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11 December 2012

Ingrid Illias
NSW Department of Planning and Infrastructure
23-33 Bridge Street
Sydney NSW 2000

Dear Ms Illias,

**Patrick Stevedores Port Botany Container Terminal Project Section 75W Modification Application
Request for Director General's Requirements**

Patrick Stevedore Operations No. 2 (Patrick) propose to conduct a range of demolition and construction works within their existing container terminal located on the northern side of Brotherson Dock in Port Botany, New South Wales (NSW). Patrick understands that the proposed works will require approval in the form of a Section 75W Modification to the *Patrick Stevedores Port Botany Container Terminal Project* (DA-453-12-2002-i) under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

Please find attached the *Patrick Stevedores Port Botany Container Terminal Project Section 75W Modification Application* for Director General's Requirements (DGRs). The application provides a broad description of the project, reviews the applicable legislative framework and identifies potential environmental issues associated with construction and operation of the project.

We look forward to receiving the DGRs in due course. If you require any further information please do not hesitate to contact me on (02) 8333 6227.

Yours sincerely

A handwritten signature in black ink, appearing to read "R Pollock".

Richard Pollock

Assistant Project Director



Patrick Stevedores Operations No. 2

Patrick Stevedores Port Botany Container Terminal Project
Section 75W Modification Application

December 2012

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Abbreviations

AHIMS	Aboriginal Heritage Information Management System
AQIS	Australian Quarantine and Inspection Services
ASC	Automated Stacking Cranes
CBD	Central Business District
DECC	NSW Department of Environment and Climate Change
DGRs	Director General's Requirements
DP&I	NSW Department of Planning and Infrastructure
DPI	NSW Department of Primary Industries
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EIS	Environmental Impact Statement
EP&A Act	<i>NSW Environmental Planning and Assessment Act, 1979</i>
EP&A Regulation	<i>NSW Environmental Planning and Assessment Regulation 2000</i>
EPA	Environmental Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act, 1999</i>
EPL	Environmental Protection License
FM Act	<i>NSW Fisheries Management Act 1994</i>
GHD	GHD Pty Ltd
Hutchinson	Hutchison Port Holdings
LEP	Local Environmental Plan
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NSW	New South Wales
OCR	Optical Character Recognition
OEH	NSW Office of Environment and Heritage
OEMP	Operational Environmental Management Plan
OLS	Obstacle Limitation Surface

Patrick	Patrick Stevedore Operations No. 2
PBRP	Port Botany Redevelopment Project
RMS	NSW Roads and Maritime Authority
SEPP	State Environmental Planning Policy
SICTL	Sydney International Container Terminals
SPC	Sydney Ports Corporation
TEC	Threatened Ecological Communities
TEU	Twenty-foot Equivalent Unit
TSC Act	<i>NSW Threatened Species Conservation Act 1995</i>

1. Introduction

1.1 Overview

Patrick Stevedores Operations No. 2 (Patrick) propose to modify its existing development consent by conducting a range of demolition and construction activities within its existing terminal site located on the northern side of Brotherson Dock in Port Botany, New South Wales (NSW). The demolition and construction activities (hereafter referred to as “the project”) require approval from the NSW Minister for Planning and Infrastructure in the form of a Section 75W Modification to the *Patrick Stevedores Port Botany Container Terminal Project* (DA-453-12-2002-i) under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

This Section 75W Modification Application (hereafter referred to as “the application”) has been prepared by GHD Pty Ltd (GHD) on behalf of Patrick. The application provides a broad description of the project, reviews the applicable legislative framework and identifies potential environmental issues associated with implementing the project.

The application will be used to provide background information to support a request for Director General’s Requirements (DGRs) to prepare a Section 75W Modification Environmental Assessment for the project.

1.2 The proponent

The proponent, Patrick, is part of Asciano Ltd, one of Australia's largest infrastructure owners. Patrick’s principal operations include container terminals, container parks, container packing (consolidation) and unpacking (de-consolidation); and transport services.

Patrick operates container terminals in Sydney, Brisbane, Melbourne and Fremantle with the capacity to handle 3.9 million twenty-foot equivalent units (TEUs) annually. Patrick is a leader in the provision of container services for ship and landside customers and assists in the movement of containers by road and rail. Patrick also provides rail-land bridging services between Melbourne and Adelaide. Patrick’s container terminal at Port Botany is approximately 44 hectares in size and the container throughput is approximately 1.15 million TEUs.

Table 1-1 provides contact details for the proponent.

Table 1-1 Proponent information

Proponent’s name	Patrick Stevedores Operations No. 2 (Patrick)
ABN	640 562 926 87
Postal address	PO Box 273 Botany NSW 2019
Contact name	Mr Richard Pollock, Assistant Project Director
Telephone	(02) 8333 6227
Email	r.pollock@patrick.com.au

1.3 The site

1.3.1 Site location and ownership

The project site is located entirely within the existing container terminal operated by Patrick at Port Botany. The land on which the development is proposed is described as Lots 1-6, 8-14 and 16-19, DP 452236; Lots 1 and 2, DP 1009870 Lot 1, 2, 3 and 4, DP 1126332), Brotherson Dock, Port Botany in the Botany Bay Local Government Area (LGA). Brotherson Dock is located on the northeastern edge of Botany Bay, approximately 12 kilometres south of Sydney's Central Business District (CBD), in the suburb of Banksmeadow, NSW (refer to Figure 1-1).

The land is owned by Sydney Ports Corporation (SPC) and is currently leased by Patrick. Patrick has the responsibility for the day-to-day running of the terminal. Land transport operations beyond the terminal gates are the responsibility of separate rail and road transport operators.

The land owner, SPC, has reviewed this application. Formal landowners consent in accordance with Section 8F of the *NSW Environmental Planning and Assessment Regulation 2000* (the Regulation) will be obtained prior to requesting approval.

1.3.2 Site context

The main physical feature of the area is Botany Bay which is approximately 4,163 hectares in area. Two river systems enter Botany Bay, the Georges River and the Cooks River. The Georges River enters in the southwestern corner of the bay, and the Cooks River enters the bay in the northwestern corner.

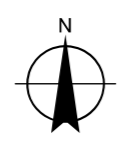
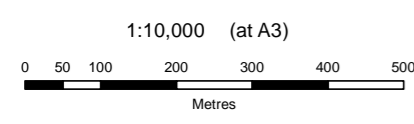
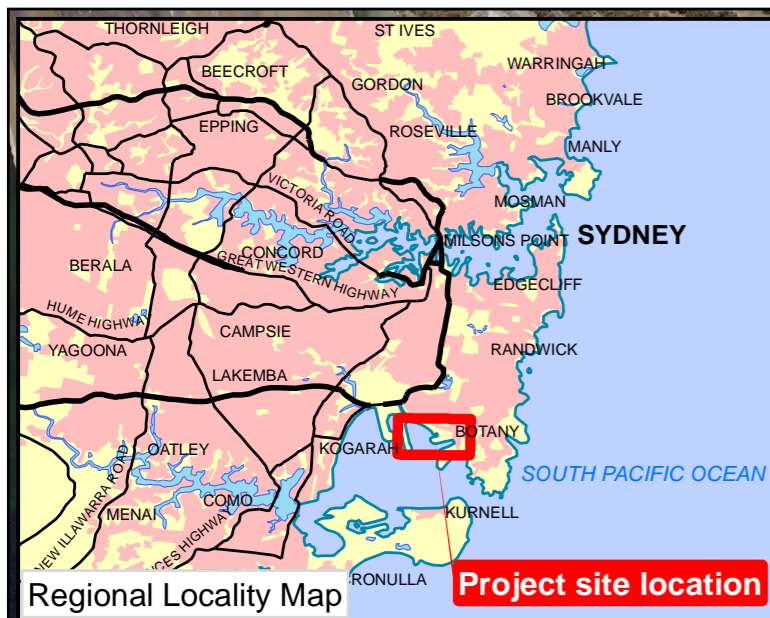
Immediately north of the site is a strip of land approximately 750 metres long and 100 metres wide leased by Sydney International Container Terminals (SICTL) from SPC (refer to Figure 1-1). To the north of this strip of land is Penrhyn Estuary, which is a small tidal inlet formed by the reconfiguration of the northern shores of Botany Bay in the late 1970s during the construction of Port Botany. Penrhyn Estuary provides ecological habitat for fish and a variety of shorebirds and waders.

Immediately to the north of Penrhyn Estuary is Foreshore Beach, which is a beach comprised of estuarine sands dredged from Botany Bay during previous Port Botany and Sydney Airport construction activities. Planted coastal dune heath has colonised the dunes behind Foreshore Beach.

To the west and northwest of the site is vacant terminal land currently being developed by both Patrick (referred to as the "Knuckle") and Hutchison/ SICTL.

The Botany Freight Rail Line lies approximately 1 kilometre to the north and northeast of the site. The railway is used to transport freight to and from Port Botany. Road access to the site is provided by several major arterial roads including Foreshore Road, Botany Road, Southern Cross Drive, General Holmes Drive and the M5 East.

The major land uses in the vicinity of the site include industrial developments (predominantly in the east and northeast); special purpose land uses (including Port Botany and Sydney Airport); the Caltex Oil Refinery (located on the southern side of Botany Bay); residential areas; commercial uses (mainly along the western shores of Botany Bay); nature reserves on the southwestern side of Botany Bay (Towra Point Nature Reserve); and recreational uses (such as fishing, swimming, boating, walking, golf, cycling, and bird watching).



LEGEND

	Project site location (Patrick)
	The Knuckle (Patrick)
	SICTL
	Railway



Job Number	21-21961
Revision	0
Date	11 Dec 2012

Project site location **Figure 1-1**

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 Data Source: NSW Department of Lands: Cadastre - Jan 2011; Geoscience Australia: 250k Data - Jan 2011. Created by: sdwoodger

1.3.3 Existing port facilities

Existing port facilities at Port Botany include:

- ▶ two operating container terminals, one on the northern side (operated by Patrick) and one on the southern side of Brotherson Dock (operated by DP World)
- ▶ vacant terminal area currently being developed by Patrick and Hutchinson/SICTL
- ▶ container parks (operated by Smith Bros, Patrick Port Services and P&O Trans Australia)
- ▶ a Bulk Liquids Berth, from which bulk liquids (including LPG, petroleum products, organic chemicals and caustic soda) are transferred to liquid storage facilities operated by VOPAK, Origin Energy, Orica Australia, Mobil, Elgas and Terminals Pty Ltd. A second bulk liquids berth is currently under construction and due to commence operations in Quarter 2 of 2013.

In addition, a number of container parks and cargo facilities supporting port activities are located within the Botany Bay City LGA.

1.4 Project context

The facilities at Port Botany were constructed on reclaimed land over thirty years ago in the late 1970s. Since then, container trade has steadily expanded both in Australia and worldwide. Sydney's container throughput has grown from about 175,000 TEUs in 1970 to 1.62 million TEUs in 2007. Conservative forecasts suggest that by 2020 the facilities at Port Botany will be moving over 3 million TEUs per annum (Aurecon, 2012).

Multiple factors affect the ability of the current facilities at Port Botany to cope with the forecast increase in demand. Limited availability of land, age and efficiency of infrastructure, berth numbers, and the limited capacity of land and seaside transport network are beginning to have significant financial effects on the port and the shipping industries' services.

Over the past 10 years, a number of re-development and expansion projects have sought to address these issues and to ensure that Port Botany continues to operate efficiently over the forecast period.

1.4.1 Sydney Ports Corporation Port Botany Expansion Project

In 2005, SPC obtained approval from the NSW Department of Planning and Infrastructure (DP&I) to reclaim and develop approximately 63 hectares of land to construct additional container handling facilities at Port Botany (the Port Botany Expansion Project - DA-494-11-2003). The expansion has recently been completed and construction of the operating infrastructure is scheduled to commence shortly. Once operational, the expanded terminal will provide significant additional capacity to meet the projected long-term trade growth.

Since the initial consent for the Port Botany Expansion Project was granted, twelve modifications have been sought for the expanded terminal. These modifications have included amendments to the location of facilities, work times for construction activities, dredging activities and stormwater first flush systems (among others) (Aurecon, 2012).

1.4.2 Patrick Port Botany Redevelopment Project

In July 2012, the Asciano Board approved a \$348 million capital investment program to develop "the knuckle" area of the expanded terminal and to comprehensively redevelop the existing container terminal (both operated by Patrick). This redevelopment is referred to as the "Port Botany Redevelopment Project" (hereafter referred to as the "PBRP").

The PBRP has been divided into two separate projects, which are being assessed under separate planning applications:

1. a modification to the *Port Botany Expansion Project* (DA-494-11-200) approved by the DP&I in 2005 under Section 75W of the EP&A Act relating to improvements to stormwater drainage
2. a modification to the *Patrick Stevedores Port Botany Container Terminal Project* (DA-453-12-2002-i) approved by the DP&I in 2003 and the subject of this application.

1.5 Document structure

The application is structured as follows:

- ▶ **Section 1 – Introduction.** This section introduces the project and the proponent. It also describes the site. This section also provides context to the project. The structure of the application is also provided.
- ▶ **Section 2 – Project description.** This section provides a description of the project and presents the benefits of the project.
- ▶ **Section 3 – Planning and approvals framework.** This section examines the relevant State and Commonwealth legislation relating to the project. Relevant licences, approvals and permits required for the project to proceed are also identified.
- ▶ **Section 4 – Preliminary environmental assessment.** This section examines the potential environmental impacts and benefits associated with the project.
- ▶ **Section 5 – Project justification and conclusion.** This section provides an explanation of why the project is required and concludes what environmental criteria should be considered for further assessment within the Section 75W Modification Environmental Assessment.
- ▶ **Section 6 – References.** This section presents a list of references cited in the application.

The appendices contain information related to the application.

