



PORT BOTANY EXPANSION

RAIL OPERATIONS

SECTION 96 (1A) MODIFICATION

February 2009

TABLE OF CONTENTS

1.	INTRODUCTION	2
2.	MODIFICATION DESCRIPTION	3
	2.1. EIS Approved Rail Configuration.....	3
	2.2 Inter-terminal Road Access Corridor Rail Configuration (Alternate Rail Configuration)	3
3.	NEED FOR THE ALTERNATE RAIL CONFIGURATION	7
4.	RELEVANT STATUTORY REQUIREMENTS AND APPROVAL PROCESSES.....	8
	4.1. Environment Protection and Biodiversity Conservation Act 1999 [Cth] (EPBC Act).....	8
	4.2.Airports Act 1996 [Cth]	8
	4.3 Environmental Planning & Assessment Act 1979 [NSW]	8
5.	CONSULTATION	9
	5.1.Port Botany Expansion Community Consultative Committee.....	9
	5.2 Botany and Randwick Councils	10
6.	ENVIRONMENTAL ASSESSMENT.....	10
	6.1 Construction Impacts	10
	6.2 Operational Impacts.....	11
	6.2.1.Noise.....	11
	6.2.2.Shorebirds	13
	6.2.3.Traffic	16
	6.2.4.Stormwater Management.....	16
	6.2.5.Spill Management.....	17
7.	CONCLUSION & RECOMMENDATION	18

1. INTRODUCTION

Sydney Ports Corporation (Sydney Ports) has obtained planning approval from the Minister for Planning for the construction and operation of a new container terminal, referred to as the Port Botany Expansion (DA-494-11-2003i approved on 13 October 2005 and 22 August 2006).

An essential component of the development is efficient rail access to and from the new container terminal for the transport of containerised cargo.

The approved development provided for:

- three rail sidings, of length between 400m and 600m depending on the number of operators, on the new terminal for the loading and unloading of containers to and from rail; and
- two rail sidings parallel to Penrhyn Road (on the Inter-terminal Access Road Corridor) for the storage of trains in the event of congestion on the Botany Freight Rail Line.

The approved Environmental Impact Statement (EIS) for the Port Botany Expansion (URS, 2003) states that:

"Should the entire new terminal be operated by a single terminal operator then the 600m long road/rail servicing operations would most likely provide the optimal terminal efficiency for servicing the five new berths. However, should there be more than one operator, it is possible that the southern portion of the new terminal could be operated by one operator with the remaining area to the north being operated by a different operator.

In this configuration, the northern portion of the terminal would be serviced by 400m long road/rail servicing operations." [Chapter 6, page 6-12]

The EIS was written in 2003. Discussions with potential operators during the ensuing period indicate that it is likely that the southern portion of the new terminal will be operated by a different operator to that of the northern portion of the terminal.

Additional work subsequent to the EIS, including for the preparation of the Port Freight Logistics Plan (a requirement of the development consent), has identified that in order to maximise rail usage and rail transport efficiency all terminals at the port require operational rail sidings of 600m.

In order to achieve 600m operational rail sidings for the northern portion of the new terminal, operational rail activities would need to take place along the Inter-terminal Road Access Corridor, in place of the approved rail storage sidings.

This modification application seeks planning approval for operational rail sidings along the Inter-terminal Road Access Corridor, as an option, whilst maintaining the EIS approval for operational rail sidings within the new terminal. Only one of these options will be implemented. The option to be implemented will be determined following confirmation of the leasing arrangements for the new terminal.

2. MODIFICATION DESCRIPTION

2.1. EIS Approved Rail Configuration

The approved rail for the new terminal is described in detail in Sections 21.5.4 and 6.3.2 of the EIS (URS, 2003) and summarised below.

The new terminal would be serviced by three rail sidings of between 400m and 600m, depending on the number of operators of the new terminal. The rail sidings are located within the new terminal parallel to the wharf face. Two of these sidings are to be used for unloading/loading of containers while the third siding is designed as a runaround track which allows an engine to move to the other end of a train.

Rail access to the new terminal is to be provided by extending the existing Botany Freight Rail Line around the northern edge of Penrhyn Estuary and into the new terminal across a rail bridge connecting the foreshore to the new terminal. A 600m passing loop would be provided adjacent to Foreshore Road, prior to the track entering the new terminal, to allow trains to pass each other.

Two additional rail sidings were approved parallel to Penrhyn Road, on what is known as the Inter-terminal Road Access Corridor, to allow trains to wait and avoid congestion of the Botany Freight Rail Line.

Figure 1.2 of the EIS, reproduced below, identifies the approved rail configuration. This modification application seeks to retain the approved rail configuration as one option in the event that the new terminal is leased entirely to one operator.

2.2. Inter-terminal Road Access Corridor Rail Configuration (Alternate Rail Configuration)

As foreshadowed in the EIS (URS 2003, page 6-12), the southern portion of the new terminal is likely to be leased to one operator, with the remaining area to the north being operated by a different operator. Consequently the longest rail siding able to be provided on the northern terminal, under the planning approval, is 400m.

