



MODIFICATION REQUEST:

**Newcastle Coal Infrastructure Group
Coal Export Terminal, Kooragang Island,
Newcastle
(MP 06_0009 MOD 2)**

Description of Modification Request

- Construction and operation of a rail flyover to include the following components:
 - grade separation of the inbound track for the NCIG northern rail spur;
 - realignment of the inbound (western) track of the Kooragang Island Main Line;
 - realignment and lowering of the outbound (eastern) track of the Kooragang Island Main Line; and
 - other associated ancillary infrastructure.

Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

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EXECUTIVE SUMMARY

On 13 April 2007 the then Minister for Planning granted approval to Newcastle Coal Infrastructure Group to construct and operate a coal export terminal with a capacity of 66 million tonnes of coal per year on Kooragang Island. The approval included the preparation of the site, the construction of rail, coal storage and wharf facilities, access roads and other associated infrastructure to enable the receipt of coal by train, its unloading and storage on the site and the loading of coal via shiploaders for export by sea.

The project approval allowed for the construction and operation of an optional at-grade high capacity inlet rail spur and rail sidings from the Kooragang Island Main Line across Deep Pond and to connect with the existing rail loop on the site. As a result of consultation with Port Waratah Coal Services and Australian Rail Track Corporation, it was determined that a grade separated rail flyover would be required to facilitate existing and potential rail movements between the Kooragang Island Main Line and the export terminals on Kooragang Island. The Proponent, Newcastle Coal Infrastructure Group, submitted a modification request to construct and operate a rail flyover in lieu of the previously approved at-grade rail spur as part of the project.

The Department has undertaken an assessment of the modification request based on the modification application, the submissions received during its exhibition and the Proponent's response to the issues raised in the submissions in its Response to Submissions Report. The key item raised in the submissions received on the modification request related to biodiversity impacts, specifically the encroachment and resultant impacts to Swan Pond to the west of the Kooragang Island Main Line.

The Department notes that the Australian Rail Track Corporation has confirmed that the rail flyover is necessary to ease congestion on the Kooragang Main Line. The main environmental impacts that would result from the construction of the proposal would include additional biodiversity impacts to Coastal Saltmarsh, Freshwater Wetland, the habitat of the Green and Golden Bell Frog and migratory bird species. The Department notes that the amount of additional clearing required would include 1.32 hectares of Coastal Saltmarsh and 0.13 hectares of Freshwater Wetland. The Department has considered the additional impacts of the grade separated rail spur (as opposed to the approved at-grade option) and considers that the modification is justified. The Department has proposed a number of amendments to strengthen existing conditions, as well as developing additional conditions to ensure that the proposal is undertaken in a manner that is acceptable to the surrounding environment and the community.

In relation to biodiversity, the Department has clarified the amount of compensatory habitat offsets that are required for the project and included specific milestones for their implementation in order to ensure positive biodiversity outcomes are realised. In addition, the Department has recommended that a Conservation Bond be required so that in the event that the Proponent is unable to provide the stipulated compensatory offsets, the Director-General would be in a position to call in all or part of the bond and arrange for the completion of compensatory habitat works.

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1. BACKGROUND

1.1 Introduction

The Newcastle Coal Infrastructure Group (NCIG) Coal Export Terminal on Kooragang Island within the Newcastle local government area was approved by the then Minister for Planning on 13 April 2007. The location of the site on Kooragang Island is shown on **Figure 1**.

The approved project (MP 06_0009) comprises the following activities:

- foundation preparation/capping of a rail corridor traversing the existing Kooragang Island Waste Emplacement Facility (KIWEF) for the development of the rail spurs, rail sidings and rail loops;
- construction of rail spurs, rail sidings and rail loop, rail overpass, train unloading stations and connecting conveyors;
- re-use of dredged materials from the south arm of the Hunter River as preload and engineering fill for construction of the coal storage area, rail corridor and wharf facilities;
- construction of a coal storage area including coal stockpiles, conveyors, transfer points and combined stacker/reclaimers;
- construction of wharf facilities (three shipping berths), two rail-mounted shiploaders, conveyors and two buffer bins, each capable of storing 2,000 tonnes of coal;
- development of water management infrastructure including site drainage works, stormwater settlement ponds, primary and secondary settling ponds, site water pond, water tanks and stockpile spray system;
- installation of electricity reticulation and control systems;
- development of access roads and internal roads;
- construction of administration and workshop buildings;
- other associated minor infrastructure, plant, equipment and activities; and
- operation of the Coal Export Terminal up to a capacity of 66 million tonnes per annum (Mtpa), including the unloading of coal trains, the stockpiling of coal, and the loading of coal to ships via wharf facilities and shiploaders.

The project is being constructed in stages. Construction commenced in February 2008 with Stage 1 (up to 30 Mtpa) completed and officially opened in May 2010. Stage 2 of the project is currently being constructed which, when completed would increase the capacity of the terminal to 53 Mtpa. Following this, the next stage, referred to as Stage 2F, would be constructed which would increase the capacity of the terminal to its approved maximum of 66 Mtpa.

The site is surrounded by industrial uses, principally associated with the coal industry. Other land uses in the vicinity of the site include Blue Circle Southern Cement and Origin Energy to the east, Kooragang Wetlands Rehabilitation project to the west of the Kooragang Island Main Line and the Kooragang Nature Reserve and the Hunter River National Park to the west and north. Port Waratah Coal Services (PWCS) operates the Kooragang Coal Terminal, located immediately north east of the NCIG site. The Department is currently considering a proposal by PWCS to expand the Kooragang Coal Terminal to the north and west of NCIG's existing rail loop. This project, if approved, would increase capacity of the Port of Newcastle by between 60 and 100 Mtpa.

LEGEND

- Approximate Extent of Approved NCG C&I Key Components
- Local Government Area Boundary
- Nature Reserve
- Mangrove Area
- SE PP (Major Development) 2005 - Torango Industrial Site
- SE PP (Major Development) 2005 - Newcastle Port Site

RAIL FLYOVER MODIFICATION

FIGURE 1
Regional location

Newcastle Coal

1.1.1. At-Grade Rail Spur

The Environmental Assessment for the NCIG Coal Export Terminal allowed for the construction and operation of a high capacity optional inlet rail spur and rail sidings as part of the project subject to the conditions of project approval. The Environmental Assessment indicated that this rail spur would connect with the Kooragang Island Main Line at grade and section 2.4.1 of the document further stated that if a grade separated flyover was required to be provided this would require further environmental assessment and subsequent approval.

At the time of the original assessment, the at-grade rail spur was an issue of concern to a number of stakeholders with some requesting that it be removed from the application as a result of its impacts to Deep Pond and the fact that it may not be required as part of the project. As part of its assessment, the Independent Hearing and Assessment Panel stated that the Proponent should continue to explore options to avoid crossing Deep Pond in order to integrate biodiversity conservation as well as engineering and economic considerations into the project. If there are no feasible alternatives then the embankment construction should consider developing shallow wading habitat along the edges of the embankment to enhance habitat diversity for shoreline birds in Deep Pond.

The Department noted during its assessment that the Proponent stated that the rail spur may potentially not be required until maximum throughput capacity of 66 Mtpa is reached and therefore given the uncertainty of the need for the optional rail link and the potential impacts that such a piece of infrastructure could have to the ecology of Deep Pond, the Department recommended, as a condition of approval, that the optional rail spur not be constructed until the Compensatory Habitat and Ecological Monitoring Program is implemented to the extent agreed by the Director-General (condition 1.6). In addition, the Department recommended that the Proponent be required to undertake a review of the need for the optional rail spur in consultation with the owner/operator of the Kooragang Coal Terminal (PWCS) and ARTC to confirm the need for the infrastructure in light of circumstances and operational requirements that would exist just prior to the spur's implementation. This recommendation was translated to condition 2.40 of the project approval which required that the results of the review be submitted to the Director-General to ensure that the required investigations were undertaken and the need for the infrastructure was fully justified.

As a result of consultation with PWCS and ARTC undertaken in response to condition 2.40 of the project approval, it was determined that a grade separated flyover would be required to be constructed as part of the development of the rail spur to meet the requirements of ARTC so as to facilitate existing and potential future rail movements between the Kooragang Island Main Line and the coal export terminals on Kooragang Island. ARTC stated that to avoid detrimental impacts to the capacity of the main line, grade separation of the rail spur would be necessary. The need for a grade separated rail link formed the basis of the modification application described in Section 2.

