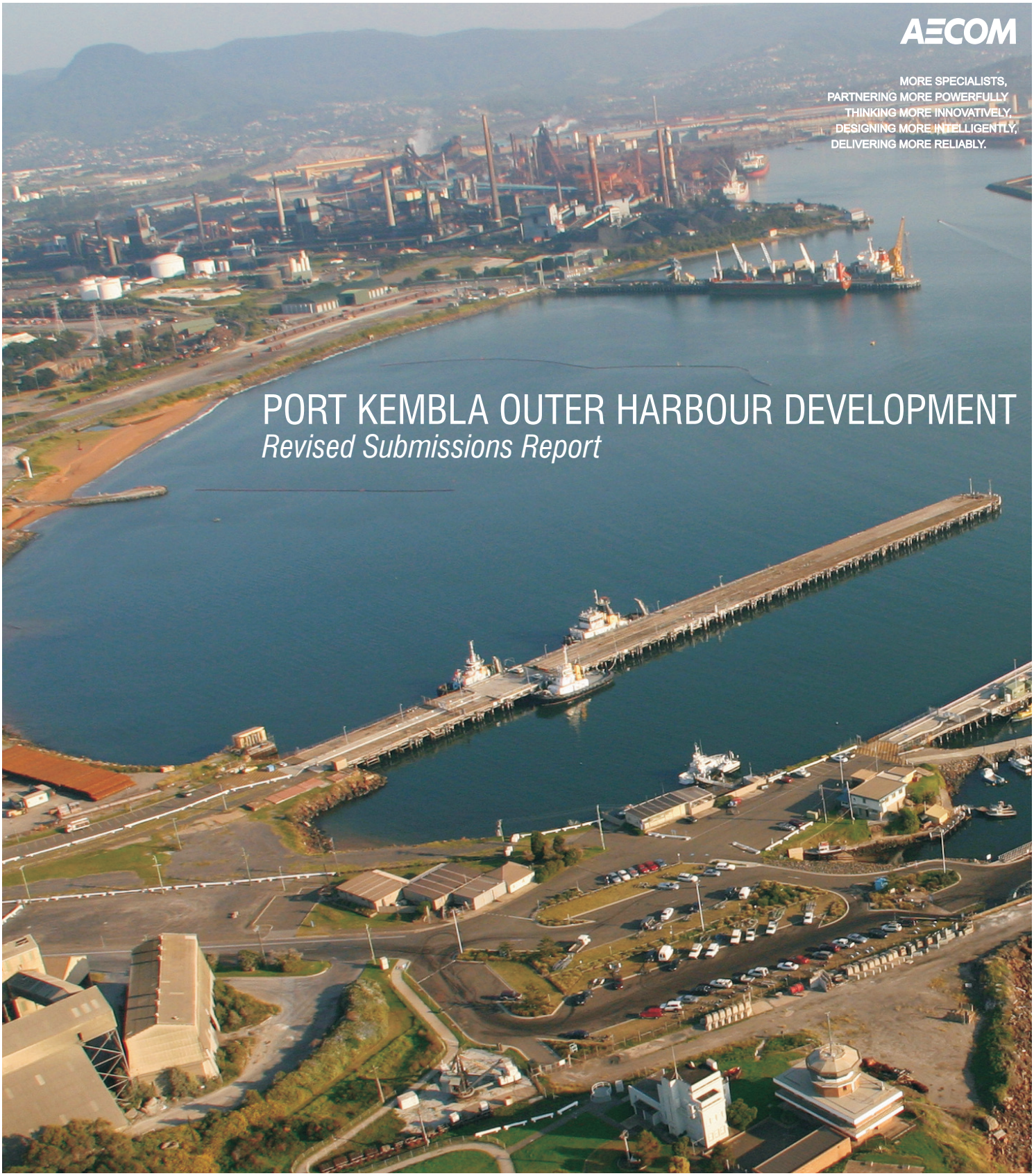

PORT KEMBLA OUTER HARBOUR DEVELOPMENT

Revised Submissions Report

Prepared for
Port Kembla Port Corporation

27 October 2010

PORT KEMBLA
PORT CORPORATION

Port Kembla Outer Harbour Development

Revised Submissions Report

Prepared for

Port Kembla Port Corporation

Prepared by

AECOM Australia Pty Ltd
Level 8, 17 York Street, Sydney NSW 2000, Australia
T +61 2 8023 9333 F +61 7 8023 9399 www.aecom.com
ABN 20 093 846 925

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Table of Contents

1.0 Introduction

1.1 Overview of Proposal

Port Kembla Port Corporation (the Proponent), a State Owned Corporation under the *Port and Maritime Administration Act 1995*, proposes to develop additional portside and landside facilities in the Outer Harbour of the Port of the Port Kembla to attract new trades as well as increasing the volume of existing cargoes.

Development of the Port would involve a relatively long timeline, anticipated to occur between 2010 and 2037. As a consequence, Port Kembla Port Corporation (PKPC) is seeking planning approval for a staged development to enable reclamation and berth construction and operation. The development would need to have seed infrastructure in place, for example road, rail and the reclamation footprint, to attract new trades and clients.

Physical features of the full development include the following:

- At least 42 hectares of hard stand, to accommodate new multi-purpose terminals and new container terminals (hardstand area would comprise approximately 40 hectares for reclamation and two hectares for a piled structure);
- Dredging works to accommodate future berth boxes (up to -16.5m water depth below Port Kembla Harbour Datum), basins between multi-purpose and container terminals and approach channels;
- 1770 metres total new berth length;
- A total of seven new berths, including four container berths and three multi-purpose berths designed to handle dry bulk, break bulk and bulk liquid; and
- Road and rail infrastructure to support the expansion.

In accordance with advice provided by the Department of Planning (DoP), PKPC is seeking concurrent Concept Plan Approval and Major Project Approval under Part 3A of the *Environmental Planning and Assessment Act 1979*.

Concept Plan Approval would be sought for the entire development, providing certainty for government stakeholders and the community about the long term plans for development of the Outer Harbour. It would also provide PKPC with a greater level of certainty and confidence in securing trades and future customers for components of the development in later stages, while retaining flexibility for refinement of the design.

Major Project Approval would be sought for Stage 1 of the development and would allow PKPC to commence reclamation and dredging for the multi-purpose and container terminals and operate the first central portion of the multi-purpose terminals. Subsequent programs of work under the Concept Plan are anticipated to be conducted over the next 27 years, and would be subject to applicable environmental approvals prior to commencing.

1.2 Overview of Environmental Impact Assessment Process

The Proponent is seeking the following approvals pursuant to Part 3A of the *Environmental Planning and Assessment Act* (EP&A Act):

- Concept Plan Approval for the entire development, including Stages 1, 2 and 3.
- Concurrent Project Approval for:
    - The construction and operation of Stage 1 of the Concept Plan. The Major Project application sits within, and is part of, the overarching Concept Plan.
    - Stage 1 construction would comprise the demolition of No.3 and No.4 Jetties (including Berth 206), and reclamation and dredging for the footprint of the total development, with the exception of an area in the vicinity of the Port Kembla Gateway and expansion of the current swing basin area (ship turning circle) which will be dredged during later stages of the Concept Plan. Road and rail infrastructure to support the first berth would also be constructed.

An Environmental Assessment (EA) was prepared for the Proponent in accordance with the provisions of Part 3A of the EP&A Act and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), together with the Environmental Assessment Requirements (EARs) issued by the Director-General of the DoP in January 2009.

The EA was placed on public exhibition from 25th March to 7th May 2010. The submissions received during this period form the basis of this Submissions Report.

The original version of the Submissions Report was submitted to the DoP on 18 June 2010. This version has now been updated to reflect further discussion between the proponent (PKPC) and a number of government agencies, in particular DoP and Department of Environment Climate Change and Water (DECCW) in relation to a number specific issues raised in the submissions. It also reflects the fact that two of the technical reports accompanying the EA have been revised to address issues raised in the submissions, in particular:

- the revised Air Quality Impact Assessment (AQIA) prepared by AECOM and dated 10 September, 2010; and
- the revised Noise and Vibration Impact Assessment (NIA) prepared by AEDCOM and dated 20 September, 2010.

1.3 Purpose of this Report

The purpose of this report is to detail and provide responses to submissions by private individuals, community groups, local businesses and stakeholders, and government agencies regarding the proposed Project which were received during the EA exhibition period.

1.4 Submissions Process

During the exhibition period, submissions regarding the proposed project were accepted by DoP from online, email and post sources. Submissions were given a reference number as they were received and provided to the Proponent in a consolidated set following the completion of the exhibition period. All submissions were reviewed and issues raised have been summarised and addressed in this Submissions Report.

1.5 Submissions Received

In total, 18 submissions were received. Seven submissions were received from State and Local Government agencies, four submissions from local businesses and stakeholders, and seven from community interest groups and private individuals. A summary of submissions received and the assigned reference numbers are outlined in **Table 1**.

Table 1: Summary of Submissions Received

Submission	Reference Number
State and local government agencies	
Department of Planning - Heritage Branch	1
Department of Environment, Climate Change and Water	7
Roads and Traffic Authority	9
Wollongong City Council	12
Department of Industry and Investment	15
RailCorp	17
NSW Office of Water	18
Local businesses and stakeholders	
Asciano Ltd	4
Adelaide Brighton Cement Ltd (ABCL)	6
Blue Scope Steel	11
Orica	13
Community interest groups and individuals	
Wollongong Transport Coalition	2
A. McLean	3
P. Laird	5
O. Rodwell	8
M. Laird	10
Port Kembla Pollution Meeting	14
H. Hamilton	16

1.6 Structure of Submissions Report

This Submissions Report is structured as follows:

- **Chapter 1** presents an overview of the proposal, the environmental impact assessment process and a summary of the submissions received regarding the proposal.
- **Chapter 2** provides a summary of the key issues identified from the various submissions received and provides a summary response to each.
- **Chapter 3** provides responses to each of the issues raised in the individual submissions received.
- **Attachment A** which contains a copy of all submissions received.
- **Attachment B** which contains a copy of the revised AQIA dated 10 September 2010.
- **Attachment C** which contains a copy of the revised NIA dated 20 September 2010.
- **Attachment D** which contains a table summary of the predicted noise impacts at non-residential receivers**.**
- **Attachment E** which contains a copy of the following pieces of correspondence:
  - Letter from AECOM to DoP (Glenn Snow) dated 20 September 2010;
  - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.
- **Attachment F** which contains a copy of the revised and final Statement of Commitments for the project.

2.0 Summary of Key Issues

2.1 Introduction

This section of the submissions report provides a summary of the key issues identified from the various submissions received during the public exhibition period. The key issues are identified and then a summary response is provided to each, along with references to associated documentation where further detail is provided. The key issues have been summarised under the following headings:

- Traffic and Transport;
- Rail Infrastructure;
- Air Quality;
- Noise and Vibration;
- Terrestrial and Aquatic Ecology;
- Heritage; and
- Other Issues.

2.2 Traffic and Transport

2.2.1 Key Issues

The key issues raised in submissions regarding traffic and transport were as follows:

- Concern that the proportion of freight transported on road may exceed the levels predicted, leading to unacceptable impacts;
- Potential over-reliance on trucks for transport of fill materials to site for construction purposes;
- The capacity of regional road infrastructure to safely accommodate additional traffic;
- Impacts on local roads including Foreshore Road, Darcy Road and Downie's Bridge due to increased heavy vehicle traffic and proposed road modifications.

2.2.2 Summary Response

The assessment has been based on a modal split that favours rail, particularly for container cargo (Stage 2 and 3). The modal split that is proposed is based upon:

- PKPC experience and market intelligence regarding likely bulk and general cargo trades;
- Innovative design principles to minimise dwell times and maximise the efficiency of container movement.

In order to achieve the predicted container throughputs in the limited space proposed for the terminal it will be essential to have an efficient operating regime and rail transport of containers to an inland port facility.

PKPC will commit to 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.

The reclamation area will be filled using a combination of dredged material, fill from local sources (such as uncrushed blast furnace slag from Mt Prosser) and fill imported to the site from construction projects in the wider Sydney metropolitan area. PKPC has identified a number of potential construction projects in Sydney which could contribute fill materials to the Outer Harbour reclamation. PKPC will endeavour to transport 100% of fill material sourced from the Sydney metropolitan region by a combination of barge and rail. PKPC will commit to providing detail of the sources of the fill and method of transport to the site for approval by the Department of Planning before such filling operations commence.

The NSW Government is committed to improving major road links for the Illawarra region including Picton Road and the Princes Highway. PKPC maintains a regular liaison with the RTA to discuss traffic impacts and road infrastructure requirements to cater for port operations and future port growth. The Concept Plan will provide valuable input to strategic planning for the region's road infrastructure.

The impact of the proposed development on local roads surrounding the port will be minimal due to:

- Provision of a new port access road from Christy Drive;
- A designated haulage route via Flinders Street which avoids residential/commercial areas and Downie's Bridge;
- Continuing to provide public road access to the recreational boat ramp facility;
- Retention of heavy vehicle access to businesses on Foreshore Road; and
- Appropriate traffic management measures during construction works.

Most of the concerns raised regarding impacts on local roads pertain to Stages 2 and 3 of the Concept Plan. PKPC will liaise with affected businesses and the wider community prior to seeking approval for these stages. Any new road infrastructure (e.g. new access road to boat ramp, bridge over rail on Foreshore Rd) will be planned and designed to ensure adequate access is retained for existing premises.

2.2.3 Further References

For more detail in relation to Traffic and Transport issues, refer to the following:

- Section 18 and Appendix I of the Environmental Assessment;
- Specific issues and responses in Table 2 below identified by Reference Numbers 2-C, 2-E, 4-C, 6-D, 9-A, 10-D, 11-C, 13-A, 14-A, 16-A;
- Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010 contained in Attachment E;
- The Final Statement of Commitments in Attachment F.

2.3 Rail Infrastructure

2.3.1 Key Issues

The key issues raised in submissions regarding rail infrastructure matters were as follows:

- There are capacity issues on the existing main line to Sydney and on the Moss Vale-Unanderra line (speed and weight restrictions);
- There is doubt about whether the Maldon-Dombarton rail link will proceed and also whether it will proceed in a timeframe that will meet the needs of the PKOH development;
- Whether the modal transport split forecasted in the EA (90% movement of containers by rail) can be achieved given the current constraints on the regional rail network.

2.3.2 Summary Response

The Illawarra Line is primarily for passenger movements and some coal and there are few train paths currently available. As such, it is not realistic to rely on being able to utilise the Illawarra Line. Existing constraints on the Moss Vale-Unanderra line, including curvature and steep grades, have been considered as part of the rail assessment in the EA.

Stage 1 does not require the building of any major new infrastructure with the only additional works involving extension of rail sidings in the South Yard. As discussed in the EA, the Moss Vale - Unanderra Line has sufficient capacity to support the four trains per day necessary for operation of Stage 1.

The EA clearly states that Stages 2 and 3 cannot be commenced until a rail master plan has been completed and rail infrastructure requirements will be reviewed as part of Project applications for Stages 2 and 3. Theanticipated project timeframes for Stages 2 and 3 are such that this approach is considered appropriate.

Two options have been identified for the upgrade of regional rail infrastructure to support Stages 2 and 3 of the Concept Plan and these include:

- Upgrade of the Moss Vale-Unanderra line including extension of passing loops in the medium term (post 2020 when the 2nd container berth becomes operational) and curve easing or route re-alignment in the longer term (post 2034 when the 3rd container berth becomes operational); or
- Upgrade of the Moss Vale-Unanderra line including extension of passing loops in the medium term (post 2020 when the 2nd container berth becomes operational) and completion of the Maldon-Dombarton rail link in the longer term (post 2034 when the 3rd container berth becomes operational).

A feasibility study for the Maldon – Dombarton Rail Line is currently being undertaken, and this will feed into the final arrangement for the port rail access.

PKPC will commit to providing updates to DoP regarding the demand for rail freight to/from the port and the progress of planned regional rail infrastructure prior to commencing the later stages (Stages 1b and 1c) of the dredging and reclamation works (ie. Stages 1a, 1b and 1c).

The assessment has been based on a modal split that favours rail, particularly for container cargo (Stage 2 and 3). The modal split that is proposed is based upon:

- PKPC experience and market intelligence regarding likely bulk and general cargo trades;
- Innovative design principles to minimise dwell times and maximise the efficiency of container movement.

This concept relies on an efficient operating regime for the terminals and adequate rail infrastructure and network capacity. In order to be commercially viable and thus competitive in container trade, the proposed container terminals have been designed to operate on the basis of there being limited wharf side land available for container storage and consolidation. The viability of the port is dependent on inland storage facilities, such as an intermodal terminal, and adequate rail transport. This is in line with other container facilities around the world where limited infrastructure or developable land is available at the port.

For the container facility to reach its design capacity it will be necessary to:

- Significantly reduce container dwell time;
- Use high density state of the art stacking equipment;
- Have an intermodal (ship to rail) facility directly feeding containers to associated inland port areas.

These objectives have underpinned the development of thye Port Kembla Outer Harbour Master Plan prepared by Maunsell in 2008 and this Masterplan has in turn been the basis for the Concept Plan and Major Project Applications for the Outer Harbour which are currently being assessed.

2.3.3 Further References

For further discussion of issues relating to the provision of supporting rail infrastructure please refer to the following:

- Section 19 of the Environmental Assessment;
- Specific issues and responses in Table 2 below identified by Reference Numbers 2-B, 2-C, 2-H, 3-A, 4-A, 4-B, 5-A, 5-D, 5-E, 5-K, 5-L, 6-C, 8-D, 9-A, 10-C, 10-E, 12-C, 14-C, 14-F, 16-D, 16-E, 17-A, 17-F, 17-G, 17-H, 17-I, 17-J, 17-M, 17-O.
- Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010 contained in Attachment E;
- The Final Statement of Commitments in Attachment F.

2.4 Air Quality

2.4.1 Key Issues

The key issues raised in submissions regarding air quality matters were as follows:

- There have been a number of concerns raised by DECCW about the air quality assessment particularly in respect to some of the assumptions used and the emissions factors/rates adopted;
- There have been a number of exceedances reported at receivers in respect to Ground Level Concentrations (GLCs) for PM_{10} and $NO_{x;}$

- The dust potentially arising from the use of blast furnace slag within the reclamation area may pose a human health risk to sensitive receptors surrounding the port;
- The project should adopt best management practices to minimise air quality impacts particularly in relation to PM_{10} (dust) emissions from the project.

2.4.2 Summary Response

A revised AQIA dated 10 September 2010 has been prepared to address submissions received during the public exhibition period and in particular comments received from the DECCW and DoP. In addressing the issues raised, a number of the underlying assumptions and methodologies were revisited, in particular those relating to ship and train movements, to refine the input information to the model to better reflect operational characteristics and to correct some inconsistencies noted in the original emissions inventory.

The revised AQIA indicated that for PM_{10} there are likely to be exceedances of short term 24 hour PM_{10} GLCs at a number of receptors during construction, Major Project operation and Concept Plan operation but in all cases there were no exceedances of PM_{10} annual average criteria. In nearly all cases the exceedances are the result of cumulative impacts arising from a relatively high background concentration of PM_{10} in the regional air shed.

The revised AQIA indicated that for NO_x there were no GLC exceedances of relevant criteria (one hour or annual average) predicted at any of the sensitive receptors during the operation of both the Major Project and Concept Plan and only one isolated exceedance (one hour criteria) during construction.

AECOM undertook a screening assessment of heavy metals concentrations in slag dust during construction using the maximum average concentrations for characterisation as described in the DECCW resource recovery exemption for blast furnace slag. The screening assessment suggests that all of the metals potentially present in the blast furnace slag met the one hour maximum and annual concentrations under the relevant DECCW assessment criteria.

Appropriate Best Management Practices (BMP) available to construction and operation activities have been defined in the revised AQIA and include mitigation measures such as:

- confining vehicle access to designated access roads;
- implementing site speed limits;
- using covers on trucks carrying spoil, sand or loose materials;
- wetting down or use of surfactant on stockpile areas;
- stabilising reclaimed surface areas;
- sealing of regularly trafficked access roads;
- sealing of operational terminal areas;
- adjusting work practices based on wind observations and dust monitoring results;
- putting in place a complaints management system;
- operation of a dust monitoring program during contstruction.

