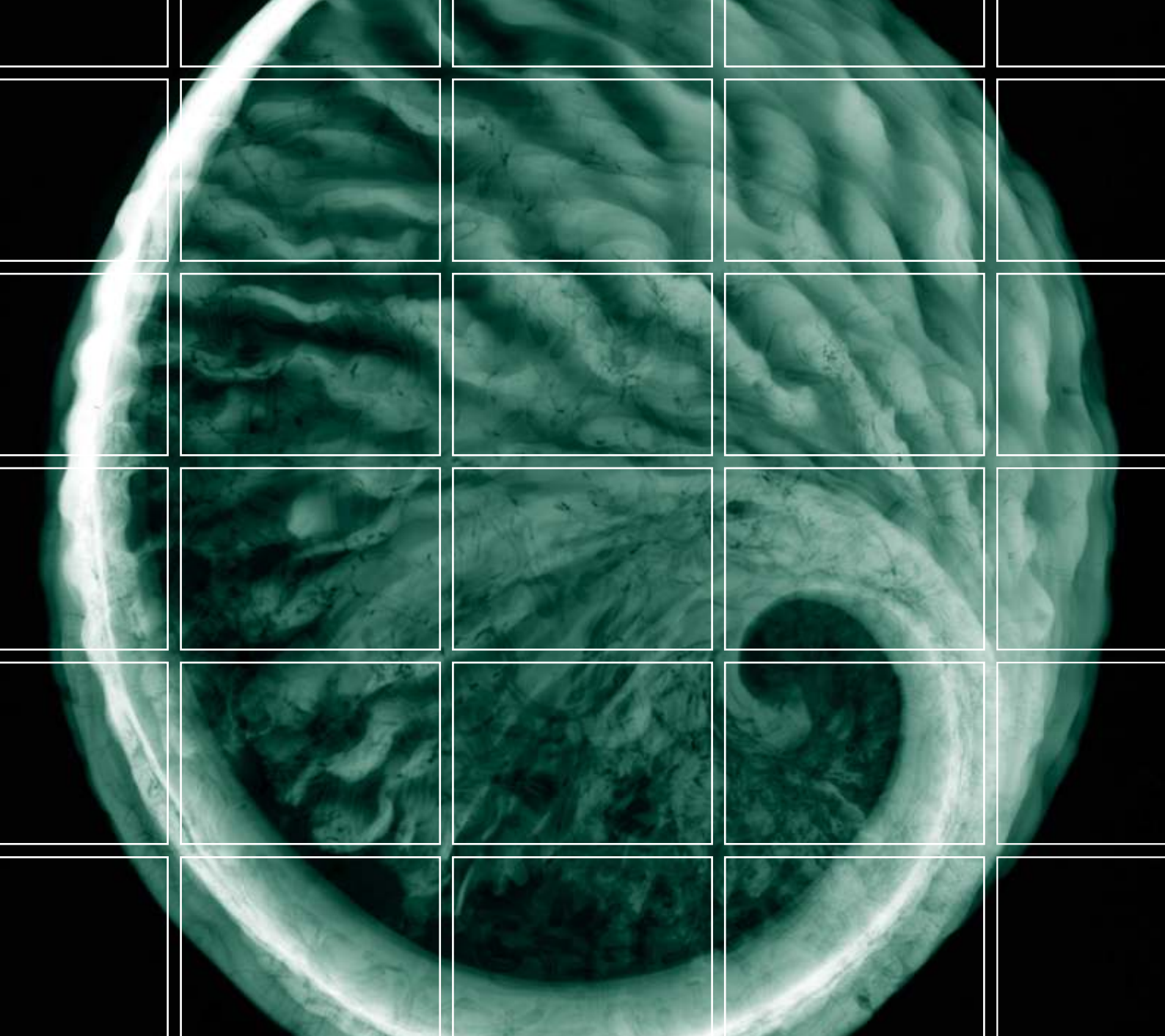




Sydney Fish Market

Ecological Impact Assessment

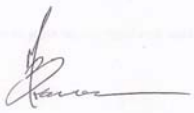
Final

Sydney Harbour Foreshore Authority

5 July 2010

0118591RP01_Final

www.erm.com

Approved by:	Tanya Martin
Position:	Partner
Signed:	
Date:	5 July 2010
Approved by:	Mark Branson
Position:	Project Manager
Signed:	
Date:	5 July 2010

Environmental Resources Management Australia Pty Ltd Quality System

This report was prepared in accordance with the scope of services set out in the contract between Environmental Resources Management Australia Pty Ltd ABN 12 002 773 248 (ERM) and the Client. To the best of our knowledge, the proposal presented herein accurately reflects the Client's intentions when the report was printed. However, the application of conditions of approval or impacts of unanticipated future events could modify the outcomes described in this document. In preparing the report, ERM used data, surveys, analyses, designs, plans and other information provided by the individuals and organisations referenced herein. While checks were undertaken to ensure that such materials were the correct and current versions of the materials provided, except as otherwise stated, ERM did not independently verify the accuracy or completeness of these information sources

Sydney Fish Market

Sydney Fish Market
Ecological Impact Assessment

5 July 2010

Reference: 0118591Ecol_FINAL

**Environmental Resources Management
Australia**

Building C, 33 Saunders Street
Pyrmont, NSW 2009
Telephone +61 2 8584 8888
Facsimile +61 2 8584 8800
www.erm.com

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EXECUTIVE SUMMARY

Sydney Fish Market Pty Ltd (SFM) is currently preparing a Development Application for redevelopment of the Sydney Fish Market site. Environmental Resources Management Australia Pty Ltd (ERM) was commissioned by SFM and the Sydney Harbour Foreshore Authority (SHFA) in 2002 to undertake an Assessment of Ecological and Aboriginal Heritage Issues at the Sydney Fish Markets site in Pyrmont, NSW. This report is a continuation of the engagement between SFM and ERM. The proposed project is considered as a Major Project for determination under Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The proposed redevelopment will occur on the existing Sydney Fish Markets site located in Pyrmont, NSW. The site is currently an urban space that operates as the existing wholesale and retail Sydney Fish Markets, at the north-eastern end of Blackwattle Bay, in Pyrmont, NSW. The site is situated on reclaimed land and contains very little native vegetation (ERM 2002). The proposed redevelopment will provide additional retail outlets and wholesale trading areas, a new harbourside public precinct and foreshore boardwalk. New two to four storey buildings incorporating car parking levels and a revitalised public foreshore precinct are proposed to be erected on the existing car parking area.

*Two Hill's Weeping Figs (*Ficus microcarpa* var. *hillii*), two Bangalay hybrids (*Eucalyptus botryoides* x *saligna*) and three Crimson Bottlebrush (*Callistemon citrinus*) occur within the site. Impacts of development on these trees and the fauna habitat that they provide were considered under the Environmental Planning and Assessment Act 1979 (EP&A Act). Due to the highly developed and disturbed nature of the site there are limited flora issues associated with the proposed development. No threatened terrestrial flora species listed under the NSW Threatened Species Conservation Act 1995 (TSC Act) or Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) have the potential to occur within the site. No marine vegetation recorded within the site is listed as threatened under the Fisheries Management Act 1994 (FM Act).*

*The site is unlikely to provide habitat for many native terrestrial fauna species. However, the Hill's Weeping Figs provide potential foraging habitat for the Grey Headed Flying-fox (*Pteropus poliocephalus*), listed as vulnerable under the TSC Act and vulnerable under the EPBC Act. An assessment of significance has been undertaken for the Grey-headed Flying-fox pursuant to the TSC Act and EPBC Act (see Annex D). The assessments found that with the implementation of avoidance measures, the proposed action is considered unlikely to have a significant impact on the Grey-headed Flying-fox. In addition, the proposed action has been referred to the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) for a decision by the Commonwealth Minister for the Environment, Heritage and the Arts as to whether the action is likely to have a significant impact on matters of national environmental significance.*

Sydney Fish Market Pty Ltd (SFM) is currently preparing a Development Application for redevelopment of the Sydney Fish Market site. Environmental Resources Management Australia Pty Ltd (ERM) was commissioned by SFM and the Sydney Harbour Foreshore Authority (SHFA) in 2002 to undertake an Assessment of Ecological and Aboriginal Heritage Issues at the Sydney Fish Markets site in Pyrmont, NSW. This report is a continuation of the engagement between SFM and ERM. The proposed project is considered as a Major Project for determination under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1**PROJECT DESCRIPTION**

The proposed redevelopment will occur on the existing Sydney Fish Markets site located in Pyrmont, NSW. The site is currently an urban space that operates as the existing wholesale and retail Sydney Fish Markets, at the north-eastern end of Blackwattle Bay, in Pyrmont, NSW. The site is situated on reclaimed land and contains very little native vegetation (ERM 2002).