1.1.2. Previous Modifications

The project has been modified once to date. The previous modification on 27 November 2007 involved subdivision of the land in order to facilitate the registration of the leasehold over the land area from the State Property Authority to NCIG.

1.2 Memorandum of Understanding

A Memorandum of Understanding (MoU) exists between Newcastle Port Corporation and the former NSW Department of Environment, Climate Change and Water (DECCW). The MoU, which was signed on 11 November 2009, relates to the availability of land on Ash Island for the provision of biodiversity offsets for the Green and Golden Bell Frog (GGBF) in order to support economic development on Kooragang Island. The MoU states that following the transfer of Ash Island from the State Property Authority to DECCW that DECCW would reserve potential GGBF habitat sites on the island to be accessible to BHP Billiton and NCIG for the purposes of these companies implementing their GGBF offset strategies, as required by their respective project approvals. The MoU also states that the land would be set aside for an initial period of five years so as to allow for proponents to determine whether expansion of the coal export chain or other port related developments will occur and require an offset for impacts to GGBF and its habitat. The initial five year period expires on 11 November 2014, unless an extension has been requested and granted by the Office of Environment and Heritage (OEH).

2. PROPOSED MODIFICATION

2.1 Modification Description

NCIG has lodged a modification request for the construction and operation of a rail flyover to include the following components:

- grade separation of the inbound track for the NCIG northern rail spur;
- realignment of the inbound (western) track of the Kooragang Island Main Line;
- realignment and lowering of the outbound (eastern) track of the Kooragang Island Main Line; and
- other associated ancillary infrastructure, including the relocation of existing electricity transmission lines to the west of the realigned inbound (western) track of the Kooragang Island Main Line.

To allow for the construction of the grade separation, the realignment of the Kooragang Island Main Line would traverse through land not previously listed in the schedule of land affected by the project (MP 06_0009).

The general arrangement of the proposed rail flyover is shown in **Figure 2** and **Figure 3** provides more detailed plans showing the area proposed to be impacted by the modification on the western side of the Kooragang Island Main Line.

The Proponent stated that it would compensate for the additional clearance of approximately 1.45 hectares of potential habitat for the GGBF by establishing additional compensatory habitat in a location agreed by the Director-General, equivalent to no less than twice the area of habitat removed (2.9 hectares) in accordance with the approved Compensatory Habitat and Ecological Monitoring Program (CHEMP).

A revised CHEMP was not provided as part of the documentation supporting the modification request. Initially, no compensatory habitat was specified for impacts to migratory shorebird habitat or endangered ecological communities impacted by the proposal. However, this issue has since been addressed and is discussed in Section 5.1.

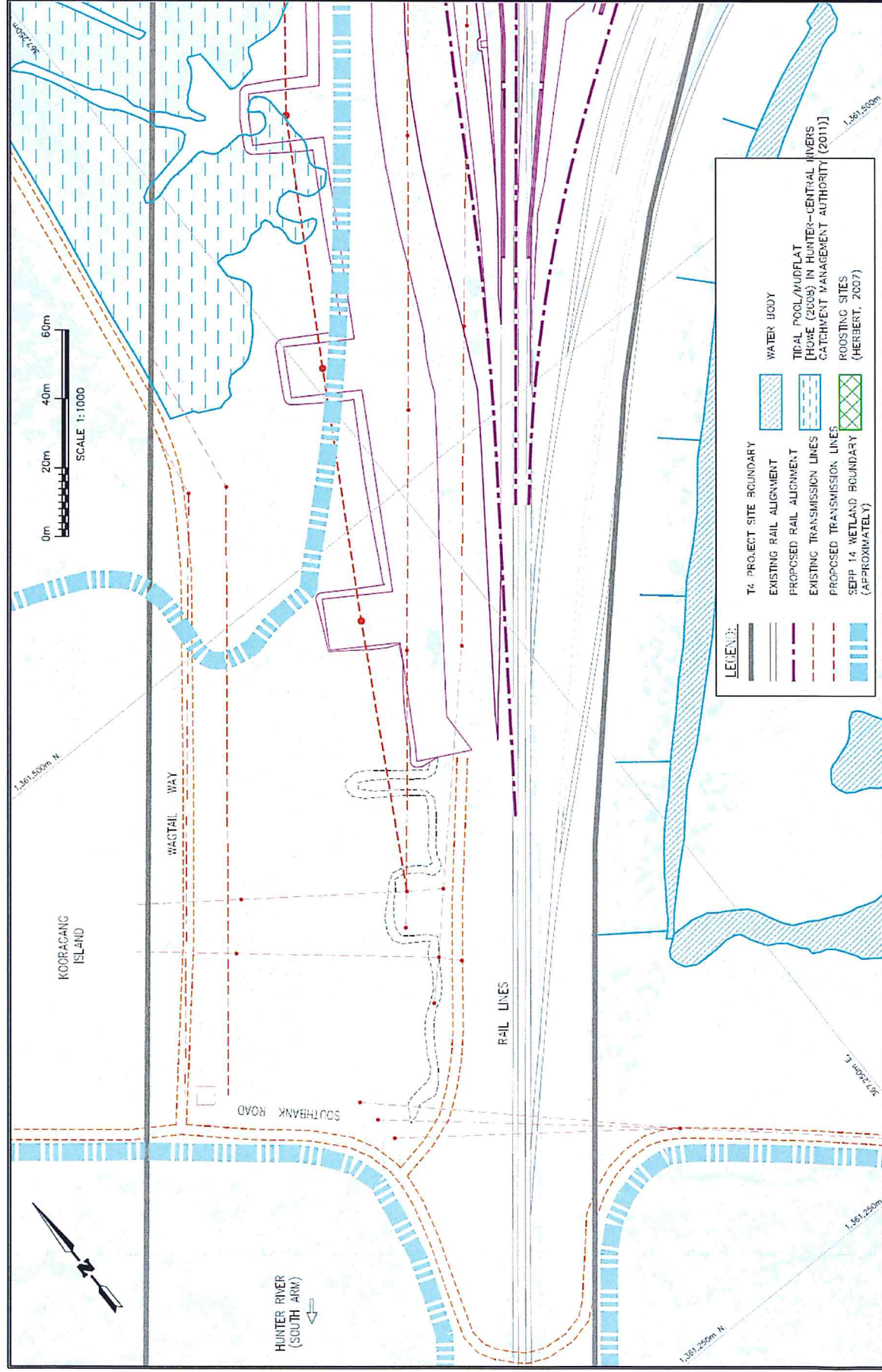


Figure 2 – Proposed Rail Flyover (Plan 1 of 3)



Figure 2 – Proposed Rail Flyover (Plan 2 of 3)