2. Project description

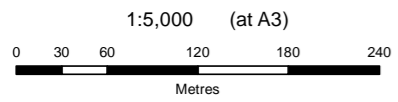
2.1 Key aspects of the project

The project would involve a range of demolition and construction works at the site as well as the replacement of manually operated equipment with automated equipment. The key aspects of the project are outlined in Table 2-1. The demolition and construction works are shown in Figure 2-1 and Figure 2-2 and are discussed in further Section 2.2.

Table 2-1 Key aspects of the project

Aspect	Outline details
Administration building	The existing demountable administration buildings would be removed/ demolished and replaced with a permanent single storey office building located in the southeastern corner of the site.
Control building	A new control building would be constructed in the southeastern corner of the site. The height of the control building would be limited by the obstacle limitation surface (OLS), surrounding Sydney Airport and would be similar to existing light towers. The control building would comprise a concrete core with two levels of office floors. Windows would be sloping and be treated to reduce glare and heat gain. An external walkway around the tower would be provided to facilitate window cleaning. A preliminary plan is provided in Appendix A.
Car parks	Two new car parks would be constructed. The first would be located in the southeastern corner of the site, in the same general vicinity as the new administration building and control building. The second car park would be constructed in the eastern corner of the site. The total capacity of the two car parks would be approximately 300 spaces. Landscaping would be provided in both areas.
Maintenance and workshop building	A new maintenance building would be erected comprising a steel portal structure with silver metal cladding. Natural light and ventilation would be provided using glazed fold-up doors. The height of the structure would be designed to house the automated straddle cranes. A roof would provide protection from adverse weather and therefore facilitate maintenance to be undertaken under all conditions. The roof would also reduce the volume of wastewater discharges at the terminal. A preliminary plan is provided in Appendix A.
Optical character recognition (OCR) building	The existing OCR building would be removed and new single storey OCR facility and traffic lanes would be constructed at the entrance to the terminal.
Australian Quarantine and Inspection Service (AQIS) building	A new, single-storey AQIS building would be constructed adjacent to the new OCR building.
Substation	An existing substation, Substation E, located in the northwestern corner of the site would be removed to accommodate the relocation of the truck grids.

Aspect	Outline details
Straddle parking and fuelling bays	New straddle parking and fuelling bays would be constructed in the northeastern portion of the terminal.
Straddle carriers	The existing manually-operated straddle carriers would be replaced with 44 "AutoStrad™" carriers.
Rail line	The existing rail line would operate unchanged, however following completion of the project, reachstacker operations would be conducted from the northern side of the rail line only instead of the southern side.
Truck grids and weighbridges	The existing truck grids and weighbridges would be removed and relocated consistent with the new OCR facility.
Lighting	Modernising of terminal lighting would be undertaken including re-positioning of existing lights and installation of more energy efficient lighting within the stacking yard.



Map Projection: Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia (GDA)
 Grid: Map Grid of Australia 1994, Zone 56



- LEGEND**
- Demolition locations
 - Project site boundary
 - Railway

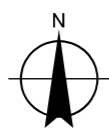
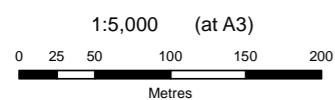


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
Proposed demolition works

Figure 2-1

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LEGEND

	Constuction Locations
	Project site boundary
	Railway

Map Projection: Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia (GDA)
 Grid: Map Grid of Australia 1994, Zone 56



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Proposed construction works

Figure 2-2

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2.2 Demolition, enabling and construction works

The project would be undertaken in three stages, namely, demolition, enabling and construction. These works are outlined below.

2.2.1 Stage 1 – Demolition/ removal works

Demolition works would comprise the demolition/ removal of existing temporary buildings and other infrastructure and isolation of existing services e.g. water, electricity, etc. Buildings would be demolished in a controlled manner by a specialist contractor and machinery. The resulting waste materials would be loaded by excavator and removed from site by truck to an approved disposal site.

At various locations in the terminal, sub-grade repair and pavement strengthening works need to be undertaken to repair existing (failed) pavements and to strengthen areas for changed loadings by heavy vehicles including trucks, reachstacker and straddles in line with the reconfigured traffic paths. This would be undertaken on approximately 8.4 hectares or 20 per cent of the terminal area.

2.2.2 Stage 2 - Enabling and infrastructure works

Sub-grade rectification and strengthening works would require the demolition and removal of asphalt surface materials and subgrade to a depth of up to approximately 1 metre. It would be replaced with cement-treated rockfill subgrade and approximately 150-200 millimetres of asphalt to form the new terminal surface. In other locations, reinforced concrete and/or concrete pavers may be used as the running surface depending on the loading conditions and traffic duty required.

Additional infrastructure would also be installed during this stage including gross pollutant traps , upgraded drainage including pumps, water treatment plant improvements, light towers, water and sewerage services, boundary fencing and walls, weighbridge and associated equipment and landscaping works in accordance with the relevant statutory and port code requirements.

2.2.3 Stage 3 - Building construction

A range of buildings as outlined in Table 2-1 would be constructed on the site. In some cases, these are to replace existing, temporary structures and in others, relocation is required to make space for other facilities as a result of the terminal reconfiguration.

An architect has been engaged to provide services in relation to the construction of all buildings including wall and roof treatments, internal fit-out and landscaping within the site. The design of the project consists of a number of visually distinct elements - each associated with a different function e.g. control building, workshops and maintenance bays, etc. The different visual identity proposed for each element would reduce the bulk and scale of the design overall as each element would appear as a smaller building instead of a single building mass. The external finishes would also be different and would enhance the industrial function of the building and the coloured elements highlight the offices and amenities.

Photograph 2-1 shows the concept of the proposed new maintenance and workshop building based on a similar building at Patrick's Queensland terminal. The height and bulk of the structures are largely determined by the infrastructure required to be housed.

Photograph 2-2 shows the concept of a control building similar to what is proposed to be constructed at the site.



Photograph 2-1 Proposed maintenance and workshop building showing AutoStrad™



Photograph 2-2 Proposed control building concept

2.2.4 Replacement of manual straddle carriers with automated straddle carriers

The existing manually operated straddle carriers would be replaced with automated straddle carriers, or “AutoStrad™s”. The AutoStrad™s would be fitted with radar-based navigation and automatic motion-control systems, which enable the control of speed, steering and container hoisting. The automation technology for the AutoStrad™s would be installed on the expanded terminal area. Once installed, an exclusion fence would be erected around the perimeter of the terminal to physically separate personnel and machinery.

2.3 Operation

The project would have no effect on the operating capacity or throughput of the existing terminal. The project would not result in any changes to:

- ▶ the size of the terminal
- ▶ the number of cranes operating at the terminal
- ▶ the volume of TEU's containers contained within the terminal
- ▶ the length of rail line
- ▶ vehicle numbers
- ▶ hours of operation
- ▶ site access from Foreshore Road.

Table 2-2 demonstrates the key operating parameters before and after completion of the project.

Table 2-2 Comparison of pre- and post-operating parameters

Existing operations		Proposed operations	
Terminal size	36 hectares	Terminal size	36 hectares
Operation	Manual Straddle	Operation	Auto Straddle
TEU per annum	1.15 million	TEU per annum	1.15 million
Quay line (Berths)	1000 metres (3 berths)	Quay line (Berths)	1000 metres (3 berths)
Crane (Existing Quay line)	9	Cranes (Existing Quay line)	9
Rail length (lines)	650 metres (2 lines)	Rail length (lines)	650 metres (2 lines)
Operations buildings	Demountable	Operations Buildings	Permanent
Maintenance	External facilities	Maintenance	All-weather
Staff numbers	511	Staff numbers	241
Hours of operation	24 / 7	Hours of operation	24 / 7
Vehicles per hour	~70 at peak	Vehicle per hour	~70 at peak
Access	Via Penrhyn Rd and Ramp C	Access	Via Penrhyn Rd and Ramp D

2.4 Construction workforce and working hours

The construction workforce is estimated to be approximately 150 workers in peak periods with an average of around 100 onsite on a typical week. Standard working hours of 7 am to 6 pm Monday to Friday, 8 am to 2 pm Saturdays and no work on Sundays and public holidays. Works that may be undertaken outside of these standard working hours which would be subject to additional approvals include:

- works required by utility service providers or where impacts to services cannot be reasonably managed
- oversized deliveries/unloading of machinery than can only be transported between hours specified by the police or the NSW Roads and Maritime Authority (RMS)
- where works can be undertaken so as to be inaudible at the nearest residential receivers
- as otherwise agreed with the Environmental Protection Authority (EPA) in the issuing of an environmental protection licence for licensable works.

2.5 Construction program and estimated project cost

It is anticipated that construction works would be completed within approximately 12 months of commencement. The estimated project cost is approximately \$72 million.

2.6 Benefits of the project

Proceeding with the project would result in the following key benefits:

- **Improving safety performance at the terminal.** Straddle driving is a significant cause of injuries at the terminal. The introduction of AutoStrad™s would significantly improve safety at the terminal by physically separating staff from the straddle carriers. There would be no manually operated straddle carriers operating underneath the quay cranes or in and around the container stacking areas. Removal of manual straddle carriers would significantly decrease the risk to staff at the terminal. This has been demonstrated by previous implementation of the technology at the Brisbane AutoStrad™ Terminal.
- **Providing a better place to work.** The terminal would be a better place to work. There would be a new, architecturally designed administration building which would house first aid rooms, training facilities, and amenities.
- **Improving environmental performance.** The project would result in improved environmental conditions at the terminal including:
 - Noise. There would be less operational noise because the straddle carriers would be automated and would not require reverse warning signals. There would also be less noise associated with shifting gears. Additionally, there is reduced idle time as the AutoStrad™s shut down when not in use.
 - Air. There would be less idling time associated with the introduction of the automated straddle carriers. The AutoStrad™s would be turned off when not in use rather than sitting idle as is the case presently.
 - Water quality. Stormwater quality at the terminal would be improved with the installation of undercover (all-weather) maintenance buildings. The installation of gross pollutant traps and stormwater drainage including pumps, trenching and kerbing would also help to improve stormwater quality.

- Energy efficiency and savings. There would be less operational light emitted from the terminal because lights would not be turned on during night operations as the automated straddle carriers would not require lighting. This process would also help reduce operational costs for Patrick. New buildings would be designed with the objective of achieving enhanced environmental building performance and energy efficiency.
- ▶ **Maintaining competitiveness in the industry.** Patrick's competitors have indicated their intention to partially automate their terminals through the use of Automated Stacking Cranes (ASC). The introduction of the AutoStrad™s would reduce the operating costs of the terminal, significantly improving the competitive position of the terminal. Automation would result in a cost savings of around \$50 million per annum.

3. Planning and approvals framework

3.1 Environmental Planning and Assessment Act 1979

3.1.1 Overview

Planning and development in NSW is carried out under the EP&A Act and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

The EP&A Act provides the statutory basis for planning and environmental assessment in NSW. The Minister for Planning and Infrastructure, statutory authorities and local councils are responsible for implementing the EP&A Act. The EP&A Act provides the framework for environmental planning and development approvals and includes provisions to ensure that the potential environmental impacts of a development are assessed and considered in the decision making process.

The project is considered to be a modification to the existing facility, which was subject to development consent by the Minister for Infrastructure and Planning in 2003. As outlined below, the 2003 approval for the facility is taken to be a major project approval under (the now repealed) Part 3A of the EP&A Act. As a result, (the now repealed) Section 75W of Part 3A applies in relation to the application.

3.1.2 Approval pathway

The project is to be assessed as a Section 75W Modification as the previous consent for the site was granted under Part 4 of the EP&A Act and related to State significant development.

In 2002, an application was made to the Minister for Planning for the upgrade of the existing container terminal. The upgrade was classified as State significant development and subsequently approval was granted on 27 October, 2003

In relation to this type of consent clause 8J(8) of the Regulation provides:

(8) For the purposes only of modification, the following development consents are taken to be approvals under Part 3A of the Act and section 75W of the Act applies to any modification of such a consent:

...(c) a development consent granted by the Minister under Part 4 of the Act (relating to State significant development) before 1 August 2005 or under clause 89 of Schedule 6 to the Act

Although Part 3A of the EP&A Act has since been repealed, Schedule 6A, clause 12 relates to the continued application of Part 3A to modifications of certain development consents. Therefore Section 75W, as in force immediately before its repeal, continues to apply to modifications of development consents referred to in clause 8J(8) of the Regulation

A modification application is required to be lodged with the DP&I, accompanied by an Environmental Assessment. The Section 75W Modification Environmental Assessment will be prepared in accordance with requirements of the EP&A Act, EP&A Regulation and environmental assessment requirements (DGRs) issued by the Director-General of the Department of Planning and Infrastructure.

3.1.3 Environmental planning instruments

State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (State and Regional SEPP) identifies development:

- ▶ to which the State significant development assessment and approval process under Part 4 of the Act applies
- ▶ that is State significant infrastructure and critical State significant infrastructure where the approval process is under Part 5.1.

Development that is specified in Schedule 1 or Schedule 2 is declared to be State significant development. Clause 18 of Schedule 1 includes:

Development for the purpose of port facilities or wharf or boating facilities (not including marinas) that has a capital investment value of more than \$30 million.

While the project has a capital investment value greater than \$30 million, the project is being undertaken as a modification to the previous consent (DA-453-12-2002-i).

State Environmental Planning Policy (Major Development SEPP) 2005

State Environmental Planning Policy (Major Development) 2005 (Major Development SEPP) aims to facilitate developments that have particular significance to the State. Clause 7 identifies State significant sites as follows:

State significant sites

- (1) *Schedule 3 describes State significant sites.*
- (2) *The provisions in Schedule 3 relating to the carrying out of development on a State significant site have effect.'*

The site is part of the 'Three Ports Site' which is listed as a State significant site under Part 20 of Schedule 3. Part 20 of Schedule 3 provides relevant planning controls that apply to the site, including the zoning of the site and permissibility of activities. The site is zoned SP1 Special Activities. The project is defined as "port facilities" under Clause 2, Part 20 of Schedule 3. Development for the purposes of "port facilities" is permissible with consent in the SP1 zone.

