Submission Against PWCS T4 Project

Rising Tide Newcastle

7 May, 2012

Figure 1: Swan Pond, Ash Island

Summary

Rising Tide objects to the fourth coal terminal proposed by Port Waratah Coal Services (PWCS) for the reasons outlined in this submission. Rising Tide believes the impacts of this project are unacceptable and will be irreversible. We believe that the project should not go ahead. A short summary of Rising Tide's objections to the T4 project is provided below. Many of these points are further elaborated in the submission that follows.

- Although some of the land of the project area is owned and managed by the Office of Environment and Heritage and managed under the National Parks and Wildlife Act, this Act is not mentioned in the Environmental Assessment.

- The Environmental Assessment fails to comply with the Director General's Requirements for the project on a number of grounds, which are further elaborated in this submission. For example, contrary to the DGR's the Biodiversity Offset Strategy has not been finalized in the EA.

- The justification of the project relies on other projects (under the Long Term Commercial Framework); however, these projects are not assessed as part of the Environmental Assessment. The EA should assess the cumulative impacts of these projects, including the 15 mega mines that will feed this project and the associated impacts on water, health, communities and land that these projects will have.

- Many sections of the Environmental Assessment are not complete

or defer assessment to other documents and studies that will be conducted later and will not be subject to the same level of public access and scrutiny.

- The EA does not satisfactorily assess the impacts of the T4 project on Swan Pond (pictured on p. 1), which is the third most important site for birds in the Hunter Estuary.

- The offsets in the EA are not located appropriately and will not compensate for the loss of habitat on the project site.

- The T4 project does not adequately assess its impacts on migratory shorebirds within the Hunter Estuary. The project will have unacceptable influences on nationally threatened species such as the Australasian Bittern and will impact critical foraging habitat for 11 species of migratory shorebirds.

- The EA makes sweeping reassurances that the project will not affect the Ramsar wetlands and National Park; however, the EA fails to provide any evidence or justification for this rather optimistic conclusion.

- The T4 project will necessitate the movement of 41 more laden coal wagons through Newcastle and Maitland each day, increasing dust related respiratory ailments. This will also increase the noise levels for all residencies within the vicinity of the train line.

- The EA also fails to assess the impact of fine particle pollution (PM1). Recent studies have demonstrated that fine particle pollution is the most damaging to human health and can travel considerably further than larger particles.

- The coal exported from the T4 project would provide the capacity to feed 15 more power stations around the world. These power stations will emit 288 million tonnes of carbon pollution per annum and will exacerbate climate change. Any infrastructure associated with the mining, export and burning of coal should be assessed for its contribution to climate change.

- The EA of the T4 project does not adequately assess the cumulative impacts of movement of contaminants from the project site into the adjacent Estuary and the Hunter River system. The assessment needs to be conducted again to assess the impacts of "squeezing" the soil profile and mobilizing contaminants into the Estuarine Aquifer, the Hunter River and the Estuary.

- The EA uses average annual rainfall data to inform its surface water storage and re-use plan. This is not satisfactory. The water management plans need to be redone to account for higher than average rainfall, as the runoff from higher than average rainfall is likely to carry contaminants offsite and into the Hunter Estuary and river system.

- The approach of PWCS to its greenhouse assessment is illustrative that the proponents are completely disregarding their share of the global effort to reduce greenhouse pollution. PWCS appears unaware of global agreements to reduce greenhouse pollution.

Director General's Requirements

The EA of the T4 project does not comply with the Director General's Requirements. The EA is incomplete and vague in sections and misleads the public on the status of part of the project site. Specifically, the EA fails to mention the National Parks and Wildlife Act, despite the fact that part of the project site is owned and managed by the Office of Environment and Heritage (under part 11 of the National Parks and Wildlife Act).

The T4 project is entirely against the objects and provisions of the National Parks and Wildlife Act. Rising Tide believes the EA deliberately misleads the public by failing to include this fact in its Environmental Assessment.

The EA does not explore the impacts of the rail line on Swan Pond – public lands that are currently under conservation management. The only place that this is mentioned is in Appendix K Part 1 – where it is revealed that 2.3 ha of Swan Pond is located within the T4 project area.

