The League of Independent Activists Australia

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By electronic submission

Submission against Port Waratah Coal Services Terminal 4

This is a submission against the Port Waratah Coal Services Terminal 4 (application number 10_0215)

The League of Independent Activists Australia (IndyAct) believes that the environmental and social impacts of this project are unacceptable and irreversible, and that the project should not go ahead.

Summary of recommendations and concerns

- The Environmental Assessment does not meet the Director General's Requirements in a number of areas, which are outlined in this submission.
- The Environmental Assessment appears to mislead the public in only obliquely acknowledging that some of the land in the "project area" is currently owned and managed under the *National Parks and Wildlife Act*. They mention that OEH own it, but the *National Parks and Wildlife Act* and its objects do not rate a mention.
- At the same time, the Newcastle Coal Infrastructure Group is constructing Stage 2 of the third coal export terminal, and has stated that "compensatory habitat" for that project will be located on Part 11 land on Ash Island which "is in the process of being gazetted as National Park and therefore the area will be maintained for conservation purposes in perpetuity"
- The EA does not mention the Ash Island Statement of Interim Management Intent which covers the land in question, and was finalised in July 2011 ahead of the preparation of the Hunter Wetlands National Park Plan of Management, which is underway.
- It is crucially important that transparent information is provided by OEH, the Department of Planning, PWCS and NCIG regarding the possible overlap of the two companies' offset strategies.
- The EA does not adequately assess the impact of the proposal on Swan Pond, which has been identified as the third most significant site for birds in the entire estuary.

- Contrary to the assertions in the EA, the ecological offsets are neither quantifiable nor targeted, nor located appropriately. The main offset site is not named, located or described in detail.
- Contrary to the requirements of the DGRs, the Biodiversity Offset Strategy for the project is not finalised. The EA asserts that the proponent will offset the significant impacts the project is acknowledged to be likely to have, but there is no major offset site in the proponent's hands, nor is it described or located.
- The justification for the project relies on other projects that are not assessed by the Environmental Assessment and that may never go ahead and defers much of the substantial environmental mitigation measures to documents that are not prepared yet, and will not be subject to public scrutiny. The project cannot go ahead on these terms.
- The Assessment fails to assess the cumulative impact of this project, including the impacts of the equivalent of 15 mega-mines that will feed it and the relationship of the project to biodiversity impacts and offsetting strategies for the NCIG coal terminal, despite being required to do so.
- The project will have unacceptable impacts on several species of migratory shore bids, and on the Federally endangered Australasian Bittern.
- Locally, the fourth coal terminal project would see 41 more laden coal trains through Newcastle and Maitland every day, increasing dust related health problems such as asthma and other respiratory ailments.
- The coal exported would provide the capacity to feed at least 15 more large power stations around the world emitting 288 million tonnes of carbon pollution each year and fuelling climate change.
- The greenhouse assessment contextualises these emissions in a scenario likely to drive global warming of six degrees above pre-industrial temperatures, but the Environmental Assessment does not explain that this is would be the outcome of the scenario.
- The proposed coal terminal expects to reach a capacity of 120Mt tonnes after all work is concluded, this amounts to doubling Newcastle's current export capacity, and increasing Australia's total coal exports by over 40%[1].
- The proponent's approach to its greenhouse assessment demonstrates that this project is entirely inconsistent with global efforts to avoid dangerous climate change, and is out-of-touch with agreements already made to substantially reduce greenhouse pollution.
- Consideration of the cumulative impacts associated with offsite movement of contaminants needs to be assessed. The claim that the region is already contaminated does not justify the release of more contaminants into the system.
- The assessment must be re-done to include assessment of higher than average rainfall, to ensure that no contaminated run-off from the T4 site or adjacent areas will enter the River and the wetlands as a result of this project.
- The EA has not modelled the cumulative impact of adding fugitive coal dust and other pollutants into the air surrounding the rail corridor.

[1] Total Australian coal exports were 284 mtpa in 2010-2011.

Introduction

The League of Independent Activists Australia (IndyAct Australia) believes that the environmental and social impacts of this project are unacceptable and irreversible, and that the project should not go ahead.

The assessment for the project has failed to fulfil the Director General's Requirements with respect to cumulative impacts in particular. The cumulative impacts, and the impacts of this project alone on the local pollution levels, on migratory birds, on the risk of mobilising contaminants in the estuary and on the world's climate are, on balance, far greater than the minimal short-term benefits this project purports to provide. Certainly the thin justification for the project presented in the Environmental Assessment cannot possibly out-weigh the unacceptable and irreversible local environmental and health impacts associated with this project.

There is significant uncertainty about the possible movement of contaminants as a result of the squeezing effect of this development. It would be reckless for the Government to approve it on the basis of the information that has been provided about the impacts and minimalist mitigation measures that have been promised, but not specified. In some cases inaccurate or misleading information has been presented to downplay the impacts of the project. In other cases, as for the Biodiversity Offset Strategy, mitigation measures are not articulated, but are promised for a future date. It is not appropriate for processes and commitments of such profound importance to the ecological values protected under State and Federal law to be undertaken outside publicly transparent, accountable and statutory processes.

