228

Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Ref: F2011/12981

Ms Rebecca Newman
Senior Planning Officer
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Ms Newman

Port Waratah Coal Services Terminal 4 – Submission

The Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) has reviewed the Environmental Assessment (EA) documents that are currently on public exhibition for the Port Waratah Coal Services (PWCS) Terminal 4 project (the T4 project). As you are aware the New South Wales government is undertaking an assessment of the T4 project under Australia's national environmental law, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), via an accredited State assessment process under Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW).

SEWPaC remains concerned that the T4 project will have a significant impact on matters of national environmental significance, most notably on the Hunter Estuary Wetland Ramsar site, listed threatened species and listed migratory species. These impacts are discussed further in Attachment A.

If you would like to discuss SEWPaC's comments please contact Mr Denis Snowdon. Denis may be contacted on telephone 02 6274 1652 or email to denis.snowdon@environment.gov.au

Yours sincerely

Michael Ward
Director
Ports and Marine Section
3 May 2012

228 A

Attachment A: SEWPaC's concerns regarding the T4 project

Comment No.	Comment
Migratory species - Shorebirds	
1.	PWCS acknowledges that without appropriate mitigation and offsetting the T4 project would have a significant impact on listed migratory shorebirds. However, the proposed mitigation measures would have limited effect on shorebird species, as the southern retained portion of Deep Pond is unlikely to be utilised by shorebirds due to noise, light spill and lack of broad sight distances for predation avoidance. The offset of preserving Ellalong Lagoon as a freshwater habitat is not relevant to listed migratory shorebirds as it is not currently utilised by any of the species of shorebird likely to be significantly impacted as part of the T4 project. Subsequently, restoration of historic shorebird habitat and creation of suitable new habitat are key to mitigating impacts of the T4 project on listed migratory shorebird species. PWCS states that they intend to construct a series of shorebird habitats on the Hunter Wetlands Offset site providing several shallow lagoons, saltmarsh habitat and mudflats. This is currently only at the conceptual design phase and appropriate areas are not identified in the EA. The acquisition of appropriate land and timeframe for shorebird populations being established needs to be specified.
Threatened species – Green and golden bell frog	
2.	The EA suggests there are 900 green and golden bell frog (*Litoria aurea*) individuals within the T4 project area, of which an unknown proportion will be affected. It is highly likely that a significant proportion (if not all) of the 900 green and golden bell frogs found at the site will be adversely impacted by the development. PWCS concede that without mitigation measures it is likely that the proposed reduction of freshwater wetland habitat at Kooragang Island will significantly impact the green and golden bell frog, especially due to the cumulative effects of habitat loss, isolation and habitat fragmentation. PWCS confirm in the EA that construction will not be staged to protect areas of breeding habitat and that it is likely that all known green and golden bell frog breeding habitat within the T4 project site will be removed during stage 1 of construction. A conceptual corridor comprising a series of habitat features for the green and golden bell frog is proposed within the T4 project area to provide linkage between populations. Biodiversity offset measures are also being developed by PWCS as residual impacts to the green and golden bell frog are likely to occur. ***Staging and project design*** PWCS should consider the alternative of staging the project in a South to North order rather than the proposed North to South staging. This is particularly important as stage three stockpiles will only be required if there is adequate demand. If stockpile construction was done in a south to north order, railway pond (which appears to be the most significant breeding habitat on the T4 site) could be protected for as long as possible and perhaps avoided entirely. South to north staging would also allow SEWPaC and PWCS to determine if the proposed conceptual corridor is effective prior to the removal of railway pond (should the T4

project be approved). Furthermore it is not evident that alternative project designs that may better protect green and golden bell frog breeding habitat were investigated.

PWCS should reconsider the design of the project, especially the northern location of the new rail way lines and coal stockyards to avoid impacting important green and golden bell frog populations in the northern part of the T4 project area. If this is not possible, then significant mitigation measures may be required along the railway corridor and across the coal stockyard. Consideration should be given to either exclude known breeding habitat from the project site or the staged construction of coal stockpiles in a south to north direction (currently proposed for construction starting from the north) to avoid impacts to the breeding habitat for as long as possible (which will also enable PWCS to determine whether the habitat corridor is successful) and might also include a raised railway line.

Mitigation

Recognising the complexities of the green and golden bell frog population, PWCS have committed to developing monitoring protocols and performance criteria in consultation with relevant authorities. There is very little information regarding what guidelines the green and golden bell frog monitoring program will incorporate or when it will come into effect. To maximise its effectiveness monitoring should commence before construction takes place and it should have regard to the relevant state and commonwealth species guidelines.

