



3.3 RESULTS

3.3.1 Species Recorded During Previous Studies

Fauna surveys and compilation lists prepared for the Region have identified 43 native mammals, 198 native birds, 39 reptiles and 15 frogs (see Appendix 4). In addition to these, a number of introduced animals have also been recorded (see Appendix 4). Of those native species previously recorded in the Region, 41 are 'threatened' under the Schedules to the EPBC and/or TSC Acts. Note: these totals are provided for both aquatic and terrestrial fauna.

However, this ecological assessment constitutes a 'terrestrial only' fauna survey: there are few native species present; and there is a low diversity of fauna habitats within the Study Area.

The Study Area is considered to contain poor quality habitat for native fauna species. Further, given the nature of the proposed development, it is considered unlikely that the Proposal will impact unduly on adjacent terrestrial areas or on any existing fauna habitats.

A review of the findings of the previous ecological studies and the various databases indicates the Study Area is within the vicinity of known occurrences of numerous threatened species (See Table 3.1).

Table 3.1: Threatened Fauna Species Previously Recorded in the Study Region.

* - Detected in the Study Area during the current field investigation.

MAMMALS		
New Zealand Fur-seal	<i>Arctocephalus forsteri</i>	TSC Act
Australian Fur-seal	<i>Arctocephalus pusillus doriferus</i>	TSC Act
Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	EPBC Act
Tiger Quoll	<i>Dasyurus maculatus maculatus</i>	EPBC Act
Southern Brown Bandicoot	<i>Isodon obesulus obesulus</i>	EPBC Act
Eastern Bentwing Bat	<i>Miniopterus schreibersii oceanensis</i>	TSC Act
Long-nosed Bandicoot	<i>Perameles nasuta</i>	TSC Act
Koala	<i>Phascolarctos cinereus</i>	TSC Act
Long-nosed Potoroo	<i>Potorous tridactylus tridactylus</i>	EPBC Act
Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>	EPBC Act and TSC Act
BIRDS		
Antipodean Albatross	<i>Diomedea antipodensis</i>	EPBC Act
Wandering Albatross	<i>Diomedea exulans</i>	TSC Act
Gibson's Albatross	<i>Diomedea gibsoni</i>	EPBC Act
Little Penguin	<i>Eudyptula minor</i>	TSC Act
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>	TSC Act
Swift Parrot	<i>Lathamus discolor</i>	EPBC Act and TSC Act
Southern Giant Petrel	<i>Macronectes giganteus</i>	EPBC Act and TSC Act
Northern-Giant Petrel	<i>Macronectes halli</i>	EPBC Act
Powerful Owl	<i>Ninox strenua</i>	TSC Act
Barking Owl	<i>Ninox connivens</i>	TSC Act
Osprey	<i>Pandion haliaetus</i>	TSC Act



Gould's Petrel	<i>Pterodroma leucoptera leucoptera</i>	EPBC and TSC Act
Superb Fruit-dove	<i>Ptilinopus superbis</i>	TSC Act
Australian Painted Snipe	<i>Rostratula australis</i>	EPBC Act
Diamond Firetail	<i>Stagonopleura guttata</i>	TSC Act
Sooty Tern	<i>Sterna fuscata</i>	TSC Act
Buller's Albatross	<i>Thalassarche bulleri</i>	EPBC Act
Shy Albatross	<i>Thalassarche cauta</i>	EPBC Act and TSC Act
Campbell Albatross	<i>Thalassarche impavida</i>	EPBC Act
Black-browed Albatross	<i>Thalassarche melanophrys</i>	TSC Act
Salvin's Albatross	<i>Thalassarche salvini</i>	EPBC Act
White-capped Albatross	<i>Thalassarche steadi</i>	EPBC Act
Regent Honeyeater	<i>Xanthomyza Phrygia</i>	EPBC Act and TSC Act
AMPHIBIANS		
Giant Burrowing Frog	<i>Heleioporus australiacus</i>	EPBC Act and TSC Act
Green and Golden Bell Frog	<i>Litoria aurea</i>	EPBC Act
Stuttering Frog	<i>Mixophyes balbus</i>	EPBC Act
Red-crowned Toadlet	<i>Pseudophryne australis</i>	TSC Act
REPTILES		
Green Turtle	<i>Chelonia mydas</i>	EPBC Act and TSC Act
Leathery Turtle	<i>Dermochelys coriacea</i>	EPBC Act and TSC Act
Broad-headed Snake	<i>Hoplocephalus bungaroides</i>	EPBC Act
Rosenberg's Goanna	<i>Varanus rosenbergi</i>	TSC Act

Whilst targeted, the above-listed threatened species were not recorded during field investigations.

The Study Area however, may provide potential habitat for the Grey-headed Flying Fox (*Pteropus poliocephalus*), which may be using the larger trees as dispersal habitat. However, the proposed development is not likely to result in the removal of any of these large trees.

As a result of presence considerations, and the results of the targeted diurnal fauna survey, assessments drawing on the criteria provided under Section 5A of the *EPBC Act* (these commonly referred to as the 'Seven-part Test') will NOT be required



3.3.2 Recovery Plans

No recovery plan (draft, pending or final) for the Grey-headed Flying Fox (*Pteropus poliocephalus*).

Although not observed, using the precautionary principle, it may be assumed that this species may be present at times.

However, given the minimal extent, and type, of habitat to be modified as part of the scope of works, it is considered that the undertaking of the Proposal WOULD NOT result in a significant impact on any potential habitat for this species.

3.3.3 Species Recorded During Current Survey

By the completion of the field survey, five (5) native birds had been recorded within the Study Area (see Appendix 4). In addition to the native species recorded, an introduced species was also detected, or indicated as occurring, within the Study Area (see Appendix 4).

In regards to the detection of those native species recorded, all of the birds were observed within, adjacent to, or flying over, the Study Area, or were identified by their distinct calls.

Although the native species recorded within the Study Area are not ‘threatened’, they are protected, as defined by the NSW *National Parks and Wildlife Act* 1974, but they are considered to be common to abundant throughout the surrounding Region. These animals are all commonly recorded within the Region, occurring in association with residential areas, semi-rural properties and bushland remnants.

All of these fauna species would be considered either generalist and/or suburban-tolerant animals (Catterall, Green and Jones 1991). These species would not be solely reliant upon those habitats present within the Study Area such that the removal or further disturbance of these would threaten the occurrence of these animals.

Due to their ability to adapt to, and be tolerant of urban and semi-rural environments, none of the native species recorded for the Study Area would be adversely affected by the Proposal such that the viability of a local population of those animals would be placed at risk of extinction.

3.3.4 Habitat Types

By the completion of the field investigation, two (2) broad habitat types had been recorded:

- Introduced/Landscaped Gardens; and
- A Modified environment.

Both of these habitat types offer little to the native fauna of the Region, consisting only of limited browsing and dispersal uses by urban tolerant birds and bat species. The proposed additions and alterations to the existing D’Albora Marina will be undertaken mostly within the aquatic environment, and are not expected to impact on any adjoining grassland inside the public Reserve.



3.3.5 Wildlife Corridors and Vegetation Links

Based on review of topographic maps and aerial photography that incorporates the Study Area, combined with a visual assessment of the area proposed for development undertaken at the time of the field investigation, it is noted that the Study Area lies within a predominantly developed area, although there are several bushland reserves in the locality – Parriwi Park and The Spit Reserve. The slopes and foreshores of Middle Harbour in the vicinity of The Spit also retain significant stands of native bushland and/or native trees.

