

PLANNING PROPOSAL REQUEST

No. 229 Macquarie Grove Road, Cobbitty

(Camden Council)



Prepared For:
Trustees of the Sisters
Of the Good Samaritan
Prepared By:



Volume 2
Annexure "D"
Appendices 1 & 2
Biodiversity Overview and Management Principles
(Travers Ecological)

October 2021

Appendix 1. Flora & Fauna Species Lists

Flora species recorded

Family	Scientific name	Common name
TREES		
Mimosaceae	<i>Acacia decurrens</i>	Black Wattle
Mimosaceae	<i>Acacia parramattensis</i>	Parramatta Wattle
Myrtaceae	<i>Acmena smithii</i>	Lillypilly
Myrtaceae	<i>Angophora costata</i>	Smooth-barked Apple
Myrtaceae	<i>Angophora subvelutina</i>	-
Casuarinaceae	<i>Casuarina cunninghamiana</i>	River Oak
Lauraceae	<i>Cinnamomum camphora</i> *	Camphor Laurel
Rutaceae	<i>Citrus limon</i> *	Lemon Tree
Rutaceae	<i>Citrus sinensis</i> *	Orange Tree
Myrtaceae	<i>Corymbia eximia</i>	Yellow Bloodwood
Myrtaceae	<i>Corymbia maculata</i>	Spotted Gum
Myrtaceae	<i>Eucalyptus eugenioides</i>	Thin-leaved Stringybark
Myrtaceae	<i>Eucalyptus microcorys</i>	Tallowwood
Myrtaceae	<i>Eucalyptus moluccana</i>	Grey Box
Myrtaceae	<i>Eucalyptus robusta</i>	Swamp Mahogany
Myrtaceae	<i>Eucalyptus scoparia</i> ^{TS}	Wallangarra White Gum
Myrtaceae	<i>Eucalyptus siderophloia</i>	Northern Grey Ironbark
Myrtaceae	<i>Eucalyptus tereticornis</i>	Forest Red Gum
Santalaceae	<i>Exocarpos cupressiformis</i>	Native Cherry
Proteaceae	<i>Grevillea robusta</i>	Silky Oak
Bignoniaceae	<i>Jacaranda mimosifolia</i> *	Jacaranda
Lythraceae	<i>Lagerstroemia indica</i> *	Crepe Myrtle
Myrtaceae	<i>Melaleuca linariifolia</i>	Snow in Summer
Pinaceae	<i>Pinus radiata</i> *	Radiata or Monterey Pine
Anacardiaceae	<i>Schinus areira</i> *	Pepper Tree
Proteaceae	<i>Stenocarpus sinuatus</i>	Queensland Firewheel Tree
SHRUBS		
Mimosaceae	<i>Acacia fimbriata</i>	Fringed Wattle
Mimosaceae	<i>Acacia floribunda</i>	Sally Wattle
Mimosaceae	<i>Acacia implexa</i>	Hickory
Mimosaceae	<i>Acacia longifolia</i> var. <i>longifolia</i>	Sydney Golden Wattle
Pittosporaceae	<i>Bursaria spinosa</i> var. <i>spinosa</i>	Native Blackthorn
Myrtaceae	<i>Callistemon viminalis</i>	Weeping Bottlebrush
Solanaceae	<i>Cestrum parqui</i> *	Chilean Cestrum
Fabaceae	<i>Dillwynia sieberi</i>	Prickly Parrot-pea
Verbenaceae	<i>Duranta repens</i> *	Golden Dewdrop
Fabaceae	<i>Indigofera australis</i>	Native Indigo

