area of Red Beach are proposed for Stage 1. A summary of these measures is presented below: • Hard substrate habitat in the form of new berth faces, pile-supported desk areas and rock revetments will be increased as a result of the development. Habitat features that will be incorporated into the design of the hard structures will include: - Boulder-sized rocks placed without cement to offer crevices in the inter-tidal and sub-tidal zones for the use of fish and invertebrates. - Artificial rock pools in revetments to provide habitat for species such as sea-hares, sea urchins and octopus. - Objects such as concrete knobs, or similar, attached to vertical wall structures to add texture and form for the benefit of colonising organisms. • Soft substrate habitat measures will be implemented as part of habitat improvement projects proposed for Tom Thumb Lagoon and Garungaty Waterway (refer **Section 16** and **Appendix G** of the EA for additional detail). The measures proposed are intended to complement the existing restoration programs in these areas by increasing fish

Major Project	
Issue	**Environmental Commitment**
	passage, tidal exchange and promoting estuarine communities such as saltmarsh, mangroves and seagrass. The measures are consistent with Wollongong Council's *Estuary Management Plan* (2007) and the *Plan of Management* prepared for Conservation Volunteers Australia in 2006. The habitat improvement projects will be undertaken over the next 10 years and will include ongoing monitoring and maintenance to ensure that effective habitat outcomes are achieved and sustained on the site. *Dredging Environment Management Plan* The DEMP will address the following: • Ways in which the generation of shockwaves through the water column associated with underwater rock blasting can be reduced as far as it is practicably achievable. • Measures to reduce or minimise negative impacts on marine mammals will be included in the DEMP and will be based on available and relevant guidelines. • Protection of migratory marine mammals. Specific mitigation measures may include a marine mammal observer program to be implemented and stop blasting provisions if whales are sighted within specified distances from the development area. *Green and Golden Bell Frog Management Plan* Prior to any works which involve the clearing of vegetation and debris within the development area of Stage 1, a suitable and targeted survey will be undertaken by an ecologist in order to allow for the detection of any GGBF. If GGBF are detected, no clearing works will commence until the GGBF response provisions in the GGBFMP have been implemented. A comprehensive GGBFMP will be prepared prior to the commencement of construction works for Stage 1. The GGBFMP will be prepared by a suitably qualified ecologist and in consultation with DECCW and will be in accordance with the following plans and previous studies: - *Draft Recovery Plan: Green and Golden Bell Frog* (Lesson 1829) *Recovery Plan* (DECCW, 2005) - *Best Practice Guidelines: Green and Golden Bell Frog Habitat* (DECCW, 2008) - *The Green and Golden Bell Frog Key Population at Port Kembla Management Plan* (DECCW, 2007) - *Assessment of Habitat, Dispersal Corridors and Management Actions to Conserve the Port Kembla Key Population of Green and Golden Bell Frog 2007-2008* (Gaia Research, 2008). The GGBFMP will include the following as a minimum: • Program of works and timeline for all key components of Stage 1. • Undertake a conservation assessment ranking for any known or likely GGBF habitats in the study area, including but not limited to, identification and assessment of breeding, shelter, foraging, and movement habitat components. • Identify any actual or potential threats from construction and operations, including but not limited to: - Habitat loss, modification and disturbance - Fragmentation and isolation of habitat - Water quality and pollutant issues - Road mortality - Exotic weed control and application of herbicides containing glyphosate - Slashing and mowing

Major Project	
Issue	**Environmental Commitment**
	- Invasion by *Chrysanthemoides monilifera* - Predation and disease (refer detailed mitigation measures below). • Identify appropriate actions to present or minimise these actual or potential threats, including, but not necessarily limited to: - Scheduling works to coincide with activity cycles where practicable - Construction of any compensatory habitat prior to proposed habitat loss - Frog fencing - Engaging a suitably qualified ecological consultant to be onsite during construction - Development of response protocols in the event that frogs are found in the active construction areas - Signage - Measures outlined in the frog hygiene protocol. • Include details of how the proponent will monitor and report on the ongoing effectiveness of the GGBFMP including, but not necessarily limited to: - Including the objectives of the monitoring program - Method of monitoring - Data return to DECCW - Licensing - Reporting framework - Duration - Frequency. • A program of works and timeline for planting and landscaping in appropriate areas with vegetation suitable for GGBF foraging and shelter as well as installing structures (such as logs and concrete pieces) to facilitate movement and over wintering habitat. Mitigation measures to minimise the spread of deadly pathogens and disease to the GGBF include the following: • Frog exclusion fencing will be installed around construction sites in close proximity to known or potential GGBF breeding habitats. • The construction works site and any open trenches within the development area should be checked each morning during construction for the presence of any Frogs which should be released into nearby ground cover. Handling the species should be minimised. Frog Hygiene Protocol (NPWS, 2001) should be followed to avoid the spread of chytrid spores or other pathogens between aquatic habitats and frog sites. • If necessary, earth-working equipment and vehicles will be cleaned of excess soil by brushing or hosing when they enter and exit the site in order to minimise the likelihood of the spread of weed seeds and plant pathogens. • If it is likely that vehicle tyres will result in mud and water being transferred to other bodies of water or frog sites, they should be sprayed with a disinfecting solution as per the Frog Hygiene Protocol (NPWS, 2001). This should be carried out at a safe distance from water bodies, so the disinfecting solution can infiltrate the soil instead. • The importation of water should avoid known areas of breeding habitat in close proximity to construction activities (such as Site 18). • The use of imported mulch or compost should be avoided in any rehabilitation works in the vicinity of known breeding areas and associated dispersal avenues.

Major Project	
Issue	**Environmental Commitment**
Rail	During reclamation activities, PKPC will review the need to install a material handling system to unload fill from trains at the area dedicated to stockpiling imported fill material. PKPC will provide Department of Planning with updates regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure upgrades prior to commencing the later stages (i.e. Stage 1b and 1c) of the dredging and reclamation works.
Traffic	*Traffic Management Plan* PKPC will prepare a TMP in accordance with Traffic Control at Worksites (RTA, 2003), prior to construction and operation of Stage 1 in order to minimise impact on pedestrian and vehicle movements. The TMP will outline and manage the transportation routes to the site for heavy vehicles during construction of Stages 1a, 1b and 1c of the Major Project. The TMP will also include: • Access arrangements for heavy vehicle to the site. • Procedures for the delivery and dispatch of products. • Preference for the use of larger trucks in order to minimise vehicular movements. • Haulage routes to and from the site. • Driver protocols including a Code of Conduct to encourage safe driving practices. • Use of truck turnaround areas. • Financial penalties. • Truck movement hour restrictions. Car park facilities will be established within dedicated construction areas internal to the site. Car parks will be designed to cater for the number of construction vehicles to reduce or avoid potential overflow impacts on the local road network, such as Foreshore Road. All roads constructed as part of the development would be designed to accommodate the number and type of vehicle movements projected and would satisfy relevant design standards and would consider local guidance publications including the Wollongong City Council's Subdivision Policy for Road Construction. *Sources of Fill Material* Prior to the commencement of filling operations for Stages 1b and 1c, PKPC will provide detail of the sources of the fill material which is to be imported to the site for the reclamation, including the method of transport, for approval by the Department of Planning.
Noise	*Construction Noise and Vibration Management Plan* A Construction Noise and Vibration Management Plan (CNVMP) will be prepared by PKPC prior to the commencement of construction of Stage 1 in line with DECCW "Interim Construction Noise Guidelines'" in order to minimise the noise impact at sensitive receivers. The CNVMP will include: • Notification of and maintaining regular contact with noise-affected neighbours. • Maintaining a complaints register and complaints handling. • Operating plant in a quiet and efficient manner. • Adoption where practicable of alternative work practices which generate less noise. For example, the use of hydraulic rock splitters instead of rockbreakers, or electric equipment instead of diesel or petrol powered equipment, amongst other management measures. PKPC is committed to the selection of acoustically considerate plant where possible and

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Issue	**Environmental Commitment**
	the use of noise reducing measures such as silencers, multi-frequency reversing alarms, visual system reversing warnings, enclosures and shrouds. The construction noise level emission and the potential annoyance to sensitive receptors will depend on the final selection of equipment, type of operation, activity duration and the time of day at which works are conducted. Additional noise impact assessment will be carried out if the construction plant to be used on site differs significantly from that assumed for modelling purposes in the revised Noise and Vibration Impact Assessment prepared by AECOM and dated 20 September 2010). *Rock Blasting* PKPC will ensure that site specific data gathered during trial blasts (to refine and determine methods for the blasting of bedrock) is used to refine and calibrate the calculations prior to any blasting taking place. *South Yard* The need for mitigation measures to address construction noise associated with the South Yard rail siding upgrade will be carefully considered at the construction planning stage. Potential mitigation measures may include review of the construction schedule, working hours, type of plant used and the use of temporary noise barriers. .
Air Quality	*Air Quality Management Plan* PKPC will prepare an AQMP and mitigation measures will include but not be limited to: • Transport loads and materials will be covered to avoid generating wind-blown dust. • Site surfaces will be wetted down during dry weather including excavation sites, haul roads, spoil stockpiles and other exposed areas. • Vehicular access will be confined to designated access roads. • Shaker pad facilities will be provided for construction trucks and machinery leaving site. • Instantaneous dust monitoring will be undertaken at the site boundary. Regular checks on exhaust emissions from construction equipment, trucks, plant and machinery will be undertaken. • Construction site speed limits will be implemented. The AQMP will include a dust monitoring program designed to assess the impact of particulate emissions from construction works undertaken as part of the project. Monitoring will be undertaken in accordance with *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
Landscape and Visual Amenity	*Landscape Management Plan* PKPC will prepare a LMP for construction of Stage 1 which includes site specific measures and controls including: • Projection of lighting used for evening and night time work will be downward and toward site works to minimise light spill on adjacent areas. • Clear definition of materials storage areas, compounds and construction areas and boundaries. • Construction timing will be programmed to minimise period of disturbance.
Heritage	*Archival Photographic Recording* An archival photographic recording will be prepared prior to demolition of No. 3 and No. 4

Major Project	
Issue	**Environmental Commitment**
	Jetties (part of Stage 1) and a comprehensive history of the jetty prepared. *Historical Shipwrecks* Should any evidence of shipwreck material be encountered during dredging or other activities during Stage 1, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified maritime archaeologist will be contacted to assess the discovery and provide advice on mitigation and recording. *Other Heritage Items or Archaeological Relics* Should unidentified European heritage items and/or archaeological relics be encountered during Stage 1 construction, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified heritage consultant will be contacted to assess the discovery and provide advice on mitigation and recording.
Waste	*Waste Management Plan* PKPC will ensure that appropriate general and hazardous waste identification, handling, storage, transportation, disposal and monitoring measures, to be followed on-site during construction for Stage 1 are included in a WMP which is to form part of all relevant CEMPs. PKPC will ensure these management measures as well as on site waste management activities are undertaken in accordance with the relevant NSW and Commonwealth Regulations and Guidelines. *Demolition Management Plan* The DMP for Stage 1 will include appropriate management measures for the dismantling, removal and disposal of structures and materials from No. 3 and No. 4 Jetties.
Operation Phase	
Hydrology and Water Quality	*Operation Environment Management Plan* The OEMP will include the following measures to ensure the appropriate management of materials handled at the first multi-purpose berth: • A control system to ensure that bulk material stockpiles and materials within handling areas are contained onsite, through the use of containment walls, bunding, stormwater and dust controls. • Any excess sediment laden runoff will either be contained within the bunded storage areas or directed to a land based treatment area. • Implementation of a program of regular monitoring and maintenance of the storage and handling of bulk materials will be implemented. • Measures to minimise excess materials being deposited offsite during loading and transportation of bulk materials from the material handling area. • Implementation of controls such as vehicle shaker pads, use of vacuum road sweepers, covering loads during transport and dust suppression. • Inclusion of emergency spill response procedures in the ERP. • Inclusion of pollution control devices on the future paved surfaces of the development. *Water Sensitive Urban Design* WSUD will be utilised where ever possible to reduce the volume, velocity and contaminants associated with stormwater runoff. *Stormwater Management Plan* A STMP will be prepared to appropriately manage the accumulation of surface water from rainfall, storm events and stockpile watering. The STMP will outline the management of