Given the nature of the development, it is considered the development will NOT affect commonly occurring urban-tolerant species from dispersing through the area.

3.4 CONSERVATION VALUE OF THE FAUNA IN THE STUDY AREA

Consultation of known literature and database sources identified 41 threatened fauna species of State and/or National conservation significance, as listed under the *TSC Act* and/or the *EPBC Act*, and known to have been recorded during past studies of the Region.

None of these species were identified within the Study Area and habitat quality is considered to be poor. There is the potential for the Grey-headed Flying Fox (*Pteropus poliocephalus*) to be using the large trees in the Study Area for dispersal however given the nature of the development none of these trees are likely to be removed as a result of the proposal.

3.5 FAUNA ASSESSMENTS

3.5.1 Commonwealth Legislative Considerations

By the completion of the current field investigations, NO threatened fauna species listed under the Schedules to the *EPBC Act* had been recorded within the Study Area.

The Study Area may provide potential dispersal habitat for the Grey-headed Flying Fox (*Pteropus poliocephalus*). However, given the nature of the development, any potential habitat is not likely to be significantly impacted on. Therefore no assessment under the *EPBC Act* has been prepared.

Therefore, the proposed works can proceed as planned WITHOUT requiring referral of the matter to the Federal Minister for the Environment and Water Resources for further consideration or approval.



3.5.2 NSW State Legislative Considerations

By the completion of the current field investigations, NO threatened fauna species listed under the Schedules to the *TSC Act* had been recorded within the Study Area.

The Study Area may, however, provide potential dispersal habitat for the Grey-headed Flying Fox (*Pteropus poliocephalus*). However, given the nature of the development, any potential habitat is not likely to be removed or other significantly impacted on. Therefore, no assessment under the *TSC Act* has been prepared.

Therefore, an 'Assessment of Significance' for the Grey-headed Flying Fox (*Pteropus poliocephalus*) under the State *Environmental Planning and Assessment Act* 1979, has not been prepared.

3.6 EXPECTED IMPACT ON THREATENED FAUNA

With no threatened species identified within the Study Area and given the nature of the development, the Study Area's highly modified state and lack of good quality habitat, the proposed works are not considered to affect, threaten or have an adverse impact on any of the threatened, or migratory species, listed under the *EPBC* and *TSC Acts*.



4 GENERAL RECOMMENDATIONS

The following recommendations are made with respect of conserving those indigenous flora and fauna that do occur within the Study Area and to help to enhance local habitat values.

1. The extent of vegetation clearing should be restricted to the minimum necessary for the safe undertaking of the project.
2. Exclusion fencing should be erected to identify the boundary of the public land (i.e. Ellery Park/The Spit Reserve), and maintained in place in order to exclude vehicles, construction machinery and the like.
3. Storage areas and access routes should be sited only in areas that contain minimum native vegetation and such areas should be kept away from those trees to be retained.
4. Soil excavated from the site and designated for re-use should be stored in a manner that allows the separation of weed-free³ topsoil to be replaced following the completion of works.
5. All stockpiling of soil should be restricted to the development site and contained with appropriate sediment fencing and covered to prevent wash into the adjoining parkland.
6. Post construction, all residual soil, imported fill and other surplus materials are to be removed from the site. No material is to be deposited in the adjoining parkland.
7. Appropriate machine hygiene should also be adhered to. Any machinery used in parkland or reserve should be cleaned prior to its use on the site, and again at the conclusion of works.
8. Plants used for landscaping should be non-invasive exotics or preferably native plants indigenous to the Region and grown from provenance stock.
9. Community awareness is important. Appropriate signage should be erected on the boundaries of the public land indicating the type and duration of the development works. A contact telephone number should be provided on the sign(s).

³ In this context, the term 'weed' includes introduced turf species such as Kikuyu, Couch and Buffalo Grasses.



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6 APPENDICES



APPENDIX 1: FLORA SPECIES RECORDED WITHIN THE STUDY AREA, THE SPIT, MOSMAN

KEY

- - Species of local or regional conservation significance.
- - Species of National or State conservation significance.
- * - Introduced or non-indigenous species.

Species Frequency of Occurrence within Site

- V - Very common (species covers 51-100% of the site).
- C - Common (species covers 26-50% of the site).
- O - Occasional (species covers 5-25% of the site).
- R - Rare (species covers <5% of the site; scattered distribution).
- L - Localised distribution only (species covers <5% of the site; clumped distribution)

FAMILY	SPECIES	COMMON NAME	FREQUENCY
DICOTYLEDONS			
Aizoaceae	<i>Carpobrotus glaucescens</i>	Pigface	L
Araucariaceae	<i>Araucaria heterophylla</i> *	Norfolk Island Pine	L
Arecaceae	<i>Livistonia australis</i>	Cabbage-tree Palm	L
Asteraceae	<i>Bidens pilosa</i> *	Cobbler's Pegs	L
Asteraceae	<i>Conyza</i> sp.*	Fleabane	L
Asteraceae	<i>Hypochaeris radicata</i> *	Catsear	L
Asteraceae	<i>Sonchus oleraceus</i> *	Sow Thistle	L
Chenopodiaceae	<i>Atriplex prostrata</i> *	Orache	L
Fabaceae (Faboideae)	<i>Erythrina X ykesii</i>	Coral Tree	L
Fabaceae (Faboideae)	<i>Trifolium repens</i> *	White Clover	L
Malaceae	<i>Cotoneaster</i> sp.*	Cotoneaster	L
Moraceae	<i>Ficus macrophylla</i>	Moreton Bay Fig	L
Moraceae	<i>Ficus rubiginosa</i>	Port Jackson Fig	L
Myrtaceae	<i>Lophostemon confertus</i> *	Brush Box	L
Portulacaceae	<i>Portulaca oleracea</i> *	Pigweed	L
Proteaceae	<i>Banksia integrifolia</i>	Coastal Banksia	L
Salicaceae	<i>Populus</i> sp. *	Poplar	L
Urticaceae	<i>Parietaria judaica</i> *	Pellitory	L
MONOCOTYLEDONS			
Asparagaceae	<i>Asparagus densiflorus</i> *= <i>aethiopicus</i>	Asparagus Fern/Ground Asparagus	L
Cyperaceae	<i>Isolepis nodosa</i>		L
Lomandraceae	<i>Lomandra longifolia</i>	Spiny-headed Mat Rush	L
Poaceae	<i>Cynodon dactylon</i> *	Couch	L
Poaceae	<i>Ehrharta erecta</i> *	Panic Veldt Grass	L
Poaceae	<i>Pennisetum clandestinum</i> *	Kikuyu	L
Poaceae	<i>Sporobolus africanus</i> *	Parramatta Grass	L
Poaceae	<i>Sporobolus virginicus</i> *	Common Couch Grass	L



APPENDIX 2: LIKELIHOOD OF OCCURRENCE OF FLORA SPECIES OF STATE OR NATIONAL CONSERVATION SIGNIFICANCE

SOURCE OF RECORDS

1 = Department of Environment and Climate Change (2007a). Search area: 10 x 10 km centred on Study Area

2 = Department of the Environment and Water Resources (2007). Search area: 5 km radius centred on Study Area

E = Endangered species; E2 = Endangered population; Ex = Extinct; V = Vulnerable species

