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.*

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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.