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Issue	**Environmental Commitment**
	surface water for operation of Stage 1 (central portion of the multi-purpose terminals) and measures for treatment such as a first flush stormwater capture system. Management of surface water will be considered and confirmed during detailed design but is likely to include harvesting of water from roofs of buildings and other roofed structures.
Potential Hazards	*Emergency Response Plan* PKPC will prepare an ERP in accordance with the HIPAP No.1 Emergency Planning Guidelines as part of the OEMP of the multi-purpose terminal. *Hazardous Substance Management Plan* PKPC will prepare a HSMP as part of the OEMP that will be implemented during the operation of the first berth including as a minimum, the following measures to prevent and respond to spills: • A system to ensure that all staff involved in the handling of chemicals are suitably qualified and trained in emergency spill response procedures. • Diagrams and descriptions of access and unloading locations and procedures for drivers of vehicles delivering chemicals. • A program of regular monitoring and maintenance of equipment used in the transportation and handling of chemicals. • A register of equipment, responsibilities and procedures for responding to spills. • A program of monitoring of the condition of bunding. • Procedures for maintenance activities for the Sulphuric acid pipeline that will be relocated from Berth 206.
Flora and Fauna	*Green and Golden Bell Frog Master Plan* A GGBF Master Plan will be prepared to provide a strategic framework on how GGBF and its habitat will be managed across the Port Kembla Outer Harbour area. The GGBF Master Plan will be prepared prior to commencement of operations of Stage 1. PKPC will consult with DECCW during preparation of the GGBF master plan.
Traffic	*Traffic Management Plan* A TMP will be included in the site OEMP. The Plan will address work practices on site, designated haulage routes to and from the site, driver protocols (including a Code of Conduct to encourage safe driving practices), financial penalties and hours of operation amongst other measures.
Rail	Recommendations for rail infrastructure upgrade and arrangements for network paths for construction and operation of Stage 1 are as follows: • Rail infrastructure upgrade in the South Yard required for operation of Stage 1 will comprise extension of siding No. 13 by 120m to 780m and turnout installation and removal. • Agreement will be sought from ARTC to allow the use of five train paths per day (one train for transport of fill material and four trains for the multi-purpose berth), in each direction on the Unanderra Line. PKPC will provide Department of Planning with updates regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure upgrades prior to commencing the later stages (i.e. Stage 1b and 1c) of the dredging and reclamation works.
Noise	*Operational Noise and Vibration Management Plan* PKPC will prepare an ONVMP as part of the OEMP, prior to the commencement of operation of Stage 1 of the proposed development. The ONVMP should be prepared in

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Issue	**Environmental Commitment**
	accordance with the relevant DECCW guidelines and should incorporate best practice mitigation measures, The ONVMP will recommend noise mitigation measures required to address operational noise and sleep disturbance impacts arising from increased rail movements associated with Stage 1 of the project. To mitigate the potential sleep disturbance impacts associated with the use of train horns in Stage 1, PKPC will commit to use shorter train horn toots rather than standard longer train horn blasts. PKPC will carry out an additional noise impact assessment, if it is found, after detailed design and operations planning, that the finalised operational scenario differs significantly from that used for modelling purposes in the revised Noise and Vibration Impact Assessment prepared by AECOM and dated 20 September 2010).
Air Quality	*Air Quality Management Plan* PKPC will ensure that the AQMP includes appropriate site specific best practice mitigation measures for the management of particulate emissions during the operation of the proposed development such as: • Sealing roads and areas susceptible to windblown dust impacts. • Covering of transport loads. • Watering and/or using surfactants on stockpiles. • Covering of bulk cargo stockpiles (where necessary practicable). • Instantaneous dust monitoring at the boundary of the site most affected by dust impacts. • Reclaimed areas for future terminal development to be covered with suitable compacted materials to ensure fugitive dust emissions are minimised. • Site specific mitigation measures for the management of particulate emissions during the operation of the proposed development's night time operation.
Landscape and Visual Amenity	*Landscape Management Plan* PKPC will ensure that the LMP includes appropriate site specific measures and controls to mitigate potential visual impacts on the immediate, local, and regional landscape including: • Lighting for the portion of the dry bulk/multi-purpose terminal that will be operational as part of Stage 1 and other operational areas, including the new road link, will be carefully selected to minimise light spill on surrounding areas outside the terminal boundaries and minimise visual impact when viewed from adjacent premises. • Selection of suitable colours and materials for the terminal pavement, buildings and other structures to minimise reflectivity and contrast.
Sustainability	As per Concept Plan
Climate Change	As per Concept Plan
Waste	*Waste Management Plan* PKPC will ensure that appropriate general and hazardous waste identification, handling, storage, transportation, disposal and monitoring measures, to be followed on-site during operation of the proposed development, are included in a WMP which is to form part of the OEMP. PKPC will ensure these management measures as well as on site waste management activities are undertaken in accordance with the relevant NSW and Commonwealth Regulations and Guidelines. The following measures will be included as a minimum in the WMP: • Incoming vessels to the Port will be subjected to assessment in accordance with the Quarantine Act 1908. Australian Quarantine Inspection Service (AQIS) manages

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Issue	**Environmental Commitment**
	quarantine controls at our borders to minimise the risk of exotic pests and diseases entering the country. Incoming vessels will have to apply to the AQIS: form s20AA Permission to Enter an Australian Non-Proclaimed First Port of Entry and/or Application for s33 Permission to Enter Subsequent Ports of Call. • The OEMP should incorporate requirements as in the National Ballast Water Management Arrangements under the Australian National System for the Prevention and Management of Marine Pest Incursions.
Socio-Economic	PKPC will ensure that access to the existing small boat harbour and associated facilities is not affected during either the construction or operational phase of Stage 1. PKPC will include appropriate measures in a SFMP for Stage 1 to ensure that safe access is provided for recreational boaters entering and exiting the small boat harbour, particularly during reclamation and dredging activities. PKPC will continue to liaise with affected businesses and local community groups during Stage 1 to inform them about project status and timing for construction key project components.

APPENDIX E

Final Statement of Commitments

1.0 Final Statement of Commitments

1.1 Introduction

This section provides the Final Statement of Commitments (SoCs) for the proposed Port Kembla Outer Harbour development in accordance with section 75F(6) of the *EP&A Act*. The commitments for Concept Plan and Major Project have been presented in separate tables.

The draft Statement of Commitments has been revised following consideration of the submissions received during the public exhibition period of the EA.

This section describes the general commitments made as part of this Environmental Assessment for both Concept Plan and Major Project. The Statement of Commitments (SoC) identify a combination of matters that will be dealt with in the next stage of the Major Project (detailed design) and implemented during both construction and operation phases. The SoC for Concept Plan also includes matters that require further assessment and/or that must be dealt with during subsequent stages of the development, based on current knowledge and design resolution.

Tables 1-1 and **1-2** describe the commitments identified by this Environmental Assessment to avoid or minimise adverse impacts on the environment during the Concept Plan and Major Project, respectively.

Table 1-1: Final Statement of Commitments for Concept Plan

Concept Plan	
Issue	**Environmental Commitment**
Environmental Management	The proposed Outer Harbour development will be constructed and operated generally as described in the *Port Kembla Outer Harbour Development, Environmental Assessment*, prepared by AECOM and dated February 2010 and portrayed in **Figure 5-3** (Concept Plan) and in **Figure 5-5** (Major Project). The proponent will prepare and implement a suite of Environmental Management Plan (EMP) Framework documents that will be developed for construction (including dredging and reclamation) and operation for Stages 1, 2 and 3 of the Concept Plan. Each discrete phase of construction activity will have its own CEMP. Similarly, discrete operating units (e.g. terminals) will each have their own OEMP. All CEMPs and OEMPs will include appropriate strategies and management measures to control and manage environmental risks, assess environmental performance and comply with relevant statutory requirements that are applicable to activities to be undertaken within that stage of the Concept Plan. Sub-plans will be included in the CEMP and OEMP Framework and will be included in each relevant stage of the project as appropriate. Sub-plans that will be required to be prepared for either construction or operation of at least one of the stages of the project will include the following: • Soils and Water Management Plan (SWMP). • Stormwater Management Plan (STMP). • Acid Sulfate Soil Management Plan (ASSMP). • Spoil Management Plan (SPMP). • Dredging Environment Management Plan (DEMP). • Site Management Plan (SMP). • Hazardous Substance Management Plan (HSMP). • Emergency Response Plan (ERP). • Green and Golden Bell Frog Management Plan (GGBFMP). • Traffic Management Plan (TMP). • Noise and Vibration Management Plan (NVMP).

Concept Plan	
Issue	**Environmental Commitment**
	• Air Quality Management Plan (AQMP). • Safety Management Plan (SFMP). • Landscape Management Plan (LMP). • Conservation Management Plan (CMP). • Waste Management Plan (WMP). • Demolition Management Plan (DMP). • Refuelling Management Plan (RMP).
Soil Erosion and Sedimentation	Controls and measures to mitigate soil erosion and sedimentation construction and operation impacts as a result of Stage 1 of the Concept Plan are detailed within the Major Project SoC (**Table 1-2**). A *Soils and Water Management Plan* (SWMP) would be prepared prior to the commencement of construction activities and will be included as a sub-plan in the relevant CEMP for that stage. The SWMP will be prepared in accordance with Landcom's *Managing Urban Stormwater; Soils and Construction Manual 2004* and will be maintained for the duration of the construction process and operational period. A *Stormwater Management Plan* (STMP) would be prepared prior to the commencement of operation of activities. Potential impacts to soil erosion and sedimentation as a result of Stages 2 and 3 of the Concept Plan will be identified during environmental assessments undertaken to support project applications for those stages. Controls and measures to mitigate impacts will be incorporated into SWMPs and STMPs to be implemented during construction and operation phases for Stages 2 and 3, respectively.
Hydrology and Water Quality	A SWMP would be prepared prior to the commencement of key project components and will outline specific measures to ensure impacts to water quality and hydrology during construction of each stage of the Concept Plan are minimised. Monitoring programs for water quality and biology will be developed, in consultation with DECCW and the Port Kembla Harbour Environment Group, and implemented for each stage of the Concept Plan. These monitoring programs will outline monitoring frequencies and testing procedures and results will be used to identify emerging trends or problems, provide data for measuring the impact of operational activities, determine whether pollution controls are working and provide a basis for efficient response to emergencies such as spills. PKPC will ensure that hydrological and ecological considerations are taken into account in the stormwater design for terminals for all stages of terminal construction. Water sensitive urban design (WSUD) will be utilised where ever practicable to reduce the volume, velocity and contaminants associated with stormwater runoff. Inclusion of pollution control devices on the future paved surfaces of the development.
Contaminated Sediments	Mitigation measures proposed to manage contaminated sediment impacts associated with Stage 1 will be included within a DEMP and are presented in the Major Projects SoC (**Table 1-2**). A DEMP will also be prepared prior to dredging activities for Stage 3 and will broadly include the following: • Description of extraction methodology and machinery to be employed. • Identification of dredge areas. • Identification of disposal (reclamation) areas. • Turbidity control devices (floating booms, silt curtains). • Erosion and sediment control measures. • Water and air quality monitoring locations.