The requirements of the Director General state that a compensatory habitat framework is required to offset and mitigate the impacts of the project. However, the Biodiversity Offset Strategy of the Project has not been finalised. This is contrary to the Director General's Requirements. The proponents do not own an offset site and the offset site is not located in the EA.

The EA does not describe the offset site, nor reveal its tenure, location, size. All that is mentioned is that the threatened species that the offset site is suppose to compensate for were not found on the site. However, the EA

does mention that the consultants hired by PWCS to assess the viability of the offset site stated that the threatened species located on the offset site are likely to be negatively impacted by use of the site as an offset! The EA states that: “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 state that the compensatory habitat for the T4 project should be based on the Kooragang Compensatory Habitat Framework and in relation to other project approvals on Kooragang Island. However, this was not done. Ash Island has a limited amount of land. The entirety of Ash Island is owned by the National Parks service. The whole of Ash Island is unsuitable as an offset site, as it protection has been a long-standing intention and substantial investment has already gone into its protection and conservation. Instead of ensuring its protection, this project will in fact destroy a significant portion of Ash Island, which is critical habitat for many national threatened species. The EA admits that the potential offset site does not have mangroves that are mature enough to provide habitat for the Grey-heading flying fox that inhabit the project site.

The Green and Golden Bellfrog and the Australasian Bittern are the only populations that are considered with any level of thoroughness in the Environmental Assessment. Other species that will be impacted by the project, such as the knotweed, four migratory shorebirds and the Grey-headed flying fox are barely acknowledged. The survey conducted by Umwelt recorded seven threatened bird species within the project site. A further seven were recorded by the Hunter Bird Observers Club from 2000 – 2010. The Australian Bittern was the only species for which targeted surveys were conducted. This is not good enough.

The offset strategies for migratory shorebirds and the Australasian Bittern are undeveloped and inadequate.

It is not good enough to finalise the ecological management plan after the project has been approved, as is stated in the EA. The compensatory habitat for the NCIG coal terminal still does not exist.

The whole enterprise of artificially creating suitable habitat for migratory shorebirds is highly speculative. It would be irresponsible for the Director General and Planning Minister to approve the project when the offset strategy is so risky and dubious.

The Director General's Requirements require that the "direct, indirect and cumulative impacts" including "direct and indirect impact on all matters of national environmental significant." However, this is not done in the Environmental Assessment. Through the Long Term Commercial Framework the T4 project is explicitly linked to the development of roughly 15 mega mines. These mines could not go ahead if the T4 project was rejected. However, these are not considered in the EA. Furthermore, the impacts of the coal when burned (roughly 288 million tonnes of carbon pollution each year) are not considered in the EA.

The Director General's Requirements require that the Environmental Assessment address the relationship of the T4 project with existing uses of the Port and the Hunter Valley coal transport chain. The Environmental Assessment has not done this. The T4 project does not even mention (let alone address) the cumulative impacts of increasing coal exports by 120 Mtpa. The impacts on Green and Golden Bellfrogs and migratory shorebirds are treated separately to previous developments on Kooragang Island.
The Environmental Assessment clearly does not comply with the Director General's Requirements.

Contaminants

Rising Tide Newcastle objects to the proposed T4 project due to its potential to mobilise toxic contaminants into the Hunter Estuary.

The EA of the project states that the contaminants that exist in the groundwater, surface water and soils of the project site include cyanide, PAHs, BTEX, anions and physico-chemistry. The level so these contaminants frequently exceed the guidelines outlined in the NSW EPA health based criteria for commercial and industrial landuse. They also exceed the ANZEC water quality guidelines for slightly to moderately disturbed sites.

The history of the T4 project site is that is was previously a dumping ground for dredged material from the harbour and industrial waste. Furthermore, due to the acid sulphate soils around the T4 site, there is potential for reduced pH soils and high metal levels. It is possible that this effect may be reduced due to exposure to saline waters.

There are two aquifers situated on the project site of T4; the Fill Aquifer and the Esuarine Aquifer. These two aquifer sites are separated by clay aquitard. The Fill Aquifer consists predominantly of fill and dredged material. It flows sub-horizontally and also vertically percolates through the aquitard into the Estuarine Aquifer. The Estuarine Aquifer flows sub-horizontally to the north and south arms of the Hunter River and its adjacent wetlands.