Family	Scientific name	Common name
Verbenaceae	<i>Lantana camara</i> *	Lantana
Myrtaceae	<i>Leptospermum petersonii</i> *	Lemon Scented Tea-tree
Solanaceae	<i>Lycium ferocissimum</i> *	African Boxthorn
Araceae	<i>Monstera deliciosa</i> *	Fruit-salad Plant
Rutaceae	<i>Murraya paniculata</i> *	Orange Jessamine
Berberidaceae	<i>Nandina domestica</i> *	Sacred Bamboo
Oleaceae	<i>Olea europaea</i> subsp. <i>cuspidata</i> *	African Olive
Asteraceae	<i>Osteospermum fruticosum</i> *	Shrubby Daisy-bush
Rosaceae	<i>Photinia robusta</i> *	-
Phytolaccaceae	<i>Phytolacca octandra</i> *	Inkweed
Rosaceae	<i>Rubus fruticosus</i> sp. agg.*	Blackberry Complex
Solanaceae	<i>Solanum sisymbriifolium</i>	-
GROUNDCOVERS		
Liliaceae	<i>Agapanthus praecox</i> *	Agapanthus
Rubiaceae	<i>Asperula conferta</i>	Common Woodruff
Poaceae	<i>Axonopus fissifolius</i> *	Narrow-leafed Carpet Grass
Asteraceae	<i>Bidens pilosa</i> *	Cobbler's Pegs
Brassicaceae	<i>Brassica rapa</i> *	Wild Turnip
Crassulaceae	<i>Bryophyllum delagoense</i> *	Mother-of-Millions
Brassicaceae	<i>Capsella bursa-pastoris</i> *	Shepherds purse
Cyperaceae	<i>Carex appressa</i>	Tall Sedge
Asteraceae	<i>Carthamus lanatus</i> *	Saffron Thistle
Poaceae	<i>Cenchrus clandestinus</i> *	Kikuyu
Apiaceae	<i>Centella asiatica</i>	Indian Pennywort
Sinopteridaceae	<i>Cheilanthes sieberi</i>	Rock Fern
Poaceae	<i>Chloris gayana</i> *	Rhodes Grass
Poaceae	<i>Chloris truncata</i>	Windmill Grass
Poaceae	<i>Chloris ventricosa</i>	Tall Chloris
Asteraceae	<i>Cirsium vulgare</i> *	Spear Thistle
Amoryllidaceae	<i>Clivia miniata</i> *	Bush Lily
Asteraceae	<i>Conyza bonariensis</i> *	Flaxleaf Fleabane
Asteraceae	<i>Conyza sumatrensis</i> *	Fleabane
Poaceae	<i>Cynodon dactylon</i>	Common Couch
Cyperaceae	<i>Cyperus eragrostis</i> *	Umbrella Sedge
Cyperaceae	<i>Cyperus gracilis</i>	-
Convolvulaceae	<i>Dichondra repens</i>	Kidney Weed
Poaceae	<i>Ehrharta erecta</i> *	Panic Veldtgrass
Chenopodiaceae	<i>Einadia nutans</i>	Climbing Saltbush
Poaceae	<i>Eragrostis curvula</i> *	African Lovegrass
Euphorbiaceae	<i>Euphorbia peplus</i> *	Spurge
Fumariaceae	<i>Fumaria muralis</i> *	Wall Fumitory
Geraniaceae	<i>Geranium homeanum</i>	Northern Cranesbill

Family	Scientific name	Common name
Dilleniaceae	<i>Hibbertia diffusa</i>	-
Clusiaceae	<i>Hypericum gramineum</i>	Small St Johns Wort
Asteraceae	<i>Hypochaeris radicata</i> *	Flatweed
Poaceae	<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass
Juncaceae	<i>Juncus usitatus</i>	Common Rush
Brassicaceae	<i>Lepidium africanum</i> *	Common Peppercross
Lobeliaceae	<i>Lobelia purpurascens</i>	Whiteroot
Lomandraceae	<i>Lomandra filiformis</i>	Wattle Mat-rush
Lomandraceae	<i>Lomandra multiflora</i> subsp. <i>multiflora</i>	Many-flowered Mat-rush
Fabaceae	<i>Lotus suaveolens</i> *	Hairy Bird's Foot Trefoil
Primulaceae	<i>Lysimachia arvensis</i> *	Scarlet Pimpernel
Fabaceae	<i>Medicago polymorpha</i> *	Burr Medic
Poaceae	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
Malvaceae	<i>Modiola caroliniana</i> *	Red-flowered Mallow
Brassicaceae	<i>Nasturtium officinale</i> *	Watercress
Onagraceae	<i>Oenothera stricta</i> *	Evening Primrose
Oxalidaceae	<i>Oxalis perennans</i>	-
Poaceae	<i>Paspalum dilatatum</i> *	Paspalum
Plantaginaceae	<i>Plantago debilis</i>	Slender Plantain
Plantaginaceae	<i>Plantago lanceolata</i> *	Ribwort
Poaceae	<i>Poa affinis</i>	-
Acanthaceae	<i>Pseuderanthemum variabile</i>	Pastel Flower
Dennstaedtiaceae	<i>Pteridium esculentum</i>	Bracken
Iridaceae	<i>Romulea rosea</i> var. <i>australis</i> *	Onion Grass
Polygonaceae	<i>Rumex crispus</i> *	Curled Dock
Poaceae	<i>Rytidosperma tenuius</i>	Wallaby Grass
Asteraceae	<i>Senecio madagascariensis</i> *	Fireweed
Poaceae	<i>Setaria parviflora</i> *	-
Malvaceae	<i>Sida rhombifolia</i> *	Paddy's Lucerne
Solanaceae	<i>Solanum prinophyllum</i>	Forest Nightshade
Solanaceae	<i>Solanum pseudocapsicum</i> *	-
Asteraceae	<i>Soliva sessilis</i> *	Jojo
Asteraceae	<i>Sonchus oleraceus</i> *	Common Sow-thistle
Poaceae	<i>Stenotaphrum secundatum</i> *	Buffalo Grass
Strelitziaceae	<i>Strelitzia juncea</i> *	Bird of Paradise
Asteraceae	<i>Taraxacum officinale</i> *	Dandelion
Poaceae	<i>Themeda triandra</i>	Kangaroo Grass
Commelinaceae	<i>Tradescantia fluminensis</i> *	Wandering Jew
Fabaceae	<i>Trifolium repens</i> *	White Clover
Typhaceae	<i>Typha orientalis</i>	Cumbungi
Scrophulariaceae	<i>Verbascum virgatum</i> *	Twiggy Mullein