Species	Source		TSC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence
	1	2				
<i>Allacasharina portuensis</i> (Nielsen Park She-oak)	✓	✓	E	E	Tall closed woodland in original habitat at Nielsen Park.	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey
<i>Acacia bryoniaea</i> (Bynoe's Wattle)	✓	✓	E	V	Heath and dry sclerophyll forest on sandy soils (Harden 2002). Substrate is typically sand and sandy clay, often with ironstone gravels and is usually very infertile and well-drained (NPWS 1999a). Occurs on along ridgetops mainly in heath and open-woodland on sandstone (James 2005). Prefers open, sometimes slightly disturbed sites such as trail margins, edges of roadside spoil mounds and in recently burnt patches (DECC 2007). Associated overstorey species include <i>Corymbia gummifera</i> , <i>Eucalyptus haemastoma</i> , <i>E. parramattensis</i> , <i>E. sclerophylla</i> , <i>Banksia serrata</i> and <i>Angophora bakeri</i> (NPWS 1999a). It is known to occur from Morisset in the north, Blue Mountains to the west, and Berima/Illawarra region to the south (James 2005).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey
<i>Acacia terminalis</i> ssp. <i>terminalis</i> (Sunshine Wattle)	✓	✓	E	E	Occurs within open woodland and heaths on sandstone in the Bilpin/Faulconbridge/Maroota/Hornsby Heights areas (James 2005). It typically grows amongst or within rock platforms on sandstone outcrops (DEC 2006).	Unlikely – Numerous recordings within search area however habitat considered to be too modified. If present, would more than likely have been observed in the field survey
<i>Caladenia tessellata</i> (Thick Lip Spider Orchid)	✓	✓	E	V	The species occupies low open forest with a heathy or sometimes grassy understorey (Bishop 2000). In NSW it is known from two disjunct areas – one (1) population near Braidwood, and three (3) populations in the Wyong area (NSW Scientific Committee).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey



Species	Source	TSC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence
<i>Callistemon linearifolius</i> (Nerred Bottle Brush)	✓	V		Dry sclerophyll forest. For the Sydney area, recent records are limited to the Hornsby Plateau area near the Hawkesbury River.	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Cryptotylis hunteriana</i> (Leafless Tongue Orchid)	✓	V	V	Swamp-heath on sandy soils, mainly in coastal districts (Harden 1993). Grows in Coastal Plains Scribbly Gum Woodland with a shrubby understorey between Lake Macquarie and Pittwater (Benson & McDougall 2005). Substrates are dry sandy loams on Triassic Narrabeen geology with low nutrient levels (Benson & McDougall 2005).	Unlikely – No preferred habitat on site
<i>Epacris purpurascens</i> var. <i>purpurascens</i>	✓	V		Sclerophyll forest, scrubs and swamps on sandstone (Harden 1992). Occurs in wet heath, scrub, woodland or forest on sandstone usually with a strong clay influence, which is often periodically poorly drained (James 2005).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Eucalyptus camfieldii</i> (Heart-leaved Stringybark)	✓	V	V	Grows in coastal shrub heath on sandy soils on sandstone, often in areas with restricted drainage (Harden 2002). This species is known to occur from Tomago to the Royal National Park (Harden 2002). It grows in ridgetop heath in full sun (Benson & McDougall 1998). Associated species frequently include stunted species of <i>E. oblonga</i> , <i>E. capitellata</i> and <i>E. haemastoma</i> (DECC 2007b).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Eucalyptus nicholii</i> (Narrow-leaved Black Peppermint)	✓	V	V	Dry grassy woodland on shallow and infertile soils (DECC 2007a).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Haloragcdendron lucasii</i>	✓	E	E	Dry sclerophyll forest on moist sandy loams. Associated with high soil moisture and phosphorus levels (DECC 2007a).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Lasiopetalum joycae</i>	✓	V	V	Heath on Sandstone (Harden 2002).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.



Flora & Fauna Assessment: – d'Albora Marinas, The Spit

Species	Source	TSC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence
<i>Melanthera deanei</i> (Deane's Paperbark)	✓	V	V	It occurs in two (2) distinct areas, Ku-ring-gai/Berowra in the north and Holsworthy/Wedderburn in the south (James 2005). There are outliers in the Blue Mountains, Nowra and Central Coast (James 2005). Wet heath on sandstone from Berowra to Nowra (Harden 2002). Broad flat ridgetops, dry ridges and slopes in woodland (Benson & McDougall 1998). Sandy loam substrates, sometimes with ironstone on sandstone (Benson & McDougall 1998). Seedlings are intolerant of shade, but tolerant to waterlogging (Benson & McDougall 1998).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Microtis angustii</i> (Angus's Onion Orchid)	✓	E	E	Ridgetop lateritic soils (DECC 2007a).	Unlikely – No preferred habitat present on site
<i>Pimelea curviflora</i> var. <i>curviflora</i>	✓	V	V	Coastal areas around Sydney on sandstone (Harden 2000). It is restricted to the northern area of Sydney on sandstone soils and laterite soils (NSW Scientific Committee 1998). Substrates are shaley/lateitic soils over sandstone, shale/sandstone transition (Benson & McDougall 2001). Occurs on ridges or upper slopes in open-woodland or open-forest including Shale/Sandstone Transition Forest and Duffys Forest (James 2005).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.
<i>Prostanthera marifolia</i>	✓		Ex	Sclerophyll forest and woodland, usually near the coast in sandy loams on sandstone (Harden 1992).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey. Scheduled as 'Extinct' under EPBC Act.
<i>Syriginum paniculatum</i> (Magenta Lilly Pilly)	✓	V	V	Subtropical and littoral rainforest on sandy soils or stabilized dunes near the sea (Harden 2002). The species grows in littoral rainforest or gallery rainforest (Benson & McDougall 1998).	Unlikely – No preferred habitat present on site
<i>Tetratheca glandulosa</i>	✓	V	V	Sandy or rocky heath or scrub (Harden 1992). Heath, scrub or sclerophyll woodland on clayey sand on sandstone or shale sandstone transition (Benson & McDougall 2001). Generally associated with shale/sandstone transition areas, particularly where there is shale capping over sandstone (James 2005). It occurs on ridges and upper slopes in heath, scrub, open-woodland and open-forest communities, generally within areas of semi-shade (James 2005).	Unlikely – No preferred habitat present on site



Species	Source	TSC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence
<i>Thesium australe</i> (Austral Toadflax)	✓	V	V	The species grows in woodland and grassland in damp areas, but is absent from areas with dense shrub or tree cover (Benson & McDougall 2001).	Unlikely – Habitat considered to be too modified. If present, would more than likely have been observed in the field survey.



APPENDIX 3: NOXIOUS WEED DECLARATIONS FOR MOSMAN MUNICIPAL COUNCIL

The following weeds are declared noxious in the control area of Mosman Municipal Council. Species **BOLDED** were recorded in the Study Area.

