May 7, 2012

The Director-General
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Sir,

OBJECTION TO PWCS TERMINAL 4
APPLICATION 10-0215

Hunter Ports has a strong interest in Newcastle and the development of Port Infrastructure. We wish to see sustainable growth and optimised development of the Port to support the NSW coal industry.
We have commissioned JBA Planning to undertake a review of the Environmental Assessment Report which was prepared by EMGA | MitchellMcLennan (EAR) on behalf of PWCS for the Terminal 4 (T4) Project, Kooragang (the Project). The purpose of the review is to better understand environmental and planning issues associated with the project and highlight the risks relating to the project in relation to environmental impacts, delivery timeline and estimated project cost.
The review has identified a number of significant issues associated with the Project including;

- **Dredging approvals:** It is unclear why approvals for dredging have been excluded from the EAR. However, it is imperative to note, that all of the inter-related components of the T4 project should be considered and assessed at the same time so a proper evaluation can be conducted.. Information on the timing, cost and responsibility for the dredging have not been properly outlined in the EAR which poses a risk for decision makers..

- **Consideration of alternatives:** There are are significant environmental issues and impacts associated with lands around the margin of the project footprint. PWCS, it seems, has not conducted or included any analysis of alternative options to possibly develop a scaled down development , which could potentially reduce the environmental impacts. Conversely, PWCS should be made to undertake further analysis to properly justify the scale of this project in this location.

- **Contamination:** The project will result in the mobilisation of contaminated ground water adjacent to the river and sensitive environmental communities. There are inherent uncertainties associated with the validity of the modelling results contained in the report and therefore it is highly contentious and uncertain as to whether the T4 project can be reasonably delivered without any significant impact to the surrounding water resources both in the short and long term.

- **Biodiversity:** The biodiversity assessment highlights significant impacts on a number of threatened species (including RAMSAR wetlands and migratory species) and proposes an offset strategy to address these impacts. However, the offset strategy is poorly defined, provides no certainty as to the delivery of suitable offset sites, and does not

demonstrate that 'like-for-like' offsets can be adequately provided for. This presents significant environmental risk for both local wildlife and flora.

- **Environmental management:** The PWCS proposal lacks innovation in relation to environmental management systems and controls to be implemented at the Project – preferring to rely on the out-dated environmental management regime in place at the adjacent Kooragang Coal Terminal. Given the large scale of this project, it would be in the interests of the community that PWCS be required to demonstrate that they will implement world's best practice environmental management measures at the site.

- **Community benefit:** Surprisingly, the T4 proposal does not result in the creation of any long term operational jobs nor any commitment to provide meaningful benefits for the local community.,. In addition, there is a distinct lack of detail and/or outline in the proposal of how PWCS will provide substantive improvements to local infrastructure given traffic congestion concerns and long standing environmental and community impacts.

Given the scale of the project and the potential for significant local community impacts, both from an infrastructure and environmental perspective, we believe further analysis or clarification should be sought from PWCS. The unanswered questions and risks, highlighted above, need to be properly canvassed and assessed, incorporating a holistic consideration of the complete project including all scope elements, before the project should gain the support of Government and the confidence of the local community. The assessment must ensure the potential benefits will outweigh the potential costs and reach an optimal outcome against variation of scale.

Thank you for your further consideration of this matter. Steve van Barneveld is available to discuss at your convenience.

Yours sincerely

Steve van Barneveld
Managing Director

Attachments: *JBA Review of Environmental Planning Issues*

REVIEW OF ENVIRONMENTAL PLANNING ISSUES

JBA has reviewed the Environmental Assessment Report which was prepared by EMGA|MitchellMcLennan (EAR) on behalf of PWCS for the Terminal 4 (T4) Project, Kooragang. This review of the environmental planning issues of the T4 project was prepared on behalf of Hunter Ports, with input from other environmental specialists.

The issues identified through our review of the EAR are listed below, and are described in further detail in the following sections:

- **Project scope:** The scope of the approval sought is poorly defined in the EAR with a lack of detail regarding specific activities and project components, and the potential implications of the project on supporting infrastructure, including whether additional supporting infrastructure is required and who would be responsible for delivering additional infrastructure to support the project.
- **Dredging approvals:** Approvals for dredging has been excluded from the EAR – however it is imperative that all of the inter-related components of the T4 project be considered and assessed at the same time as each other. It is unclear who will be responsible for securing the approval to carry out the dredging. This also creates uncertainty as to the validity of the use of Part 3A as an accredited process for assessment of the dredging activities by the Commonwealth.
- **Consideration of alternatives:** Significant environmental issues and impacts are associated with lands around the margin of the project footprint. PWCS have not outlined any alternative options to develop a marginally scaled down project, which may substantially reduce the environmental impacts. PWCS has not justified the scale of this large coal export terminal in this location – neither the 120 Mtpa operational capacity nor the extent of the physical footprint.
- **Contamination:** The project will result in massive changes to the hydrodynamic regime across this large and complex area which has multiple known zones of contamination. The conclusions of the contamination assessment are built upon complicated hydrodynamic modelling and are based on a large number of highly variable inputs and assumptions, as well as ill-defined remediation measures. Of particular concern is the high level of variability and uncertainty associated with many assumptions and input parameters in relation to the measurability of some groundwater features, future flow rates, water levels and the potential for mobilisation and transport of contaminants to sensitive adjacent environments. This creates inherent uncertainty as to whether the T4 project can reasonably be delivered with no significant impact to the surrounding water resources in the short and long term.
- **Biodiversity:** The biodiversity assessment predicts significant impacts on a number of threatened species (including RAMSAR wetlands and migratory species) and proposes an offset strategy to address this. However, the offset strategy is poorly defined in the EAR, provides no certainty as to the delivery of suitable offset sites, and does not demonstrate that 'like-for-like' offsets can be adequately provided.
- **Surface water and hydrology:** The T4 project will make substantive physical changes to the surface water channels in the wetlands north of the site, but has not demonstrated that this will not result in unintended impacts to the wetlands.
- **Hazards and risks:** The EAR does not provide any assessment in relation to the storage and handling of dangerous goods, and the potential for off-site impacts associated with the risk of explosions and fires.
- **Visual impact assessment:** The T4 project will result in a significant negative visual impact in the vicinity of the Tourle Street Bridge which is a major gateway into the City of Newcastle, but has not considered any alternative design measures or any meaningful mitigation measures to minimise this impact.

- **Traffic impact assessment:** Traffic congestion over Tourle St Bridge and along Cormorant Road is a well documented issue and concern in Newcastle. The traffic impact assessment outcomes make no positive contribution to this infrastructure, and in fact create significant risk of exacerbating this issue on what is the principal thoroughfare from the centre of the city out to the fastest growing regional airport in Australia. In addition, the EAR indicates that a shuttle bus regime will be implemented to transport up to 300 construction workers per day, but does not identify any details of the scheme – in particular where the additional car parking would be provided and where the connection points would be, considering the area proposed is generally residential.
- **Environmental management:** PWCS has not proposed any innovation in relation to environmental management systems and controls to be implemented at trheT4 project – preferring to rely on the out-dated environmental management regime in place at the adjacent Kooragang Coal Terminal. Given the scale of this project, PWCS should be required to demonstrate that they will implement world's best practice environmental management measures at the site. Technology has been implemented in other modern facilities in other parts of the world that have not even been considered for this application.
- **Community benefit:** PWCS has not provided any commitment to provide meaningful benefits for the local community, which is expected to bear the impacts associated with the project. There is no commitment to provide substantive improvements to local infrastructure.
- **Consultation:** The EAR includes a detailed report describing the outcomes of an extensive consultation programme. However, it needs to set out exactly which environmental, community and other special interest were consulted through the process, what the issues raised by these groups were, and how the ERA has dealt with these issues.

Further, the EAR has not justified the proposed demand for additional coal exporting capacity at the port beyond Stage 1. Given the projected coal export demand, and the complex uncertainties associated with environmental impacts of the T4 project, it seems unnecessary at this time for the full 120 Mtpa to be approved. Since many of the environmental impacts are predicted at the outer boundary of the project footprint, a lower overall operating capacity could be achieved with a smaller development footprint, effectively scaling down the impact of the project.

It is therefore considered that PWCS should consider a revised project with a more environmentally sustainable footprint which would have many overall benefits, including:

- Less dredging and less material emplaced on the site.
- Fewer berths, with less impact on shipping channels.
- Less environmental impacts and uncertainty.
- Faster and more secure project delivery.