Family	Scientific name	Common name
Verbenaceae	<i>Verbena bonariensis</i> *	Purpletop
Verbenaceae	<i>Verbena rigida</i> *	Veined Verbena
Plantaginaceae	<i>Veronica plebeia</i>	Creeping Speedwell
Agavaceae	<i>Yucca aloifolia</i> *	Yucca
VINES		
Basellaceae	<i>Anredera cordifolia</i> *	Madeira Vine
Apocnyaceae	<i>Araujia sericifera</i> *	Mothvine
Ranunculaceae	<i>Clematis aristata</i>	Old Man's Beard
Fabaceae	<i>Glycine clandestina</i>	Twining Glycine
Fabaceae	<i>Hardenbergia violacea</i>	False Sarsparilla
Bignoniaceae	<i>Pandorea pandorana</i>	Wonga Vine
* denotes exotic species TS denotes threatened species		

It should be noted that not all garden, cultivar or landscape species have been identified as part of this assessment.

Fauna species recorded

Common name	Scientific name	Method observed	
Birds		OEH 2016	TBE 2021
Australasian Grebe	<i>Tachybaptus novaehollandiae</i>	Not given	
Australasian Darter	<i>Anhinga novaehollandiae</i>	Not given	
Australian Hobby	<i>Falco longipennis</i>	Not given	
Australian King Parrot	<i>Alisterus scapularis</i>	Not given	
Australian Magpie	<i>Cracticus tibicen</i>	Not given	OW
Australian Owlet-nightjar	<i>Aegotheles cristatus</i>	Not given	
Australian Raven	<i>Corvus coronoides</i>	Not given	OW
Australian White Ibis	<i>Threskiornis molucca</i>	Not given	
Australian Wood Duck	<i>Chenonetta jubata</i>	Not given	O
Azure Kingfisher	<i>Ceyx azureus</i>	Not given	
Bar-shouldered Dove	<i>Geopelia humeralis</i>	Not given	
Bell Miner	<i>Manorina melanophrys</i>	Not given	W
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	Not given	
Brown Cuckoo-Dove	<i>Macropygia amboinensis</i>	Not given	
Brown Gerygone	<i>Gerygone mouki</i>	Not given	
Brown Goshawk	<i>Accipiter fasciatus</i>	Not given	
Brown Thornbill	<i>Acanthiza pusilla</i>	Not given	
Brown-headed Honeyeater	<i>Melithreptus validirostris</i>	Not given	
Common Bronzewing	<i>Phaps chalcoptera</i>	Not given	
Common Myna *	<i>Sturnus tristis</i>	Not given	
Common Starling *	<i>Sturnus vulgaris</i>	Not given	
Crested Pigeon	<i>Ocyphaps lophotes</i>	Not given	OW
Crested Shrike-tit	<i>Falcunculus frontatus</i>	Not given	
Crimson Rosella	<i>Platycercus elegans</i>	Not given	
Double-barred Finch	<i>Taeniopygia bichenovii</i>	Not given	
Dusky Moorhen	<i>Gallinula tenebrosa</i>	Not given	