There are significant concerns with the proposed location of the habitat corridor. The corridor is intended to provide linkage between green and golden bell frog populations and suitable habitat; however the majority of frog individuals that will be impacted by the T4 project are unlikely to benefit from the corridor. According to the EA, the majority of green and golden bell frogs found within the T4 project site inhabit the northern part of the project site. Two significant areas of breeding habitat have also been identified in this northern area. The proposed habitat corridor is planned for the southern section of the T4 project area away from the northern part where the majority of frogs are found. The location of the habitat corridor should be reconsidered to ensure it is accessible to the viable breeding populations in the northern section of the T4 project. According to the *Significant Impact Guidelines for the Vulnerable Green and Golden Bell Frog (Litoria Aurea),* to minimise impacts to the species the projects design should incorporate buffers zones around water bodies of at least 200 m and terrestrial movement corridors by at least 100 m. The current habitat corridor design does not appear to incorporate these guidelines and therefore appropriate scientific justification needs to be provided so that the appropriateness of not incorporating the recommended buffer zones can be assessed. Similarly, the guidelines also recommend avoiding project works during sensitive periods such as the breeding season (September to February). PWCS state that work will not be suspended for the green and golden bell frog breeding season.

Therefore, mitigation measures for the green and golden bell frog must be revised and improved.

Biodiversity offset measures

Biodiversity offset measures are also being proposed by PWCS to offset residual impacts to the green and golden bell frog. The main direct offset proposed is the

	purchase and management of land where a known or suspected breeding population of green and golden bell frogs occur. The preferred offset site has not yet been confirmed but is likely to be in the Crookhaven region, which is outset the Hunter Region, but within the Sydney Basin Bioregion. While this could represent benefits for the east coast population as a whole, it may not be considered acceptable as a residual impact offset to the Kooragang Island population or the Hunter region which will still be significantly impacted by the development of the T4 project. Confirmation of the preferred offset site should be provided, so that the appropriateness of the site as an offset for the residual impact to the Kooragang Island breeding population of green and golden bell frogs can be assessed. SEWPaC notes that green and golden bell frog have previously been found at Ellalong Lagoon. It is not clear whether a green and golden bell frog reintroduction program at Ellalong Lagoon has been considered or assessed.
Threatened species – Australasian Bittern	
3.	Any proposed offset site for the Australasian Bittern should be appropriately surveyed to determine if the species occurs at the site. Only sites where Australasian Bittern are known to occur that are not currently protected can be classified as a direct biodiversity offset measure for this species.
Threatened and migratory species – Humpback and Southern Right Whales	
4.	PWCS has acknowledged the risk of vessel strike with cetaceans, which is also acknowledged by the Recovery Plans for Australia's Threatened Whales under the EPBC Act. However PWCS does not appear to have included details in regards to the impacts to whales of potential increased shipping resulting from this project. PWCS should outline the anticipated number and size of vessels expected to visit the facility each year and the contribution of these vessels to general shipping volumes in the vicinity if known. SEWPaC understands that the Newcastle Port Corporation limits the number of vessels that are within the port or at anchor at any one time. If this is the case and means that shipping numbers will not increase as a result of this project, then PWCS should provide details of how NPC limits vessel numbers in the port or at anchor at any one time.
Hunter Estuary Wetland Ramsar site – Impacts to the green and golden bell frog	
5.	The green and golden bell frog is a critical component of the Hunter Estuary Wetland Ramsar site. Impacts to the green and golden bell frog under the current T4 project design are not acceptable and will likely result in unacceptable impacts to the values of the Hunter Estuary Wetlands Ramsar site. See Comment No.2 for further comments in regard to impacts to green and golden bell frogs associated with the project design and proposed mitigation measures. The proposed biodiversity offset measures for green and golden bell frog do not offset the impacts to the Hunter Estuary Wetlands Ramsar site. SEWPaC also notes that green and golden bell frog has not been recorded at the proposed Hunter Estuary Wetlands Offset site and that and that it is likely that any habitat for the species will be removed or disturbed during migratory shorebird and saltmarsh habitat restoration works. Therefore, based on the current project design and