1.0 SCOPE OF THE PART 3A PROJECT APPROVAL

Key concerns with the Scope of the Project for which Part 3A Approval is sought include:

- Variously throughout the environmental planning documentation the T4 project area is defined as between 200 hectares (ha) and 325 ha. PWCS needs to clarify the project area. If there is uncertainty as to the actual extent of the project footprint then there can be no realistic chance of a robust and comprehensive environmental impact assessment.
- The real property descriptions in the Part 3A Project Application are inconsistent with the description in the referral to the Commonwealth under the En*vironment Protection and Biodiversity Conservation Act 1999* (EPBC Act). PWCS needs to clarify the land parcels subject to the respective applications.
- The EAR states that the rail infrastructure for T4 will be independent of the existing Kooragang Island rail tracks. However, it seems as though the new turning loop for T4 will interact closely with the existing turning loop through the Kooragang Coal Terminal (KCT). If the KCT rail infrastructure will be affected during the construction or operation of the rail turning loop for the T4 project then this may impact on the short-to-medium term operation of the KCT rail operations and lead to the potential for off-site environmental impacts.
- Further to the potential construction implications on the rail activities at Kooragang Island coal terminals, it is unclear whether the EAR has considered the potential upstream impacts on the Hunter Valley Coal Chain. In particular, if there are any construction related impacts to the efficiency of the rail corridor during construction then this could cause upstream train queuing with associated impacts to local communities that have not been assessed.
- The project proposes to place up to 5.5 million cubic metres of dredged material onto the site as fill. This is vast quantity of dredged fill material; however the EAR provides virtually no description or discussion of the construction methodology, procedures, sequencing of works and timing associated with the filling. Given that many of the environmental issues described below relate specifically to the construction activities associated with this filling a detailed description of the methodology is considered to be warranted.
- It is unclear what has been assessed in relation to the relocation of the 2 x 33 kV transmission lines i.e. whether they are to be located to the north of the railway line or along the proposed southern easement. In particular they do not seem to be included in the Project Description map which shows the T4 project's components. This is potentially significant if the transmission lines need to be located to the north of the proposed railway line since it is unclear whether this would entail further removal of vegetation from the adjacent wetlands that goes beyond the assessment carried out in the EAR.

2.0 APPROVALS PROCESS FOR DREDGING

2.1 Background

The EAR specifically excludes dredging from the T4 Part 3A Project Application; however the project relies heavily on dredging activities to provide the necessary shipping routes and facilities for the T4 project to proceed. Further, a large proportion of the dredged material is proposed to be used as fill at the T4 site – as much as 5.5 million cubic metres. A summary of the dredging approvals framework proposed in the EAR is set out below:

- Part 3A: The T4 project is seeking approval under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Included in this Part 3A Project Application is the construction of wharves and berth facilities (on the north and south banks of the Hunter River South Arm) and the placement of dredged materials in the T4 project area. The Part 3A Project Application specifically does not include the dredging required to provide the shipping channel to the proposed berths and wharves or the dredging required for the berths and wharves.

- EPBC: The T4 project impacts on matters of National Environmental Significance and so it requires approval from the Commonwealth under the EPBC Act. The referral made to the Commonwealth includes request for approval to carry out dredging for the wharves and berths as well as for the required shipping channel. The T4 project is being assessed by the Commonwealth under an accredited NSW Government assessment process (being Part 3A) and the EAR is intended to provide a detailed environmental impact assessment to meet the requirements of the NSW Government agencies as well as the Commonwealth requirements. To this end the EAR includes as appendices technical reports relating to flooding and hydrodynamics.
- Section 96 Modification: The EAR states that the dredging of the river, including the dredging for the berths on the north bank of the South Arm has been approved under Development Consent No. DA-134-3-2003-i but that this consent will need to be modified to account for the particular requirements of the T4 project. The EAR is not accompanied by the proposed Modification Application, and it does not appear that any Modification Application has currently been submitted for consideration by the NSW Government or the Commonwealth.

2.2 Key issues with the Approvals Process

- The construction of the wharves and berths on the north bank of the Hunter River South Arm are either part of the Part 3A Project or not. It is also unclear whether the coal conveyor infrastructure associated with the crossing of the Hunter River South Arm adjacent to the Tourle Street Bridge is included in the Part 3A Project Application or whether it will be assessed as part of the dredging approvals.