Other SEPPs that may apply

The following SEPPs may have relevance to the project and will be considered in the Section 75W Modification Environmental Assessment:

- ▶ *State Environmental Planning Policy (Infrastructure) 2007*
- ▶ *State Environmental Planning Policy No 33—Hazardous and Offensive Development*
- ▶ *State Environmental Planning Policy No 55—Remediation of Land.*

Botany Bay Local Environmental Plan 1995

The site is situated within the land covered by *Botany Bay Local Environmental Plan 1995* (LEP 1995) and is zoned 5(a) Port. Although the site is listed as a State Significant Site under Schedule 2 of the Major Projects SEPP, the relevant provisions of the Botany Bay LEP 1995 will be addressed in the Section 75W Modification Environmental Assessment.

3.2 Other relevant legislation

The following legislation may have relevance to the project, and will be considered in the Section 75W Modification Environmental Assessment:

- ▶ *Coastal Project Act 1979*
- ▶ *Contaminated Land Management Act 1997*
- ▶ *Dangerous Goods (Roads and Rail Transport) Act 2008*
- ▶ *Environmental Hazardous Chemicals Act 1985*
- ▶ *Fisheries Management Act 1994*
- ▶ *Marine Pollution Act 2012*
- ▶ *National Parks and Wildlife Act 1974*
- ▶ *Ports and Maritime Administration Act 1995*
- ▶ *Protection of the Environment Operations Act 1997*
- ▶ *Waste Avoidance and Resources Recovery Act 2001*
- ▶ *Water Management Act 2000*
- ▶ *Work Health and Safety Act 2011.*
- ▶ *Airports Act 1996 (Commonwealth)*
- ▶ *Civil Aviation Act 1988 (Commonwealth)*

3.3 Relevant regulations, guidelines and policies

The following NSW regulations, guidelines and policies may have relevance to the project, and will be considered in the Section 75W Modification Environmental Assessment:

- ▶ *Coastal Protection Regulations 2011*
- ▶ *Contaminated Land Management Regulation 2008*
- ▶ *Dangerous Goods (Roads and Rail Transport) Regulation 2009*
- ▶ *Environmental Planning and Assessment Regulation 2000*
- ▶ *Environmentally Hazardous Chemicals Regulation 2008*
- ▶ *Marine Pollution Regulation 2006*
- ▶ *Protection of the Environment Operations (Clean Air) Regulation*
- ▶ *Protection of the Environment Operations (Noise) Regulation*
- ▶ *Protection of the Environment Operations (Waste) Regulation*
- ▶ *Airports (Protection of Airspace) Regulations 1996*
- ▶ *Civil Aviation (Building Control) Regulations 1988*
- ▶ *CASA Manual of Standards Part 139 – Aerodromes*
- ▶ *SPC's Port Botany Development Code 2012*
- ▶ *Port Botany Land Use Safety Study Overview Report 1996*
- ▶ *SPC's Green Port Guideline 2006.*

3.4 Commonwealth legislative considerations

The *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) requires the approval of the Commonwealth Minister for the Environment for actions that may have a significant impact on matters of national environmental significance. The EPBC Act also requires Commonwealth approval for certain actions on Commonwealth land.

The Section 75W Modification Environmental Assessment will determine whether the project has the potential to significantly impact any matters of national environmental significance and thereby referral for Commonwealth approval.

4. Preliminary environmental assessment

4.1 Introduction

A preliminary assessment of the environmental impacts (beneficial and/or adverse) that may be associated with the project is provided in Section 4.2 through Section 4.13. Key features of the existing environment and potential environmental issues resulting from the project are outlined.

Based on the preliminary assessment of the environmental impacts, the following key environmental issues will require detailed assessment in the Section 75W Modification Environmental Assessment:

- ▶ construction traffic and access
- ▶ construction noise
- ▶ visual amenity and lighting
- ▶ cumulative impacts.

4.2 Traffic and access

4.2.1 Existing environment

The main roads that serve the existing terminal site include Foreshore Road, Botany Road and Beauchamp Road. Data from traffic counts show that Foreshore Road, Botany Road (south of Exell Street), Botany Road (between Beauchamp Road and Bumborah Point Road), and Beauchamp Road (between Botany Road and Denison Street) all carry more than 15,000 vehicles on average per weekday. Truck movements entering and exiting the site are approximately 70 per hour which equates to 1,680 over a 24 hour period.

Traffic congestion and truck queuing at the intersection of Penrhyn Road and Foreshore Road is of concern to both residents and motorists passing in the vicinity of Port Botany. Increased traffic associated with the operation of the expanded terminal (the Port Botany Expansion) has also been highlighted as a primary traffic concern to residents and motorists.

4.2.2 Potential impacts

Construction of the project may result in a short-term minor increase in construction vehicular traffic as a result of additional heavy and light vehicle movements entering and exiting the site for the delivery of materials and for the transport of construction personnel. This may result in a localised increase in traffic along Foreshore Road, Botany Road and Beauchamp Road which provide access to the site. Worker parking and delivery of large materials during construction may result in terminal congestion and interfere with the efficiency of container traffic movements. The number of container trucks accessing the site would however be restricted to within current operational limits which set the maximum number of trucks allowed to enter the site for pick-up and delivery of containers.

No adverse impacts on traffic are anticipated during operation of the project. Light vehicle movements entering and exiting the site are expected to decrease; whilst truck deliveries are expected to remain unchanged as the project would not increase the throughput of the terminal.

4.2.3 Assessment considerations

A construction traffic impact assessment will be prepared to identify and assess the potential for traffic disruption, the increase in traffic movements and the interaction with existing port traffic movements during construction of the project. The traffic impact assessment will:

- ▶ review background traffic information
- ▶ assess historic crash data for adjacent roads
- ▶ review likely or proposed construction traffic movements
- ▶ review construction traffic routes and construction traffic waiting and parking arrangements
- ▶ undertake intersection traffic modelling to assess their existing performance and the construction traffic impacts
- ▶ assess the potential impact of the construction activities within the terminal and on the surrounding road network.

The construction traffic impact assessment will be prepared in accordance with the RMS' *Guide to Traffic Generating Developments* procedure manual (RTA, 2002).

4.3 Construction noise

4.3.1 Existing environment

The Port Botany area experiences noise emissions from existing port operations, road traffic along Foreshore Road, from the Botany Freight Rail Line, Sydney Airport and other industrial activities.

Noise from the existing terminal site results from:

- ▶ container ship engines, particularly at night
- ▶ loading and unloading of containers from trucks, trains and ships by quay cranes and straddle carriers during the day and night
- ▶ operation of gantries, forklifts and reach stackers, particularly when operated in reverse with reverse warning signals
- ▶ re-organisation and stacking of containers within the terminal
- ▶ transport of containers on trucks and trains to and from the terminal.

Noise is known to be of particular concern to residents in Port Botany. Recent studies undertaken by Parsons Brinkerhoff in September 2012 concluded that existing noise levels at four sensitive noise receptors, north of Botany Golf Course, were considered high due to noise generated from the above-mentioned activities (both the existing port operations and other industrial activities in the area).

4.3.2 Potential impacts

Construction of the project is likely to result in a short-term localised increase in noise emissions as a result of the demolition of old buildings/infrastructure, the construction of the new buildings/infrastructure and the temporary increase in vehicle movements within the site. Although noise is expected to be localised to the site, noise emissions may be experienced at nearby sensitive receivers.

Operational noise emissions are expected to decrease as a result of the project as the proposed Autostrad™s would not require reverse warning signals. No adverse operational impacts are anticipated.

4.3.3 Assessment considerations

A qualitative noise impact assessment will be prepared in accordance with the *Interim Construction Noise Guidelines* (DECC, 2009) and *NSW Industrial Noise Policy* (NSW EPA, 1999) that will:

- ▶ identify sensitive land uses with the potential to be impacted by construction noise
- ▶ predict construction noise and vibration levels (or level ranges) for each key construction stage
- ▶ compare noise predictions with the applicable noise criteria to identify any exceedences to the criteria
- ▶ describe (where possible) the expected duration of the highest noise levels and, as necessary, recommend reasonable and feasible practices to reduce noise at the surrounding receivers.

4.4 Visual and lighting

4.4.1 Existing environment

The Port Botany visual landscape is dominated by the existing container terminals and supporting infrastructure that includes cranes, commercial buildings and rail. The cranes are up to 110 metres in height whilst the buildings are up to 20 metres high.

The terminal areas are greater than 100 hectares and flat. They are covered by either asphalt or concrete and house containers. The containers are stacked no greater than six containers high. The visual character of the terminal is considered to be of low significance because:

- ▶ the terminal and its immediate surrounding environment is heavily industrialised
- ▶ it has limited vegetation
- ▶ the industrial nature of the site can be seen from distances and locations around Botany Bay.

Surrounding the terminal, direct lines of sight include views to Kurnell in the south, filtered views to Foreshore Drive to the north and the shoreline of Botany Bay and Sydney Airport to the west.

4.4.2 Potential impacts

Construction of the project would be temporary and is not likely to result in significant impacts on the visual amenity of the site.

The project may result in changes to the visibility of the site as a result of the proposed new control building and upgraded lighting. During operation of the project, lighting intensity is likely to be reduced at night due to the automation of the terminal and is likely to result in a beneficial impact on nearby sensitive receivers with views of the site.

4.4.3 Assessment considerations

The proposed control building will require specific assessment of impacts on surrounding sensitive visual receptors. The upgraded lighting will also require consideration in the assessment. The visual impact assessment will:

- ▶ generate a viewshed assessment to determine the limitation of views
- ▶ identify locations from which the control building is visible and potentially affected receptors (road users, recreation users, etc.)

- ▶ evaluate the existing landscape and visual environment, and visual receptor sensitivity from each of the selected viewing locations
- ▶ identify the extent of change to the existing landscape and visual character
- ▶ identify management and mitigation measures (if needed).

4.5 Construction dust

4.5.1 Existing environment

Ambient air quality within the site is affected by prevailing meteorological conditions and local air quality emissions sources. The main contributors to air quality at the site are emissions from the port operations, neighbouring industrial activities, and exhaust/particulate emissions from adjacent roads.

Operation of the existing terminal and the surrounding port environment includes emissions of diesel combustion from container ships, road traffic, trains, straddle carriers and other types of workshop machinery.

Construction activities at the adjacent terminal areas (including the Knuckle) also contribute to the air quality at the site. The influence of local wind directions and speeds has a bearing on the dispersion of air pollutants around Botany Bay.

4.5.2 Potential impacts

The project may result in temporary impacts on local air quality as a result of increased dust emissions from the demolition of existing buildings/infrastructure and the construction of new buildings/infrastructure and vehicle emissions from construction equipment.

The potential impacts are not expected to be significant and would be limited to the construction stage of the project.

Operation of the project is likely to have beneficial impacts on air quality. No adverse impacts on air quality are anticipated during operation.

4.5.3 Assessment considerations

A construction dust impact assessment will be prepared that will:

- ▶ review ambient air quality and meteorological monitoring data
- ▶ develop a dust emissions inventory for each key construction activity based on the construction program and proposed construction equipment/methods
- ▶ rank the risk of activities and construction activity sequencing with respect to dust emissions and location with respect to sensitive receptors and then assign in-principle mitigation measures and a monitoring program (if warranted) for each significant activity or group of activities in the construction sequence.

4.6 Surface water and groundwater

4.6.1 Existing environment

Surface water and flood potential

Surface water drainage lines collect stormwater that drains into a treatment facility at the terminal site. The facility has an oil-water interceptor, which treats potentially contaminated water prior to it being discharged from site into Botany Bay.

Surface waters surrounding the site include Botany Bay to the south and Penrhyn Estuary to the north. Areas within the Penrhyn Estuary are currently being rehabilitated and water quality monitoring is being undertaken (E3 Consulting, 2012).

As the terminal site is at an elevation of approximately 2.5 metres above median sea level and includes an existing stormwater drainage network, flood potential within the site is considered low.

Groundwater

The terminal site lies within the Botany Basin which is characterised by an unconfined and semi-confined aquifer known as the Botany Sands aquifer.

Groundwater is likely to be present in a shallow unconfined aquifer beneath the site and is thought to flow to the north, west and south and discharge into Botany Bay (E3 Consulting, 2012). Groundwater levels at the site are likely to fluctuate with the influence of daily tidal movements.

4.6.2 Potential impacts

The potential for surface water and/or groundwater contamination at the terminal site may arise if environmental management and mitigation measures are not in place during construction.

The terminal lies within a groundwater extraction embargo area established by the NSW Office of Water in response to the historical contamination of industrial land and specifically the Botany Sands Aquifer by Orica. While it is unlikely that groundwater is used at the terminal, excavation and piling works to be undertaken may intercept groundwater which may be contaminated.

Chemical leaks or spills may occur through poorly managed equipment; during refuelling activities or through poorly maintained chemical storage areas. Potential contamination may also arise as a result of dust and other debris from demolition and construction activities or if groundwater is intercepted, which, if not managed appropriately, could result in contamination of surface water and/or groundwater.

Operation of the project would likely improve water quality at the site. The maintenance buildings would be placed undercover and the installation of GPTs and other improvements being undertaken would improve the quality of surface runoff prior to discharge into the environment.

4.6.3 Assessment considerations

An assessment will be prepared that will provide details of a plan to manage the discharge of any site water during construction and how spills and leaks from construction will be managed. This will include a testing regime for any intercepted groundwater and a contingency plan for workers who may be exposed to the soils/ water or vapours.