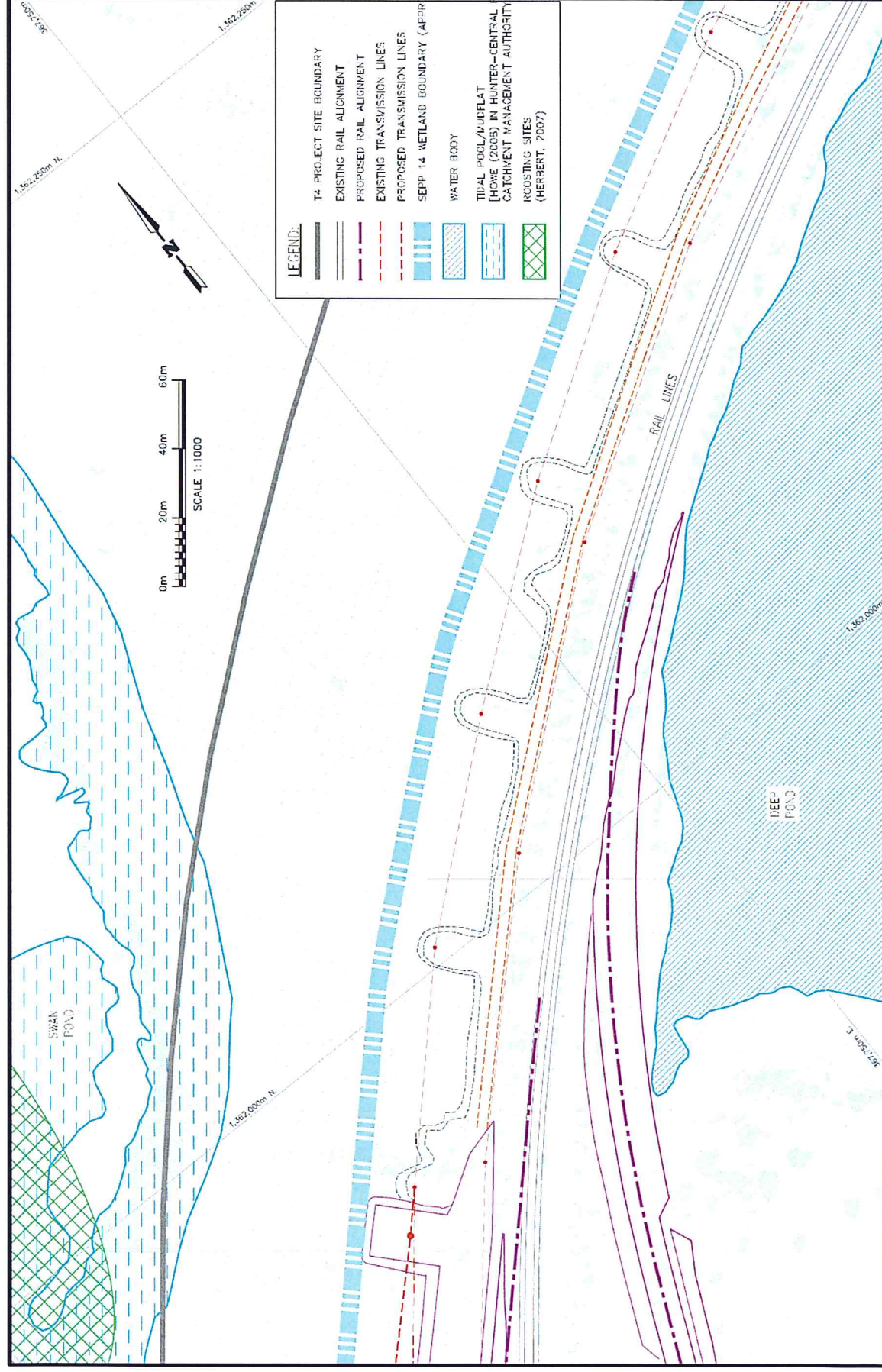


Figure 2 – Proposed Rail Flyover (Plan 3 of 3)

3. STATUTORY CONTEXT

3.1 Modification of the Minister's Approval

Section 75W(2) of the *Environmental Planning and Assessment Act* (EP&A Act) provides that a Proponent can request the Minister to modify the approval of a project. The Minister's approval is not required if the project, as modified, will be consistent with the original approval. The subject modification is not consistent with the original approval, but at the same time, does not constitute a project in its own right, and therefore an assessment in accordance with Section 75W of the EP&A Act is considered appropriate.

Transitional arrangements are in place as a result of the repeal of Part 3A of the Act. Clause 2(1)(a) of Schedule 6A states that an approved project (whether approved before or after the repeal of Part 3A) is considered to be a transitional Part 3A project. Clause 3 of Schedule 6A states that Part 3A continues to apply to and in respect of transitional Part 3A projects and therefore section 75W of the Act continues to apply to modifications of Part 3A projects.

3.2 Delegated Authority

On 14 September 2011, the Minister delegated his powers and functions under section 75W of the EP&A Act to the Planning Assessment Commission (PAC) to applications made before or after 1 October 2011 (including reportable political donation applications) other than applications made by or on behalf of a public authority.

The Department notes that more than 25 objections were received during exhibition and a reportable political donation was made by the Proponent. The application meets the criteria of the delegation and therefore the application will be determined by the PAC.

3.2 Other Approvals

The coal export terminal was referred to the former Commonwealth Department of Environment and Heritage (DEH) under the *Environment Protection and Biodiversity Act 1999* (EPBC Act). While the Minister for Environment and Heritage did not consider that the project constituted a controlled action, an approval was granted under the EPBC Act in 2006 (Particular Manner Decision 2006/2987). Item 10 of this approval stipulates that the Commonwealth Department must be notified a minimum of 24 months prior to the construction of the northern rail spur, if it proceeds. An assessment of the potential impacts on listed shorebird habitat in Deep Pond is to be provided at that time, together with a description of any design or other mitigation measures required to avoid significant impacts on birds listed under the EPBC Act. Item 10 further states that such measures may include the enhancement of existing habitat and creation of new habitat alongside the northern rail spur embankment. Design and construction of any new habitat, or habitat enhancement measures, is also required to be undertaken in consultation with a shorebird specialist.

The responsibility of meeting the requirements of Particular Manner Decision 2006/2987 rests with the Proponent. This is a separate matter to the current assessment and is required to be resolved between the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) and the Proponent.

The Proponent has stated that it has not referred the proposed rail flyover modification request to SEWPaC as its assessment concludes that the proposal would not result in significant impacts on any threatened flora or fauna species or communities listed under the EPBC Act.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75X(2)(f) of the EP&A Act, the Director-General is required to make the modification request publicly available. The Department:

- publicly exhibited the modification from 17 July to 1 August 2012, a period of 16 days:
 - on the Department's website;
 - at the Department of Planning and Infrastructure's Information Centre;
 - at the Nature Conservation Council; and
 - at Newcastle City Council.
- advertised the public exhibition in the Newcastle Herald on 17 July 2012; and
- notified Newcastle City Council in writing via letter dated 10 July 2012.

The Department received sixty (60) submissions during the exhibition of the modification request – six submissions from government agencies (including Newcastle City Council) and 54 submissions from the local community including special interest groups.

Copies of submissions are provided in **Appendix B**. A summary of the issues raised in submissions is provided below.

4.2 Public Authority Submissions

The six submissions received from public authorities comprised submissions from the following agencies:

- Office of Environment and Heritage (OEH);
- Environment Protection Authority (EPA);
- Roads and Maritime Services (RMS);
- Department of Primary Industries (DPI);
- Hunter-Central Rivers Catchment Management Authority (CMA); and
- Newcastle City Council.

Of the submissions received, Hunter-Central Rivers CMA objected to the proposed modification as did OEH initially with the remaining agencies not stating a position although providing comments. OEH has subsequently reviewed and accepted the draft conditions of approval.

A summary of the issues raised by each public authority is provided below.

Office of Environment and Heritage (OEH)

The OEH initially stated that it could not support the proposal due to the inadequate flora and fauna surveys or details of targeted searches undertaken and the lack of appropriate compensatory habitat provided for additional impacts associated with the green and golden bell frog and listed threatened species including migratory birds and endangered ecological communities. OEH indicated that the proposal would

further reduce an area of internationally recognised wetlands that are considered to be important habitat to threatened species, particularly from the impact to the eastern shoreline of Swan Pond. The OEH also made comments regarding the impact of the proposal on Aboriginal cultural heritage, including the need for improved management of potential Aboriginal objects.

Environment Protection Authority (EPA)

The EPA provided comments on the modification request and noted that a range of matters would be addressed through existing conditions of approval and Environment Protection Licence (EPL) conditions. In relation to groundwater, the EPA stated that NCIG should undertake a groundwater monitoring program to monitor existing contaminated groundwater in and around the rail line to ensure that any exacerbation of existing contamination is identified and managed effectively to minimise impact on the surrounding environment. In this regard, the EPA made recommendations for additional conditions to be provided in any approval related to groundwater and monitoring requirements. The EPA also stated that the existing EPL would need to be varied to update the premises description and take into account additional conditions if the modification request is approved.

Roads and Maritime Services (RMS)

The RMS noted that the daily heavy vehicle traffic movements generated by the construction of the rail flyover would be less than those generated during the construction of Stage 2AA. Notwithstanding, RMS requested that the Construction Traffic Management Plan for Stage 2F be revised to include the expected traffic movements generated from the construction of the rail flyover and that the Plan be submitted to the RMS for its review and acceptance.

Department of Primary Industries (DPI)

DPI provided comments on the modification request and included those from Fisheries NSW and the NSW Office of Water. Fisheries NSW advised that there were no fisheries issues associated with the proposal. NSW Office of Water provided comment regarding the proposed dewatering of excavations to manage groundwater issues and stated that all existing and proposed works, including monitoring bores, excavation and dewatering works with the potential to intercept or extract groundwater requires a licence under Part 5 of the *Water Management Act 1912*. NSW Office of Water made a recommendation in the approval document in relation to the need for the proponent to obtain relevant licences to its satisfaction prior to the commencement of activities for all works that are proposed to intercept or extract groundwater.