  PWCS needs to clarify what parts of the project are included in the Part 3A Project Application and verify that the EAR has fully assessed all environmental planning issues associated with the project components that are included.
- The EAR is intended to assess the dredging impacts in relation to the EPBC Act Approval, but this has been specifically excluded from the Part 3A environmental assessment process. The Commonwealth are relying on a bilateral agreement / accredited assessment whereby the assessment of the Part 3A project application considers a project scope that is at least as broad as that for which approval is sought from the Commonwealth. The inconsistency in the scope of the project being considered at the State and Commonwealth levels puts into question the validity of the bilateral / accredited process.
- Given that the dredging required for the T4 project has not been included as part of the Part 3A Project Application and has not been assessed in the EAR there is no certainty that this dredging can be assessed and carried out in a timely and efficient manner. As such, the Part 3A Project Application, if approved, would rely on a future assessment and approval of the dredging works. This causes an unacceptable degree of uncertainty associated with the project. Further, given that the NSW Government development consent for the dredging is held by the NSW Government (through NSW Maritime), it is unclear who is responsible for assessing, funding and executing the dredging.
- A hydrodynamic assessment prepared by Worley Parsons and provided in Appendix I of the EAR provides an assessment of the hydrodynamic affects associated with the dredging activities. This hydrodynamic assessment refers to the original Patterson Britton and Partners report prepared in 2003, and concludes that the outcomes of this 2003 report remain valid. Considering the Commonwealth are supposed to be assessing the hydrodynamic impacts of the dredging then it would seem to be necessary that the full assessment of the dredging be provided as part of the EAR. Further, the EAR does not provide any consideration of the hydrodynamic assessment report – in particular whether the proponent intends to implement all of the mitigation and management measures proposed. This demonstrates the inadequacy of the assessment approach adopted by PWCS in not concurrently and cumulatively assessing all aspects of the proposal.
- The EAR is unclear about other approvals that may be required in relation to dredging and the construction of berths and wharves. In particular it states that approvals under the

Fisheries Management Act and the Water Management Act are not required since the project is being assessed under Part 3A. However, if the dredging is to be assessed via a Modification Application under Section 96 of the EP&A Act to the previous dredging consent then these approvals will still be required. This adds to the uncertainty and lack of clarify regarding dredging discussed above.

- The EAR notes that the benthic sediments in the Hunter River provide habitat for benthic and epibenthic fauna. These benthic habitats are an important component of the estuarine ecosystem, which includes the Hunter Wetlands National Park and Hunter Estuary Wetlands RAMSAR site. However, the biodiversity impacts (including potential impacts to Matters of National Environmental Significance) of the dredging associated with changes to the benthic and epibenthic habitats have not been assessed in the EAR since the dredging has been excluded from the EAR.
- As already described above, the EAR does not provide any detailed description or analysis of the methodology, procedures and sequencing associated with the use of dredged materials as fill. Because the dredging activities have been deferred to a subsequent approval all details about the dredging activities have been excluded from the EAR. However, because the material is proposed to be used for fill at the T4 site, the EAR should set out the procedures to be implemented to identify and monitor the dredged material and in particular how the material will be analysed to determine its suitability for use as fill material.
- Based on the above it is clear that the assessment for the T4 project needs to consider the dredging concurrently with the Part 3A Project Application to ensure a cumulative assessment is provided. All aspects of the project should be considered and assessed concurrently and cumulatively. To this end the Part 3A Project Application should be expanded to include the entire project (including the whole dredging program), or at a minimum, the proposed Modification Application should be submitted and assessed concurrently with the Part 3A and the EPBC Act applications.

3.0 CONSIDERATION OF ALTERNATIVES AND STRATEGIC PLANNING

- PWCS has not justified the extent of the project in terms of the proposed operating capacity or the overall project footprint and the EAR does not consider possible alternative arrangements that could significantly reduce the ecological impacts of the project. In particular:
  - While it is appreciated that PWCS has proposed a staged increase in port capacity as part of T4, the extent of the footprint of the project, upon which many of the environmental impacts are based, does not change from stage to stage (that is the full footprint is required for Stage 1). Since many of the environmental impacts are predicted at the outer boundary of the project footprint a smaller project footprint for Stage 1 should be considered.
  - If an alternative arrangement for a coal loader at the site which has a lower development footprint could be developed then this could result in a significant reduction in the ecological impacts of the project. In particular, many of the impacts to wetlands occur on the edge of the site – as such it seems that only a small reduction in project footprint would result in potentially large reductions in the level of ecological impacts, in particular to the Hunter Estuary RAMSAR Wetlands.
  - It is considered that PWCS should consider a revised project which relates to a reduced project footprint. If not, then PWCS need to demonstrate that the incremental increase in operational capacity associated with the proposed project footprint is acceptable when compared to the smaller operational capacity of a reduced footprint that is also associated with lower environmental impacts.
  - Given the complex uncertainties associated with the project, the proponent has not demonstrated that development of the full 120 Mtpa need is justified on environmental grounds. Rather, it would seem to be an appropriate application of the precautionary principle to approve and implement additional coal export capacity at the port in a more

step-wise approach until monitoring, mitigation and management measures have been tested and verified.