2.4.3 Further References

For further discussion of issues relating to air quality please refer to the following:

- The revised Air Quality Impact Assessment prepared by AECOM dated 10 September 2010 contained in Attachment B;
- The letter from AECOM to Department of Planning (Glenn Snow) dated 20 September, 2010 contained in Attachment E;
- Specific issues and responses in Table 2 below identified by Reference Numbers 7-AB, 7-AC, 8-G, 14-E.
- The Final Statement of Commitments in Attachment F.

2.5 Noise and Vibration

2.5.1 Key Issues

The key issues raised in submissions regarding noise and vibration matters were as follows:

- There have been a number of concerns raised by DECCW about aspects of the noise and vibration impact assessment particularly in respect to the worst case meteorological conditions modelled, the construction and operational scenarios modelled, and the application of modifying factor corrections;
- A need for clearer presentation of predicted construction and operational noise levels at sensitive residential and non-residential receivers (eg. schools and churches);
- The noise impacts arising fromf rail construction works within the South Yard;
- Sleep disturbance impacts particularly from rail operations in the South Yard;
- The examination of potential mitigation measures in relation to traffic noise;
- The use of best practice rolling stock to assist in reducing noise from the rail operations.

2.5.2 Summary Response

A revised NIA dated 20 September 2010 has been prepared to address submissions received during the public exhibition period and in particular comments received from the DECCW and DoP. In addressing the issues raised, a number of the underlying assumptions and methodologies were revisited, in particular those relating to ship and train movements, to refine the input information to the model to better reflect operational characteristics and also to address a number of issues raised by DECCW in relation to issues of construction noise, operational noise (including noise from rail operations), sleep disturbance and road traffic noise.

The revised NIA has clearly presented the predicted construction and operational noise impacts and compared these to relevant noise limits at all sensitive receivers with the results are shown as both contour plots and in table format (refer to Appendix A, C and D of the revised NIA). Predicted noise levels at non-residential receivers (one local primary school and two local churches) have been provided in Appendix D and this shows that operational noise levels will comfortably comply with the relevant noise limit in each case.

A relatively minor rail infrastructure upgrade (extension of existing sidings) is required to service Stage 1. Three options were considered in the vicinity of the balloon loop adjacent to the Outer Harbour, including an extension of a siding in the South Yard, a new siding around Port Kembla North Station or reconfiguration of the North Yard. An upgrade in the South Yard is the preferred option both operationally and economically.

The principal contributor to the exceedance of the construction noise criteria from construction works in the South Yard is the use of demolition saws and the use of mobile plant such as dump trucks and bulldozers. The revised NIA has discussed the use of a suitable temporary noise barrier around the site when the demolition saws are in use and this is expected to reduce the predicted noise impact by up to 5dB(A). Furthermore, the construction works at the South Yard for Stage 1 are likely to be limited in scope and duration (i.e. completed within 6 months) and the demolition saws will only be used for a fraction of this time.

Further detail of mitigation measures will be confirmed as part of the detailed design phase and Construction Noise and Vibration Management Plan.

The impacts of operational noise associated with the Major Project are predicted to comply with the daytime, evening and night time project specific noise goals at all sensitive receivers in Sensitive Catchment Area 1 (SCA1) and Sensitive Catchment Area 2 (SCA2) following application of indicative noise mitigation in the South Yard to address noise from trains. The impacts of operational noise associated with the Concept Plan are predicted to exceed the daytime evening and night time project specific noise goals at a number of sensitive receivers in SCA1 and SCA2 by between 1-4dB(A) following the application of indicative noise mitigation in the South Yard to address noise from trains.

It is important to note that the operational scenario modelled to produce the expected noise levels are extremely conservative and likely to occur on a very limited number of occasions. It is likely that the predicted exceedances will be further reduced by noise mitigation measures at the detailed design phase and as part of the operational Noise and Vibration Management Plan.

It is recommended that a further acoustic assessment be undertaken prior to the commencement of Stage 2 and 3 of the Concept Plan by which time the rail master plan for Port Kembla Outer Harbour will be completed and there will be further certainty about rail operations and infrastructure required to support Stages 2 and 3.

The issue of sleep disturbance and the use of train horns at night time for the Major Project and Concept Plan operations are discussed in the revised NIA. Currently up to seven train horns are sounded during the night time period at one of three locations within the Balloon Loop (Old Port Road crossing, Foreshore Road crossing and the Flinders Street Bridge). From a sleep disturbance perspective the Old Port Road and Foreshore Road crossings are more sensitive given their proximity to sensitive receivers. The proposed Major Project will add an extra two train horns and the proposed Concept Plan will add an extra five train horns per night. No train horns will be sounded as trains move onto sidings from the main line.

To mitigate the impact of train horns PKPC will commit to the use of shorter duration train horn toots rather than standard train horn blasts. In relation to Stages 2 and 3 of the Concept Plan, PKPC will also commit to investigating the feasibility of mitigation measures such as:

- the removal of the Foreshore Road crossing;
- grade separation at the Old Port Road crossing.

It is proposed that the issue of potential sleep disturbance associated with increased train movements be investigated further prior to the commencement of Stages 2 and 3 once the rail master plan has been prepared and more information is known about likely train movements in the Outer Harbour.

The predicted increase in road traffic noise levels at sensitive receivers as a result of the Major Project is 0.3 dB(A) and the Concept Plan is 0.6 dB(A) both during the peak PM peak traffic flow and both adjacent to receivers on Five Islands Road at Cringilla. This is below the ECRTN 'maximum allowable increase' of 2dB(A).

Potential mitigation measures such as use of private roads, restricting vehicle movement times, use of noise barriers, maximising use of rail transport etc have been considered in the revised NIA. The outcome is that none of these potential mitigation measures are considered to be feasible and reasonable given the predicted increase in road traffic noise levels for this project.

A Traffic Management Plan (part of the Construction Environmental Management Plan and Operation Environmental Management Plan) will include control measures such as designated haulage routes to and from the site to minimise impacts on nearby residential users.

It is not feasible to specify any type of rolling stock for Stage 1 of the Outer Harbour development because the berth and associated terminal space that is proposed for operation will be a multi-purpose, common-user facility for cargo types and points of origin that are not yet known. The cargoes discussed in Section 19.5 of the Environmental Assessment are not currently handled through Port Kembla and PKPC has not as yet secured commitments for any of them to be handled through the proposed Outer Harbour facility. This is in contrast to other bulk cargo terminal operations which service regular customers most, if not all, of whom have made long-term commitments to use rail transport to that facility.

PKPC cannot be certain that future customers (i.e. cargo owners or exporters) seeking to transport cargo to the Outer Harbour via rail will be able to secure "best practice" rolling stock at a reasonable cost. PKPC is willing to liaise with prospective customers on a case-by-case basis to determine whether it is feasible and reasonable for them to use this rolling stock.

2.5.3 Further References

For further discussion of issues relating to noise and vibration please refer to the following:

- The revised Noise and Vibration Impact Assessment prepared by AECOM and dated 20 September 2010 contained in Attachment C;
- A table summary of the predicted noise impacts at non-residential receivers contained in Attachment D;
- The letter from AECOM to Department of Planning (Glenn Snow) dated 20 September, 2010 contained in Attachment E;
- Specific issues and responses in Table 2 below identified by Reference Numbers 6-F, 6-G, 7-A to 7-Z (inclusive), 7-AA, 8-F, 14-D;
- The Final Statement of Commitments in Attachment F.

2.6 Terrestrial and Aquatic Ecology

2.6.1 Key Issues

The key issues raised in submissions regarding terrestrial and aquatic ecology matters were as follows:

- DECCW has recommended that PKPC prepares a Green and Golden Bell Frog (GGBF) Masterplan which will provide a strategic framework for how PKPC will manage GGBF and its habitat across the Outer Harbour area;
- Potential impact of the proposed access road from Darcy Road (along the disused rail corridor) on significant habitat for the local GGBF population;
- Potential impact of the project on threatened fauna species such as the Eastern Quoll, Sooty Oystercatcher, various migratory bird species, the Dugong, Australian Fur Seal and Syngnathiforms;
- The permanent loss of aquatic habitat in the Outer Harbour and the proposed compensatory measures.

2.6.2 Summary Response

PKPC is supportive of the suggested GGBF Master Plan. The GGBF Master Plan will provide opportunities to strategically plan for a range of measures to conserve and enhance GGBF habitat in areas adjacent to the Outer Harbour while allowing for the proposed development.

The GGBF Master Plan will focus upon sites with the greatest potential for GGBF habitat and connectivity, in particular freight corridors and associated land areas. Areas of existing and potential new GGBF habitat will be identified and considered in the preparation of the proposed Rail Master Plan. The GGBF Master Plan will be prepared upon completion of the Rail Master Plan to ensure that it is compatible with the rail infrastructure requirements of the port. It is proposed that the GGBF Master Plan should be adaptive in nature allowing it to be reviewed as required, and that it should be prepared in consultation with DECCW and other relevant stakeholders.

PKPC staff have discussed with DECCW officers the 4 options for continued public access to the Boat Ramp and Harbour . The options are summarised as follows:

Option A: Do nothing and retain existing access via Foreshore Road.

Option B: Build a new road from Darcy Road to the Boat Ramp car park via the disused rail corridor between Morgan Cement and Orrcon (as per the Concept Plan Figure 5-3 in the EA).

Option C: Extend Gloucester Boulevard through the Heritage Park to the Boat Ramp car park.

Option D: Build a new road within the Boom Sidings corridor adjacent to the rail line that will service the proposed container terminal.

Option B is the preferred option at this stage having regard to a range of functional, safety, economic, environmental and heritage issues. PKPC will consider all options prior to seeking approval for Stage 2 of the development. While noting that DECCW does not support this option at this time, PKPC is committed to undertaking a comprehensive assessment of threatened species impacts prior to undertaking any works in areas of known GGBF habitat and proposing appropriate measures to mitigate and offset any significant impacts.

Mitigation measures that may be implemented to minimise the potential impacts to GGBF are likely to 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;
- 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.

Based upon site inspections and DECCW threatened species records and profiles, it is not believed that appropriate foraging habitat for the Eastern Quoll (*Dasyurus viverrinus)* exists within the Outer Harbour development footprint. Furthermore, given the highly modified environment and disturbance history, the site is not considered to provide suitable habitat for Eastern Quoll dens.

Whilst the Sooty Oystercatcher may potentially forage around the proposed development site and some of this foraging habitat will be removed as part of the development, no breeding habitat will be affected as this species breeds almost exclusively on offshore islands. Therefore Sooty Oystercatcher populations are not likely to be significantly affected.

Migratory bird species are unlikely to breed along the foreshore due to the high likelihood of predation by feral species (such as Black Rat and European Red Fox). These are likely to be harboured amongst the thickets of exotic shrubs lining the foredunes. Whilst potential habitat for migratory birds may exist along the foreshore, this is considered to be marginal at best. Migratory birds are likely to use these areas on a transient basis and more suitable habitat for these highly mobile species occurs further north and south of the proposed development area footprint areas that contain more natural undisturbed habitat. Therefore potential impacts on migratory birds as a result of the proposed works are considered to be low.

Potential impacts to aquatic mammals such as whales will be addressed in a Marine Mammal Management Plan. Potential adverse impacts to Syngnathiforms is unlikely as kelp beds were not found during field surveys in the areas of the Outer Harbour which will be affected by proposed dredging and reclamation works and these issues are addressed in the aquatic ecology chapter of the EA.

The loss of the deeper soft substrate habitat associated with the reclamation, although significant in surface area, is not considered likely to have a significant impact. The surveys of deeper soft substrate habitat showed that it is a low diversity faunal habitat and sufficient area of deeper soft substrate would remain in the Outer Harbour. New hard substrate habitat, in the form of wharf face, pile supported decks and rock revetments would be designed with enhanced features to provide expanded aquatic habitat values to those that already exist in the Outer Harbour.

The loss of the shallow soft substrate habitat off Ref Beach is considered to be of some significance. Aquatic habitat offsets/compensatory measures are proposed for the loss of potential juvenile fish habitat currently provided by this shallow sandy substrate.

Opportunities to compensate for the loss of soft substrate have been identified in Tom Thumb Lagoon and Garungaty Waterway. Both the Lagoon and Waterway are tidal water bodies, which offer soft sediment habitat for fish and other aquatic fauna within the catchment of Port Kembla Harbour. PKPC has initiated discussions with Wollongong City Council and Conservation Volunteers Australia (CVA) regarding potential habitat improvement projects at these locations.

2.6.3 FurtherReferences

For further discussion of issues relating to terrestrial and aquatic ecology please refer to the following:

- Sections 16 and 17 and Appendix B, D and H of the Environmental Assessment;
- The letter from AECOM to Department of Planning (Glenn Snow) dated 20 September, 2010 in contained in Attachment E;
- Specific issues and responses in Table 2 below identified by Reference Numbers7-AD, 7-AE, 12-F, 15-A, 15-B;
- The Final Statement of Commitments in Attachment F.

2.7 Heritage

2.7.1 Key Issues

The key issues raised in submissions regarding heritage matters were as follows:

- Commitments were sought to implement the recommendations of the Historic Heritage Assessment regarding archival recording of timber jetties prior to demolition and conservation of the Mobile Block Setting Steam Crane;
- Deterioration of the machine gun pillbox and its potential separation from the companion Military Museum as a result of proposed road construction;
- Potential for unexpected discovery of shipwrecks; and
- Potential for unexpected discovery of European heritage items and/or archaeological relics.

2.7.2 Summary Response

PKPC will commit to implementing all of the recommendations made in the Historic Heritage Assessment.

No commitment can be given to restoration of the pillbox at this time as it is located on land which is neither owned or managed by PKPC. Nevertheless, PKPC will incorporate appropriate landscape design and access features into any future road design to minimise the impact of separation from the Military Museum.

PKPC will commit to developing a contingency plan for the discovery of unexpected shipwrecks during dredging works and for the discovery of unexpected European heritage items and/or archaeological relics during construction works.

2.7.3 Further References

PKPC will commit to implementing all of the recommendations made in the Historic Heritage Assessment.

For more detail in relation to Heritage issues, refer to the following:

- Section 24 and Appendix M of the Environmental Assessment;
- Specific issues and responses in Table 2 below identified by Reference Numbers 1-A, 1-B, 1-C, 1-D, 1-E;
- The Final Statement of Commitments in Attachment F.

2.8 Other Issues

2.8.1 Key Issues

The key issues raised in submissions regarding other matters were as follows:

- The impacts associated with the potential closure of Foreshore Road;
- The impact of the potential new road which is to run along the disused rail corridor extending north from Darcy Road;
- The impact of the new road bridge proposed over the rail line at Foreshore Road;
- The potential impacts of the project on the Orica sulphuric acid pipeline;
- The potential impact of the project in restricting the size of vessels that can enter the port;
- The project will increase substantially the on site storage of many hazardous substances and this will need to be strictly controlled;
- The need for a groundwater monitoring program to assess the impact of the project on groundwater flow and quality;
- The availability of carparking for employees during the construction phase of the project.

2.8.2 Summary Response

Rail access to the container terminal is an important part of the Concept Plan. Careful resolution of the rail line and Foreshore Road level crossing will be required as part of Stage 2 to ensure that rail and road traffic conflicts are avoided, truck traffic is not unreasonably restricted, access to adjoining properties is maintained and that impacts on adjoining properties are minimised.

The use of Christy Drive is desirable because it avoids a rail crossing on Foreshore Road, it avoids the use of Downies Bridge (a rail overbridge on Old Port Road to the south of the Foreshore Road and Old Port Road intersection) and it avoids port traffic using Five Islands Road near existing residential areas.

PKPC has no intention to remove or hinder access to existing properties along Foreshore Road either through the construction phase or in the long-term. Long-term access arrangements will be considered in detail as part of further investigation of Stages 2 and 3 of the Concept Plan and this process will include consultation with all landowners.

Detailed design for Stages 2 and 3 of the Concept Plan has yet to be undertaken. This process will involve consultation with all existing landowners on Foreshore Road to ensure that their existing and future access requirements are achieved.

The traffic assessment notes that all operational traffic will access the site via Christy Drive. It is anticipated that the majority of construction vehicles will also use this link off Christy Drive as part of development of the terminals.

The new road link off Foreshore Road will only provide access for a proportion of the construction vehicles associated with the reclamation of the container terminals in Stage 1. As a worst case this may reach 23 trucks per hour. Foreshore Road, with a relatively flat gradient, good lines of sight and limited access points and on-street parking, has sufficient capacity to accommodate these additional movements above the current levels.

As noted in the EA, Traffic Management Plans would be included in CEMPs prepared for each discrete package of construction works. These plans will be prepared to minimise impacts on the local road network and will include designated haulage routes (via Flinders Street rather than Old Port Road) to avoid Downies Bridge and nearby residential areas adjacent to Five Islands Road.

The proposed new road over the existing rail line to the south of the container terminals will allow grade separation of the road and rail. In turn this will enable more efficient transport operations within the port precinct and enhance safety. By travelling over the rail line the new road would not pose limitations on road access to the port.

Orica's existing pipeline was established subject to a commercial licence agreement between it and PKPC. The proposed development will allow Orica to continue its sulphuric acid trade via a new pipeline linking the proposed multi-purpose terminal to its storage tanks. Details regarding design, operation, costs and tenure of the pipeline will be subject to normal commercial negotiations between PKPC and Orica. PKPC will consult with Orica at that time.

Larger vessels (such as some cape size ships) currently have restrictions placed on them when entering the port given their length and draught. The restrictions are due to the physical characteristics of the port such as depth of water and breakwater alignment. The Outer Harbour development will have no impact on current vessel restrictions in the harbour.

A Preliminary Hazard Assessment (PHA) was prepared based on assumptions of type and quantities of hazardous materials likely to be stored at the container terminals and it was identified that the proposed port operations would be classified as 'potentially hazardous'. The PHA recognises that the hazardous substances are manageable at the site and a further Final Hazard Assessment will be prepared as part of detailed project applications for construction and operation of the container terminals. PKPC will also prepare a Hazardous Substances Management Plan for the construction and operation phases of the development.

PKPC has an existing ongoing groundwater monitoring program to monitor groundwater quality in the vicinity of the Outer Harbour. The existing groundwater monitoring program will be reviewed and background levels will be used as a basis to develop a program for Stage 1 construction and operation phases.

There is expected to be an indicative workforce of 90 employees during Stage 1 construction activities (dredging, reclamation and berth construction). Assuming that employees are on site at the same time and allowing for a conservative carparking rate of one space per employee, then a total of 90 spaces would be required on-site during Stage 1 construction. This area can be easily accommodated within the largely vacant 10 ha Outer Harbour land area. The carparking spaces would be located in two areas of the site:

- one adjacent to the site compound area shown on Figure 5-5 of the EA document;
- the second adjacent to the new construction road link which provides access to the site from Foreshore Road.

The car park adjacent to the site compound will be accessible either from Christy Drive to the north or Foreshore Road to the south. The choice of access would depend upon the operational and construction activities occurring at the time. The car park adjacent to the proposed new construction road will be accessible from Foreshore Road.

2.8.3 Further References

For further discussion of issues relating to other matters please refer to the following:

- Sections 11, 13, 16, 17 & 18 and Appendix C, D, E, G, H & I of the Environmental Assessment;
- Specific issues and responses in Table 2 below identified by Reference Numbers 6-A, 6-B, 6-D, 6-E, 8-B, 11-A, 13-A, 18-A;
- Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010 contained in Attachement E;
- The Final Statement of Commitments in Attachment F.

3.0 Detailed Response to Submissions

Each submission has been reviewed and presented in sequential order by reference number in **Table 2**. Each of the issues within the submissions has been considered and a response provided. Each issue has been assigned a unique reference number with the number corresponding to the submission reference i.e. reference number 1-A refers to submission number 1 (Department of Planning Heritage Branch) and issue 'A', reference number 4-B refers to submission number 4 (Asciano Ltd) and issue 'B'. Refer to Table 1 for a list of submission reference numbers.