Hunter-Central Rivers Catchment Management Authority (CMA)

The CMA objected to the modification request and stated that it was concerned regarding the impacts the proposal would have on Swan Pond, an important migratory bird habitat and additional offsets should be considered. The CMA stated that the EA was inadequate in terms of the information provided on migratory bird species and the potential impacts of the proposal on migratory bird habitat at Swan Pond. The CMA stated that it is also concerned about the cumulative impacts of the expansion and modification of industrial projects into areas of saltmarsh endangered ecological communities, mud flats, mangrove areas and other key habitats within the lower Hunter estuary.

Newcastle City Council

Council made a number of comments regarding the modification request, including the applicability of State Environmental Planning Policy (SEPP) No. 14 – Coastal Wetlands, the loss of habitat and removal of two endangered ecological communities and that need to define the proposed compensatory habitat.

Council also sought advice on how the proposal would interact with the contamination remedial strategy for the KIWEF and stated that an updated Construction Traffic Management Plan would require the approval of Council and the RMS. In this regard, Council provided recommended amendments to existing conditions 2.21 and 7.3(d).

4.3 Public Submissions

Fifty four (54) submissions were received by the public. This included submissions from the following special interest groups:

- Birding NSW;
- Birdlife Australia;
- Correct Planning and Consultation for Mayfield Group;
- Cumberland Bird Observers Club;
- Hunter Community Environment Centre;
- Hunter Bird Observers Club; and
- National Parks Association of NSW.

In addition, the Department received a submission from the Australian Wetlands, Rivers and Landscapes Centre of the University of New South Wales.

Of the 54 public submissions received, 52 submissions (96.3 per cent) objected to the proposed modification and two submissions (3.7 per cent) did not object but raised concerns and provided comments. With the exception of one submission, all of the public submissions received regarding the modification request included comment on biodiversity impacts, particularly the potential impact the proposal would have on habitat for migratory shorebird species that utilise Swan Pond (an area which is internationally recognised) as well as direct impacts on two endangered ecological communities (saltmarsh and freshwater wetland) listed under the *Threatened Species Conservation (TSC) Act 1999*.

Because migratory shorebirds are listed under both the TSC Act and the EPBC Act the majority of submissions received also stated that the proposal should be considered a "controlled action" and therefore also assessed under the EPBC Act. The Department considers this a separate matter, as outlined in Section 3.3. A number of submissions also noted that the proposal would have additional impacts on the Green and Golden Bell Frog (GGBF) (i.e. *Litoria aurea*)

The Department notes that many of the submissions that objected to the proposal on biodiversity grounds stated that the eastern margin of Swan Pond is particularly important for shorebirds as it is shallow and dries out periodically to expose mudflats that are favoured by migratory shorebirds as foraging and roosting habitat. Saltmarsh is also proposed to be removed as a direct result of the proposal and many of the submissions also noted that this community provides habitat for bird species which are listed under the TSC Act. These submissions also stated that all rail lines and industrial development should be constrained within the existing

industrial area east of the Kooragang Island Main Line with no incursions to the west; that compensatory shorebird habitat should be provided prior to works being undertaken; that alternatives should be investigated for the location of the transmission line and that relocating the lines to impact on Swan Pond was unacceptable and that cumulative impacts should be considered.

Of the public submissions received, only one public submission raised other issues of concern, additional to biodiversity, which included:

- the number of jobs lost as a result of the operation of the proposal;
- the future capacity of the Hunter through the use of double-stacked trains and the fact that the flyover should account for the use of these trains and provide adequate clearance;
- operational noise levels and noise monitoring requirements, particularly as trains would be required to climb a 10.5 metre grade;
- lighting should be fitted with shields and automatic switches to limit light to essential areas;
- dust management along the length of the rail corridor from which NCIG draws its supply; and
- that the site should be remediated back to its original state if it ceases to operate as a coal export terminal.

The Department has considered the issues raised in the submissions received in its assessment of the proposed modification.

4.3 Response to Submissions

NCIG prepared a Response to Submissions document dated September 2012 to address the issues raised in the submissions. The Department did not consider that the Response to Submissions document adequately responded to the issues raised in the submissions received and instructed NCIG by letter to revise the document.

A Revised Response to Submissions was received by the Department in October 2012 and comprised the following components:

- Part A (revised) providing a response to the issues raised in the submissions;
- Part B (revised) providing a specific response to the issues raised by the OEH; and
- Part C (new) providing additional detail regarding biodiversity impacts, including up to date survey records for Swan Pond purchased from the Hunter Bird Observers Club.

Additional information on individual threatened species assessments (Part D) was submitted to the Department in December 2012.

NCIG stated in its Revised Response to Submissions documents that it can confirm that the proposal would impact on a linear strip of saltmarsh totalling 1.32 hectares within the vicinity of Swan Pond as well as 0.13 hectares of freshwater wetland, both of which are listed as endangered ecological communities under the TSC Act. In relation to the GGBF, approximately 1.45 hectares of potential habitat would be directly impacted and NCIG would establish additional compensatory habitat equivalent to no less than twice the area (2.9 hectares) in accordance with existing condition 2.20. The Revised Response to Submissions also confirmed that the

proposed modification would not have any additional impacts to Deep Pond with the crossing of Deep Pond wholly located within the approved rail corridor. NCIG has also stated that the realignment of the outbound line to the east would not encroach on the open water area of Deep Pond and therefore no additional impacts to waterbirds in this area is anticipated.

Further consultation

The Revised Response to Submissions Report was sent to OEH, RMS and DPI for further comment in October 2012 and subsequent additional biodiversity information (Part D) was forwarded to OEH in December 2012 for its review. A summary of the responses received by OEH and RMS is outlined below. No further correspondence was received from DPI.

OEH

In its response to the Department, the OEH acknowledged that the revised submissions report generally addressed OEH's previous comments. However, it considered that there was still an outstanding issue with respect to the proposed compensatory habitat for threatened shorebirds and therefore OEH was unable to support the proposal until this was addressed.

In its letter, OEH further stated that the outstanding conditions of approval for the original development should be resolved prior to issuing any approval for the proposed modification.

The Department notes that there has been a difference of opinion since the project was approved in relation to the required amount of compensatory habitat for this species. NCIG has consistently stated that its project would directly impact on 8.4 hectares of GGBF habitat and therefore that it is required to provide 16.8 hectares of compensatory habitat (at the ratio of 2:1) in accordance with condition 2.20. However, the OEH maintains that the area of direct impact is in fact 34 hectares, made up of 17 hectares of wetland (breeding) habitat and 17 hectares of terrestrial (foraging) habitat and therefore that the amount of compensatory habitat required should be 68 hectares.

The pre-impact baseline population of GGBF impacted by the project can no longer be confirmed as the project has been operational since 2010. NCIG also advised that the baseline population cannot be determined using computer population modelling (i.e. ecological software) due to the lack of pre-impact capture-mark-recapture data. Instead, NCIG has devised a methodology to determine the GGBF population impacted by the project which involves a number of cycles of monitoring of the established habitat ponds on Ash Island to accurately define GGBF population dynamics and habitat usage. NCIG has made a commitment (via letter dated 8 June 2012) that if the proposed methodology fails within three years, that an area of 68 hectares, as determined by the then Department of Environment and Climate Change (DECC) in its letter dated 25 September 2009 would be accepted as the compensatory obligation for the project.

In relation to the provision of compensatory habitat for shorebirds, the OEH requested additional information regarding the proposed compensatory habitat proposed, specifically:

- offset location and clear justification as to why that location has been chosen (i.e.

- how it meets OEH's offsetting principles);
- how any offset(s) compensates impacts on migratory shorebirds, White-fronted Chat and Coastal Saltmarsh EEC; and
- how the offsets will be conserved in perpetuity (utilising appropriately endorsed OEH conservation measures).

In its Response to Submissions document, NCIG has stated that compensatory habitat for shorebirds is proposed to be located on lands managed by National Parks and Wildlife Service (NPWS) and administered under the *National Parks and Wildlife Act 1974*. The document further states that the habitat would be located in Area E (Ash Island). The OEH has stated that it is NPWS policy that offsetting actions are generally not permitted within the state's reserve system with the exception of the MoU between OEH and Newcastle Port Corporation to allow for offsets on Ash Island for the GGBF to be undertaken by both BHP and NCIG. Therefore OEH considered that NCIG had not provided the information required regarding the proposed compensatory habitat for shorebirds, including Coastal Saltmarsh EEC and that this issue needs to be resolved prior to the approval of the modification request.

However, as part of its assessment of the modification request, the Department developed specific biodiversity conditions in consultation with the OEH relating to compensatory habitat arrangements, timing and financial surety. The assessment and these conditions are further discussed in Section 5.1.