The groundwater sampling undertaken as part of the EA signifies higher levels of contamination in the Estuarine Aquifer than the Fill Aquifer. Some such contaminants exceed the ANZEC water quality guidelines. The likely cause of this is from the percolation of water from

the Fill Aquitard through the aquitard and into the Estuarine Aquifer. The likelihood of this occurring during construction and operation of T4 is highly likely to increase.

A significant concern raised by the proposed T4 project is the potential percolation of contaminated water from the Fill Aquifer to the Estuarine Aquifer and then into the South and North arms of the Hunter River and the adjacent wetlands. The concentrations of toxic contaminants in the Estuarine Aquifer are already exceed the ANZEC water quality guidelines. Certain sections of the aquitard are more thin and permeable than other sections (for instance the sections around the Easement Pond and the Delta EMD site). Indeed, it is not established that all sections of the T4 project site have any aquitard layer at all. In these areas, more water will obviously percolate from the Fill Aquifer into the Estuarine Aquifer. Another associated issues is the potential for the extra weight of infrastructure on the site to "squeeze" the soil profile and increase the leaching of toxic contaminants into the Estuarine Aquifer and thereby increasing the transportation of contaminants off the project site and into the Hunter Estuary and wetlands. A more detailed and comprehensive study should be undertaken to test the likelihood and potential impacts of such a "squeezing" effect occurring.

The possible penetration of the clay aquitard during the construction phase has been acknowledged in the Environmental Assessment. IF penetration of the aquitard occurs, it will increase the mobility of contaminants from the Fill Aquifer into the Estuarine Aquifer and offsite. The EA outlines the emergency actions that will be enacted if penetration of the aquitard occurs; however, the timing is not outlined.

The surface water on the T4 site also frequently exceed the ANZEC water quality guidelines, indicating that the T4 site is heavily contaminated from years of industrial use. The Lower Hunter River is also contaminated, and it is highly likely that this contamination has in part come from runoff water from the T4 site. A study should be conducted to determine the cumulative impacts of these discharges from the T4 site on the Kooragang wetlands and lower Hunter River system.

The EA states that roughly 24% of runoff water will be released off-site once every 95 days (or once every 36 days during wet years). This will mobilise the contaminants offsite and increase the contamination of the Hunter River system. Other systems of water management should be explored. A precautionary approach to water management is critical given the concentrations of contaminants present on the T4 site and the potential of severe environmental harm caused by the mobilisation of these contaminants into the aquifers, wetlands and Hunter river system.

Assessment of Remediation Plan

The main flaw in the remediation plan is the lack of data on the aquitard depth across the site. The concern is that if the aquitard is thin or non-existent in some parts of the site, there is potential for significant escape of contaminants. It is critical to gain a better understanding of aquitard depth.

The plans outlined for surface water storage and re-use are based on average rainfall. This means that during periods of heavy rainfall, the water storage and re-use plan is ill equipped and inadequate. In this situation, the excess water will flow off-site and increase contamination.

At the very least, the surface water re-use and storage plan should be calculated based on rainfall extremes (as these are what pose the most danger) rather than rainfall averages.

A long-term site management, groundwater and surface water management plan have not been made available. These should be included in the Environmental Assessment as they are actually crucial information about the likely impact of the T4 project.

The cumulative impacts of contaminants moving off-site should be assessed. It is a very poor argument to claim that just because the area is already contaminated, that further contamination does not matter.

Groundwater

Maintaining the pressure in the Estuarine Aquifer is also important. The Estuarine Aquifer is in direct hydraulic connection to the Hunter River system but is classified as a confined aquifer. The Estuarine Aquifer is classified as confined because a layer of clay aquitard naturally prevents the movement of water (and contaminant fluxes) from the Fill Aquifer into the Estuarine Aquifer.

During the construction phase of T4 the dewatering of certain areas will be necessary. This will lead to localised depressurisation of the Fill Aquifer. In areas where the aquitard is thin or non-existent, the localised depressurisation of the Fill Aquifer could lead to subsequent depressurisation of the Estuarine Aquifer. The MODFLOW model is inadequate as it fails to model the localised impacts of depressurisation of the Estuarine Aquifer. Thus, the extent or impact of potential localised aquifer depressurisation is not known. Further and more

detailed modelling should be conducted to gain a better understanding of these potential impacts.

