



Port Botany Terminal Terminal Upgrade

Preliminary Environmental Assessment

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Documentation and Approvals

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Approvals

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1 Introduction

P&O Ports operates a container terminal facility, Port Botany Terminal (PBT), at Brotherson Dock South, 42 Friendship Road, Port Botany. In the year to 31 December 2005, PBT handled approximately 646,000 Twenty-foot Equivalent Units (TEU). Significant growth in container trade is projected into the future, and P&O Ports is pro-actively planning to cater for this growth, within the context of the recent approval of the Port Botany Expansion EIS and the NSW Ports Growth Plan and, in particular, recognising the focus on seeking to increase rail modal share.

P&O Ports proposes to progressively increase the capacity of its existing facility to in excess of 1.3 million TEU through the provision of additional Quay Cranes and container handling equipment, the staged introduction of new infrastructure, and ongoing improvements in operational management systems. By so doing, P&O Ports will continue to provide capacity ahead of demand and maintain PBT as an efficient and competitive facility.

The P&O Ports proposal consists of the following:

1. Extension of the existing rail siding along Friendship Road from 330 metres to in excess of 600 metres, with a curve, to enable trains to be loaded and unloaded without having to break them.
2. Relocation of the existing truck entry, exit and marshalling areas, which is required to enable the extension of the rail siding described above.
3. Increasing the capacity of the P&O Ports Terminal to handle in excess of 1.3 million TEU annually through the acquisition of additional post-panamax Quay Cranes and Rubber-Tyred Gantry yard cranes, optimising the use of the existing Terminal site, and facilitating the expected increase in rail modal share through the provision of rail infrastructure.

This preliminary assessment is submitted in accordance with the requirements of Part 3A, Section 75E of the *Environmental Planning and Assessment Act 1979* as a Major Project within the Port Botany precinct as defined in Schedule 2 of the *State Environmental Planning Policy (State Significant Development) 2005*.

2 Background

The P&O Ports submissions to the Port Botany Expansion Commission of Inquiry identified a quayline productivity benchmark of 1,169 TEU per metre of berth based upon the Drewry Report, a copy of which was provided to DIPNR. P&O Ports also indicated on a number of occasions throughout the EIS process that it regarded this measure as conservative, below benchmarks currently being achieved within a normal competitive operating environment and prudently set for the purposes of port planning. In P&O Ports' view all of these contingencies need to be factored out for an individual container terminal operating within a port, which would add at least 15% to the capacity benchmark for such an individual terminal. With an existing quayline of 936 metres this equates to a current capacity for PBT of at least 1.3 million TEU p.a.

In addition, in consideration of an appropriate port benchmark P&O Ports is conscious of the time within which efficiency improvements would need to be delivered. P&O Ports expects average container ship size to continue to increase and systems, including those critical to the efficient interface with road and rail, to improve each of these resulting in a higher effective capacity for PBT. These factors will be taken into consideration in the volumes we will forecast for the Terminal going forward.

The proposed expansion of the P&O Ports Terminal operations at Port Botany includes a number of changes to existing operations, and the development of improved rail and road access infrastructure. The components of the project are described below. Diagrams are provided in Annex A of the existing general layout and in Annex B of the proposed upgraded Terminal.

3 Project Components

3.1 Rail Siding Extension

The existing three rail sidings would be lengthened from 330 metres to in excess of 600 metres. The increased siding length would reduce the need for the splitting and shunting of trains as presently required, and improve the overall productivity of the rail operation matching expected developments in the metropolitan freight rail and Intermodal network.

The existing rail sidings run approximately north-south along the eastern side of the P&O Ports Terminal, terminating near the boundary of the P&O Ports Terminal with Friendship Road. The current siding is approximately 330 metres long, and trains are required to be broken for loading and unloading, decreasing efficiency. A greater number of longer trains (of 600 metres) are likely to require access to Port Botany in the future, particularly with the development of 600 metre sidings at the Enfield Intermodal Terminal and/or other Intermodal terminals in the future.