Concept Plan	
Issue	**Environmental Commitment**
	Additional Contaminated Sediment Investigations will be undertaken as part of subsequent project applications for Stage 3. The additional investigations will assess potential contaminated sediment impacts associated with the following: • Area to be dredged north of Port Kembla Gateway to accommodate the third multi-purpose berth. • Dredging for expansion of the existing ship turning circle located south of the northern breakwater. • Reclamation for northern portion of the multi-purpose terminals. Mitigation measures that are proposed to manage contaminated sediments that are located in these areas will be included in the SMPs for those stages.
Contaminated Soils and Groundwater	Mitigation measures proposed to manage contaminated soil and groundwater impacts associated with Stage 1 will be included within a SMP and are presented in the Major Projects SoC (**Table 1-2**). Additional Contaminated Land Investigations will be undertaken as part of subsequent project applications for Stages 2 and 3. The additional investigations will assess potential contaminated soil and groundwater impacts associated with the following: • An extension of the road link from Christy Drive to connect with the container terminals. • Reconfiguration of rail in the South Yard to enable efficient operation of the western and eastern container facilities (this is in addition to the rail infrastructure upgrade required as part of Stage 1). • An extension of an existing rail siding into and along the length of the container terminals. • New road link from Darcy Road to boat harbour. • Hard stand of landward extent of development west to existing rail lines and south to Foreshore Road. Any contamination 'hot spots' that are identified during subsequent investigations for Stages 2 and 3 will be included within SMPs for those stages. Develop a groundwater monitoring program to be conducted at the site prior to the commencement of the works and regularly thereafter. This program will be designed and undertaken so as not to impede construction or operation of the development. In developing the groundwater monitoring program PKPC will review and utilise the results for the existing groundwater monitoring program being undertaken for the Outer Harbour.
Human Health and Ecological Risk	Measures proposed to mitigate potential risks for Stage 1 are presented in the Major Project SoC. Where applicable, these measures will also be applied to Stages 2 and 3 of the Concept Plan. *Site Management Plan* PKPC will prepare a SMP for each stage of the Concept Plan which will set our procedures to manage potential risks identified to human receptors and ecological receptors during land based construction works. *Dredging Environment Management Plan* PKPC will prepare a DEMP prior to dredging activities for Stage 3. *Hazardous Substance Management Plan* An HSMP will be prepared for each Stage of the Concept Plan and will contain the following information where it is relevant to the proposed activities: • Work methods to safeguard against hazards such as spills. Any fuel spillage will be reported, documented and immediately remediated. • Appropriate methyl bromide management procedures for the container terminals.

Concept Plan	
Issue	**Environmental Commitment**
	• Separation of the flammable solids and flammable liquids storage areas. • Ammonium Nitrate (AN) storages at the container terminal will be sited and designed to comply with the relevant Australian Standard (AS) in respect to both storage quantities and siting (distance separation). • Transport risk assessment studies which will be conducted for future development at each facility will include an assessment of the transport requirements and risks associated with the transport of Dangerous Goods. • Appropriate training and qualifications for staff involved in the handling of chemicals and in emergency spill response procedures. • Diagrams and descriptions of access and unloading locations will be developed as well as procedures for drivers of vehicles delivering chemicals. • A program of regular monitoring and maintenance of equipment used in the transportation and handling of chemicals. • A register of equipment, responsibilities and procedures for responding to spills. • A program of monitoring of the condition of bunding. *Emergency Response Plan* An Emergency Response Plan (ERP) will be prepared as part of the OEMP for each of the general cargo terminals and container terminals. The ERP will be prepared in accordance with the HIPAP No.1 Emergency Planning Guidelines. *Additional Assessments* A further qualitative risk assessment will be undertaken once dredging methodology has been confirmed, prior to the commencement of dredging tasks in Stage 1 and Stage 3, and will include: • A further qualitative risk assessment of contaminated sediment dispersal to assess potential risks to ecological receptors. • Recommendations and mitigation measures that arise from these additional assessments will be incorporated into the DEMP.
Potential Hazard	*Hazardous Substance Management Plan* PKPC will ensure that the risks that may be associated with potential hazards will be maintained within the permissible levels via mitigation measures included in a HSMP. Measures will include: • The container terminal will be designed with appropriate Methyl Bromide dosing and capture systems and operated in a manner that minimises the risk of release of potentially harmful gas. • The flammable solids storage area will be separated from the flammable liquids storage area by a minimum of 35m. • The risks associated with the potential storage of toxic gases will be specifically addressed in the individual environmental impact assessments conducted for the various terminal operators. Appropriate risk reduction measures that may be determined as a result of this assessment will be included in the terminal design and operational procedures, where applicable. A Final Hazard Assessment will be prepared as part of detailed project applications for operation of the container terminals.

Concept Plan	
Issue	**Environmental Commitment**
Flora and Fauna	*Compensatory Measures* Compensatory measures to offset the loss of soft substrate habitat in the Outer Harbour and the sandy beach area of Red Beach are proposed for Stage 1 of the Concept Plan. A summary of these measures is presented in the Major Project SoC. The need for additional compensatory measures for Stages 2 and 3 will be considered during environmental assessments prepared as part of project applications for those stages. *Green and Golden Bell Frog Master Plan* A GGBF Master Plan will be prepared to provide a strategic framework for how GGBF and its habitat will be managed across the Port Kembla Outer Harbour area. The GGBF Master Plan will focus upon sites with the greatest potential for GGBF habitat and connectivity, particularly freight rail corridors and associated land areas. The GGBF Master Plan will be prepared following preparation of the Rail Master Plan (so that it is compatible with the rail infrastructure requirements of the port) and prior to commencement of Stage 2 operations. PKPC will consult with DECCW and other relevant stakeholders during preparation of the GGBF master plan. *Green and Golden Bell Frog Management Plan* The GGBFMP framework prepared as part of this EA will be developed into a comprehensive GGBFMP in consultation with a suitably qualified ecologist and DECCW prior to the commencement of construction works for Stage 1. The GGBFMP developed for Stage 1 construction works will be reviewed and updated in association with the environmental assessments that will be undertaken as part of project applications for Stages 2 and 3. Each GGBFMP will include the following as a minimum: • Program of works and timeline for all key components of the project. • Undertake a conservation assessment ranking for any known or likely GGBF habitats in the study area, including but not limited to, identification and assessment of breeding, shelter, foraging, and movement habitat components. • Identify any actual or potential threats from construction and operations. • Identify appropriate actions to prevent or minimise actual or potential threats. • Include details of how the proponent will monitor and report on the ongoing effectiveness of the GGBFMP. • A program of works and timeline for planting and landscaping in appropriate areas with vegetation suitable for GGBF foraging and shelter as well as installing structures (such as logs and concrete pieces) to facilitate movement and over wintering habitat. • A feasibility assessment of retaining and/or enhancing shelter, foraging and movement habitat or potential breeding habitat along the proposed road corridor off Darcy Road. Further mitigation measures that will be implemented in relation to the proposed road corridor off Darcy Road during Stage 2 include: • Pre construction frog surveys. • Careful, staged clearing of site and provision of proximate alternate habitat to encourage frogs to seek shelter. • Installation of permanent 1 metre high frog exclusion fencing. • Careful direction of surface water runoff.

Concept Plan	
Issue	**Environmental Commitment**
	• Appropriate signage at entrance and exit of the proposed road alerting staff and visitors that an endangered species has been found in this area and to exercise caution. • Site inductions to educate workers. • Monitoring and regular review of performance of mitigation measures. Mitigation measures proposed to manage impacts on GGBFs for Stage 1 construction works are detailed in the Major Project SoC. The need for additional breeding ponds to be constructed to offset impacts to potential foraging habitat for populations of GGBF (particularly adjacent to Site 8) will be assessed as part of project applications for Stage 2 and Stage 3 of the Concept Plan. Ecological impacts of the Concept Plan will be reviewed as part of project applications for Stages 2 and 3 including impacts on threatened species, populations and ecological communities, and riparian and stream ecology (Salty Creek).
Rail	Recommendations for rail infrastructure upgrades and arrangements for Stage 1 are presented in the Major Project SoC. Adequacy of the existing rail infrastructure and capacity of the regional network will need to be reassessed prior to the construction and operation of Stages 2 and 3. The following commitments are proposed to assess rail infrastructure and network capacity for Stages 2 and 3: • PKPC will provide Department of Planning with updates regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure upgrades prior to commencing the later stages (i.e. Stage 1b and 1c) of the dredging and reclamation works. • PKPC will participate in the Maldon Dombarton Study, ensuring that the Outer Harbour is included as a main destination for goods in the Maldon - Dombarton Study. • PKPC will liaise with RailCorp regarding access from the Outer Harbour to the Unanderra Line (a distance of 4km). PKPC will prepare a rail master plan prior to the commencement of construction of Stage 2 to identify rail infrastructure requirements for Stages 2 and 3 of the Concept Plan.
Traffic	A Traffic Management Plan (TMP) will be prepared by PKPC in accordance with Traffic Control at Worksites (RTA, 2003), prior to construction of Stage 1 in order to minimise impact on pedestrian and vehicle movements. The TMP will include control measures such as designated haulage routes and driver code of conduct to encourage safe driving practices. The proposed content of the TMP is detailed in the Major Project SoC. Future traffic and transport assessments will be undertaken as part of project applications for Stages 2 and 3. This will include an assessment of the traffic impacts associated with the changes to the road network and to separate port related traffic and public traffic accessing the boat harbour. PKPC will progressively assess the volume of truck movements associated with the Project applications for each stage of the Outer Harbour development to ensure that they are consistent with the volumes predicted in the EA. The assessment will take into account actual truck volumes generated from the Outer Harbour development at that point of time. If the volume of truck movements is predicted to exceed the volumes assessed in the EA then further assessment of the likely impacts associated with any additional truck traffic on the road network will be required. All roads constructed as part of the development would be designed to accommodate the number and type of vehicle movements projected and would satisfy relevant design

Concept Plan	
Issue	**Environmental Commitment**
	standards and would consider local guidance publications including the Wollongong City Council's Subdivision Policy for Road Construction. PKPC will ensure that any new road infrastructure required for Stages 2 and 3 of the Concept Plan is planned and designed to ensure adequate access is retained for existing premises and will consult with affected businesses and the wider community in this regard. Car park facilities will be established within dedicated construction areas internal to the site. Car parks will be designed to cater for the number of construction vehicles to reduce or avoid potential overflow impacts on the local road network, such as Foreshore Road.
Noise	*Noise and Vibration Management Plans* A Construction Noise and Vibration Management Plan (CNVMP) will be prepared by PKPC prior to the commencement of construction of Stage 1 in line with DECCW "Draft Construction Noise Guidelines". The content of the CNMP is detailed in the Major Project SoC. PKPC will prepare an Operational Noise and Vibration Management Plan (ONVMP) prior to the commencement of operation of each stage of the Concept Plan. The ONVMP should be prepared in accordance with the relevant DECCW guidelines and should incorporate best practice mitigation measures, *Rail Noise and Sleep Disturbance* An assessment of the acoustic impact arising from changes to the rail infrastructure associated with Stages 2 and 3 of the Concept Plan will be undertaken following completion of the Rail Master Plan when more information is known about the likely train movements in the Outer Harbour. Operational noise and sleep disturbance impacts arising from increased rail movements associated with Stages 2 and 3 of the Concept Plan will be investigated and, if required, appropriate noise mitigation measures will be recommended. To mitigate the potential sleep disturbance impacts associated with the use of train horns, PKPC will commit to use shorter train horn toots rather than standard longer train horn blasts. In addition, for Stages 2 and 3 of the Concept Plan PKPC will investigate the feasibility of further mitigation measures such as: • The removal of the Foreshore Road rail crossing; • Grade separation at the Old Port Road rail crossing. Noise and vibration assessments will be undertaken as part of applications for project applications for Stages 2 and 3 to assess both construction and operation impacts.
Air Quality	An AQMP will be prepared for inclusion in the CEMP and OEMP for each stage of the Concept Plan. The AQMP should include a requirement for on-going dust monitoring during the construction of Stage 1 of the project (for further details refer to Major Project SoC – **Table 1-2**). Site specific best practice mitigation measures for the management of particulate emissions during construction and operation of each of the stages of the Concept Plan will be included in AQMPs. Mitigation measures to be included in the AQMP for Stage 1 are detailed in the Major Project SoC (**Table 1-2**). PKPC will assess future operations at the site on a case by case basis, for potential impacts on the local air shed, with consideration of the regional and local pollution findings of the revised Air Quality Impact Assessment prepared by AECOM dated 10 September 2010. Further analysis and atmospheric dispersion modelling will be undertaken for Stages 2 and 3 of Concept Plan. The reporting of this modelling will be included in separate project applications for Stage 2 and 3 of the Concept Plan.