Table 2: Summary of responses to each issue that was raised in the submission

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Heritage Branch, Department of Planning					
Heritage	The assessment highlights that there are a number of heritage items (including two potential shipwrecks – the Adele and the Clio) located in the area of the works, of which at least five will be impacted by the proposed works. These items are Jetties No. 3, 4 and 6, Breakwater Battery, Historical Military Museum, Tank Barriers, and the Mobile Setting Steam Crane. If the application is approved, the following recommendations should be imposed to ensure that all heritage issues are satisfactorily addressed: The management recommendations (recommendation 1, 2 and 4) for Jetties No. 3, 4 and 6 are considered adequate and should be included in the final Statement of Commitments for the project.	Noted. The management recommendations contained in the draft Statement of Commitments relating to heritage items are considered adequate by Heritage Branch and will be included in the final Statement of Commitments.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Section 8.0 of Appendix M Final SoC – Attachment F of this report.	1-A
Heritage	Separation of the Historical Military Museum from its companion Pillbox structure by a new port access road is not a desirable outcome as	In its present location, the Pillbox is already separated from the Military Museum by the disused rail corridor.	Stage 2 (Concept Plan)	Section 8.0 of Appendix M	1-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	the two should be interpreted and viewed together and any separation will affect their significance. Heritage Branch has noted that the Pillbox is deteriorating and it is recommended that PKPC provide funding to aid in the restoration of the Pillbox. Heritage Branch supports the proponent's recommendation to provide landscaping.	Potential impacts on the Pillbox were assessed as part of the EA and mitigation measures have been proposed. The land on which the Pillbox is located is not owned or managed by PKPC. Further assessment would need to be undertaken as part of the application for approval made for Stage 2 of the development.			
Heritage	The Heritage Branch generally supports the recommendation numbers 3 & 6 made in Section 8.0 of the EA regarding this significant piece of moveable heritage. It is noted that the crane would need to be moved if PKPC proceeds with the proposed new road link from Darcy Road. The Heritage Branch considers that the crane needs to undergo restoration prior to being moved. It is recommended that the Proponent include a commitment to undertake a Conservation Management Plan (CMP) for the crane, to restore the crane in line with the recommendations in the CMP prior to relocating it, to move the crane to a safe and prominent location close by and undertake interpretation of the crane for the public as part of the development.	The crane is located on land that is managed by PKPC. PKPC is prepared to provide funding to restore the crane prior to it being relocated. A commitment to undertake a Conservation Management Plan, to restore the crane in line with the recommendations in the CMP prior to relocating it, move the crane to a safe and prominent location, and provide interpretative signage, will be included in the final Statement of Commitments.	Stage 2 (Concept Plan)	Section 8.0 of Appendix M Final SoC – Attachment F of this report.	1-C
Heritage	The Proponent is bound by the requirements of the *Commonwealth Shipwrecks Act 1976* and must abide by provisions contained within the Act which relate to notification of the discovery of a wreck, lodging an Application for Disturbance and the submission of an Incident	A commitment will be included in the final Statement of Commitments that will be used in the unexpected discovery of shipwreck material during dredging works. This is required to satisfy provisions of the Commonwealth *Historic Shipwrecks Act 1976*. The commitment will include a provision to stop work in	During dredging work in Stages 1 and 3) (Major	Final SoC – Attachment F of this report.	1-D

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	Report should a wreck be damaged by the works. The Director, Heritage Branch, Department of Planning is the Commonwealth Delegate in NSW for implementation of this Act. The Heritage Branch recommends that the Proponent includes a mitigation strategy in the Final Statement of Commitments to be used in case of the unexpected discovery of shipwrecks. The strategy should include a requirement to immediately notify the Heritage Branch of the discovery of a shipwreck, the stoppage of all works in the area and the provision to engage a qualified Maritime Archaeologist to assess the shipwreck and undertake any and all required underwater archival recording to best practice standards.	the immediate vicinity should any evidence of any shipwreck material be encountered during dredging. The Heritage Branch would be contacted immediately and a suitably qualified maritime archaeologist contacted to assess the discovery and provide advice on mitigation and recording.	Project and Concept Plan)		
Heritage	The Heritage Branch recommends that the Proponent include in the Final Statement of Commitments a provision that if, during construction processes, any evidence of any previously unidentified European heritage items and/or archaeological relics is found, all work on the site is to cease and the Heritage Branch shall be contacted immediately to satisfy provisions of the *Heritage Act 1977*. A suitably qualified heritage consultant should be contacted to assess the discovery and provide advice on mitigation and recording.	A commitment will be included in the final Statement of Commitments that will be used in the unexpected discovery of unidentified European heritage items and/or archaeological relics. This is required to satisfy provisions of the *Heritage Act 1977*. The commitment will include a provision to stop work in the immediate vicinity should any evidence of any previously unidentified European heritage items and/or archaeological relics be encountered. The Heritage Branch would be contacted immediately and a suitably qualified heritage consultant contact to assess the discovery and provide advice on mitigation and recording.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	1-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Wollongong Transport Coalition					
Traffic and transport	The EA does not make reference to the 2007 Sydney – Wollongong AusLink corridor strategy that recognised severe constraints on rail and road links.	The AusLink National Network and its connections to the broader transport network are the passenger and freight backbone of Australia's national land transport system and are the focus of the Australian Government's planning and funding responsibility. The Sydney – Wollongong Corridor Strategy is a statement of the shared strategic priorities of the Commonwealth and State Government for the long-term (20-25 year) development of the corridor. Short-term priorities identified in the strategy include: - To manage increased freight on the corridor as a result of the Port Kembla expansion; - Improve safety and efficiency of Mount Ousley Road; - Capacity improvements to Picton and Appin Roads; - Improve competiveness for rail on the Moss Vale-Port Kembla rail line. The Strategic Priorities identified in the Strategy provide a basis for the Commonwealth and State Governments to negotiate project funding priorities for future infrastructure development on the AusLink National Network through the Nation Building Program. Upgrades to Picton Road (in the form of clear zone improvements and new safety barriers) have already been completed as part of the Australian Government's Nation Building Program. Other priorities will be addressed as a result of recent funding announcements made in NSW 2010 budget. The Strategy demonstrates that key challenges	Stages 1, 2 and 3 (Major Project and Concept Plan)	-	2-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		identified for the region, and of concern to Wollongong Transport Coalition, are a priority for the Commonwealth and State Governments. The road assessment and modelling undertaken for the Outer Harbour development revealed that the Level of Service of the intersections that were assessed will be satisfactory as a result of the activities associated with the three stages of development in accordance with the Concept Plan. Consequently, no mitigation measures are deemed necessary on the wider network to ameliorate the impacts of the proposed Outer Harbour development. In addition, a report titled "The Great Freight Task: Is Australia's transport network up to the challenge?" was produced for the House of Representatives in July 2007 by the Standing Committee on Transport and Regional Services. Sections 3.52 to 3.72 deal with Port Kembla. The key issues discussed in the report are the fact that the Port is currently operationally constrained by traffic curfews, a third berth is to be constructed in the inner harbour, and that the Port is to undertake a master plan for the development of the Outer Harbour – the outcome of which is subject of this EA. The report further recommends that the government undertake a study of the feasibility of completing the Maldon – Dombarton rail link. This study is currently underway. In preparing this EA, the comments in the Sydney to Wollongong Corridor Strategy and the House of Representatives report were taken into consideration, even if the reports were not directly referenced.			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Traffic and transport	The EA notes the limitations of rail capacity on the existing main line to Sydney (Illawarra Line) and suggests re-routing trains from Sydney via Moss Vale. This would impose severe penalties on the economic provision of rail freight services due to the extra distance when compared with the existing line and the difficult nature of the Robertson-Unanderra track with its short crossing loops and its steep grades. Safe working requires a maximum speed of 40km/hr for most sections with some sections further constrained to 20km/hr operations. These transit time and load constraints would lead to the choice of using road freight rather than rail freight. The alternative is firm targets – much stronger than the 40 per cent of cargo going to and from Port Botany to go by rail, when rail has for years been trying to reach 20 per cent. Or the promise that 20 per cent of car carriers going from Port Kembla would go by rail.	Bulk customers who use rail are expected to be exporting, and using the Southern Sydney Freight Line and Moss Vale-Unanderra line to reach the port. The grades are therefore less of an issue, as only empty trains are returning up the grade. The existing constraints of the Moss Vale-Unanderra line, including curvature and steep grades have been discussed in the EA. The master plan for the Outer Harbour development was prepared based on a modal split that is strongly in favour of rail. In order to be commercially viable and thus competitive in container trade, the proposed container terminals have been designed to operate on the basis of there being limited wharf side land available for container storage and consolidation. The viability of the port is dependent on inland storage facilities, such as an intermodal terminal, and adequate rail transport. This is in line with other container facilities around the world where limited infrastructure or developable land is available at the port. This concept relies on an efficient operating regime for the terminals and adequate rail infrastructure and network capacity. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stages 2 and 3 (Concept Plan)	Section 19.2.3 of the EA	2-B
Traffic and Transport	Critical infrastructure, including Maldon-Dombarton rail link and the Picton Road and Princes Highway, needs to be upgraded to avoid more road congestion and increased	The Major Project Approval (for Stage 1) does not require the construction of any rail infrastructure outside of the Port precinct. The Concept Plan Approval, however, will require infrastructure upgrades.	Stages 2 and 3 (Concept Plan)	Section 19.5.1 of the EA	2-C

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	numbers of road crashes. The EA does not address expressions of community concern about the state of Picton Road, and the number of fatalities from road crashes.	The rail assessment for the EA identified that there are two main rail options to service the long term growth of the port; the Moss Vale – Unanderra Line and Maldon-Dombarton link. There is capacity available on the Moss Vale-Unanderra Line for Stage 1 and additional capacity enhancements could be made to service Stages 2 and 3. Alternatively the Maldon – Dombarton link is the other option available to service the port. A federally funded and managed feasibility study for Maldon-Dombarton is currently being prepared. A pre-feasibility study, funded by the Australian Government, has been completed on the Maldon - Dombarton freight rail line in NSW. The study included a review of the existing infrastructure, and proposed remedial works, an estimate of construction requirements and costs to complete the project. The RTA has and continues to provide funding for safety upgrades to Picton Road. Upgrades to Picton Road (in the form of clear zone improvements and new safety barriers) have been completed as part of the Australian Government's Nation Building Program. The NSW State Government announced a $12 million program of safety improvements for Picton Road in February 2009. This two and a half year program of work will address the most common types of crashes along this busy road and will include: - Upgrades to sections of the road to reduce the risk of vehicles losing control in the wet - Improvements to line marking and medians - Improvements to road shoulders and			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		existing curves. - New warning signs - Police enforcement bays In addition, the NSW Government recently announced an additional $20 million in new funding for Picton Road (NSW 2010 budget).			
Traffic and Transport	The EA does not address cumulative impacts resulting from not only the truck car carriers and extra coal trucks (there does not seem to be any modelling for either 7.5mtpa or 10mtpa of coal on the road as conditionally approved in 2009) or the ongoing population increase of Wollongong and Shellharbour (including a new large Calderwood subdivision) with more and more people commuting to Sydney.	The Traffic and Transport assessment uses modelling outputs from the Wollongong Shellharbour (WOLSH) Transportation model which has been endorsed by the RTA. The WOLSH model incorporates population, employment and trade projections until 2026 so that the cumulative impacts can be assessed.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Appendix I of the EA	2-D
Traffic and Transport	The EA suggests that barge and rail may be used to move much of the material required for the proposed reclamation. However, the EA does not outline the means that will ensure that using barge and rail will actually occur, as opposed to over-reliance on trucks operating over public roads.	Material will be sourced over time from major construction projects most likely in the Sydney metropolitan area. PKPC will endeavour to transport 100% of fill material sourced from the Sydney metropolitan region by a combination of barge and rail. For further discussion of issues relating to the source of fill material from construction projects please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 1 (Major Project)	Section 18.4.2 and 19.5.2 of the EA	2-E
Traffic and Transport	The EA tends to treat truck impacts as if one truck is equivalent to one vehicle. It is well known that trucks occupy more space and are over-represented in fatal road crashes and a heavy semi-trailer causes at least 10,000 times the road wear and tear that a family car does.	The Traffic Assessment has used SIDRA Intersection modelling software to assess the impacts of trucks on the adjacent road network. The software recognises the speed and road space characteristics of the trucks so that their impact can be fully realised. The traffic generated by the Outer Harbour	Stages 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	2-F

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		development would utilise designated truck routes with a focus on industrial roads and the arterial road network. As noted in the EA, Traffic Management Plans would be included in CEMPs prepared for each discrete package of construction works. These plans will be prepared to minimise impacts on the local road network and will include designated haulage routes (via Flinders Street rather than Old Port Road) to minimise impacts on the road network and access to surrounding properties.			
Traffic and Transport	The EA is very light on external costs. It stands as a failure of the assessment process that applicants have not, to date, been required to address in detail such issues.	An environmental assessment has been undertaken to address the Director General Requirements, including RTA requirements. There was no specific requirement in the DGRs requiring the assessment to address the issue of external transport costs. External costs are easier to calculate for projects where the impacts on public infrastructure, such as road wear and tear, are directly attributable to a particular land use. However, attributing the proportion of costs associated with a project such as the Outer Harbour development, which will result in wide and far-reaching transport of goods on the broader regional transport network, is too complex to calculate. For this reason projects such as the Outer Harbour development are generally assessed by focusing on the impacts within the immediate study area. It is generally accepted that the onus to assess and manage the costs arising from maintenance, accidents, air pollution etc with respect to infrastructure that is used by a multitude of different users is the responsibility of the particular authority for that industry i.e. RTA for roads, RailCorp for rail etc.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.5.2 of the EA	2-G

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Traffic and Transport	Wollongong Transport Coalition is supportive of the concept of developing seaports to serve the hinterland when the port is supported by good rail and road infrastructure. However the Wollongong Transport Coalition does not support the proposal given the severe constraints on the existing rail and road networks. Determination should be put on hold until the current Maldon-Dombarton feasibility study results are released. Proposals for further expansion of Port Kembla require that all relevant issues are properly examined and that a Commission of Inquiry with public hearings is held.	The rail assessment has focused on Stage 1 of the development and there is sufficient capacity on the Moss Vale-Unanderra line to accommodate the limited train numbers generated as a result of the operation of Stage 1. A rail master plan will commence in 2010 to identify rail infrastructure requirements for Stages 2 and 3. The feasibility of Stage 1 of the development is not dependent on the construction of Maldon-Dombarton. PKPC's significant on-going investment in nationally significant port infrastructure is being supported by parallel investment in regional rail and road infrastructure by the NSW Government – with Commonwealth Government support as appropriate through the Nation Building Program. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010. An environmental assessment has been undertaken to examine all relevant issues associated with the Outer Harbour development. The assessment has been informed by the robust Part 3A process, a public exhibition period and assessment by Department of Planning officers and the Minister for Planning. Project applications will be needed prior to construction of Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	2-H

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
A. McLean – individual					
Traffic and Transport	Infrastructure that should be completed prior to the expansion of the Port: - Appropriate number of rail balloon loops to serve wharves that connect onto the main Wollongong – Port Kembla line; - Improved direct rail routes from Port Kembla to Unanderra-Moss Vale and Maldon-Dombarton; - Complete Maldon-Dombarton; - Upgrade Picton Road to dual carriageway over complete length; - Install flyovers east and west of Wilton. The western flyover should provide access to and from the new Wilton subdivision; - Mt Ousley should be upgraded to three lanes up and down along the full length from Picton Road to Port Kembla; - Upgrade Heathcote Road to dual carriageway status to at least Nowra to accommodate the haulage of ethanol and starch products from Shoalhaven Starches P/L; - Increase the number of truck parking and rest areas with toilet, showers and 24 hour catering services offering healthy options in proximity to Port Kembla, along the route to Hume Highway and the M5;	PKPC's significant on-going investment in nationally significant port infrastructure is being supported by parallel investment in regional road and rail infrastructure by the NSW Government – with Commonwealth Government support as appropriate through the Nation Building Program. PKPC supports upgrade of strategic transport links however consideration of these needs is beyond the scope of the Port Kembla Outer Harbour Development plan. The modal split for the operation of the Outer Harbour expansion favours rail and PKPC will commission a rail master plan to be commenced in 2010 to identify rail infrastructure upgrades required to support Stages 2 and 3 of the Concept Plan. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	3-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	- A direct S/W secondary or back up dual carriageway route completely to the Hume Highway to relieve Macquarie Pass. This is necessary should accidents occur on Mt Ousley and/or Picton Road. The route should service heavy vehicles currently using the Nowra-Camberwarra Mt-Kangaroo Valley-Hampton Bridge-Moss Vale Road route; - Upgrade Princes Highway to B double standard from Nowra to Batemans Bay; - Upgrade Kings Highway from Batemans Bay to Queanbeyan to provide an emergency heavy haulage route to Canberra, Monaro Highway and reconnect back to the Hume Highway; and - Upgrade the Princes Hwy from the Victorian border to Batemans Bay to provide opportunity to export agricultural and other products from East Gippsland/Southern Victoria, Eden/Monaro and Batemans Bay hinterlands through Port Kembla.				
Asciano Ltd					
Rail	Rail traffic flows and required ancillary support facilities to effectively accommodate planned growth and in particular rail freight movements will be deficient without direct consultation with Asciano.	The rail master plan for the Outer Harbour will commence in 2010 and PKPC will consult Asciano in this process. The rail master plan will be completed prior to the introduction of rail freight operations as a result of the Outer Harbour development.	Stage 2 and 3 (Concept Plan)	Section 19.6.1 of the EA	4-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Rail	Infrastructure requirements to ensure efficient rail access to Sydney have not been addressed in the EA.	There are no major infrastructure upgrade requirements for Stage 1. The rail infrastructure requirements for the Concept Plan have been broadly outlined in the EA and this will be refined by the rail master plan, to be commenced in 2010. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 in the EA	4-B
Access Rail	The proposed rail overbridge at the entrance to the new quay poses particular limitations on road access to the port.	The proposed new road over the existing rail line to the south of the container terminals will allow grade separation of the road and rail. In turn this will enable more efficient transport operations within the port precinct and enhance safety. By travelling over the rail line the new road would not pose limitations on road access to the port.	Stage 2 (Concept Plan)	Figure 5-3 in the EA	4-C
Rail	North Yard and the interdependencies of the North and South Yard appear to have been overlooked in the assessment.	Much of the North Yard is currently out of service. Future uses for North and South Yards are being considered as part of the rail master plan.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	4-D
Rail	Rail support facilities proximate to the rail operational infrastructure is critical to efficient and economic rail operations. The replacement of the Darcy Road sidings, owned by Pacific National with new road access may place limitations on both rail capacity and availability of land for ancillary facilities for expanded rail	No major change to the rail infrastructure is envisaged for Stage 1. PKPC acknowledges that the Darcy Road siding is owned by Pacific National, and the possible conversion of this siding to provide a new road access to the public area of the port could only take place with PN involvement. This will be reviewed further during the rail	Stage 2 (Concept Plan)	-	4-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	operations. The Darcy Road siding provides shunting and storage capacity to the terminal land on Darcy Road.	master plan that will commence in 2010 and will be subject to further assessment as part of the Project application for Stage 2.			
P. Laird – individual					
Rail	Of crucial importance is the question of whether the Maldon Dombarton rail link will be completed. It is submitted that until the NSW Government makes a commitment to provide some funds towards the completion of this link, the present PKPC application should not be approved. The concept of full expansion of the outer harbour should be deferred until there is support for the completion of the Maldon-Dombarton rail link. This may require delaying determination until mid 2011 when the current study on the economic viability of completing the Maldon-Dombarton link has been undertaken, or making the concept plan a two step process: Stage One concept a very limited port expansion with tonnage limits on road haulage outside of Wollongong, Shellharbour and the South Coast region, and Stage Two (conditional on completion of Maldon-Dombarton) full expansion.	Stage 1 does not require the building of any major new infrastructure. As discussed in the EA, the Moss Vale - Unanderra Line has sufficient capacity to support the four trains per day necessary for operation of Stage 1. The EA clearly states that Stages 2 and 3 cannot be commenced until additional applications are made for project approval and until a rail master plan has been completed. A feasibility study for the Maldon – Dombarton Rail Line is currently being undertaken, and this will feed into the final arrangement for the port rail access. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.5.2 of the EA	5-A
Environmental assessment process	The environmental assessment needs to be 'done right'. To assist in getting it right, it is submitted that assessment by a Commission of Inquiry with Public Hearings is desirable.	Refer response to issue 2-H	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	5-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Traffic and transport	No reference is given at all to widely reported issues of road safety on Mt Ousley, Picton and Appin Roads. In addition, no reference is given to the official 2007 Sydney-Wollongong Corridor Strategy.	Refer responses to issues 2-A and 2-C	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	5-C
Rail	In regards to containers, it is noted on page 18-3 and 18-4 that 10 per cent of containers would be transported by road. This means 90 per cent by rail, which far exceeds recent and current practice at Port Botany. Whilst 90 per cent container movement by rail would be desirable, mechanisms including road pricing and rail infrastructure upgrades will be needed to achieve this.	The container terminal will be constructed in three stages over the next 27 years. The master plan for the Outer Harbour development was prepared based on a modal split that is strongly in favour of rail. In order to be commercially viable and thus competitive in container trade, the proposed container terminals have been designed to operate on the basis of there being limited wharf side land available for container storage and consolidation. The viability of the port is dependent on inland storage facilities, such as an intermodal terminal, and adequate rail transport. This is in line with other container facilities around the world where limited infrastructure or developable land is available at the port. This concept relies on an efficient operating regime for the terminals and adequate rail infrastructure and network capacity. PKPC will commit to 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 would 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	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	5-D