The proposed redevelopment will provide additional retail outlets and wholesale trading areas, a new harbour side public precinct and foreshore boardwalk. New two to four storey buildings incorporating car parking levels and a revitalised public foreshore precinct are proposed to be erected on the existing car parking area. The existing Fish Market Main Building, located at the southern portion of the site will remain in the first instance and will be redeveloped at a future stage. It is anticipated that the redevelopment of the site will increase the retail and wholesale floor area by approximately 36%, with a multi-storey car park. A total of approximately 630 car spaces will be accommodated on the site.

The redevelopment will improve the Sydney Fish Market's appearance, its functional performance, occupational health and safety and environmental impact. It will increase the public domain, improve access to the foreshore and will upgrade this retail precinct to world class standards.

1.2**SITE**

The Sydney Fish Market is located on historically reclaimed small cover on the north-eastern edge of Blackwattle Bay, Ultimo. Pyrmont Bridge Road runs along the south east boundary and Bank Street along the eastern boundary. The boundary of the site is shown in *Figure 1.1* and the proposed site plan is shown in *Figure 1.2*.

This ecological impact assessment forms part of the Environmental Assessment Report to be submitted for determination under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of this assessment was to:

- identify and describe the conservation significance of ecological communities, flora species, fauna species and wildlife habitat within the Site;
- assess the potential impacts of the proposed development on any terrestrial threatened species, populations, ecological communities or their habitats;
- identify mitigation measures to avoid and minimise the extent of potential impacts.

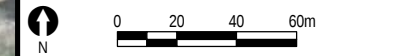


Legend
 Site

Source:
 Image © Google TM

Figure 1.1
Boundary of the Sydney Fish Market Study Area

Client:	Sydney Harbour Foreshore Authority		
Project:	Sydney Fish Markets Ecological Impact Assessment		
Drawing No:	0118591s_EIA_G001_R0.mxd		
Date:	29/06/2010	Drawing size:	A4
Drawn by:	SW	Reviewed by:	RGP
Projection:	GDA 1994 MGA Zone 56		
Scale:	Refer to Scale Bar		



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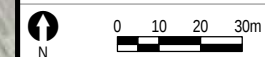


Legend
 — Site Plan
 Site

Source:
 Image © Google TM

Figure 1.2
Sydney Fish Market Site Plan

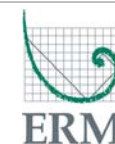
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Project:	Sydney Fish Markets Ecological Impact Assessment	
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Date:	29/06/2010	Drawing size: A4
Drawn by:	SW	Reviewed by: RGP
Projection:	GDA 1994 MGA Zone 56	
Scale:	Refer to Scale Bar	



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2.1 *ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires approval of the Commonwealth Minister for the Environment, Heritage and the Arts for actions that may have a significant impact on matters of National Environmental Significance (NES). The EPBC Act is administered by DEWHA and lists threatened species, ecological communities and other matters that are considered matters of NES. Any proposed action that is expected to have an impact on matters of NES must be referred to the Commonwealth Minister for Environment, Heritage and the Arts for assessment under the EPBC Act, or assessed under the bilateral agreement between the Commonwealth and the State of NSW.

2.2 *ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979*

The relevant planning legislation for NSW is the *Environmental Planning and Assessment Act 1979* (EP&A Act). The EP&A Act instituted a system of environmental planning and assessment in NSW and is administered by the Department of Planning. This Act sets out the framework for development control processes and environmental impact assessment on flora and fauna including threatened species, populations or ecological communities listed under the TSC Act and FM Act.

It also provides for the consideration of threatened species, populations or ecological communities when making a State Environmental Planning Policy (SEPP), Regional Environmental Plan (REP), Local Environmental Plan (LEP) or Development Control Plan (DCP).

The proposed development is considered as a “Major Project” to which Part 3A of the EP&A Act applies. The development of the type described in Clause 6 of the SEPP, being development that is described in Schedule 2 (Specified Sites) of the Major Projects SEPP, and is a major project to be determined under Part 3A of the EP&A Act.

Section 5A (s.5A) of the EP&A Act lists seven factors that must be taken into account in an Assessment of Significance to assess potential impacts of a proposed development on threatened species, populations or ecological communities (or their habitats) listed under the TSC Act. The Assessment of Significance determines whether a proposed development is likely to impose a significant effect on threatened biota, in which case, a Species Impact Statement (SIS) must be prepared and submitted with the development application.

There is no requirement for the consent authority to consider s.5A of the EP&A Act when determining a Project Application under Part 3A of the Act. However the assessment criteria established under Assessments of Significance, pursuant to s.5A of the EP&A will be used to determine if the proposal will have a significant impact on threatened species, populations and communities.

2.3 *THREATENED SPECIES CONSERVATION ACT 1995*

Projects determined by a statutory authority of the NSW State Government are required to be assessed in accordance with the EP&A Act, as amended by the TSC Act. The TSC Act lists threatened species, populations and ecological communities under Schedules 1 and 2 of the Act, that are priorities for conservation within NSW. Schedule 3 of the TSC Act lists Key Threatening Processes for species, populations and ecological communities within NSW. This flora and fauna assessment has considered potential impacts to all species, populations and ecological communities listed on the TSC Act that are known or considered likely to occur within the Study Area as a result of the investigations undertaken in the development of this assessment.

2.4 *FISHERIES MANAGEMENT ACT 1994*

The Fisheries Management Act 1994, as amended by the Fisheries Management Amendment Act 1997, is administered by the Department of Industry and Investment (NSW Fisheries) and includes provisions to declare and list threatened species of fish and marine vegetation, endangered populations and ecological communities, and key threatening processes.

The effect of a development or activity on aquatic threatened species must be considered by a consent and/or determining authority. Where there is likely to be a significant effect on a threatened species, the preparation of a species impact statement is required, and the consent or determining authority must seek the concurrence of the Director of Agriculture, Fisheries and Forestry.

Where an action is proposed that does not require approval under the EP&A Act, it may require approval under this FM Act. For actions which are likely to result in significant impacts to a threatened species, population or ecological community, a licence may be required. However, assessment under Major Projects SEPP are exempt from licences and only required to advise Fisheries of the proposed action and address any concerns.

2.5 *SYDNEY HARBOUR INTERTIDAL PROTECTED AREA*

Under the FMA Act, the whole of the foreshores of Sydney Harbour, including the Parramatta and Lane Cove rivers are identified as Sydney Harbour Intertidal Protected Area (IPA) and collecting intertidal animals is prohibited (excluding the foreshores of North Harbour, from Manly Point around to the western end of Forty Baskets Beach). The Sydney Fish Markets site is located within the IPA.

3.1

DESKTOP ASSESSMENT

Literature reviews and database searches were conducted to obtain recent data on flora and fauna species, populations, communities and habitats within the site, or with the potential to occur within the site. Information reviewed included:

- Environmental Resources Management Australia Pty Ltd (2002) Assessment of Ecological and Aboriginal Heritage Issues prepared for Sydney Harbour Foreshore Authority;
- the NSW Department of Environment, Climate Change and Water (DECCW) Atlas of NSW Wildlife database; and
- the Commonwealth Department of the Environment, Water, Heritage and the Arts (DEWHA) on-line search tool for Matters of National Environmental Significance (MNES).

Database searches were conducted to obtain records of species listed as threatened under the TSC Act previously recorded within a 10 kilometre (km) radius of the site. An additional search was conducted on matters of NES as listed under the Commonwealth EPBC Act considered to have the potential to occur within one kilometre radius of the site. Considering the highly urbanised surrounding environment and the localised development actions proposed a search buffer of one kilometre was considered suitable for determining matters of NES with the potential to be impacted. The results of the search are provided as *Annex A*.

A site survey was conducted by ERM (2002). Due to the highly developed and disturbed nature of the site a detailed site survey was not considered necessary for this assessment. However, an ERM ecologist walked around the site on Monday 28 June 2010 to confirm finding by ERM (2002).