The assessment will also document the stormwater management devices and other aspects that would be installed to improve the quality of water that is discharged during operation and to comply with the requirements of the existing Environmental Protection License (EPL).

4.7 Waste

4.7.1 Existing environment

The terminal site currently generates a range of operational domestic and industrial wastes including:

- ▶ domestic waste (glass, aluminium cans, paper and cardboard, milk bottles, soft drink bottles and food waste)
- ▶ maintenance materials (disused parts and components, machinery and scrap metal; hazardous/dangerous goods (including oils and solvents)
- ▶ sewage
- ▶ wastewater (trade waste)
- ▶ first flush stormwater.

4.7.2 Potential impacts

The project would generate waste during construction and demolition activities. Waste types are likely to include:

- ▶ demolition waste such as redundant building materials, asphalt waste, bricks, concrete, paper, plastics, glass and metal, and timber
- ▶ construction materials such as excess building materials, concrete, timber, masonry, bricks, plasterboards, metal and packaging materials
- ▶ domestic waste such as glass, aluminium cans, paper and cardboard and food waste.

Hazardous and/or contaminated waste may be encountered during demolition works and would require specific management to ensure compliance with the environmental and safety legislation.

During operation, the volume of waste produced would be reduced. The types of waste, however, would not likely change as a result of the project. Improved waste collection areas would also be installed at the site.

4.7.3 Assessment considerations

An assessment of construction and demolition waste will be prepared. Estimated volumes and types and methods of reuse, recycling and disposal of waste will be documented.

4.8 Hazard and risks

4.8.1 Existing environment

The site currently stores a range of dangerous goods including large volumes of diesel which is used for operational equipment such as the straddle carriers. It has an existing emergency / spill response plan and supporting infrastructure to deal with unforeseen spills or pollution events.

The site also has an existing Operational Environmental Management Plan (OEMP) which details procedures for the transport of hazardous materials, stormwater, industrial emergencies and safety management.

4.8.2 Potential impacts

During construction, small quantities of hazardous materials may be stored and used onsite which may result in additional hazards and risks.

There may be a potential hazard to the safety of construction workers if contaminated soils or groundwater is encountered during construction.

There is not expected to be any changes to the storage or use of hazardous substances during operation of the project.

4.8.3 Assessment considerations

An assessment will be prepared to estimate the quantities and types of hazardous goods likely to be stored and used on site during construction. Where necessary, assessment against the screening criteria in SEPP 33 will be conducted.

Any other construction hazards and risks identified will be referred to a construction hazard and risk management plan to be developed by the construction contractor prior to the commencement of works.

4.9 Heritage

4.9.1 Existing environment

Indigenous heritage

A search of the Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) database was undertaken on 29 October 2012 to determine whether there are any indigenous sites within the boundaries of the site. This search indicated that no indigenous sites have been previously recorded at, or within 200 metres, of the site.

The closest recorded indigenous site to the terminal is a rock engraving at Bumborah Point (NPWS Site #45-6-639), located approximately 1 kilometre southeast of the site. The indigenous site was first recorded in 1897 and includes engravings of two whales, one of which is superimposed with several fish and two anthropomorphic figures. It is described as occurring approximately 6 metres above high water mark, in Botany Bay near the Botany Cemetery on a smooth rocky surface (URS, 2003).

Non-indigenous heritage

A desktop search of the following statutory and non-statutory heritage registers and schedules was conducted for the suburb of Banksmeadow on the 29 October 2012:

- ▶ National Heritage List (Australian Heritage Council)
- ▶ Commonwealth Heritage List (Australian Heritage Council)
- ▶ Register of the National Estate
- ▶ The State Heritage Inventory (NSW OEH)
- ▶ State authority Section 170 registers
- ▶ *Botany Local Environmental Plan 1995.*

A list of the results is provided in Table 4-1. As shown in Table 4-1, the closest recorded heritage item to the site is the 'Port Botany Old Government Wharf Remains' which is listed on the Sydney Ports Corporation Section 170 Heritage Register. The wharf is located approximately 400 metres northwest of the site in Penrhyn Estuary.

Table 4-1 Heritage records within the suburb of Banksmeadow

Item	Location	Heritage listing
Botany Bay Hotel	1803 Botany Road, Banksmeadow	<i>Botany Local Environmental Plan 1995</i>
Botany Marshalling Yards	Beauchamp Street, Banksmeadow	<i>Botany Local Environmental Plan 1995</i>
Main Administration Building	Beauchamp Street, Banksmeadow	<i>Botany Local Environmental Plan 1995</i>
Pier Hotel	Botany Road, Banksmeadow	<i>Botany Local Environmental Plan 1995</i>
Port Botany Old Government Wharf Remains	Port Botany, unincorporated waterway	Section 170 NSW state agency heritage register (Sydney Ports Corporation)
Sandstone Kerb From Golf Course, Botany Road, Banksmeadow	Botany Road, Banksmeadow	Section 170 NSW State agency heritage register (Roads and Maritime Services)
Sir Joseph Banks Hotel (c.1840), Former	23 Anniversary Street, Banksmeadow	<i>Botany Local Environmental Plan 1995</i>
Botany Bay	Foreshore Road	National Heritage List

4.9.2 Potential impacts

No indigenous or non-indigenous sites or relics are recorded on the various relevant databases as occurring within the boundaries of the terminal. As discussed in Section 1.4 the terminal was designed and constructed on reclaimed land and has undergone extensive disturbance as a result of the installation of underground services and port infrastructure. Given the results of the database searches and the factors outlined above, the potential for indigenous or non-indigenous sites or relics to be found on the terminal is considered negligible.

The remains of the Port Botany Old Government Wharf are located within close proximity to the terminal and the closest recorded indigenous site to the terminal (the rock engraving at Bumborah Point) is located approximately 1 kilometre from the terminal. Given that construction and operation of the project would be confined within the boundaries of the existing terminal, these sites would not be impacted by the project.

4.9.3 Assessment considerations

Existing heritage items located within proximity to the site would not be impacted by the construction or operation of the project. As such, a detailed assessment of cultural heritage items would not be required.

4.10 Ecology

4.10.1 Existing environment

The following database searches were undertaken on 29 October 2012 to identify potential State and Commonwealth listed threatened species, habitats, and endangered ecological communities within a 10 kilometre radius search of the site:

- ▶ Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) Protected Matters Search Tool for Matters of National Environmental Significance (MNES) listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) within the locality (DSEWPaC 2012a, dated 23 February 2012)
- ▶ NSW OEH Wildlife Atlas database (licensed) for records of threatened species, populations and endangered ecological communities listed under the *NSW Threatened Species Conservation Act 1995* (TSC Act) that have been recorded within the locality
- ▶ NSW Department of Primary Industries (DPI) online protected species viewer for records of threatened aquatic species and communities listed under the *NSW Fisheries Management Act 1994* (FM Act).

Threatened ecological communities

The protected matters search identifies three threatened ecological communities (TECs) listed under the EPBC Act as potentially occurring in the region. The Atlas of NSW Wildlife database lists 24 TECs listed under the TSC Act have been recorded in the region also (refer to Appendix B). No TECs occur within the terminal site.

Threatened species

The protected matters search identifies 13 threatened flora species listed under the EPBC Act as potentially occurring in region. The Atlas of NSW Wildlife database identifies 14 threatened flora species listed under the TSC Act previously recorded in the region. Of these, one threatened flora species, *Acacia terminalis subsp. terminalis*, has previously been recorded within close proximity to the site.

The protected matters search identifies 51 threatened fauna species (24 birds, two fish, four frogs, 11 mammals, six reptiles, and four sharks) listed under the EPBC Act as potentially occurring in the study area. The Atlas of NSW Wildlife database identifies 60 threatened fauna species listed under the TSC Act as having been previously recorded in the region. No threatened fish species listed under the FM Act have been previously recorded in the region. However, mangrove and seagrass vegetation, protected under the FM Act, occur within close proximity to the terminal (refer to Appendix B). According URS (2003), saltmarsh occur within Penrhyn Estuary, directly north of the site.

No threatened flora or fauna species occur within the terminal site.

Migratory species

The protected matters search identifies 70 listed migratory species with potential to occur within the region (refer to Appendix B). Habitat for shorebirds (migratory and non-migratory) is primarily confined to the southern shores of Botany Bay between Taren Point and Bonna Pont in Kurnell. Shorebirds that once used feeding habitat at Runway Beach, the Pilots Embayment, the entrance to the Mill Stream and Foreshore Beach, were displaced as a result of the construction of the Parallel Runway at Sydney Airport. After the construction of the Parallel Runway most of the shorebirds that returned to the northern portion of Botany Bay were concentrated in a much reduced area, restricted to Penrhyn Estuary (URS, 2003).

No migratory species occur within the terminal site.

Other matters of national environmental significance

The protected matters search identified one wetland of international significance (Ramsar Wetland) within the vicinity of the site: the Towra Point Aquatic Reserve. The Towra Point Aquatic Reserve is situated on the southern shores of Botany Bay, approximately 2.5 kilometres south of the site. This reserve contains most of the seagrass, mangroves and saltmarshes within Botany Bay and contains refuge areas from fishing (URS, 2003).

No matters of national environmental significance occur within the terminal site.

4.10.2 Potential impacts

The terminal is a highly modified industrial site with no remnant vegetation and very limited potential for fauna habitat. The project would not result in any direct impacts on threatened flora, fauna species or threatened ecological communities as none occur within the terminal site. Neither Towra Point Nature Reserve nor Penrhyn Estuary would be affected by construction or operation of the project as all works would be confined within the boundaries of the existing terminal site.

Indirect impacts such as changes to air quality and noise would not present any adverse impact to flora or fauna in the vicinity of the terminal site.

4.10.3 Assessment considerations

Existing threatened flora, fauna and ecological communities located within proximity to the site would not be impacted by the construction or operation of the project. As such, a detailed ecological assessment would not be required.

4.11 Soils, geology and topography

4.11.1 Existing environment

The terminal site has an elevation of approximately 2.5 metres above median sea level and is flat. It is entirely sealed with asphalt and concrete.

There are no exposed soils within the site and as stated in Section 1.4, the site is built upon reclaimed land. According to E3 Consulting (2012), the reclaimed material is likely to contain heavy metals, organic and inorganic pollutants that may or may not be elevated above trigger values.

4.11.2 Potential impacts

Construction activities, if not managed appropriately, have the potential to impact on soils. Exposed soils from demolition and/or construction works may be eroded, resulting in sediment laden runoff and associated impacts. Furthermore, chemical leaks and/or spills, from poorly maintained equipment and storage areas, may lead to contamination of soils.

Due to the industrial nature of the site, there is also potential for existing soils to be contaminated. If not managed appropriately, exposure of contaminated soils can result in the spreading of contamination and the potential contamination of contaminated surface water runoff.

No impacts on soils are anticipated during operation of the project.

4.11.3 Assessment considerations

An assessment of potential impacts from erosion and exposure of potentially contaminated soils will be prepared. A list of management measures will also be provided to ensure that potentially contaminated soils are appropriately managed.

4.12 Land use

4.12.1 Existing environment

Land uses immediately surrounding the terminal site are used for industrial, special uses, commercial, residential and recreational purposes. Land surrounding the site is subject to planning provisions contained in the Botany LEP 1995 and Randwick LEP 1998.

4.12.2 Potential impacts

Construction and operation of the project would not result in any changes to the current use of the terminal site or surrounds. There would also be no impact on surrounding land uses. The project would not alter or change any land use within the site or surrounding the site.

4.12.3 Assessment considerations

The project would not result in any changes to land use within the site or surrounding the site. As such, a detailed assessment of land use would not be required.

4.13 Cumulative impacts

Cumulative impacts (both positive and negative) may arise from the combination of the construction and operation of the project with other port projects and activities. An assessment of cumulative air, noise and traffic impacts as a result of other construction projects within the Patrick Terminal, DP World Terminal, SICTL Terminal and other sites within close proximity will be included as part of the Section 75W Modification Environmental Assessment.

4.14 Approach to consultation and stakeholder engagement

A consultation strategy will be designed to encourage community involvement during preparation of the Section 75W Modification Environmental Assessment.

The overall objective of the community involvement process will be to ensure clear, two-way communication by listening, recording and responding to issues as they arise.

Specific objectives of the consultation strategy will be to:

- ▶ disseminate information about the project and the statutory process to key stakeholders and the surrounding community
- ▶ increase community and stakeholder awareness and understanding of the project and the associated planning process
- ▶ ensure stakeholders and members of the community are provided with opportunities throughout the consultation process to communicate feedback and identify issues so that they can be included in the project
- ▶ identify community and stakeholder issues and views.

5. Project justification, summary and next steps

5.1 Justification

The existing Patrick Terminal is out-dated and needs significant investment to remain operational. Building and infrastructure improvements (including automation of the terminal) are required to ensure the operation of the terminal remains viable and competitive.

The project would result in a number of operational benefits including: significantly improved safety performance; long-term improved environmental performance at the terminal including reduced noise, improved stormwater quality and increased energy efficiency; and a significant reduction in the operating costs of the terminal. Light vehicle movements entering and exiting the site at peak times are expected to be reduced during operation of the project.

5.2 Summary

The information provided in this application will be used to support a request for DGRs to prepare a Section 75W Modification Environmental Assessment for the project.

The project is required in order for Patrick to maintain competitiveness in the industry, to improve the safety performance, to provide a better place to work and to improve the environmental conditions at the terminal.

The objective of the project is to *deliver the necessary infrastructure and change management to enable transition from a manual terminal operation to a state of the art "AutoStrad™" terminal operation*. To achieve this objective, a range of demolition and construction works are proposed to be undertaken within the existing terminal. These works include demolition of infrastructure and buildings; pavement works; construction of a control building, administration building, AQIS, OCR building and workshop and maintenance buildings; construction of related infrastructure such as light towers and radar poles, pits and conduits, boundary fencing, waiting shelters, weighbridges and landscaping. The existing manually operated straddle carriers would also be replaced with automatic straddle carriers (AutoStrad™). The proposed activities would not change the operational capacity of the existing terminal.