A low permeability Geosynthetic Clay Liner (GCL) is proposed for the Delta EMD site. However, this is not a very safe solution as Geosynthetic Clay Liners commonly puncture and leak. Alternatively, a 0.5m clay liner is recommended, as it would offer a greater level of protection. Geotechnical modelling should be undertaken (e.g. using the Hydrologic Evaluation of Landfill Performance model) to ascertain the effectiveness of various designs.

Various remediation options are outlined in the Environmental Assessment to manage specific contaminants. These include constructing soil-bentonite barriers, installing permeable reactive barriers and installing permeability liners. However, the effectiveness of these various management strategies has not been assessed. The MODFLOW model assesses the effectiveness of low-permeability liners in limiting saline contamination; however, it does not assess the effectiveness of various other strategies to manage contamination. These various methods should be incorporated into the MODFLOW model. More information is needed to know whether or not these management strategies will actually be effective.

Particle Pollution

The T4 project will necessitate the movement of twice as many coal trains and twice as much coal will be handled on conveyer belts and loaders. This will cause twice as much the particle pollution in suburbs such as Mayfield, Carrington, Tighes Hill and other suburbs. Newcastle suburbs already experience enough particle pollution from coal dust and will not tolerate any more.

The coal dust (PM10) from the T4 project is likely to exceed the guidelines set by the Office of Environment and Heritage on at least two days of the year. However, Table 12.4 (p.236) in the Environmental Assessment illustrates that PM10 levels at all ten monitoring stations already exceed 50 ugm-3 (the national level of concern).

It is likely that the T4 project will add 11.4 ugm-3 during the construction phase and 6ugm-3 during Stage 3 operation. This will elevate the levels of coal dust significantly and is cause for concern. The ten monitoring sites are all predicted to have a cumulative PM10 level above 50ugm-3.

Any increase whatsoever in particle pollution directly impacts health. It is thus misleading to suggest that an increase in particle pollution from 3-13 ugm-3 will be “negligible”. This represents a 135 increase in coal dust and correspondingly a 13% increase in asthma and other respiratory ailments.

The most significant omission in the Environmental Assessment in relation to coal dust is the lack of consideration of the impacts of fine particle pollution. Particles that cause the most severe health impacts are those with a diameter of less than 1 micron (PM1). These particles are inhaled deeply into the lungs and have more of an impact on respiratory health than larger particles.

The Environmental Assessment considers only PM10 particles and Total Suspended Particles (TSP). This is a crude and old-fashioned method of assessing air quality. Instead of measuring the mass of large particles, air quality studies now measure the levels of very fine particles and what they are comprised of. The reason for this is that fine

particles generally drift farther from point sources than larger particles. The Environmental Assessment only considers the impact of dust particles on residencies within 20m of the rail corridor. This may be a reasonable assumption for the assessment of larger particles; however PM1 particles frequently travel hundreds of metres from point sources. When the prevailing winds are travelling towards residential areas, the distances that fine particles can travel can increase significantly.

The EA of the T4 project states that air pollution will be reduced through a range of measures and that monitoring of PM10 particles and predictive air quality controls will be implemented. However, there is no mention of what will be done if dust levels exceed health guidelines. The EA needs to outline exactly what will be done if dust levels exceed health guidelines. Will PWCS claim that the dust particles cannot be isolated from the cumulative impacts of dust particles from other loaders such as Newcastle Coal Infrastructure Group third coal terminal?

A particle pollution response plan needs to be included as part of the Environmental Assessment. The Response Plan should outline what will be done if particle pollution rises above the 'level of concern', whether community members will be advised when this occurs, what will happen if the operations of T4 result in particle pollution that regularly exceeds the predicted levels of particle pollution and how will the results of air quality monitoring be communicated to the community?

In sum, a comprehensive study is required in order to assess existing levels of particle pollution. This study should assess existing PM1 levels and identify the current impacts of coal dust on the population throughout Newcastle and along the train line from the Hunter Valley and model the likely impacts of PM1 concentrations as a result of the T4

project. The study should also assess the option of covering coal wagons and determine the extent to which covering coal wagons would reduce particle pollution.