Database and literature searches revealed that 16 flora species and 38 fauna species listed as threatened under the TSC Act have been previously recorded within a 10km radius of the site. An additional two threatened flora species, three threatened fauna species, five marine reptile species and 27 migratory species listed as matters of NES under the EPBC Act were considered to have the potential to occur within the site and the locality based on habitat occurrence.

A consideration of the occurrence of threatened species within the site as well as their potential to be impacted by the proposed works is provided in *Annex B*. Database search results from the DECCW Wildlife Atlas are provided as *Figure 4.3*.

4.1

FLORA

Results of the site visit (ERM 2002), literature reviews and database searches indicate that no threatened terrestrial flora species listed under the TSC Act or EPBC Act have the potential to occur within the site. No marine vegetation recorded within the site is listed as threatened under the FM Act (ERM 2002).

Some planted trees occur within the site, including two Hill's Weeping Figs (*Ficus microcarpa* var. *hillii*), two Bangalay trees (*Eucalyptus botryoides* × *saligna*) and three Crimson Bottlebrush (*Callistemon citrinus*). Impacts of development on these trees and the fauna habitat that they provide would need to be considered under the EP&A Act. Due to the highly developed and disturbed nature of the site there are limited flora issues associated with the proposed development. Photographs of the foreshore and the marine environment are provided in *Annex C*.

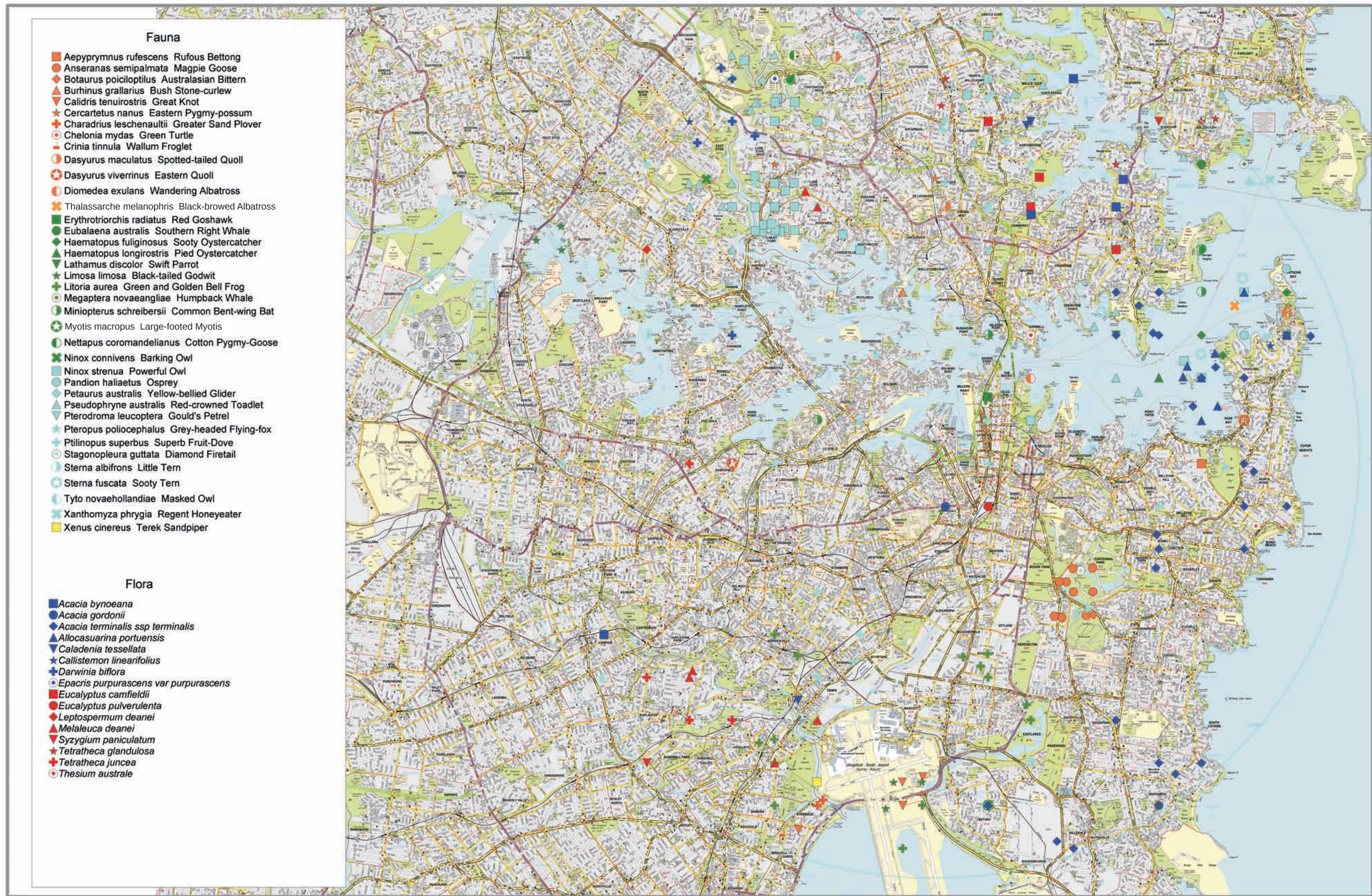


Figure 4.1
Threatened Species Within 10 km of the Sydney Fish Market

Client: Sydney Harbour Foreshore Authority
Project: Sydney Fish Markets Ecological Impact Assessment

Drawing No: 0118591s_EIA_C001_R0.cdr
Date: 29/06/2010 Drawing size: A3
Drawn by: GC Reviewed by: RGP
Scale: Refer to Scale Bar



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4.2

FAUNA

The site is unlikely to provide habitat for many native terrestrial fauna species. However, the Hill's Weeping Figs within the site provide potential foraging habitat for the Grey Headed Flying-fox (*Pteropus poliocephalus*), listed as vulnerable under the TSC Act and vulnerable under the EPBC Act. Other native terrestrial species include common native birds such as Australian Magpie (*Gymnorhina tibicen*) and Crimson Rosella (*Platycercus elegans*). Introduced animals such as the Black Rat (*Rattus rattus*) are present and are attracted to the market waste.

The waterfront is characterised by a steeply constructed built environment. The depth of the water is too deep to support intertidal or estuarine fauna habitats such as mangroves, seagrasses or saltmarshes. Therefore, potential impacts on these habitats and species that rely on these habitats are unlikely to be an issue. However, the site includes a marine environment and supports considerable numbers of native waterbirds including Australian White Ibis (*Threskiornis molucca*), Silver Gull (*Larus novaehollandiae*), Darter (*Anhinga melanogaster*), and Australian Pelican (*Pelecanus conspicillatus*) and is likely to support marine fish species.

4.3

THREATENED SPECIES, POPULATIONS OR COMMUNITIES

4.3.1

NSW Legislation

DECCW Wildlife Atlas database records of threatened species listed in the TSC Act within 10 km of the site are shown in *Figure 4.1*. One species, the Grey-headed Flying -fox, listed as vulnerable under the TSC Act has the potential to forage in the Hill's Weeping Figs within the site. A 7-Part-Test for this species been completed pursuant to the TSC Act and EP&A Act to assess the significance of impacts and the Grey-headed Flying-fox (see *Annex D*). The assessments found that with the implementation of avoidance measures, the proposed action is considered unlikely to have a significant impact on the Grey-headed Flying-fox.

No threatened species listed under the FM Act are likely to occur in the marine environment of the site. However, mitigation measures have been provided in *Section 5.2* to comply with NSW Fisheries guidelines for aquatic habitat management and fish conservation (NSW Fisheries 1999).

4.3.2

Commonwealth Legislation

A report on Matters of National Environmental Significance (NES) under the EPBC Act, which includes threatened species, populations and communities, is included in *Annex A*. This report lists matters of NES that may occur within one kilometre of the Sydney Fish Market site.

The Grey-headed Flying-fox is listed as vulnerable under the EPBC Act and has the potential to forage in the Hill's Weeping Figs within the site. An assessment of significance has been undertaken for the Grey-headed Flying-fox pursuant to the EPBC Act (see *Annex D*). The assessments found that with the implementation of avoidance measures, the proposed action is considered unlikely to have a significant impact on the Grey-headed Flying-fox.