This document provides a high level preliminary environmental assessment of potential impacts associated with construction and operation of the project. The key environmental issues identified as requiring detailed impact assessment in the Section 75W Modification Environmental Assessment include traffic and access; noise; visual amenity and lighting, and cumulative impacts.

5.3 Next steps

Following submission of this application, a Section 75W Modification Environmental Assessment will be prepared. The Section 75W Modification Environmental Assessment will be prepared in accordance with the DGRs issued by the Director-General of the DP&I and the EP&A Act and EP&A Regulation.

Consultation during preparation of the Section 75W Modification Environmental Assessment will be undertaken to ensure stakeholders and members of the community are provided with opportunities to identify issues so that they can be included in the assessment.

6. References

Aurecon (2012) *Section 75W Modification to Stormwater Management System for Southern Expansion Area*. Report prepared for Patrick Stevedores Operation No 2 Limited, October 2012.

Department of Environment and Climate Change (2009) *Interim Construction Noise Guidelines*.

E3 Consulting (2012) *Site Condition Report*. Report prepared for Patrick Stevedores, September 2012.

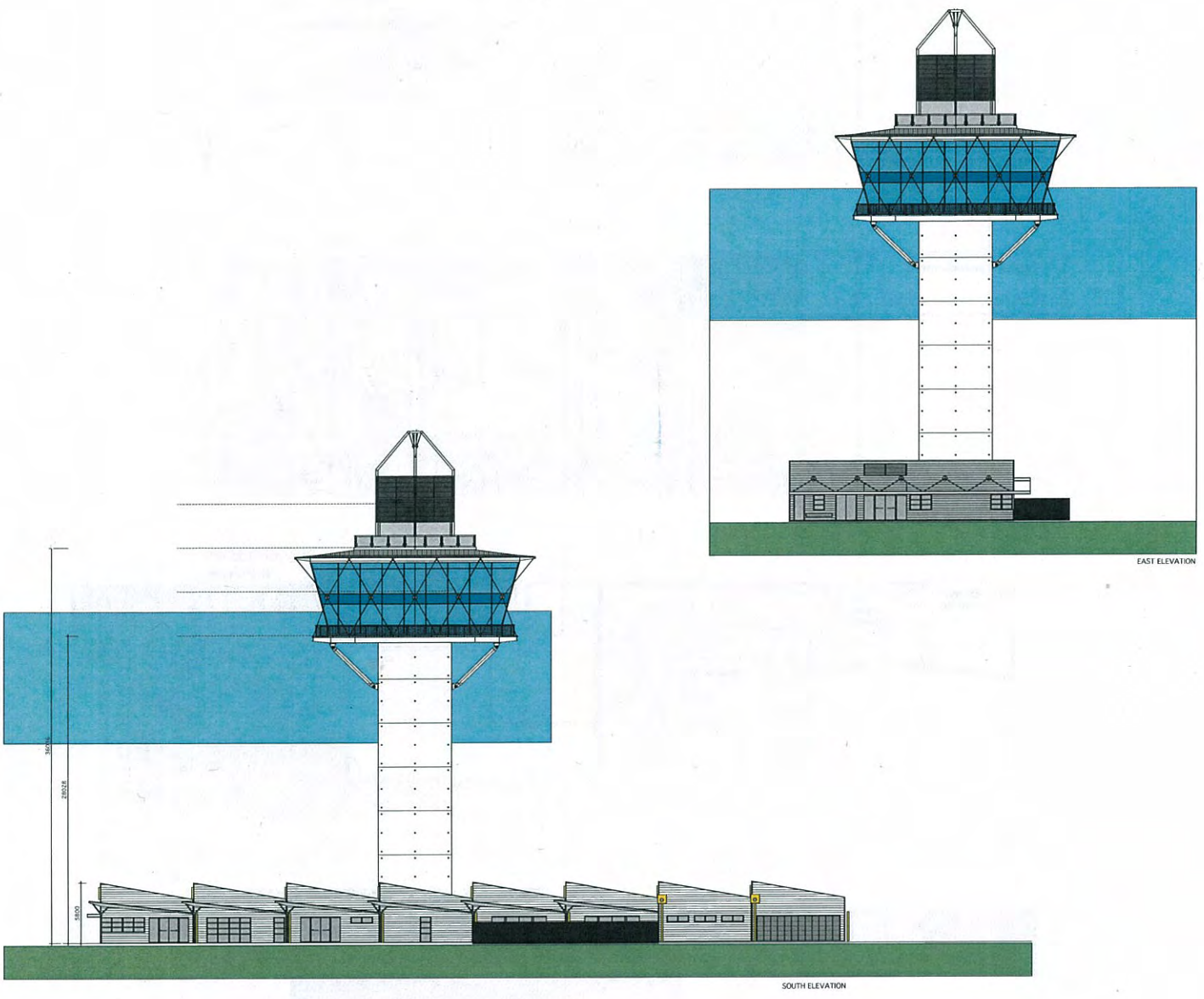
NSW Environmental Protection Authority (1999) *NSW Industrial Noise Policy*.

NSW Roads and Traffic Authority (2002) *Guide to Traffic Generating Developments*, NSW Roads and Maritime Services.

URS Corporation (2003). *Port Botany Expansion Environmental Impact Statement*. Report prepared for Sydney Ports Corporation, November 2003.

Appendices

Appendix A Preliminary design drawings



EAST ELEVATION

SOUTH ELEVATION

THIS DRAWING IS SUBJECT TO COPYRIGHT & MUST NOT BE REPRODUCED OR REFERENCED WITHOUT THE AUTHORITY OF FALCON PROJECTS

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Amendments	
No.	Date
1	21 AUG 2011
SSQ APPLICATION	

DATE PLOTTED: 21/08/2011



Fiala Ooi
 Architects
 4 Gillin Place, St Leonards NSW 2057
 Telephone: (02) 9552 8766
 Facsimile: (02) 9552 8722
 Email: fiala@fiala-ooi.net.au

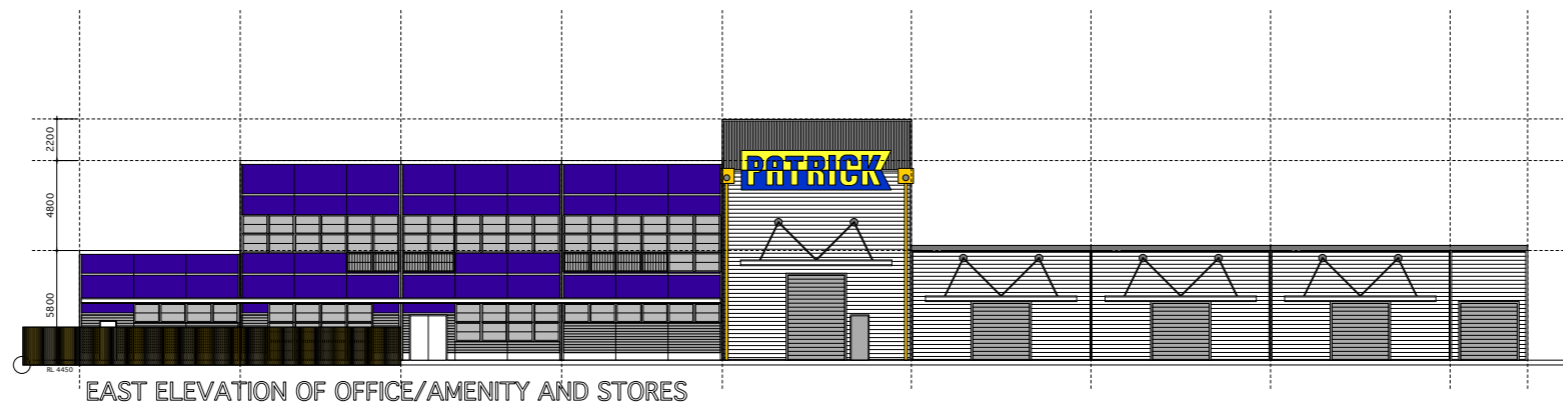
Client:
 Patrick Stevedores Operations Pty Ltd

Project Title:
 ADMIN/CONTROL BUILDING

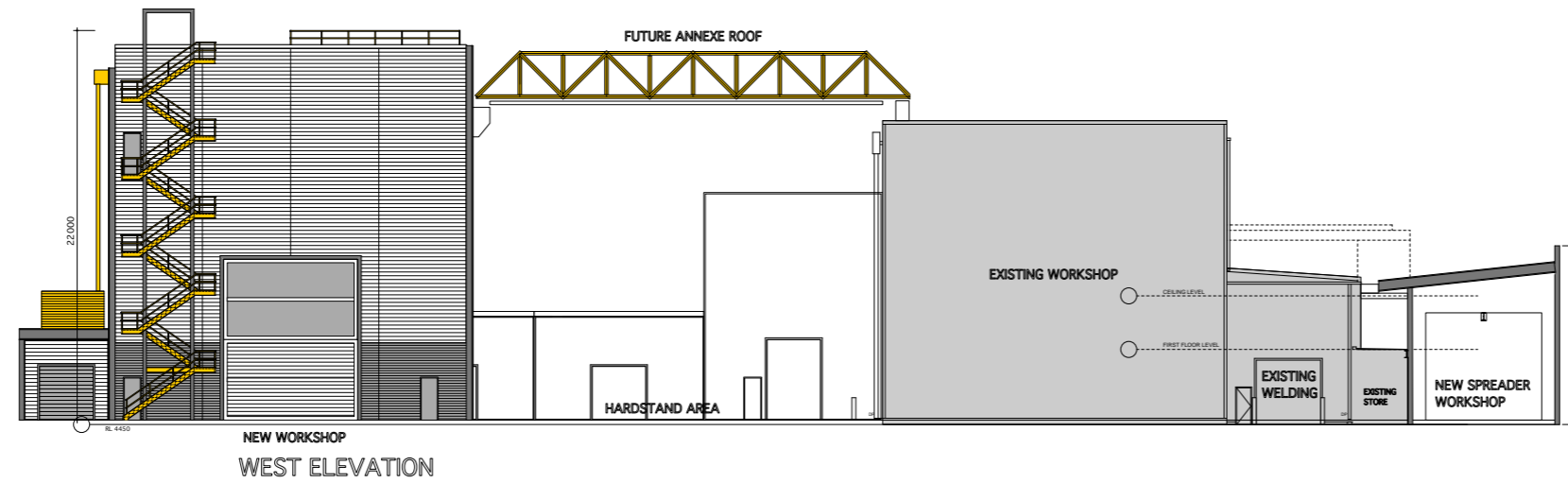
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 Port Botany Container Terminal
 Penrhyn Road
 Bankstown NSW

Drawing Title:
 ELEVATIONS

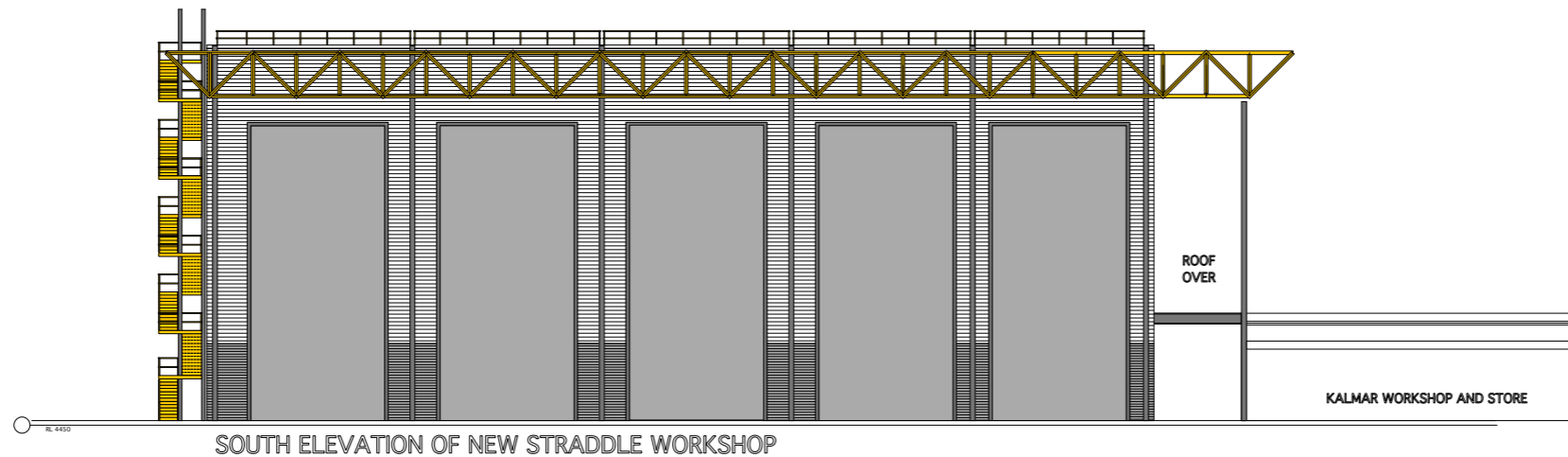
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Drawn: I.O.	
Comp. Ref. No.:	Sheet:
AR-07	-