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		required.			
Rail	Page 19.4 of Appendix I of the EA notes the limitations of rail capacity on the existing main line to Sydney and suggests re-routing freight trains from Sydney via Moss Vale. However, the Moss Vale - Unanderra line has severe speed-weight restrictions that make it difficult for any rail operator to provide cost effective rail freight services. These include: - The difficult nature of the Robertson-Unanderra track with its steep grades that requires a maximum speed of 40km/hr for most sections of this track. - The short length crossing loops limiting train tonnage and size. - Excessive extra distance for freight moving between Port Kembla and Western Sydney when compared with the existing line.	The Illawarra Line is primarily for passenger movements and some coal and there are few train paths currently available. As such, it is not realistic to rely on being able to utilise the Illawarra Line. Existing constraints on the Moss Vale-Unanderra line, including curvature and steep grades, have been considered as part of the rail assessment in the EA. It was identified that there is sufficient capacity available on the line to support Stage 1 of the development. Upgrades to the existing rail infrastructure would be required to support Stages 2 & 3. The master plan for the Outer Harbour development was prepared based on a modal split that is strongly in favour of rail. In order to be commercially viable and thus competitive in container trade, the proposed container terminals have been designed to operate on the basis of there being limited wharf side land available for container storage and consolidation. The viability of the port is dependent on inland storage facilities, such as an intermodal terminal, and adequate rail transport. This is in line with other container facilities around the world where limited infrastructure or developable land is available at the port. This concept relies on an efficient operating regime for the terminals and adequate rail infrastructure and network capacity. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: - Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 2 and 3 (Concept Plan)	Section 19 of the EA	5-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Rail	Given the constraints on the existing rail system as noted above it will be hard for the proposed target of 50 per cent of all bulk commodities (4.25mtpa) to be moved by rail.	We disagree. There is capacity on the existing network to move this volume of dry bulk and this is discussed in the EA. During the operation of Stage 1 rail movement of bulk would be in the direction of the port only, providing an advantage as only empty units would need to return back up the hill, a movement which is easily achievable.	Stage 1	Sections 19.2.3 and 19.5.2	5-F
Environmental assessment	There is no reference to external costs in the EA. These issues require more attention and the other external costs identified in many official reports including noise pollution, air pollution, congestion costs, and accident costs etc also require addressing.	Refer response 2-I.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	5-G
Traffic and transport	A further understatement of traffic impacts is the insufficient attention given to the cumulative impacts of car carriers, the potential for extra coal trucks and the increase over recent years in the numbers of people commuting between Sydney (Western and other parts) and Wollongong (in both directions).	Refer response 2-C and 2-D.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	5-H
Traffic and transport	Understatement of traffic impacts also arises from the dubious practice of counting a heavy truck as one vehicle (e.g. page 18.4 that the proposal will lead to an increase in only one per cent of the number of trucks per peak hour). Standard methodology of assessing road system costs and impacts includes not only vehicle numbers, but three other standard and important indicators; Passenger Car Equivalents (including 3 for a semi trailer and 4 for a B-Double), Average Gross Mass Vehicle	The Traffic Assessment has used SIDRA Intersection modelling software to assess the impacts of trucks on the adjacent road network. The software recognises the speed and road space characteristics of the trucks so that their impact can be fully realised. The traffic generated by the Outer Harbour development would utilise designated truck routes with a focus on industrial roads and the arterial road network. As noted in the EA, Traffic Management Plans would be included in CEMPs prepared for each discrete	Stages 1, 2 and 3 (Major Project and Concept Plan)	Appendix I of the EA Final SoC – Attachment F of this report.	5-I

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	kilometres, and Equivalent Standard Axle kilometres (which take into account the wear and tear of the roads caused by heavy vehicles and other vehicles). These parameters are outlined in official reports such as those of the National Transport Commission, yet only vehicle numbers and vehicle kilometres appears to be used in the PKPC EA.	package of construction works. These plans will be prepared to minimise impacts on the local road network and will include designated haulage routes (via Flinders Street rather than Old Port Road) to minimise impacts on the road network and access to surrounding properties.			
Rail	The EA could give more information about the Maldon-Dombarton rail link, including some of the findings from the 2009 pre-feasibility study.	Refer response 2-C	-	-	5-J
Rail	The EA appears not to have mentioned the promised Waterfall-Thirroul route with a long tunnel or even partial realignment of this winding track.	Due to limited available capacity on the Illawarra Line, the rail assessment was based on an assumption that there would be no reliance on the Illawarra Line from the development. As such, the Waterfall-Thirroul route, which is part of the Illawarra Line, will not be affected by the development and therefore was not addressed in the EA.	-	-	5-K
Rail	The completion of the Maldon-Dombarton rail link would be a much less expensive option than improving rail capacity on the existing line.	We disagree. Initial estimates indicate the Maldon – Dombarton link will cost approximately $550 million to complete. Upgrades to the Moss Vale – Unanderra line will cost much less than Maldon – Dombarton and will be sufficient for operation of Stages 2 and 3 of the Concept Plan. Maldon-Dombarton has not been considered for operation of Stage 1 of the development given the timeframes involved and due to the fact that the Moss Vale-Unanderra line would be adequate to support Stage 1. However, Maldon-Dombarton potentially offers advantages for the container freight task for Stages 2 and 3. The findings of the current feasibility study for	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.5.1	5-L

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		Maldon-Dombarton would be considered as part of the future planning for the development when Project applications are being prepared for Stages 2 and 3.			
Adelaide Brighton Cement Ltd					
Traffic and transport	The concept plan shows construction of a road link which is to be located on Foreshore Road, approximately 150m to the west of the access to the ABCL site. Foreshore Road is the sole access route for ABCL, and therefore sharing of this road with construction traffic will be necessary throughout the duration of the construction works. The traffic assessment does not account for the fact that construction traffic will be using Foreshore Road and the assumption has been made that all operational traffic will access the site via Christy Drive. There is concern that the EA does not take into account traffic impacts of the construction traffic associated with Stage 1 of the proposed development or consideration as to whether the additional traffic can be accommodated or will cause any impacts further along the road network. ABCL is concerned that ABCL has not been consulted in relation to ABCL's current and future truck movements. The only mitigation measure in relation to traffic impacts for Stage 1 works is the preparation of a Traffic Management Plan. It is considered that greater assessment of the impacts of the proposal is	The traffic assessment notes that all operational traffic will access the site via Christy Drive. It is anticipated that the majority of construction vehicles will also use this link off Christy Drive as part of development of the terminals. The new road link off Foreshore Road will only provide access for a proportion of the construction vehicles associated with the reclamation of the container terminals in Stage 1. As a worst case this may reach 23 trucks per hour. Foreshore Road, with a relatively flat gradient, good lines of sight and limited access points and on-street parking, has sufficient capacity to accommodate these additional movements above the current levels. As noted in the EA, Traffic Management Plans would be included in CEMPs prepared for each discrete package of construction works. These plans will be prepared to minimise impacts on the local road network and will include designated haulage routes (via Flinders Street rather than Old Port Road) to avoid Downies Bridge and nearby residential areas adjacent to Five Islands Road. PKPC has no intention to remove or hinder access to existing properties along Foreshore Road either through the construction phase or in the long-term. Long-term access arrangements will be considered in	Stage 1, 2 and 3 (Major Project and Concept Plan)	Appendix I of the EA Final SoC – Attachment F of this report.	6-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	required and certainty that any specific mitigation measures will be undertaken by the applicant to minimise the identified impacts. It is requested that the applicant provide certainty that access along Foreshore Road for ABCL's established road tankers can continue unimpeded for the duration of the construction works. It is requested that the applicant consult with ABCL in relation to truck movements and provide information setting out the proposed arrangements to ABCL for review and comment.	detail as part of further investigation of the Concept Plan and this process will include consultation with all landowners. PKPC has consulted with ABCL following the closure of the public exhibition period to better understand their concerns.			
Traffic and transport	The EA provides no consideration of the traffic impacts related to the construction traffic in Stage 1 using the Foreshore Road and Old Port Road intersection, an intersection heavily used by ABCL and other landowners along Foreshore Road. It is noted from the EA that Old Port Road may require enhancement (including improvements to pavement strength and improved turning radii for long vehicles) in Stage 1 to cater for increased levels of heavy traffic however assessment of this requirement is not provided nor it is included in the Draft Statement of Commitments. We request that the Department of Planning require additional traffic assessment detail to be provided by the applicant in relation to the capacity of Foreshore Road and the Foreshore Road/Old Port Road intersection to accommodate the construction traffic.	Refer response 6-A	Stage 1	Section 18.4.2 of the EA	6-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Traffic and transport	The EA largely refers to potential road and rail infrastructure requirements for Stages 2 and 3, rather than proposed upgrades based on assessments of requirements. The applicant is proposing that consideration of the required road and rail infrastructure is delayed until Stage 2. Information on the required road and rail infrastructure upgrades is required now, at Concept Plan stage. The DGRS issued for the project require the applicant to address traffic impacts during the construction and operational phases of the project, which must include 'recommendations for required infrastructure upgrades as a result of the development'.	The approach is appropriate given the proposed timing for Stage 2 (commencing 2014) and Stage 3 (commencing 2026) and given that applications for project approval will be required prior to construction and operation of those stages. A number of potential road infrastructure works have been identified for Stage 2 but require further assessment such as: • closure of Foreshore Road at rail crossing; • new road link from Christy Drive either through to Foreshore Road or to a new road running parallel to Foreshore Road; and • new road extending north from Darcy Road to the carpark area for the recreational boat harbour. No major rail infrastructure is required for Stage 1 other than extending one rail siding and reviewing the need to install a material handling system. The EA sets out the general requirements for road and rail. It is too premature to assess Stage 2 and 3 requirements in detail until completion of a rail master plan (due to be commenced in 2010). For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 2 and 3 (Concept Plan)	Figure 5-6 in the EA	6-C
Traffic and transport	ABCL has particular concerns related to the following proposals, which represent alterations in the near vicinity of the ABCL site: *Potential closure of Foreshore Road* The treatment of Foreshore Road as part of the	Rail access to the container terminal is an important part of the Concept Plan. Careful resolution of the rail line and Foreshore Road level crossing will be required as part of Stage 2 to ensure that rail and road traffic conflicts are avoided, truck traffic is not unreasonably	Stage 1 and 2 (Major Project and Concept Plan)	Figure 5-3 in the EA	6-D

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	outer harbour development works is of critical importance to ABCL, as it is the only possible access route to ABCL's site. There is concern that the assessment of traffic impacts has been based on the assumption that the majority of additional traffic generated will access the new development via Christy Drive even though the closure of Foreshore Road has not yet been determined. *Potential new road link along the disused rail corridor off Darcy Road* The potential conversion of the rail corridor located adjacent to Darcy Road to a road may impinge on the long term rail transport opportunities for ABCL and neighbouring land owners. The EA recognises that additional studies are required to confirm network capacity and identify the required infrastructure upgrade to support the Concept Plan, including preparing a rail master plan. An example of the lack of certainty in regards to the road and rail infrastructure is shown in the traffic assessment which is based on a modal split of 50% road and 50% rail. However, it is stated that the use of rail may increase depending on whether existing rail infrastructure is upgraded. This in effect makes the 50/50 modal split redundant as it is not based on any meaningful assessment of requirements or proposed infrastructure upgrades. ABCL wish to be consulted in any long term rail strategy for the Port Kembla area and request that the Department of Planning	restricted, access to adjoining properties is maintained and that impacts on adjoining properties are minimised. The use of Christy Drive is desirable because it avoids a rail crossing on Foreshore Road, it avoids the use of Downies Bridge (a rail overbridge on Old Port Road to the south of the Foreshore Road and Old Port Road intersection) and it avoids port traffic using Five Islands Road near existing residential areas. The road and rail assessments were prepared on the basis of conservative worst case assumptions and in some cases the worst case assumptions vary between the road and rail assessments. For the road assessment a 50/50 split applies to dry bulk with different splits for general cargo and containers. A modal split with preference to rail is desirable as it will reduce heavy vehicle traffic on the local and regional road network. For the rail assessment a more conservative 65% mode share to rail for dry bulk was applied in order to show that a higher proportion of handling by rail can be achieved. Detailed design for Stages 2 and 3 of the concept plan has yet to be undertaken. This process will involve consultation with all existing landowners on Foreshore Road to ensure that their existing and future access requirements are achieved. PKPC has initiated discussion with ABCL to better understand their concerns.			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	requires this information prior to approval of the Concept Plan. *New rail overbridge to Foreshore Road* We are concerned that Concept Plan approval for an overbridge on Foreshore Road to separate road and rail is highly problematic given the lack of resolution for the location, and unresolved consultation with landowners who may be negatively impacted, including ABCL. The location of the overbridge is highly constrained and the necessary ramping is likely to require acquisition of part of the ABCL site, which already has a very narrow access point. The required ramping may block the existing entry point to the ABCL site. It is requested that the Department of Planning require the applicant to submit additional information to ensure environmental impacts can be adequately understood prior to Concept Plan approval. It is considered of paramount importance that ABCL is consulted on this matter prior to approval.				
Traffic and transport	The traffic assessment which supports the EA does not consider car parking requirements. ABCL seek identification of the proposed locations and sizes of the required car parking facilities, particularly the construction car parking which will be accessed from Foreshore Road in proximity to the ABCL site. There are concerns that sufficient parking is not provided there may be impacts on the surrounding road network.	Car park facilities during construction would be established within dedicated construction areas internal to the site. Car parks would be designed to cater for the appropriate number of construction vehicles to reduce or avoid potential overflow impacts on the local road network, such as Foreshore Road. For further discussion of issues relating to carparking please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	6-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Construction hours	Dredging pumps and plant may be operational 24 hours a day at certain stages of the project. Confirmation is sought that 24 hour activities related to dredging only includes operation of pumps and plant and does not involve any transportation of materials to or from the site. ABCL operations involve truck movements to and from the site 24 hours a day. Therefore any works permitted outside the standard construction hours may have an impact on ABCL deliveries. It is requested that a commitment is made by the applicant to consult with ABCL prior to any construction works occurring outside of the agreed standard construction hours.	Construction activities, including truck movements, will be restricted to normal construction hours i.e. 7am-6pm Monday to Friday and 8am to 1pm on Saturday, with the exception of the dredging pumps and plant which will operate 24 hours per day. The dredging pumps and plant will be located in the harbour itself and won't adversely impact on ABCL deliveries.	Stage 1 and 3 (Major Project and Concept Plan)	Section 6.3.7 of the EA	6-F
Vibration	The EA does not identify the ABCL site as an industrial receiver and therefore has not considered potential vibration impacts on ABCL structures. Certain items of machinery operated by ABCL include vibration monitors to ensure there is not excessive vibration in the machinery. These monitors might detect vibrations caused by the development. The detection of vibrations by these monitors could result in interruptions to ABCL's machinery and operations. In addition, vibration impacts may affect the amenity of workers at the ABCL site, particularly as development works will occur over a long time period between the years 2010 to 2037. It is recognised within the EA that the levels at which annoyance occurs are much lower than the structural damage criteria	The ABCL site was included within the noise impact assessment and the impacts of vibration during construction and operation were discussed in Section 4.3.5 and 4.7 of the revised NIA dated 20 September 2010 in Attachment C of this report. This demonstrates that the predicted vibration impacts at the ABCL site are acceptable. A detailed geotechnical investigation has recently been undertaken to determine the location and levels of bedrock that will need to be removed during dredging activities. Data from this study and small trial blasts prior to construction will assist in setting appropriate limits for both human comfort and structural damage. Details of mitigation measures, including trial blasting and notification of proximate receivers, will be included in the Construction Noise and Vibration Management Plan that will be prepared prior to construction and approved by DoP.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	6-G

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	for buildings. ABCL request that the Department of Planning require the applicant to undertake environmental assessment of the potential vibration impacts on their premises, being a close neighbour, located within 200m of the subject construction site. It is requested that the results of this assessment be made available for review by ABCL and their consultants. It is requested that mitigation measures identified with regard to the impacts of vibration should be included in the applicant's Statement of Commitments.	PKPC will consult with ABCL during preparation of the Construction Noise and Vibration Management Plan to ensure appropriate mitigation measures are incorporated into the plan that will minimise potential impacts on ABCL's machinery.			
Existing easement / Operations	Proposed works in the vicinity of Darcy Road and Foreshore Road may impact upon the registered easement DP1143326 on Lot 11 DP1006859 and Lot 1 DP 209933 in favour of Integral Energy for the purposes of underground high voltage electricity cables that are the sole source of electricity supply to the ABCL's site. ABCL seeks assurance that the proposed works will not impact upon the long term security of registered easement DP1143326 on Lot 11 DP 1006859 and Lot 1 DP 209933.	There are no Integral Energy easements over PKPC port land. The subject easements are located immediately adjacent Darcy Road and would not be impacted during Stage 1 of the development. However, there is potential for construction works associated with Stage 2 of the development to impact on Lot 1 DP209933, which is located in the vicinity of the connection between the disused rail corridor and Darcy Road. In the event that construction activities impact on an easement on adjacent land, PKPC will undertake to resolve any issues/concerns directly with Integral Energy at that time.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	6-H
Consultation	Lack of consultation with ABCL and other landowners on Foreshore Road	As part of the consultation undertaken during the Part 3A planning approval process, two information sessions were held in August 2009 and April 2010 and Morgan Cement (a subsidiary of ABCL) was invited to both. It is considered that the consultation throughout the Part 3A process was sufficient and provided	Planning approval	Table 8-1 of the EA	6-I

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		adequate opportunity for ABCL to raise issues. PKPC has consulted with ABCL following the public exhibition period and will continue to consult with ABCL, particularly when an application for Project approval is being made for Stage 2 of the Concept Plan.			
Department of Environment, Climate Change and Water					
Noise	The noise impact assessment does not appear to have identified whether any sensitive land uses other than residential are potentially impacted from the development, for example schools or churches.	Impact at the following sensitive receivers has been assessed: • St Patrick's Primary School, located at 40 O'Donnell Street; • A church on the corner of Fitzwilliam Street and Kembla Street; and • A church on the corner of Church Street and Military Road. Results are presented in Attachment D of this report. The results predict compliance at all receivers.	Stage 1, 2 and 3 (Major Project and Concept Plan)		7-A
Noise	There are additional receivers in Reservoir Street that were identified in the draft noise impact assessment which have not been included in the final noise impact assessment. Noise Assessment Unit (NAU) is unsure why these receiver locations have not been included in the assessment.	Predicted noise levels for receivers in Reservoir Street Sensitive Catchment Area 1 (SCA1) have been calculated and found to comply both during construction and also during operation for both the Major Project and Concept Plan. Details can be found in the revised NIA dated 20 September 2010 contained in Attachment C of this report. .	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-B
Noise	From a site visit, NAU identified receivers in Keira Street that were elevated and have a direct view of the proposed development site. NAU would like to see noise levels predicted to these elevated receiver locations.	Noise levels for receivers on Keira Street in SCA2 have been calculated and found to comply during construction and during operation of the Major Project. Noise levels during operation of the Concept Plan comply during the daytime period but there are exceedances of between 1-3dB(A) during the night	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-C