The proposed extension to the rail sidings would involve a new curved section of track commencing on the existing sidings and curving towards the south-west before straightening and running along the boundary of the P&O Ports Terminal adjacent to Friendship Road. The total length of each siding would be in excess of 600 metres, with two straight sections and a curved section with a minimum radius of 180 metres. It is proposed that all three rail sidings will be extended by the end of 2008. Two rail sidings will be for loading and unloading operations and the third rail siding for locomotive repositioning.

3.2 Road Access Relocation

Lengthening of the rail siding as described in Section 3.1 would require the relocation of the truck entry, marshalling area and exit points to the Terminal. The current entry and exit and marshalling area is located to the east of the administration building and existing truck marshalling area and is accessed from Friendship Road. The extended rail siding would occupy this land.

A new truck entry point and marshalling area is proposed adjacent to the Charlotte Road boundary, with entry from Friendship Road near the intersection of Friendship Road and Charlotte Road, and a new truck exit to Friendship Road to the south-east of the administration building. Some portions of this area of the P&O Ports Terminal is currently not developed or utilised. Works would include paving and line marking.

3.3 Capacity Improvements

P&O Ports proposes to progressively increase the capacity of the existing Terminal from the current throughput of 646,000 TEU to at least 1.3 million TEU. This progressive increase in capacity would occur incrementally, just ahead of market demand, which is necessarily unpredictable. However, to enable timely delivery of these incremental capacity increases, it is important that P&O Ports is provided with planning certainty for the PBT facility.

P&O Ports proposes to achieve throughput of in excess of 1.3 million TEU through optimising the use of the existing Terminal land and facilities, and through improvements in equipment including new cranes and better rail and road access infrastructure, as described in Sections 3.1 and 3.2. No expansion of the current lease area, additional quay line or land reclamation are required to achieve the proposed capacity. Components of the proposed full development of existing facilities under the current mode of operation would include:

- Up to 11 quay cranes would be operational (increased from seven currently), including larger cranes to cater for new larger vessels.
- Extension of 3 rail sidings and appropriate type of Container Handling Equipment.
- New Rubber Tyred Gantry Crane (RTG) stacking areas adjacent to the extended rail siding.
- Truck entry and exits would be moved to allow the extension of the rail sidings (as discussed in Section 3.2).

4 Capital Costs

The estimated capital cost associated with these projects are summarised in the following table.

Project Cost	(\$M)
New or Replaced Equipment	\$144
Extended Rail	\$18
New Truck Entrance & Exit	\$4
Civils (paving, development)	\$8
Other (systems, etc)	\$10
Total	\$184

5 Time Table

The estimated timing associated with these projects are summarised in the following table.

Project	Planning & Approval	Construction/ Installation	Operational
New or Replaced Equipment	Progressively	Progressively	2007 – 2016
New Truck Entrance & Exit	Qtr 3 2006 – Qtr 2 2007	Qtr 3 2007 – Qtr 1 2008	Qtr 2 2008
Extended Rail	Qtr 3 2006 – Qtr 1 2008	Qtr 2 2008 – Qtr 4 2008	Qtr 1 2009
Other (paving, development)	Progressively	Progressively	2007 – 2016

6 Workforce

The estimated number of jobs associated with these projects are summarised in the following table.

Workforce Type	Number
P&O Ports Employees	In accordance with Enterprise Agreement
Construction	20
Maintenance	10
Off Shore	20

7 Statutory Framework

7.1 Environmental Planning & Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (as amended), together with the *Environmental Planning and Assessment Regulation 2000* forms the statutory framework for planning and assessment in NSW.

The Director General of the Department of Planning, as delegate of the Minister of Planning has determined that the proposed development is of a kind that is described in Schedule 2 of the *State Environmental Planning Policy (Major Projects) 2005* – namely Clause 7(1) Botany “Development within the area identified on Map 5 of the Schedule for the purpose of a shipping terminal or associated building, structure or work” – and is thus declared to be a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies for the purpose of section 75B of that Act.

Being designated as a Major Project to which Part 3A applies, the Minister for Planning would be the consent authority for the proposal.

7.2 Statutory Consultation

Consultation has been limited to discussions with the Sydney Ports Corporation as the owner of the land and preliminary discussions with the Department of Planning.