The Green and Golden Bellfrog

A single population of Green and Golden Bellfrogs (GGBF) inhabit Kooragang and Ash Islands. The project site is a stronghold for this nationally threatened species. This population of Green and Golden Bellfrogs have already been heavily impacted by infrastructure for coal exports. Despite the Environmental Assessment acknowledging that: "It is likely that a range of factors operate on the Lower Hunter population to drive decline and that these may act cumulatively", the EA does not comply with the Director General's Requirements to assess these cumulative impacts.

There have been numerous surveys conducted over recent years to detect the size of the population of GGBF on Kooragang and Ash Island and to determine the habitat areas that are likely to be most critical for the GGBF population. Recent surveys conducted by PWCS are not adequate for this purpose. However, this information would be available to PWCS by simply overlaying the results of numerous surveys previously conducted on the GGBF. Combining and overlaying these studies could produce a reasonably confident picture about where critical habitat areas are located.

The Environmental Assessment of the T4 project estimates that approx. 5 ha of breeding habitat for the Green and Golden Bellfrog will be lost as a result of the T4 development. This figure is likely to be a considerable underestimate as it is based only on where tadpoles and/or metamorphs have been sighted and recorded. The lack of recorded

evidence of breeding in other areas is not evidence that breeding does not occur in these areas. Indeed, it is highly likely that breeding occurs in other areas. There are methodologies that could be utilized to determine whether additional areas are also GGBF breeding habitat.

The Environmental Assessment states that offset habitat will be provided to compensate for destroyed habitat on the T4 project site. Offsets are not adequate compensation for the significant loss of critical habitat of a nationally threatened species. It is extremely difficult to actually create successful offset habitat. To date, most attempts to recreate or enhance habitat for Green and Golden Bellfrog populations have failed. Re-creation of suitable habitat is not an easy task and, given the previous failures, it seems highly optimistic to assume that such an offset scheme will be successful in the context of the T4 project. Even if the offset process followed best practice conventions and was designed to exceed the destroyed habitat by a factor of 10, the practice of offsetting is a dubious business. Companies frequently fail to actually implement their offsets, or to implement them within the promised timeframe. Indeed, as we have recently discovered, the third coal terminal developed by the Newcastle Coal Infrastructure Group has not yet even decided where their offsets will be located, despite the fact that the promised timeframe has long passed.

The offset site for Green and Golden Bellfrogs is not adequate. The offset strategy is not thoroughly developed, which is in contravention to the Director General's Requirements. Furthermore, GGBFs were not found at either of the proposed (unnamed) offset sites or at Ellalong Lagoon. The last siting at Ellalong Lagoon was in 1993.

The Environmental Assessment actually contains contradictory information and is unclear about which wetlands will be lost and which

wetlands will be saved. The EA states that it will retain wetlands 1 and 2, Railway pond and part of Deep Pond as part of its GGBF mitigation strategy. However, later in the Environmental Assessment (App K part 2) it is stated that "it is likely that all known breeding habitat within the T4 project area will be removed during Stage 1 of construction." This is not good enough.

Migratory Shorebirds

Migratory shorebirds are another group that are likely to be severely impacted by the T4 project. Migratory shorebirds have been impacted more in the Hunter Estuary than in any other areas across Australia.

The potential impacts to the feeding areas for migratory birds should be assessed more thoroughly. The Environmental Assessment is lacking detail and critical information about how species, ecological communities are populations are likely to be impacted by the T4 project.

There seem to be many unjustified reassurances and assumptions made without any backing evidence in the Environmental Assessment of the T4 project. One such assumption is that the project will not impact the Ramsar listed wetlands and the adjacent National Park. There is no clear explanation of why this assumption is made.

There is still a lack of understanding as to why birds have been impacted more heavily in the Hunter Estuary than other areas in Australia. Survey data in recent years has revealed that populations of migratory shorebirds in the Hunter Estuary and Botany Bay are declining more rapidly than in other areas across Australia. Whilst migratory shorebirds are being negatively impacted by the destruction

of their habitat in South-east Asia, some populations that use the Hunter Estuary are declining more rapidly than other populations. The red-necked stint is one such example. There is a lack of understanding about the causes of these local declines. It seems rather presumptuous and downright arrogant to simply state that birds won't be affected, when birds are currently being affected and the causes are still not clear.