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		time period if no mitigation is applied to train operations in the South Yard. These exceedances are avoided, except in one instance, if mitigation options are applied. Details can be found in the revised NIA dated 20 September 2010 contained in Attachment C of this report.			
Noise	NAU considers that any operational noise limits set for the Port Kembla Outer Harbour development would apply to the entire development (stages 1, 2 and 3), not just to stage 1.	The criteria established in Table 7 of Appendix J of the EA are applicable for the entire development. Based on the equipment selection modelled for the Major Project it is unlikely that this stage of operations will utilise all of the noise 'allowance'. Once the equipment for the operation is confirmed a comparison with the equipment used for this assessment should be made to determine whether the assessment needs to be revised.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-D
Noise	NAU does not agree with the methodology in the noise impact assessment to set the road traffic noise criteria. The noise impact assessment uses measured LAeq15hour and LAeq9hour noise levels from Five Islands Road to set the criteria for all roads in the vicinity of the development site (arterial, collector and local roads) as the same criteria. The Environmental Criteria for Road Traffic Noise (ECRTN) has different criteria for each of the three road types (meaning, land use developments with potential to create additional traffic on). Further, the ECRTN requires that all feasible and reasonable measures to reduce existing noise levels should be explored before the allowance criteria are applied. This does not appear to have been done. Nonetheless, NAU can accept that there is limited availability	In respect to road traffic noise, the principal roads affected (Five Islands Road and Masters Road) were all considered to be arterial or collector roads and therefore have the same criteria as set in Table 11 of Appendix J of the EA. The inclusion of 'local' roads in the title for this table is an error and has been removed in the revised NIA dated 20 September 2010 (refer Table 12 contained in Attachment C of this report). The predicted increase in road traffic noise levels at sensitive receivers as a result of the Major Project is 0.3 dB(A) and the Concept Plan is 0.6 dB(A) both during the peak PM peak traffic flow and both adjacent to receivers on Five Islands Road at Cringilla (refer to Table 31 in Section 4.6 of the revised NIA). This is below the ECRTN 'maximum allowable increase' of 2dB(A). Discussion of feasible and reasonable mitigation measures such as use of private roads, restricting	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	for the proponent to reduce existing noise levels on the roads surrounding the development site. It also appears that at least Five Islands Road, Masters Road and the Princes Highway already have significant truck movements and so the additional movements created by the proposed development may not present an appreciable increase in existing road traffic noise levels.	vehicle movement times, use of noise barriers etc has been included in Section 5.6 of the revised NIA. A Traffic Management Plan (part of the Construction Environmental Management Plan and Operation Environmental Management Plan) will include control measures such as designated haulage routes to and from the site to minimise impacts on nearby residential users.			
Noise	NAU notes that construction noise criteria have been set as day, evening and night levels, however the Interim Construction Noise Guideline does not specify evening criteria. Therefore NAU considers that the night time construction criteria would apply during the "evening" period specified in the NIA.	The evening criteria have been removed and the night time criteria have been adopted (refer Tables 38 and 39 of the revised NIA report).	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-F
Noise	NAU notes that assessment of vibration-induced damage to structures does not come under DECCW's charter and therefore this information in the noise impact assessment has not been reviewed by NAU.	Noted	Stage 1 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-G
Noise	NAU notes that there are some items of plant and equipment in the final noise impact assessment that have a different sound power level (Lw) to the draft noise impact assessment, for example the sheet piling rig had an Lw of 131 dB(A) in the draft noise impact assessment and an Lw of 101 dB(A) in the final noise impact assessment, without any explanation for the changes. There are further items that are not included in the final noise	Review of the sound power levels used in the construction noise assessment confirms that the L_w used for some of the construction plant was incorrect. The levels have been amended and are consistent with data published in the UK Department of Environment, Food and Rural Affairs (DEFRA) document 'Update of noise database for prediction of noise on construction and open sites'. Assessment of the construction noise impact utilising the amended sound power levels predicts compliance	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-H

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	impact assessment that were included in the draft noise impact assessment, without any explanation for the changes, for example the onshore dredging pump is not included in the final noise impact assessment and the metal clangs and wheeled loaders are not included in the final noise impact assessment, whereas they were included in the draft noise impact assessment.	at all of the noise sensitive receivers in SCA1 and SCA2 (refer to revised NIA dated 20 September 2010). Some of the equipment included in the draft noise impact assessment has since been omitted due to further clarification of the construction methodology as discussed with PKPC. For instance, dredging pumps and wheeled loaders were omitted as AECOM was advised they will not be used. Metal clangs are included in the sleep disturbance assessment. The amended predicted construction noise levels at the worst affected receivers in SCA1 and SCA2 are shown in the revised NIA dated 20 September 2010. The predicted construction noise impact at all of the worst affected receivers in SCA1 and SCA2 complies with the daytime and night-time construction noise criteria.			
Noise	The assessment of construction noise in Section 4.3 is very light on details. It is not clear to NAU where the plant and equipment was located in the model, what scenarios were modelled, nor what are the predicted construction noise levels.	In Section 4.3 of the revised NIA dated 20 September 2010 further detail has been provided in relation to the construction noise assessment including assumed construction equipment, sound power levels, the construction scenario modelled (including overlap between Stages 1 and 2) and assumes the worst case shortest distance between source and receivers. The predicted construction noise levels are detailed in the revised NIA and this shows compliance with noise limits at all sensitive receivers in SCA1 and SCA2 during both the day and night time periods. Additional assessment, with a focus on blasting and rail construction activities, will be undertaken as detailed construction methodologies are established and Construction Noise and Vibration Management Plans are developed by contractors.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report. Final SoC – Attachment F of this report.	7-I

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Noise	The draft noise impact assessment included predicted construction noise levels, however the final noise impact assessment only includes predicted construction noise levels for the stabling yard construction works in Section 4.3. The noise impact assessment only states that "The construction noise impact is predicted to comply with the daytime, evening and night time construction noise management levels at all nearby sensitive residential and commercial receivers."	The revised NIA dated 20 September 2010 includes predicted construction noise levels at the worst affected receivers in SCA1 and SCA2. The assessment allows for the potential overlap between Stage 1 and Stage 2 construction works (refer Section 4.3 and Table 19 of the revised NIA).	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-J
Noise	NAU requires an assessment of the cumulative construction noise levels for all construction activities operating at the same time. For example, if the stabling yard construction works will occur at the same time as the reclamation and berth construction, then all these activities should be included in the model to generate predicted construction noise levels from all of those works.	The construction scenario modelled in the revised NIA dated 20 September 2010 (refer Section 4.3 and Table 19) is considered to be representative of the likely 'worst case' conditions and allows for potential overlap between Stage 1 and Stage 2 construction works including dredging, reclamation, berth construction and rail siding construction in the South Yard. The model for the construction noise assessment assumes: • Stage 1 and Stage 2 construction occurs simultaneously; • the shortest possible distance between construction noise sources and the closest sensitive receivers; • all construction plant is operational concurrently; • there is an adverse source to receiver wind speed of 3m/s. The detailed construction schedule for the berth construction works and South Yard is yet to be determined. However, the construction works at the South Yard for Stage 1 are likely to be limited in scope and duration i.e. maximum of six months.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-K

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		Refer to section 4.3.3 of the NIA for an assessment of the cumulative impacts of rail and berth construction. The predicted noise impact as a result of the concurrent construction activities is the same as with the South Yard construction operating independently. The construction activities at the South Yard are the dominant source of construction noise.			
Noise	The noise impact assessment indicates that not a lot of detail is known of the proposed construction program, however the EA contains significantly more detail on the proposed construction program than what appears to in the noise impact assessment.	The noise impact assessment has been revised to reflect the known detail of the construction program. A 'worst case' approach has been adopted which allows for potential overlap between Stage 1 and Stage 2 construction works. As a result the construction noise assessment is considered to be conservative.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-L
Noise	NAU considers that sound power levels for construction equipment given in Table 18 of the NIA are low, on the basis of our reviews of proposals with similar plant and considering the detail presented in the draft noise impact assessment. We recommend that the proponent examine the Lw used in the assessment, and if correct, offer a SoC that all plant and equipment will be selected to satisfy the Lw in the noise impact assessment.	The L_W levels for construction equipment have been reviewed and amended in the revised NIA dated 20 September 2010 (refer Section 4.3) and the predicted impact re-calculated. Assessment of the construction noise impact utilising the amended L_w has been carried out and is predicted to comply at all receivers during the daytime and night time (refer to the revised NIA).	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-M
Noise	NAU would recommend that no construction take place during the night-time hours unless a more detailed assessment be performed and a Construction Noise and Vibration Management Plan to minimise construction noise impacts (from on and off-site activities) be prepared and implemented.	The only construction scheduled to take place at night is off shore dredging activity and this has been assessed and shown to comply with the night time construction noise management level at all receivers (refer to the revised NIA). Therefore, further assessment of night time dredging activities is not required. Dredging activities will be subject to measures outlined in the Construction Noise and Vibration Management Plan.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report. Final SoC – Attachment F of this report.	7-N

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Noise	The noise impact assessment presents predicted construction noise levels for three different stabling yard options in Table 21, whilst the EA appears to confirm that the south yard option will be adopted. The predicted levels for the south yard option exceed the criteria by up to 13 dB(A). NAU considers the noise impact assessment has not adequately assessed all feasible and reasonable mitigation measures to be implemented to minimise predicted noise impacts from activities in the south yard.	A rail infrastructure upgrade is required to service Stage 1. Three options were considered in the vicinity of the balloon loop adjacent to the Outer Harbour, including an extension of a siding in the South Yard, a new siding around Port Kembla North Station or reconfigure the North Yard. An upgrade in the South Yard is the preferred option both operationally and economically. The principal contributor to the exceedance of the construction noise criteria from construction works in the South Yard is the use of demolition saws and the use of mobile plant such as dump trucks and bulldozers. The revised NIA dated 20 September 2010 has discussed the use of a suitable temporary noise barrier around the site when the demolition saws are in use and this is expected to reduce the predicted noise impact by up to 5dB(A). Furthermore, the construction works at the South Yard for Stage 1 are likely to be limited in scope and duration i.e. completed within 6 months and the demolition saws will only be used for a fraction of this time. Possible mitigation measures during construction are detailed in Section 5.3 of the revised NIA dated 20 September 2010. Further mitigation measures will be confirmed as part of the detailed design phase and Construction Noise and Vibration Management Plan.	Stage 1	Revised NIA dated 20 September 2010 in Attachment C of this report. Final SoC – Attachment F of this report.	7-O
Noise	The noise impact assessment does not appear to have considered any correction for the character of noise from construction plant/equipment/activities, for example from the piling rig.	The revised NIA has not considered any tonality penalty for construction plant such as the piling rig. The predicted construction noise levels demonstrate compliance at all sensitive receivers in SCA1 and SCA2. Given the distance separation between the	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-P

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		construction noise sources and the closest receivers it is considered unlikely that a tonality penalty would materially impact on these predicted noise levels. It is noted that the construction noise assessment is based on conservative worst case construction scenarios. It is recommended that feasible and reasonable mitigation measures are determined during the production of the Construction Noise and Vibration Management Plan and a number of mitigation measures have been recommended (refer Section 5.3 of the revised NIA contained in Attachment C of this report).			
Noise	Section 4.4 of the noise impact assessment includes the assessment for operational noise, however predicted noise levels have only been provided for the rail siding operation for the Major Project. The noise impact assessment states that the development is predicted to comply for the Major Project and also for the Concept Plan during the daytime and evening, but that there are minor predicted exceedances of up to 4 dB(A) at a number of unspecified residences during the night-time. NAU is unable to set recommended general terms of approval in the usual format without predicted noise levels at identified potentially most affected noise receivers.	Predicted operational noise levels for the Major Project and Concept Plan are discussed in Sections 4.4 and 5.4 of the revised NIA dated 20 September 2010 and the modelled results are detailed in Attachment C of this report. The impacts of operational noise associated with the Major Project are predicted to comply with the daytime, evening and night time project specific noise goals at all sensitive receivers in SCA1 and SCA2 following application of basic noise mitigation in the South Yard to address noise from trains. The impacts of operational noise associated with the Concept Plan are predicted to exceed the daytime evening and night time project specific noise goals at a number of sensitive receivers in SCA1 and SCA2 by between 1-4dB(A) following the application of noise mitigation in the South Yard to address noise from trains. It is important to note that the operational scenario modelled to produce the expected noise levels are extremely conservative and likely to occur on only a	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report. Final SoC – Attachment F of this report.	7-Q

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		very limited number of occasions per year. It is likely that the predicted exceedances will be further reduced by noise mitigation measures at the detailed design phase. It is also recommended that a further acoustic assessment be undertaken prior to the commencement of Stage 2 and 3 of the Concept Plan by which time the rail master plan for Port Kembla Outer Harbour will be completed and there will be further certainty about rail operations and supporting infrastructure required to support Stages 2 and 3 of the Concept Plan.			
Noise	A ground-borne noise impact assessment from rail operations in the South Yard has not been undertaken, and is stated as being recommended to be undertaken "following the rail infrastructure planning study scheduled for 2010".	Noted. The revised NIA dated 20 September 2010 has assessed noise from train operations in the South Yard for both the Major Project and Concept Plan as detailed below: • Major Project construction – 1 train per day (1 fill train); • Major Project operation – 4 trains per day (4 multi-purpose trains); • Concept Plan operation – 21 trains per day (16 container trains and 5 multi-purpose trains). Refer to section 4.7.3 of the revised NIA for assessment of ground-borne noise impacts. The closest residential receivers are unlikely to be adversely affected by ground-borne noise. Any impact on the nearest commercial receivers will be masked by air-borne noise.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-R
Noise	NAU notes that the stabling yard sites are currently operational, by Pacific National, on a 24/7 basis. The Major Project is said to not add additional rail movements, rather to use one of	The revised NIA dated 20 September 2010 has assessed noise from additional train operations in the South Yard for both the Major Project and Concept Plan and these movements are in addition to the	Stage 1, 2 and 3 (Major Project and Concept	Revised NIA dated 20 September 2010 in Attachment C	7-S

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	the Pacific National movements. The predicted noise levels for the stabling yard activities are from the Major Project Stage 1 only. The noise impact assessment states that overall Concept Plan rail activities are not known at this stage.	existing movements occurring in the South Yard (3 trains per day). It is proposed that the impact of rail movements associated with Stages 2 and 3 of the Concept Plan be assessed in further detail at the detailed design phase as part of Project applications for Stages 2 and 3, following completion of the rail master plan (which is due to commence in 2010).	Plan)	of this report. Final SoC – Attachment F of this report.	
Noise	Section 5.2 states that the operational noise assessment for the Concept Plan has assumed a worst case scenario of all berths at the multipurpose terminals and container terminals are working at maximum capacity (4 berths), however the EA states that there are 4 berths proposed for the multipurpose terminals and 3 berths for the container terminals. This does not appear to have been reflected in the model for the assessment of noise from the Concept Plan development	It is unrealistic to model operational noise impacts on the basis of seven ships at berth simultaneously. In the revised NIA dated 20 September 2010, the operational noise model for the Concept Plan included two ships at the multi-purpose berths and two ships at the container terminal berths (four ships in total). Although there are seven berths in total no more than four berths are likely to be occupied at one time. This is the worst case and likely to occur during the night time period (worst case for thermal inversions) for no more than 10% of the time (refer to Section 5.4 of revised NIA for further details). In order to realise this worst case scenario all four ship berths would need to be working at maximum capacity simultaneously with associated peak traffic flow rates and coinciding with with a f-class temperature inversion.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-T
Noise	As mentioned above, NAU considers that any recommended GTAs for the Major Project will apply to all of Stages 1, 2 and 3, not just to Stage 1. As such, NAU would like to see the Concept Plan predicted levels (either as tables or as contour maps) as a representation of the worst case scenario with all operational activities included.	Predicted operational noise levels for the Concept Plan with all operational activities included are provided as Contour Plots and Tables in the revised NIA dated 20 September 2010.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-U

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Noise	It is not clear if any of the assessments have included modifying factor corrections for the character of the noise sources on site, for example the conveyor drives are a potential source of tonal noise. NAU considers that the conveyor drives require treatment so that their operation does not result in tonal noise at any receivers. This should be reflected in a SoC.	The addition of a 5dB(A) tonality penalty for the conveyor drives is considered to be overly conservative and unnecessary at this stage. In the revised NIA mitigation options including the use of shrouds for conveyor equipment and the sourcing of acoustically considerate equipment have been recommended. It is recommended that when plant is chosen that the acoustic performance of the conveyor system is considered and suitable mitigation measures included (if necessary). This can be addressed as part of the NVMP for the project.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-V
Noise	The noise impact assessment provides an assessment of sleep disturbance from the proposed Concept Plan and the Major Project, stating that train horns and metal clangs of the container stacks are the likely contributors to potential sleep disturbance. The predicted levels for the train horns exceed the criteria by up to 11 dB(A) and the predicted levels for the container clangs do not exceed the criteria. The noise impact assessment states that it is recommended that alternatives to train horns be used on site, however NAU notes from previous proposals that alternatives to train horns are not necessarily a viable option. The proponent should provide an explanation of what alternatives are proposed. The noise impact assessment does not address the requirements in the Application Notes for the INP, where the screening criteria are not met, for a more detailed analysis being required. The detailed analysis should cover the maximum noise level or LA1, (1 minute), that	The issue of sleep disturbance and the use of train horns at night time for the Major Project and Concept Plan operations are discussed in some detail in Sections 5.4.1 and 5.4.2 of the revised NIA dated 20 September 2010. Currently up to seven train horns are sounded during the night time period at one of three locations within the Balloon Loop (Old Port Road crossing, Foreshore Road crossing and the Flinders Street Bridge). From a sleep disturbance perspective the Old Port Road and Foreshore Road crossings are more sensitive given their proximity to sensitive receivers. The proposed Major Project will add an extra two train horns and the proposed Concept Plan will add an extra five train horns per night. No train horns will be sounded as trains move onto sidings from the main line. To mitigate the impact of train horns PKPC will commit to the use of shorter duration train horn toots rather than standard train horn blasts. In addition, for Stages 2 and 3 of the Concept Plan PKPC will also commit to investigate the feasibility of	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report. Final SoC – Attachment F of this report.	7-W

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	is, the extent to which the maximum noise level exceeds the background level and the number of times this happens during the night-time period. Some guidance on possible impact is contained in the review of research results in the appendices to the ECRTN. Other factors that may be important in assessing the extent of impacts on sleep include: how often high noise events will occur time of day (normally between 10pm and 7am) whether there are times of day when there is a clear change in the noise environment (such as during early morning shoulder periods).	further mitigation measures such as: • the removal of the Foreshore Road crossing; • grade separation at the Old Port Road crossing. It is proposed that the issue of potential sleep disturbance associated with increased train movements be investigated further prior to the commencement of Stages 2 and 3 once the rail master plan has been prepared and more information is known about likely train movements in the Outer Harbour.			
Noise	As noted above, predicted road traffic noise levels have been assessed against the 2 dB(A) allowance criteria, without any obvious assessment of feasible and reasonable mitigation measures. The ECRTN requires that existing road traffic noise levels be established.	AECOM has assessed potential mitigation measures that can be applied to mitigate traffic noise (refer to the revised NIA dated 20 September 2010) and considers that none of the potential mitigation measures are considered to be feasible and reasonable. Also refer to response 7-E.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	7-X
Noise	At a meeting with the proponent during the adequacy review stage, the proponent agreed to include a SoC to install cable conduits to support ship board power should this option be utilised in the future. It appears that this SoC has not been included.	A commitment to provide cable conduits for possible future use of ship to shore power will be included in the final Statement of Commitments (Attachment F of this report).	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	7-Y
Noise	Due to the large timescale involved in implementation of the Concept Plan an overarching Noise and Vibration Management Plan for the Outer Harbour should be developed and maintained. This document will be required to be updated on a regular basis in order to track the evolving noise environment	AECOM considers this to be an appropriate method of tracking the ongoing noise impact. The plan should detail regular monitoring of existing noise levels and pre construction noise modelling to ensure that a systematic approach to noise control is maintained. Feasible and reasonable mitigation measures should be implemented where required as	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report. Final SoC –	7-Z