RMS

The RMS stated that the matters raised previously regarding the project still applied and noted that NCIG committed to updating the Construction Traffic Management Plan to reflect changes in traffic movements during the construction and operation of the rail spur.

5. ASSESSMENT

The Department considers the key issue for the proposed modification to be its potential impacts on biodiversity, particularly its impact on Swan Pond which is outside the area previously assessed as part of the original Environmental Assessment. In relation to the impact on Swan Pond, the issue of the required compensatory habitat to be provided as an offset is also addressed.

While not raised in many submissions, the Department considered that groundwater management was also an issue that required assessment with all other minor issues raised addressed under "other matters" in Section 5.3.

5.1 Biodiversity

Issue

The approved coal export terminal project included the construction and operation of an optional at grade northern rail spur located between the Kooragang Island Main Line and NCIG's rail loop, crossing Deep Pond on an embankment. The Director-General's Environmental Assessment Report acknowledged that a number of submissions were concerned with impacts associated with the optional northern rail spur and given the level of uncertainty recommended that the Proponent be required

to undertake a review of the need for the optional rail spur in consultation with the owner/operator of the Kooragang Coal Terminal (PWCS) and the ARTC and this was stipulated in condition 2.40. The Department has received information which adequately satisfies this requirement and confirms that the grade separation of the line is required to facilitate train movements and minimise potential rail congestion in the future.

In addition, the Department, recommended as a condition of approval, that the rail spur not be constructed until the Compensatory Habitat and Ecological Monitoring Program (required under condition 2.20) was implemented to the extent agreed by the Director-General. This recommendation was translated to condition 1.6 in the project approval.

The proposed modification, however, involves the construction and operation of the northern rail spur including the grade separation of the rail line and the realignment of the inbound track of the Kooragang Island Main Line to the west and the realignment of the Kooragang Island Main Line outbound track to the east, as described in Section 2. The proposed realignment of the Kooragang Island Main Line to the west and the associated need to realign the Ausgrid 33 kV electrical transmission line further west has resulted in additional biodiversity impacts. This includes impacts to migratory shorebirds that regularly utilise Swan Pond as well as additional impacts to the habitat of the GGBF and impacts to endangered ecological communities, namely *Coastal Saltmarsh in the NSW North Coast, Sydney Basin and South East Corner Bioregions Endangered Ecological Community* (Coastal Saltmarsh EEC) and *Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions Endangered Ecological Community* (Freshwater Wetlands EEC). The impact on these EEC's has been documented as 1.32 hectares of Coastal Saltmarsh and 0.13 hectares of Freshwater Wetland. No threatened flora species would be directly impacted by the proposed modification, however the proposal would impact on an additional 1.45 hectares of habitat for the GGBF and NCIG has advised that it would establish additional compensatory habitat, equivalent to no less than twice the area of impact to be removed (i.e. 2.9 hectares) in accordance with the approved Compensatory Habitat and Ecological Monitoring Program (CHEMP) required under existing condition 2.20.

The realignment of the Kooragang Island Main Line and the associated realignment of the existing transmission line to the west also results in an encroachment on the boundary of *State Environmental Planning Policy (SEPP) No. 14 – Coastal Wetlands* in the vicinity of Swan Pond. Newcastle City Council raised concerns in its submission that the Environmental Assessment is silent on the applicability of section 7(3) of the Policy.

While NCIG did not provide information on proposed offsets for endangered ecological communities or migratory shorebirds within the modification documentation, its Response to Submissions states that consistent with the requirements of existing condition 2.20, NCIG proposes to update the CHEMP, in consultation with the OEH, and submit it for the approval of the Director-General to reflect the additional compensatory habitat to be established as a result of the habitat lost due to the modification request. Subsequent information provided by NCIG proposes that compensatory habitat for migratory shorebirds be provided on Area E, Ash Island which it considers is consistent with the *Kooragang Island – Threatened*

Species Offsets Framework prepared by the then DECC in 2008 and involves the removal of mangroves in the area, transforming the area back to saltmarsh/mud flats and therefore providing additional habitat area for migratory shorebirds adjacent to existing habitat. However, OEH has raised concerns with offsets being provided on the state's reserve system with the exception of offsets for the GGBF on Ash Island, which is permissible through the MoU, discussed previously in Section 1.2, and therefore considers that the Proponent has not outlined an appropriate compensatory habitat for migratory shorebirds, including Coastal Saltmarsh EEC. Whether the existing MoU could be revised to incorporate compensatory habitat for migratory bird species is a matter to be resolved in consultation with the OEH.

Consideration

The Department has reviewed the Environmental Assessment, the submissions received and NCIG's Response to Submissions documentation comprising Parts A, B, C and D and considers that the proposed modification can be approved subject to conditions. The Department understands that the configuration of the grade separated rail flyover and associated adjacent infrastructure is such that avoidance of impacts to biodiversity is not possible and that the Proponent has minimised impact as much as possible. While the proposal would result in encroachment into Swan Pond and additional impact to endangered ecological communities and potential impacts to migratory shorebirds and the habitat of the GGBF, the assessment undertaken by the Proponent has concluded that the impacts on biodiversity would not be significant and the Department accepts this position. The Department considers that the construction of the proposal can be managed such that impacts are minimised and also considers that the impacts of 0.13 hectares of Coastal Saltmarsh, 0.13 hectares of Freshwater Wetland and an additional 1.45 hectares of GGBF habitat are relatively minor when compared to the benefits that the proposal would provide and are able to be offset such that a maintain or improved biodiversity outcome is achieved.

In this regard, the Department has recommended that, in relation to biodiversity, a number of existing conditions of approval (namely conditions 1.6, 2.17 and 2.20) are required to be modified and strengthened and that there is a need to add a number of new conditions to the instrument (conditions 2.19A, 2.20A and 2.20B) to address additional biodiversity impacts to the west, the financial surety in relation to the provision of compensatory habitat offsets and the need to revise the previously approved CHEMP document. The Department has also confirmed the amount of compensatory offsets to be provided and has included specific milestones for their implementation in order to further strengthen the conditions and ensure positive biodiversity outcomes.

Under SEPP 14, the clearing of land, the construction of a levee or undertaking draining or filling of a SEPP 14 wetland is designated development and requires the consent of the local council and the concurrence of the Director-General of the Department. However, due to the project being assessed under Part 3A where the Minister's delegate is the approval authority, this consent is not required. Notwithstanding, the Department has assessed the impacts of the proposed modification on the SEPP 14 wetland and concluded that the impacts are minor.

In relation to proposed changes to existing conditions, the Department has outlined in **Table 1** the original condition highlighted to show the changes proposed to the text, together with an explanation on why the change is considered appropriate.

Table 1: Changes to Existing Conditions (Biodiversity)