The waters of Blackwattle Bay are highly urbanised active port areas with a high amount of shipping activity to and from the fish markets. The aquatic habitat of the site is unlikely to be significant for any other threatened species. These areas are considered unsuitable for marine turtles due to the lack of seagrasses, high level of port activity and urban pollutants from runoff and debris. However, some threatened species including the Southern Right Whale (*Eubalaena australis*) and Humpback Whale (*Megaptera novaeangliae*), could potentially occur in Sydney Harbour located approximately 4km north east of the site. Mitigation measures including adoption of weed and sediment control measures will ensure impacts to the marine environment are avoided.

The proposed action has been referred to the Commonwealth DEWHA for a decision by the Commonwealth Minister for the Environment, Heritage and the Arts as to whether the action is likely to have a significant impact on matters of national environmental significance.

This chapter provides an assessment of the likely impacts associated with the proposed works, the means by which the proposal has avoided impacts to threatened species, the mitigation measures that have been undertaken to reduce impacts and the offsets required.

The impact assessments of significance provided in full in *Annex D* assume that the mitigation measures outlined here form part of the ongoing works and Environmental Management Plan (EMP) to be developed for the project.

The proposed development will require the siting of infrastructure for the redevelopment of existing buildings, development of new two to four storey buildings incorporating car parking levels, new harbourside public precinct and foreshore boardwalk. The site is almost entirely covered by concrete, bitumen and artificial surface grass. Therefore, lay-down areas are not anticipated to impact any terrestrial flora or fauna at the site.

5.1

POTENTIAL IMPACTS

There are unlikely to be any ecological issues associated with direct impacts on terrestrial flora or fauna, including threatened species, populations or communities listed under the TSC Act, EPBC Act or FM Act.

However, potential indirect ecological impacts could include:

- introduction or spread of weeds from vehicles and personnel; and
- pollution or sedimentation of waterways associated with construction waste and runoff from lay down areas.

5.2

AVOIDING IMPACTS

As there are not likely to be any significant impacts associated with Matters of NES at the development site, there are no reportable measures to avoid or reduce impacts.

5.3

MITIGATION MEASURES AND RECOMMENDATIONS

This section provides general management measures that should be adopted during the proposed works to reduce the potential for impact to flora and fauna within the site.

5.3.1 *General Management Measures*

General management measures for implementation include:

- adoption of weed and sediment control measures;
- gross pollutant traps will need to be constructed upstream of any discharge point to prevent sediment being discharged into Blackwattle Bay;
- ensure all lay-down areas cleaned and debris removed following completion of construction works to avoid introduction of disease;
- development of a wash down facility and central grease trap for new buildings;
- proposed new tree planting of identified Grey-headed Flying-fox foraging habitat (Hill's Weeping Figs) within the site; and
- development of the waterfront should be designed to minimise the degree of shading, thereby reducing the potential impact on any marine species that may be present (NSW Fisheries 1999).

The ERM (2002) investigation indicated that the proposed action will cause minimal impacts on threatened flora and fauna species and therefore more intensive mitigative measures are not considered necessary to reduce impacts to the ecology of the area.

5.4 *OFFSET REQUIREMENTS*

The proposed action will not involve any clearing of vegetation and based on ERM (2002) field surveys the proposed action is not expected to have significant impacts on threatened flora and fauna species. Therefore, no offsets are required for this Project.

5.5 *CONCLUSIONS*

The development site is highly modified urban environment on reclaimed land that currently operates as a commercial fish market. The site is almost entirely comprised of warehouses, retail outlets and parking spaces built from concrete and bitumen. There are no remnant ecological communities at the site. There are very few numbers of native trees at the site, and there are no endangered flora species.

The site does contain a small amount of foraging habitat suitable for the Grey-headed Flying-fox although this habitat is not considered important habitat for an ecologically significant proportion of an important population and there will not be significant impacts to this species as a result of the proposed action (ERM 2010). The site does contain habitat for two migratory listed species, although the condition of the habitat is poor and the project will not involve any actions that will impact significantly on these species. There are no other threatened species that occur at the site, and the proposed action does not involve any actions that will impact on any other threatened species.

REFERENCES

Department of Environment, Climate Change and Water (2008) **Grey-headed Flying-fox Vulnerable Species Listing** Online Resource: <http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10697> Accessed 28/06/10

Department of Environment, Climate Change and Water (2008) **Draft Recovery Plan for the Grey-headed Flying-fox (*Pteropus poliocephalus*)** Prepared by Dr Peggy Eby and by the Department of Environment, Climate Change and Water NSW for the Australian Government Department of the Environment, Water, Heritage and the Arts.

Environmental Resources Management Australia Pty Ltd (2002) **Assessment of Ecological and Aboriginal Heritage Issues** Prepared for Sydney Harbour Foreshore Authority

Geoffrey and Katauskas Pty Ltd (2001) **Report to the Sydney Harbour Foreshore Authority on Geotechnical Investigation for Proposed Upgrade at Sydney Fish Market, Pyrmont, NSW.**

Ku-ring-gai Bat Conservation Society (2010) **Sydney Bats - Grey-headed Flying-foxes (*Pteropus poliocephalus*)** Online Resource: <http://www.sydneymbats.org.au/cms/index.php?id=13,74,0,0,1,0> Accessed 29/06/10

NSW Fisheries (1999) **Policy and Guidelines - Aquatic Habitat Management and Fish Conservation 1999** NSW Fisheries.

Annex A

EPBC Act Protected Matters Search Results

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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.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

 Map of Search Region including any Buffer

This map may contain data which are
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© PSMA Australia Limited

Search Type: Point
Buffer: 1 km
Coordinates: -33.872556,151.192340

 Thumbnail Map of Search Region

Report Contents: [Summary](#)
[Details](#)

- [Matters of NES](#)
- [Other matters protected by the EPBC Act](#)

- [Extra Information](#)
[Caveat](#)
[Acknowledgments](#)

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 - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance: (Ramsar Sites)	1
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	None
Threatened Species:	16
Migratory Species:	33

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. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>.

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

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

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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.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

 Map of Search Region including any Buffer

This map may contain data which are
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© PSMA Australia Limited

Search Type: Point
Buffer: 1 km
Coordinates: -33.872556,151.192340

 Thumbnail Map of Search Region

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[Details](#)

- [Matters of NES](#)
- [Other matters protected by the EPBC Act](#)

- [Extra Information](#)
[Caveat](#)
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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 - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance: (Ramsar Sites)	1
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	None
Threatened Species:	16
Migratory Species:	33

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. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>.

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

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. Information on EPBC Act permit requirements and application forms can be found at <http://www.environment.gov.au/epbc/permits/index.html>.

<u>Commonwealth Lands:</u>	4
<u>Commonwealth Heritage Places:</u>	1
<u>Places on the RNE:</u>	115
<u>Listed Marine Species:</u>	37
Whales and Other Cetaceans:	None
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.

State and Territory Reserves:	None
Other Commonwealth Reserves:	None
Regional Forest Agreements:	None

Details

Matters of National Environmental Significance

Wetlands of International Significance [[Dataset Information](#)]
(Ramsar Sites)

TOWRA POINT NATURE RESERVE Within same catchment as Ramsar site

Threatened Species [[Dataset Information](#)] Status Type of Presence

Birds

Lathamus discolor Endangered Species or species habitat may occur within area
Swift Parrot

Rostratula australis Vulnerable Species or species habitat may occur within area
Australian Painted Snipe

Frogs

Heleioporus australiacus Vulnerable Species or species habitat likely to occur within area
Giant Burrowing Frog

Litoria aurea Vulnerable Species or species habitat may occur within area
Green and Golden Bell Frog

Mammals

Chalinolobus dwyeri Vulnerable Species or species habitat may occur within area
Large-eared Pied Bat, Large Pied Bat

[Dasyurus maculatus maculatus \(SE mainland population\)](#)

Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)

Endangered Species or species habitat may occur within area

[Potorous tridactylus tridactylus](#)

Long-nosed Potoroo (SE mainland)

Vulnerable Species or species habitat may occur within area

[Pteropus poliocephalus](#)

Grey-headed Flying-fox

Vulnerable Species or species habitat likely to occur within area

Reptiles[Caretta caretta](#)

Loggerhead Turtle

Endangered Species or species habitat likely to occur within area

[Chelonia mydas](#)

Green Turtle

Vulnerable Species or species habitat likely to occur within area

[Dermochelys coriacea](#)

Leatherback Turtle, Leathery Turtle, Luth

Endangered Species or species habitat likely to occur within area

[Eretmochelys imbricata](#)

Hawksbill Turtle

Vulnerable Species or species habitat likely to occur within area

[Hoplocephalus bungaroides](#)