The project will have unacceptable impacts on migratory shore birds, and on habitat for the Australasian Bittern, and these have not been in any way ameliorated by the proponents. The Environmental Assessment for the project does not meet the requirements set down by the Director-General of Planning and by the Department of Sustainability, Environment, Water, Population and Communities. The justification for the project relies on other projects, specifically, proposed new coal mines, that are not assessed by the Environmental Assessment and that may never go ahead.[2]

It should patently clear to the Government and other decision makers, upon reading this Environmental Assessment, that the ecological values that will be lost if this project goes ahead cannot be compensated for, because they are too rare, and too much loss to them has already been inflicted. In the search for land to use as offsets for the profound impacts of this project, the EA confesses that "no major viable options were located." This is because this amount and value of habitat for these migratory shorebirds in particular simply does not exist elsewhere.

Justification for the proposal.

[2] For example, in April, the Australian Financial Review reported that Rio Tinto is again considering shelving the 10mpta Mount Pleasant open cut mine.

The proponent claims that it has "a contractual obligation to ensure capacity and build the T4 project" and relies on the circular logic of the Capacity Framework Agreement to justify the project, "to accommodate contracted and projected future coal exports." It is no surprise that PWCS has agreed with other coal companies to coordinate their efforts to increase the amount of coal they're exporting from the Hunter Valley and Liverpool Plains through Newcastle, but this does not bind the Government to approve the project. Indeed, the notion that the project "must go ahead" because the proponent has agreed with other coal companies that it should, and the ACCC has affirmed that this agreement does not breach anti-cartel provisions in Federal legislation treats the law and the community with contempt. That the NSW Government helped the companies draft the agreement does not supercede statutory processes for major project development applications, and the need for rigorous assessment and consideration, based on the public interest.

The justification for the project relies on other projects that are not assessed by the Environmental Assessment and that may never go ahead. Rio Tinto, which owns a major stake in the proponent company, states on its website that: "This additional capacity will support the future expansions of existing mines and development of new mines planned in the Hunter Valley. Coal & Allied [a Rio Tinto subsidiary] has entered into long term take or pay contracts for port allocation with Port Waratah Coal Services, and has secured additional allocation through NCIG."[3]

The Environmental Assessment falsely implies that the Capacity Framework Agreements are a Government endorsement of the expansion of the Port capacity, rather than a framework to prevent the companies involved being taken to court for breaching the cartel provisions in the *Competition and Consumer Act 2010*.[4]

The ACCC determination states that the CFA includes "triggers requiring terminals to build new capacity on demand, long-term contracts to underpin investment in terminal capacity, and industry levy to help fund new terminal infrastructure where required, guaranteed access for new entrants and expanding producers and a proposal for a fourth coal loading terminal in Newcastle" (ACCC determination 2009). But this does not guarantee the construction of that terminal: the State and Federal Governments still retain the power to approve such developments and in this case, both should refuse consent, as the proposal is inconsistent with planning and environmental law, and will cause profound and irreversible harm to Newcastle and the broader environment.

The assessment is misleading, and fails to comply with DGRs

We believe that the Environmental Assessment does not comply with the Director General's Requirements, and that the Director General erred in placing the EA on exhibition.

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[3] Accessed 1 April 2012
http://www.riotintocoalaustralia.com.au/sustainabledevelopment/1408_financial_strength.asp

[4] ACCC December 2009. Determination of application for authorisation Capacity Framework Agreement: "On 24 July 2009 the Applicants lodged further applications for authorisation A91168-A91169 under section 88(1A) of the Act in relation to a contract, arrangement or understanding which may contain a cartel provision."

Furthermore, the Assessment fails to reveal relevant information, and misleads the public about the status of some of the land on which the development is proposed to take place.

In the section describing the legislative and policy framework, the Environmental Assessment does not mention the *National Parks and Wildlife Act*. Though the EA mentions that some of the land is owned by OEH, it does not explain that these lands are managed by OEH under Part 11 of that Act. This project is entirely inconsistent with the objects and provisions of that Act, and the Environmental Assessment appears to deliberately mislead the public in not acknowledging that this land is currently managed for conservation.

The EA does not mention the Ash Island Statement of Interim Management Intent which covers the land in question, and was finalised in July 2011 ahead of the preparation of the Hunter Wetlands National Park Plan of Management, which is now underway. The Environmental Assessment does not discuss the impact of the rail line that is proposed to cut through the bottom corner of Swan Pond, which is on "Area E" of Ash Island and is public land that is currently managed for conservation. It is only in the Appendices (Appendix K Part 1) that it is revealed that "Approximately 2.3 hectares of Swan Pond, occurring to the west of Deep Pond ... occurs within the T4 project area."