8 Preliminary Environmental Assessment & Summary of Issues

Based on the knowledge of the environmental issues expected to arise from the proposed development and previous studies undertaken by the Sydney Ports Corporation for the Port Botany precinct, the following are considered to be the key issues associated with the proposal. These issues, together with any other matters identified by statutory authorities will be fully evaluated in the detailed Environmental Assessment of the proposal.

8.1 Land of Use

The P&O Ports Container Terminal facility at Port Botany is an existing development within the Port Botany precinct. The proposed upgrading of the facilities would be compatible with industrial and transport infrastructure already existing in the area.

The proposal may involve a minor increase in the area used by the Terminal within the nature-strip easement abutting the eastern portion of Charlotte Road, dependant on the queuing requirements for the new truck entry location for the site.

The proposal would be consistent with the existing zoning of the land and development control plans and guidelines prepared by Randwick City Council and NSW Department of Planning.

8.2 Traffic & Transportation

The proposal will result in an increase in overall traffic generated over background levels with increasing container throughput at the Terminal. However, the proposed upgrade of the Terminal will facilitate a significant increase in the movement of containers by rail, which together with higher truck utilisation levels should assist in reducing the expected growth of truck movements within the port precinct.

Upgrading of the current facilities will increase the capacity of the Terminal to move containers by rail, recognising the NSW Government's target of a 40% rail modal share by 2011, and the space made available for loading, unloading and queuing of road transport.

Although the Sydney Ports Corporation conducted a detailed assessment of road traffic impacts on the general Port Botany precinct that will result from the approved expansion of the port, the impacts of increased traffic volume on Bumborah Point and Friendship Roads will be the subject of further evaluation within the detailed Environmental Assessment of the proposal. The potential impacts of re-locating the truck entry to the Terminal on traffic flows within Friendship Road and Charlotte Street will also be evaluated.

8.3 Noise

Additional noise is likely to result from the construction works and operation of the upgraded Terminal facilities. Noise levels from general Terminal operations are not expected to increase by any discernable amount over current levels, although the duration may increase as the facilities are more fully utilized with increasing container throughput.

There is expected to be an increase in noise resulting from the proposed construction works, primary associated with the demolition of existing building structures and pavements to facilitate extension of the rail line and relocation of the truck entry to the Terminal.

Noise levels from future increases in truck movements into the port precinct are expected to comply with EPA traffic noise criteria.

The increase in the number of train movements into the Terminal as a result of the proposal is not expected to result in any significant increases in noise in residential areas adjacent to the line. The construction of the curved rail line extension within the upgraded Terminal will be evaluated in detail and designed to minimize any potential “wheel - squeal” generated by trains entering and departing the facility.

A detailed evaluation of any potential noise impacts will be undertaken within the Environmental Assessment of the proposal.

8.4 Air Quality

There will be an increase in air emissions as a result of the proposal. The increased use of fossil-fuelled Terminal equipment and transportation vehicles with increased container throughput will generate additional exhaust emissions into the local area and the greater Sydney air-shed. Greenhouse gas emissions are also likely to increase with increasing use of non-renewable fossil fuels.

However, the increase in container movements by rail, the realization of operational efficiencies and the potential substitution and/or supplementation of cleaner alternative fuels are expected to result in a decrease in emission intensity per container movement in the future.

There is also expected to be a potential increase in dust emissions generated from the Terminal during the demolition works associated with the proposal, although these are not expected to result in any significant impacts on surrounding land uses.

8.5 Water Quality

The construction and operation of the proposal has the potential to impact on storm water run-off into Port Botany. Appropriate measures will be put in place to manage any surface water contamination issues associated with construction works and operation of the upgraded facilities.

Modifications to the existing storm water drainage system and implementation of incident management procedures are expected to minimize potential water-related impacts from the proposal.

8.6 Waste

The construction works associated with the proposal will generate quantities of demolition waste and construction materials.

Mitigation measures will be incorporated into the construction environmental management plan to ensure that the maximum quantity of waste is recycled or re-used to reduce the amount of waste requiring disposal to landfill.

8.7 Visual

The existing landscape of the Port Botany precinct is dominated by quay cranes, containers, ships, rail infrastructure and the other industrial developments of East Botany.