Common name	Scientific name	Method observed	
Dusky Woodswallow ^{TS}	<i>Artamus cyanopterus</i>	Not given	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	Not given	
Eastern Rosella	<i>Platycercus eximius</i>	Not given	O
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>	Not given	
Eastern Whipbird	<i>Psophodes olivaceus</i>	Not given	
Eastern Yellow Robin	<i>Eopsaltria australis</i>	Not given	
Eurasian Blackbird	<i>Turdus merula</i>	Not given	O
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>	Not given	
Galah	<i>Eolophus roseicapillus</i>	Not given	OW
Golden Whistler	<i>Pachycephala pectoralis</i>	Not given	
Great Cormorant	<i>Phalacrocorax carbo</i>	Not given	
Grey Butcherbird	<i>Cracticus torquatus</i>	Not given	
Grey Fantail	<i>Rhipidura albiscapa</i>	Not given	OW
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	Not given	
Grey Teal	<i>Anas gracilis</i>	Not given	
Hardhead	<i>Aythya australis</i>	Not given	
Jacky Winter	<i>Microeca fascians</i>	Not given	
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	Not given	OW
Lewin's Honeyeater	<i>Meliphaga lewinii</i>	Not given	W
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>	Not given	
Little Corella	<i>Cacatua sanguinea</i>	Not given	W
Little Eagle ^{TS}	<i>Hieraaetus morphnoides</i>	Not given	
Little Lorikeet ^{TS}	<i>Glossopsitta pusilla</i>	Not given	
Little Pied Cormorant	<i>Microcarbo melanoleucos</i>	Not given	
Magpie-lark	<i>Grallina cyanoleuca</i>	Not given	OW
Masked Lapwing	<i>Vanellus miles</i>	Not given	
Mistletoebird	<i>Dicaeum hirundinaceum</i>	Not given	
Musk Lorikeet	<i>Glossopsitta concinna</i>	Not given	
Nankeen Kestrel	<i>Falco cenchroides</i>	Not given	
Noisy Friarbird	<i>Philemon corniculatus</i>	Not given	
Noisy Miner	<i>Manorina melanocephala</i>	Not given	OW
Olive-backed Oriole	<i>Oriolus sagittatus</i>	Not given	
Pacific Black Duck	<i>Anas superciliosa</i>	Not given	
Peaceful Dove	<i>Geopelia striata</i>	Not given	
Pied Butcherbird	<i>Cracticus nigrogularis</i>		O
Pied Cormorant	<i>Phalacrocorax varius</i>	Not given	
Pied Currawong	<i>Strepera graculina</i>	Not given	O
Powerful Owl ^{TS}	<i>Ninox strenua</i>	Not given	
Purple Swampphen	<i>Porphyrio porphyrio</i>	Not given	
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	Not given	W
Red-browed Finch	<i>Neochmia temporalis</i>	Not given	
Red Wattlebird	<i>Anthochaera carunculata</i>	Not given	OW
Red-rumped Parrot	<i>Psephotus haematonotus</i>	Not given	
Red-whiskered Bulbul *	<i>Pycnonotus jocosus</i>	Not given	
Restless Flycatcher	<i>Myiagra inquieta</i>	Not given	
Rose Robin	<i>Petroica rosea</i>	Not given	
Royal Spoonbill	<i>Platalea regia</i>	Not given	

Common name	Scientific name	Method observed	
Rufous Fantail ^{MS}	<i>Rhipidura rufifrons</i>	Not given	
Satin Bowerbird	<i>Ptilonorhynchus violaceus</i>	Not given	
Scarlet Honeyeater	<i>Myzomela sanguinolenta</i>	Not given	
Shining Bronze-cuckoo	<i>Chalcites lucidus</i>	Not given	
Silvereye	<i>Zosterops lateralis</i>	Not given	
Southern Boobook	<i>Ninox novaeseelandiae</i>	Not given	
Speckled Warbler ^{TS}	<i>Chthonicola sagittata</i>	Not given	
Spotted Pardalote	<i>Pardalotus punctatus</i>	Not given	
Spotted Turtle-Dove *	<i>Streptopelia chinensis</i>	Not given	
Striated Pardalote	<i>Pardalotus striatus</i>	Not given	
Sulphur Crested Cockatoo	<i>Cacatua galerita</i>	Not given	
Superb Fairy-wren	<i>Malurus cyaneus</i>	Not given	
Tawny Frogmouth	<i>Podargus strigoides</i>	Not given	
Varied Sittella ^{TS}	<i>Daphoenositta chrysoptera</i>	Not given	
Variegated Fairy-wren	<i>Malurus lamberti</i>	Not given	
Wedge-tailed Eagle	<i>Aquila audax</i>	Not given	
Weebill	<i>Smicromis brevirostris</i>	Not given	
Welcome Swallow	<i>Hirundo neoxena</i>	Not given	O
Whistling Kite	<i>Haliastur sphenurus</i>	Not given	
White-bellied Sea-Eagle ^{TS/MS}	<i>Haliaeetus leucogaster</i>	Not given	O
White-browed Scrubwren	<i>Sericornis frontalis</i>	Not given	
White-faced Heron	<i>Egretta novaehollandiae</i>	Not given	
White-naped Honeyeater	<i>Melithreptus lunatus</i>	Not given	
White-necked Heron	<i>Ardea pacifica</i>	Not given	
White-throated Treecreeper	<i>Cormobates leucophaea</i>	Not given	
White-winged Chough	<i>Corcorax melanorhamphos</i>	Not given	
Willie Wagtail	<i>Rhipidura leucophrys</i>	Not given	W
Yellow Thornbill	<i>Acanthiza nana</i>	Not given	
Yellow-faced Honeyeater	<i>Caligavis chrysops</i>	Not given	
Yellow-tailed Black-Cockatoo	<i>Calyptorhynchus funereus</i>	Not given	
Mammals			
Black Rat *	<i>Rattus rattus</i>	Not given	
Brown Hare *	<i>Lepus capensis</i>	Not given	
Cat (feral)*	<i>Felis catus</i>	Not given	
Chocolate Wattled Bat	<i>Chalinolobus morio</i>	U	
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	Not given	
Common Ringtail Possum	<i>Pseudocheirus peregrinus</i>	Not given	
Common Wombat	<i>Vombatus ursinus</i>	Not given	
Domesticated Cattle *	<i>Bos taurus</i>		O
Eastern Broad-nosed Bat	<i>Scotorepens orion</i>	U	
Eastern Freetail-bat	<i>Mormopterus ridei</i>	U	
Eastern Grey Kangaroo	<i>Macropus giganteus</i>	Not given	O
Euro	<i>Macropus robustus</i>	Not given	
European Red Fox *	<i>Vulpes vulpes</i>	Not given	
Fallow Deer *	<i>Dama dama</i>	Not given	
Gould's Wattled Bat	<i>Chalinolobus gouldii</i>	U	
House Mouse *	<i>Mus musculus</i>	Not given	