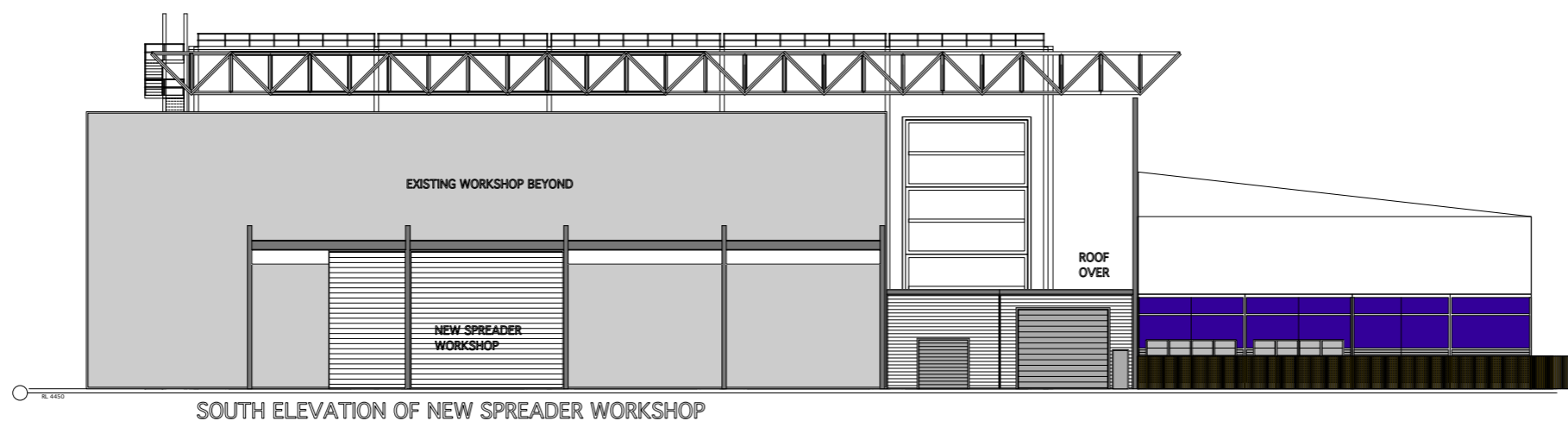
EAST ELEVATION OF OFFICE/AMENITY AND STORES



WEST ELEVATION



SOUTH ELEVATION OF NEW STRADDLE WORKSHOP



SOUTH ELEVATION OF NEW SPREADER WORKSHOP

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IF ANY DISCREPANCIES ARISE, THEY ARE TO BE REPORTED TO THE AUTHOR PRIOR TO COMMENCEMENT OF WORK.

Amendments:	
No.	Date
SSD APPLICATION	21/02/2012

LOCATION PLAN



Fiala Ooi Architects
4 Griffin Place Glebe NSW 2037
Telephone: (02) 9692 9766
Facsimile: (02) 9692 9722
Email: fialaooi@inet.net.au

Client
Patrick Stevedores Operations Pty Ltd

Project Title:
WORKSHOPS AND AMENITY BUILDING

Address:
Port Botany Container Terminal
Penhyn Road
Banksmeadow

Drawing Title:
ELEVATIONS

Scale: 1:200	Date: August 2011
Drawn: LO	
Comp. Ref. No.:	Issue:
AR-14	-

Appendix B Environmental database search results

Rate
this
site



You are here: [Home](#) > [Heritage sites](#) > [Searches and directories](#) > NSW heritage search

Search for NSW heritage

[Return to search page where you can refine/broaden your search.](#)

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into two sections.

Section 1. contains items listed by the heritage council under the NSW Heritage Act. This includes listing on the state heritage register, an interim heritage order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Branch.

Section 2. contains items listed by local councils & shires and state government agencies. This section may also contain additional information on some of the items listed in the first section.

Section 1. Items listed under the NSW Heritage Act.

Your search did not return any matching results.

Section 2. Items listed by Local Government and State Agencies.

Your search returned 7 records.

Item name	Address	Suburb	LGA	Information source
Botany Bay Hotel	1803 Botany Road	Banksmeadow	Botany Bay	LGOV
Botany Marshalling Yards	Beauchamp Street	Banksmeadow	Botany Bay	LGOV
Main Administration Building	Beauchamp Street	Banksmeadow	Botany Bay	LGOV
Pier Hotel	Botany Road	Banksmeadow	Botany Bay	LGOV
Port Botany Old Government Wharf Remains	Port Botany	Banksmeadow	Unincorporated Waterway	SGOV
Sandstone Kerb From Golf Course, Botany Road, Banksmeadow	Botany Road	Banksmeadow	Botany Bay	SGOV
Sir Joesph Banks Hotel (c.1840), Former	23 Anniversary Street	Banksmeadow	Botany Bay	LGOV

There was a total of 7 records matching your search criteria.

Key:

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

Note: The Heritage Branch seeks to keep the State Heritage Inventory (SHI) up to date, however the latest listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included. Always check with the relevant local council or shire for the most recent listings.

Search Results

1 result found.

Botany Bay Foreshore Rd	Botany, NSW, Australia	(Nomination now ineligible for PPAL) National Heritage List
---	---------------------------	---

Report Produced: Mon Oct 29 14:33:47 2012

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Rima Exikanas
level 15, 133 Castlereagh St
Sydney New South Wales 2000

Attention: Rima Exikanas

Email: rima.exikanas@ghd.com

Dear Sir or Madam:

Date: 29 October 2012

AHIMS Web Service search for the following area at Lat, Long From : 151.20678, -33.97072 - Lat, Long To : -33.96348, 151.21886 with a Buffer of 200 meters. conducted by Rima Exikanas on 29 October 2012

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 29/10/12 13:19:54

[Summary](#)

[Details](#)

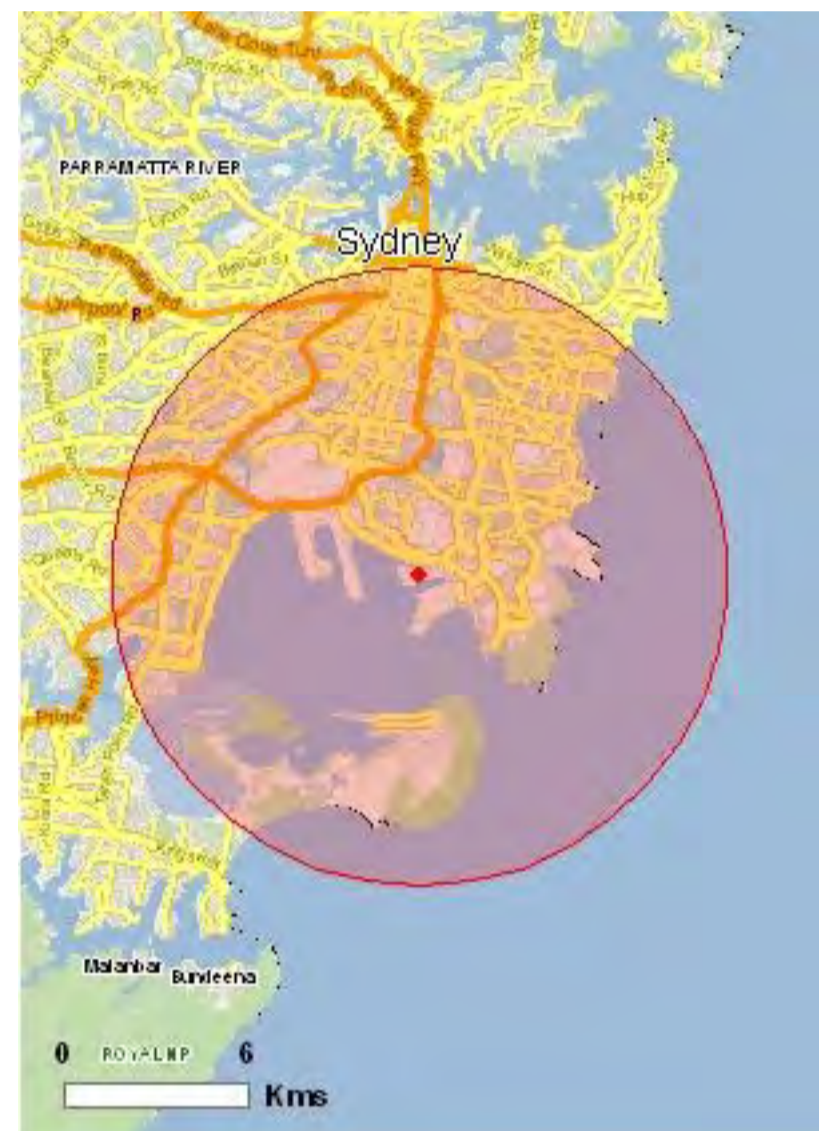
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)

[Buffer: 10.0Km](#)



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	4
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	64
Listed Migratory Species:	70

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As [heritage values](#) of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate.

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	28
Commonwealth Heritage Places:	20
Listed Marine Species:	89
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

Place on the RNE:	458
State and Territory Reserves:	9
Regional Forest Agreements:	None
Invasive Species:	15
Nationally Important Wetlands:	3
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

National Heritage Properties [\[Resource Information \]](#)

Name	State	Status
Indigenous		
Cyprus Hellene Club - Australian Hall	NSW	Listed place
Historic		
Kurnell Peninsula Headland	NSW	Listed place
Colonial Sydney	NSW	Nominated place
Kamay Botany Bay	NSW	Nominated place

Wetlands of International Importance (RAMSAR) [\[Resource Information \]](#)

Name	Proximity
Towra point nature reserve	Within Ramsar site

Listed Threatened Ecological Communities [\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Eastern Suburbs Banksia Scrub of the Sydney Region	Endangered	Community known to occur within area
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occur within area
Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion	Endangered	Community may occur within area

Listed Threatened Species [\[Resource Information \]](#)

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Endangered	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea exulans amsterdamensis Amsterdam Albatross [82330]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Diomedea exulans antipodensis Antipodean Albatross [82269]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans exulans Tristan Albatross [82337]	Endangered	Foraging, feeding or related behaviour may occur within area
Diomedea exulans gibsoni Gibson's Albatross [82271]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant-Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Vulnerable	Species or species habitat likely to occur within area
Sternula nereis nereis Fairy Tern (Australian) [82950]	Vulnerable	Species or species habitat known to occur within area
Thalassarche bulleri Buller's Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta salvini Salvin's Albatross [82343]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris impavida Campbell Albatross [82449]	Vulnerable	Species or species habitat may occur within area
Fish		
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Heleioporus australiacus Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat may occur within area
Mixophyes iteratus Giant Barred Frog, Southern Barred Frog [1944]	Endangered	Species or species habitat may occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Isodon obesulus obesulus Southern Brown Bandicoot (Eastern) [68050]	Endangered	Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pseudomys novaehollandiae New Holland Mouse [96]	Vulnerable	Species or species

Name	Status	Type of Presence
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	habitat likely to occur within area Foraging, feeding or related behaviour known to occur within area
Plants		
Acacia terminalis subsp. terminalis MS Sunshine Wattle [64829]	Endangered	Species or species habitat known to occur within area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
Melaleuca biconvexa Biconvex Paperbark [5583]	Vulnerable	Species or species habitat may occur within area
Pelargonium sp. Striatellum (G.W.Carr 10345) Omeo Stork's-bill [84065]	Endangered	Species or species habitat may occur within area
Pimelea curviflora var. curviflora [4182]	Vulnerable	Species or species habitat likely to occur within area
Pimelea spicata [20834]	Endangered	Species or species habitat may occur within area
Pterostylis saxicola Sydney Plains Greenhood [64537]	Endangered	Species or species habitat likely to occur within area
Pterostylis sp. Botany Bay (A.Bishop J221/1-13) Botany Bay Bearded Greenhood, Botany Bay Bearded Orchid [64965]	Endangered	Species or species habitat likely to occur within area
Streblus pendulinus Siah's Backbone, Sia's Backbone, Isaac Wood [21618]	Endangered	Species or species habitat likely to occur within area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Pocket-less Brush Cherry, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat likely to occur within area
Tetratheca glandulosa Glandular Pink-bell [2350]	Vulnerable	Species or species habitat may occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Hoplocephalus bungaroides Broad-headed Snake [1182]	Vulnerable	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat likely to occur within area

Sharks

Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Congregation or aggregation known to occur within area
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species

[[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat may occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered*	Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable*	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Foraging, feeding or related behaviour may occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Species or species habitat may occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence area
Macronectes halli Northern Giant-Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Puffinus leucomelas Streaked Shearwater [66541]		Species or species habitat may occur within area
Sterna albifrons Little Tern [813]		Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable*	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Species or species habitat may occur within area
Migratory Marine Species		
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<i>Eretmochelys imbricata</i> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
<i>Eubalaena australis</i> Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
<i>Lagenorhynchus obscurus</i> Dusky Dolphin [43]		Species or species habitat may occur within area
<i>Lamna nasus</i> Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
<i>Megaptera novaeangliae</i> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<i>Natator depressus</i> Flatback Turtle [59257]	Vulnerable	Species or species habitat likely to occur within area
<i>Orcinus orca</i> Killer Whale, Orca [46]		Species or species habitat may occur within area
<i>Rhincodon typus</i> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
<i>Hirundapus caudacutus</i> White-throated Needletail [682]		Species or species habitat known to occur within area
<i>Merops ornatus</i> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<i>Monarcha melanopsis</i> Black-faced Monarch [609]		Species or species habitat known to occur within area
<i>Myiagra cyanoleuca</i> Satin Flycatcher [612]		Species or species habitat known to occur within area
<i>Neophema chrysogaster</i> Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
<i>Rhipidura rufifrons</i> Rufous Fantail [592]		Species or species habitat known to occur within area
<i>Xanthomyza phrygia</i> Regent Honeyeater [430]	Endangered*	Species or species habitat likely to occur within area
Migratory Wetlands Species		
<i>Actitis hypoleucos</i> Common Sandpiper [59309]		Roosting known to occur within area
<i>Ardea alba</i> Great Egret, White Egret [59541]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]		Roosting known to occur within area
Calidris ferruginea Curlew Sandpiper [856]		Roosting known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]		Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]		Roosting known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting may occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Roosting known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew [847]		Roosting known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Vulnerable*	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land -
Commonwealth Land - Airservices Australia
Commonwealth Land - Australian & Overseas Telecommunications Corporation
Commonwealth Land - Australian Broadcasting Corporation
Commonwealth Land - Australian Postal Commission
Commonwealth Land - Australian Postal Corporation
Commonwealth Land - Australian Telecommunications Commission
Commonwealth Land - Australian Telecommunications Corporation
Commonwealth Land - Commonwealth Bank of Australia
Commonwealth Land - Commonwealth Trading Bank of Australia
Commonwealth Land - Defence Housing Authority
Commonwealth Land - Defence Service Homes Corporation
Commonwealth Land - Defence Service Homes Corporation & Alice Isabel Patterson
Commonwealth Land - Director of War Service Homes
Commonwealth Land - Telstra Corporation Limited
Defence - BANKSMEADOW DEPOT (Sydney Workshop Company)
Defence - ENDEAVOUR HOUSE - COOGEE
Defence - KENSINGTON DEPOT
Defence - MATERIAL RESEARCH LAB
Defence - OXFORD ST SYDNEY
Defence - PARKVIEW BUILDING - SYDNEY
Defence - RANDWICK (CARRINGTON RD)
Defence - RANDWICK BARRACKS
Defence - RANDWICK FRENCHMANS TRG
Defence - ROCKDALE TRAINING DEPOT
Defence - SYDNEY UNIVERSITY REGIMENT - DARLINGTON
Defence - VICTORIA BARRACKS - PADDINGTON
Defence - ZETLAND NAVY SUPPLY CENTRE