Furthermore, the Newcastle Coal Infrastructure Group is already constructing Stage 2 of the *third* coal export terminal, and has stated that "compensatory habitat" for that project will be located on Part 11 land on Ash Island which "is in the process of being gazetted as National Park and therefore the area will be maintained for conservation purposes in perpetuity" It is crucially important that transparent information is provided by OEH, the Department of Planning, PWCS and NCIG regarding the possible overlap of the two companies' offset strategies and that these backroom deals over land trading, particularly when the land concerned is already owned and managed by OEH for conservation, is brought into the light of public scrutiny.

The DGRs require a compensatory habitat framework, and "measures to offset or mitigate the impact." Contrary to this requirement, the Biodiversity Offset Strategy for the project is not finalised. The EA asserts that the proponent will offset the significant impacts the project is acknowledged to be likely to have, but there is no major offset site in the proponent's hands, nor is it described or located. The EA claims that, "the actual locations will be provided once the Biodiversity Offset Strategy is finalised, a process which is subject to potentially sensitive commercial transactions." It is not appropriate for such a material component of the project to be deferred to future negotiation between Government Departments and the company after consent is granted, out of public view, and without any accountability.

Contrary to the assertions in the EA, the offsets are neither quantifiable nor targeted, nor located appropriately. The main offset site is not named, located or described in detail. The EA does not reveal how large it is, or its tenure, but does reveal that the consultants hired by PWCS failed to find the threatened species that will be affected by the development at the unnamed offset site. The threatened species they *did* find living there, they imply will be negatively impacted by their use of the site! (The EA says, "The presence of eastern grass owl habitat may be a potential constraint in the development of the site as an offset for

shorebirds and saltmarsh and an appropriate balance of development and retention of eastern grass owl habitat is likely to be required.")

The DGRs said the EA must "include a compensatory habitat strategy *for all impacted species* [our emphasis] based on the Kooragang Compensatory Habitat Framework (DECC) and consider compensatory habitat provided in relation to other project approvals on Kooragang Island (including the limitations of the nearby Ash Island for use as an offset area for habitat loss in the Kooragang Island and Hunter River estuary)." The DGRs also required the EA to "consider compensatory habitat provided in relation to other project approvals on Kooragang Island (including the limitation of nearby Ash Island for use as an offset area)."

Neither of these requirements were fulfilled.

This does, in fact, go to the heart of the problem. Ash Island is limited. A large part of the site has had substantial investment put into it to improve its habitat value over the last twenty years, and this has been very successful. Much of the area is already owned by the National Parks service under Part 11 of their Act, and so is demonstrably unsuitable as an offset site, as there is a long-standing intention to protect it. Far from securing this protection, the project will, in fact, clear and fill a portion of one of the most significant areas of bird habitat on Ash Island (Swan Pond, on "Area E").

Of the species that will be impacted by the project, only the Green and Golden Bell Frog (GGBF) and the Australasian Bittern are dealt with in any detail – and the latter is dealt with inadequately. The other impacted species: knotweed, Grey-headed Flying Fox, and the four migratory shore birds (sharp-tailed sandpiper, curlew sandpiper, marsh sandpiper, and common greenshank) are given only cursory treatment. Seven threatened bird species were recorded within the T4 project area during the surveys undertaken by Umwelt (refer to Figure 4.8) and a further seven have been recorded by HBOC between 2000 and 2010. Only one, the Australasian Bittern had targeted surveys undertaken for the EA.

For the threatened bats that are impacted, the EA confesses that the unnamed offset site does not provide mangroves mature enough to provide replacement habitat for that lost in the development, but no alternative is proposed.

Compensatory habitat is only proposed for some of the impacted species, and though there is an elaborate offset strategy proposed for the Federally-threatened Green and Golden Bell Frog, the offset proposals for the migratory shore birds and the Australasian Bittern are undeveloped, inadequate, non-existent and will not make amends for the profound impact this project will have on those species. Similarly, the EA confesses that the anonymous offset site discussed does not provide mature trees that can support the Federally-listed Grey-headed Flying Fox.

The EA states that, "It is expected that a detailed Ecological Management Plan will be prepared post-approval in order to further define the commitments within this document, detail the proposed ecological management of the site." (App K Part 2 8). Again, it is not acceptable for this process to occur post-approval. We note that the "Compensatory Habitat and Ecological Monitoring Program" for the adjacent NCIG coal terminal was not completed

until well after the due date, and the promised "compensatory habitat" for the nationally threatened Green and Golden Bell Frog still does not exist.

It is proposed that the proponent will replace currently functional and heavily-used migratory bird habitat by artificially constructing bird habitat on the unknown offset site, where none of these birds have been found. The enterprise is highly speculative and it would be untenable for the Director General or the Minister to approve the project for development on these terms: the loss of known and rare habitat for potentially constructed habitat on land not yet owned by the proponent. The "the detailed design of the habitat restoration program" has not yet occurred either. (App K Part 2 7.4.1.5)

The DGRs require the assessment to consider "direct, indirect and cumulative impacts" including "direct and indirect impact on all matters of national environmental significance." In the Environmental Assessment this project is explicitly linked to the expansion of existing mines and the creation of new mines. Our calculations show that this coal terminal would entail the creation of around 15 new very large open-cut coal mines, but there is no assessment in the EA of the environmental and social impact of these mines.