Common name	Scientific name	Method observed	
Large Bent-winged Bat ^{TS}	<i>Miniopterus orianae oceanensis</i>	U	
Large-eared Pied Bat ^{TS}	<i>Chalinolobus dwyeri</i>	U	
Large Forest Bat	<i>Vespadelus darlingtoni</i>	U ^{PO}	
Little Bent-winged Bat ^{TS}	<i>Miniopterus australis</i>	U ^{PO}	
Little Forest Bat	<i>Vespadelus vulturnus</i>	U	
Long-eared Bat	<i>Nyctophilus</i> sp.	U	
Rabbit *	<i>Oryctolagus cuniculus</i>	Not given	
Ride's Freetail-bat	<i>Ozimops ridei</i>	U	
Short-beaked Echidna	<i>Tachyglossus aculeatus</i>	Not given	
Sugar Glider	<i>Petaurus breviceps</i>	Not given	
Swamp Wallaby	<i>Wallabia bicolor</i>	Not given	
White-striped Mastiff-bat	<i>Austronomus australis</i>	U	
Reptiles			
Bar-sided Skink	<i>Eulamprus tenius</i>	Not given	
Blackish Blind Snake	<i>Anilius nigrescens</i>	Not given	
Delicate Skink	<i>Lampropholis delicata</i>	Not given	
Eastern Blue Tongue Lizard	<i>Tiliqua scincoides</i>	Not given	
Eastern Long-necked Turtle	<i>Chelodina longicollis</i>	Not given	
Eastern Water Dragon	<i>Intellagama lesueurii</i>	Not given	
Eastern Water Skink	<i>Eulamprus quoyii</i>	Not given	
Elegant Snake-eyed Skink	<i>Cryptoblepharus pulcher</i>	Not given	
Grass Skink	<i>Lampropholis guichenoti</i>	Not given	
Red-bellied Black Snake	<i>Pseudechis porphyriacus</i>	Not given	
Three-toed Skink	<i>Saiphos equalis</i>	Not given	
Amphibians			
Bleating Tree Frog	<i>Litoria dentata</i>	Not given	
Common Eastern Froglet	<i>Crinia signifera</i>	Not given	W
Dwarf Tree Frog	<i>Litoria fallax</i>	Not given	
Eastern Banjo Frog	<i>Limnodynastes dumerilii</i>	Not given	
Peron's Tree Frog	<i>Litoria peronii</i>	Not given	
Striped Marsh Frog	<i>Limnodynastes peronii</i>	Not given	
Verreaux's Frog	<i>Litoria verreauxii</i>	Not given	W
Mollusc			
Cumberland Plain Land Snail ^{TS}	<i>Meridolum corneovirens</i>	Not given ^{PO}	
Brown Garden Snail *	<i>Cornu aspersum</i>	Not given	
<p>Note: * indicates introduced species ^{TS} indicates threatened species ^{MS} indicates Migratory species All species listed are identified to a high level of certainty unless otherwise noted as:</p> <p>^{PR} indicates species identified to a 'probable' level of certainty – more likely than not ^{PO} indicates species identified to a 'possible' level of certainty – low-moderate level of confidence</p>			
E - Nest/roost	H - Hair/feathers/skin	P - Scat	W - Heard call
F-Tracks/scratchings	K- Dead	Q- Camera	X- In scat
FB - Burrow	O - Observed	T - Trapped/netted	Y - Bone/teeth/shell
G - Crushed cones	OW- Obs & heard call	U- Anabat/ultrasound	Z- In raptor/owl pellet