- The EAR does not provide an assessment of the proposal against the relevant aims and objectives of the applicable strategic planning documents, including:
  - The Lower Hunter Regional Strategy.
  - The NSW Ports Growth Plan.
  - The Hunter Estuary Management Plan.

4.0 CONTAMINATION

4.1 Summary of Contamination Issues

The EAR includes contamination assessment documentation which includes:

- A contamination assessment report
- A summary of contamination issues for the OneSteel site
- A groundwater assessment report
- An assessment of remediation options report
- An outline remediation action plan

All of these assessments rely on detailed groundwater flow and contaminant mobility modelling. The general conclusions of these various reports are that there will be a short term increase in the flow of groundwater; in the interaction of groundwater and surface waters; and in the mobility of contaminants due to these increased flows. However, they conclude that the short-term impacts are manageable and acceptable, and that they are compensated for by the long term benefits associated with remediating the site.

There are a number of uncertainties associated with this approach, which can be summarised as follows (and are described in more detail in the follow section):

- The assessment does not justify the inclusion or exclusion of certain parts of the site, and is not based on actual location of emplacement cells and their designs, which has been deferred.
- The modelling is based on a myriad of assumptions and input parameters all of which have a high level of variability and uncertainty associated with them and which have not been explained or justified. Given the potential significance of the level of impacts then contingency measures should also be detailed.
- This results in the outputs of the modelling in relation to the predicted acceptability and manageability of the short-term impacts being unclear and unreliable.
- The predicted long-term benefits are based on remediation options that have yet to be defined – so it seems unlikely that they can be accurately assessed at this stage.

4.2 Detailed Consideration of Contamination Issues

- The EAR includes only a desktop based assessment in relation to the contamination of T4 project land which is part of the OneSteel site, located on the south bank of the Hunter River South Arm. The desktop based assessment identifies that there are risks of impacts arising during the construction process in relation to leaching of contamination into the river. The assessment concludes that management measures will be required, however that it states that the management measures will not be confirmed until site-specific investigations have been carried out. It is therefore considered that the potential impacts on the river water quality have not been adequately assessed. Further, there has not been demonstrated that

the proposed remediation strategy for the OneSteel site (i.e. capping) is suitable for the site and the nature of the contaminants.

- The EAR specifies that Area E has not been subject of any known filling and so it is not necessary to carry out a contamination assessment. However, the area is within land zoned for Special Uses and it is immediately adjacent to the rail line for a coal terminal. As such, there is certainly a possibility that historic activities, being either spills, leaks or undocumented filling, have resulted contamination in Area E. As such, it is considered necessary for at least a preliminary environmental investigation to be carried out in this area.
- The EAR proposes that a containment cell be constructed to be used for the purposes of emplacing contaminated materials that are not suitable for use elsewhere at the site. The location of containment cells has not been specified in the EAR – rather it has been deferred until an assessment has been completed in relation to the likely composition of the materials to be excavated, the sizing of the cell, and the design of the lining system. It is considered that the potential impacts of the containment cells cannot be appropriately assessed until their location, size and the nature of the materials to be emplaced has been identified.
- The groundwater assessment (Appendix C EAR) includes detailed modelling of the groundwater conditions at the site, including the interaction between the groundwater and surface water. The groundwater modelling is a critical assessment which is relied upon by PWCS in relation to ensuring that the development works for T4 do not result in impacts to the ecological values of the Hunter River estuary. This groundwater assessment identifies a large range of potential impacts associated with multiple contaminated areas at the site, all of which have different levels and types of contamination. The potential impacts identified by the groundwater assessment includes changes to water flows within surface waters and groundwaters at the site, increased salinity, and increased flux of contaminants from the known contaminated land areas. These impacts have been assessed through the preparation of detailed numerical models for flow rates and contaminant transport. These models are based on a myriad of assumptions in terms of the model construction and the input parameters. The report identifies that that there is a high level of variability and uncertainty associated with many of these assumptions and input parameters including in relation to the measurability of some groundwater features, future flow rates, water levels and the transport of contaminants. Given the high level of uncertainty associated with the modelling the report should provide additional analysis in relation to the following:
    - Explanation of the likelihood that the model is incorrect and the potential magnitude of the impacts if the model is incorrect?
    - Justification that the base assumptions and input parameters that have been used for the numerical models are sufficiently conservative.
    - Justification that the assessment criteria that have been adopted are suitable for the receiving environment (in particular the Hunter River Wetlands).
    - Description of contingency measures to be implemented in the event that the actual groundwater contamination issues are more significant that predicted by the model or if the proposed mitigation and management measures fail.
- The groundwater assessment identifies that the former FDF part of the site (in Area D) is managed through existing leachate systems. Further, it identifies a risk that the T4 project works will impact on the proper functioning of the existing leachate management systems with the potential outcome that increased leaching of contamination into the Hunter River Wetlands, and the modelling indicates that this would result in unacceptable levels of contaminants being leached. However, the groundwater assessment report does not consider the likelihood of the existing leachate management system being so affected. Further, the assessment report does not demonstrate that the proposed mitigation measure (being the installation of a permeable reactive barrier) will result in a reduction of contaminant leaching to below the relevant thresholds.