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	resulting from ongoing construction and additional operations.	development progresses. A Statement of Commitment to use acoustically sensitive plant and take advantage of emerging acoustic technology is made in the revised NIA dated 20 September 2010.		Attachment F of this report.	
Noise	The predicted noise levels for the stabling yard activities are from the Major Project (Stage 1) only and overall Concept Plan rail activities are not known at this stage. In the absence of this information DECCW would like to work with DoP to include a condition in any Project approval that the Proponent only use a rail service provider who will contract 'Best Practice' rolling stock. By 'Best Practice' we mean only locomotives that will have received an approval to operate on the NSW rail network in accordance with the noise limits L6.1 to L6.4 in RailCorp and ARTCs Environment Protection Licenses or a Pollution Control Approval issued pursuant to the former Pollution Control Act 1970.	DECCW has sought an explanation as to why it is not feasible to use only "best practice" rolling stock to service the development and cited Port Waratah's Kooragang Island Coal Loader Project as an example of new rail generating activities where this is a requirement. It is not feasible to specify any type of rolling stock for Stage 1 of the Outer Harbour development because the berth and associated terminal space that is proposed for operation will be a multi-purpose, common-user facility for cargo types and points of origin that are not yet known. The description of rail operations given in Section 19.5.2 of the Environmental Assessment should be regarded as indicative only. The term "current customers" in this section should be replaced with "current prospective customers" as these cargoes are not currently handled through Port Kembla and PKPC has not as yet secured commitments for any of them to be handled through the proposed Outer Harbour facility. This is in contrast to operations such as the Kooragang Coal Terminal which service regular customers most, if not all, of whom have made long-term commitments to use rail transport to that facility. PKPC cannot be certain that future customers (i.e. cargo owners or exporters) seeking to transport cargo to the Outer Harbour via rail will be able to secure "best practice" rolling stock at a reasonable cost. PKPC supports the intent of the recommended condition and	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	7-AA

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		is willing to liaise with prospective customers on a case-by-case basis to determine whether it is feasible and reasonable for them to use this rolling stock. It should also be noted that any major exporter of bulk products transported to the Outer Harbour by rail is likely to seek to lease a parcel of land from PKPC to establish a dedicated terminal for that cargo type. If this were to occur, the development of such a terminal would require separate approval and conditions regarding rail noise could be determined at that time.			
Air quality	The objective for the project should be to ensure that all relevant air quality criteria are satisfied at the nearest existing or likely future off-site receiver. The Air Quality Impact Assessment (AQIA) reports an exceedance of particulate matter less than 10 micros (PM10) Ground Level Concentration (GLC) Criteria across a large area of Port Kembla. The PM10 result is a modelled exceedance of a health based criteria. The EA states the PM10 modelling is conservative. DECCW seeks the following information on the AQIA to better understand these reported impacts and the practical measures that can be implemented to ensure the above objective is met. -the extent of each exceedance (magnitude, duration/frequency) and the conditions likely to result in an exceedance -a clear identification and quantification of dust and PM10 sources (emissions inventory – including number of sources) -likely impacts (if any) that might arise from the dust generated from slag use. We refer you to	A revised AQIA dated 10 September 2010 has been prepared to address submissions received during the public exhibition period and in particular comments received from the DECCW and DoP. In addressing the issues raised, a number of the underlying assumptions and methodologies were revisited, in particular those relating to ship and train movements, to refine the input information to the model to better reflect operational characteristics and to correct some inconsistencies noted in the original emissions inventory. For further details of the changes refer to Section 1.2 of the revised AQIA. For details of the extent of exceedance and the conditions likely to result in an exceedance please refer to Tables 25 to 36 in Sections 7.2, 7.3 and 7.4 of the revised AQIA. For clear identification and quantification of dust and PM_{10} sources please refer to the revised AQIA which contains details relating to the Emissions Inventory and Mass Emission Rates. For discussion of the likely impacts arising from the dust generated from the use of blast funace slag in the reclamation area please refer to Section 8.2 of the	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised AQIA dated 10 September 2010 in Attachment B. Final SoC – Attachment F of this report.	7-AB

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	the constituents listed in the *Slag Exemption* granted in 2010 under Part 6 of the *Protection of the Environment (Waste) Regulation 2005*. -further identification and assessment of the Best Management Practices (BMP) which will be applied to these dust sources to eliminate or minimise emissions. BMPs should include but not be limited to the following: • construction related dust minimisation techniques per best practice guidelines • real time dust monitoring (for example TOEM) linked to a reactive dust management plan (as suggested in the EA) • emissions control devices on trucks and other construction equipment (on road and off-road) • alternatives to truck transport on external roads during the emplacement stage for example rail or use of private roads • opportunities to maximise the amount of freight that can be transported by rail We would like to discuss these and other techniques further with the proponent to achieve the above air quality outcome.	revised AQIA. Predicted ground level concentrations of all metals potentially present in slag dust are lower than relevant DECCW criteria and are therefore considered unlikely to result in adverse human health impacts. Appropriate Best Management Practices (BMP) available to construction and operation activities have been defined in Section 8.3 and Table 37 of the revised AQIA and include mitigation measures such as: • confining vehicle access to designated access roads; • implementing site speed limits; • using covers on trucks carrying spoil, sand or loose materials; • wetting down or use of surfactant on stockpile areas; • stabilising reclaimed surface areas; • sealing of regularly trafficked access roads; • sealing of operational terminal areas; • adjusting work pratices based on wind observations and dust monitoring results; • putting in place a complaints management system; • operation of a dust monitoring program. Material will be sourced over time from major construction projects most likely in the Sydney metropolitan area. PKPC will endeavour to transport 100% of fill material sourced from the Sydney metropolitan region by a combination of barge and rail. For further discussion of issues relating to the source of fill material from construction projects please refer to the following documents in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		The modal split for the operation of the Outer Harbour expansion favours rail to a significant degree and PKPC will commission a rail master plan to be commenced in 2010 to identify rail infrastructure upgrades required to support Stages 2 and 3 of the Concept Plan.			
Air quality	The objective for the project should be to ensure that all relevant air quality criteria are satisfied at the nearest existing or likely future off-site receiver. The Air Quality Impact Assessment (AQIA) reports an exceedance of nitrogen oxides (NOx) GLC exceedance at one sensitive receiver location. The NOx result is a modelled exceedance of a health based criteria which incorporates a high background concentration. DECCW seeks the following information to better understand these reported impacts and the practical measures that can be implemented to ensure these objectives are met. • the extent of each exceedance (magnitude, duration/frequency) and the conditions likely to result in an exceedance • a clear identification and quantification of NOx sources (emissions inventory – including number of sources) The draft SoC sought regarding ship board power would also, if implemented, further reduce NOx and PM_{10} emissions from the operational area. DECCW seeks to discuss this option further with Department of Planning and the proponent.	For details of the extent of NOx exceedances and the conditions likely to result in an exceedance please refer to Tables 26, 30 and 34 in Sections 7.2, 7.3 and 7.4 of the revised AQIA. In summary there are no predicted NOx exceedances during the operational phases of the Major Project or Concept Plan and there is only one predicted NOx exceedance (cumulative with background) during the construction phase of the Major Project. For clear identification and quantification of NOx sources please refer to the revised AQIA which contains details relating to the Emissions Inventory and Mass Emission Rates. Berth design would include allowance for alternative marine power (AMP) for vessels at berth, also known as cold ironing, The success of AMP will depend upon the adoption of suitable international standards for the supply of shore based electricity to ships and on a critical mass of vessels being suitably equipped to receive shore based power.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised AQIA dated 10 September 2010 in Attachment B. Final SoC – Attachment F of this report.	7-AC

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Terrestrial ecology	DECCW recommends that PKPC prepare a Green and Golden Bell Frog Master Plan which provides the strategic framework on how the applicant will manage GGBF and its habitat across the Port Kembla Outer Harbour area. DECCW considers that this GGBF Master Plan should be provided as additional information to support the management plan as it will inform proposed and future projects within the Port Kembla Outer Harbour area over the next 30 years. We also recommend the proponent consult with DECCW in the development of this Master Plan.	PKPC is supportive of the suggested GGBF Master Plan. The GGBF Master Plan will provide opportunities to strategically plan for a range of measures to conserve and enhance GGBF habitat in areas adjacent to the Outer Harbour while allowing for the proposed development. Following discussion with DECCW officers it is clear that most of the PKPC-owned land for with potential GGBF habitat measures is located within freight rail corridors and associated lands that were transferred to PKPC by RailCorp in 2008. Therefore PKPC has proposed to prepare the GGBF Master Plan after completing the Rail Master Plan to ensure compatibility with rail requirements for future stages of the development. DECCW has recommended completion of the GGBF Master Plan prior to commencement of construction of Stage 1 of the development which would effectively pre-date the Rail Master Plan. PKPC is not supportive of any attempt to "lock in" GGBF habitat areas prior to understanding the rail infrastructure requirements for the Outer Harbour. PKPC is willing to commit to: • Preparing a GGBF Management Plan prior to commencement of construction with a view to minimising the impact of construction works on GGBF; • Preparing a plan which identifies areas of existing and potential new GGBF habitat for consideration in the Rail Master Plan; and • Preparing a GGBF Master Plan following completion of the Rail Master Plan and prior to commencement of operations in Stage 1 of the development. In preparing the GGBF Master Plan it should be noted	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	7-AD

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		that: • No GGBF habitat is proposed for the development footprint area as shaded brown in the Concept Plan (Fig 5-3 of the EA). There is no evidence to suggest that this area is current GGBF habitat and the proposed future use of the land would involve high levels of heavy vehicle and mobile equipment traffic that would be hazardous to GGBF. • The GGBF Master Plan shall be adaptive in nature and shall be reviewed as required to meet operational and conservation requirements. • PKPC will consult DECCW and other relevant stakeholders during preparation of the GGBF Master Plan.			
Terrestrial ecology	The proposed access road from Darcy Road to the boat harbour along the disused rail corridor is a very significant GGBF habitat for the Port Kembla GGBF population as it supports freshwater channels, shelter and foraging and movement habitat. DECCW request that alternative locations for the proposed new access road be identified in order to avoid habitat loss and/or fragmentation of the GGBF habitat. In addition, options to mitigate habitat loss and/or fragmentation of GGBF habitat along the old rail corridor have been deferred to the detailed design phase of the proposed access road. In the absence of the above information DECCW is unable to evaluate the likely direct and indirect, construction and operational	PKPC staff have discussed with DECCW officers the 4 options for continued public access to the Boat Ramp and Harbour. The options are summarised as follows: **Option A:** Do nothing and retain existing access via Foreshore Road. This will significantly increase safety risks at the Foreshore Road level crossing due to increased number of train movements over the crossing. Note that it is not feasible to create grade separation at this point due to the proximity of the crossing to the Old Port Road intersection. **Option B:** Build a new road from Darcy Road to the Boat Ramp car park via the disused rail corridor between Morgan Cement and Orrcon (as per the Concept Plan Figure 5-3 in the EA). This would require removal of trees, shrubs and noxious weeds (i.e. lantana) along the corridor. GGBF are known to inhabit	Stage 2	Section 17.4.1 of the EA Final SoC – Attachment F of this report.	7-AE

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	impacts, of the proposed access road on the Port Kembla GGBF population. To satisfy Step 4 of the draft *Guideline for Threatened Species Assessment* (DoP and DECCW, 2005) the proponent should identify and describe mitigation measures to avoid or mitigate habitat loss and/or fragmentation of GGBF habitat associated with the proposed access road proposal as part of the Concept Plan. The response should also contain justification of the preferred option based on the key thresholds outlined in Step 5 of the draft *Guideline for Threatened Species Assessment*.	this corridor. There is sufficient width to have a GGBF movement route along the corridor by retaining the existing open channel or providing an appropriately vegetated drainage swale adjacent to the road. This route is unlikely to result in significant disturbance of heritage items such as the Mobile Steam Block Setting Crane or the Pillbox. **Option C:** Extend Gloucester Boulevard through the Heritage Park to the Boat Ramp car park. PKPC has undertaken preliminary site survey to identify potential alignments for this road. While this option retains much of the vegetation in the rail corridor as described above, it would still require disturbance of GGBF habitat features including: • Earthworks adjacent to the northern section of the drainage channel where exposure to sunlight and cumbungi growth offer the best GGBF habitat; • Loss of, or disturbance adjacent to, the Heritage Park pond which has proven to be successful GGBF breeding habitat in the 2 years since its installation; and • Removal of existing rock mounds which offer sheltered over-wintering habitat for GGBF. Other potential issues of concern with Option C include: • the need to move or reconfigure the Mobile Block Steam Setting Crane to accommodate some potential alignments; • widening of the existing bitumen driveway access and potential impacts on Aboriginal heritage values associated with shell middens at the northern end of MM Beach; and • the gradient of the road as it drops from the			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		upper portion of the Heritage Park to the Boat Ramp car park below. **Option D:** Build a new road within the Boom Sidings corridor adjacent to the rail line that will service the proposed container terminal. In order to eliminate the need for a level crossing it would be necessary to relocate the rail tracks to the north-western side of the corridor to make space for the road along the south-eastern side. The Boom Siding corridor is constrained by its relatively narrow width at the southern end. It may be necessary to provide additional rail tracks in this corridor to service the container facility. This option cannot be considered until the Rail Master Plan is completed and the rail requirements for the container terminal are known. **Option B** is the preferred option at this stage, but PKPC will consider all options prior to seeking approval for Stage 2 of the development. While noting that DECCW does not support this option at this time, PKPC is committed to undertaking a comprehensive assessment of threatened species impacts prior to undertaking any works in areas of known GGBF habitat and proposing appropriate measures to mitigate and offset any significant impacts. Mitigation measures that may be implemented to minimise the potential impacts to GGBF are likely to 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;			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		• Careful direction of surface water runoff; • 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; and • Monitoring and regular review of performance of mitigation measures.			
O. Rodwell – individual					
Qualitative Human Health and Ecological Risk Assessment	There is doubt about the affect of the sediments on the ecology of the life in the water. There may still be a problem with edible fish and shellfish for human consumption. All measures to mitigate the risks should be mandatory in the conditions attached to the approval.	Refer to sediment investigation and QHHERA (in Section 12 and in Appendix D of the EA). Mitigation measures have been proposed to minimise the potential impacts associated with contaminated sediments and these are outlined in the Statement of Commitments.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Section 12 and Appendix D of EA. Final SoC – Attachment F of this report.	8-A
Preliminary Hazard Analysis	Total throughput will increase substantially and on site storage of many hazardous substances will also increase. The on site storage must be mandated to be strictly limited, secured and monitored, and the processes regularly reviewed.	A Preliminary Hazard Assessment (PHA) was prepared based on assumptions of type and quantities of hazardous materials likely to be stored at the container terminals and it was identified that the proposed port operations would be classified as 'potentially hazardous'. However, the PHA recognises that the hazardous substances are manageable at the site. A further Final Hazard Assessment will be prepared as part of detailed project applications for construction and operation of the container terminals. PKPC will prepare Hazardous Substances Management Plan for construction and operation phases of the development.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Section 13 and Appendix E of EA. Final SoC – Attachment F of this report.	8-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Traffic and transport	In Port Kembla only Flinders Road, Christy Drive, Old Port Road, Foreshore Road should be available for cargo transport. No heavy vehicles should be allowed in Wentworth Street. There have been many near misses on Downies Bridge and it should not be used to service the harbour. Routes to handle cargo to and from the harbour should be mandatory. Downies Bridge should not be used for heavy vehicles.	During construction, heavy vehicles will use Flinders Street, Old Port Road, Christy Drive and Foreshore Road and will avoid Downies Bridge and other roads between Downies Bridge and the Port Kembla commercial/residential area. Following construction of the central portion of the multi-purpose terminal as part of the Major Project (Stage 1), it is anticipated that all operational traffic would use Flinders Street and Christy Drive to access the Outer Harbour, therefore avoiding Downies Bridge, Wentworth Street and some of the residential areas adjacent to Five Islands Road. The additional traffic generated by the operation of the Concept Plan is expected to continue to use Flinders Street and Christy Drive for port access. These designated haulage routes will be encouraged through implementation of Traffic Management Plans prepared as part of the Construction Environmental Management Plan and Operation Environmental Management Plan. The TMPs will also include a driver code of conduct to encourage safe driving practices.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	8-C
Rail	The Maldon-Dombarton rail link must be finished to help take the trucks off the roads. The pedestrian rail system is inadequate to handle the present passenger load and must be upgraded to take cargo.	The rail assessment for the EA identified that there are two main rail options to service the long term growth of the port; the Moss Vale – Unanderra Line and Maldon-Dombarton link. There is capacity available on the Moss Vale-Unanderra Line for Stage 1 and additional capacity enhancements could be made to service Stages 2 and 3. Alternatively the Maldon – Dombarton link is the other option available to service the port. A federally funded and managed feasibility study for Maldon-Dombarton is currently being prepared.	-	Section 19.5.1	8-D