This is patently a failure to comply with the Director General's Requirements, since those mines constitute an "indirect impact" of the project: they will not go ahead if this project does not go ahead.

More broadly, on cumulative impacts, the DGRs expressly require the EA to consider the project's relationship with existing port operations and approvals and the broader Hunter Valley coal transport network. This project will substantially increase the number of trains heading to Kooragang Island, it will clear and fill vegetation, habitat and wetlands in an estuary that has already seen substantial loss of vegetation and threatened species habitat. The EA utterly fails to even describe, let alone assess, the cumulative impact of adding another 100Mt coal terminal to an already heavily impacted site, and treats the impacts on the Green and Golden Bell Frog and the migratory shore birds in isolation from recent developments on Kooragang Island (primarily, the NCIG coal terminal) that also impacted on these matters. There is no discussion of the NCIG offset strategy, its "compensatory habitat and environmental monitoring plan" which is still not implemented, despite a condition of approval that required it to be in place within 6 months of construction starting.

Section 10.4.6 on the cumulative impacts notes the loss of habitat for the GGBF, but does not outline previous compensatory habitat activities undertaken by other companies (BHPB and NCIG), and deals with these matters in a cursory manner. Less than a page of the body of the EA is dedicated to this question.

Given that the DGRs required this project to assess the cumulative impact of this and other development on Kooragang and Ash Islands, the current status of the NCIG's environmental strategy is very relevant, but it is not mentioned in the EA. Equally, we are informed that NCIG intends to go ahead with its northern rail spur, which will have a significant impact on the migratory shore birds of Deep Pond.

Unacceptable impact on migratory shore birds

114 bird species have been recorded in areas within the T4 project area including Deep Pond, Area E, Easement Pond and Railway Pond, and it is known that the project will have a significant impact on at least four migratory shorebird species. The Hunter estuary contains in excess of 1% of the global population of Sharp-tailed sandpiper and Eastern Curlew, as well as a population of Australasian Bittern. The estuary "qualifies as an Important Bird Area [confirmed by Birds Australia] because it contains a population of the endangered Australasian Bittern and several species in excess of 1% of their global populations: Rednecked Avocet; Chestnut Teal; Straw-necked Ibis; Eastern Curlew; Sharp-tailed Sandpiper; and Latham's Snipe."[5] For the Marsh sandpiper, the Hunter estuary is a site of national significance, with the third highest count (500) of any in the country[6]

This project proposes to destroy two highly significant sites for migratory shorebirds. "Swan Pond" in Area E is frequented by several migratory birds listed on international protection agreements. "Deep Pond" is the only large area of freshwater available to birds in the estuary, and is also a key aggregation site. The proposal will mean loss of habitat and disruption to an ecologically significant proportion of a population of four migratory shorebird species listed under international conservation conventions.

Both of these areas will be irreversibly damaged, lost or destroyed if this project goes ahead – which would constitute an unacceptable impact on the four species of migratory shorebirds for whom the area is a significant ecological role.

The conclusion the EA makes that "The Biodiversity Offset Strategy provides an adequate and appropriate means to counterbalance the residual significant impact of the T4 Project on the ecological values identified in Section 7.2.1" is not applicable to these species.

Deep Pond

Four-Fifths of the 23 hectares of Deep Pond are proposed for developments for this project.

This large freshwater pond includes deep water and shallow areas in the south that dry out and provide foraging shoreline habitat that is of limited extent in the estuary. Deep Pond has a shallow southern area that, as it dries out, is ideal habitat for shorebirds[7]. According to Herbert, "During the summer of 2005/2006, Deep Pond often had a greater diversity and abundance of bird species than the whole of Ash Island. Its importance, therefore, cannot be emphasised enough."

Herbert (2007) found that the Deep Pond hosted twenty-four significant species of birds, including a diversity of raptors, indicating that the Pond has complex and flourishing ecology. Records of migratory species on Deep Pond include 600 Sharp-tailed Sandpiper, a species which seems to prefer the threatened ponds at the western end of Kooragang Island

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[5] Chris Herbert September 2007. *Distribution, Abundance and Status of Birds in the Hunter Estuary.* Hunter Bird Observers Club for Newcastle Council.

[6] . Australian Government species profile and threats database (SPRAT), accessed 22 April 2012. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=833)

[7] Herbert 2007

(Deep Pond and the ponds on "Area E" of Ash Island) to the more secure sites elsewhere in the estuary.