Concept Plan	
Issue	**Environmental Commitment**
Socio-Economic	Throughout the progressive development of the Concept Plan PKPC will ensure that access to the existing small boat harbour and associated facilities is not affected during either the construction of operational activities of each stage. In addition, PKPC will include appropriate measures in a SFMP to ensure that safe access is provided for recreational boaters entering and exiting the small boat harbour. PKPC will continue to liaise with community groups to inform them about project status throughout the development of the Concept Plan.
Landscape and Visual Amenity	PKPC will prepare a Landscape Management Plan to ensure visual impacts associated with Stage 1 are minimised. The content of the LMP is detailed in the Major Project SoC. LMPs will be prepared as part of CEMPs and OEMPs for each stage of the Concept Plan and will include the following: • Lighting used for evening and night time work will be projected downward and onto the proposed works. • Construction timing should be programmed to ensure efficiency of works and minimise period of disturbance. • Construction areas and plant/machinery and materials storage areas will be clearly designated and clearly defined. • Lighting for terminals and other operational areas, including the new road link, will be carefully selected to minimise light spill. • A Landscape Management Plan (LMP) will be prepared to guide any landscaping works that are proposed across the area of development. Suitable colours and materials will be selected for the terminal pavement, buildings and other structures to minimise reflectivity and contrast. Landscape and Visual Amenity assessments will be undertaken as part of project applications for Stages 2 and 3.
Heritage	*Archival Photographic Recording* An archival photographic recording will be prepared prior to demolition of No. 3 and No. 4 Jetties (part of Stage 1) and a comprehensive history of the jetties prepared. An archival photographic recording will be prepared prior to demolition of No. 6 Jetty (part of Stage 3) and a comprehensive history of the jetty prepared. *Historical Shipwrecks* Should any evidence of shipwreck material be encountered during dredging or other activities during Stages 1 and 3, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified maritime archaeologist will be contacted to assess the discovery and provide advice on mitigation and recording. *Other Heritage Items or Archaeological Relics* Should unidentified European heritage items and/or archaeological relics be encountered during construction, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified heritage consultant will be contacted to assess the discovery and provide advice on mitigation and recording. The environmental assessment to be undertaken as part of a project application for Stage 2 will further consider the intrusion of the new road link connecting Darcy Road with the boat harbour on accessibility between the concrete pillbox and the Historic Military Museum. PKPC will ensure the design of the new road limits intrusion on the listed heritage items including consideration of the use of landscaping to ensure that any visual impact is

Concept Plan	
Issue	**Environmental Commitment**
	minimised. PKPC will prepare a Conservation Management Plan (CMP) for the Mobile Block Setting Crane prior to commencing construction activities within the proximity of the item during Stage 2. PKPC will restore the crane in accordance with the recommendations of the CMP, relocate the crane to a safe and prominent location nearby and provide interpretive signage for the public.
Waste	*Waste Management Plan* WMPs will be prepared for inclusion in relevant CEMPs and OEMPs for all stages of the Concept Plan and will emphasise potential for recovery and reuse of waste, minimise waste generation, and include specific requirements for each of the waste types identified. *Demolition Management Plan* A Demolition Management Plan (DMP) will be prepared to include appropriate management measures for the dismantling, removal and disposal of structures and materials during Stages 1 and 3. Waste assessments will be undertaken for Stages 2 and 3 as part of project applications for these stages.
Sustainability	Throughout all stages of the Concept Plan PKPC is committed to the following: • Consider the potential for incorporating local renewable power generation (e.g. from micro and large scale wind turbines) as part of future design and construction works. • Consider the potential for power generation from the sun by encouraging future tenants and lessees to install panels on structures to take advantage of the solar potential. • Investigate the potential for water capture and reuse during the detailed design of terminals. Recommendations and mitigation measures to manage sustainability issues identified during this environmental assessment will be reviewed as part of environmental assessments for Stages 2 and 3, and revised to incorporate new technological innovations that could be considered and implemented as part of the total development. The design of berths and terminal areas will include allowance for the provision of alternative marine power (AMP) for vessels while at berth to allow for possible future use of ship to shore power.
Climate Change	Throughout all stages of the Concept Plan PKPC is committed to the management of the impacts of a variable climate and extreme weather conditions as follows: • The proposed reclamation and pavement levels will be set above predicted extreme sea level rises (i.e. including storm surges and extreme events) for the 100 year design life, with a freeboard suitable to cater for further sea level rise beyond that time. • Risk management strategies will be in place for extremely hot days to manage potential rail buckling. • Maintenance regimes will take accelerated degradation of infrastructure into account. Assessments for Stages 2 and 3 will review the findings of this assessment in light of the latest climate change projections and statistics.

Table 1-2: Statement of Commitments – Major Project

Major Project	
Issue	**Environmental Commitment**
Construction Phase	
Major Project - General	The proposed Outer Harbour development will be constructed and operated generally as described in the *Port Kembla Outer Harbour Development, Environmental Assessment*, prepared by AECOM and dated February 2010 and portrayed in **Figure 5-3** (Concept Plan) and in **Figure 5-5** (Major Project). The proponent will prepare and implement a suite of Environmental Management Plan (EMP) Framework documents that will be developed for construction (including dredging and reclamation) and operation for Stage 1. Each discrete phase of construction activity will have its own CEMP. Similarly, discrete operating units (e.g. terminals) will each have their own OEMP. All CEMPs and OEMPs will include appropriate strategies and management measures to control and manage environmental risks, assess environmental performance and comply with relevant statutory requirements that are applicable to that part of Stage 1. A number of sub-plans will be included in relevant CEMPs and OEMPs and will include the following, where relevant: • Soils and Water Management Plan (SWMP) • Stormwater Management Plan (STMP) • Acid Sulfate Soil Management Plan (ASSMP) • Spoil Management Plan (SPMP) • Dredging Environment Management Plan (DEMP) • Site Management Plan (SMP) • Hazardous Substance Management Plan (HSMP) • Emergency Response Plan (EMP) • Green and Golden Frog Management Plan (GGFMP) • Traffic Management Plan (TMP) • Noise and Vibration Management Plan (NVMP) • Construction Noise and Vibration Management Plan (CNVMP) • Operational Noise and Vibration Management Plan (ONVMP) • Air Quality Management Plan (AQMP) • Safety Management Plan (SFMP) • Landscape Management Plan (LMP) • Conservation Management Plan (CMP) • Waste Management Plan (WMP) • Demolition Management Plan (DMP) • Refuelling Management Plan (RMP)
Soil Erosion and Sedimentation	*Soils and Water Management Plan* SWMPs will be prepared by PKPC prior to commencement of construction of Stage 1 and will be included where relevant in the CEMPs for that stage. The SWMPs will be prepared in accordance with Landcom's *Managing Urban Stormwater; Soils and Construction*

Major Project	
Issue	**Environmental Commitment**
	Manual 2004. *Erosion and Sedimentation Controls* Management controls aimed at containing, redirecting, and stabilising soils that are unavoidably disturbed by construction activities will include: • Installing water diversion structures to ensure surface water runoff does not enter zones of exposed soils during construction, particularly in the vicinity of the new road link from Christy Drive, and rail infrastructure upgrade in the South Yard. • Installation of erosion and sedimentation control devices prior to excavation at the site, that will remain in place until the bare soils and surfaces are stabilised temporarily or permanently (by suitable surface materials, revegetation or other means) and removed when redundant. • Installing sediment traps around areas of soils that will be exposed as a result of construction activities to protect downstream water quality. Sediment traps will be maintained and will remain in place until all works are finalised and surfaces are stabilised. • Installing buffers to the riparian zone, for example sediment fences, to prevent sediment laden water from entering Salty Creek, Darcy Road Drain, and the Outer Harbour. • Installing filter rolls at stormwater drain locations to minimise potential for sedimentation of drains and subsequent flooding during heavy rainfall. • Implementation of site management procedures including watering or covering of unsecured stockpiles of reclamation material (if stockpiles contain fines) anticipated to be exposed and unused for a period longer than two continuous weeks. • Limiting the area of disturbance to those locations necessary to construct the new roads, reclamation area and rail infrastructure upgrade. • Disturbed areas will be restored (sealed or covered with pebbles/gravel or vegetated, as appropriate) upon the completion of the works in that area to ensure that soils are exposed for as short a time as possible. • Daily visual inspections of erosion and sediment control devices to determine the condition and effectiveness of control measures. Immediate action will be taken to repair any control devices that have failed to work adequately. Emergency procedures will be detailed for high rainfall events that could increase soil erosion during construction. *Fill Materials, Dredging and Reclamation* • Environmentally suitable fill materials will be used for reclamation only. • Appropriate soil enhancement procedures and treatments will be implemented, as required, to facilitate consolidation of soft material and minimise slumping. • Soils confirmed to be Actual ASS will be handled in accordance with the Acid Sulfate Soil Management Plan (ASSMP). • PKPC will carefully consider the disposal/placement of potential ASS and preference will be given to disposal/placement of Potential ASS in locations beneath the water to avoid exposure to oxygen. • Where feasible, reclamation will be undertaken with a material which will allow for a similar groundwater flow to the current flow regime into the Outer Harbour.

Major Project	
Issue	**Environmental Commitment**
	Terminal Hardstand and Temporary Unpaved Surfaces • The surface material of reclaimed areas that are to remain unpaved until Stage 2 will be selected and prepared to minimise potential erosion. If surface fill material is susceptible to erosion a suitable surface layer with low erosive qualities will be laid.
Hydrology and Stormwater Design	*Soil and Water Management Plan* A SWMP will be prepared to document mitigation measures to manage hydrology and water quality impacts associated with construction of Stage 1. The SWMP will include the following measures: • A control system to ensure that bulk material stockpiles and materials within handling areas are contained onsite, through the use of containment walls, bunding, stormwater and dust controls. Any excess sediment laden runoff will either be contained within the bunded storage areas or directed to a land based treatment area. A program of regular monitoring and maintenance of the storage and handling of bulk materials will be implemented. • Measures to minimise excess materials being deposited offsite during loading and transportation of bulk materials from the material handling area. Controls such as vehicle shaker pad, use of vacuum road sweepers, covering loads during transport and dust suppression. • Emergency spill response procedures will also be included in the Emergency Response Plan (ERP). *Dredging Environment Management Plan* A DEMP will be prepared and implemented for all stages of Stage 1, incorporating: • Description of extraction methodology and machinery to be employed. • Identification of dredge areas. • Identification of disposal areas. • Turbidity control devices (floating booms, silt curtains). • Erosion and sediment control measures. • Water and air quality monitoring locations. *Salty Creek and Darcy Road Drain* PKPC will design and size channel structures or culverts to convey flows from Salty Creek and Darcy Road Drain through the reclamation area for flood events up to the 100 year ARI design storm event. The design of these structures will consider: • Potential climate change impacts due to increasing sea levels and rainfall intensities. • Possible hydraulic impacts due to flows greater than the 100 year ARI storm and up to the Probable Maximum Flood and/or due to blockage of the structure. • Fish passage. Consideration should be given for the incorporation of a V-shaped recess in the floor of the culverts to facilitate movement of fish and other mobile aquatic species during periods of low flow. • Water sensitive urban design (WSUD) will be utilised where ever practicable to reduce the volume, velocity and contaminants associated with stormwater runoff.

Major Project	
Issue	**Environmental Commitment**
	Potential Pollutants Handling The handling of oils and fuels, washing of all equipment, (including all concreting equipment) will be undertaken within bunded areas or containers and pollutants trapped in bunded areas will be disposed of in accordance with the waste management section of the CEMP. Any fuel spillage will be reported, documented and immediately remediated. Collected contaminated material will be disposed of as per the management section of the CEMP and in accordance with the NSW Waste Classification Guidelines 2008. *Water Quality and Biological Monitoring Pprograms* PKPC will develop water quality and biological monitoring programs, in consultation with the Port Kembla Harbour Environmental Group and DECCW, during construction and operation. The water quality and biological monitoring programs will form part of the CEMP and will: • Identify monitoring parameters. • Identify representative monitoring locations and frequency of monitoring. • Identify testing procedures (ensuring chemical testing is undertaken by NATA accredited laboratory). • Outline the framework and format for reporting monitoring results.
Contaminated Sediments	*Acid Sulfate Soils* An ASSMP will be prepared prior to the dredging and reclamation works. Measures for the appropriate management of Acid Sulfate Soils, in line with the ASSMAC. These measures will either ensure that future works avoid exposing Potential Acid Sulfate Soils (PASS) to air or provide for appropriate management of the PASS. *Dredging Environmental Management Plan* A DEMP will be prepared based on the measures recommended by the AECOM Sediment Investigation, 2010 and will include: • Procedures for sediments to be dredged and emplaced in the reclamation area at essentially the same time (to avoid the need for land storage and wastewater management, and avoid the exposure of PASS). • Dredged sediments deposited as part of the proposed reclamation will be contained and effectively encapsulated and confined in an engineered containment structure which will be constructed of clean imported fill. • Dredged sediments will be placed at depth, below the depth of wave action at the base of the reclamation fill. • Dredging and reclamation will be undertaken within the protection of parallel silt curtains encompassing the dredging and placement areas. • Dredging technologies will be selected in consideration of their ability to minimise the generation of turbidity. • Turbidity monitoring will be employed in conjunction with twice daily observations by personnel undertaking the dredging and reclamation activities to assist in early identification of problems and proactive implementation of mitigation measures. • Regular monthly flyovers will be undertaken to assess the presence of potential sediment plumes and algal blooms from the dredging or placement areas. • Contingency measures will be implemented immediately in the event visible turbidity and harbour water quality impacts are identified during routine monitoring.