	proposed mitigation measures, further green and golden bell frog offsetting initiatives within the Hunter Estuary Wetlands appear to be appropriate.
Hunter Estuary Wetland Ramsar site – Water quality and hydrological impacts	
6.	***Dredging activities*** Increased levels of turbidity are a common impact associated with dredging activities. Increases in turbidity are not discussed in the EA for the new dredging plan, however PWCS reiterate that there are negligible differences between the original and modified plan. In the original dredging plan, one of the mitigation measures was a floating turbidity barrier installed across the river upstream of the dredge area. PWCS state in the new plan that this is not considered a practical option now considering the tidal flows in the river and occurrence of flooding. Previous dredging of the South Arm by PWCS and other companies has shown that water quality impacts can be managed without the need for installation of a turbidity curtain across the river. There is a lack of information from PWCS to justify claims of minimal changes to impacts especially considering the need for considerable excavation/dredging for the two new berths and that the previously approved turbidity barrier mitigation measure is not being implemented.
7.	***Activation and exposure of potential acid sulphate soils*** The activation of Acid Sulphate Soils (ASS) within the T4 project area is a concern due to the potential to leach acid to the Ramsar site where it can scald vegetation and kill aquatic fauna. While PWCS appears to appreciate the importance of ASS, it is difficult to assess their mitigation measures without the proposed ASS Management Plan. If the T4 project is approved under the EPBC Act it is likely that proposed conditions would require that an ASS Management Plan be developed and approved by the Minister prior to construction.
8.	***Groundwater changes*** Groundwater within the T4 project is highly contaminated and exceeds the ANZECC trigger levels. The lower Estuarine Aquifer connects with the Hunter River South Arm via sub-horizontal flows and to a lesser extent to the Hunter River North Arm and tidal wetlands to the north and west, including the Ramsar site. Travel time to the Hunter River from the Estuarine Aquifer is estimated to be 50 years. Given the connectivity between the Estuarine Aquifer and the Ramsar site, strict management measures will be required during construction and operation of the T4 project to ensure contamination is not spread from groundwater to the Ramsar site in the short, medium and long term. Several activities planned for the T4 project have the potential to impact upon Ramsar values through groundwater impacts. These include excavation below the water table and penetration of the clay aquitard, soil 'squeezing' and contaminant mobilisation under the weight of T4 project fill and infrastructure, and activities that will lead to lower water levels within the aquifers. PWCS commit to developing and implementing groundwater monitoring plans for the T4 project construction and operation. The plans will include water quality monitoring at sites cross the project area that are known to be particularly

	contaminated. There is no discussion regarding what baseline data will be used, if triggers will be in place and what course of action will be taken if the triggers are breached. In addition, there is no indication of what guidelines will be used in the creation of the groundwater monitoring plan. If the project is approved, PWCS suggest that the measures will be refined and submitted for subsequent approval as part of a Remediation Action Plan. Impacts to the Ramsar site as a result of activities at the T4 project are already small given the limited influence of groundwater on the Ramsar site and the 50 year travel time between the Estuarine Aquifer and Hunter River. However changes to groundwater flow rates and contamination levels may have long-term and cumulative detrimental impacts on Ramsar values. To ensure impacts are fully mitigated, PWCS must develop a comprehensive water quality monitoring program. In developing the monitoring program, PWCS should: • commit to developing water quality triggers and contingency measures • consider the ANZECC/ARMCANZ guidelines when developing water quality triggers • consider the NWQMS when formulating the plan • gather baseline data prior to any development at the site.
9.	***Surface water management*** PWCS acknowledge that the T4 project is expected to alter existing flow regimes, water quality and water quantity at the site. Although surface water from the T4 site is believed to have limited influence on the Ramsar wetland, a comprehensive surface water management plan is required to mitigate potential impacts. In developing this PWCS should: • commit to developing water quality triggers and contingency measures for the Construction Environmental Management Plan • consider the ANZECC/ARMCANZ guidelines when developing water quality triggers • consider the NWQMS when formulating the plan • gather baseline data prior to any development at the site.
10.	***Changes to flooding regime*** The EA indicates that the T4 project area is unlikely to be significantly impacted by flooding or impact flooding at any downstream areas, however there is a lack of discussion around the indirect impacts of flooding. In particular, the settlement ponds in the Deep Pond area will continue to be inundated during flood events after construction. This is likely to result in the mobilisation and transfer of contaminants and sediments from the settlement ponds to the Ramsar site during a flood event. The transfer of these waste contaminants and sediments could have serious consequences for areas used by migratory birds and the green and golden bell frog breeding populations. PWCS should investigate any indirect impacts to Ramsar values as a result of the mobilisation of contaminants and sediments from the Deep Pond settlement ponds during at least a 1 in 100 year flood event. PWCS need to consider appropriate contingency and mitigation measures that can be promptly used in the event of a flood to mitigate the movement of contaminants towards the Ramsar site. This

	should be incorporated into a comprehensive Flood Management Plan.
Other comments	
11.	At the referral stage PWCS indicated that a permit would be sought for offshore disposal of material unsuitable for use as engineering fill. Detail on any proposed offshore disposal of dredged material cannot be found in the EA. Clarification is required on whether PWCS still intends to apply for an offshore disposal permit and if so, the location of the proposed spoil ground.
12.	PWCS should consider whether land purchased or proposed to be purchased as part of their biodiversity offset measures has been previously used as an offset for other projects and if so, provide details.
13.	PWCS have not provided details of the pipeline route or methods to transfer dredge material suitable for use as engineering fill to the T4 site. This information should be provided and potential impacts of this activity assessed.