Weed	Class	Legal requirements
African feathergrass [<i>Pennisetum macrourum</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
African turnipweed [<i>Sisymbrium runcinatum</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
African turnipweed [<i>Sisymbrium thellungii</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Alligator weed [<i>Alternanthera philoxeroides</i>]	3	The plant must be fully and continuously suppressed and destroyed
Anchored water hyacinth [<i>Eichhornia azurea</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Annual ragweed [<i>Ambrosia artemisiifolia</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Arrowhead [<i>Sagittaria montevidensis</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Artichoke thistle [<i>Cynara cardunculus</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Asparagus fern [<i>Asparagus aethiopicus</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Athel pine [<i>Tamarix aphylla</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Balloon vine [<i>Cardiospermum grandiflorum</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Bear-skin fescue [<i>Festuca gautieri</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Bitou bush [<i>Chrysanthemoides monilifera</i> subspecies <i>rotundata</i>]	3	The plant must be fully and continuously suppressed and destroyed
Black knapweed [<i>Centaurea nigra</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Blackberry [<i>Rubus fruticosus</i> aggregate species] except cultivars Black satin, Chehalem, Chester Thornless, Dirksen Thornless, Loch Ness, Murrindindi, Silvan, Smoothstem, Thornfree	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an All of NSW declaration
Boneseed [<i>Chrysanthemoides monilifera</i>]	3	The plant must be fully and continuously suppressed and



Weed	Class	Legal requirements
subspecies monilifera]		destroyed
Bridal creeper [<i>Asparagus asparagoides</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Broomrapes [<i>Orobanche</i> species] Includes all <i>Orobanche</i> species except the native (<i>O. cernua</i> variety <i>australiana</i> and (<i>O. minor</i>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Burr ragweed [<i>Ambrosia confertiflora</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Cabomba [<i>Cabomba caroliniana</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Cape ivy [<i>Delairea odorata</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Castor oil plant [<i>Ricinus communis</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Cat's claw creeper [<i>Macfadyena unguis-cati</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Cayenne snakeweed [<i>Stachytarpheta cayennensis</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Chilean needle grass [<i>Nassella neesiana</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Chinese violet [<i>Asystasia gangetica</i> subspecies <i>micrantha</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Climbing asparagus fern [<i>Asparagus plumosus</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Clockweed [<i>Gaura lindheimeri</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Clockweed [<i>Gaura parviflora</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Corn sowthistle [<i>Nonchus arvensis</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Dodder [<i>Cuscuta</i> species] Includes All <i>Cuscuta</i> species except the native species <i>C. australis</i> , <i>C.</i>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration



Weed	Class	Legal requirements
tasmanica and C. victoriana		
East Indian hygrophila [Hygrophila polysperma]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Elephant grass [Arundo donax]		See Giant reed
Espartillo [Achnatherum brachychaetum]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Eurasian water milfoil [Myriophyllum spicatum]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Fine-bristled burr grass [Cenchrus brownii]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Fountain grass [Pennisetum setaceum]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Gallon's curse [Cenchrus biflorus]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Giant reed [Arundo donax]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Glaucous starthistle [Carthamus glaucus]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Golden thistle [Scolymus hispanicus]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Green cestrum [Cestrum parqui]	3	The plant must be fully and continuously suppressed and destroyed
Harrisia cactus [Harrisia species]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an All of NSW declaration
Hawkweed [Hieracium species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Horsetail [Equisetum species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Hygrophila [Hygrophila costata]	2	The plant must be eradicated from the land and the land must be kept free of the plant
Hymenachne [Hymenachne amplexicaulis]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Karoo thorn [Acacia karroo]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration



Weed	Class	Legal requirements
Kochia [Bassia scoparia] except Bassia scoparia subspecies trichophylla	1	except B.scoparia subspecies trichophylla The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Lagarosiphon [Lagarosiphon major]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Lantana [Lantana species]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Lantana [Lantana species]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Leafy elodea [Egeria densa]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Long-leaf willow primrose [Ludwigia longifolia]	3	The plant must be fully and continuously suppressed and destroyed
Long-leaf willow primrose [Ludwigia longifolia]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Ludwigia [Ludwigia peruviana]	3	The plant must be fully and continuously suppressed and destroyed
Madeira vine [Anredera cordifolia]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Mexican feather grass [Nassella tenuissima]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Mexican poppy [Argemone mexicana]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Miconia [Miconia species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Mimosa [Mimosa pigra]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Morning glory (coastal) [Ipomoea cairica]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Morning glory (purple) [Ipomoea indica]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Mossman River grass [Cenchrus echinatus]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration



Weed	Class	Legal requirements
Onion grass [Romulea species] Includes all Romulea species and varieties except R. rosea var. australis	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Oxalis [Oxalis species and varieties] Includes all Oxalis species and varieties except the native species O. chnoodes, O. exilis, O. perennans, O. radicata, O. rubens, and O. thompsoniae	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Pampas grass [Cortaderia species]	3	The plant must be fully and continuously suppressed and destroyed
Parthenium weed [Parthenium hysterophorus]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Pellitory [Parietaria judaica]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Pond apple [Annona glabra]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Prickly acacia [Acacia nilotica]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Prickly pear [Cylindropuntia species]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an All of NSW declaration
Prickly pear [Opuntia species except O. ficus-indica]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an All of NSW declaration
Privet (Broad-leaf) [Ligustrum lucidum]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Privet (Narrow-leaf/Chinese) [Ligustrum sinense]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Red rice [Oryza rufipogon]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Rhizomatous bamboo [Phyllostachys species]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Rhus tree [Toxicodendron succedaneum]	4	The growth and spread of the plant must be controlled according to the measures specified in a



Weed	Class	Legal requirements
		management plan published by the local control authority This is an All of NSW declaration
Rubbervine [<i>Cryptostegia grandiflora</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Sagittaria [<i>Sagittaria platyphylla</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Salvinia [<i>Salvinia molesta</i>]	2	The plant must be eradicated from the land and the land must be kept free of the plant
Sand oat [<i>Avena strigosa</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Senegal tea plant [<i>Gymnocoronis spilanthoides</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Serrated tussock [<i>Nassella trichotoma</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Siam weed [<i>Chromolaena odorata</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Smooth-stemmed turnip [<i>Brassica barrelieri</i> subspecies <i>oxyrrhina</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Soldier thistle [<i>Picnomon acarna</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Spotted knapweed [<i>Centaurea maculosa</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
St. John's wort [<i>Hypericum perforatum</i>]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Texas blueweed [<i>Helianthus ciliaris</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Tussock paspalum [<i>Paspalum quadrifarium</i>]	3	The plant must be fully and continuously suppressed and destroyed
Water caltrop [<i>Trapa</i> species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Water hyacinth [<i>Eichhornia crassipes</i>]	2	The plant must be eradicated from the land and the land must be kept free of the plant
Water lettuce [<i>Pistia stratiotes</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Water soldier [<i>Stratiotes aloides</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration



Weed	Class	Legal requirements
Willows [<i>Salix</i> species] Includes all <i>Salix</i> species except <i>S. babylonica</i> , <i>S. x reichardtii</i> , <i>S. x calodendron</i>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration
Witchweed [<i>Striga</i> species] Includes all <i>Striga</i> species except native species and <i>Striga parviflora</i>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Yellow burrhead [<i>Limnocharis flava</i>]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an All of NSW declaration
Yellow nutgrass [<i>Cyperus esculentus</i>]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an All of NSW declaration