Broad-headed Snake

Vulnerable Species or species habitat likely to occur within area

Plants[Caladenia tessellata](#)

Thick-lipped Spider-orchid, Daddy Long-legs

Vulnerable Species or species habitat likely to occur within area

[Cryptostylis hunteriana](#)

Leafless Tongue-orchid

Vulnerable Species or species habitat may occur within area

[Pimelea curviflora var. curviflora](#)

Vulnerable Species or species habitat may occur within area

Migratory Species [[Dataset Information](#)]

Status Type of Presence

Migratory Terrestrial Species**Birds**[Haliaeetus leucogaster](#)

White-bellied Sea-Eagle

Migratory Species or species habitat likely to occur within area

[Hirundapus caudacutus](#)

White-throated Needletail

Migratory Species or species habitat may occur within area

[Merops ornatus](#)

Rainbow Bee-eater

Migratory Species or species habitat may occur within area

[Monarcha melanopsis](#)

Black-faced Monarch

Migratory Breeding may occur within area

[Myiagra cyanoleuca](#)

Satin Flycatcher

Migratory Breeding likely to occur within area

[Rhipidura rufifrons](#)

Rufous Fantail

Migratory Breeding may occur within area

Migratory Wetland Species**Birds**

<i>Ardea alba</i> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Migratory	Species or species habitat may occur within area
<i>Arenaria interpres</i> Ruddy Turnstone	Migratory	Species or species habitat known to occur within area
<i>Calidris acuminata</i> Sharp-tailed Sandpiper	Migratory	Species or species habitat known to occur within area
<i>Calidris canutus</i> Red Knot, Knot	Migratory	Species or species habitat known to occur within area
<i>Calidris ferruginea</i> Curlew Sandpiper	Migratory	Species or species habitat known to occur within area
<i>Calidris ruficollis</i> Red-necked Stint	Migratory	Species or species habitat known to occur within area
<i>Calidris tenuirostris</i> Great Knot	Migratory	Species or species habitat known to occur within area
<i>Charadrius bicinctus</i> Double-banded Plover	Migratory	Species or species habitat known to occur within area
<i>Charadrius leschenaultii</i> Greater Sand Plover, Large Sand Plover	Migratory	Species or species habitat known to occur within area
<i>Charadrius mongolus</i> Lesser Sand Plover, Mongolian Plover	Migratory	Species or species habitat known to occur within area
<i>Gallinago hardwickii</i> Latham's Snipe, Japanese Snipe	Migratory	Species or species habitat known to occur within area
<i>Heteroscelus brevipes</i> Grey-tailed Tattler	Migratory	Species or species habitat known to occur within area
<i>Limosa lapponica</i> Bar-tailed Godwit	Migratory	Species or species habitat known to occur within area
<i>Limosa limosa</i> Black-tailed Godwit	Migratory	Species or species habitat known to occur within area
<i>Numenius madagascariensis</i> Eastern Curlew	Migratory	Species or species habitat known to occur within area
<i>Numenius phaeopus</i> Whimbrel	Migratory	Species or species habitat known to occur within area
<i>Pluvialis fulva</i> Pacific Golden Plover	Migratory	Species or species habitat known to occur within area
<i>Rostratula benghalensis s. lat.</i> Painted Snipe	Migratory	Species or species habitat may occur within area
<i>Tringa stagnatilis</i> Marsh Sandpiper, Little Greenshank	Migratory	Species or species habitat known to occur within area
Migratory Marine Birds		
<i>Apus pacificus</i> Fork-tailed Swift	Migratory	Species or species habitat may occur within area
<i>Ardea alba</i>	Migratory	Species or species habitat may occur

Great Egret, White Egret		within area
<i>Ardea ibis</i>	Migratory	Species or species habitat may occur within area
Cattle Egret		
Migratory Marine Species		
Reptiles		
<i>Caretta caretta</i>	Migratory	Species or species habitat likely to occur within area
Loggerhead Turtle		
<i>Chelonia mydas</i>	Migratory	Species or species habitat likely to occur within area
Green Turtle		
<i>Dermochelys coriacea</i>	Migratory	Species or species habitat likely to occur within area
Leatherback Turtle, Leathery Turtle, Luth		
<i>Eretmochelys imbricata</i>	Migratory	Species or species habitat likely to occur within area
Hawksbill Turtle		

Other Matters Protected by the EPBC Act

Listed Marine Species [Dataset Information]	Status	Type of Presence
Birds		
<i>Apus pacificus</i>	Listed - overfly marine area	Species or species habitat may occur within area
Fork-tailed Swift		
<i>Ardea alba</i>	Listed - overfly marine area	Species or species habitat may occur within area
Great Egret, White Egret		
<i>Ardea ibis</i>	Listed - overfly marine area	Species or species habitat may occur within area
Cattle Egret		
<i>Arenaria interpres</i>	Listed	Species or species habitat known to occur within area
Ruddy Turnstone		
<i>Calidris acuminata</i>	Listed	Species or species habitat known to occur within area
Sharp-tailed Sandpiper		
<i>Calidris canutus</i>	Listed - overfly marine area	Species or species habitat known to occur within area
Red Knot, Knot		
<i>Calidris ferruginea</i>	Listed - overfly marine area	Species or species habitat known to occur within area
Curlew Sandpiper		
<i>Calidris melanotos</i>	Listed - overfly marine area	Species or species habitat known to occur within area
Pectoral Sandpiper		

<i>Calidris ruficollis</i> Red-necked Stint	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Calidris tenuirostris</i> Great Knot	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Charadrius bicinctus</i> Double-banded Plover	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Charadrius leschenaultii</i> Greater Sand Plover, Large Sand Plover	Listed	Species or species habitat known to occur within area
<i>Charadrius mongolus</i> Lesser Sand Plover, Mongolian Plover	Listed	Species or species habitat known to occur within area
<i>Charadrius ruficapillus</i> Red-capped Plover	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Gallinago hardwickii</i> Latham's Snipe, Japanese Snipe	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
<i>Heteroscelus brevipes</i> Grey-tailed Tattler	Listed	Species or species habitat known to occur within area
<i>Himantopus himantopus</i> Black-winged Stilt	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Hirundapus caudacutus</i> White-throated Needletail	Listed - overfly marine area	Species or species habitat may occur within area
<i>Lathamus discolor</i> Swift Parrot	Listed - overfly marine area	Species or species habitat may occur within area
<i>Limosa lapponica</i> Bar-tailed Godwit	Listed	Species or species habitat known to occur within area
<i>Limosa limosa</i> Black-tailed Godwit	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Merops ornatus</i> Rainbow Bee-eater	Listed - overfly	Species or species habitat may occur within area

	marine area	
<i>Monarcha melanopsis</i> Black-faced Monarch	Listed - overfly marine area	Breeding may occur within area
<i>Myiagra cyanoleuca</i> Satin Flycatcher	Listed - overfly marine area	Breeding likely to occur within area
<i>Numenius madagascariensis</i> Eastern Curlew	Listed	Species or species habitat known to occur within area
<i>Numenius phaeopus</i> Whimbrel	Listed	Species or species habitat known to occur within area
<i>Philomachus pugnax</i> Ruff (Reeve)	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Pluvialis fulva</i> Pacific Golden Plover	Listed	Species or species habitat known to occur within area
<i>Recurvirostra novaehollandiae</i> Red-necked Avocet	Listed - overfly marine area	Species or species habitat known to occur within area
<i>Rhipidura rufifrons</i> Rufous Fantail	Listed - overfly marine area	Breeding may occur within area
<i>Rostratula benghalensis s. lat.</i> Painted Snipe	Listed - overfly marine area	Species or species habitat may occur within area
<i>Tringa stagnatilis</i> Marsh Sandpiper, Little Greenshank	Listed - overfly marine area	Species or species habitat known to occur within area

Reptiles

<i>Caretta caretta</i> Loggerhead Turtle	Listed	Species or species habitat likely to occur within area
<i>Chelonia mydas</i> Green Turtle	Listed	Species or species habitat likely to occur within area
<i>Dermochelys coriacea</i> Leatherback Turtle, Leathery Turtle, Luth	Listed	Species or species habitat likely to occur within area
<i>Eretmochelys imbricata</i> Hawksbill Turtle	Listed	Species or species habitat likely to occur within area

Commonwealth Lands [[Dataset Information](#)]

Communications, Information Technology and

the Arts - Australian Postal Corporation

Communications, Information Technology and
the Arts - Telstra Corporation Limited

Defence

Unknown

Commonwealth Heritage Places [[Dataset Information](#)]

[Pyrmont Post Office NSW](#)

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

Note that not all Indigenous sites may be listed.