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			
Traffic and transport	I do not accept that the road system can handle the extra road traffic. The model is flawed.	The Traffic and Transport assessment uses modelling outputs from the Wollongong Shellharbour (WOLSH) Transportation model which has been endorsed by the RTA.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Appendix I of the EA	8-E
Noise and vibration	The community was affected by both noise and vibration impacts during construction of the copper smelter. There must be strict guidelines about blasting as far as time, frequency and consultation.	A Construction Noise and Vibration Management Plan will be prepared prior to the commencement of construction and it will include measures regarding notification and adopting appropriate work practices to minimise nuisance noise. These issues are addressed in Sections 4.3, 4.7, 5.2, 5.3 and 5.7 of the revised NIA.	Stage 1, Stage 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachment C of this report.	8-F
Air quality	The community has experienced severe air pollution from heavy industry over a period of many years. Air quality should be monitored whenever there is a potential pollution problem.	Air Quality Management Plans will be prepared as part of the Construction and Operation Environmental Management Plans and will include mitigation measures to minimise dust and particulate emissions during construction and operation. This will include a dust monitoring program during the construction phase of the project.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Revised AQIA dated 10 September 2010 in Attachment B. Final SoC – Attachment F of this report.	8-G
RTA					
Traffic and transport	The RTA has considered the impact of the predicted traffic volumes. Whilst the volumes are unlikely to have a significant impact on the surrounding State road network, they rely on a number of assumptions. In particular, they rely	The assessment has been based on a modal split that favours rail, particularly for container cargo (Stage 2 and 3). PKPC will commit to progressively assess the volume of truck movements associated with the Project	Stages 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	9-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	on a high rate of transportation via rail. Whilst the RTA strongly supports the use of rail, the RTA has concerns that if the predicted rail mode share cannot be achieved, the impact to the road network would be considerably more. Given the high percentage of heavy vehicles that would be associated with the road transportation of goods from the Outer Harbour, departing from predicted traffic volumes is likely to lead to unacceptable impacts to road safety and traffic efficiency as well as environmental issues such as amenity, noise and air quality. The RTA does not support the proposal in its current form. The RTA would reconsider its position if annual transportation of goods from the proposed Outer Harbour were restricted by the conditions of approval to the levels shown in Table 4.4 of the Traffic and Transport Report. To demonstrate compliance with such restrictions, the RTA would expect an annual report to be sent to the RTA detailing the annual transportation by road for bulk trade, general cargo and containers.	applications for each stage of the Outer Harbour development to ensure that they are consistent with the volumes predicted in the EA. The assessment would 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. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			
M. Laird – individual					
Traffic and transport	There was no particular plan put forward on upgrading Picton Road or other roads.	The RTA has and continues to provide funding for safety upgrades to Picton Road. The NSW State Government announced a $12 million program of safety improvements for Picton Road in February 2009. More recently the NSW Government announced an additional $20 million in new funding for Picton Road (NSW 2010 budget).	-	-	10-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Global issues	What impact would a significant increase of the world price of crude oil have on the development?	The EA has not assessed the potential impacts associated with either an increase or decrease in the price of crude oil. The price of crude oil is a global economic variable which is beyond the scope of this EA.	-	-	10-B
Rail	PKPC did not appear to support Maldon-Dombarton rail link despite agreeing that it will go ahead in the future.	Maldon-Dombarton is one of the options to service the Outer Harbour development in the future, the other being the upgrade of the Moss Vale-Unanderra Line. A federally funded feasibility study for Maldon-Dombarton is currently being undertaken and will identify whether Maldon-Dombarton is likely to proceed in the future. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	-	Section 19.5.1	10-C
Traffic and transport	More emphasis needs to be placed on transport and safety around the region regarding trucks. Picton Road has been a dangerous road for many years.	Refer response 10-A. Traffic Management Plans will be prepared for construction and operation of each stage of the development and will detail measures to minimise impact on pedestrian and vehicle movements and encourage safe road haulage to and from Port Kembla through a driver code of conduct.	-	Final SoC – Attachment F of this report.	10-D
Traffic and transport Rail	Routing freight trains through Moss Vale makes for a longer haul. It would make more sense to build the Maldon-Dombarton rail link so less dependency would be placed on the use of heavy trucks on public roads.	Refer response 10-C.	Stage 2 and 3	Section 19.5.1	10-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
BlueScope Steel					
Navigation	The swing basin needs to cater for current and future vessels, especially cape size ships. The proposed development should not place a restriction on the maximum allowable size Cape Vessel that can enter the port. The swing basin should not increase the number of tugs required to manoeuvre the vessels.	Larger vessels (such as some cape size ships) currently have restrictions placed on them when entering the port given their length and draught. The restrictions are due to the physical characteristics of the port such as depth of water and breakwater alignment. The Outer Harbour development will have no impact on current vessel restrictions in the harbour.	-	-	11-A
Hydrology and flooding	It is unclear from the EA how Salty Creek will discharge and drain to the harbour. In heavy rainfall periods the drain has the potential to flood if obstructed. Flooding of Salty Creek raises a number of concerns, including: • environmental – built up water can destabilise banks and riparian vegetation and wash up waste • flooding is a safety risk to employees and the public • flooding has the potential to damage assets and infrastructure.	Salty Creek will be extended through the reclamation to discharge to the harbour through a permanently open channel. The new channel will be designed and sized to mitigate adverse flood impacts upstream of the site for flood events up to the 100 year ARI design storm event.	Stage 1	Sections 6.5.3 and 14.6.2 of the EA	11-B
Traffic and transport	Increased traffic flow may result if trade throughout emphasis swings away from the container trade. Increased truck traffic could lead to road congestion, noise and air quality impacts during peak periods.	PKPC has applied their best endeavours to determine the future trade throughput based on PKPC's experience and market intelligence regarding likely bulk and general cargo trades. Refer response 5-D.	Stages 1, 2 and 3 (Major Project and Concept Plan)	Section 18.3 of the EA	11-C
Hydrology	There does not seem to have been any modelling on the water exchange between the inner and outer harbour. The proposed development may have an effect on water circulation in the inner harbour and its cumulative effect with SCP should be	Cardno Lawson Treloar (CLT) was engaged to assess the effects of the proposed development on tidal flushing between the Inner Harbour and Outer Harbour and details of the modelling, including the CLT report, were incorporated in Appendix F of the EA. The modelling showed that re-developing the Outer Harbour	Stages 1, 2 and 3 (Major Project and Concept Plan)	Appendix F of the EA	11-D

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	evaluated.	would induce very small positive changes in the Inner Harbour basin which resulted in an improvement in flushing times in the most critical upper reaches of the Inner Harbour. As the tidal prism of the Outer Harbour is reduced by the proposed reclamation, there would be greater exchange of Inner Harbour water with ocean water and less potential for the re-circulation of Inner Harbour waters.			
Wollongong City Council					
Traffic and transport	The electronic copies of the intersection analysis are to be submitted to the RTA for assessment including the AM and PM peaks for all models and key intersections along the routes proposed. The intersection analysis will show impacts at the intersections modelled, however it will not show re-routing of passenger vehicles to avoid congestion at key intersections which is expected to occur and the overall economic impacts of this on the network.	PKPC will provide any data generated by the traffic impact assessment to the RTA upon their request. The Traffic and Transport assessment uses modelling outputs from the Wollongong Shellharbour (WOLSH) Transportation model which has been endorsed by the RTA. The WOLSH model incorporates long-term growth projections for the region and allows traffic re-routing in response to congestion. However, re-routing of vehicles at key intersections as a result of the Outer Harbour development is unlikely given the road network. Even if it was to occur it is difficult to accurately assess the overall impacts, including economic impacts, of re-routing passenger vehicles on the road network.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Appendix I of the EA	12-A
Traffic and transport	There will come a time when intersections and carriageways reach capacity and as a result re-routing will occur and impact on the local network capacity and amenity. Council is concerned that the network capacity may be accelerated as a result of this proposal. The Traffic and Transport component of the EA states that improvements 'may' be required as	The transport assessment recognises that some of the intersections on the surrounding road network will exceed their current capacity in the future regardless of whether future development occurs at the Port. The Level of Service of these intersections has been assessed as being satisfactory as a result of the activities associated with the three stages of development in accordance with the Concept Plan.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Appendix I of the EA	12-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	a result of this proposal. It is recommended that these improvements be identified and a commitment from the applicant to complete these works be obtained prior to any consent being issued. Alternatively this may be conditioned on consent. The works required to be completed as a result of a development should be completed by the applicant and not by a public authority with public money.	Consequently, no mitigation measures are deemed necessary on the wider network to ameliorate the impacts of the proposed Outer Harbour development. Further assessment of network capacity will be undertaken as part of Project applications for later stages of the development (Stages 2 and 3).			
Traffic and transport	Council shares the concerns of Neighbourhood Forum 5 in relation to the adequacy of existing road and rail infrastructure to support the harbour expansion. It is in the interests of the public to ensure that sufficient infrastructure is in place to support the harbour prior to further expansion commencing. Specifically, reliance on road transport should be discouraged and greater use of rail encouraged. Any increase in freight traffic from Port Kembla must be supported by the necessary improvements in road and rail infrastructure. It is noted that the traffic modelling provided within the EA does not address traffic impacts on either Picton or Appin Roads, including potential road safety impacts. This must be given further consideration by the applicant and the Department prior to consent being granted. Further modelling is required to ensure that any westerly movement of goods from the harbour will not have adverse cumulative impacts on Appin or Picton Roads, including impacts on road safety.	PKPC's significant on-going investment in nationally significant port infrastructure is being supported by parallel investment in regional infrastructure by the NSW Government – with Commonwealth Government support as appropriate through the Nation Building Program. The EA demonstrates a significant reliance on rail transport and a commitment to ensure adequate rail infrastructure is constructed where it is needed. Upgrades to Picton Road (in the form of clear zone improvements and new safety barriers) have been completed as part of the Australian Government's Nation Building Program. In addition, the NSW State Government announced a $12 million program of safety improvements for Picton Road in February 2009 and a further $20 million in new funding for Picton Road was announced in the NSW 2010 budget. A federally funded Maldon-Dombarton feasibility study is currently being prepared. Material will be sourced over time from major construction projects most likely in the Sydney metropolitan area. PKPC will endeavour to transport	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	12-C

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	Where possible Council would encourage reclamation material to be transported to the site by either barge or rail to reduce truck movements on the local and regional road networks.	100% of fill material sourced from the Sydney metropolitan region by a combination of barge and rail. For further discussion of issues relating to the sourcing fill from construction projects please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			
Security	The Department of Planning should undertake a 'Safety by Design' assessment of the proposal. There are a number of unsafe areas within the development site and security is a major concern given that there will be no natural surveillance of the site. It is recommended that conditions be imposed in relation to the following matters: • provision of security fencing to the whole area • Implementation of security systems and employment of guards • Implementation of CCTV • provision of high standard lighting • provision of barriers towards open water	Ports are covered by strict maritime security provisions as outlined in the *Maritime Transport and Offshore Facilities Security Act 2003*, including access by maritime security identification cards (MSIC). A good example is the recently completed development of the Inner Harbour at Port Kembla where appropriate security is in place. Design measures will include perimeter fencing, security systems and guards, CCTV and lighting.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	12-D
Hydrology and water quality	The use of blast furnace slag and coal wash may potentially result in water pollution at least in the short term resulting in: • turbidity • high alkalinity caused by emplacement • high sulphide concentration and hydrogen sulphide smell related to emplacement of slag	A Site Management Plan will be prepared and form part of the Construction Environmental Management Plan that will be implemented during the construction phase of all three stages of development of the Concept Plan. Dredged sediments will be transported in the water column and not exposed to air to avoid oxidation and potential acid sulfate soils turning to actual acid sulfate soils. A groundwater monitoring program will be developed	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	12-E

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	• large quantity of calcium hydroxide discharge, caused by slag reaction with marine water • possibility of acid sulphate soil impacted from dredged sediments • increased discharge of contaminated groundwater from Port Kembla Copper Site into the inner and outer harbour especially soluble zinc, copper and cadmium. It is recommended that the applicant provide a Site Environmental Management Plan which addresses all of the above impacts to minimise potential water pollution.	and implemented. PKPC has had extensive experience with similar port development issues of this nature over the last 5 to 10 years. The recently completed Inner Harbour development was constructed under strict DECCW licence conditions relating to the use of coal slag.			
Terrestrial ecology	An Eastern Quoll has been recorded within the proposed development. This species may find appropriate forage and shelter within drainage lines, especially those used by GGBF. There are also records of Sooty Oystercatcher within the proposed development area. It is likely that suitable foraging area is available along the shoreline for this species. Migratory bird species which have been recorded within the proposed development area include Black-tailed Godwit, Black-necked stork, White Tern, Little Tern, and Little Shearwater. Individuals of these species may occasionally rest of forage along the shoreline. Dugong and Australian Fur-seal have also been recorded in the outer harbour and *Syngnathiforms* are known to occur within the kelp beds in the harbour. All species of the *Syngnathiforms* families are protected under	Based upon site inspections of the PKOH development, it is not believed that appropriate foraging habitat for the Eastern Quoll exists within the development footprint. Field surveys did not find any evidence of this species occurring within the proposed development area. All threatened species sightings must be verified and recorded. According to the most recent information provided in DECCW's threatened species profiles, there have been no recent sightings of the Eastern Quoll in NSW and this species has not been seen for many years (DECCW, 2010). In fact, its current distribution in NSW remains uncertain. Furthermore, given the highly modified environment and disturbance history, it is unlikely that the Eastern Quoll persists in this area. The drainage lines within the study area are amongst hard stand areas and contain very little vegetation. These areas are not considered to provide suitable habitat for Eastern Quoll dens.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 17 of the EA Final SoC – Attachment F of this report.	12-F

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	the NSW *Fisheries Management Act 1994*. It is recommended that further studies be requested from the applicant to assess the likely impact on fauna species that may utilise the site for resting, shelter or foraging. It is also recommended that preparation and submission of a GGBF Management Plan for both the construction and operational stages of the proposed project.	Preferred habitat for this species occurs amongst areas containing dry sclerophyll forest, scrub or heathland. Whilst the Sooty Oystercatcher may potentially forage around the proposed development site and some of this foraging habitat will be removed as part of the development, no breeding habitat will be affected as this species breeds almost exclusively on offshore islands. Therefore Sooty Oystercatcher populations will not be significantly affected. Migratory bird species are unlikely to breed along the foreshore due to the high likelihood of predation by feral species [such as Black Rat and European Red Fox]. These are likely to be harboured amongst the thickets of exotic shrubs lining the foredunes. Whilst potential habitat for migratory birds may exist along the foreshore, this is considered to be marginal at best. Migratory birds are likely to use these areas on a transient basis and more suitable habitat for these highly mobile species occurs further north and south of the proposed development area in other areas that contain more natural undisturbed habitat. Therefore potential impacts on migratory birds as a result of the proposed works are considered to be low. Potential impacts to aquatic mammals such as whales will be addressed in a Marine Mammal Management Plan. Potential adverse impacts to Syngnathiforms is unlikely as kelp beds were not found during field surveys in the areas of the Outer Harbour which will be affected by proposed dredging and reclamation works and these issues are addressed in the aquatic ecology chapter of the EA. Preparation of a GGBF Master Plan and Management Plan as proposed in the SoC will also address potential			

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		impacts to the GGBF during construction and operation.			
Visual amenity	The proposed road construction necessitates the installation of street tree planting at 10m centres for the length of the road. Council requires the planning of *Cupaniopsis anavardivides* and *Arautaria heterophylla*. Tree pits must be adequately established with mulching, soil improved with fertilizer and water retention conditioners, planting and staking installed to the satisfaction of WCC Manager City Works. Contact Dial-Before-You-Dig and undertake any necessary pit holing to determine the location of existing services before excavating tree pits.	A commitment to prepare a Landscape Management Plan associated with Stage 1 is included in the Statement of Commitments for the Major Project. The use of appropriate landscaping of the container terminal would be considered as part of the applications for project approval for Stages 2 and 3 of the Concept Plan.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	12-G
Detailed design	The proposal has been reviewed with respect to civil design, stormwater and flooding and is satisfactory subject to the following: • a detailed civil road design for the proposed access roads in accordance with Ausroads design standards and Wollongong City Council's Subdivision Policy for road construction. • a consultation period with the RTA and Wollongong City Council prior to undertaking any works within the public road reserve. The purpose of the consultation is to discuss any relevant issues such as the schedule of inspections, the need for a road occupation or opening permit and the provision of traffic control plans as part of the works.	All roads constructed as part of the development would be designed to accommodate the number and type of vehicle movements projected for this development and would satisfy relevant design standards and would consider local guidance publications including the Wollongong City Council's Subdivision Policy for Road Construction. PKPC would consult with Wollongong City Council and RTA as required prior to commencement of construction of new public roads and any works on existing public roads.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	12-H

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Heritage	The outer harbour forms a significant part of the history of the locality. It is recommended that the following conditions be imposed: • archival and photographic recording of the affected area should be carried out to record the shoreline, the layout, location and construction of harbour structures. This would contribute to a public record of the historical development of the harbour area over time • suitable conditions should be included if consent is granted to ensure the recording and protection of potential archaeological relics, particularly in the vicinity of Red Beach and where previous structures were located.	It is proposed within the SoC to prepare archival recording for the jetty structures. No other items of heritage significance were identified. This recommendation has been accepted by Heritage Branch, Department of Planning. A large proportion of the history of the port, including the Outer Harbour, has already been recorded in the book *Roadstead to Port* (Hoogenedorn, 1999).	Stage 1	Final SoC – Attachment F of this report.	12-I
Visual amenity	To manage potential visual impacts in industrial areas, Council's Development Control Plan Vol 1 Part B5.10 *Shipping Container Storage Facilities* lists the following objectives: • to ensure that the storage of shipping containers does not cause any adverse visual impact upon the streetscape or amenity of the surrounding locality • to ensure the storage of shipping containers is restricted to specific designated storage areas only within a site and that the storage areas are well screened from view from any road frontage or any abutting or nearby residential area	A commitment to prepare a Landscape Management Plan associated with Stage 1 is included in the SoC for the Major Project. The use of appropriate landscaping for the container terminal would be considered as part of the applications for project approval for Stages 2 and 3 of the Concept Plan. Some residential areas to the south and west are elevated and look down across the Outer Harbour site albeit from some distance away. Screening views from these locations is not practical. The Outer Harbour development will be undertaken in a port precinct that is dedicated for port activity. The new berths and terminal areas will be sympathetic with the wider visual context of the active port and surrounding industrial and commercial areas.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	12-J

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	• to ensure all semi-trailer trucks and trailers carrying shipping containers are contained wholly within the confines of the subject side and not on any public road. It is recommended that the Landscape Management Plan noted under proposed mitigation measures in the Visual Amenity assessment incorporate suitable screening of the storage areas viewed from any road frontage or residential area to the south and west of the outer harbour.				
Orica					
Traffic and transport	Orica is seeking more information in relation to the following: • proposed traffic movements along Foreshore Road; • confirmation that the Port will not restrict vehicular movements (including tankers) along Foreshore Road; • direct impact the Port expansion will have on current Orica operations including: - during construction; - relocation of pipeline (PKPC contribution to cost); - likely expected vessel volumes at the wharf; - use of priority system; - provision of a dedicated connection point on the proposed new berth with appropriate bunding;	With regard to Foreshore Road traffic impacts refer to responses 6-A and 6-B. Orica's existing pipeline was established subject to a commercial licence agreement between it and PKPC. The proposed development will allow Orica to continue its sulfuric acid trade via a new pipeline linking the proposed multi-purpose terminal to its storage tanks. Details regarding design, operation, costs and tenure of the pipeline will be subject to normal commercial negotiations between PKPC and Orica. PKPC will consult with Orica at that time.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	13-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	- provision of a suitable area at the jetty/shore line point to enable stripping of acid out of the jetty line following cargo operations; - ability for straight above ground pipe to run from the new wharf direct to Orica import tanks; - easement in favour of Orica for the pipeline located on PKPC land - guarantee that designated wharf will be in close proximity to Orica import tanks; and - provision of a control station adjacent to the ship-shore hose connection point on the wharf for Orica operator. Orica would appreciate the opportunity to discuss concerns with the proponent in relation to the proposed development.				
Port Kembla Pollution Meeting					
Traffic and transport	There should be a strict condition on the road route to service the harbour from the construction phase onwards. Trucks should not be allowed to go through the township or the residential areas of Port Kembla passing the pre-school and schools. The route should be via Christy Drive, Old Port Road and Flinders Street to Five Islands Road. Darcy Road should be avoided until the new work is done.	During construction, heavy vehicles will use Flinders Street, Old Port Road, Christy Drive and Foreshore Road and will avoid Downies Bridge and other roads between Downies Bridge and the Port Kembla commercial/residential area. Following construction of the central portion of the multi-purpose terminal as part of the Major Project, it is anticipated that all operational traffic would use Flinders Street and Christy Drive to access the Outer Harbour, therefore avoiding Darcy Road, Downies Bridge and residential areas along part of Five Islands Road. The	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	14-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		additional traffic generated by the operation of the Concept Plan is expected to continue to use Flinders Street and Christy Drive for port access. In addition the planned closure of the connection between Old Port Road and Foreshore Road at the existing level crossing will direct traffic away from the township and the schools and pre-schools. A Traffic Management Plan (part of the Construction Environmental Management Plan and Operation Environmental Management Plan) will include control measures such as designated haulage routes to and from the site and a driver code of conduct to encourage safe driving practices.			
Traffic and transport	Downies Bridge on Old Port Road (going into Darcy Road) should be thoroughly investigated and revamped or eliminated. No authority will claim responsibility for this trouble spot and three authorities share various aspects of the bridge. We believe there is an alternative solution with land that appears to be available that could accommodate another route to avoid this dangerous bridge.	Refer response 14-A.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	14-B
Rail	All cargo must go by rail as there are already too many large trucks using the local and intercity roads. The rail system must also be urgently upgraded to deal with present traffic. One train can transport the load of 20 trucks.	Modal splits have been devised based on predicted scenarios for port growth and necessary transport movements to support this. The container terminals will rely heavily on rail transport to and from the port as discussed in the EA. PKPC will provide appropriate rail infrastructure within the port and negotiate with regional rail infrastructure providers to ensure adequate capacity is available to service the development as it progresses. For further discussion of issues relating to the proposed	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.5.1 of the EA	14-C