APPENDIX 4: FAUNA SPECIES RECORDED OR KNOWN TO OCCUR IN THE VICINITY OF THE STUDY AREA

Key EPBC - indicates species listed under the EPBC Act. M - Species listed as migratory under the EPBC Act. CE- Species listed as Critically Endangered under the EPBC Act. TSC - indicates species listed under the TSC Act. E - Species is listed as Endangered for that Act. V - Species is listed as Vulnerable for that Act. Δ - indicates species of regional conservation significance (as per NPWS 1997). * - indicates introduced species.	Source of Records 1 = Species recorded during present study. 2 = DECC (2007b). 3 = DEW (2007)
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EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		AMPHIBIA				
		Hylidae				
V		<i>Litoria aurea</i>	Green and Golden Bell Frog			X
		Δ <i>Litoria caerulea</i>	Green Tree Frog		X	
		<i>Litoria peronii</i>	Peron's Tree Frog		X	
		<i>Litoria phyllochroa</i>	Green Stream Frog		X	
		Myobatrachidae				
		<i>Adelotus brevis</i>	Tusked Frog		X	
		<i>Crinia signifera</i>	Common Eastern Froglet		X	
V	V	<i>Heleioporus australiacus</i>	Giant Burrowing Frog		X	X
		<i>Limnodynastes dumerilii</i>	Bullfrog		X	
		Δ <i>Limnodynastes ornatus</i>	Ornate Burrowing Frog		X	
		<i>Limnodynastes peronii</i>	Striped Marsh Frog		X	
		<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog		X	
V		<i>Mixophyes balbus</i>	Stuttering Frog			X
		<i>Paracrinia haswelli</i>	Haswell's Froglet		X	
	V	<i>Pseudophryne australis</i>	Red-crowned Toadlet		X	
		Δ <i>Pseudophryne bibronii</i>	Bibron's Toadlet		X	
		BIRDS				
		Acanthizidae				
		Δ <i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill		X	
		<i>Acanthiza lineate</i>	Striated Thornbill		X	
		<i>Acanthiza nana</i>	Yellow Thornbill		X	
E		<i>Acanthiza pusilla</i>	Brown Thornbill		X	
		Δ <i>Acanthiza reguloides</i>	Buff-rumped Thornbill		X	
		<i>Gerygone mouki</i>	Brown Gerygone		X	
		<i>Gerygone olivacea</i>	White-throated Gerygone		X	



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		<i>Δ Origma solitaria</i>	Rockwarbler		X	
		<i>Sericornis frontalis</i>	White-browed Scrubwren		X	
		Accipitridae				
M		<i>Accipiter cirrocephalus</i>	Collared Sparrowhawk		X	
M		<i>Accipiter fasciatus</i>	Brown Goshawk		X	
M		<i>Elanus axillaris</i>	Black-shouldered Kite		X	
M		<i>Δ Haliaeetus leucogaster</i>	White-bellied Sea-Eagle		X	X
M		<i>Δ Haliaeetus sphenurus</i>	Whistling Kite		X	
M		<i>Δ Hieraaetus morphnoides</i>	Little Eagle		X	
M	V	<i>Pandion haliaetus</i>	Osprey		X	
		Alcedinidae				
		<i>Alcedo azurea</i>	Azure Kingfisher		X	
		<i>Dacelo navaeguineae</i>	Laughing Kookaburra		X	
		<i>Todiramphus sanctus</i>	Sacred Kingfisher		X	
		Anatidae				
M		<i>Anas castanea</i>	Chestnut Teal		X	
M		<i>Anas gracilis</i>	Grey Teal		X	
M		<i>*Anas platyrhynchos</i>	Mallard		X	
M		<i>Anas superciliosa</i>	Pacific Black Duck		X	
M		<i>Aythya australis</i>	Hardhead		X	
M		<i>Chenonetta jubata</i>	Australian Wood Duck		X	
		Anhingidae				
		<i>Anhinga melanogaster</i>	Darter		X	
		Apodidae				
M		<i>Δ Apus pacificus</i>	Fork-tailed Swift		X	X
M		<i>Δ Hirundapus caudacutus</i>	White-throated Needletail		X	X
		Ardeidae				
M		<i>Δ Ardea alba</i>	Great Egret		X	X
M		<i>Ardea ibis</i>	Cattle Egret		X	X
		<i>Butorides striatus</i>	Striated Heron		X	
		<i>Egretta garzetta</i>	Little Egret		X	
		<i>Egretta novaehollandiae</i>	White-faced Heron		X	
M		<i>Egretta sacra</i>	Eastern Reef Egret		X	
		<i>Δ Nycticorax caledonicus</i>	Nankeen Night Heron		X	
		Artamidae				
		<i>Cracticus nigrogularis</i>	Pied Butcherbird		X	
		<i>Cracticus torquatus</i>	Grey Butcherbird		X	
		<i>Gymnorhina tibicen</i>	Australian Magpie	X	X	
		<i>Strepera graculina</i>	Pied Currawong	X	X	
		Cacatuidae				

EPBC	IISC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		<i>Cacatua galerita</i>	Sulphur-crested Cockatoo		X	
		<i>Cacatua sanguine</i>	Little Corella		X	
		<i>Calyptorhynchus funereus</i>	Yellow-tailed Black-Cockatoo		X	
		<i>Eolophus roseicapillus</i>	Galah		X	
		Campephagidae				
		<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike		X	
		Caprimulgidae				
		<i>Eurostopodus mystacalis</i>	White-throated Nightjar		X	
		Charadriidae				
M		<i>Vanellus miles</i>	Masked Lapwing		X	
		Cisticolidae				
		<i>Cisticola exilis</i>	Golden-headed Cisticola		X	
		Climacteridae				
		<i>Cormobates leucophaeus</i>	White-throated Treecreeper		X	
		Columbidae				
		<i>Δ Chalcophaps indica</i>	Emerald Dove		X	
		<i>Columba leucomela</i>	White-headed Pigeon		X	
		<i>*Columba livia</i>	Rock Dove		X	
		<i>Δ Geopelia humeralis</i>	Bar-shouldered Dove		X	
		<i>Leucosarcia melanoleuca</i>	Wonga Pigeon		X	
		<i>Lopholaimus antarcticus</i>	Topknot Pigeon		X	
		<i>Δ Macropygia amboinensis</i>	Brown Cuckoo-Dove		X	
		<i>Ocyphaps lophotes</i>	Crested Pigeon		X	
		<i>Δ Phaps chaloptera</i>	Common Bronzewing		X	
		<i>Phaps elegans</i>	Brush Bronzewing		X	
	V	<i>Ptilinopus superb</i>	Superb Fruit-Dove		X	
		<i>*Streptopelia chinensis</i>	Spotted Turtle-Dove		X	
		Coraciidae				
		<i>Eurystomus orientalis</i>	Dollarbird		X	
		Corvidae				
		<i>Corvus coronoides</i>	Australian Raven	X	X	
		Cuculidae				
		<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo		X	
		<i>Cacomantis variolosus</i>	Brush Cuckoo		X	
		<i>Chalcites basalis</i>	Horsfield's Bronze-Cuckoo		X	
		<i>Chalcites lucidus</i>	Shining Bronze-Cuckoo		X	
		<i>Cuculus pallidus</i>	Pallid Cuckoo		X	
		<i>Eudynamys orientalis</i>	Pacific Koel		X	
		<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo		X	
		Dicaeidae				