In order to achieve 600m operational rail sidings for the northern portion of the new terminal, operational rail activities would need to take place along the Inter-terminal Road Access Corridor, in place of the approved rail storage sidings. This is identified in Figure 2 below.

This modification application seeks approval to construct three rail sidings of 600m length on the Inter-terminal Access Road Corridor for the unloading / loading of containers to/from rail, as an option. A 3m high noise barrier will be constructed north of the rail sidings, with the top 1m being made from transparent material.

Approval of this modification would not change the total footprint of the development or the type, nature, or scale of operations that will take place on the terminal. The equipment to be used for loading and unloading of trains and the number of trains to be serviced remains unchanged from the EIS. The access and egress points of trucks to/from the new terminal remains unchanged from the EIS.

The modification is therefore substantially the same development as the approved development.



Figure 1: Approved Development (From URS, 2003)

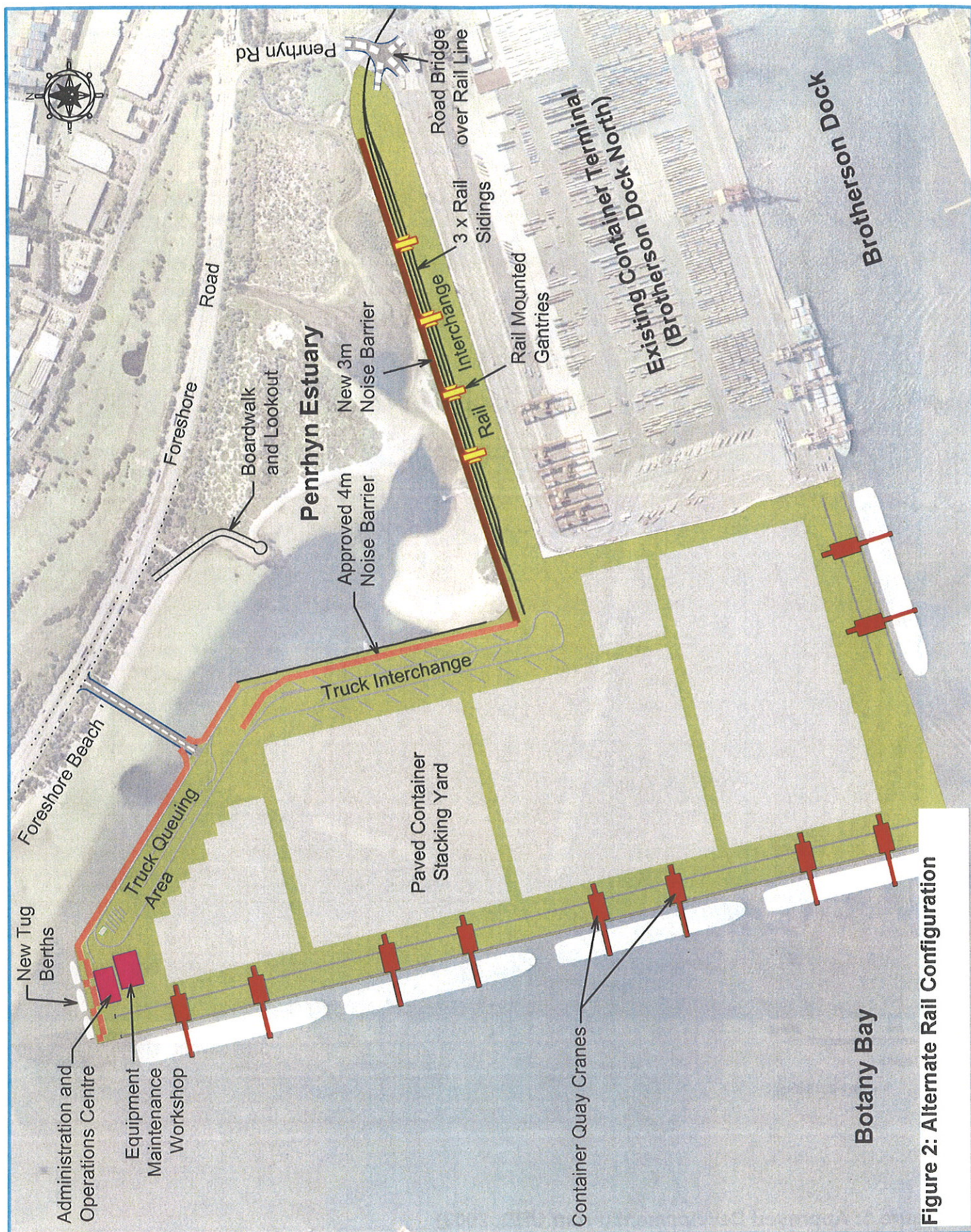
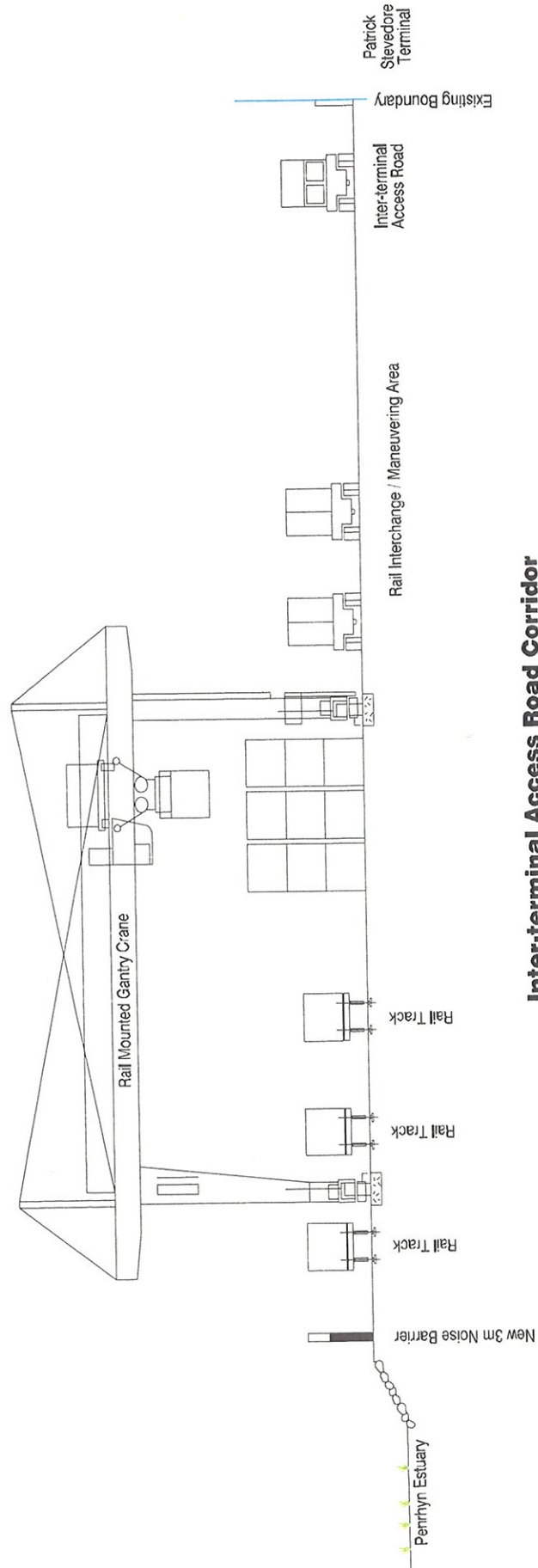