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			
Noise and vibration	Frequency and times of these possible aspects need to be mandated in the conditions. Residents need to be informed before serious noise or vibration events occur.	This is addressed in the revised NIA report and incorporated in the Statement of Commitments. Noise and Vibration Management Plans will include mitigation measures to minimise nuisance noise on surrounding residents and workers, including adequate notification of noisy activities.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Revised NIA dated 20 September 2010 in Attachement C. Final SoC – Attachment F of this report.	14-D
Air quality	The community has experienced severe air pollution from heavy industry over a period of many decades. Air quality should be monitored and should be a condition in the approval consent.	PKPC has made a commitment to undertake dust monitoring during the construction phase	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	14-E
Rail	We support the fast tracking of the Maldon-Dombarton rail link. It will help to engage Port Kembla and NSW in the grand vision for the future maritime development of the eastern states of Australia.	The EA identifies two options for regional rail connections to the Outer Harbour development, including the upgrade of the Moss Vale-Unanderra Line and the proposed Maldon-Dombarton link. The economic viability of Maldon – Dombarton is currently being assessed as part of a feasibility study being funded by the Commonwealth Government. The outcome of this study will drive the development of the link. If the Maldon-Dombarton link is to proceed it is likely to be a medium to long term rail infrastructure project and therefore most relevant to Stage 3 of the Concept Plan. If it does not proceed there is the option of upgrading the Moss Vale-Unanderra Line.	Stages 2 and 3 (Concept Plan)	Section 19.5.1 of the EA	14-F

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Operation	We believe the strictest controls are placed on every stage of the development and operations of the harbour to protect at all times the health, wellbeing and amenity of the workers at the harbour and the nearby residents.	A comprehensive list of mitigation measures has been included in the draft Statement of Commitments and these have been revised in the Final Statement of Commitments to address issues raised in submissions.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	14-G
NSW Industry and Investment					
Aquatic ecology	I&I NSW concurs with the proposed aquatic ecology mitigation measures in Section 16.4 and Appendix G of the EA. in particular, the Department has no objection to the proposed compensatory measures for the permanent loss of aquatic habitat in Port Kembla Outer Harbour described in Appendix G (letter dated 18 December 2009). I&I NSW recommends that DoP include a specific approval condition that requires the proponent to implement all the proposed habitat improvement projects at Tom Thumb Lagoon and Garungaty Waterway listed in Appendix G of the EA to the satisfaction of this Department.	Noted	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	15-A
Aquatic ecology	I&I NSW concurs with the proposal for the new hard substrate surfaces of the development to incorporate marine habitat friendly structures and aquatic habitat improvement features described in *Environmentally Friendly Seawalls: A Guide to Improving the Environmental Values of Seawalls and Seawall-lined Foreshores in Estuaries* (Sydney Metro CMA and DECC, 2009) (Sections 16.3.10 and 25.2). The Department recommends that this is made a specific	Noted	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	15-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	approval condition for the development by DoP.				
Aquatic ecology	I&I NSW recommends that the proposed biological monitoring program (section 16.4.1) is implemented in consultation with I&I NSW with regular (e.g. annual) reports provided to I&I NSW.	PKPC will consult with I&I NSW during finalisation of the biological monitoring program and will prepare reports to document the results of the monitoring at each stage of construction of the Outer Harbour development. The frequency of reporting will be agreed with I&I NSW when the biological monitoring program is finalised.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	15-C
Aquatic ecology	I&I NSW concurs with the proposal for a v-shaped recess in the floor of the Salty Creek culverts to facilitate movement of aquatic species during periods of low flow (Section 16.4.2).	Noted	Stage 1	Section 16.4.2 of the EA	15-D
Aquatic ecology	I&I NSW recommends that the proposed extensions of Salty Creek and Darcy Road Drain include pollution control devices (e.g. gross pollutant traps) (Section 6.5.3). Surface water management for drainage of future paved surfaces in the development should also include pollution control devices (Section 6.5.4).	A commitment to include pollution control devices on the future paved surfaces of the development will be included in the Statement of Commitments.	Stage 1	Sections 6.5.3 and 6.5.4 of the EA. Final SoC – Attachment F of this report.	15-E
Aquatic ecology	I&I NSW concurs with the proposal to include Water Sensitive Urban Design measures in the detailed design of Stage 1 of the development (Section 25.5.3).	Noted	Stage 1	Section 25.5.3 of the EA. Final SoC – Attachment F of this report.	15-F
Aquatic ecology	I&I NSW recommends that copies of the following plans for Stage 1 of the development Table 29-2) are provided to the Department at draft stage for comment: - Soils and Water Management Plan	PKPC will liaise with I&I NSW during preparation of the management plans.	Stage 1		15-G

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	- Dredging Environment Management Plan - Stormwater Management Plan - Acid Sulfate Soil Management Plan - Spoil Management Plan - Demolition Management Plan				
Aquatic ecology	I&I NSW recommends that a copy of the Operation Environment Management Plan for the new port facilities that covers stormwater management is provided to I&I NSW at draft stage for comment (section 16.4.2).	PKPC will liaise with I&I NSW during preparation of the management plans.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 16.4.2 of the EA	15-H
Aquatic ecology	I&I NSW concurs with the proposed mitigation measures for soils and sediments (section 9.4), contaminated sediments (section 10.4), contaminated soil and groundwater (section 11.4) and hydrology and water quality (section 14.6).	Noted	Stage 1, 2 and 3 (Major Project and Concept Plan)	Sections 9.4, 10.4, 11.4 and 14.6 of the EA	15-I
H. Hamilton – individual					
Traffic and transport	The roads to and from the harbour precinct are inadequate as they now exist and the new loop road is not proposed until Phase 2 planned for between 5-15 years away. Downies Bridge on Old Port Road is extremely old and RTA and Wollongong Council (believed to be bridge owners) should take some action to make the bridge safer with repairs to the rails and bitumen that have been damaged.	PKPC is aware of the community concern over Downies Bridge and the traffic impact assessment has focused on routing heavy trucks to and from the port via Flinders Street. During construction, heavy vehicles will use Flinders Street, Old Port Road, Christy Drive and Foreshore Road and will avoid Downies Bridge and other roads between Downies Bridge and the Port Kembla commercial/residential area. Following construction of the central portion of the multi-purpose terminal as part of the Major Project, it is anticipated that all operational traffic would use Flinders Street and Christy Drive to access the Outer Harbour,	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	16-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		therefore avoiding Downies Bridge. The additional traffic generated by the operation of the Concept Plan is expected to continue to use Flinders Street and Christy Drive for port access. In addition the proposed closure of the connection between Old Port Road and Foreshore Road at the existing level crossing will direct traffic away from the township. A Traffic Management Plan (part of the Construction Environmental Management Plan and Operation Environmental Management Plan) will include control measures such as designated haulage routes and driver code of conduct to encourage safe driving practices.			
Traffic and transport	The intersection where Darcy Road, Military Road and Five Islands Road meet should be upgraded with traffic lights or a roundabout prior to the harbour development.	Refer response 16-A. Outer Harbour traffic will not be using this intersection as a main haulage route.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Final SoC – Attachment F of this report.	16-B
Traffic and transport	The roads from the Port Kembla industrial area are limited and are already cluttered with big trucks 24 x7. Our roads out of the Illawarra are already proving to be deadly.	Refer response 16-A. A large portion of cargoes will be transported by rail. The proportion of traffic on the local and regional road that is generated by the Outer Harbour development in 2016 will be approximately 1% of the total traffic on the regional network. In addition, the NSW State Government announced a $12 million program of safety improvements for Picton Road in February 2009 and a further $20 million in new funding for Picton Road was announced in the NSW 2010 budget.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Tables 4.6 and 4.7 of Appendix I of the EA Final SoC – Attachment F of this report.	16-C
Rail	Road transport should eventually be replaced with rail transport but the rail lines are also inadequate. The South Coast Line is cluttered	The South Coast Line will not be used for freight transport from the port. The Moss Vale – Unanderra Line will be used in the early stages of the	Stage 1, 2 and 3 (Major Project and	-	16-D

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	with passenger and freight trains from as far south as Nowra and has been known to close when bad weather occurs.	development. If it proceeds, the Maldon-Dombarton Line may provide another option for rail transport to and from the port in the medium to longer term or otherwise the upgrade of the Moss Vale - Unanderra line is another option.	Concept Plan)		
Rail	The Maldon-Dombarton Rail Line will be essential before this proposed expansion takes place.	Stage 1 of the development requires only a minor upgrade to the existing rail infrastructure in the South Yard. An upgrade to the Moss Vale – Unanderra line will be required in the medium to long term to support the Concept Plan and the Maldon – Dombarton rail link is an option raised in the long term (i.e. Stage 3 of the Concept Plan). Rail infrastructure requirements will be reviewed as part of Project applications for Stages 2 and 3 and following completion of the rail master plan.	-	Section 19.5.1 of the EA	16-E
RailCorp					
Rail	The EA is heavily focused on the short term (Stage 1), but there is a lack of detailed analysis of medium to long term impacts on capacity and competing future interests, given the large capital investment required. The EA confirms that the majority of trade would be transported to and from the port by rail. Therefore, detailed analysis of long term rail and infrastructure impacts and needs is critical to the long term success of the project.	There is little to no impact on the rail network to provide the four trains per day required for the operation of the Major Project (Stage 1). PKPC will commence a rail master plan in 2010 to better plan for the development of the port, and will be consulting with RailCorp on this at the appropriate stages. In parallel, a feasibility study is currently being undertaken for the Maldon – Dombarton rail link. Further assessment of the rail infrastructure requirements will be undertaken as part of Project applications for Stages 2 and 3. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents	Stage 1	Section 19.6.1 Final SoC – Attachment F of this report.	17-A

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			
Rail	The proposal includes substantial expansion of the Outer Harbour trackwork already owned by PKPC. RailCorp has no involvement in this part of the proposal.	Noted.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	17-B
Rail	The proposal appears to include unspecified upgrading of the junction between the Port Kembla branch line and the PKPC sidings. As yet no negotiations with RailCorp have been undertaken. It is recommended that RailCorp are consulted with respect to the upgrading of this junction during development of the design.	Refer Response 17-F. The upgrade of this junction will be covered in the rail master plan that will commence in 2010. PKPC and its consultants will engage with RailCorp during preparation of the rail master plan.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1	17-C
Rail	Detailed traffic assessment provided in Appendix I is limited to Stage 1 impacts only.	This is incorrect. Section 4.9 of the Traffic and Transport assessment in Appendix I of the EA considers impacts on the road network around 2016 (to coincide with construction and operation of Stage 1 and 2036 (to coincide with construction and operation of Stages 2 and 3).	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 4.9 of Appendix I of the EA.	17-D
Rail	The proposal will also introduce bulk commodity traffic onto the Port Kembla branch line, which does not use that line at the moment. This may require upgrading of the track infrastructure and/or junctions.	Agreed. This is the subject of the rail master plan exercise to be commenced in 2010. Upgrading of the Port Kembla branch line is not required for the Major Project (Stage 1) which will require a minor upgrade to the South Yard only.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	17-E
Rail	The report considers capacity on the Unanderra-Moss Vale line, but overlooks the fact that the additional trains will require capacity on the Port Kembla branch line and the single track Allan's Creek Triangle loop which connects the branch line to the Illawarra	Operation of Stage 1 (Major Project) requires only four trains per day to access the junction. Initial discussions with both ARTC and RailCorp, and a review of existing capacity analysis suggest that this will not be an issue, however final agreement on the timetabling and modelling will be required once actual train paths are	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA	17-F

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	Line, and through Unanderra Junction. The interaction between South Coast passenger and freight trains at Unanderra Junction is already a significant variable in the operation of the South Coast (Wollongong-Dapto-Kiama and Bomaderry) passenger service, and the report appears to propose an additional 20 train movements each way per day through this location.	identified. The junction will be an issue once this number of trains increases, in Stages 2 and 3 of the development. This issue is one of the main drivers of the rail master plan to be commenced in 2010.			
Rail	Rail assessment is limited to Stage 1.	The assessment comprised a more detailed assessment for Stage 1 and a limited assessment for Stages 2 and 3 given the extended timeframe for their introduction. A rail master plan will be commenced in 2010 to identify infrastructure upgrades required for Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA Final SoC – Attachment F of this report.	17-G
Rail	The assessment of rail capacity is only based on train sizes capable of operating on the Moss Vale to Unanderra Line only.	Correct. The Moss Vale to Unanderra line is the limiting factor on rail operations until such time as a second link becomes feasible. All train operations for the Concept Plan have been assumed to use Moss Vale - Unanderra which is a worst case scenario.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.3	17-H
Rail	Mode split of cargo impacts and rail is based on PKPC advice and lacks proposed demand and supply analysis. The EA comments that in the long term it is envisaged that the majority of trade at the Outer Harbour would be transported to and from the port by rail. Existing rail infrastructure upgrades will be required.	The master plan for the Outer Harbour development was developed based on a modal split that is strongly in favour of rail. In order to be commercially viable and thus competitive in container trade, the proposed container terminals have been designed to operate on the basis of limited wharf side land for container storage and consolidation. The viability of the port is dependent on utilising inland storage facilities, such as an intermodal terminal, and adequate rail transport. This is in line with container facilities around the world where limited infrastructure or land is available at the	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	17-I

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
		port. Such a concept relies upon an efficient operating regime for the terminals and an efficient and extensive rail infrastructure and operating capacity being readily available to the port facility. For further discussion of issues relating to the proposed road/rail modal split and the provision of supporting rail infrastructure please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.			
Rail	RailCorp recommends these issues regarding rail operations requires further consideration prior to moving to the next stage of the planning process.	Project approval is sought for Stage 1 which will require only a minor rail infrastructure upgrade to the South Yard. A rail master plan will be commenced in 2010 to identify rail infrastructure upgrade requirements for Stages 2 and 3. Project Approvals will be sought prior to construction and operation of Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA Final SoC – Attachment F of this report.	17-J
Rail	RailCorp recognises the potential impacts of port expansion and the subsequent increase in freight traffic which may occur as part of the Port Kembla Outer Harbour Development. RailCorp insists on further consultation should any extra need for freight transport by rail be required. This includes access to train paths and any further issues related to the current rail operating patterns. RailCorp also requires further consultation regarding the preparation of the Rail Master Plan as referred to in the EA.	Noted and agreed. RailCorp will become an important stakeholder in the development of the rail access to the Port. The rail master plan and later stages of development cannot be undertaken without consultation with RailCorp.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA Final SoC – Attachment F of this report.	17-K
Rail	The proponent has selected the medium growth rates for bulk and container freight for analysis. However if high growth actually eventuates this could have significant impacts.	Medium growth is a reasonable assumption. If the assumptions provided in the EA change then further assessment will be required as part of applications made for approval of Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	-	17-L

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Rail	The modal split is based on conservative figures and not on worst case scenario for RailCorp.	The modal split adopted is conservative and appropriate.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Sections 19.5.1 and 19.5.2 of the EA.	17-M
Rail	Train lengths have been estimated to be 749m, is this a certain?	No. This is an assumption based on the longest practical train that can run on the Moss Vale - Unanderra Line in its current format (due to passing loop lengths and grades). Consultation is underway with ARTC to look at potential upgrades to the Moss Vale line to allow for longer trains. Upgrades will allow for longer trains to be run, to minimise the number of trains and timetable impacts.	Stage 1	Section 19.3 of the EA	17-N
Rail	Transport of container freight assessment needs further assessment/analysis as no infrastructure is in place to accommodate container freight movement and with an expected modal split of 90% rail and 10% road.	A rail master plan will commence in 2010 that will identify rail infrastructure upgrades required for Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA Final SoC – Attachment F of this report.	17-O
Rail	The EA is short on design and modelling to determine the best design of infrastructure to provide efficient movements of freight.	A rail master plan is scheduled to commence in 2010 to identify infrastructure upgrade required for Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA Final SoC – Attachment F of this report.	17-P
Rail	RailCorp consultation will be required prior to finalisation of the Stages 2 and 3 project applications.	PKPC will consult with all relevant stakeholders, including RailCorp, as part of the rail master plan and the consultation undertaken for the approval processes for Stages 2 and 3.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 19.6.1 of the EA Final SoC – Attachment F of this report.	17-Q

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
Transport of Fill Material	The EA makes reference to the use of fill from White Bay as part of the Light Rail (this is an error as this is related to the Metro proposal). However, given the recent Government announcement not to pursue the metro proposal at this stage and to extend the light rail from Lilyfield to Dulwich Hill, the proponent will need to address this matter in their Submissions Report (i.e. how will they use this corridor when light rail is in operation and no spoil from White Bay as part of Metro).	The original intent was to take the spoil from the tunnel boring of the Sydney Metro and use it as fill in Port Kembla. With the cancellation of the Metro Project there is no longer a source of fill material available and this option is no longer under consideration. However, fill is expected to be sourced from other construction projects in the Sydney metropolitan and surrounding regions and transported to the Outer Harbour by rail or barge. The reclamation area will be filled using a combination of dredged material, fill from local sources (such as uncrushed blast furnace slag from Mt Prosser) and fill imported to the site from construction projects in the wider Sydney metropolitan area. PKPC has identified a number of potential construction projects in Sydney which could contribute fill materials to the Outer Harbour reclamation. PKPC will endeavour to transport 100% of fill material sourced from the Sydney metropolitan region by a combination of barge and rail. PKPC will commit to providing detail of the sources of the fill and method of transport to the site for approval by the Department of Planning before such filling operations commence. For further discussion of issues relating to the source of construction fill for the reclamation area please refer to the following documents contained in Attachment E of this report: • Email from AECOM to DoP (Rebecca Newman) dated 9 July 2010.	Stage 1	Section 19.5.2 of the EA	17-R

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
NSW Office of Water					
Groundwater	The NSW Office of Water (NOW) considers it important that both a background groundwater monitoring program and an operational groundwater monitoring program are undertaken in relation to this proposal. Both the background groundwater monitoring program and the operational groundwater monitoring program need to be undertaken to the satisfaction of NOW and DECCW. Section 11.5.1 of the EA indicates it is important that the reclamation would be designed to ensure the existing groundwater flow regimes are not significantly altered and that there is not increased risk of harm associated with groundwater contamination. The NOW agrees that this is important. Table 29.2 (Statement of Commitments) in the EA indicates a groundwater monitoring program will be developed at the site prior to the commencement of the works and annually thereafter. The SoC needs to be amended to include both the background groundwater monitoring program and the operational groundwater monitoring program undertaken to the satisfaction of NOW and DECCW.	PKPC have an existing ongoing groundwater monitoring program to monitor groundwater quality in the vicinity of the Outer Harbour. The existing groundwater monitoring program will be reviewed and background levels will be used as a basis to develop a program for Stage 1 construction and operation phases.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 11.4.2 of the EA Final SoC – Attachment F of this report.	18-A
Hydrology	NOW notes that while Salty Creek is to remain open through the reclamation area as part of Stage 1, it is proposed to be enclosed under hardstand as part of Stage 2 (page 5-9 and 5-10). NOW is supportive of mitigation measures being provided (including compensatory	Noted and agreed.	Stage 1, 2 and 3 (Major Project and Concept Plan)	Section 9.4.2 of the EA	18-B

Broad theme/Issue	Issue/Comment	Response	Stage of Project	Environmental Assessment Reference (if applicable)	Reference Number
	measures) to assist in mitigating the impact of modifying Salty Creek from an open system to a permanently enclosed culvert system. It is recommended that advice be obtained from NSW I& I in relation to this matter. It is noted that buffers are to be installed to the riparian zone (sediment fences) to prevent sediment laden water from entering Salty Creek, Darcy Road Drain and the Outer Harbour (Section 9.4.2, page 9-7). NOW agrees that details of the proposed mitigation measures need to be outlined and included in a CEMP. The mitigation measures must be installed prior to works commencing and adequately maintained throughout the construction phase until the completion of the works and the site is stable to mitigate the potential impact of sediments entering the waterways. NOW agrees that the mitigation measures should follow relevant management practices as outlined in the Landcom manual 'Managing Urban Stormwater: Soils and Construction – Volume 1'.				
Water sensitive urban design	Section 25.5.3 of the draft EA indicates there are opportunities to investigate efficient use of water throughout construction and operation phases (page 25-4). NOW supports in principle the provision of water sensitive urban design (WSUD) measures which focus on stormwater runoff capture and reuse on the site and intention to investigate other WSUD measures during the detailed design for Stage 1.	Noted and agreed.	Stage 1	Section 25.5.3 of the EA	18-C

PORT KEMBLA OUTER HARBOUR DEVELOPMENT

Revised Submissions Report