Major Project	
Issue	**Environmental Commitment**
	The DEMP will refer to the ASSMP and will include appropriate management measures for: • Handling and transportation of PASS below water. • Any PASS dredged material will be encapsulated and confined within an engineered containment structure (bunded area) at a lower harbour depth within the reclamation. • The removal of PASS from dredged material to land (if encapsulating and confining the material underwater is not possible). • Any mobilisation of disturbed soils that are confirmed to be AASS. Twice-daily manual measurements of turbidity will be carried out in conjunction with observations by personnel undertaking the dredging and reclamation activities to assist in early identification of problems and proactive implementation of mitigation measures. *Human Health Risk Assessment* The risk to human health and the environment associated with the contaminated sediment (in particular the identified sediment contamination hotspots) should be evaluated by a further qualitative risk assessment. If the risk assessment concludes that the contamination hotspots present an unacceptable risk to the environment, a Remedial Action Plan will be prepared to appropriately manage the identified materials of concern. *Groundwater Considerations* The reclamation will be designed to ensure that the existing groundwater flow regimes are not significantly altered and that there is no increased risk of harm associated with groundwater contamination.
Contaminated Soils and Groundwater	*Site Management Plan* PKPC will prepare a SMP prior to the commencement of construction to manage excavation works and to address the following: • Contamination 'hotspots' based on visual observations and through detailed soil sample analysis if required. • Appropriate management of contamination including selective excavation (to minimise quantities), stockpiling, characterisation and disposal (likely to an off-site soil remediation facility) assuming that the material is not suitable for inclusion within the reclamation area. • Develop a groundwater monitoring program to be conducted at the site prior to the commencement of the works and annually thereafter. This program will be designed and undertaken so as not to impede construction or operation of the development. In developing the groundwater monitoring program PKPC will review and utilise the results for the existing groundwater monitoring program being undertaken for the Outer Harbour. *South Yard* A Limited Phase Two Environmental Site Investigation will be undertaken prior to the commencement of works at the proposed site for the extension of the railway siding at the South Yard, to assess potential contamination issues in this area.

Major Project	
Issue	**Environmental Commitment**
Human Health and Ecological Risk	*Dredging Environment Management Plan* Prior to commencing dredging a further qualitative assessment will be undertaken to address potential risks to ecological receptors associated with contaminated sediment dispersal. The assessment will consider the following: • Potential indirect effects or risks to marine ecosystem or communities outside the heavily impacted PKOH area. • Potential indirect risks to human health due to toxic dinoflagellate blooms or bioaccumulation of contaminants into edible fish or shellfish. • The extent to which protected or recreationally important species are present within the PKOH. This assessment should be based on detailed design of the dredging works and specific environmental management safeguards aimed at minimising and containing contaminated sediment dispersal. Recommendations and mitigation measures that arise from the additional assessment will be incorporated into the DEMP. PKPC will prepare a HSMP for construction of Stage 1 that will address the following: • Handling of oils and fuels and the washing of all equipment, including all concreting equipment, in accordance with the following DECCW Bunding and Spill Management Guideline documents: - Storing and Handling Liquids: Environmental Protection - Participants Manual; and - Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation. • Disposal of any pollutants trapped in bunded areas in accordance with the waste management section of the CEMP and DECCW waste guidelines. • Any fuel spillage will be reported, documented and immediately remediated. *Refuelling Management Plan* PKPC will prepare a Refuelling Management Plan (RMP) which will address on site refuelling if required and which will identify appropriate refuelling locations, proximity to infrastructure, bunding required, location, use of spill kits and monitoring.
Flora and Fauna	*Compensatory Measures* Compensatory measures to offset the loss of soft substrate habitat in the Outer Harbour and the sandy beach area of Red Beach are proposed for Stage 1. A summary of these measures is presented below: • Hard substrate habitat in the form of new berth faces, pile-supported desk areas and rock revetments will be increased as a result of the development. Habitat features that will be incorporated into the design of the hard structures will include: - Boulder-sized rocks placed without cement to offer crevices in the inter-tidal and sub-tidal zones for the use of fish and invertebrates. - Artificial rock pools in revetments to provide habitat for species such as sea-hares, sea urchins and octopus. - Objects such as concrete knobs, or similar, attached to vertical wall structures to add texture and form for the benefit of colonising organisms. • Soft substrate habitat measures will be implemented as part of habitat improvement projects proposed for Tom Thumb Lagoon and Garungaty Waterway (refer **Section 16** and **Appendix G** of the EA for additional detail). The measures proposed are intended to complement the existing restoration programs in these areas by increasing fish

Major Project	
Issue	**Environmental Commitment**
	passage, tidal exchange and promoting estuarine communities such as saltmarsh, mangroves and seagrass. The measures are consistent with Wollongong Council's *Estuary Management Plan* (2007) and the *Plan of Management* prepared for Conservation Volunteers Australia in 2006. The habitat improvement projects will be undertaken over the next 10 years and will include ongoing monitoring and maintenance to ensure that effective habitat outcomes are achieved and sustained on the site. *Dredging Environment Management Plan* The DEMP will address the following: • Ways in which the generation of shockwaves through the water column associated with underwater rock blasting can be reduced as far as it is practicably achievable. • Measures to reduce or minimise negative impacts on marine mammals will be included in the DEMP and will be based on available and relevant guidelines. • Protection of migratory marine mammals. Specific mitigation measures may include a marine mammal observer program to be implemented and stop blasting provisions if whales are sighted within specified distances from the development area. *Green and Golden Bell Frog Management Plan* Prior to any works which involve the clearing of vegetation and debris within the development area of Stage 1, a suitable and targeted survey will be undertaken by an ecologist in order to allow for the detection of any GGBF. If GGBF are detected, no clearing works will commence until the GGBF response provisions in the GGBFMP have been implemented. A comprehensive GGBFMP will be prepared prior to the commencement of construction works for Stage 1. The GGBFMP will be prepared by a suitably qualified ecologist and in consultation with DECCW and will be in accordance with the following plans and previous studies: - *Draft Recovery Plan: Green and Golden Bell Frog* (Lesson 1829) *Recovery Plan* (DECCW, 2005) - *Best Practice Guidelines: Green and Golden Bell Frog Habitat* (DECCW, 2008) - *The Green and Golden Bell Frog Key Population at Port Kembla Management Plan* (DECCW, 2007) - *Assessment of Habitat, Dispersal Corridors and Management Actions to Conserve the Port Kembla Key Population of Green and Golden Bell Frog 2007-2008* (Gaia Research, 2008). The GGBFMP will include the following as a minimum: • Program of works and timeline for all key components of Stage 1. • Undertake a conservation assessment ranking for any known or likely GGBF habitats in the study area, including but not limited to, identification and assessment of breeding, shelter, foraging, and movement habitat components. • Identify any actual or potential threats from construction and operations, including but not limited to: - Habitat loss, modification and disturbance - Fragmentation and isolation of habitat - Water quality and pollutant issues - Road mortality - Exotic weed control and application of herbicides containing glyphosate - Slashing and mowing

Major Project	
Issue	**Environmental Commitment**
	- Invasion by *Chrysanthemoides monilifera* - Predation and disease (refer detailed mitigation measures below). • Identify appropriate actions to present or minimise these actual or potential threats, including, but not necessarily limited to: - Scheduling works to coincide with activity cycles where practicable - Construction of any compensatory habitat prior to proposed habitat loss - Frog fencing - Engaging a suitably qualified ecological consultant to be onsite during construction - Development of response protocols in the event that frogs are found in the active construction areas - Signage - Measures outlined in the frog hygiene protocol. • Include details of how the proponent will monitor and report on the ongoing effectiveness of the GGBFMP including, but not necessarily limited to: - Including the objectives of the monitoring program - Method of monitoring - Data return to DECCW - Licensing - Reporting framework - Duration - Frequency. • A program of works and timeline for planting and landscaping in appropriate areas with vegetation suitable for GGBF foraging and shelter as well as installing structures (such as logs and concrete pieces) to facilitate movement and over wintering habitat. Mitigation measures to minimise the spread of deadly pathogens and disease to the GGBF include the following: • Frog exclusion fencing will be installed around construction sites in close proximity to known or potential GGBF breeding habitats. • The construction works site and any open trenches within the development area should be checked each morning during construction for the presence of any Frogs which should be released into nearby ground cover. Handling the species should be minimised. Frog Hygiene Protocol (NPWS, 2001) should be followed to avoid the spread of chytrid spores or other pathogens between aquatic habitats and frog sites. • If necessary, earth-working equipment and vehicles will be cleaned of excess soil by brushing or hosing when they enter and exit the site in order to minimise the likelihood of the spread of weed seeds and plant pathogens. • If it is likely that vehicle tyres will result in mud and water being transferred to other bodies of water or frog sites, they should be sprayed with a disinfecting solution as per the Frog Hygiene Protocol (NPWS, 2001). This should be carried out at a safe distance from water bodies, so the disinfecting solution can infiltrate the soil instead. • The importation of water should avoid known areas of breeding habitat in close proximity to construction activities (such as Site 18). • The use of imported mulch or compost should be avoided in any rehabilitation works in the vicinity of known breeding areas and associated dispersal avenues.

Major Project	
Issue	**Environmental Commitment**
Rail	During reclamation activities, PKPC will review the need to install a material handling system to unload fill from trains at the area dedicated to stockpiling imported fill material. PKPC will provide Department of Planning with updates regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure upgrades prior to commencing the later stages (i.e. Stage 1b and 1c) of the dredging and reclamation works.
Traffic	*Traffic Management Plan* PKPC will prepare a TMP in accordance with Traffic Control at Worksites (RTA, 2003), prior to construction and operation of Stage 1 in order to minimise impact on pedestrian and vehicle movements. The TMP will outline and manage the transportation routes to the site for heavy vehicles during construction of Stages 1a, 1b and 1c of the Major Project. The TMP will also include: • Access arrangements for heavy vehicle to the site. • Procedures for the delivery and dispatch of products. • Preference for the use of larger trucks in order to minimise vehicular movements. • Haulage routes to and from the site. • Driver protocols including a Code of Conduct to encourage safe driving practices. • Use of truck turnaround areas. • Financial penalties. • Truck movement hour restrictions. Car park facilities will be established within dedicated construction areas internal to the site. Car parks will be designed to cater for the number of construction vehicles to reduce or avoid potential overflow impacts on the local road network, such as Foreshore Road. All roads constructed as part of the development would be designed to accommodate the number and type of vehicle movements projected and would satisfy relevant design standards and would consider local guidance publications including the Wollongong City Council's Subdivision Policy for Road Construction. *Sources of Fill Material* Prior to the commencement of filling operations for Stages 1b and 1c, PKPC will provide detail of the sources of the fill material which is to be imported to the site for the reclamation, including the method of transport, for approval by the Department of Planning.
Noise	*Construction Noise and Vibration Management Plan* A Construction Noise and Vibration Management Plan (CNVMP) will be prepared by PKPC prior to the commencement of construction of Stage 1 in line with DECCW "Interim Construction Noise Guidelines'" in order to minimise the noise impact at sensitive receivers. The CNVMP will include: • Notification of and maintaining regular contact with noise-affected neighbours. • Maintaining a complaints register and complaints handling. • Operating plant in a quiet and efficient manner. • Adoption where practicable of alternative work practices which generate less noise. For example, the use of hydraulic rock splitters instead of rockbreakers, or electric equipment instead of diesel or petrol powered equipment, amongst other management measures. PKPC is committed to the selection of acoustically considerate plant where possible and