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		<i>Dicaeum hirundinaceum</i>	Mistletoebird		X	
		Dicruridae				
		<i>Dicrurus bracteatus</i>	Spangled Drongo		X	
		<i>Grallina cyanoleuca</i>	Magpie-lark	X	X	
		<i>Monarcha melanopsis</i>	Black-faced Monarch		X	
		<i>Monarcha trivirgatus</i>	Spectacled Monarch		X	
M		<i>Myiagra cyanoleuca</i>	Satin Flycatcher		X	X
		<i>Myiagra rubecula</i>	Leaden Flycatcher		X	
		<i>Rhipidura albiscapa</i>	Grey Fantail		X	
		<i>Rhipidura leucophrys</i>	Willie Wagtail		X	
M		<i>Rhipidura rufifrons</i>	Rufous Fantail		X	X
		Diomedidae				
V, M		<i>Diomedea antipodensis</i>	Antipodean Albatross			X
V, M	E	<i>Diomedea exulans</i>	Wandering Albatross		X	
V, M		<i>Diomedea gibsoni</i>	Gibson's Albatross			X
V, M		<i>Thalassarche bulleri</i>	Buller's Albatross			X
V, M	V	<i>Thalassarche cauta</i>	Shy Albatross		X	X
V	V	<i>Thalassarche melanophrys</i>	Black-browed Albatross		X	
V, M		<i>Thalassarche impavida</i>	Campbell Albatross			X
V, M		<i>Thalassarche salvini</i>	Salvins Albatross			X
V, M		<i>Thalassarche steadi</i>	White-capped Albatross			X
		Estrildidae				
		<i>Neochmia temporalis</i>	Red-browed Finch		X	
	V	<i>Δ Stagonopleura guttata</i>	Diamond Firetail		X	
		Eupetidae				
		<i>Psophodes olivaceus</i>	Eastern Whipbird		X	
		Falconidae				
M		<i>Falco berigora</i>	Brown Falcon		X	
M		<i>Falco cenchroides</i>	Nankeen Kestrel		X	
M		<i>Falco longipennis</i>	Australian Hobby		X	
M		<i>Δ Falco peregrinus</i>	Peregrine Falcon		X	
		Fringillidae				
		<i>*Carduelis carduelis</i>	European Goldfinch		X	
		Haematopodidae				
	V	<i>Haematopus fuliginosus</i>	Sooty Oystercatcher		X	
		Hirundinidae				
		<i>Hirundo neoxena</i>	Welcome Swallow		X	
		<i>Petrochelidon nigricans</i>	Tree Martin		X	
		Hydrobatidae				
		<i>Pelagodroma marina</i>	White-faced Storm-Petrel		X	



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		Laridae				
M		<i>Anous stolidus</i>	Common Noddy		X	
		<i>Larus novaehollandiae</i>	Silver Gull		X	
		<i>Larus pacificus</i>	Pacific Gull		X	
M		<i>Sterna albifrons</i>	Little Tern			X
		Δ <i>Sterna bergii</i>	Crested Tern		X	
		<i>Sterna caspia</i>	Caspian Tern		X	
	V	<i>Sterna fuscata</i>	Sooty Tern		X	
M		Δ <i>Sterna hirundo</i>	Common Tern		X	
		<i>Sterna striata</i>	White-fronted Tern		X	
		Maluridae				
		<i>Malurus cyaneus</i>	Superb Fairy-wren		X	
		<i>Malurus lamberti</i>	Variegated Fairy-wren		X	
		Megapodiidae				
		<i>Alectura lathami</i>	Australian Brush-turkey		X	
		Meliphagidae				
		<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater		X	
		<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill		X	
		<i>Anthochaera carunculata</i>	Red Wattlebird		X	
		<i>Anthochaera chrysoptera</i>	Little Wattlebird		X	
		<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater		X	
		<i>Lichenostomus leucotis</i>	White-eared Honeyeater		X	
		<i>Lichenostomus melanops</i>	Yellow-tufted Honeyeater		X	
		<i>Lichenostomus penicillatus</i>	White-plumed Honeyeater		X	
		Δ <i>Lichmera indistincta</i>	Brown Honeyeater		X	
		<i>Manorina melanocephala</i>	Noisy Miner	X	X	
		<i>Meliphaga lewinii</i>	Lewin's Honeyeater		X	
		<i>Melithreptus lunatus</i>	White-naped Honeyeater		X	
		<i>Myzomela sanguinolenta</i>	Scarlet Honeyeater		X	
		<i>Philemon citreogularis</i>	Little Friarbird		X	
		<i>Philemon corniculatus</i>	Noisy Friarbird		X	
		<i>Phylidonyris nigra</i>	White-cheeked Honeyeater		X	
		<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater		X	
M	E	<i>Xanthomyza phrygia</i>	Regent Honeyeater		X	X
		Menuridae				
		<i>Menura novaehollandiae</i>	Superb Lyrebird		X	
		Meropidae				
M		<i>Merops ornatus</i>	Rainbow Bee-eater			X
		Motacillidae				
		<i>Anthus australis</i>	Australian Pipit		X	



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		Muscicapidae				
M		* <i>Turdus merula</i>	Eurasian Blackbird		X	
M		<i>Zoothera heinei</i>	Russet-tailed Thrush		X	
		Neosittidae				
		<i>Daphoenositta chrysoptera</i>	Varied Sittella		X	
		Oriolidae				
		<i>Oriolus sagittatus</i>	Olive-backed Oriole		X	
		<i>Sphecothebes vieilloti</i>	Australasian Figbird		X	
		Pachycephalidae				
		<i>Colluricincla harmonica</i>	Grey Shrike-thrush		X	
M		Δ <i>Falcinuculus frontatus</i>	Eastern Shrike-tit		X	
		<i>Pachycephala pectoralis</i>	Golden Whistler		X	
		<i>Pachycephala rufiventris</i>	Rufous Whistler		X	
		Pardalotidae				
		<i>Pardalotus punctatus</i>	Spotted Pardalote		X	
		<i>Pardalotus striatus</i>	Striated Pardalote		X	
		Passeridae				
		* <i>Passer domesticus</i>	House Sparrow	X	X	
		Pelecanidae				
		<i>Pelecanus conspicillatus</i>	Australian Pelican		X	
		Petroicidae				
		<i>Eopsaltria australis</i>	Eastern Yellow Robin		X	
		Δ <i>Microeca fascians</i>	Jacky Winter		X	
		<i>Petroica rosea</i>	Rose Robin		X	
		Phaethontidae				
M		<i>Phaethon lepturus</i>	White-tailed Tropicbird		X	
		Phalacrocoracidae				
		<i>Phalacrocorax carbo</i>	Great Cormorant		X	
		<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant		X	
		<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant		X	
		<i>Phalacrocorax varius</i>	Pied Cormorant		X	
		Phasianidae				
		Δ <i>Coturnix ypsilophora</i>	Brown Quail		X	
		Pittidae				
		<i>Pitta versicolor</i>	Noisy Pitta		X	
		Podargidae				
		<i>Podargus strigoides</i>	Tawny Frogmouth		X	
		Podicipedidae				
		<i>Poliocephalus poliocephalus</i>	Hoary-headed Grebe		X	
		<i>Tachybaptus novaehollandiae</i>	Australasian Grebe		X	