According to the extensive surveys undertaken by the Hunter Bird Observer's Club "Migratory
shorebirds using Deep Pond include small to medium-sized waders such as Marsh Sandpiper, Common Greenshank, Sharp-tailed Sandpiper, Curlew Sandpiper, Red-necked Stint, Double-banded Plover and Latham's Snipe. Rarer shorebirds include Black-tailed Godwit, Pectoral Sandpiper and Ruff."[8]

Deep Pond has been recorded to exceed the threshold of 0.1 per cent of the Australian flyway population for three migratory shorebird species, with 600 sharp-tailed sandpiper (*Calidris acuminata*), 450 curlew sandpiper (*Calidris ferruginea*), and 270 marsh sandpiper (*Tringa stagnatilis*) recorded (*Environment Assessment* Vol 4 Appendix K Part 1).

Swan Pond

According to the EA Swan Pond also "exceeds the threshold of 0.1 per cent of the Australian flyway population for three migratory shorebird species including 1482 sharp-tailed sandpiper (*Calidris acuminata*), 152 marsh sandpiper (*Tringa stagnatilis*) and 78 common greenshank (*Tringa nebularia*)." (*Environment Assessment* Vol 4 Appendix K Part 1)

Swan Pond is public land, owned and managed by the National Parks Service under Part 11 of their Act. It is also part of the highly successful long-term restoration project, the Kooragang Wetland Rehabilitation Project (KWRP). The Environmental Assessment for the fourth coal terminal does not elaborate the impact it will have on Swan Pond, but images and maps in the Assessment indicate that the south-eastern end of the pond will be developed into a new rail line, with an unknown footprint of additional damage during construction.

The KWRP was initiated in 1993 to compensate for 200 years of damage and loss to the ecology of Hunter estuary and its purpose was to restore and rehabilitate Ash Island. "Area E," which comprises the bottom south east corner of Ash Island has been under rehabilitation by the KWRP for close to 20 years. Within Area E, Swan Pond is the most important saltmarsh pond.[9]

Deep Pond and Swan Pond are in the top ten sites in the estuary determined to be most significant in an assessment by the Hunter Bird Observers' Club, the most significant sites being, "Stockton Sandspit, ranked highest with 38 Significant Species; followed by the Kooragang Dykes; Swan Pond; the Hunter Wetlands Centre; Deep Pond; Pambalong Nature Reserve; Stockton Channel; Wader Pond; Hexham Swamp; and Fern Bay."[10] All of the Ash Island Ponds were found to be among the largest roosting sites in the estuary. And Swan and Wader Ponds (Area E, Ash Island), were also found to be among the most important foraging sites.

[8] Herbert 2007
[9] Herbert 2007
[10] Herbert 2007

The Environmental Assessment does not discuss the impact of the rail line that is proposed to cut through the bottom corner of Swan Pond – the area which, on site visits by the Hunter Community Environment Centre in Autumn 2012, was observed to be the congregation area for the migratory shorebirds and other wading species. It is only in the Appendices (K, Part 1), that it is revealed that "Approximately 2.3 hectares of Swan Pond, occurring to the west of Deep Pond ... occurs within the T4 project area"

Offset strategy

In the search for land to use for offsets "no major viable options were located" in the Hunter Region.
Yet, for their EPBC approval for dredging works, PWCS have undertaken to "be responsible for the securing of 15 hectares of 'new or restored comparative roosting habitat and/or intertidal feeding areas' for shorebirds in the Hunter Estuary." (App K Part 2 table 7.7). This must be in addition to the non-existent habitat they have so far failed to secure to offset the coal loader impact. Additional habitat to support these species simply does not exist. The project cannot go ahead on these terms: it will have an unacceptable and irreversible impact on these birds.

The EA requires cumulative impacts to be assessed, but makes only passing reference to the NCIG coal terminal and its "compensatory habitat and ecological monitoring program" (CHEMP) which was created in November 2010. At that time, NCIG were not certain they would build the additional rail spur that is currently under construction, and they noted

> Compensatory habitat works for migratory shorebirds are not currently proposed as part of this Compensatory Habitat and Ecological Monitoring Program, as migratory shorebird habitat loss would only occur with construction of optional rail infrastructure associated with future stages of the Project. At this time, the future construction of the rail infrastructure in question has been clouded by the proposed T4 terminal which could make the rail infrastructure impractical. This Compensatory Habitat and Ecological Monitoring Program would be revised if required to include details of compensatory habitat works for migratory shorebirds prior to construction of the optional rail infrastructure.[11]

The NCIG is already constructing Stage 2 of the third coal export terminal, and stated in the CHEMP that "Stage 2 compensatory habitat works will be located on Ash Island, which is now Part 11 land, i.e. held by the Minister for the environment, with DECCW being the land owner. It is in the process of being gazetted as National Park and therefore the area will be maintained for conservation purposes in perpetuity, hence a Conservation Agreement is not appropriate." It is crucially important that transparent information is provided by OWH, the Department of Planning, PWCS and NCIG regarding the possible overlap of the two companies' offset strategies.