Major Project	
Issue	**Environmental Commitment**
	the use of noise reducing measures such as silencers, multi-frequency reversing alarms, visual system reversing warnings, enclosures and shrouds. The construction noise level emission and the potential annoyance to sensitive receptors will depend on the final selection of equipment, type of operation, activity duration and the time of day at which works are conducted. Additional noise impact assessment will be carried out if the construction plant to be used on site differs significantly from that assumed for modelling purposes in the revised Noise and Vibration Impact Assessment prepared by AECOM and dated 20 September 2010). *Rock Blasting* PKPC will ensure that site specific data gathered during trial blasts (to refine and determine methods for the blasting of bedrock) is used to refine and calibrate the calculations prior to any blasting taking place. *South Yard* The need for mitigation measures to address construction noise associated with the South Yard rail siding upgrade will be carefully considered at the construction planning stage. Potential mitigation measures may include review of the construction schedule, working hours, type of plant used and the use of temporary noise barriers. .
Air Quality	*Air Quality Management Plan* PKPC will prepare an AQMP and mitigation measures will include but not be limited to: • Transport loads and materials will be covered to avoid generating wind-blown dust. • Site surfaces will be wetted down during dry weather including excavation sites, haul roads, spoil stockpiles and other exposed areas. • Vehicular access will be confined to designated access roads. • Shaker pad facilities will be provided for construction trucks and machinery leaving site. • Instantaneous dust monitoring will be undertaken at the site boundary. Regular checks on exhaust emissions from construction equipment, trucks, plant and machinery will be undertaken. • Construction site speed limits will be implemented. The AQMP will include a dust monitoring program designed to assess the impact of particulate emissions from construction works undertaken as part of the project. Monitoring will be undertaken in accordance with *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
Landscape and Visual Amenity	*Landscape Management Plan* PKPC will prepare a LMP for construction of Stage 1 which includes site specific measures and controls including: • Projection of lighting used for evening and night time work will be downward and toward site works to minimise light spill on adjacent areas. • Clear definition of materials storage areas, compounds and construction areas and boundaries. • Construction timing will be programmed to minimise period of disturbance.
Heritage	*Archival Photographic Recording* An archival photographic recording will be prepared prior to demolition of No. 3 and No. 4

Major Project	
Issue	**Environmental Commitment**
	Jetties (part of Stage 1) and a comprehensive history of the jetty prepared. *Historical Shipwrecks* Should any evidence of shipwreck material be encountered during dredging or other activities during Stage 1, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified maritime archaeologist will be contacted to assess the discovery and provide advice on mitigation and recording. *Other Heritage Items or Archaeological Relics* Should unidentified European heritage items and/or archaeological relics be encountered during Stage 1 construction, works in the immediate vicinity will cease, the Heritage Branch will be contacted immediately and a suitably qualified heritage consultant will be contacted to assess the discovery and provide advice on mitigation and recording.
Waste	*Waste Management Plan* PKPC will ensure that appropriate general and hazardous waste identification, handling, storage, transportation, disposal and monitoring measures, to be followed on-site during construction for Stage 1 are included in a WMP which is to form part of all relevant CEMPs. PKPC will ensure these management measures as well as on site waste management activities are undertaken in accordance with the relevant NSW and Commonwealth Regulations and Guidelines. *Demolition Management Plan* The DMP for Stage 1 will include appropriate management measures for the dismantling, removal and disposal of structures and materials from No. 3 and No. 4 Jetties.
Operation Phase	
Hydrology and Water Quality	*Operation Environment Management Plan* The OEMP will include the following measures to ensure the appropriate management of materials handled at the first multi-purpose berth: • A control system to ensure that bulk material stockpiles and materials within handling areas are contained onsite, through the use of containment walls, bunding, stormwater and dust controls. • Any excess sediment laden runoff will either be contained within the bunded storage areas or directed to a land based treatment area. • Implementation of a program of regular monitoring and maintenance of the storage and handling of bulk materials will be implemented. • Measures to minimise excess materials being deposited offsite during loading and transportation of bulk materials from the material handling area. • Implementation of controls such as vehicle shaker pads, use of vacuum road sweepers, covering loads during transport and dust suppression. • Inclusion of emergency spill response procedures in the ERP. • Inclusion of pollution control devices on the future paved surfaces of the development. *Water Sensitive Urban Design* WSUD will be utilised where ever possible to reduce the volume, velocity and contaminants associated with stormwater runoff. *Stormwater Management Plan* A STMP will be prepared to appropriately manage the accumulation of surface water from rainfall, storm events and stockpile watering. The STMP will outline the management of

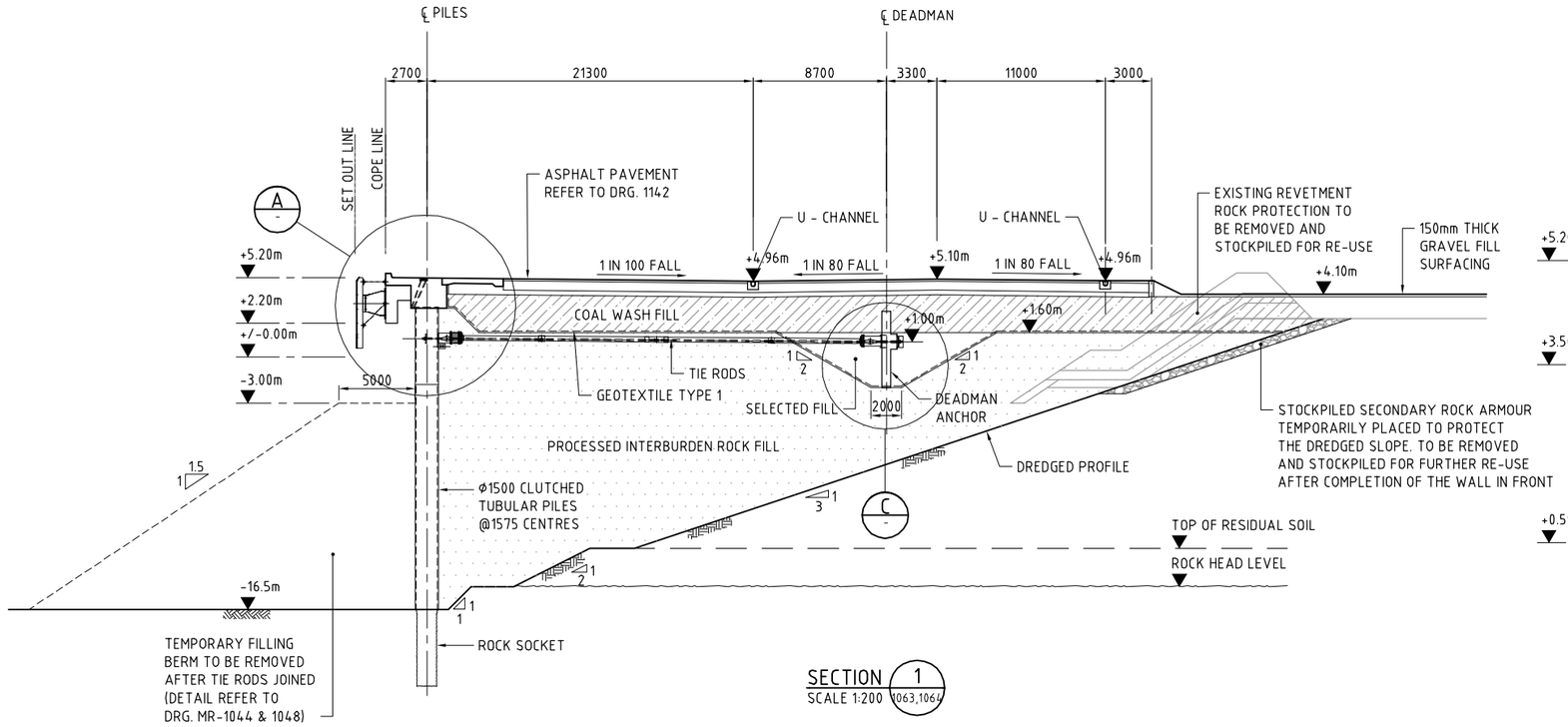
Major Project	
Issue	**Environmental Commitment**
	surface water for operation of Stage 1 (central portion of the multi-purpose terminals) and measures for treatment such as a first flush stormwater capture system. Management of surface water will be considered and confirmed during detailed design but is likely to include harvesting of water from roofs of buildings and other roofed structures.
Potential Hazards	*Emergency Response Plan* PKPC will prepare an ERP in accordance with the HIPAP No.1 Emergency Planning Guidelines as part of the OEMP of the multi-purpose terminal. *Hazardous Substance Management Plan* PKPC will prepare a HSMP as part of the OEMP that will be implemented during the operation of the first berth including as a minimum, the following measures to prevent and respond to spills: • A system to ensure that all staff involved in the handling of chemicals are suitably qualified and trained in emergency spill response procedures. • Diagrams and descriptions of access and unloading locations and procedures for drivers of vehicles delivering chemicals. • A program of regular monitoring and maintenance of equipment used in the transportation and handling of chemicals. • A register of equipment, responsibilities and procedures for responding to spills. • A program of monitoring of the condition of bunding. • Procedures for maintenance activities for the Sulphuric acid pipeline that will be relocated from Berth 206.
Flora and Fauna	*Green and Golden Bell Frog Master Plan* A GGBF Master Plan will be prepared to provide a strategic framework on how GGBF and its habitat will be managed across the Port Kembla Outer Harbour area. The GGBF Master Plan will be prepared prior to commencement of operations of Stage 1. PKPC will consult with DECCW during preparation of the GGBF master plan.
Traffic	*Traffic Management Plan* A TMP will be included in the site OEMP. The Plan will address work practices on site, designated haulage routes to and from the site, driver protocols (including a Code of Conduct to encourage safe driving practices), financial penalties and hours of operation amongst other measures.
Rail	Recommendations for rail infrastructure upgrade and arrangements for network paths for construction and operation of Stage 1 are as follows: • Rail infrastructure upgrade in the South Yard required for operation of Stage 1 will comprise extension of siding No. 13 by 120m to 780m and turnout installation and removal. • Agreement will be sought from ARTC to allow the use of five train paths per day (one train for transport of fill material and four trains for the multi-purpose berth), in each direction on the Unanderra Line. PKPC will provide Department of Planning with updates regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure upgrades prior to commencing the later stages (i.e. Stage 1b and 1c) of the dredging and reclamation works.
Noise	*Operational Noise and Vibration Management Plan* PKPC will prepare an ONVMP as part of the OEMP, prior to the commencement of operation of Stage 1 of the proposed development. The ONVMP should be prepared in

Major Project	
Issue	**Environmental Commitment**
	accordance with the relevant DECCW guidelines and should incorporate best practice mitigation measures, The ONVMP will recommend noise mitigation measures required to address operational noise and sleep disturbance impacts arising from increased rail movements associated with Stage 1 of the project. To mitigate the potential sleep disturbance impacts associated with the use of train horns in Stage 1, PKPC will commit to use shorter train horn toots rather than standard longer train horn blasts. PKPC will carry out an additional noise impact assessment, if it is found, after detailed design and operations planning, that the finalised operational scenario differs significantly from that used for modelling purposes in the revised Noise and Vibration Impact Assessment prepared by AECOM and dated 20 September 2010).
Air Quality	*Air Quality Management Plan* PKPC will ensure that the AQMP includes appropriate site specific best practice mitigation measures for the management of particulate emissions during the operation of the proposed development such as: • Sealing roads and areas susceptible to windblown dust impacts. • Covering of transport loads. • Watering and/or using surfactants on stockpiles. • Covering of bulk cargo stockpiles (where necessary practicable). • Instantaneous dust monitoring at the boundary of the site most affected by dust impacts. • Reclaimed areas for future terminal development to be covered with suitable compacted materials to ensure fugitive dust emissions are minimised. • Site specific mitigation measures for the management of particulate emissions during the operation of the proposed development's night time operation.
Landscape and Visual Amenity	*Landscape Management Plan* PKPC will ensure that the LMP includes appropriate site specific measures and controls to mitigate potential visual impacts on the immediate, local, and regional landscape including: • Lighting for the portion of the dry bulk/multi-purpose terminal that will be operational as part of Stage 1 and other operational areas, including the new road link, will be carefully selected to minimise light spill on surrounding areas outside the terminal boundaries and minimise visual impact when viewed from adjacent premises. • Selection of suitable colours and materials for the terminal pavement, buildings and other structures to minimise reflectivity and contrast.
Sustainability	As per Concept Plan
Climate Change	As per Concept Plan
Waste	*Waste Management Plan* PKPC will ensure that appropriate general and hazardous waste identification, handling, storage, transportation, disposal and monitoring measures, to be followed on-site during operation of the proposed development, are included in a WMP which is to form part of the OEMP. PKPC will ensure these management measures as well as on site waste management activities are undertaken in accordance with the relevant NSW and Commonwealth Regulations and Guidelines. The following measures will be included as a minimum in the WMP: • Incoming vessels to the Port will be subjected to assessment in accordance with the Quarantine Act 1908. Australian Quarantine Inspection Service (AQIS) manages