<i>Existing Condition (Changes Highlighted)</i>	<i>Comment</i>
<p>Condition 1.6 The Proponent may only proceed to construct the infrastructure marked as "High Capacity Optional Inlet Rail Spur and Rail Sidings" in Figure 2-1 of the document referred to under condition 1.1b) of this approval upon receipt of the Director-General's satisfaction that:</p> <ul style="list-style-type: none"> a) the Compensatory Habitat and Ecological Monitoring Program required under condition 2.20 has been is being implemented according to the timeframes required, or to the extent agreed by the Director-General; and b) the Proponent has complied with rail infrastructure review design requirements required under condition 2.40 referred to in condition 2.39 of this approval. 	<p>The High Capacity Optional Inlet Rail Spur and Rail Sidings is proposed to be defined in the modified instrument in the list of abbreviations and definitions in Schedule 2.</p> <p>Condition 2.20 (refer below) is proposed to be modified to include specific timeframes for the completion of compensatory habitat works.</p> <p>Condition 2.40 is proposed to be deleted. This condition required the Proponent to consult with ARTC and PWCS and undertake a review of the need for the High Capacity Optional Inlet Rail Spur and Rail Sidings and to notify the Director-General. This condition was completed in 2011 and therefore the Department proposes to delete existing condition 2.40 and refer to condition 2.39 in condition 1.6 regarding the design requirements of the rail spur.</p>
<p>Condition 2.17 The Proponent shall design and construct relevant rail infrastructure associated with the project to include culverts, underpasses or other similar measures to permit the movement of <i>Litoria aurea</i> and other amphibian species under the rail infrastructure, and shall have consideration of existing and proposed frog habitat areas and movement corridors. The culverts, underpasses or other similar measures shall be installed to include suitable habitat for <i>Litoria aurea</i>, and to provide protection from predators, and shall be designed in consultation with the OEH and PWCS.</p>	<p>Changes to this condition are proposed as the Department is aware that while there is existing habitat areas in close proximity to the proposed rail spur, PWCS also propose to establish additional habitat areas and movement corridors as part of it proposal to construct and operate the T4 Terminal. The Department understands that while the T4 Terminal is still a proposal and has not been approved, it considers that the Proponent should consult with OEH and PWCS regarding the provision measures to permit frog movements under the rail infrastructure.</p>
<p>Condition 2.20 The Proponent shall develop and submit for the approval of the Director-General, a Compensatory Habitat and Ecological Monitoring Program to detail how habitat and ecological values lost as a result of the project will be offset, and how ecological monitoring will be undertaken to inform ongoing ecological management. The Program shall be developed in consultation with the DEC OEH, and shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> a) ecological surveys, following detailed design of the project, to identify and quantify the extent and types of habitat that would be lost or degraded as a result of the project; b) provision for establishment of compensatory habitat for each relevant component of the project as follows, unless otherwise agreed by the Director-General: <ul style="list-style-type: none"> i) for <i>Litoria aurea</i> habitat lost as a result of the project, establishment of 75 hectares 	<p>There has been ongoing disagreement between the Department/OEH and the Proponent regarding the amount of compensatory habitat required to be offset. This stems from the fact that the Proponent did not confirm the amount of GGBF habitat impacted by the project prior to the commencement of construction activities. The Proponent, however, has agreed in writing that if land impacted by the project cannot be determined through monitoring of trial ponds and associated population modelling, that an area of 68 hectares (the original compensatory habitat requirement advised by the former OEH) would be accepted as its compensatory obligation for the project. This agreement has been reflected in the proposed modified condition and takes into consideration the additional impacts from the modified rail spur.</p> <p>A number of cycles of monitoring are required to</p>

<p><u>of compensatory habitat in a location agreed by the Director-General, in consultation with DEC the OEH. The compensatory habitat shall include viable and sustainable populations of <i>Litoria aurea</i> within a mosaic of wetland, terrestrial and breeding habitat, which includes foraging, sheltering, and wintering habitat attributes and movement corridors, in order to maximise the potential reproductive output of the <i>Litoria aurea</i> population. This amount of compensatory habitat may be reduced if the Proponent can determine, using a scientific methodology agreed to by the Department, in consultation with the OEH, that the population of <i>Litoria aurea</i> impacted by the project is less than 37.5 hectares. The reduced amount shall be agreed to by the Department, in consultation with the OEH by 30 June 2015; to no less than twice the area of habitat identified under a), with commencement of compensatory habitat works within six months of the commencement of construction;</u></p> <p>ii) for migratory shore bird habitat (including endangered ecological communities) lost as a result of the project, including filling in of parts of Deep Pond and Swan Pond from and the construction of the optional rail spur and associated infrastructure, the establishment of 8 hectares of compensatory habitat in a location agreed by the Director-General, in consultation with the DEC OEH, equivalent to no less than twice the area of habitat identified under a), with The commencement of compensatory habitat works shall occur within six months of the commencement of construction of the optional rail spur High Capacity Optional Inlet Rail Spur and Rail Sidings, or as otherwise agreed by the Director-General;</p> <p>c) provision for on-going ecological studies and migratory bird monitoring in and around Deep Pond and Swan Pond, to investigate bird behaviour and to inform the design process for components of the project affecting Deep Pond;</p> <p>d) provision for the funding of works required under this condition, to be managed by a board, trust or other mechanism that provides sound and legally enforceable means of allocating resources for ongoing adaptive management and review of the performance of compensatory habitat works for the life of the project;</p> <p>e) provision for research into <i>Litoria aurea</i> in and around Kooragang Island and the Hunter Estuary, as may be identified by the</p>	<p>accurately define the GGBF population dynamics and habitat usage. Tadpoles were only released into the trial ponds on Ash Island in January 2013 and therefore the Proponent will need until January 2015 to determine whether the establishment of habitat is being successful. This formed the basis for the 30 June 2015 date proposed in the modified condition.</p> <p>It is proposed to delete the requirement to commence the compensatory works within six months of construction as this is no longer relevant as the compensatory habitat works have already commenced with the construction and seeding of the trial ponds on Ash Island.</p> <p>Condition 2.20 b)ii) is proposed to be modified to take into consideration the additional impacts from the realignment and modification of the rail spur. The EA prepared by the Proponent calculates the area of impact and this has been used to determine the compensatory habitat offset required based on a ratio of 2:1 which is consistent with the original condition.</p> <p>Swan Pond has been added as the proposed rail flyover encroaches into Swan Pond as a result of the realignment of the Kooragang Island Main Line and the required relocation of the electricity transmission line.</p>
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<p>Proponent in consultation with relevant ecological and research groups;</p> <p>f) provision for ameliorative works on land surrounding the project Site, as may be negotiated by the Proponent with the relevant adjacent land owners, to improve or restore natural hydrology and ecosystems, remove mangrove communities where relevant and restore locally-endemic Endangered Ecological Communities;</p> <p>g) consideration of coordinating compensatory and ameliorative works with similar requirements for other developments, including with respect to the development the subject of development consent DA-134-3-2003-i (dredging and remediation of the South Arm of the Hunter River);</p> <p>h) monitoring requirements for compensatory habitat works and other ecological amelioration proposed under the Program; and</p> <p>i) timing and responsibilities for the implementation of the provisions of the Program. <u>The Proponent shall provide the following commitments in the Program, or as otherwise agreed by the Director-General:</u></p> <p>i) <u>before 31 December 2013, the Proponent shall secure compensatory habitat locations required under condition 2.20b);</u></p> <p>ii) <u>before 31 December 2014, the Proponent shall have completed the migratory shorebird compensatory habitat works required under condition 2.20b)ii);</u></p> <p>iii) <u>before 31 December 2016, the Proponent shall have completed the <i>Litoria aurea</i> compensatory habitat works required under condition 2.20b)i). If a viable breeding population of <i>Litoria aurea</i> has not been established as part of the implemented compensatory habitat works then the Proponent is required to purchase an equivalent area of land that is known to contain the species and manage this land for the enduring conservation of the species in perpetuity. Any land required to be purchased is required to be completed by 31 December 2019.</u></p>	<p>The Department considers that the CHEMEP document is required to commit to certain dates for completion to allow the compensatory habitat offsets to be realised. The construction of the coal export terminal is almost complete and therefore the site will have the potential to reach full capacity (66 Mtpa) once the rail spur is completed, however compensatory habitat works have lagged. The Department has revised the conditions in consultation with the OEH to include additional rigour and to provide specific milestones to ensure that the compensatory habitat offsets are realised.</p> <p>If the offset being proposed by the Proponent fails, the Department and OEH consider that it should be required to find an alternative site to fulfil its offset obligations for the project. Therefore, if the Proponent has not provided a viable breeding population on Ash Island then it will be required to purchase land known to contain the GGBF and manage this land in perpetuity for the ongoing conservation of this species.</p>
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Conditions 2.19A, 2.20A and 2.20B are proposed to be added to the instrument. Condition 2.19A requires the Proponent to minimise the amount of vegetation cleared to that only required for the construction and operation of the proposal and provides a maximum limit for vegetation clearance in accordance with the area identified within the Environmental Assessment documentation.

Condition 2.20A requires the provision of a Conservation Bond to be lodged with the Department so that in the event that the Proponent is unable to provide the required compensatory habitat offsets in the required timeframe of condition 2.20, then the Director-General would be in a position to call in all or part of the bond and arrange

for the completion of the relevant compensatory habitat works. Similarly, if the Proponent has satisfied the timing requirements of condition 2.20, the Director-General would be able to release the bond back to the Proponent. The requirement for a Conservation Bond would provide financial surety for the biodiversity requirements specified in condition 2.20.

Condition 2.20B requires that a revised CHEMA document be submitted for the approval of the Director-General within three months of any approval that results in a change in impacts to biodiversity that are different from those assessed in the original Environmental Assessment. This will allow the CHEMA document to be revised on an as needs basis and be updated so that it is relevant to the works that are occurring on the site. The requirement to provide a revised CHEMA document would also provide up to date information on the compensatory habitat offsets proposed against the timing requirements of condition 2.20 as well as a status update of what measures have been completed as part of the project. The last CHEMA document was approved by the Director-General in November 2010 and many of the compensatory habitat measures proposed in the document are no longer being provided as part of the project and therefore the Department considers that it is important that this document is updated and kept up to date as components of the project change.