Figure 2: Alternate Rail Configuration



Inter-terminal Access Road Corridor

Figure 3: Indicative Operational Layout for Inter-terminal Access Road Corridor

3. NEED FOR THE ALTERNATE RAIL CONFIGURATION

The NSW Government and Sydney Ports have a shared objective to achieve a 40% rail mode share for containers that are transported into and out of Port Botany. Rail has the potential to transport large volumes of containers with greater efficiency, competitive usage costs, reduced environmental impacts and less road congestion, than road transport. Rail is a key element in logistics planning for metropolitan Sydney. (Sydney Ports, 2007)

In order to achieve the 40% rail mode share objective it is important that rail infrastructure at Port Botany can cater for projected demand.

The Port Botany Expansion approval by the NSW Minister for Planning required, by Condition A2.4 of the Stage 1 development consent (13 October 2005) and Condition A1.4 of the Stage 2 development consent (22 August 2006), the preparation of a Port Freight Logistics Plan (PFLP) for approval by the Minister for Planning.

The PFLP was required to:

- examine existing container freight logistics and identify areas for improvement in the efficiency of container movements and rail interfacing;
- develop an implementation program to maximise the use of rail infrastructure;
- develop measures to improve the scheduling and utilisation of container truck movements;
- propose an implementation program to ensure efficient and advanced port freight logistics consistent with best practice;
- consider the Botany yard and any constraints on the yard;
- address the need and timing of upgrades and expansion works to provide dedicated departure and arrival roads for the Botany yard; and
- address production line arrangement of separate shuttle services to each stevedore siding for future operations.

The PFLP was approved by the Minister for Planning in May 2008.

The approved PFLP identifies a number of initiatives that will improve the efficiency and reliability of rail access and operations at Port Botany. These include:

- providing stevedore sidings to accommodate 600m train lengths; and
 - standardising train lengths at 600m to reduce shunting of trains.
- (Sydney Ports, 2007)

Further, Condition B2.17 of the Stage 1 development consent for the Port Botany Expansion requires rail siding capacity at the new terminal to be provided in accordance with the PFLP.

In order to fulfil the objectives of the PFLP and the requirement of Condition B2.17, rail sidings at the new terminal must be able to accommodate 600m trains. For the approved development with two different terminal operators these obligations would not be able to be met.