Historic

[Australian Financial Press Building NSW](#)

[Australian Joint Stock Bank \(former\) NSW](#)

[Bakery \(former\) NSW](#)

[Bristol Arms Hotel NSW](#)

[CSR Cooperage Building \(former\) NSW](#)

[CSR Gate House \(former\) NSW](#)

[CSR Laboratory B Building \(former\) NSW](#)

[CSR Main Office Building \(former\) NSW](#)

[CSR Managers House \(former\) NSW](#)

[CSR Store House \(former\) NSW](#)

[CSR Tablet House \(former\) NSW](#)

[Commercial Terrace Houses NSW](#)

[Commercial Terrace NSW](#)

[Commercial Terrace NSW](#)

[Commercial Terrace NSW](#)

[Commercial Terrace NSW](#)

[Commonwealth Bank NSW](#)

[Corner Shop NSW](#)

[Cottage NSW](#)

[Cottage NSW](#)

[Council Terrace Houses NSW](#)

[Duke of Edinburgh Hotel NSW](#)

[Dunkirk Hotel NSW](#)

[Edwin Davey & Sons Flour Mill NSW](#)

[Elder Smith Goldsbrough Mort and Company No 3 Woolstore NSW](#)

[Elder Smith Goldsbrough Mort No 1 Woolstore NSW](#)

[Electricity Substation NSW](#)

[Farmers and Graziers No 2 Woolstore \(former\) NSW](#)

[Farmers and Graziers Woolstore No1 NSW](#)
[Festival Records Building NSW](#)
[Georgian Cottage NSW](#)
[Georgian Terrace NSW](#)
[Georgian Terrace NSW](#)
[Glasgow Arms Hotel NSW](#)
[Glebe Conservation Area NSW](#)
[Glebe Courthouse NSW](#)
[Glebe Island Bridge NSW](#)
[House NSW](#)
[House NSW](#)
[House NSW](#)
[Houses NSW](#)
[Houses NSW](#)
[J H Geddes Woolstore \(former\) NSW](#)
[John Street Terrace Group NSW](#)
[Lord Wolseley Hotel NSW](#)
[Low Level Sewage Pumping Station No 2 NSW](#)
[Lyndhurst NSW](#)
[MMI Building NSW](#)
[Maybanke Kindergarten NSW](#)
[McCafferys Building NSW](#)
[McComas and Price Williams Wool Press NSW](#)
[Memorial to World War One NSW](#)
[New York Hotel NSW](#)
[Pitt Son and Badgery Wool Store NSW](#)
[Police Station NSW](#)
[Powerhouse Museum \(Stage Two\) NSW](#)
[Pymont / Ultimo Centre NSW](#)
[Pymont Bridge Hotel NSW](#)
[Pymont Bridge NSW](#)
[Pymont Bridge Road Hotel NSW](#)
[Pymont Conservation Area NSW](#)
[Pymont Fire Station NSW](#)
[Pymont Point Carriageway Dividing Fence NSW](#)
[Pymont Point Escarpment Face NSW](#)
[Pymont Point Escarpment Palisade Fence and Stone Gateposts NSW](#)
[Pymont Point Railway Cutting & Tunnel NSW](#)

[Pymont Post Office NSW](#)
[Pymont Power Station Building A NSW](#)
[Pymont Public School \(former\) NSW](#)
[Pymont Square Group NSW](#)
[Pymont and Murray Streets Residential Group NSW](#)
[Quarrymans Hotel NSW](#)
[Railway Viaduct NSW](#)
[Royal Edward Victualling Yard Group NSW](#)
[Royal Pacific Hotel NSW](#)
[Schute, Bell, Badgery & Lumby Store NSW](#)
[St Bedes Church, School & Presbytery NSW](#)
[St Johns Road Group NSW](#)
[Terminus Hotel NSW](#)
[Terrace House NSW](#)
[Terrace House NSW](#)
[Terrace House NSW](#)
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[Terrace Houses NSW](#)
[Terrace NSW](#)
[Terrace NSW](#)
[The Hub NSW](#)

[Ultimo Conservation Area NSW](#)

[Ultimo Post Office \(former\) NSW](#)

[Ultimo Sewage Pumping Station NSW](#)

[Ultimo Uniting Church Group NSW](#)

[Waite and Bull Building NSW](#)

[Ways Terrace NSW](#)

[Westpac Bank Archives \(former\) NSW](#)

[Wharf 19, 20 & 21 NSW](#)

[Woolbrokers Arms Hotel NSW](#)

[Woolstores No 1 Group NSW](#)

[Woolstores No 2 Group NSW](#)

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 [migratory](#) and [marine](#) provisions of the Act have been mapped.

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.

Acknowledgments

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

- [New South Wales National Parks and Wildlife Service](#)
- [Department of Sustainability and Environment, Victoria](#)
- [Department of Primary Industries, Water and Environment, Tasmania](#)
- [Department of Environment and Heritage, South Australia Planning SA](#)
- [Parks and Wildlife Commission of the Northern Territory](#)
- [Environmental Protection Agency, Queensland](#)
- [Birds Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [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](#)
- Other groups and individuals

[ANUcliM Version 1.8, Centre for Resource and Environmental Studies, Australian National University](#) was used extensively for the production of draft maps of species distribution.

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

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[Department of the Environment, Water, Heritage and the Arts](#)

GPO Box 787 Canberra ACT 2601 Australia
Telephone: +61 (0)2 6274 1111

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Annex B

Rare and Threatened Species Assessment

Table B.1 Rare and Threatened Species Habitat Assessment

Common Name	Species Name	TSC Act	EPBC Act	Habitat	Likelihood of Occurrence	Assessment of Significance Required
Birds						
Magpie Goose	<i>Anseranas semipalmata</i>	V	Mn	Species requires dense growth of rushes and sedges. Roosts at the edge of swamps or in a paperbark grove, where they perch at night on thin twigs.	Low	No
Australasian Bittern	<i>Botaurus poiciloptilus</i>	V	-	Species favours permanent freshwater wetlands with tall, dense vegetation.	Low	No
Bush Stone-curlew	<i>Burhinus grallarius</i>	E	-	Species inhabits lightly timbered open forests and woodlands with a sparse grassy ground layer.	Low	No
Great Knot	<i>Calidris tenuirostris</i>	V	Mi, Mn	Intertidal sand and mudflats in estuaries. Roosts on beaches and other open sites. Breeds in subarctic highlands of north-eastern Siberia.	Low	No
Greater Sand Plover	<i>Charadrius leschenaultii</i>	V	Mi, Mn	Intertidal sand and mudflats in estuaries. Roosts on sandy beaches or rocky shores. Breeds in north-western China, Mongolia and adjacent areas of Russia.	Low	No
Wandering Albatross	<i>Diomedea exulans</i>	E	V	Species spends the majority of their time in flight, over the southern oceans.	Moderate	No
Black-browed Albatross	<i>Thalassarche melanophris</i>	V	V	Species spends most of its time at sea. Breeds on small isolated islands.	Low	No
Red Goshawk	<i>Erythrorhynchus radiatus</i>	CE	V	Species mainly found along or near watercourses, in swamp forest and woodlands.	Low	No
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>	V	-	Intertidal rocky and coral reefs, mostly on ocean shores. Occasionally frequents sandspits and tidal mudflats.	Low	No
Pied Oystercatcher	<i>Haematopus longirostris</i>	V	-	Favours intertidal flats of inlets and bays, open beaches and sandbanks.	Low	No
Swift Parrot	<i>Lathamus discolor</i>	E	E	In NSW mostly occurs on the coast and south west slopes in forested areas foraging on winter flowering eucalypts.	Low	No
Black-tailed Godwit	<i>Limosa limosa</i>	V	-	Intertidal sand and mud flats in estuaries.	Low	No