Appendix 2. Threatened Flora & Fauna Habitat Assessment

Threatened flora species habitat assessment

Scientific name DATABASE SOURCE	BC Act	EPBC Act	Growth form and habitat requirements Distribution limit	Recorded on site (y/n)	If not recorded on site			
					Suitable habitat present (y/n)	Nearby and / or high number of record(s) (y/n) Notes 1,2 & 3	Record(s) from recent years (y/n) Notes 1,2 & 3	Potential to occur
<i>Acacia bynoeana</i> EPBC	E1	V	Erect or spreading shrub to 0.3 m high growing in heath and dry sclerophyll open forest on sandy soils. Often associated with disturbed areas such as roadsides. <i>Distribution limits N-Newcastle S-Berrima.</i>	no	no	n/a	n/a	no
<i>Acacia pubescens</i> EPBC	V	V	Spreading shrub 1-4 m high open sclerophyll growing in open forest and woodlands on clay soils. <i>Distribution limits N-Bilpin S-Georges River.</i>	no	marginal	no	n/a	no
<i>Allocasuarina glareicola</i> EPBC	E1	E	Small shrub 1-2 m high growing in open sclerophyll forest on lateritic soils derived from tertiary alluviums. <i>Distribution limits Castlereagh NR region.</i>	no	no	n/a	n/a	no
<i>Cynanchum elegans</i> DPIE EPBC	E1	E	Climber or twiner to 1m. Grows in rainforest gullies, scrub & scree slopes. <i>Distribution limits N-Gloucester S-Wollongong.</i>	no	no	n/a	n/a	no
<i>Epacris purpurascens</i> var. <i>purpurascens</i> DPIE	V	-	Erect shrub to 1.5 m high growing in sclerophyll forest and scrub and near creeks and swamps on sandstone. <i>Distribution limits N-Gosford S-Blue Mountains.</i>	no	no	n/a	n/a	no
<i>Eucalyptus benthamii</i> DPIE EPBC	V	V	Blue gum to 40 m high. Wet forest on sandy alluvial soils. <i>Distribution limits N-Yarramundi S-Bents Basin.</i>	no	Outside of study area along Nepean River embankment	yes	yes	no

Scientific name DATABASE SOURCE	BC Act	EPBC Act	Growth form and habitat requirements Distribution limit	Recorded on site (y/n)	If not recorded on site			
					Suitable habitat present (y/n)	Nearby and / or high number of record(s) (y/n) Notes 1,2 & 3	Record(s) from recent years (y/n) Notes 1,2 & 3	Potential to occur
<i>Genoplesium baueri</i> EPBC	E1	E	A terrestrial orchid that grows in sparse sclerophyll forest and moss gardens over sandstone. Flowers Feb–Mar. <i>Distribution limits N – Hunter Valley S – Nowra.</i>	no	no	n/a	n/a	no
<i>Haloragis exalata</i> <i>subsp. exalata</i> EPBC	V	V	Shrub to 1.5 m high. Grows in damp places near watercourses. <i>Disjunctly distributed in the Central Coast, South Coast and North Western Slopes botanical subdivisions of NSW.</i>	no	no	n/a	n/a	no
<i>Melaleuca biconvexa</i> DPIE	V	V	Tall shrub. Grows in wetlands adjoining perennial streams and on the banks of those streams, generally within the geological series known as the Terrigal Formation. <i>Distribution limits N-Port Macquarie S-Jervis Bay.</i>	no	no	n/a	n/a	no
<i>Melaleuca deanei</i> EPBC	V	V	Shrub to 3 m high. Grows in heath on sandstone. <i>Distribution limits N-Gosford S-Nowra.</i>	no	no	n/a	n/a	no
<i>Persicaria elatior</i> EPBC	V	V	Herb to 90 cm tall which grows in damp places especially beside streams and lakes. Occasionally in swamp forest or associated with disturbance. <i>Varied distribution from SE NSW to QLD.</i>	no	no	n/a	n/a	no
<i>Persoonia bargoensis</i> EPBC	E1	V	Erect shrub to 1 m high. Grows in woodland to Dry sclerophyll forest, on sandstone and laterite. <i>Restricted to the Bargo area.</i>	no	no	n/a	n/a	no
<i>Persoonia hirsuta</i> EPBC	E1	E	Erect to decumbent shrub. Grows in dry sclerophyll forest and woodland on Hawkesbury sandstone with infrequent fire histories. <i>Distribution limits N-Glen Davis S-Hill Top.</i>	no	no	n/a	n/a	no