The Alternate Rail Configuration is therefore required as an option to the approved rail configuration in the event that the new terminal is leased to more than one operator. This will ensure that 600m operational rail sidings are able to be achieved whether there is a single operator or two operators on the new terminal area.

Sydney Ports has conducted a rail simulation which confirms that the 40% rail mode share is achieved with operational rail sidings of 600m on the Inter-terminal Access Road Corridor.

Optimisation of the rail logistics chain is achieved by ensuring all trains visiting the port are standardised to a 600m length. This maximises the productivity of loading and unloading of trains at port terminals and reduces the delays in splitting trains into segments and the subsequent reforming of trains. The Alternate Rail Configuration provides an enhanced outcome in comparison with a 400m siding on the new terminal.

4. RELEVANT STATUTORY REQUIREMENTS AND APPROVAL PROCESSES

4.1. Environment Protection and Biodiversity Conservation Act 1999 [Cth] (EPBC Act)

The then Commonwealth Minister for the Environment and Heritage accredited the NSW environmental impact assessment process for the proposed Port Botany Expansion. The assessment was undertaken in accordance with provision of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act), with the single EIS for the project satisfying the assessment requirements of both the Commonwealth and NSW Legislation.

This application will be sent to the Commonwealth Department of Environment, Heritage, Water and the Arts (DEWHA) by Sydney Ports at the same time as it is lodged with the NSW Department of Planning (DoP) to seek advice as to whether this modification requires assessment and determination by the Department under the EPBC Act. Should a determination be required under the EPBC Act then the DoP would refer the application to DEWHA following approval.

There is no impact on Commonwealth land and no change is required to the Penrhyne Estuary Habitat Enhancement Plan as a result of the modification.

4.2. Airports Act 1996 [Cth]

The modification is not a 'controlled activity' as defined under the *Airports Act*. There will be no intrusion into prescribed airspace and no change to the level of lighting or sunlight reflectivity arising from the modification.

4.3. Environmental Planning & Assessment Act 1979 [NSW]

Section 96 (1A) of the EP&A Act states that a consent authority may modify a development consent if:

"

- (a) *it is satisfied that the proposed modification is of minimal environmental impact, and*
- (b) *it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all), and*
- (c) *it has notified the application in accordance with:*

- (i) the regulations, if the regulations so require, or
- (ii) a development control plan, if the consent authority is a council that has made a development control plan under section 72 that requires the notification or advertising of applications for modification of a development consent, and
- (d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be. "

Table 1 sets out the sections in this document that relate to each of the above requirements.

Table 1: Section 96(1A) Requirements

Requirement under Section 96(1A)	Location in document where addressed
(a) Proposed modification is of minimal environmental impact	Section 6
(b) Modified consent would be substantially the same development	Section 2.2
(c) Notification of the application	Notification is not required under the Regulations or under any Development Control Plan applying to the site. The modification has been discussed with the Port Botany Expansion Community Consultative Committee which includes representatives of the City of Botany Bay Council and Randwick Council. (Refer Section 5)
(d) Consideration of submissions	Responses to the comments and issues raised by the Port Botany Expansion Community Consultative Committee are summarised in Section 5, Table 2.

5. CONSULTATION

5.1. Port Botany Expansion Community Consultative Committee

In line with Sydney Ports' commitment to the Community Consultative Committee (CCC) to advise them of proposed project modifications in advance of seeking approval from the NSW Department of Planning, this modification was raised with the CCC at the meetings of 5 November 2008 and 3 February 2009 and is recorded in the minutes which are available on the Sydney Ports website (Sydney Ports, 2009). A summary of the issues raised, comments made and Sydney Ports' response to these comments are provided in **Table 2**.

Table 2: CCC Comments / Issues & Responses

CCC Issue / Comment	Sydney Ports Response
<u>Community Member</u> The modification makes more sense than the approved rail location and is consistent with the community's suggestion many years ago.	Noted
<u>Botany Council Representative</u> The modification is a positive outcome as it removes impacts on the shorebirds in the Estuary from not having the rail line along the northern side of the Estuary. Sydney Ports was vocal about having the rail siding on the new terminal parallel to the berth face as the most efficient option. Why has this changed? Will the rail siding along Foreshore Road remain?	Noted. It is more efficient to have a 600m siding in the proposed location than a 400m siding at the back of the berth and parallel to the wharf face. Only one of the two rail configurations would be used, either the EIS approved option which includes the siding along Foreshore Road, or the Alternate Rail Configuration along the Inter-terminal Road Access Corridor which does not include the siding along Foreshore Road.

5.2. Botany and Randwick Councils

Representatives of the City of Botany Bay and Randwick Council are members of the Port Botany Expansion CCC. Feedback received from these representatives is contained in Table 2 above.

6. ENVIRONMENTAL ASSESSMENT

6.1. Construction Impacts

Construction impacts are not expected to increase, from the EIS predictions, as a result of the proposed modification.

The land area on which the new operational rail sidings are to be constructed is within the Port Botany Expansion construction site. Construction methodology and equipment would remain the same. Two rail storage sidings were to be built on the Inter-terminal Road Access Corridor, these would now become three operational rail sidings.