Commonwealth Heritage Places [\[Resource Information \]](#)

Name	State	Status
Natural		
Malabar Headland	NSW	Listed place
Historic		
Sydney (Kingsford Smith) Airport Group	NSW	Indicative Place
Botany Post Office	NSW	Listed place
Building VB1 and Parade Ground	NSW	Listed place
Building VB2 Guard House	NSW	Listed place
Buildings MQVB16 and VB56	NSW	Listed place

Name	State	Status
Buildings VB13, 15, 16 & 17	NSW	Listed place
Buildings VB41, 45 & 53	NSW	Listed place
Buildings VB60 and VB62	NSW	Listed place
Buildings VB69, 75 & 76 including Garden	NSW	Listed place
Buildings VB83, 84, 85, 87 & 89	NSW	Listed place
Buildings VB90, 91, 91A & 92	NSW	Listed place
Cape Baily Lighthouse	NSW	Listed place
Marrickville Post Office	NSW	Listed place
Paddington Post Office	NSW	Listed place
School of Musketry and Officers Mess, Randwick Army Barracks	NSW	Listed place
Victoria Barracks Perimeter Wall and Gates	NSW	Listed place
Victoria Barracks Precinct	NSW	Listed place
Victoria Barracks Squash Courts	NSW	Listed place
Sydney Airport Air Traffic Control Tower	NSW	Nominated place

Listed Marine Species [[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Roosting known to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]		Roosting known to occur within area
Calidris ferruginea Curlew Sandpiper [856]		Roosting known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris subminuta Long-toed Stint [861]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]		Roosting known to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat may occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area

Name	Threatened	Type of Presence
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]		Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered*	Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable*	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Foraging, feeding or related behaviour may occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Species or species habitat may occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting may occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Heteroscelus incanus Wandering Tattler [59547]		Roosting known to occur within area
Himantopus himantopus Black-winged Stilt [870]		Roosting known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Roosting known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area

Name	Threatened	Type of Presence
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant-Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew [847]		Roosting known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Vulnerable*	Species or species habitat likely to occur within area
Sterna albifrons Little Tern [813]		Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable*	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Species or species habitat may occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area
Fish		
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus abdominalis Bigbelly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat may occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Solenostomus paegnius Rough-snout Ghost Pipefish [68425]		Species or species habitat may occur within area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Stigmatopora argus Spotted Pipefish, Gulf Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area

Mammals

Arctocephalus forsteri New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area

Reptiles

Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat likely to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans

[[Resource Information](#)]

Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within

Name	Status	Type of Presence area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

Places on the RNE [[Resource Information](#)]

Note that not all Indigenous sites may be listed.

Name	State	Status
Natural		
Bundock Street Banksia Scrub	NSW	Indicative Place
Kurnell Sand Dune	NSW	Indicative Place
Cape Banks	NSW	Registered
Jennifer Street Bushland	NSW	Registered
Kurnell Peninsula Towra Point Area	NSW	Registered
Little Bay Geological Site	NSW	Registered
Long Bay Area	NSW	Registered
Malabar Headland	NSW	Registered
St Peters Brickpit Geological Site	NSW	Registered
Towra Point Aquatic Reserve	NSW	Registered
Indigenous		
The Block	NSW	Registered
Historic		
Arncliffe Post Office	NSW	Indicative Place

Name	State	Status
Arncliffe Pre School Kindergarten	NSW	Indicative Place
Art Room at Newington College	NSW	Indicative Place
Artney	NSW	Indicative Place
Banbury Cottage	NSW	Indicative Place
Banksia Urban Conservation Area	NSW	Indicative Place
Bardwell Park Urban Conservation Area	NSW	Indicative Place
Beverley Park South Urban Conservation Area	NSW	Indicative Place
Beverley Park Urban Conservation Area	NSW	Indicative Place
Bexley Fire Station (Former)	NSW	Indicative Place
Bexley Park Urban Conservation Area	NSW	Indicative Place
Bligh / Camperdown Terrace Conservation Area	NSW	Indicative Place
Bondi Post Office	NSW	Indicative Place
Botany Bay Entrance	NSW	Indicative Place
Botany Fire Station	NSW	Indicative Place
Botany Swamps	NSW	Indicative Place
Brighton Baths	NSW	Indicative Place
Brighton Le Sands Urban Conservation Area	NSW	Indicative Place
Bronte Beach Baths	NSW	Indicative Place
Bronte House Gardens	NSW	Indicative Place
Buckle House (former)	NSW	Indicative Place
Canada House	NSW	Indicative Place
Carlton	NSW	Indicative Place
Carlton South Urban Conservation Area	NSW	Indicative Place
Chamberlain Hotel	NSW	Indicative Place
Clovelly Bay Enclosure & Baths	NSW	Indicative Place
Coles Fosseys 1915 Building (former)	NSW	Indicative Place
Coles Fosseys 1935 Building (former)	NSW	Indicative Place
Commercial Terrace	NSW	Indicative Place
Coogee Bay Hotel	NSW	Indicative Place
Cooper Street Conservation Area	NSW	Indicative Place
Crown Lodge	NSW	Indicative Place
Douglass Lane	NSW	Indicative Place
Earlwood Urban Conservation Area	NSW	Indicative Place
Enmore Post Office (former)	NSW	Indicative Place
Evening Star Hotel	NSW	Indicative Place
Fairmont	NSW	Indicative Place
Fayworth House	NSW	Indicative Place
Ferndale	NSW	Indicative Place
Georgian Style Gable Roofed Cottage	NSW	Indicative Place
Giles Baths & Bath-House	NSW	Indicative Place
Golden Barley Hotel	NSW	Indicative Place
Gower	NSW	Indicative Place
Griffiths Building	NSW	Indicative Place
Hawthornden	NSW	Indicative Place
Haymarket Post Office	NSW	Indicative Place
Highbury	NSW	Indicative Place
Hollis Park and Environs / Urban Conservation Area	NSW	Indicative Place
Horaceville	NSW	Indicative Place
Jackson Place Cottages	NSW	Indicative Place
King George Hotel (former)	NSW	Indicative Place
Kogarah Fire Station	NSW	Indicative Place
Kyeemagh Urban Conservation Area	NSW	Indicative Place
Mahon Pool	NSW	Indicative Place
Maroubra Fire Station	NSW	Indicative Place
Marrickville Fire Station	NSW	Indicative Place
Marrickville Post Office	NSW	Indicative Place
Mascot Fire Station	NSW	Indicative Place
McIvers Baths	NSW	Indicative Place
Newmarket Hotel	NSW	Indicative Place
Peckham	NSW	Indicative Place
Penston Hall	NSW	Indicative Place
Prince Alfred Park	NSW	Indicative Place
Raben Footwear	NSW	Indicative Place
Ramsgate Baths	NSW	Indicative Place
Randwick Fire Station	NSW	Indicative Place
Ross Jones Memorial Pools	NSW	Indicative Place

Name	State	Status
Royal Alexander Hospital for Children (former) Garden Remnants	NSW	Indicative Place
Royal Navy Logistics Store	NSW	Indicative Place
Scarborough Park Urban Conservation Area	NSW	Indicative Place
Seaforth Park Urban Conservation Area	NSW	Indicative Place
Sheffield House	NSW	Indicative Place
Sir John Young Hotel	NSW	Indicative Place
St Judes Rectory Garden	NSW	Indicative Place
Stanmore House	NSW	Indicative Place
Summerfield Terrace	NSW	Indicative Place
Sunbeam Avenue Urban Conservation Area	NSW	Indicative Place
Sydenham Village Terrace	NSW	Indicative Place
Terrace	NSW	Indicative Place
Terrace	NSW	Indicative Place
Terrace	NSW	Indicative Place
The Bear Pits Moore Park Zoo	NSW	Indicative Place
The Pressure Tunnel	NSW	Indicative Place
The Towers - Residence	NSW	Indicative Place
Trethaway House	NSW	Indicative Place
Undercliffe Urban Conservation Area	NSW	Indicative Place
Victorian Regency Terrace	NSW	Indicative Place
Victorian Rustic Gothic Cottage	NSW	Indicative Place
Victorian, Wooden Ridgeline, Semi-detached House	NSW	Indicative Place
War Memorial 1914-18	NSW	Indicative Place
Warehouse	NSW	Indicative Place
Warren Ball Avenue Victorian Terrace Houses	NSW	Indicative Place
Waverley Post Office	NSW	Indicative Place
Waverley Tramway Depot Tramshed Remains	NSW	Indicative Place
West End Hotel	NSW	Indicative Place
William Croft Building (former)	NSW	Indicative Place
Woollahra Fire Station	NSW	Indicative Place
Woollahra Post Office	NSW	Indicative Place
Wylies Baths	NSW	Indicative Place
Alexandra Canal	NSW	Interim List
Botany Water Supply Scheme Remains	NSW	Interim List
Sewage Pumping Station 38, Substation and Inspection Hall	NSW	Interim List
Southern & Western Suburbs Ocean Outfall Sewers	NSW	Interim List
Sydney (Kingsford Smith) Airport Group	NSW	Interim List
ANZ Bank	NSW	Registered
ANZ Bank (former)	NSW	Registered
Administration Building A Sydney Technical College	NSW	Registered
Agincourt Hotel	NSW	Registered
All Saints Anglican Church	NSW	Registered
Annandale Public School and Infants Building	NSW	Registered
Anzac Memorial	NSW	Registered
Arabela Terrace	NSW	Registered
Archina and Ascot and Surrounds	NSW	Registered
Aston Lodge Group	NSW	Registered
Australian Gaslight Company Showroom Building (former)	NSW	Registered
Avonmore Terrace	NSW	Registered
Banksia and Witchagil	NSW	Registered
Bare Island Fort	NSW	Registered
Barham (excluding later additions)	NSW	Registered
Beares Stairs	NSW	Registered
Belgrave Terrace (former)	NSW	Registered
Bexley School of Arts including Front Lawns and Edging	NSW	Registered
Blackfriars Public School (former)	NSW	Registered
Blenheim House	NSW	Registered
Botany Building	NSW	Registered
Botany Post Office	NSW	Registered
Bourke Street Public School	NSW	Registered
Briarbank	NSW	Registered
Bronte House and surrounds	NSW	Registered
Building VB1 and Parade Ground	NSW	Registered
Building VB2 Guard House	NSW	Registered
Buildings MQVB16 and VB56	NSW	Registered

Name	State	Status
Buildings VB13, 15, 16 & 17	NSW	Registered
Buildings VB41, 45 & 53	NSW	Registered
Buildings VB60 and VB62	NSW	Registered
Buildings VB69, 75 & 76 including Garden	NSW	Registered
Buildings VB83, 84, 85, 87 & 89	NSW	Registered
Buildings VB90, 91, 91A & 92	NSW	Registered
Busbys Bore or The Tunnel	NSW	Registered
Cairnsfoot	NSW	Registered
Cape Baily Lighthouse	NSW	Registered
Capitol Theatre	NSW	Registered
Captain Cooks Landing Place Historic Site	NSW	Registered
Cast Iron Drinking Fountain	NSW	Registered
Centennial Park	NSW	Registered
Centennial Park Gates	NSW	Registered
Centennial Parklands	NSW	Registered
Central Police Courts	NSW	Registered
Central Railway Station	NSW	Registered
Chief Mechanical Engineers Office (former)	NSW	Registered
Christ Church St Laurence Anglican Church	NSW	Registered
Christ Church St Laurence Group	NSW	Registered
Christ Church St Laurence Rectory	NSW	Registered
Christ Church St Laurence School and Hall (former)	NSW	Registered
Cleveland House	NSW	Registered
Cleveland Street Public School	NSW	Registered
Cliffbrook House, Stables & Stone Walls	NSW	Registered
Collins Street Terraces	NSW	Registered
Commercial Bank of Sydney Facade (former)	NSW	Registered
Commercial Building (former)	NSW	Registered
Commercial Buildings	NSW	Registered
Commercial High School (former)	NSW	Registered
Commonwealth Bank (former)	NSW	Registered
Cooks River Sewer Aqueduct	NSW	Registered
Cooper Park	NSW	Registered
Corona & Hygeia Victorian Terraces	NSW	Registered
Corporation Building	NSW	Registered
Cottage	NSW	Registered
Cottage	NSW	Registered
Cottage	NSW	Registered
Cottage	NSW	Registered
Cottage No 1	NSW	Registered
Cottage No 2	NSW	Registered
Cottage No 3	NSW	Registered
Cottage No 4	NSW	Registered
Courthouse & Police Station	NSW	Registered
Cranbrook Group	NSW	Registered
Crown Street Public School	NSW	Registered
Cyprus Hellene Club and Australian Hall	NSW	Registered
Daceyville Garden Suburb Urban Conservation Area	NSW	Registered
Daking House	NSW	Registered
Darley Street Group	NSW	Registered
Darlinghurst Courthouse	NSW	Registered
Darlinghurst Gaol (former)	NSW	Registered
Darlinghurst Police Station and Residence	NSW	Registered
Darlinghurst Public School (1883 Section)	NSW	Registered
Darlington Conservation Area	NSW	Registered
Door and Surrounds School of Rural Studies	NSW	Registered
Duplex	NSW	Registered
Duplex	NSW	Registered
Duplex	NSW	Registered
Duplex	NSW	Registered
Durham Hall	NSW	Registered
Edina	NSW	Registered
Engehurst	NSW	Registered
Erskineville Public School	NSW	Registered
Essex	NSW	Registered
Eveleigh Railway Workshops	NSW	Registered