[11] NCIG. November 2010. CHEMP http://www.ncig.com.au/Portals/2/files/es/CHEMP-R01-L%20-%20FINAL.pdf

The Kooragang Compensatory Habitat Framework requires that "Twice the area of habitat lost or degraded should be provided as a compensatory measure for shorebirds." This is patently not the case in this project for the Australasian Bittern, for which 28ha of habitat will be lost. To compensate for this, the EA proposes that PWCS will "fund to (sic) management of Australasian bittern habitat at the Hunter Wetland Centre Australia" but confesses this would only supplement a grant HWCA *has already received* from the Federal Government to modify 18ha of the HWCA site to make it more suitable for bitterns.

The EA also proposes "Restoration of direct land-based offset potential habitat" to compensate for loss of 18.8ha of saltmarsh habitat and 7.5 ha of mudflat habitat, but surveys at the unnamed offset site did not find the migratory shorebirds that will experience significant impact, nor any evidence of Australasian Bitterns. They also confess that the offset site does not provide mangroves mature enough to provide replacement habitat for that lost in the development, but, extraordinarily, claims other trees, on another unnamed adjacent property not part of the offset, instead: "Although it is acknowledged that the mangroves at the Hunter Estuary Wetlands Offset site are younger and less likely to contain the extent of potential roosting habitat as the habitats within the T4 project area, mature mangroves, adjacent to the site provide similar habitat for threatened micro-bats to that of the T4 project area." (App K Part 2 7.4.1.4)

To make up for the lack of migratory shorebird habitat in the unnamed offset site, "It is proposed to construct a series of shorebird habitats on the Hunter Estuary Wetlands Offset site providing several shallow lagoons to enable different management strategies to be applied." (7.4.1.5). But this activity is going to negatively impact on the only threatened species that they *did* find living there: the eastern grass owl. As for the other impacted species, the EA struggles to justify the use of Ellalong Lagoon as an offset for species that live in a different area, with different floristic environment and different habitat features. As the EA states, "Ellalong Lagoon is not known as a significant site for migratory shorebirds," yet, the 20ha of Freshwater wetland at Ellalong Lagoon is listed in Table 7.7 as providing a habitat offset for these species.

Unacceptable impact on the nationally threatened Australasian Bittern.

For this nationally threatened species, little amelioration of the impact proposed. We urge the Federal Government to declare that this project – in conjunction with surrounding projects that are all competing for limited potential compensatory habitat for shorebirds -- will have an unacceptable impact on this species and must be redesigned so that it does not impact upon it. The proposed offset site does not provide habitat for the species concerned, most of the proposed offsets are not yet secured, their future status unclear, one site is not identified at all and there are no estimates of area of habitat or vegetation it supports.

The global population size of the Australasian Bittern is estimated to be 2500-3000 birds and it is listed as Endangered under both the EPBC Act and the IUCN Red List. Among the primary threats the Scientific Committee identified for the Australasian Bittern are: "reduction in extent and quality of habitat due to the diversion of water away from wetlands (primarily for irrigation as well as groundwater extraction); the drainage of

swamps; the loss or alteration of wetland habitats due to clearing for urban and agricultural development"

The conclusion the EA makes that "The Biodiversity Offset Strategy provides an adequate and appropriate means to counterbalance the residual significant impact of the T4 Project on the ecological values identified in Section 7.2.1" is not accurate in regard to the Australasian Bittern, the key offset strategy for which is to add unspecified supplementary funding to a project to restore 18ha of Bittern habitat at the protected Hunter Wetlands Centre, for which the Centre has already received a Federal Government *Caring for Country* grant.

It is patently untrue that "The three land-based offset sites in combination with the funding of habitat restoration/creation initiatives and habitat management actions at sites in the Lower Hunter, provide a substantial threatened species habitat protection and management approach, including known or restored habitat for the threatened and migratory species that are considered likely to be significantly impacted by the T4 Project." (Section 7.6)

20ha of Freshwater wetland at Ellalong Lagoon is listed in Table 7.7 as providing a habitat offset for the Australasian bittern. The habitat creation at the unnamed estuary site is speculative enough, but it is ridiculous to propose Ellalong Lagoon as an offset for this species. Even if the proposed shorebird habitat were created at the site where it is not yet found, the proposed offset ratio for this species would be 1.5 ha of known habitat where the species is now found lost, for replacement by 1 ha of created modified habitat where the species has not been found.

They did not find Australasian bitterns in surveys at the unnamed offset site, but extraordinarily, mention that they were found "in the adjacent wetlands to the east of the Hunter Estuary Wetlands Offset site" – as if their offset strategy could be bolstered by records elsewhere and outside the management control of the company.

Air quality and greenhouse emissions

The DGRs state that the assessment needed to consider the impacts of the project "in isolation and in a cumulative context with existing and approved development," This has not been the case for the noise and dust impacts of the project must include offsite impacts, nor is it the case in the greenhouse assessment.

Indy Act is informed by health experts that the EA has not modelled the cumulative impact of adding fugitive coal dust and other pollutants into the air surrounding the rail corridor. We support the submission made by Nick Higginbotham and other health experts that proposes that further emissions modelling is essential to report the cumulative impact of this continuous flow of trains for PM10, PM2.5, diesel combustion pollution, and concentrations of Ultra Fine Particles.