There would be some reduced impacts around the northern edge of Penrhyn Estuary as the rail track in this location and the rail bridge crossing the flushing channel would no longer be required. This would reduce potential impacts to shorebirds using the Estuary and have the beneficial effect of removing the need for culverts crossing the discharge locations of Floodvale and Springvale Drains and the associated potential for disturbance of contaminated sediments.

6.2. Operational Impacts

This section details the environmental impacts associated with the Alternate Rail Configuration that have the potential to be different from those impacts assessed as part of the EIS.

6.2.1. Noise

A noise assessment of the Alternate Rail Configuration was undertaken by Wilkinson Murray. The report dated January 2009 is contained in Appendix A.

The report presents a comparison of the noise emissions from the EIS Approved Rail Configuration with the Alternate Rail Configuration. Apart from the changed location of the operational rail sidings, there are no other changes arising from the modification that would affect the noise impact of the Port Botany Expansion.

A summary of the results is presented in **Table 3**.

Noise Assessment Without Additional Noise Barrier

Relocation of the rail operations to the Inter-terminal Road Access Corridor, with the approved noise controls on operational equipment and with the approved 4m high noise barrier along the northern and eastern boundaries of the new terminal only (refer Figure 1), has the effect of increasing noise levels at some locations generally by about 1 dBA. (Refer to table 5-1 in Appendix A)

Noise Assessment With Additional Noise Barrier

To ensure that noise from terminal operations is mitigated to the maximum extent possible, a 3m high noise barrier would be constructed along the northern edge of the Inter-terminal Access Road Corridor, to the north of the relocated rail sidings.

Figure 3 identifies the extended location of the noise wall.

The change in noise levels at the residential receivers is summarised in Table 3 below.

Table 3 – Noise Predictions (L_{Aeq}) at Residential Receivers

Location Number	Location	Meteorology	Criterion	EIS noise level with approved noise controls and noise wall	Alternate rail configuration noise level with approved noise controls and extended noise wall	Change in Noise Levels
1	Chelmsford Ave	Isothermal	40	38	38	0
		3 m/s wind from NW	40	35	35	0
2	Dent St	Isothermal	40	43	43	0
		3 m/s wind from NW	40	41	41	0
	Livingstone Ave	Isothermal	40	41	41	0

Location Number	Location	Meteorology	Criterion	EIS noise level with approved noise controls and noise wall	Alternate rail configuration noise level with approved noise controls and extended noise wall	Change in Noise Levels
		3 m/s wind from NW	40	38	38	0

Tupia St Isothermal 40 41 41 0

		3 m/s wind from NW	40	39	39	0
	Waratah Road	Isothermal	40	42	42	0
		3 m/s wind from NW	40	40	40	0
3	Jennings St	Isothermal	39	27	28	+1
		3 m/s wind from NW	39	34	35	+1
4	North of Golf Course	Isothermal	40	43	43	0
		3 m/s wind from NW	40	45	45	0
5	Australia Avenue	Isothermal	38	25	26	+1
		3 m/s wind from NW	38	33	34	+1
6	Military Road	Isothermal	40	31	31	0
		3 m/s wind from NW	40	40	41	+1

With the inclusion of a 3m high noise barrier to the north of the alternate rail siding, noise impacts at receivers to the north and west of the proposed rail operations would be no greater than for the approved project.

At residences to the east there would be an increase in noise levels of 1 dBA as these residences are not shielded by the proposed noise barrier. However noise levels remain below the criterion, with the exception of the single caretaker's residence at the crematorium on Military Road (location 6) where the increase will result in a 1 dBA exceedence of the criterion when there is a 3m/s wind from the northwest. During isothermal, calm conditions noise would be below the criterion at this location. A 1dBA exceedence is not considered to be significant as it would be an imperceptible change to the receiver.

The impacts on other sensitive receivers (eg. churches and schools) were also assessed (refer to table 5-1 in Appendix A). The results indicate that with the

additional 3m noise barrier there would be an increase of 1dBA at some receivers, however noise levels would remain below the criterion.

An assessment of sleep disturbance impacts indicates that there is either no change to predicted L_{A1} noise levels or where there is an increase this results in levels still remaining below the criterion.

The results from the noise assessment demonstrate that there is minimal impact on noise sensitive receivers arising from the proposed modification.

6.2.2. Shorebirds

A review of the potential impacts on shorebird feeding and roosting behaviour in Penrhyn Estuary arising from the proposed rail modification was undertaken by Avifauna Research Services. The assessment, dated January 2009, is contained in Appendix B.

The Avifauna Research Services assessment identifies that the main impact on shorebirds arising from the modification is the construction of the additional noise barrier as it will increase the 'boxing in effect' on the estuary.

Noise and disturbance changes arising from the modified rail loading and unloading operations would not present any additional impacts on shorebirds beyond those identified in the Port Botany Expansion EIS (URS, 2003).