The Department has undertaken extensive consultation with the OEH regarding the assessment of the proposal, the recommended amendments and the formulation of additional conditions of approval for the modification request. As a result of this consultation, the Department notes that the OEH are generally satisfied with the proposed conditions.

5.2 Contaminated Soils and Groundwater Management

Issue

The realignment of the Kooragang Island Main Line, the construction of the rail flyover and the associated relocation of the transmission line is proposed to occur in proximity to the former Kooragang Island Waste Emplacement Facility (KIWEF) and therefore any excavation works have the potential to disturb existing contaminated soils. The construction of the rail embankments could also result in induced groundwater flows.

The Environmental Assessment states that the rail infrastructure corridor would continue to be designed and constructed to meet the goals of benchmark techniques 28 and 29 in *Environmental Guidelines: Solid Waste Landfills* (EPA, 1996) where it traverses KIWEF, and would include capping and drainage works. The environmental goals for Benchmark 28 (site capping and revegetation) are performance based and include preventing pollution of water by leachate, preventing landfill gas emissions, assuring quality of design, construction and operation, minimising landfill space, preventing the degradation of local amenity and ensuring adequate staffing and training. The goals additional to these outlined in Benchmark 29 (landfill closure and post-closure monitoring and maintenance) include being able to detect water pollution and landfill gas emissions, preventing unauthorized entry and noise pollution.

In relation to Benchmark 28, EPL 6437 for the KIWEF states that the *"final capping must comprise the following: a seal bearing surface, a sealing layer, an infiltration*

layer and a revegetation layer" as specified in the abovementioned guidelines. The original Environmental Assessment states that these have been achieved through the inclusion of the following aspects in the design of the existing rail infrastructure and the Proponent has indicated that these would again be achieved in the design of the proposed grade separated rail flyover:

- a seal-bearing surface (i.e. prepared sub-grade);
- a 0.5m thick sealing layer with an effective permeability of not greater than 1×10^{-8} metres per second (m/s) (unless otherwise agreed by the OEH);
- incorporation of a drainage system along the rail infrastructure to maximise rainfall runoff and minimise infiltration, inclusive of table drains to collect and divert runoff to the existing site drainage system via sediment control structures;
- an infiltration drainage layer with an effective permeability not less than 1×10^{-5} m/s and a revegetation layer across the capping layer as part of closure and rehabilitation works; and
- the capping layer and drainage layout will be designed such that they can be readily integrated with the Hunter Development Corporation's ultimate capping strategy for the whole KIWEF.

The Environmental Assessment notes that the proposal would require limited excavation, however, the procedures for sampling and analysis of soil prior to excavation and subsequent handling of contaminated materials (if identified) would occur in accordance with the Construction Environmental Management Plan (CEMP) and Statement of Commitments which require the preparation of a Soil and Excavation Management Plan to manage contaminated soils and water.

In relation to groundwater, the placement of embankment material for the proposal may cause consolidation of the underlying soils which could lead to a minor increase in pore pressure and therefore induce flows from the clay aquitard into the fill and estuarine aquifers. The Proponent has stated that this increase in flow is expected to be short-term and localised similar to those predicted and experienced during the construction of the existing rail spur associated with the coal export terminal. The Environmental Assessment indicates that any increases in groundwater flows as a result of the placement of fill for the proposal is expected to be minor. Some short-term localised and minor increases in the groundwater table would occur in areas of consolidation within the KIWEF, but such increases are expected to have negligible impact on surrounding groundwater systems due to the elevated water table present in the area. As for the original project, the Proponent proposes to manage groundwater flows by undertaking monitoring and implementing contingency measures if necessary. The Proponent has stated that it will install groundwater bores along the perimeter of the rail infrastructure corridor and that it would monitor any groundwater changes and, if significant, consider contingencies (i.e. pumping of bores or installation of localised subsurface low permeability barriers).

The EPA and the OEH commented on the potential impacts to groundwater as a result of the proposal and made recommendations to modify the existing conditions of approval.

Consideration

Conditions 2.53 to 2.55 of the existing approval address contaminated land management issues associated with the project to ensure that any disturbance and recapping works are undertaken in accordance with the commitments made in the

original Environmental Assessment and that if any contaminated material is encountered it is removed from the site and disposed of in an environmentally acceptable manner. The existing approval also requires the Proponent to have ongoing compliance with EPL 6437 as it relates to the ongoing management of the KIWEF.

Condition 2.53 specifically requires the construction of rail infrastructure works to be audited by an appropriately qualified person to ensure that the recapping is undertaken appropriately. The Department can confirm that this was carried out for the existing rail infrastructure on the coal export terminal site and that this condition has been complied with. Because the rail flyover will also be constructed over land associated with the KIWEF, recapping works will also be required to be undertaken in accordance with this condition for the proposal and therefore to avoid any doubt the Department has recommended that condition 2.53 be amended to also specifically address the proposal. This will require quarterly audits to be undertaken for the construction works associated with the High Capacity Optional Inlet Rail Spur and Rail Sidings and that quarterly audit reports are submitted to both the Director General and the EPA for review.

While the Proponent stated that it will install groundwater bores along the perimeter of the rail infrastructure corridor and to monitor any groundwater changes, the EPA in its submission requested the Proponent to undertake a groundwater monitoring program and to commence monitoring prior to construction to allow for any changes in groundwater quality to be identified. The Department agrees with the EPA's recommendation and has therefore proposed two additional conditions, 2.45A and 2.45B, be added to the project approval. Condition 2.45A requires the Proponent to sample and characterise the quality of the existing groundwater to determine groundwater quality trigger levels prior to the commencement of construction and condition 2.45B requires the Proponent to develop and implement a long-term groundwater monitoring program in and around the proposal to identify changes in groundwater quality compared to pre-construction conditions. The Proponent would also be required to develop an action plan to outline what measures would be undertaken in the event that groundwater trigger levels are exceeded during the course of the monitoring program. In addition, the Department recommended that condition 7.2 be amended to ensure that the CEMP contains measures to monitor and manage groundwater impacts, particularly in the vicinity of the proposal.

The Department of Primary Industries (Office of Water) stated in its submission that groundwater on the site is regulated under the *Water Act 1912* and that any existing or proposed works including monitoring bores, excavation or dewatering works would require a licence under Part 5 of this Act. NOW recommended that a condition be included in the modified instrument to state this. However, the Department does not consider that this is necessary as condition 1.7 of the project approval already states that the Proponent shall ensure that all licences, permits and approvals are obtained and maintained throughout the life of the project.

With the proposed amendments to existing conditions and the addition of new conditions, the Department considers that the construction of the grade separated rail flyover would be undertaken in a manner that requires that groundwater impacts are adequately monitored and managed.

5.3 Other Matters

A number of other minor matters were raised in the submissions received and the Department has addressed these below.

Aboriginal Heritage

Issue

A Preliminary Aboriginal Heritage Assessment was undertaken for the site as part of the original Environmental Assessment prepared by the Proponent. This assessment included consultation with the local Aboriginal community and concluded that the site has been subject to various disturbances over the years including agricultural activity from European settlement, the placement of dredge spoil, reclamation and waste disposal activities.

Notwithstanding, there is the possibility that undetected cultural material may be present within the project area and it is expected that the Proponent has developed management strategies to address this matter. In addition, the Proponent committed in its original Environmental Assessment to implement specific management measures to address any Aboriginal objects uncovered during construction activities and the OEH has stated that some of these measures have not been developed and implemented as planned. This is evidenced by the information provided by the Proponent as a component of its Construction Environmental Management Plan (CEMP) and therefore this requires to be addressed as part of the modification request.

Consideration

The Department has reviewed the Environmental Assessment and the matters raised about Aboriginal heritage in OEH's submission and agrees that the CEMP is required to be updated for the proposal to rectify a number of inconsistencies between the commitments made in the original Environmental Assessment and the required management measures that are to be implemented to protect existing Aboriginal heritage or address Aboriginal cultural heritage should objects be identified during construction activities. In this regard, the Department has recommended that condition 7.2 be modified to include the requirement to provide a Construction Aboriginal Heritage Management Plan as part of the CEMP which is submitted for the approval of the Director-General to detail how construction impacts on Aboriginal heritage will be minimised and managed. Measures to monitor and manage potential Aboriginal heritage impacts are also required to be provided in the body of the CEMP.