If this project goes ahead as planned, it appears that residents near rail lines in Newcastle will be exposed to continuous day-and-night train noise and vibration by 2020. The

cumulative impact of the coal developments on Kooragang Island will mean 135 nightly pass-bys between the hours of 11pm and 7am every night, 32 of these added by T4.

Under current policies, the International Energy Agency concurs with many other analysts in warning that "the world is on a trajectory that results in a level of emissions consistent with a long-term average temperature increase of more than 3.5°C"[12] The proposed coal terminal expects to reach a capacity of 120Mt tonnes after all work is concluded, this amounts to doubling Newcastle's current export capacity, and increasing Australia's total coal exports by over 40%[13].

The proponent's approach to its greenhouse assessment demonstrates that this project is entirely inconsistent with global efforts to avoid dangerous climate change, and is out-of-touch with agreements already made to substantially reduce greenhouse pollution. The International Energy Agency has advised that 80% of the cumulative greenhouse gas emissions from 2009-2035 that would result concentrations of 450 parts per million in the atmosphere is already "locked-in" by existing capital stock that exists now, or is under construction and will still be operational in 2035.

PWCS contextualises its Scope 1 and 2 greenhouse emissions against Australian and global levels of emissions that fit the "business-as-usual" scenario. This scenario means increasing the concentrations of greenhouse gases in the atmosphere to over 1000ppm, leading to global warming of between four and six degrees Celsius above pre-industrial temperatures, resulting in runaway climate change. PWCS seem ignorant of the fact that there is global consensus and decision of the United Nations Framework Convention on Climate Change to limit warming to below two degrees above pre-industrial temperatures[14].

Similarly, PWCS estimate their Scope 3 emissions of 298.6Mtpa as a proportion of global emissions consistent with 6 degrees warming and out-of-control climate change (70Gt per year in 2030). Not only does this reveal where PWCS situates themselves in the effort to avoid the impacts of dangerous levels of warming, it also gives an inaccurate picture of the contribution of this project to global pollution levels. This scenario of future emissions is inconsistent with pledged emissions reductions by major emitting countries of all kinds world-wide. Though not adequate yet to reduce emissions sufficient to meet the two degree goal, pledges made at the Durban Conference of the Parties to the UNFCCC will mean global emissions 55Gt per annum in 2020, after which all countries have agreed to further binding emissions reductions[15]. To have a 50-50 chance of meeting the agreed "below 2 degrees" goal, this needs to fall to 35Gt by 2030.

A more accurate assessment would have contextualised the project within the likely 2020 and 2030 budgets consistent with current pledged mitigation levels, and emissions levels required to meet the 2 degree warming limit. Given that this project will nearly double

[12] IEA *World Energy Outlook 2011*. November 2011. http://www.worldenergyoutlook.org/

[13] Total Australian coal exports were 284 mtpa in 2010-2011.

[14] UNFCCC 1.CP/16 (4)

[15] See Climate Action Tracker "After Durban". December 2011. http://climateactiontracker.org/assets/publications/briefing_papers/CAT_Durban_update_2_20111211.pdf

PWCS's current Scope 3 emissions, and the Director-General's Requirements mandated the assessment to consider cumulative impacts, we have estimated the more accurate picture of PWCS's total Scope 3 emissions in a carbon constrained world. PWCS are already responsible for 319.2Mtpa of carbon dioxide emissions (based on PWCS's estimates of their current capacity on their website). We calculate that in 2030, PWCS alone will be responsible for Scope 3 emissions of around 617Mtpa, amounting to 1.7% of the global budget of 35Gt that year.

Contamination

We are very concerned about the potential movement of contaminated groundwater from the Fill Aquifer through the aquitard into the Estuarine Aquifer and then into the neighbouring wetlands or Hunter River system. The existing and historic groundwater concentrations are already elevated in the Estuarine Aquifer, and the EA acknowledges that the aquitard may not be present in some places around the T4 site. The squeezing of the soil profile from fill material or infrastructure placement could increase leaching and groundwater flows to the estuarine aquifer, hence increasing contaminant transport offsite.

The Kooragang Island and Lower Hunter River area is heavily contaminated from decades of industrial use: this is no reason not to adequately assess how T4 would compound this legacy and stop the project going ahead if it is found to be a danger to Newcastle residents or the health of the estuary and Ramsar site. The cumulative impacts of contaminated discharges on the Kooragang wetlands and lower Hunter River system needs to be considered, but is not assessed by the EA – despite the Director General's Requirements stipulating that this be done.

The pond storage and surface water re-use measures proposed for the T4 project are designed for average rainfall conditions. Again, PWCS is wilfully ignoring or acting in ignorance of climate change, which is already likely to be responsible for an increase in extreme precipitation events in Newcastle. Indeed, this summer just passed recorded higher than average rainfall for Newcastle, and we believe that for above average rainfall conditions or under varied climate scenarios excess water will flow off the site, carrying potential contaminants into the estuary. It is a condition of the assessment criteria that there be no discharges into the Hunter River from this project, but in the absence of assessing for above average rainfall, the proponent cannot guarantee that this will be the case, and Newcastle will be put at risk of a serious toxic pollution event.