'Boxing In' Effect

As discussed in the EIS (URS 2003, Appendix G of Appendix O), areas that are 'boxed in' by tall trees and/or structures tend to be avoided by shorebirds. It is therefore important to provide a large enough area to provide sufficient habitat and food resources for the shorebirds plus a clear line of view around this habitat.

The approved noise barrier along the western edge of Penrhyn Estuary already forms a wall around one side of the estuary. The proposed noise barrier along the southern side of the estuary effectively forms a second wall around the estuary, thus increasing the 'boxed in effect'. This has the potential to impact on the area of habitat within Penrhyn Estuary used by shorebirds as the shorebirds may avoid areas immediately adjacent to the noise wall.

The primary measures to be implemented to mitigate this impact are:

1. to replace dune vegetation landscaping along the northern side of Penrhyn Estuary, between the proposed lookout and Floodvale Drain, with groundcover vegetation less than 15cm in height. (Refer Figure 4) This increases the clear view around the habitat and therefore increases the area of habitat in the northern part of Penrhyn Estuary which will be used by shorebirds. The groundcover vegetation will extend back from the Estuary across the rail corridor, a width of about 33m, as the rail in this location, under the Alternative Rail Configuration, would no longer be required. There is still sufficient landscaping beyond this to screen Foreshore Road. The area of groundcover vegetation to be planted is about 0.95 hectares.
2. to make the top 1m of the noise barrier transparent, to minimise the 'boxing in effect' by making the barrier appear to be 2m high. The barrier will have sufficient patterning to reduce the chance of birds flying into it thinking it was open. The bottom 2m of the barrier needs to be opaque to prevent vehicle/equipment headlights shining over the Estuary (see below).

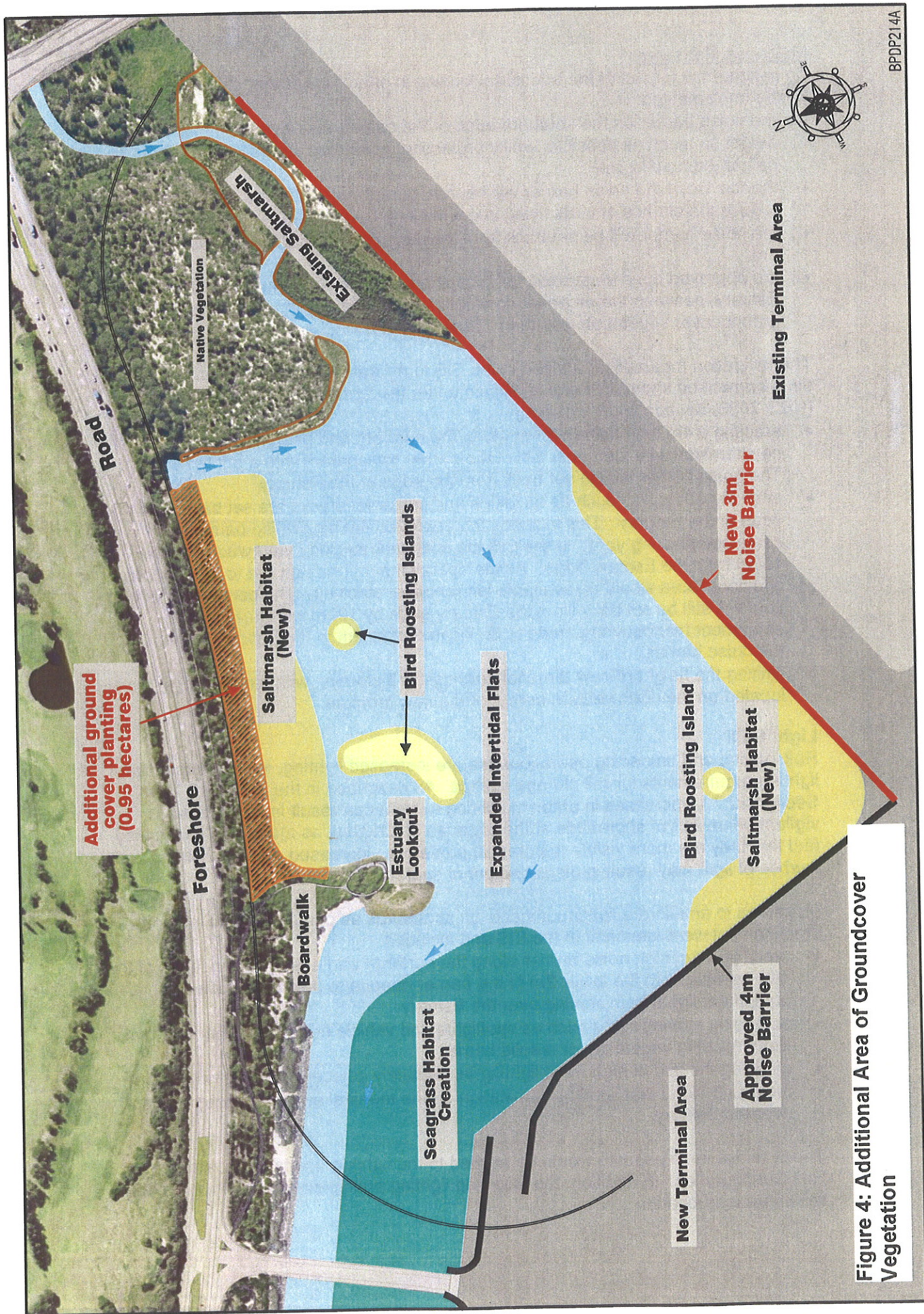


Figure 4: Additional Area of Groundcover Vegetation

Mitigation Measures

To mitigate the impact of the additional 'boxing in effect', a number of key measures will be implemented:

- the noise barrier on the southern edge of the estuary has been minimised in height as much as possible, whilst protecting residential amenity. The minimum height required is 3m.
- the top 1m of the noise barrier will be transparent with sufficient patterning to reduce the chance of birds flying into it thinking it was open.
- the noise barrier will be set back from the edge of the Estuary by a minimum of 1m.
- the approved dune vegetation landscaping along the northern side of Penrhyn Estuary, between the proposed lookout and Floodvale Drain, will be replaced with groundcover vegetation less than 15cm in height.

The mitigation measures identified in the EIS to mitigate the 'boxing in' effect of the development on shorebirds would remain under the Alternative Rail Configuration (URS 2003, Section 20.8), including:

- erecting a 4m high noise barrier along the northern and eastern boundaries of the new terminal with the upper 2m of the barrier transparent with a printed design. The noise barrier is also set back from the edge of the Estuary.
- ensuring structures such as buildings and container stacks are set back from the edge of the Estuary. This includes the approved 4m high noise barrier and container stacking yard. In the EIS the container stacking yard was set back 150m from the Estuary edge. As the operational rail sidings are to be relocated, additional area would be available for container stacking. The container stacking yard will still be set back from the Estuary edge by 100m with truck and equipment manoeuvring areas to be located adjacent to the Estuary but inside the noise barrier.
- limiting the height of new terminal buildings to 3 storeys, with the buildings located on the northwestern corner of the new terminal.

Light Spill

Rail loading and unloading operations require increased lighting, in comparison with lighting requirements for rail storage sidings. As described in the EIS (URS 2003, Section 20.7.1) increases in ambient lighting at night can result in an increase in vigilant behaviour of shorebirds at the expense of foraging, as many shorebirds may feel that they are more visible to potential predators. Increased ambient lighting and flashes of light may result in displacement of shorebirds.

Measures to ameliorate lighting impacts on shorebirds as part of the new terminal development were identified in the EIS and included:

- erecting a 4m high noise barrier along the northern and eastern boundaries of the new terminal with the lower 2m of the barrier opaque to prevent vehicle and equipment lights from shining over the Estuary.
- screening moving lights such as spotlights and vehicle headlights from Penrhyn Estuary using vegetation or a solid barrier.
- avoiding the use of high mast lighting immediately adjacent to shorebird habitat.
- focussing high mast lighting illumination on the terminal and preventing light spill over the Estuary.

These mitigation measures would be applied to the lighting used for the Alternate Rail Configuration. In addition, the following lighting principles will apply for the new rail operations location:

- the lower 2m of the proposed noise barrier would be opaque to prevent vehicle and equipment lights from shining over the Estuary.
- low mounting height poles are to be used adjacent to the Estuary. Luminaires must have absolute cutoff behind. This can be achieved through installation of a backlight shield to prevent any direct backward light spill in Penrhyn Estuary
- lights on the RMGs or alternative rail loading/unloading equipment are to be screened so that they do not spill into Penrhyn Estuary.
- High mast lighting required for the vehicle interchange area is to be sufficient to only light the interchange area. This can be achieved by minimising the mast height and installing a shield on the leading edge of each floodlight.
- Any high level lighting on operational equipment such as forklifts is not to be used so that it does not shine over the opaque noise barrier and across the Estuary.

Light from the locomotive headlights will shine across the Estuary as the train enters the site from the north. These headlights are unable to be shielded without the construction of a wall of 4m high around the rail bend into the Inter-terminal Access Road Corridor. The impact of this light intrusion is considered to be minor as the lights would not shine directly on the shorebirds given that the shorebird feeding habitat in the Estuary extends to an elevation up to 1.4m LAT and the headlights of the train will be at about 7.5m LAT.

The impact of the locomotive headlights will be monitored and if required further mitigation measures implemented which could include protocols for turning off train headlights and lighting the area with on-terminal lights; or planting of tall screening vegetation or construction of a wall around the rail bend to shield the lights.

6.2.3. Traffic

There will be no change to the access / egress for the new terminal arising from the proposed modification.

The inter-terminal access road, which connects the new terminal to the existing port area through the port estate, was to be external to the new terminal operations but will now become internal to these operations due to space limitations. (Refer to Figure 3)

The primary use for the inter-terminal access road is for block container runs between the terminal and container parks within the port estate and for emergency access / egress. Access for these purposes will be maintained through the provision of a security gate from the Penrhyn Road access road into the Inter-terminal Road Access Corridor. This gate can be opened for emergency access and to allow block container runs within the port estate.