- The contamination assessment relies on the trade-off between potential short term impacts (i.e. increased leaching of contaminants) against the possible long terms benefits (i.e. reduced long-term leaching of contaminants). This approach is questionable for the following reason:
  - It is clear from the above that there is a high degree of uncertainty associated with the predicted short-term impacts. Without providing additional assessment as detailed above it is not considered possible to state at this stage that the short-term risk of off-site impacts are within acceptable levels.
  - The long term benefits are based on implementing a range of remediation options, however these are yet to be defined, and are proposed to be determined at a later stage (as part of the preparation of a Remediation Action Plan). Therefore, the predicted long-term benefits are assumed, and have not been subject of detailed analysis to determine whether they are actually likely to occur.

5.0 BIODIVERSITY AND OFFSETS

5.1 Background

- The EAR indicates that the T4 Project will destroy habitat and vegetation of significance under both Commonwealth and State legislation, including:
  - Regionally significant habitat for a relatively large population of the Green and Golden Bell Frog which is endangered under the NSW TSC Act and vulnerable under the Commonwealth EPBC Act.
  - Approximately 29 ha of Mangroves and 19 ha of Coastal Saltmarsh which will potentially impact the Hunter Wetlands National Park and Hunter Estuary Wetlands RAMSAR site, which provide habitat for numerous threatened species listed under the Commonwealth EPBC Act and the NSW TSC Act including over 60 migratory bird species.
  - Approximately 27 ha of freshwater wetland habitat and 4 ha of Freshwater Wetland EEC.
- As a result of the above impacts a proposed offset strategy has been developed to mitigate disturbance. The proposed offset strategy includes creating habitat and/or securing existing habitat at the following sites:
  - Ellalong Lagoon, located in the Hunter Valley is recognised as a Wetland of National Significance in the Directory of Important Wetlands in Australia.
  - Improvement of part of the Hunter Estuary Wetlands to create additional Coastal Saltmarsh, and additional habitat for migratory shorebirds and the Australasian Bittern.
  - A 50 ha site at Crookhaven, on the south coast of NSW.
  - A 7 ha site on the mid-north coast of NSW.
- The offset strategy also includes the provision of funding directly for:
  - Captive breeding program for Green and Golden Bell Frog.
  - Habitat restoration program for the Australasian Bittern.
  - Genetic research for the *Zannichellia Palustris* (Horned pondweed).

5.2 Key Issues with Biodiversity Assessment

- The EAR does not consider or assess the potential impacts of noise light, dust and vibration on birds and fauna which live and/or breed within the adjacent wetlands.

5.3 Key Issues with Offsets Strategy

The T4 project will clearly have potentially significant impacts on threatened species, EECs and migratory birds listed by the Commonwealth and State, which is why an offset strategy has been

developed for the project. The Commonwealth has published a *Draft Policy Statement: Use of Environmental Offsets under the EPBC Act 1999* and the NSW OEH has published a set of key principles for the use of biodiversity offsets in NSW. Key shortcomings of the proposed biodiversity offsets provided for the T4 project include:

- It is not clear how the amount of vegetation community / habitat that is to be offset has been calculated and it appears inconsistent with the impact assessment.
- The proposed offset sites are poorly identified in the EAR. For example the Hunter Estuary Wetlands offset is not identified in a map or defined in terms of land description. The provision of rehabilitation of wetland habitat within the Hunter Estuary Wetland is a critical component of the proposed offset strategy intended to offset impacts to migratory birds and their habitat, impacts associated with the loss of saltmarsh, as well as impacts to the Australasian Bittern and its habitat. However, the EAR does not provide any details in relation to where the offset site is within the RAMSAR site, nor how big the site is, both of which would be critical to assessing the adequacy of the proposed offset site in offsetting the predicted impacts.
- The offsets strategy is not concrete – i.e. the proposed offset sites have either not been secured or have not been subject of adequate biodiversity assessment as to whether they will provide adequate offset given the nature and scale of the ecological impacts. For example, the proposed Green and Golden Bell Frog offset site at Crookhaven is not secured, and the offset site near Crescent Head needs to be subject of further ecological investigations. Given that Ellalong Lagoon does not provide a suitable offset for Green and Golden Bell Frog there is no secured offset site that provides any meaningful level of offset for this species.
- Given the above issues it is not possible to determine whether the proposed offset strategy provides a 'like for like' offset against the predicted ecological impacts of the T4 project.