Apart from the extension of the rail line along the southern boundary of the Terminal adjoining Friendship Road, the proposal will not significantly change the existing visual amenity of the area.

8.8 Social

The main social impacts of the proposal are those associated with the expected increase in road and rail transport movements into the port precinct and the surrounding suburbs, and the potential increase in noise intensity and duration associated with increased transport movements.

The Sydney Ports Corporation will implement mitigation measures to help minimize the impact of increased transportation on the areas surrounding the port precinct.

8.9 Economic

The proposal will improve the existing important port facilities located at Port Botany, which will benefit the local, state and national economies. The main economic benefit from the operation of the proposal would be the direct contribution to ensuring that Port Botany has the ability to handle the projected growth in container trade in the future.

There is also expected to be a small increase in the level of employment within the facility as equipment levels are increased to service increases in the number of containers handled through the Terminal.

8.10 Cultural Heritage

The proposal would not impact the heritage of Port Botany. There is unlikely to be any Aboriginal or other archaeological impediments to the proposed upgrading of the Terminal.

8.11 Soil & Contamination

There is unlikely to be any potential for soil erosion to result from the construction works associated with the proposal. The proposal is not expected to disturb any contaminated soil or potential and/or actual sulphate soils.

Any potential soil-related issues will be effectively managed through the implementation of an appropriate construction environmental management plan.

8.12 Flora & Fauna

The proposal is not expected to have any impact on any threatened species or ecological communities. Some landscape vegetation within current nature strips may be disturbed during construction works associated with the proposal, but these will be replaced with suitable replantings in accordance with SPC guidelines.

8.13 Energy

Energy consumption is expected to increase as a result of the construction and operation of the proposal. A key objective of the proposal is to improve operational efficiencies through increasing container movements by rail transport and introduction of new plant and improvements in operational management systems.

Implementation of these efficiency improvements is expected to see a reduction in the energy intensity for containers handled through the Terminal.

8.14 Water Use

Water use would be expected to rise with the increase in container throughput at the Terminal. However, water conservation measures will be implemented to minimise water usage during construction works and operations from the proposal.

8.15 Hazards & Risks

The risks to the surrounding public from the operation of the proposal due to fatality, injury and irritation are expected to be acceptable compared to recognised risk criteria. The risk to the public due to the potential increase in hazardous goods being transported from the Terminal are also expected to be acceptable compared to recognised risk criteria.

8.16 Cumulative Impacts

Cumulative impacts are likely to arise from the interaction of the construction and operation of the proposal with other significant proposals and activities planned for the Port Botany region. The most significant being the Sydney Ports Corporation's expansion of the port adjacent to the existing North Brotherson Dock.

Other developments include the potential construction of a Bio-fuels plant by Vopak at the Friendship Road facility; developments to improve the transport infrastructure servicing Port Botany and major improvements to the arterial road network.

The various developments aimed at increasing the capacity of operations at Port Botany will generally result in increased activity in the local area. Potential impacts on human settlement would arise from increased traffic and rail movements and the hazards and risks associated with increased port activities. The development of inland container terminals, the upgrading of the freight line and the continuing development of the arterial road network will assist in ensuring that the inland transfer of containers are predominantly confined to appropriate transport corridors, which should reduce the level of container truck movements on local roads, especially those located in residential areas surrounding the Port Botany precinct.

8.17 Conclusion

The proposed upgrade of the P&O Ports Container Terminal at Port Botany is expected to have a number of positive and negative impacts. The proposal will achieve operational efficiencies, facilitate a greater level of container movements by rail and enable the Company to meet the expected increase in demand in container trade at the Port Botany facility.

Any potential environmental impacts associated with the expected increase in traffic flows within the Port Botany precinct can be satisfactorily addressed through appropriate mitigation measures that will be implemented by P&O Ports, and the variety of road and rail initiatives being implemented by the State Government.

9 References

Sydney Ports Corporation, 2003. *Port Botany Expansion Environmental Impact Statement*, SPC.

Sydney Ports Corporation, 2004. *Supplementary Submission to Environmental Impact Statement, Port Botany Expansion*, SPC.