Having the inter-terminal access road as an internal road will have an insignificant impact on traffic numbers / flows external to the port estate as the traffic assessment undertaken for the EIS did not incorporate traffic movements within the port estate.

6.2.4. Stormwater Management

The approved stormwater management system for the new terminal and Inter-terminal Access Road Corridor is described in Section 16.6.3 of the EIS (URS, 2003).

The Inter-terminal Access Road Corridor was to be drained to a series of bioremediation swales or open catch drains which would then discharge into Penrhyn Estuary through grit/oil arresting sump pits. This process for stormwater capture and

treatment was appropriate to the use of the area as a rail storage area and inter-terminal vehicle access road.

In relocating the rail loading and unloading operations to the Inter-terminal Road Corridor the stormwater collection and treatment process for this area would be enhanced to the level approved for the new terminal. This is as a result of the greater intensity of activity and the frequent use of operational equipment and vehicles on this area. A concept design of the drainage layout is provided in Appendix C.

The stormwater collection process involves collection of the first 10mm of rainfall from the area (the first flush), which is in accordance with EPA design criteria. As the paved portion of the site would be approximately 5.4 ha, the first flush collection system would have a capacity of 540 m³.

Stormwater would be drained to surface inlet pits, collected in an underground pipe system and stormwater storage structures and pumped to a coalescing plate separator (CPS) for treatment. Subsequent flows, which would be cleaner runoff, would bypass the stormwater collection system and discharge into Penrhyn Estuary.

The treatment process would then be the same as for the new terminal, which is set out in Section 16.6.3 of the EIS (URS, 2003) and incorporates the following:

- Separation of pollutants such as oils, greases, other hydrocarbons and liquid pollutants less dense than water
- Treatment to settle out suspended solids which exceed the EPA requirements would be undertaken if required.
- Testing of the treated water. Once the water is 'clean' it would be pumped to storage tanks for on-site reuse or discharged directly into Botany Bay or the tidal channel (not into Penrhyn Estuary).
- Sludge and sediment collected in sump pits would be removed and disposed of to the sewerage system under licence or transported by a licensed waste management contractor to an approved landfill.

A higher level of treatment for the Inter-terminal Access Road Corridor would be provided under the Alternate Rail Configuration.

6.2.5. Spill Management

Accidents resulting in oil spills or loss of containment on the Inter-terminal Access Road Corridor during operations would be contained through the first flush system, as for the new terminal (refer to Section 16.6.5 of the EIS, URS 2003).

Major spills could be in the order of 20m³. Spills at this scale would be easily contained within the first flush collection system which would have a volume of 540 m³ and would include penstocks to close off discharge outlets in the event of a spill. Following containment the spill would be disposed of in an appropriate manner.

7. CONCLUSION & RECOMMENDATION

It is considered that the proposed modification is substantially the same development as the approved development and is of minimal environmental impact. Therefore an application under Section 96(1A) is appropriate.

Approval for operational rail sidings along the Inter-terminal Road Access Corridor, as an option, whilst maintaining the EIS approval for operational rail sidings within the new terminal, should be granted. The option to be implemented will be determined following confirmation of the leasing arrangements for the new terminal.

The mitigation measures to be implemented as part of the modification are summarised below:

- A 3m noise barrier is to be constructed along the northern edge of the Inter-terminal Access Road Corridor, to the north of the operational rail sidings.
- The top 1m of the noise barrier is to be transparent, with patterning to avoid birds flying into it. The bottom 2m of the barrier is to be opaque to prevent vehicle and equipment headlights shining into the Estuary.
- The noise barrier is to be set back from the Estuary edge by at least 1m.
- Dune vegetation to the north of Penrhyn Estuary, between the new Estuary lookout and Floodvale Drain is to be groundcover vegetation only and is to extend to the northern side of the approved rail corridor.
- Retain the mitigation measures to mitigate light spill and the 'boxing in effect' on the new terminal which were approved in the EIS, with the exception of the container stacking yard which would be set back 100m from the Estuary edge.
- Low mounting height poles are to be used adjacent to the Estuary. Luminaires must have absolute cutoff behind to prevent any direct backward light spill in Penrhyn Estuary
- Lights on the rail loading/unloading equipment are to be screened so that they do not spill into Penrhyn Estuary.
- High mast lighting required for the vehicle interchange area is to be sufficient to only light the interchange area.
- Any high level lighting on operational equipment such as forklifts is not to be used so that it does not shine over the opaque noise barrier and across the Estuary.
- The impact of locomotive lights on shorebird feeding is to be monitored and further measures implemented if any adverse impacts are identified.
- Stormwater collection and treatment is to be consistent with the approved requirements for the new terminal.
- Control and manage spills on the Inter-terminal Access Road Corridor through the first flush system.

REFERENCES

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