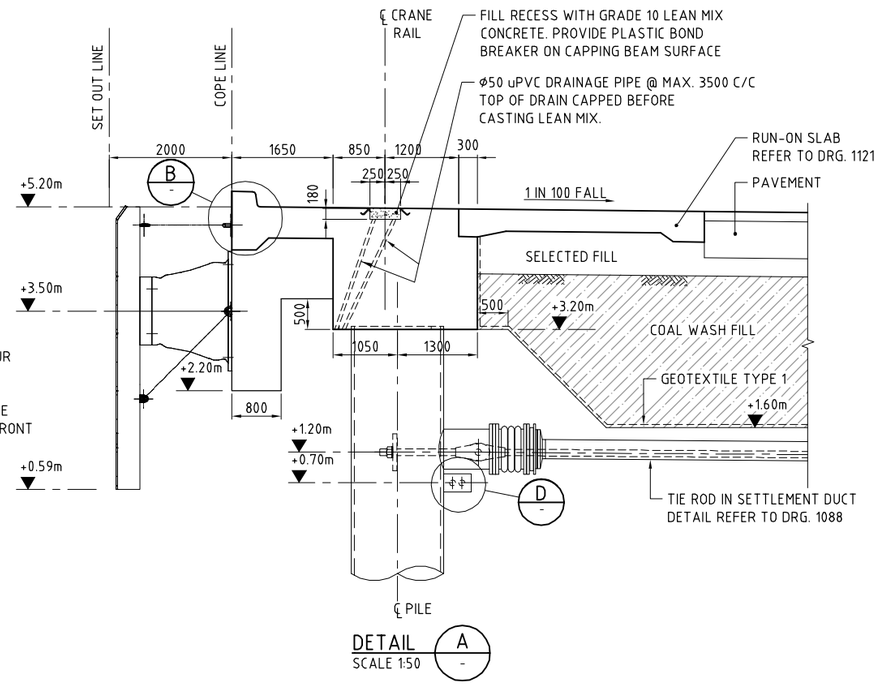
Major Project	
Issue	**Environmental Commitment**
	quarantine controls at our borders to minimise the risk of exotic pests and diseases entering the country. Incoming vessels will have to apply to the AQIS: form s20AA Permission to Enter an Australian Non-Proclaimed First Port of Entry and/or Application for s33 Permission to Enter Subsequent Ports of Call. • The OEMP should incorporate requirements as in the National Ballast Water Management Arrangements under the Australian National System for the Prevention and Management of Marine Pest Incursions.
Socio-Economic	PKPC will ensure that access to the existing small boat harbour and associated facilities is not affected during either the construction or operational phase of Stage 1. PKPC will include appropriate measures in a SFMP for Stage 1 to ensure that safe access is provided for recreational boaters entering and exiting the small boat harbour, particularly during reclamation and dredging activities. PKPC will continue to liaise with affected businesses and local community groups during Stage 1 to inform them about project status and timing for construction key project components.

APPENDIX F

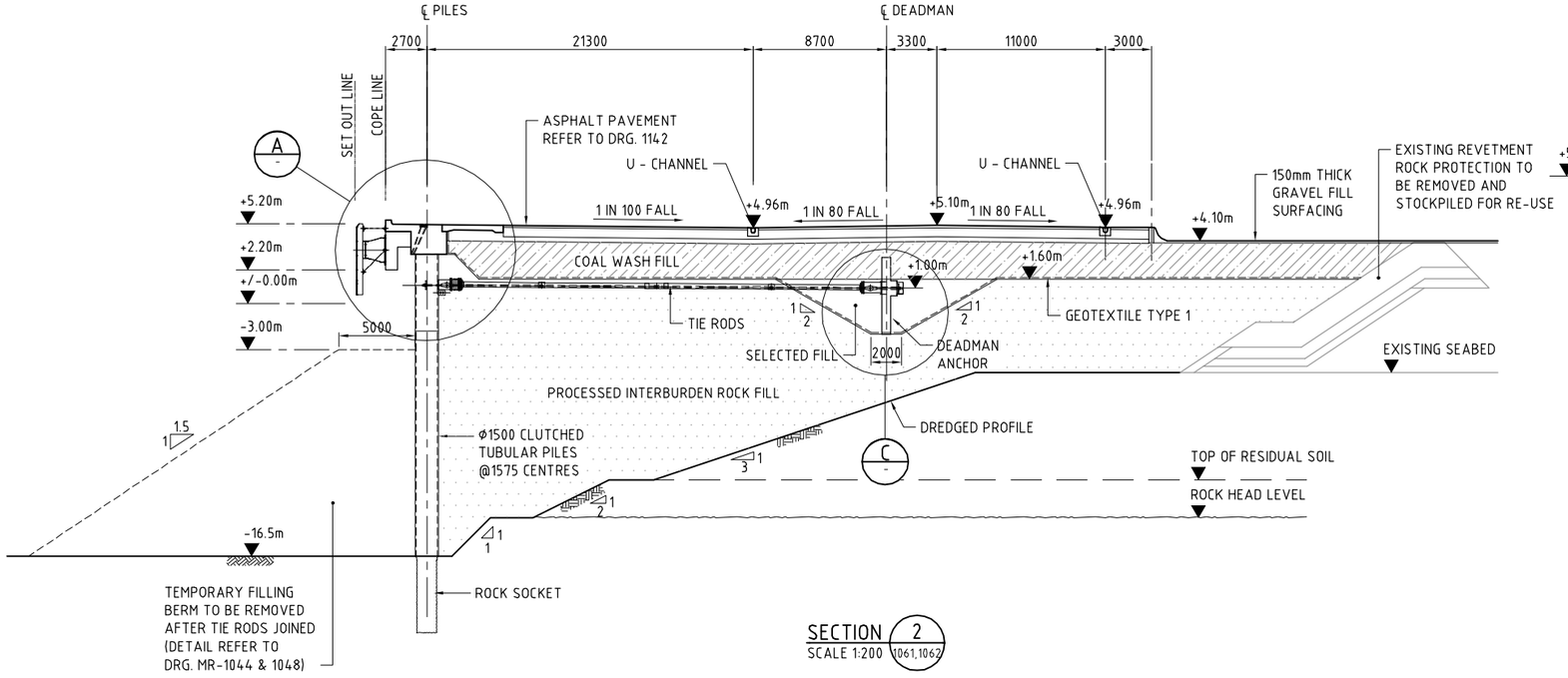
Cross-section of a Tubular Bulk Head Wall



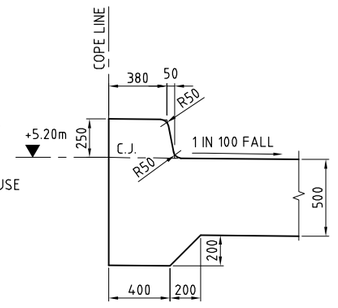
SECTION 1 (1063,1064)
SCALE 1:200



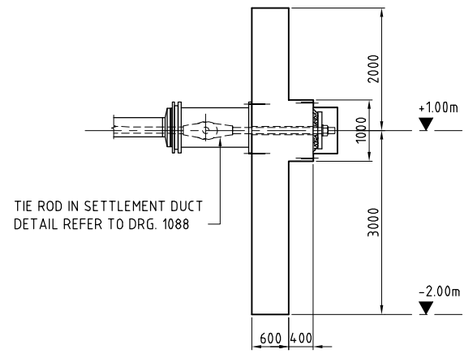
DETAIL A
SCALE 1:50



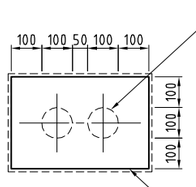
SECTION 2 (1061,1062)
SCALE 1:200



DETAIL B
SCALE 1:20



DETAIL C
SCALE 1:50



DETAIL D
SCALE 1:10

NOT FOR CONSTRUCTION

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
02	ADC	15.05.13	ISSUED FOR CLIENT REVIEW	
01	ADC	29.04.13	ISSUED FOR CLIENT REVIEW	

Scales:
200 0 200 400 600 800mm
1 : 20 FULL SIZE A1
500 0 500 1000 1500mm
1 : 50 FULL SIZE A1
2000 0 2000 4000 6000 8000mm
1 : 200 FULL SIZE A1

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	VW	CHECKED	BLG
DRAWN	ADC	CHECKED	PS
APPROVED		DATE	

Contractor :

Client : PORT KEMBLA PORT CORPORATION

Approved By
Port Engineer:

Designer : AECOM

AECOM Australia Pty Ltd
A.B.N. 20 093 846 925

Project: PORT KEMBLA NEW SHIPPING BERTH STAGE 1A

Title: STRUCTURAL WORKS
ELEVATIONS
AND SECTIONS

SHEET 1

Status: DETAIL DESIGN

Drg No.: 60282535-DRG-ST-1065

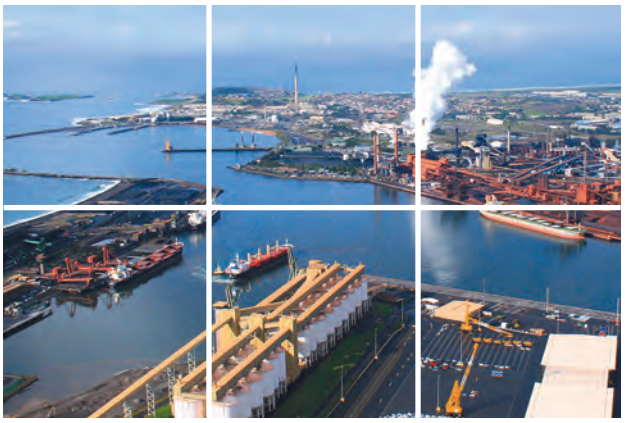
Rev.: 02

APPENDIX G

Consultation Flyer

PORT KEMBLA PORT CORPORATION

PROPOSED MODIFICATION TO THE OUTER HARBOUR DEVELOPMENT



INTRODUCTION

Port Kembla Port Corporation (PKPC) is developing the Outer Harbour at Port Kembla, NSW to provide additional land and berthing facilities to cater for future trade growth. The development is designed to provide opportunities for new trades as well cater for growth in existing trades. It includes the reclamation of approximately 42 hectares of land and the construction of 7 new berths, so that as new trade opportunities arise, the port will be able to respond accordingly.