6.0 SURFACE WATER AND HYDROLOGY

- The EAR identifies that the construction of the additional railway line as part of the T4 project will result in changes to the hydrological regime in the Hunter Estuary Wetlands to the north of the site. To address this impact PWCS propose to construct a new channel to maintain the hydraulic connection between Mosquito Creek and its tributary. However, no evidence is provided that this solution will be effective in maintaining the hydraulic connection satisfactorily or that it won't have unintended consequences elsewhere in the wetland. Considering the sensitivity of this environment (being RAMSAR Wetland), making substantive physical changes appears to be a have a significant level of risk associated with it.

7.0 HAZARDS AND RISKS

- No assessment has been carried out in relation to the storage and handling of dangerous goods or the potential for offsite impacts associated with a fire or explosion at the site. This is contrary to the Preliminary Environmental Assessment Report which states that:

  > *Potential hazards associated with the potential for spills or leaks of hazardous materials and for fires from spontaneous coal combustion.*
  >
  > *A preliminary hazard analysis (PHA) will be undertaken to identify and evaluate the potential hazards associated with the T4 Project, in accordance with the requirements of State Environmental Planning Policy No.33 –hazardous and offensive development.*

- Considering the assessment approach proposed in the Preliminary Environmental Assessment Report it seems as though the EAR has not adequately assessed the potentially hazardous nature of the T4 project. In particular a PHA should be prepared and submitted as part of the EAR or a justification provided that explains why the project is not potentially hazardous and does not require a PHA.

8.0 VISUAL IMPACT ASSESSMENT

The project includes significant coal handling infrastructure to be installed across the Hunter River South Arm, adjacent to the Tourle Street Bridge. The EAR assesses the visual impacts of this infrastructure as being moderate due to the similarity in appearance with the adjacent port and industrial facilities. Therefore it concludes that the visual impacts are not significant once mitigation has been applied. In this case the mitigation consists of camouflage painting, which appears to be painting in a khaki green colour.

However, the rendered photomontage demonstrates that the river crossing infrastructure will clearly have a significant impact on the visual outlook from the Tourle Street Bridge. In particular:

- The proposed mitigation measure (i.e. camouflage painting) does not lessen the significant of this impact.
- The proposed T4 project facilities may be similar to existing port and industrial facilities in the Port of Newcastle, but in this case the river crossing infrastructure is a lot more visually prominent, and will impact the visual context of a major gateway into the City of Newcastle.

The visual impacts of the T4 project are not moderate and are clearly significant impacts contrary to the conclusion of the EAR. PWCS should be required to investigate alternative approaches to the river crossing infrastructure and/or more advanced visual impact mitigation measures. This should include consideration of measures to improve the visual impact of existing coal loader infrastructure which contributes to the poor existing visual environment and detracts from this important Newcastle gateway.

9.0 TRAFFIC

- The EAR has assessed the impact to intersection performance in relation to constructing a new four way roundabout on Cormorant Road to replace the existing Pacific National Access Road and NCIG Wharf Access Road. The EAR indicates that they may instead construct temporary traffic signals at this location and that a new intersection would be constructed – however the EAR has not carried out an assessment of this modified traffic arrangement.
- The EAR indicates that the Industrial Ave/Woodstock St is operating at an unacceptable level and proposes to install new traffic signals prior to the commencement of Stage 2 construction activities. However, the assessment has assessed the Stage 1 traffic impacts at this intersection with the proposed new traffic signals in place. The traffic assessment should assess this intersection for Stage 1 construction works without the proposed new traffic signals, or commit to providing the new signals prior to the commencement of Stage 1 construction works.
- The proponent proposes to implement a shuttle bus service to transport 300 workers daily to address construction traffic impacts. The construction traffic modelling is reliant on this shuttle bus service, however minimal details of the service have been provided. In particular:
    - How will it be enforced to ensure that the construction traffic generated by the project does not exceed what has been assessed in the EAR.
    - A drop off and pick-up point(s) has not been provided, even if they are indicative at this time.
    - Presumably the pick-up and drop-off point(s) will require significant parking in close proximity. Unless specific car parking arrangements are provided for the workers will use the surrounding suburban streets near the pick-up and drop-off point(s).
    - How many shuttle buses are expected to be utilised to accommodate this number of people.
- Measures the Applicant proposes to address construction traffic impacts include:

- Construction of for way roundabout to replace existing PN Access road & NCIG wharf access road OR temporary signals.
- Worker traffic departure staged.
- Signals at Industrial Drive/Woodstock before construction on south bank.
- Median strip constructed south of Tourle St Bridge to limit turn into OneSteel Site to left in left out.

- These proposed upgrades are very minor in the context of a $5 Billion development. It is considered that with a project of this scale and level of impact to the surrounding community and environment there should be a mechanism to improve the level of infrastructure in the locality when it is already assessed as operating at capacity.
- Traffic congestion over Tourle St Bridge and along Cormorant Road is a well documented issue and concern in Newcastle. The traffic impact assessment outcomes make no positive contribution to this infrastructure, and in fact create significant risk of exacerbating this issue on what is the principal thoroughfare from the centre of the city out to the fastest growing regional airport in Australia.

10.0 ENVIRONMENTAL MANAGEMENT

- The environmental management regime proposed for the T4 project, including noise management, dust management and surface water management are based on the technology and criteria currently in place for the KCT. That is, there is no innovation associated with the project or any commitment to implement world's best practice technologies. For example:
  - Noise and vibration is essentially dealt with by having low-noise specification equipment and partial enclosure of dump stations.
  - Air quality during operation is dealt with by partial enclosures of dump station, sprays, belt conveyors partial enclosed, bund & trees to minimise wind and variable height stackers.
- However, for a project of this nature the proponent should not simply rehash the same old technology but should demonstrate innovation and commit implementing environment controls and management that is world's best practice. Without such a commitment the proposed measures will deliver the cheapest result for the proponent but will not deliver the best result for the community.
- In particular, PWCS has demonstrated a commitment to deliver a range of innovative and advanced environmental management controls at the Carrington Terminal to minimise impacts on the local community. PWCS should justify why these additional measures are not proposed for the T4 project.
- Other measures that could be considered as world's best practice include examples such as:
  - wind protection utilising high border fences with profiled mesh to protect exposed coal surfaces from wind erosion and dust mobilisation
  - noise and visual barriers using sound walls, particularly around parking rolling stock
- The EAR does not make reference to the nearby certified heliport located immediately to the west of the Tourle Street Bridge. Due to the proximity of the T4 project site, and especially the close proximity of the elevated infrastructure around the Tourle Street Bridge, it is considered that the proponent should consult with the Civil Aviation Safety Authority (CASA) to ensure that helicopter flight paths are not jeopardised.

11.0 COMMUNITY BENEFITS

- The T4 project is a substantial project with many impacts on the local community and the surrounding environment. Providing coal export capacity through the Port of Newcastle is

obviously a critically important component of the state's infrastructure needs. However, the importance of the infrastructure should not mean that the impacts on the local community are ignored. The local community at Newcastle are obviously impacted by the export of coal through the Port of Newcastle, and they will obviously be impacted by the construction and operation of the T4 project. Notwithstanding this the local community at Newcastle gain very little from the T4 project. In particular:

  - The T4 project includes only minor, self-serving improvements to local road infrastructure to accommodate the T4 project.
  - The T4 project will be operated predominantly from the existing workforce at the KCT and there will be no new direct jobs generated by the project.

- The provision of benefits to a locally impacted community in return for a social licence to operate has been established in the *Environmental Planning and Assessment Act 1979* through the application of Voluntary Planning Agreements (VPA). It seems extraordinary that for a project of this scale, where the impacts are directly experienced by a local community but only a small proportion of the benefits are accrued in that same community, that the proponent has not proposed any sort of local community benefit or committed to developing a VPA. It is considered that the proponent should consult with relevant stakeholders in terms of developing the community investment program and identifying the community services and facilities that will be funded.

12.0 STAKEHOLDER CONSULTATION

The community consultation reporting does not set out exactly who was consulted and what their issues were. In particular:

- The EAR should state which environmental, community and other special interest groups were consulted with during the stakeholder assessment process.
- The EAR should state how these groups were consulted.
- The EAR should include a description of the issues raised by agencies, environmental groups and other special interest groups and explain how these issues have been addressed in the design of the project and/or the preparation of the EAR.