EPBC	TSG	SCIENTIFIC NAME	COMMON NAME	1	2	3
		Procellariidae				
E,M	E	<i>Macronectes giganteus</i>	Southern Giant Petrel		X	X
V, M		<i>Macronectes halli</i>	Northern Giant Petrel			X
		<i>Pachyptila desolata</i>	Antarctic Prion		X	
M	E	<i>Pterodroma leucoptera leucoptera</i>	Gould's Petrel		X	
V		<i>Pterodroma neglecta neglecta</i>	Kermadec Petrel			X
		<i>Pterodroma macroptera</i>	Great-winged Petrel		X	
		<i>Puffinus gavia</i>	Fluttering Shearwater		X	
M		<i>Puffinus pacificus</i>	Wedge-tailed Shearwater		X	
M		<i>Puffinus tenuirostris</i>	Short-tailed Shearwater		X	
		Psittacidae				
		<i>Alisterus scapularis</i>	Australian King-Parrot		X	
		<i>Aprosmictus erythropterus</i>	Red-winged Parrot		X	
		<i>Barnardius zonarius</i>	Australian Ringneck		X	
		<i>Glossopsitta concinna</i>	Musk Lorikeet		X	
		<i>Glossopsitta pusilla</i>	Little Lorikeet		X	
E	E	<i>Lathamus discolor</i>	Swift Parrot		X	
		<i>Platycercus adscitus eximius</i>	Eastern Rosella		X	
		<i>Platycercus elegans</i>	Crimson Rosella		X	
		<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet		X	
		<i>Trichoglossus haematodus</i>	Rainbow Lorikeet		X	
		Ptilonorhynchidae				
		<i>Ptilonorhynchus violaceus</i>	Satin Bowerbird		X	
		Pycnonotidae				
		<i>*Pycnonotus jocosus</i>	Red-whiskered Bulbul		X	
		Rallidae				
		<i>Fulica atra</i>	Eurasian Coot		X	
		<i>Gallinula tenebrosa</i>	Dusky Moorhen		X	
		<i>Rallus pectoralis</i>	Lewin's Rail		X	
		<i>Porphyrio porphyrio</i>	Purple Swamphen		X	
		<i>Porzana tabuensis</i>	Spotless Crane		X	
		Recurvirostridae				
M		<i>Himantopus himantopus</i>	Black-winged Stilt		X	
M		<i>Recurvirostra novaehollandiae</i>	Red-necked Avocet		X	
		Rostratulidae				
V		<i>Rostratula australis</i>	Australian Painted Snipe			X
M		<i>Rostratula benghalensis</i>	Painted Snipe			X
		Scolopacidae				
M		<i>Δ Gallinago hardwickii</i>	Latham's Snipe		X	X



EPBC	TSG	SCIENTIFIC NAME	COMMON NAME	1	2	3
M		<i>Heteroscelus incanous</i>	Wandering Tattler		X	
M		<i>Δ Numenius phaeopus</i>	Whimbrel		X	
		Spheniscidae				
	E	<i>Eudyptula minor</i>	Little Penguin in the Manly Point Area (being the area on and near the shoreline from Cannae Point generally northward to the point near the intersection of Stuart Street and Oyama Cove Avenue, and extending 100 metres offshore from that shoreline)		X	
		<i>Eudyptula minor</i>	Little Penguin		X	
		Stercorariidae				
		<i>Stercorarius longicaudus</i>	Long-tailed Jaeger		X	
		<i>Stercorarius parasiticus</i>	Arctic Jaeger		X	
		<i>Stercorarius pomarinus</i>	Pomarine Jaeger		X	
		Strigidae				
		<i>Ninox boobook</i>	Southern Boobook		X	
	V	<i>Ninox connivens</i>	Barking Owl		X	
	V	<i>Ninox strenua</i>	Powerful Owl		X	
		Sturnidae				
		<i>*Acridotheres tristis</i>	Common Myna		X	
		<i>*Sturnus vulgaris</i>	Common Starling		X	
		Sulidae				
		<i>Morus serrator</i>	Australasian Gannet		X	
		Threskiornithidae				
		<i>Threskiornis molucca</i>	Australian White Ibis		X	
		Turnicidae				
		<i>Δ Turnix varia</i>	Painted Button-quail		X	
		Tytonidae				
		<i>Tyto alba</i>	Barn Owl		X	
		Zosteropidae				
		<i>Zosterops lateralis</i>	Silvereye		X	
		MAMMALIA				
		Balaenidae				
E, M	V	<i>Eubalaena australis</i>	Southern Right Whale		X	X
		Balaenopteridae				
		<i>Balaenoptera acutorostrata</i>	Dwarf Minke Whale		X	
M		<i>Balaenoptera edeni</i>	Bryde's Whale			X
		<i>Balaenoptera sp.</i>	Unidentified Rorqual		X	
M	V	<i>Megaptera novaeangliae</i>	Humpback Whale		X	X
		<i>Whale sp.</i>	Unidentified Whale		X	



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		Canidae				
		<i>*Canis lupus</i>	Dingo, domestic dog		X	
		<i>*Canis lupus familiaris</i>	Dog		X	
		<i>*Vulpes vulpes</i>	Fox		X	
		Dasyuridae				
		<i>Δ Antechinus stuartii</i>	Brown Antechinus		X	
E	V	<i>Dasyurus maculatus maculatus</i>	Tiger Quoll		X	X
		Delphinidae				
		<i>Delphinus delphis</i>	Common Dolphin		X	
		<i>Grampus griseus</i>	Risso's Dolphin		X	
M		<i>Lagenorhynchus obscurus</i>	Dusky Dolphin			X
M		<i>Orcinus orca</i>	Killer Whale			X
		<i>Stenella attenuata</i>	Spotted Dolphin		X	
		<i>Tursiops truncatus</i>	Bottlenose Dolphin		X	
		Dugonidae				
	E	<i>Dugong dugon</i>	Dugong		X	
		Felidae				
		<i>*Felis catus</i>	Cat		X	
		Leporidae				
		<i>*Lepus capensis</i>	Brown Hare		X	
		<i>*Oryctolagus cuniculus</i>	Rabbit		X	
		Macropodidae				
		<i>Δ Wallabia bicolor</i>	Swamp Wallaby		X	
		Molossidae				
		<i>Mormopterus sp.</i>	mastiff-bat		X	
		<i>Tadarida australis</i>	White-striped Freetail-bat		X	
		Muridae				
		<i>Hydromys chrysogaster</i>	Water-rat		X	
		<i>*Mus musculus</i>	House Mouse		X	
		<i>Rattus fuscipes</i>	Bush Rat		X	
		<i>*Rattus norvegicus</i>	Brown Rat		X	
		<i>*Rattus rattus</i>	Black Rat		X	
		<i>Rattus sp.</i>	rat		X	
		Neobalaenidae				
M		<i>Caperea marginata</i>	Pygmy Right Whale			X
		Otariidae				
	V	<i>Arctocephalus forsteri</i>	New Zealand Fur-seal		X	
	V	<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal		X	
		<i>Arctocephalus sp.</i>	Unidentified Fur-seal		X	
		<i>Seal sp.</i>	Unidentified Seal		X	