The Department understands that while consultation with the community occurred during the preparation of the original Environmental Assessment, the assessment of Aboriginal heritage for the modification application relied on consultation and assessment undertaken as part of the Terminal 4 project proposed by PWCS and therefore this consultation was not undertaken by NCIG nor was it specific to the proposed modification. Therefore, the Department considers that a Construction Aboriginal Heritage Management Plan is required to be developed in consultation with the local Aboriginal community, and specifically for the Proponent to provide opportunities for representatives of the local Aboriginal community to monitor any initial ground disturbance activities associated with previously undisturbed environments within the area of the proposal.

Noise

Issue

Operational noise levels were raised as an issue in one submission received by the Department. The issue related to the need for trains to climb up and over the Kooragang Island Main Line (outbound) and the resultant noise levels and potential impacts this may generate on the surrounding community. The submission questioned how train noise from the proposal would be no greater than train noise generated from an at-grade project. The submission also stated that the conditions should define five noise monitoring locations, the measurement technique to be used and the maximum noise levels permitted and that the conditions should form part of the EPL for the project. The EPA did not raise any issues of concern or provide comments in relation to noise.

Consideration

The Department has reviewed the Environmental Assessment, the issues raised in submissions in relation to potential noise impacts and the Proponent's Response to Submissions and considers that the existing conditions of approval would apply to the proposal and address any additional noise impacts as a result of the modification request. The Department is satisfied that the modification will not have a significant impact on the noise environment and notes that sensitive receivers are at a significant distance from the works (at least 900 metres away).

Notwithstanding, condition 2.13 of the project approval states that the Proponent shall design, construct, operate and maintain the project to ensure that noise contributions do not exceed the maximum allowable noise contributions as specified in Table 1 at the seven locations specified which relate to the closest residential receivers to the project site. The Department notes that these levels would continue to apply to the project and this would include the construction and operation of the proposed rail flyover.

In its Response to Submissions, the Proponent has also made a commitment to continue to operate in accordance with its approved Operational Noise Management Plan and the requirements of the project approval and its EPL.

The existing project approval also contains a number of conditions (i.e. 3.6 to 3.8 inclusive) which relate to noise auditing of the project to demonstrate its compliance with the noise limits stipulated. In accordance with existing condition 3.8, a noise audit was undertaken and submitted to both the Director-General and the then DECC within 90 days of the project exceeding 33 million tonnes per annum. The results of the audit demonstrated that the project was operating in compliance with its noise limits.

The Department has recommended that condition 3.8 be amended to require that a noise audit also be undertaken within 90 days of the commencement of operation of the High Capacity Optional Inlet Rail Spur and Rail Sidings to ensure that the cumulative noise generated from the project is in compliance with the noise limits specified in the project approval.

Utilities and Services

Issue

The proposed modification request involves the realignment of the Kooragang Island Main Line (inbound) to the west and the subsequent realignment of the Ausgrid 33 kV electricity transmission line. Existing power poles, wiring, lighting and signalling equipment associated with the Kooragang Main Line would also require relocation and installation within the realigned rail corridor or re-connected to existing/realigned linear infrastructure.(i.e. adjacent to the Ausgrid transmission lines).

Consideration

The existing project approval does not contain any conditions specifically related to the protection of utilities, services or other infrastructure owned and managed by other organisations or service providers.

As the proposal involves realignment of the Kooragang Island Main Line as well as associated infrastructure, the Department has recommended the modification of condition 2.39 to require that the Proponent consult with both ARTC and PWCS with respect to the design of the proposal and its interaction with existing and proposed ARTC and PWCS rail infrastructure assets. In addition, the Department has recommended the deletion of existing condition 2.40 as this has already been complied with and the replacement of this condition with a new condition 2.40 requiring utilities, services and other infrastructure potentially affected by construction and operation to be identified prior to construction to determine requirements for access to, diversion, protection and/or support. Where services are likely to be impacted, the condition requires the Proponent to consult with the relevant owner/provider and to make suitable arrangements for access to, diversion, protection and/or support of the affected infrastructure as required with the costs of any such arrangements to be borne by the Proponent, unless otherwise agreed by the utility or service provider. This is a standard condition that the Department includes in many of its approval instruments and it is considered relevant to the proposed modification request.

Other Matters

Double Stacked Trains

The Department understands that the Proponent has consulted with ARTC on the design of the rail spur and the Department is not aware of whether double-stacked trains are being considered to increase the capacity of the coal chain in the future. The Department considers that this is a matter for ARTC, the owner and operator of the Kooragang Main Line and not the Proponent. Condition 2.39 requires the Proponent to consult with ARTC and PWCS and to meet their reasonable requirements in relation to the design of the rail spur including those components of the project that may affect the design, connection and operation of existing and proposed rail infrastructure assets and therefore the Department considers that the future design of the rail line has been considered as part of the condition.

Lighting

One submission considered that all lighting should be fitted with shields and automatic switches to limit light to essential areas. The Department considers that existing condition 2.59 addresses external lighting for the project and requires that lighting is mounted, screened and directed in such a manner so as not to create a nuisance to surrounding areas and be undertaken in accordance with the Australian

Standard 4282-1997 *Control of the Obtrusive Effects of Outdoor Lighting*. No modifications to this condition are therefore proposed.

In relation to other matters raised in submissions, the Department is satisfied with the Proponent's responses and these issues are not further assessed in this report.

6. CONCLUSION AND RECOMMENDATIONS

An approval exists to construct and operate a coal export terminal on Kooragang Island, including a high capacity optional inlet rail spur and associated rail sidings between the Kooragang Island Main Line and the Proponent's coal export terminal. As a result of consultation with PWCS and ARTC it was determined that the optional inlet rail spur should be constructed and operated as a grade separated rail flyover to facilitate existing and future rail movements between the main line and the coal export terminals on the island rather than the approved at-grade rail spur.

As a result of the need to construct the rail spur as a grade separated flyover, both the inbound (western) and the outbound (eastern) tracks of the Kooragang Island Main Line require realignment. Other ancillary infrastructure, including the existing Ausgrid 33kV electricity transmission line also requires to be realigned to accommodate the grade separation.

The Department has undertaken an assessment of the modification request based on the modification application, the submissions received during its exhibition and the Proponent's Response to Submissions Report. The Department received 54 public submissions and six submissions from government agencies. Of the public submissions received, 52 submissions (96.3 per cent) objected to the proposed modification based on its impacts on biodiversity particularly the encroachment to Swan Pond and the resultant potential impacts to migratory shorebirds. In addition to biodiversity, the Department considered that contaminated soils and groundwater management were key issues for assessment while other matters such as Aboriginal heritage and noise impacts were also considered.

In its assessment of the modification request, the Department considered the environmental impacts of the proposal as well as the benefits that a grade separated flyover would provide in easing congestion on the Kooragang Island Main Line. While the proposed modification would result in environmental impacts, the Department considers that with the implementation of the existing project approval conditions, the commitments made by the Proponent and the amendments to existing conditions and new conditions proposed by the Department, that the environmental impacts of the project could be managed to an acceptable level.

The Department has proposed a number of amendments to strengthen existing conditions, as well as developing additional conditions to ensure that the proposal is undertaken in a manner that is acceptable to the community and results in positive biodiversity outcomes. In relation to biodiversity, the Department has clarified the amount of compensatory habitat offsets that are required for the project and included specific milestones for their implementation in order to ensure that positive biodiversity outcomes are realised. In addition, the Department has recommended that a Conservation Bond be required so that in the event that the Proponent is

unable to provide the stipulated compensatory offsets, the Director-General would be in a position to call in all or part of the bond and arrange for the completion of compensatory habitat works.

With the amendments to existing conditions and the proposed new conditions, the Department considers that the construction and operation of the rail flyover can be undertaken in an environmentally responsible manner.

The Department therefore recommends that the Planning Assessment Commission approve the modification request, subject to the proposed conditions.

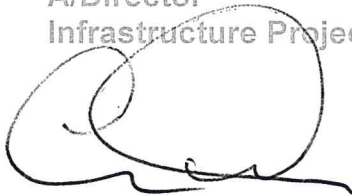
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DEVELOPMENT ASSESSMENT SYSTEMS AND APPROVALS

APPENDIX A MODIFICATION REQUEST

See the Department's website at <http://majorprojects.planning.nsw.gov.au>

See the Department's website at <http://majorprojects.planning.nsw.gov.au>

APPENDIX C RESPONSE TO SUBMISSIONS REPORT

See the Department's website at <http://majorprojects.planning.nsw.gov.au>

APPENDIX D RECOMMENDED MODIFYING INSTRUMENT