A study needs to be conducted on the drivers of current population decline of migratory shorebirds in the Hunter Estuary before any more development takes place in this area. This study should investigate the degradation of foraging habitat and loss of benthic fauna, the availability of proximate roosts, increased levels of disturbance and lack of open areas, which reduce predation pressure at feeding and roosting areas. If these areas were more fully understood, a thorough understanding of how the T4 project will impact migratory shorebirds could be obtained.

In general, critical information about the impacts on fauna from dredging was lacking, vague and unsatisfactory. The potential for the dredging process to impact on foraging habitat through changes in flow, water quality and sediment is not very well understood and was certainly not addressed in the Environmental Assessment of the T4 project.

114 bird species have been recorded within the project site. The Hunter Estuary contains at least 1% of the global population of Sharp-tailed sandpiper, Eastern Curlew, Red-necked Avocet, Chestnut Teal, Straw-necked Ibis and Latham's Snipe. Furthermore, the project site is a site of national significance for the Marsh Sandpiper with the highest count of

anywhere else in the country.

It is clear that the Hunter Estuary is critical habitat for migratory shorebirds – possibly the most important area in all of New South Wales. For this reason, it is imperative that the habitat for these birds be maintained. There is a danger that cumulative impacts of development in and around the Hunter Estuary will slowly but surely diminish the ecological values that make the Hunter Estuary such an important and valuable place. For this reason it is recommended that a study be conducted assessing the historical biodiversity of the Hunter Estuary and to identify what has been lost so far. It would also be beneficial to establish a critical threshold beyond which ecological impacts of development in the Hunter Estuary will not be tolerated. Beyond this point, development proposals should not be approved, regardless of whether or not they are supposedly "critical" infrastructure.

The Hunter Estuary is the most important wetland estuary in New South Wales. It is critical that this is treated seriously, and that more thorough investigations are conducted to determine what the impacts of the T4 project would be o migratory shorebirds. If the Hunter Estuary is going to be negatively impacted by the development, the development should not be approved.

Two of the most highly significant sites for migratory shorebirds: 'Swan Pond' and 'Deep Pond'. Deep Pond is the only large source of freshwater available to birds in the Hunter Estuary. It is also a critical aggregation site. Both Swan Pond and Deep Pond will be irreversibly damaged if T4 goes ahead. This would have an unacceptable impact on a significant proportion of a population of four species of migratory shorebirds. All

of the ponds on Ash Island, including Swan Pond and Deep Pond are amongst the largest roosting sites in the Hunter Estuary.

Greenhouse Gases

As previously mentioned, the Director General's Requirements state that the impacts of the project must be assessed in their "cumulative context". This has certainly not been done in relation to greenhouse gases. The coal that will be exported from T4 will release roughly 288 million tonnes of carbon dioxide per year. This project is entirely against global efforts to avoid climate change.

PWCS assesses its own scope 1 and 2 emissions in the context of a "business-as usual' scenario. This scenario would result in an increase in the concentrations of carbon dioxide to 1000 parts per million leading to global warming of between 4 and 6 degrees.

Offsets

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.

Offsets cannot hope to compensate for loss of habit at the site. The proposed offset site at Ellalong has already been identified as critical for

conservation in its own right. Furthermore, the offset site fails to compensate for the loss of Deep Pond because it is over 50km away from Kooragang Island. Deep Pond is critical because it provides key foraging and roosting habitat due to its proximity to RAMSAR listed wetlands in the Hunter estuary.

Justification for the Project

PWCS have claimed that they are contractually obliged to "ensure capacity and build the T4 project". The Long Term Capacity Framework articulates this circular logic. That the coal companies and PWCS made an agreement to ensure the long-term export capacity of the port does not oblige the government to approve the project.

Conclusion

In sum, Rising Tide believes that the project should not be approved due to its significant detrimental impacts. The Environmental Assessment does not comply with the Director General's Requirements on a number of grounds. Furthermore, the EA is vague, incomplete and inadequate, especially in relation to management of contaminants, particle pollution and migratory shorebirds. For a number of reasons, the proposed (unnamed) offset sites are not suitable. Finally the cumulative and indirect impacts of the project will be considerable – especially in relation to the greenhouse gases of the exported coal when burned.