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
		Peramelidae				
E		<i>Isodon obesulus obesulus</i>	Southern Brown Bandicoot			X
		<i>Isodon/Perameles sp.</i>	unidentified Bandicoot		X	
		<i>Δ Perameles nasuta</i>	Long-nosed Bandicoot		X	
	E	<i>Perameles nasuta</i>	Long-nosed Bandicoot, North Head		X	
		Petauridae				
		<i>Petaurus breviceps</i>	Sugar Glider		X	
		Phalangeridae				
		<i>Trichosurus sp.</i>	brush-tail possum		X	
		<i>Trichosurus vulpecula</i>	Common Brush-tail Possum		X	
		Phascolarctidae				
	V	<i>Phascolarctos cinereus</i>	Koala		X	
		Phocidae				
		<i>Hydrurga leptonyx</i>	Leopard Seal		X	
		<i>Mirounga leonina</i>	Southern Elephant Seal		X	
		Potoroidae				
V		<i>Potorus tridactylus tridactylus</i>	Long-nosed Potoroo			X
		Pseudocheiridae				
		<i>Pseudocheirus peregrinus</i>	Common Ringtail Possum		X	
		Pteropodidae				
V	V	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox		X	X
		<i>Pteropus sp.</i>	Flying-fox		X	
		Tachyglossidae				
		<i>Δ Tachyglossus aculeatus</i>	Short-beaked Echidna		X	
		Vespertilionidae				
		<i>Chalinolobus gouldii</i>	Gould's Wattled Bat		X	
	V	<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat		X	
		<i>Vespadelus vulturnus</i>	Little Forest Bat		X	
		RAY-FINNED FISHES				
V		<i>Prototroctes maraena</i>	Australian Grayling			X
		REPTILIA				
		Agamidae				
		<i>Physignathus lesueurii</i>	Eastern Water Dragon		X	
		<i>Δ Pogona barbata</i>	Eastern Bearded Dragon		X	
		Boidae				
		<i>Δ Morelia spilota spilota</i>	Diamond Python		X	
		Chelidae				
		<i>Chelodina longicollis</i>	Eastern Snake-necked Turtle		X	
		Cheloniidae				
V,M	V	<i>Chelonia mydas</i>	Green Turtle		X	X



EPBC	TSC	SCIENTIFIC NAME	COMMON NAME	1	2	3
M		<i>Chelonidae sp.</i>	unidentified sea turtle		X	
		Colubridae				
		<i>Δ Boiga irregularis</i>	Eastern Brown Tree Snake		X	
		<i>Dendrelaphis punctulatus</i>	Green Tree Snake		X	
		Dermochelyidae				
V,M	V	<i>Dermochelys coriacea</i>	Leathery Turtle		X	X
		Elapidae				
		<i>Cacophis squamulosus</i>	Golden Crowned Snake		X	
		<i>Demansia psammophis</i>	Yellow-faced Whipsnake		X	
		<i>Hemiaspis signata</i>	Marsh Snake		X	
		<i>Δ Notechis scutatus</i>	Mainland Tiger Snake		X	
		<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake		X	
		<i>Pseudonaja textilis</i>	Eastern Brown Snake		X	
		<i>Vermicella annulata</i>	Eastern Bandy-bandy		X	
		Gekkonidae				
		<i>Diplodactylus vittatus</i>	Eastern Stone Gecko		X	
		<i>Δ Oedura lesueurii</i>	Lesueur's Velvet Gecko		X	
		<i>Δ Underwoodisaurus miki</i>	Thick-tailed Gecko		X	
		Pygopodidae				
		<i>Δ Lialis burtonis</i>	Burton's Snake-lizard		X	
		<i>Δ Pygopus lepidopodus</i>	Southern Scaly-foot		X	
		Scincidae				
		<i>Acriscosaurus platynota</i>	Red-throated Cool-skink		X	
		<i>Cryptoblepharus virgatus</i>	Cream-striped Shinning-skink		X	
		<i>Ctenotus robustus</i>	Robust Ctenotus		X	
		<i>Ctenotus taeniolatus</i>	Copper-tailed Ctenotus		X	
		<i>Cyclodomorphus michaeli</i>			X	
		<i>Egernia cunninghami</i>	Cunningham's Spiny-tailed Skink		X	
		<i>Eulamprus quoyii</i>	Eastern Water-skink		X	
		<i>Eulamprus tenuis</i>	Bar-sided Forest-skink		X	
		<i>Lampropholis delicata</i>	Dark-flecked Garden Sunskink		X	
		<i>Lampropholis guichenoti</i>	Pale-flecked Garden Sunskink		X	
		<i>Lampropholis sp.</i>	unidentified grass skink		X	
		<i>Δ Lygisaurus foliorum</i>	Tree-base Litter-skink		X	
		<i>Saiphos equalis</i>	Yellow-bellied Three-toed Skink		X	
		<i>Saproscincus mustelinus</i>	Weasel Shadenskink		X	
		<i>Tiliqua scincoides</i>	Common Bluetongue		X	
		Typhlopidae				
		<i>Ramphotyphlops nigrescens</i>	Blackish Blind Snake		X	
		Varanidae				



EPBC	ISC	SCIENTIFIC NAME	COMMON NAME	1	2	3
	V	<i>Varanus rosenbergi</i>	Rosenberg's Goanna		X	
		<i>Δ Varanus varius</i>	Lace Monitor		X	
		SHARKS				
V, M		<i>Carcharodon carcharias</i>	Great White Shark			X
CE		<i>Carcharias taurus</i> (east coast population)	Grey Nurse Shark			X
V		<i>Rhincodon typus</i>	Whale Shark			X



APPENDIX 5: PLATES



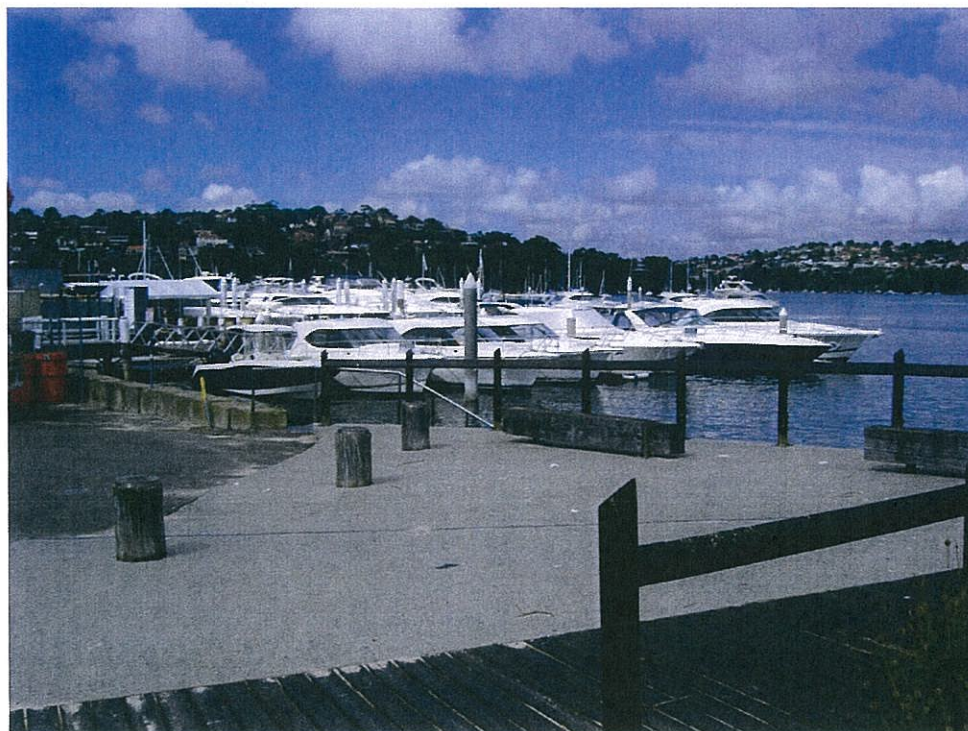
1 Waterfront Parkland.



2 Population of *Carpobrotus sp.*



3 Marina Foreshore



4 Existing Wharf & Decking