Scientific name DATABASE SOURCE	BC Act	EPBC Act	Growth form and habitat requirements Distribution limit	Recorded on site (y/n)	If not recorded on site			
					Suitable habitat present (y/n)	Nearby and / or high number of record(s) (y/n) Notes 1,2 & 3	Record(s) from recent years (y/n) Notes 1,2 & 3	Potential to occur
<i>Pimelea spicata</i> DPIE EPBC	E1	E	Decumbent or erect shrub to 0.5 m high. Occurs principally in woodland on soils derived from Wianamatta Shales. <i>Distribution limits N-Lansdowne S-Shellharbour.</i>	no	yes	Many records 3-4km south-east	yes	yes
<i>Pomaderris brunnea</i> DPIE EPBC	V	V	Shrub to 3 m high. Confined to Upper Nepean and Colo Rivers where it grows in open forest.	no	Outside of study area along Nepean River embankment	Many records 3km south-west	yes	no
<i>Pterostylis saxicola</i> EPBC	E1	E	Terrestrial orchid. Grows in shallow sandy soil above rock shelves, usually near Wianamatta / Hawkesbury transition. <i>Distribution limits N-Hawkesbury River S-Campbelltown.</i>	no	no	n/a	n/a	no
<i>Pultenaea pedunculata</i> DPIE	E1	-	Prostrate shrub. Grows in dry sclerophyll forest and disturbed sites. <i>Confined to Prestons and Villawood in NSW.</i>	no	yes	yes	yes	yes
<i>Rhizanthella slateri</i> EPBC	V	E	Underground orchid that is poorly known. Grows in sclerophyll forests. Usually only seen if the soil is disturbed. Flowers in Oct – Nov.	no	no	n/a	n/a	no
<i>Rhodamnia rubescens</i> DPIE EPBC	E4A	CE	Shrub or small tree to 25 m high found in rainforest and riparian vegetation along the coast and up to 600 m ASL. Flowers in late winter through to spring, with a peak in October, and fruits typically begin to appear in December in the Sydney region. <i>Distribution limits N-Tweed Heads S-Batemans Bay.</i>	no	no	n/a	n/a	no

Scientific name DATABASE SOURCE	BC Act	EPBC Act	Growth form and habitat requirements Distribution limit	Recorded on site (y/n)	If not recorded on site			
					Suitable habitat present (y/n)	Nearby and / or high number of record(s) (y/n) Notes 1,2 & 3	Record(s) from recent years (y/n) Notes 1,2 & 3	Potential to occur
<i>Syzygium paniculatum</i> DPIE EPBC	V	V	Small tree. Subtropical and littoral rainforest on sandy soil. <i>Distribution limits N-Forster S-Jervis Bay.</i>	no	no	n/a	n/a	no
<i>Thelymitra</i> sp. 'Kangaloon' (<i>Thelymitra kangaloonica</i>) EPBC	E4A	CE	A terrestrial orchid with dark blue flowers, presented in mid-late spring. <i>Only known from the Robertson area in the Southern Highlands.</i> Often in association with the endangered ecological community <i>Temperate Highland Peat Swamps on Sandstone.</i>	no	no	n/a	n/a	no
<i>Thesium australe</i> DPIE EPBC	V	V	Erect herb to 0.4 m high. Root parasite. Themeda grassland or woodland often damp. <i>Distribution limits N-Tweed Heads S-south of Eden.</i>	no	unlikely	1 record within 10km	Record from 1803	no
DPIE	- Denotes species listed within 10km of the development footprint on the <i>Atlas of NSW Wildlife</i>							
EPBC	- Denotes species listed within 10km of the development footprint in the <i>EPBC Act</i> habitat search							
V	- Denotes vulnerable listed species under the relevant Act							
E or E1	- Denotes endangered listed species under the relevant Act							
E4a or CE	- Denotes critically endangered listed species under the relevant Act							
NOTE:	1. This field is not considered if no suitable habitat is present within the development footprint 2. 'records' refer to those provided by the <i>Atlas of NSW Wildlife</i> 3. 'nearby' or 'recent' records are species specific accounting for home range, dispersal ability and life cycle							