Common Name	Species Name	TSC Act	EPBC Act	Habitat	Likelihood of Occurrence	Assessment of Significance Required
Cotton Pygmy-Goose	<i>Nettapus coromandelianus</i>	E	-	Species inhabits freshwater lakes, lagoons, swamps and dams.	Low	No
Barking Owl	<i>Ninox connivens</i>	V	-	Species inhabits woodland and open forest.	Low	No
Powerful Owl	<i>Ninox strenua</i>	V	-	Species inhabits a range of vegetation types, from woodland to tall open wet forest.	Low	No
Osprey	<i>Pandion haliaetus</i>	V	-	Species favour coastal areas, especially the mouths of large rivers, lagoons and lakes. Nests in a massive pile of sticks on ground or in tree. Forages for fish while hovering over water.	Low	No
Gould's Petrel	<i>Pterodroma leucoptera leucoptera</i>	V	E	Pelagic species. Summer migrant approximately five kilometres from shore. Breeds on Cabbage Tree Island off Port Stephens.	Low	No
Superb Fruit-Dove	<i>Ptilinopus superbus</i>	V	-	Species inhabits rainforest and similar closed forests.	Low	No
Australian Painted Snipe	<i>Rostratula benghalensis</i>	E	V	Species inhabits shallow inland wetlands, either freshwater or brackish.	Low	No
Diamond Firetail	<i>Stagonopleura guttata</i>	V	-	Species found in grassy eucalypt woodlands.	Low	No
Little Tern	<i>Sterna albifrons</i>	E	Mi, Mn	Intertidal sand and mudflats in estuaries. Roosts in open sandy areas. Breeds in south-east Australia.	Low	No
Sooty Tern	<i>Sterna fuscata</i>	V	Mn	Species found over tropical and sub-tropical seas and on associated islands.	Low	No
Masked Owl	<i>Tyto novaehollandiae</i>	V	-	Species inhabits dry eucalypt forests and woodlands.	Low	No
Regent Honeyeater	<i>Anthochaera phrygia</i>	E	E	Species inhabits dry open forest and woodland. Nomadic following rich sources of nectar, principally winter flowering eucalypts.	Low	No
Terek Sandpiper	<i>Xenus cinereus</i>	V	Mi, Mn	Species favours mudbanks and sandbanks located near mangroves.	Low	No

Common Name	Species Name	TSC Act	EPBC Act	Habitat	Likelihood of Occurrence	Assessment of Significance Required
Frogs						
Wallum Froglet	<i>Crinia tinnula</i>	V	-	Species found only in acid paperbark swamps and sedge swamps.	Low	No
Giant Burrowing Frog	<i>Heleioporus australiacus</i>	V	V	Species generally occurs in soaks or pools within first or second order streams.	Low	No
Green and Golden Bell Frog	<i>Litoria aurea</i>	E	V	Species inhabits marshes, dams and stream-sides, particularly those containing bulrushes.	Low	No
Red-crowned Toadlet	<i>Pseudophryne australis</i>	V	-	Occurs in open forests, mostly on Hawkesbury and Narrabeen Sandstones.	Low	No
Mammals						No
Rufous Bettong	<i>Aepyprymnus rufescens</i>	V	-	Species inhabit a variety of forests from tall, moist eucalypt forest to open woodland.	Low	No
Eastern Pygmy-possum	<i>Cercartetus nanus</i>	V	-	Species found in a broad range of habitats from rainforest through sclerophyll forest.	Low	No
Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	V	V	Species found in well-timbered areas containing gullies.	Low	No
Spot-tailed Quoll	<i>Dasyurus maculatus maculatus</i>	V	E	Species occurs in rainforest, open forest, woodland, coastal heath and inland riparian forest.	Low	No
Eastern Quoll	<i>Dasyurus viverrinus</i>	E	-	Species occurs in dry sclerophyll forest, scrub, heathland and cultivated land.	Low	No
Southern Right Whale	<i>Eubalaena australis</i>	V	E	Species inhabits temperate and sub polar waters of the Southern Hemisphere. May occur offshore in Sydney Harbour.	Low	No
Humpback Whale	<i>Megaptera novaeangliae</i>	V	V	Species occurs in oceanic and coastal waters worldwide. May occur offshore in Sydney Harbour.	Low	No

Common Name	Species Name	TSC Act	EPBC Act	Habitat	Likelihood of Occurrence	Assessment of Significance Required
Eastern Bentwing-Bat	<i>Miniopterus schreibersii oceanensis</i>	V	-	Species occurs in forested areas and roosts in caves.	Low	No
Large-footed Myotis	<i>Myotis macropus</i>	V	-	Species is found in the coastal band, rarely found more than 100 km inland, except along major rivers.	Low	No
Long-nosed Potoroo	<i>Potorous tridactylus tridactylus</i>	V	V	Species inhabits coastal heaths and dry and wet sclerophyll forests.	Low	No
Yellow-bellied Glider	<i>Petaurus australis</i>	V	-	Species occur in tall mature eucalypt forest generally in areas with high rainfall.	Low	No
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	V	V	Species occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are generally located within 20 km of a regular food source. Known roosting habitat within Sydney Royal Botanic Gardens.	High	Yes
Reptiles						
Loggerhead Turtle	<i>Caretta caretta</i>	E	E	Species are found in tropical and temperate waters off the Australian coast.	Low	No
Green Turtle	<i>Chelonia mydas</i>	V	V	Ocean-dwelling species spending most of its life at sea.	Low	No
Leatherback Turtle	<i>Dermochelys coriacea</i>	V	E	Species occurs in tropical and temperate seas and in all coastal waters.	Low	No
Hawksbill Turtle	<i>Eretmochelys imbricata</i>	-	V	Species typically occur in tidal and sub-tidal coral and rocky reef habitats.	Low	No
Broad-headed Snake	<i>Hoplocephalus bungaroides</i>	E	V	Species shelters in rock crevices and under flat sandstone rocks on exposed cliff edges.	Low	No

Annex C

Photographs



Photograph C.1 Foreshore near Pyrmont Bridge Road



Photograph C.2 Marine environment for shorebirds



Photograph C.3 Mature Hill's Weeping Fig trees (Ficus microcarpa var. hillii)

Annex D

Assessment of Significance

D.1 ASSESSMENT OF SIGNIFICANCE

The following assessment is based on the Assessment of Significance (seven part test) in Section 5A of the EP&A Act. These factors allow a determination of whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats for those species and ecological communities which have been recorded or are likely to occur in the site.

Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	
The Grey-headed Flying-fox is listed as Vulnerable under the TSC Act. This species is found within 200 km of the eastern coast of Australia, from Bundaberg in Queensland to Melbourne in Victoria. The Grey-headed Flying-fox feed on the nectar and pollen of native trees, in particular Eucalyptus, Melaleuca and Banksia, and fruits of rainforest trees and vines. The species also feed on introduced trees including commercial cultivated gardens and fruit crops. Grey-headed Flying-foxes congregate in large numbers at roosting sites (camps) that are generally located within 20 kilometres (km) of a regular food source and are commonly found close to water in vegetation with a dense canopy. Individuals generally exhibit a high fidelity to traditional camps and return annually to give birth and rear offspring. They forage opportunistically, often at distances up to 30 km from camps, and occasionally up to 60-70 km per night, in response to patchy food resources (DECCW 2008). The Grey-headed Flying-fox was not recorded within the site. However, two Hill's Weeping Figs within the site were identified to provide potential foraging habitat for the species.	
(a)	<i>in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,</i> The species requires vegetation with a dense canopy for shelter and/or breeding. These habitats are not found within the site. There are currently three major Grey-headed Flying-fox camps within the Sydney region, Ku-ring-gai, Cabramatta Creek, and the Royal Botanic Gardens (Ku-ring-gai Bat Conservation Society 2010). These camps are located within 24 km of the site, with the closest camp being the Royal Botanic Gardens located approximately 1.6 km south-east of the site. The proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Grey-headed Flying-fox individuals from these known camps have the potential to forage on two Hill's Weeping Figs within the site. However, the trees are not identified as remnant vegetation and are isolated in a built environment. Therefore, the trees are not considered important foraging habitat for the species. Consequently, the proposed action is unlikely to have an adverse effect on the life cycle of the species such that a viable local population of the species would be placed at risk of extinction.
(b)	<i>in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,</i>
Not applicable.	