Green and Golden Bell Frogs

It is not an exaggeration to say that the site in question is a stronghold for this nationally threatened species. 900 individuals are known to occur in the Kooragang/Ash Island population. The EA states that "It is likely that a range of factors operate on the Lower Hunter population to drive decline and that these may act cumulatively." (App K Part 2 6.3), but is does not comply with the Director General's requirement to assess these cumulative impacts.

The commitments provided in Part 2 of Appendix K in regard to the mitigation and offset strategy for the GGBF is speculative, and the final project will be determined in consultation with experts. This is appropriate, but does not fulfil the DGRs, which required the EA to outline these plans. It is not possible for this project to be approved without this information being provided.

The frogs weren't found at either the unnamed offset site, or at Ellalong Lagoon: the last record at Ellalong Lagoon was in 1993. Similarly, the Crookhaven offset site has not been secured by PWCS.
In Appendix K it is stated that "When determining the impact of the T4 Project on this species reference was made to the Green and Golden Bell Frog Impact Assessment Guidelines (NPWS 2003a), the Draft Recovery Plan for the species (DEC 2005) and the EPBC Act Policy Statement 3.19 Significant Impact Guidelines for the Vulnerable Green and Golden Bell Frog (*Litoria aurea*) (DEWHA 2009b)," which indicates that the cumulative impacts were *not* assessed, as the NCIG and BHPB compensatory habitat programs are not included in this list.

The EA is contradictory about the impact on the frogs and unclear about which wetlands will be lost, and which saved: there is a concentration of frogs in OEH wetland 1 and 2 and Railway Pond, which the EA says PWCS are retaining as part of their mitigation strategy: "avoidance and minimisation of disturbance of key threatened species habitat, particularly realignment of the proposed rail line to avoid OEH wetlands 1 and 2 and Railway Road Pond and the retention of approximately 5.2 hectares of Deep Pond." (App K Part 2). Yet, elsewhere, the EA says "it is likely that all known breeding habitat within the T4 project area will be removed during Stage 1 of construction." (Appendix K 5.2.9)" and then again, elsewhere it states that: "The planning and construction of the green and golden bell frog corridor will commence prior to any disturbance of existing green and golden bell frog habitat associated with the approved T4 Project." These statements appear to be contradictory.

Equally, no mention is made of the NCIG rail spur, which is not yet built, but which we are aware is now in planning. "Compensatory habitat" created to make amends for the loss of GGBF habitat caused by the construction of the third coal export terminal on Kooragang has not yet been finalised, despite a condition of consent that it be implemented within six months of construction beginning. The area mapped in the NCIG EA as "compensatory habitat" will now be lost, and details of a replacement area are not available.

Ramsar wetlands

Despite the assessment finding that four migratory species could be significantly impacted, the EA makes the assumption that this will not affect the ecological character of the Ramsar site. We do not believe the Ramsar assessment is accurate with regard to the potential movement of contaminants in the estuary, caused by soil profile squeezing, the loss of ecological values through the modification and loss of nearby shorebird habitat, and the changed water dynamics on the site.

Article 3.2 of the Ramsar Convention provides for a country with management responsibility for a RAmsar site to notify the Convention of a change in its ecological character that is induced by human alteration. The fact that a site was undergoing human-induced ecological character change at the time of listing does not preclude the need for an assessment, and possible notification of change, if there is evidence of significant ongoing adverse ecological change.

Given the risk of contamination, and the admitted impact of construction of this project on water levels and salinity levels elsewhere in the estuary, it is irresponsible for the EA to conclude at this stage that there will be no significant impact on Ramsar wetlands. We submit that if this project goes ahead, there is a strong case that the Hunter estuary Ramsar site, though ostensibly protected in a National Park, will meet the description of changed character under Article 3.2 of the Ramsar Convention: "has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference." A change in ecological character, according to COP9 of the Ramsar Convention is "the human-induced adverse alteration of any ecosystem component, process, and/or ecosystem benefit/service." (Resolution IX.1)

Conclusion

IndyAct objects to this development on a number of grounds. At this point, the first concern is the inadequacy of the assessment documents on a range of matters we have outlined. We believe that this project will have unacceptable impacts on the people and environment of Newcastle, and on matters of national environmental significance. Too many matters are not adequately investigated in the Environmental Assessment for the public to be confident that this project will not cause irreversible and unacceptable harm.

We do not believe that it is appropriate for significant and material actions and commitments to environmental protection in relation to this project to be deferred to future closed discussions between the company and the agencies concerned. This has occurred with the NCIG terminal, and the results are clearly in breach of requirements of the original consent. Such decisions cannot be reversed once made, so it is incumbent on the Government and planning decision makers to ensure that no approval is given where there is the possibility, unacknowledged and unassessed, for unacceptable and irreversible damage.