Name	State	Status
Family Hotel (former)	NSW	Registered
Farmers and Graziers No 2 Woolstore (former)	NSW	Registered
Farmers and Graziers Woolstore No1	NSW	Registered
Federation Monument	NSW	Registered
Fence, Gates and Lodge	NSW	Registered
Fenton and Garden	NSW	Registered
Fire Engine House (former)	NSW	Registered
Fitzroy Terrace	NSW	Registered
Flinders Street Group	NSW	Registered
Former Shops and Residences	NSW	Registered
G A Zink and Sons Building	NSW	Registered
Gate Lodge (former)	NSW	Registered
Gates and Gate Lodge	NSW	Registered
Glasgow Arms Hotel	NSW	Registered
Glebe Conservation Area	NSW	Registered
Glebe Courthouse	NSW	Registered
Glebe Post Office	NSW	Registered
Glebe Town Hall	NSW	Registered
Goldring House	NSW	Registered
Goodmans Buildings	NSW	Registered
Grace Brothers Store (former)	NSW	Registered
Greek Orthodox Church	NSW	Registered
Hall Building B Sydney Technical College	NSW	Registered
Hamilton and The Hermitage	NSW	Registered
Hannans Butcher Shop	NSW	Registered
Harris Street Conservation Area	NSW	Registered
Haymarket Urban Conservation Area	NSW	Registered
Helen Keller House	NSW	Registered
High Cross Precinct	NSW	Registered
Hillside	NSW	Registered
Hilton	NSW	Registered
Hoover Cinema	NSW	Registered
House	NSW	Registered
House	NSW	Registered
House	NSW	Registered
House	NSW	Registered
House	NSW	Registered
House	NSW	Registered
House	NSW	Registered
House and Stables	NSW	Registered
House, Stone Stables and Fences at rear	NSW	Registered
Houses	NSW	Registered
Hydraulic Pumping Station	NSW	Registered
Institute Building	NSW	Registered
Iona	NSW	Registered
John Storey Memorial Clinic (former)	NSW	Registered
Juniper Hall	NSW	Registered
Kien Hay Centre	NSW	Registered
King George V Memorial Hospital	NSW	Registered
King Street Conservation Area	NSW	Registered
Kogarah Community Aid and Information Centre	NSW	Registered
Kogarah School of Arts former	NSW	Registered
La Perouse Memorial Group	NSW	Registered
La Perouse Monuments Historic Site	NSW	Registered
Lady Members Stand	NSW	Registered
Latona Terrace	NSW	Registered
Lennox Street Terraces	NSW	Registered
Liverpool Street Group	NSW	Registered
Macleay Museum Building	NSW	Registered
Main Building - East Range and Great Hall	NSW	Registered
Main Building Additions & Quadrangle	NSW	Registered
Marathon Terrace	NSW	Registered
Marcus Clark Building (former)	NSW	Registered
Marist Brothers High School (former)	NSW	Registered
Mark Foys Building (former)	NSW	Registered
Marrickville Town Hall (former)	NSW	Registered

Name	State	Status
Medical Centre	NSW	Registered
Medical School	NSW	Registered
Members Stand	NSW	Registered
Members Stand Royal Randwick Racecourse	NSW	Registered
Methodist Church (former)	NSW	Registered
Methodist Parsonage (former)	NSW	Registered
Milford Haven	NSW	Registered
Millinery House	NSW	Registered
Moore Park Road Group Terraces and Houses	NSW	Registered
Mortuary Terminal (former)	NSW	Registered
National Bank	NSW	Registered
Newmarket House	NSW	Registered
Newmarket Precinct	NSW	Registered
Newtown Courthouse & former Police Station	NSW	Registered
Newtown Courthouse Group	NSW	Registered
Newtown Post Office	NSW	Registered
Newtown Public School and War Memorial	NSW	Registered
Newtown Telephone Exchange	NSW	Registered
Newtown Uniting Church Group	NSW	Registered
Norths Factory	NSW	Registered
Novar	NSW	Registered
Nugal Hall	NSW	Registered
Ocean View and Grounds	NSW	Registered
Oxford Square Group	NSW	Registered
PMG Stores Building (former)	NSW	Registered
Paddington Conservation Area	NSW	Registered
Paddington Police Station (former)	NSW	Registered
Paddington Post Office	NSW	Registered
Paddington Public School 1870 and 1892 Buildings	NSW	Registered
Paddington Public School Group	NSW	Registered
Paddington Reservoir	NSW	Registered
Paddington Town Hall	NSW	Registered
Physics Building	NSW	Registered
Police Station	NSW	Registered
Police Station (former)	NSW	Registered
Powerhouse Museum (Stage One)	NSW	Registered
Powerhouse Museum (Stage Two)	NSW	Registered
Presbyterian Church (former)	NSW	Registered
Presbyterian Church Group	NSW	Registered
Presbyterian Manse (former)	NSW	Registered
Prince Henry Hospital Conservation Area	NSW	Registered
Prince of Wales Hospital Gates and Fence	NSW	Registered
Prince of Wales Hospital Group	NSW	Registered
Prince of Wales Hospital Main Block (former)	NSW	Registered
Prince of Wales Hospital Outpatients Building (former)	NSW	Registered
Queen Street Group	NSW	Registered
Railway Institute Building	NSW	Registered
Railway Square Post Office (former)	NSW	Registered
Railway Station Western Platform Building	NSW	Registered
Randwick Police Station	NSW	Registered
Randwick Post Office	NSW	Registered
Randwick Town Hall	NSW	Registered
Rawson Place Group	NSW	Registered
Rectory and Stone Walls (former)	NSW	Registered
Redfern Courthouse	NSW	Registered
Redfern Post Office	NSW	Registered
Reservoir Fence and Steps	NSW	Registered
Retail and Commercial Building	NSW	Registered
Retail and Commercial Building	NSW	Registered
Retail and Commercial Building	NSW	Registered
Reussdale	NSW	Registered
Ritz Cinema	NSW	Registered
Rosemont	NSW	Registered
Roslyndale	NSW	Registered
Royal Agricultural Society Showground Conservation Area	NSW	Registered
Royal Hotel	NSW	Registered

Name	State	Status
Royal Hotel	NSW	Registered
Royal Prince Alfred Hospital	NSW	Registered
Runnymede	NSW	Registered
SILF Company Building	NSW	Registered
Sacred Heart Monastery & Chapel excluding 1921 & c1960 additions	NSW	Registered
Salvation Army Womens Hostel Facade (former)	NSW	Registered
School of Mechanical and Automotive Engineering	NSW	Registered
School of Musketry and Officers' Mess, Randwick Army Barracks	NSW	Registered
Science Road Bridge	NSW	Registered
Science Road Precinct	NSW	Registered
Scottish Hospital	NSW	Registered
Shops	NSW	Registered
Sir Joseph Banks Hotel (former)	NSW	Registered
St Andrews College	NSW	Registered
St Benedicts Catholic Church	NSW	Registered
St Benedicts Convent and Hall	NSW	Registered
St Benedicts Precinct	NSW	Registered
St Brigids Catholic Church	NSW	Registered
St Georges Hall	NSW	Registered
St Johns Anglican Church	NSW	Registered
St Johns Anglican Church Group	NSW	Registered
St Johns Anglican Parish Hall	NSW	Registered
St Johns College	NSW	Registered
St Johns Rectory	NSW	Registered
St Johns Road Group	NSW	Registered
St Johns Uniting Church	NSW	Registered
St Johns Uniting Church Group	NSW	Registered
St Johns Uniting Church Manse	NSW	Registered
St Johns Uniting Church Manse / Schoolhouse	NSW	Registered
St Judes Anglican Church & Cemetery	NSW	Registered
St Judes Anglican Church Group	NSW	Registered
St Judes Rectory and Curates Residence	NSW	Registered
St Magdalenes Retreat	NSW	Registered
St Mary the Virgin Anglican Church	NSW	Registered
St Matthews Anglican Church	NSW	Registered
St Matthias Anglican Church	NSW	Registered
St Matthias Church Group	NSW	Registered
St Matthias Church Hall	NSW	Registered
St Michaels Anglican Church, Hall & Rectory	NSW	Registered
St Michaels Church Group	NSW	Registered
St Pauls College	NSW	Registered
St Peters Anglican Church & Graveyard	NSW	Registered
St Peters Rectory (former)	NSW	Registered
St Saviours Anglican Church	NSW	Registered
St Stephens Anglican Church & Cemetery	NSW	Registered
Star Hotel	NSW	Registered
Station House	NSW	Registered
Statue of Captain James Cook RN	NSW	Registered
Stoneleigh	NSW	Registered
Superintendents Residence	NSW	Registered
Superintendents Residence (former)	NSW	Registered
Sydney City Markets Group	NSW	Registered
Sydney Cricket Ground Group	NSW	Registered
Sydney Technical College Group	NSW	Registered
Sydney Trades Hall	NSW	Registered
Sydney University Main Building Precinct	NSW	Registered
Technological Museum (former)	NSW	Registered
Terrace	NSW	Registered
Terrace	NSW	Registered
Terrace	NSW	Registered
Terrace	NSW	Registered
Terrace	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered

Name	State	Status
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses	NSW	Registered
Terrace Houses Group	NSW	Registered
Terrace Houses Group	NSW	Registered
Terraces	NSW	Registered
Terraces	NSW	Registered
Terraces	NSW	Registered
Terraces	NSW	Registered
Terraces and Street Trees	NSW	Registered
Terraces and Townhouses	NSW	Registered
The Big Stable	NSW	Registered
The Grange	NSW	Registered
The Grove Group	NSW	Registered
The Hub	NSW	Registered
The Watch Tower	NSW	Registered
The Womens College	NSW	Registered
Timber House	NSW	Registered
Trocadero Hall	NSW	Registered
Two Storey House	NSW	Registered
Two Terraces	NSW	Registered
Ultimo Conservation Area	NSW	Registered
Ultimo Post Office (former)	NSW	Registered
Ultimo Sewage Pumping Station	NSW	Registered
Uniting Church (former)	NSW	Registered
Uniting Church Group	NSW	Registered
Venice	NSW	Registered
Ventnor	NSW	Registered
Victoria Barracks Perimeter Wall and Gates	NSW	Registered
Victoria Barracks Precinct	NSW	Registered
Victoria Barracks Squash Courts	NSW	Registered
Vulcan Hotel	NSW	Registered
Waimea Avenue Group	NSW	Registered
War Memorial Hospital Group	NSW	Registered
Warehouse	NSW	Registered
Waterloo Public School	NSW	Registered
Waverley Cemetery	NSW	Registered
Wesleyan Chapel (former)	NSW	Registered
Westpac Bank	NSW	Registered
White City	NSW	Registered
Wolli Creek Sewer Aqueduct	NSW	Registered
Woods Avenue Group	NSW	Registered
Woollahra Public School 1877 Building	NSW	Registered
Woollahra Public School 1899 Building	NSW	Registered
Woolstores No 2 Group	NSW	Registered

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Boat Harbour	NSW
Botany Bay	NSW
Bronte-Coogee	NSW
Cape Banks	NSW
Towra Point	NSW
Towra Point	NSW
Towra Point - Stink Pot Bay	NSW
Towra Point - Weeny/Quibray Bays	NSW
Wolli Creek	NSW

Invasive Species

[[Resource Information](#)]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Frogs		
Bufo marinus Cane Toad [1772]		Species or species habitat likely to occur within area
Mammals		
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat may occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area

Nationally Important Wetlands

[[Resource Information](#)]

Name	State
Botany Wetlands	NSW
Eve St. Marsh, Arncliffe	NSW
Towra Point Estuarine Wetlands	NSW

Coordinates

-33.96678 151.21211

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Department of Environment, Climate Change and Water, New South Wales](#)
- [-Department of Sustainability and Environment, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment and Natural Resources, South Australia](#)
- [-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [-Environmental and Resource Management, Queensland](#)
- [-Department of Environment and Conservation, Western Australia](#)
- [-Department of the Environment, Climate Change, Energy and Water](#)
- [-Birds Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-SA Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-State Forests of NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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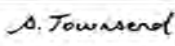

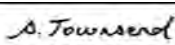

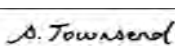
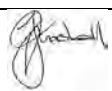
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Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
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B	R. Phillips, R. Exikanas and S. Townsend	S. Townsend		G Marshall		26.11.12
C	R. Phillips, R. Exikanas and S. Townsend	S. Townsend		G Marshall		12.12.12

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