(c)	<i>in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:</i>
	<i>(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or</i>
	Not applicable.
	<i>(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,</i>
	Not applicable.
(d)	<i>in relation to the habitat of a threatened species, population or ecological community:</i>
	<i>(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and</i>
	Two Hill's Weeping Figs within the site were identified to provide potential foraging habitat for the Grey-headed Flying-fox. These trees will be removed due to the proposed action. However, tree planting is proposed to occur within the site to replace to removed Hill's Weeping Figs.
	<i>(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and</i>
	This species is a wide ranging species which forages over the canopy. The two Hill's Weeping Figs identified as potential foraging habitat for the Grey-headed Flying-fox are not representative of remnant vegetation and are isolated from other areas of habitat within a built environment. Therefore, an area of habitat is not likely to become fragmented or isolated from other areas of habitat as a result of the proposed action.
	<i>(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality,</i>
	Three known Grey-headed Flying-fox camps are located within 24 km of the site (Kuring-gai Bat Conservation Society 2010). However, the proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Grey-headed Flying-fox individuals from these known camps have the potential to forage on two Hill's Weeping Figs within the site. However, the trees are not representative of important habitat for the species due to the trees being isolated within a built environment.
(e)	<i>whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),</i>
	No areas of critical habitat have been identified for the Grey-headed Flying-fox.

(f)	<i>whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,</i>
	A Draft National Recovery plan for the Grey-headed Flying-fox (DECCW 2009) has been prepared providing the actions necessary to stop the decline of the species. The Recovery Plan outlines ten priority actions for the recovery of this species: • identify and protect foraging habitat critical to the survival of Grey-headed Flying-foxes across their range; • enhance winter and spring foraging habitat for Grey-headed Flying-foxes; • identify, protect and enhance roosting habitat critical to the survival of Grey-headed Flying-foxes; • significantly reduce levels of deliberate Grey-headed Flying-fox destruction associated with commercial horticulture; • provide information and advice to managers, community groups and members of the public that are involved with controversial flying-fox camps; • produce and circulate educational resources to improve public attitudes toward Grey-headed Flying-foxes, promote the recovery program to the wider community and encourage participation in recovery actions; • monitor population trends for the Grey-headed Flying-fox; • assess the impacts on Grey-headed Flying-foxes of electrocution on powerlines and entanglement in netting and barbed wire, and implement strategies to reduce these impacts; • oversee a program of research to improve knowledge of the demographics and population structure of the Grey-headed Flying-fox; and • maintain a National Recovery Team to oversee the implementation of the Grey-headed Flying-fox National Recovery Plan (DECCW 2009). The proposed action incorporating mitigation measures is unlikely to contravene these strategies or interfere substantially with the recovery of the Grey-headed Flying-fox.
(g)	<i>whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.</i>
	The proposed action is not expected to constitute a key threatening process for the Grey-headed Flying-fox.

D.2 COMMONWEALTH ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 ASSESSMENT

The Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* requires approval for actions that may have a significant impact on matters of national environmental significance or Commonwealth land. The proposed action has been referred to the Commonwealth DEWHA for a decision by the Commonwealth Minister for the Environment, Heritage and the Arts as to whether the action is likely to have an significant impact on matters of national environmental significance.

Following is an assessment of the impact of the proposal on the Grey-headed Flying-fox against the Commonwealth significant impact assessment criteria as set out in the EPBC Act Policy Statement 1.1 Significant Impact Guidelines Matters of National Environmental Significance (May 2006).

D.2.1 Vulnerable Species Significant Impact Criteria

Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	
The Grey-headed Flying-fox was not recorded within the site. However, two Hill's Weeping Figs within the site were identified to provide potential foraging habitat for the species.	
<i>An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:</i>	
<i>a)</i>	<i>lead to a long-term decrease in the size of an important population of a species;</i>
The species requires vegetation with a dense canopy for shelter and/or breeding. These habitats are not found within the site. Three known Grey-headed Flying-fox camps are located within 24 km of the site. However, the proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Grey-headed Flying-fox individuals from these known camps have the potential to forage on two Hill's Weeping Figs within the site. However, the trees are not identified as remnant vegetation and are isolated in a built environment. Therefore, are not considered important foraging habitat for the species. Consequently, the proposed action is unlikely to lead to a long-term decrease in the size of an important population of a Grey-headed Flying-fox.	
<i>b)</i>	<i>reduce the area of occupancy of an important population;</i>
Three known Grey-headed Flying-fox camps are located within 24 km of the site (Kuring-gai Bat Conservation Society 2010). However, the proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Grey-headed Flying-fox individuals from these known camps have the potential to forage on two Hill's Weeping Figs within the site. However, the trees are not representative of important habitat for the species due to the trees being isolated within a built environment. Consequently, the proposed action will not reduce the area of occupancy of an important population of Grey-headed Flying-fox.	
<i>c)</i>	<i>fragment an existing important population into two or more populations;</i>
This species is a wide ranging species which forages over the canopy. The two Hill's Weeping Figs identified as potential foraging habitat for the Grey-headed Flying -fox are not representative of remnant vegetation and are isolated from other areas of habitat within a built environment. Therefore, the proposed action will not fragment an existing important Grey-headed Flying -fox population into two or more populations.	

<i>d)</i>	<i>adversely affect habitat critical to the survival of a species;</i>
	Two Hill's Weeping Figs within the site were identified to provide potential foraging habitat for the Grey-headed Flying-fox. However, these trees are not representative of important habitat for the species due to the trees being isolated within a built environment. Therefore, the proposed action will not adversely affect habitat critical to the survival of the Grey-headed Flying-fox.
<i>e)</i>	<i>disrupt the breeding cycle of an important population;</i>
	The species requires vegetation with a dense canopy for shelter and/or breeding. These habitats are not found within the site. Three known Grey-headed Flying-fox camps are located within 24 km of the site (Ku-ring-gai Bat Conservation Society 2010). However, the proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Therefore, the proposed action will not disrupt the breeding cycle of an important Grey-headed Flying-fox population.
<i>f)</i>	<i>modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline;</i>
	Three known Grey-headed Flying-fox camps are located within 24 km of the site (Ku-ring-gai Bat Conservation Society 2010). However, the proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Grey-headed Flying-fox individuals from these known camps have the potential to forage on two Hill's Weeping Figs within the site. However, the trees are not representative of important habitat for the species due to the trees being isolated within a built environment. Consequently, the proposed action will not modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the Grey-headed Flying-fox is likely to decline.
<i>g)</i>	<i>result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat;</i>
	The proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Mitigation measures (see <i>Section 5.2.1</i>) will be implemented to ensure invasive species do not result as a result of the proposed action. Therefore, the proposed action will not result in invasive species that are harmful to a vulnerable species becoming established in the Grey-headed Flying-fox habitat.
<i>h)</i>	<i>introduce disease that may cause the species to decline; or</i>
	The proposed action will occur in an urban environment and is not expected to impact on any matters outside the site. Mitigation measures (see <i>Section 5.2.1</i>) will be implemented to ensure the proposed action does not result in disease that may cause the Grey-headed Flying-fox to decline.
<i>i)</i>	<i>interfere substantially with the recovery of the species.</i>
	A Draft National Recovery plan for the Grey-headed Flying-fox (DECCW 2009) has been prepared providing the actions necessary to stop the decline of the species. The Recovery Plan outlines ten priority actions for the recovery of this species: • identify and protect foraging habitat critical to the survival of Grey-headed Flying-foxes across their range; • enhance winter and spring foraging habitat for Grey-headed Flying-foxes; • identify, protect and enhance roosting habitat critical to the survival of Grey-headed Flying-foxes; • significantly reduce levels of deliberate Grey-headed Flying-fox destruction associated with commercial horticulture;

- provide information and advice to managers, community groups and members of the public that are involved with controversial flying-fox camps;
- produce and circulate educational resources to improve public attitudes toward Grey-headed Flying-foxes, promote the recovery program to the wider community and encourage participation in recovery actions;
- monitor population trends for the Grey-headed Flying-fox;
- assess the impacts on Grey-headed Flying-foxes of electrocution on powerlines and entanglement in netting and barbed wire, and implement strategies to reduce these impacts;
- oversee a program of research to improve knowledge of the demographics and population structure of the Grey-headed Flying-fox; and
- maintain a National Recovery Team to oversee the implementation of the Grey-headed Flying-fox National Recovery Plan (DECCW 2009).

The proposed action incorporating mitigation measures is unlikely to contravene these strategies or interfere substantially with the recovery of the Grey-headed Flying-fox.

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Environmental Resources Management

Building C, 33 Saunders Street
Pyrmont NSW 2009
Locked Bag 24,
Broadway NSW 2007

T: 61 2 8584 8888
F: 61 2 8584 8800
www.erm.com