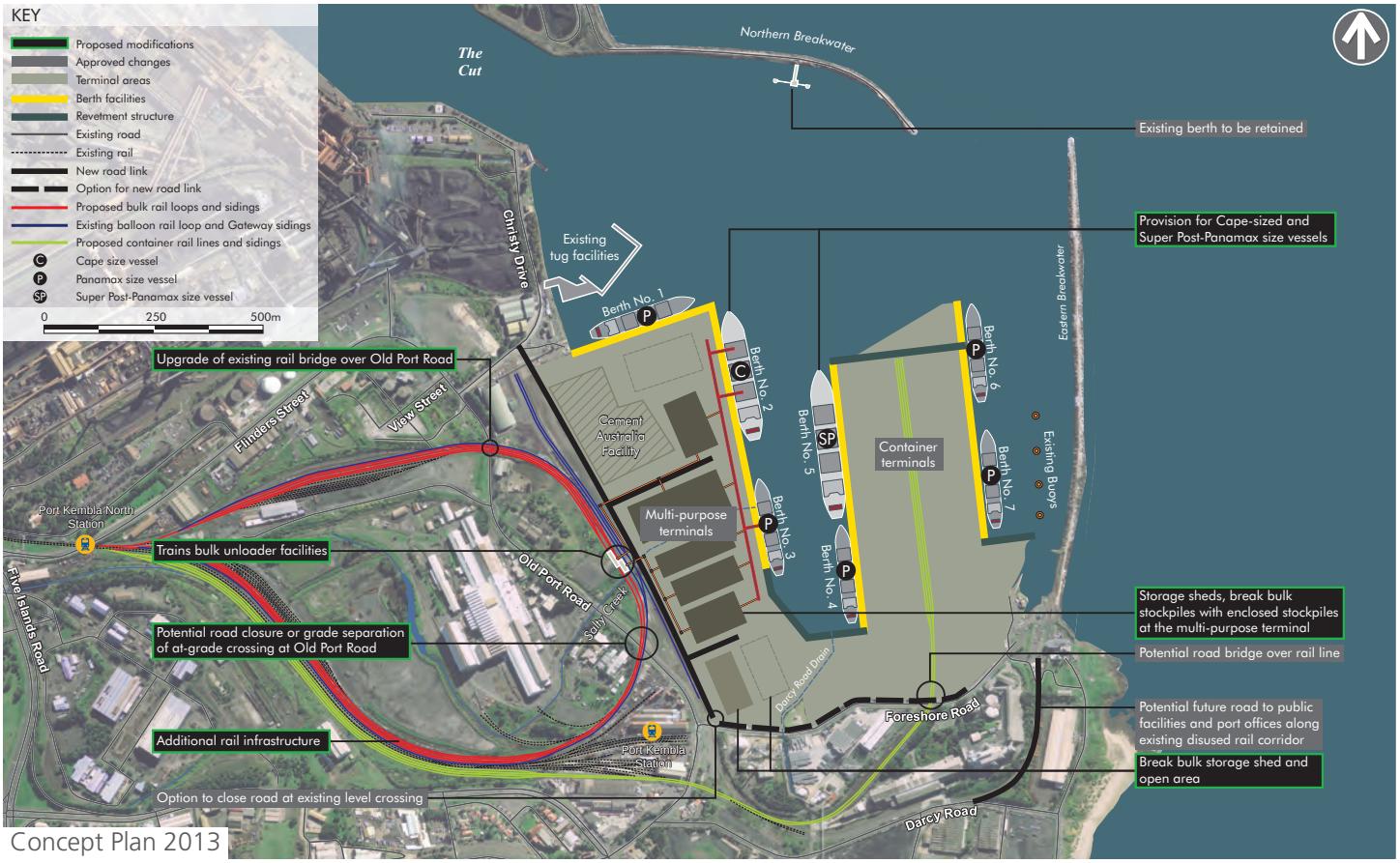
This is expected to bring significant economic benefits to the Illawarra region and the state of NSW.

The development is proceeding in a staged fashion and is anticipated to take 25-30 years to complete. Concept Plan approval for the long-term master plan for the Outer Harbour, and Major Project approval for Stage 1 of the development were obtained in March 2011 under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Due to growing customer demand and greater recognition of the strategic role of the Port as detailed in the *Draft NSW Freight and Ports Strategy* (TfNSW, 2012), PKPC is seeking to accommodate an increase in the capacity of bulk cargo handled at the Port from 4.25 mtpa to 16 mtpa.

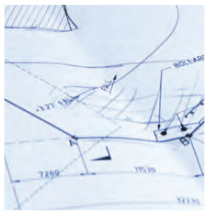
To enable this increase in capacity, a number of changes to the existing approvals are required. The key changes include:

- An increase in the operational area of the multi-purpose terminal under Stage 1 from 9 ha to 22.6 ha.
- Storage of all dry bulk cargo in enclosed sheds, with enclosed conveyor systems at the multi-purpose terminal.
- Providing for larger vessels and an additional 170 ships per year.
- An additional nine bulk trains per day accessing the Port (total of 13 bulk trains per day).
- Associated changes to rail and road infrastructure at the Port.



Concept Plan 2013

PORT KEMBLA PORT CORPORATION



Other changes would include:

- Potential road closure, diversion or overbridge at the rail level crossing on Old Port Road.
- An increase in the volume of material temporarily stockpiled for land reclamation purposes at the Outer Harbour from 100,000m^3 to 360,000m^3 across two sites.
- A minor change to the dredging and land reclamation footprint between the multi-purpose and container terminals to cater for larger ships.
- A slight increase in construction traffic due to the increase in construction activity under Stage 1.
- A revised alignment of the Salty Creek extension on a more direct route.

There would be no change to the approved capacity for general cargo or container cargo at the Outer Harbour.

WHAT ARE THE BENEFITS OF THE MODIFICATION?

- More efficient use of the proposed Port infrastructure, enabling the Port to meet projected trade growth and customer demand.
- Increase in the economic opportunities associated with the Outer Harbour Development and the contribution to the economy of the Illawarra Region.
- No further increases in heavy vehicle movements during operation, with all of the increase in bulk cargo throughput to be transported by train.
- Dry bulk cargo would be stored in enclosed sheds, such that air quality and noise impacts are kept to a minimum.

HOW WILL THIS MODIFICATION BE ASSESSED AND DETERMINED?

As the former Minister for Planning and Infrastructure approved the existing Concept Plan and Project Application, the modification will be submitted to the NSW Department of Planning and Infrastructure (the Department). The Minister (or his delegate) will be the approval authority for the modification under the transitional provisions of Section 75W of Part 3A of the EP&A Act.

Following consultation by PKPC with the Department, the Director General issued environmental assessment requirements (or DGRs) for the modification which PKPC must address.

In assessing the modification, the Department may choose to place the modification on public exhibition.

WHAT IS THE STATUS OF THE MODIFICATION?

An environmental assessment report is currently being prepared to satisfy the DGRs and is anticipated to be submitted in mid-2013.

The key environmental issues being considered in this assessment include:

- Air quality, with a focus on the potential changes in air emissions during operation and construction.
- Noise, with a focus on the additional operational activities and train movements at the Port.
- Rail, with a focus on the required infrastructure at the Port, and impacts on the broader rail network.
- Traffic and transport, with a focus on potential treatment options for the at-grade rail crossing on Old Port Road, and the increase in traffic during peak construction periods.

In undertaking the assessments, PKPC will consider feedback from relevant State agencies, like the Environment Protection Authority and NSW Roads and Maritime Services, Wollongong City Council and the local community.

WHAT IS NEXT?

Once the environmental assessment report has been finalised, it will be submitted to the Department. The Department will make the report publicly available on its Major Projects Register (http://majorprojects.planning.nsw.gov.au/page/).

If you wish to obtain further information about the proposed modification, please contact PKPC.

02 4275 0100

ohdevelopment@portkembla.com.au

APPENDIX H

Rail Capacity Analysis – Moss Vale to Unanderra Line

Rail Capacity Analysis – Moss Vale to Unanderra Line

During the preparation of the *Maldon-Dombarton Rail Link Feasibility Study* (ACIL Tasman and Hyder, 2011) a range of alternatives to completion of the Maldon-Dombarton Rail Link were considered, including potential to upgrade capacity on the Moss Vale to Unanderra line.

The ARTC prepared an analysis of capacity on the Moss Vale to Unanderra line which included identification of a range of options to increase capacity on the Summit Tank to Dombarton section of the line which is considered to be the most constrained section. The proposed upgrades aim to increase either the load carrying capacity of each train or to improve travel time thereby creating additional train paths.

After identifying the options for upgrading rail capacity, the ARTC analysis identified the potential bulk cargo capacity (mtpa) that could be achieved associated with each upgrade option given the potential number of available train paths and the train sizes that might take advantage of these paths.

The ARTC capacity analysis from the 2011 Feasibility Study has been used as the basis for examining potential bulk cargo capacity under a range of four scenarios. Each of these scenarios are based on a number of different assumptions relating to spare train paths, lengths of trains and increased tonnage limits.

The four scenarios are summarised below.

Scenario 1 – 2011 ARTC Analysis

Scenario 1 is based on the ARTC analysis from the Maldon-Dombarton Rail Link Feasibility Study 2011. It assumes existing capacity of 7 spare train paths per day, 1,350m length trains and ultimately 30 TAL trains.

The results of the Scenario 1 analysis are included in **Table H1** below.

Scenario 2 – Modified 2013 ARTC Analysis

Scenario 2 is as per the 2011 ARTC analysis in all respects but modified to reflect recent (2013) ARTC advice. It assumes existing capacity of 4.6 spare train paths per day, 1350m length trains and ultimately 30 TAL trains.

The results of the Scenario 2 analysis are included in **Table H2** below.

Scenario 3 – 2011 ARTC Analysis (Revised)

Scenario 3 is as per the 2011 ARTC analysis but modified to reflect more conservative assumptions regarding train length and tonnage limits which are considered appropriate for the Outer Harbour Development. It assumes existing capacity of 7 spare train paths per day, 850m length trains and maximum 25 TAL trains.

The results of the Scenario 3 analysis are included in **Table H3** below.

Scenario 4 – Modified 2013 ARTC Analysis (Revised)

Scenario 4 is as per the modified 2013 ARTC analysis but modified to reflect more conservative assumptions regarding train length and tonnage limits which are considered appropriate for the Outer Harbour Development. It assumes existing capacity of 4.6 spare train paths per day, 850m length trains and maximum 25 TAL trains.

The results of the Scenario 4 analysis are included in **Table H4** below.

Table H1 Rail Capacity Analysis – Scenario 1

Description	No. of Spare Train Paths	No. of Wagons	No. of Locos	Train Length (m)	Bulk Cargo Capacity (Mtpa)
Existing capacity	7.0	34	3	641	6.5
Extend loops to allow trains of 850m length	7.0	45	4	849	8.6
Extend loops to allow trains of 1350m length	7.0	72	7	1,371[1]	13.8
Extend Summit Tank Loop by 1.2km	8.1	72	7	1,371	15.9
Further extend Summit Tank Loop by 3.4km	9.4	72	7	1,371	18.5
AC traction locos with ECP braked wagons	11.4	82	8	1,562	25.5
30 tonne axle load (TAL)	11.4	82	8	1,439	32.1

[1] Note that train lengths are based on optimum loco/wagon configuration and may not precisely match passing loop lengths.

Table H2 Rail Capacity Analysis – Scenario 2

Description	No. of Spare Train Paths	No. of Wagons	No. of Locos	Train Length (m)	Bulk Cargo Capacity (Mtpa)
Existing capacity	4.6	34	3	641	4.3
Extend loops to allow trains of 850m length	4.6	45	4	849	5.7
Extend loops to allow trains of 1,350m length	4.6	72	7	1,371[1]	9.1
Extend Summit Tank Loop by 1.2km	5.7	72	7	1,371	11.2
Further extend Summit Tank Loop by 3.4km	7.0	72	7	1,371	13.8
AC traction locos with ECP braked wagons	9.0	82	8	1,562	20.2
30 tonne axle load (TAL)	9.0	82	8	1,439	25.3

[1] Note that train lengths are based on optimum loco/wagon configuration and may not precisely match passing loop lengths.

Table H3 Rail Capacity Analysis – Scenario 3

Description	No. of Spare Train Paths	No. of Wagons	No. of Locos	Train Length (m)	Bulk Cargo Capacity (Mtpa)
Existing capacity	7.0	34	3	641	6.5
Extend loops to allow trains of 850m length	7.0	45	4	849	8.6
Extend Summit Tank Loop by 1.2km	8.1	45	4	849	10.0
Further extend Summit Tank Loop by 3.4km	9.4	45	4	849	11.6
AC traction locos with ECP braked wagons	11.4	45	4	849	14.3

Table H4 Rail Capacity Analysis – Scenario 4

Description	No. of Spare Train Paths	No. of Wagons	No. of Locos	Train Length (m)	Bulk Cargo Capacity (Mtpa)
Existing capacity	4.6	34	3	641	4.3
Extend loops to allow trains of 850m length	4.6	45	4	849	5.7
Extend Summit Tank Loop by 1.2km	5.7	45	4	849	7.0
Further extend Summit Tank Loop by 3.4km	7.0	45	4	849	8.6
AC traction locos with ECP braked wagons	9.0	45	4	849	11.3