Threatened fauna species habitat assessment

Common name <i>Scientific name</i> Database source	BC Act	EPBC Act	Preferred habitat <i>Distribution limit</i>	Recorded on site (y/n)	If not recorded on site			
					Suitable habitat present (y/n)	Nearby and/or high number of record(s) (y/n) <i>Notes 1,2 & 3</i>	Record(s) from recent years (y/n) <i>Notes 1,2 & 3</i>	Potential to occur
Giant Burrowing Frog <i>Heleioporus australiacus</i> DPIE EPBC	V	V	Inhabits open forests and riparian forests along non-perennial streams, digging burrows into sandy creek banks. <i>Distribution limit: N-Near Singleton S-South of Eden.</i>	N	N	N	N	Not likely
Green and Golden Bell Frog <i>Litoria aurea</i> DPIE EPBC	E	V	Prefers the edges of permanent water, streams, swamps, creeks, lagoons, farm dams and ornamental ponds. Often found under debris. <i>Distribution limit: N-Byron Bay S-South of Eden.</i>	N	Y	N	Y	Low
Southern Bell Frog <i>Litoria raniformis</i> EPBC	E	V	Prefers the edges of permanent water, streams, swamps, creeks, lagoons, farm dams and ornamental ponds. Often found under debris. <i>Distribution limit: N-ACT Bay. S-Albury.</i>	N	Y	N	N	Unlikely
Broad-headed Snake <i>Hoplocephalus bungaroides</i> EPBC	E	V	Sandstone outcrops, exfoliated rock slabs and tree hollows in coastal and near coastal areas. <i>Distribution limit: N-Mudgee Park. S-Nowra.</i>	N	N	N	N	Not likely
Blue-billed Duck <i>Oxyura australis</i> DPIE	V	-	A completely aquatic species occurring mainly throughout the Murray-Darling basin in cool to warm temperate deep permanent freshwater lakes, lagoons and swamps with extensive reed-beds. <i>Distribution limit: N-Tenterfield. S-Albury.</i>	N	Y	Y	N	Low
Freckled Duck <i>Stictonetta naevosa</i> DPIE	V	-	Occurs mainly within the Murray-Darling basin and the channel country within large cool temperate to sub-tropical swamps, lakes and floodwaters with cumbungi, lignum or melaleucas. <i>Distribution limit: N- Tenterfield. S-Albury.</i>	Y	Y	Y	Y	Y
Black-necked Stork <i>Ephippiorhynchus asiaticus</i>	E	-	Occurs in tropical to warm temperate terrestrial wetlands, estuarine and littoral habitats such as mangroves, tidal mudflats, floodplains, open woodlands, irrigated lands, bore drains, sub-artesian pools, farm dams and sewerage ponds. <i>Distribution limit: N-Tweed Heads. S-Nowra.</i>	N	Y	N	N	Not likely

DPIE								
Australasian Bittern <i>Botaurus poiciloptilus</i> DPIE EPBC	E	E	Found in or over water of shallow freshwater or brackish wetlands with tall reedbeds, sedges, rushes, cumbungi, lignum and also in ricefields, drains in tussocky paddocks, occasionally saltmarsh, brackish wetlands. <i>Distribution limit: N-North of Lismore. S- Eden.</i>	N	Y	Y	N	Low
White-bellied Sea Eagle <i>(Haliaeetus leucogaster)</i> DPIE EPBC	V	-	Occupies coasts, islands, estuaries, inlets, large rivers, inland lakes and reservoirs. <i>Sedentary; dispersive. N-Tweed Heads. S-South of Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Little Eagle <i>Hieraaetus morphnoides</i> DPIE	V	-	Utilises plains, foothills, open forests, woodlands and scrublands; river red gums on watercourses and lakes. <i>Distribution limit - N-Tweed Heads. S-South of Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Square-tailed Kite <i>Lophoictinia isura</i> DPIE	V	-	Utilises mostly coastal and sub-coastal open forest, woodland or lightly timbered habitats and inland habitats along watercourses and mallee that are rich in passerine birds. <i>Distribution limit: N-Goondiwindi. S-South of Eden.</i>	N	Y	N	Y	Low
Eastern Osprey <i>Pandion cristatus</i> EPBC	V	-	Utilises waterbodies including coastal waters, inlets, lakes, estuaries and offshore islands with a dead tree for perching and feeding. <i>Distribution limit: N-Tweed Heads. S-South of Eden.</i>	N	Y	N	N	Unlikely
Grey Falcon <i>Falco hypoleucos</i> EPBC	V	-	Occurs over mainly inland drainage systems of open plains and lightly timbered country including the acacia scrub, spinifex and tussock grasslands. <i>Distribution limit: N-Mullumbimby. S-Bega.</i>	N	Y	N	N	Not likely
Red Knot <i>Calidris canutus</i> DPIE	-	E	The red knot is a small to medium migratory shorebird. During the non-breeding season in Australasia, the red knot mainly inhabit intertidal mudflats, sandflats and sandy beaches of sheltered coasts and sometimes on sandy ocean beaches or shallow pools on exposed rock platforms. They are occasionally seen on terrestrial saline wetlands near the coast and on sewage ponds and saltworks	N	Y	Y	N	Low
Gang-gang Cockatoo <i>Callocephalon fimbriatum</i> DPIE	V	-	Prefers wetter forests and woodlands from sea level to > 2,000m on the Great Dividing Range, timbered foothills and valleys, timbered watercourses, coastal scrubs, farmlands and suburban gardens. <i>Distribution limit: mid north coast of NSW to western Victoria.</i>	N	Y	Y	Y	Y

Glossy Black-Cockatoo <i>Calyptorhynchus lathamii</i> DPIE	V	-	Open forests with <i>Allocasuarina</i> species and hollows for nesting. <i>Distribution limit: N-Tweed Heads. S-South of Eden.</i>	N	Y	N	N	Not likely
Little Lorikeet <i>Glossopsitta pusilla</i> DPIE	V	-	Inhabits forests, woodlands; large trees in open country; timbered watercourses, shelterbeds, and street trees. <i>Distribution limit: N-Tweed Heads. S-South of Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Swift Parrot <i>Lathamus discolor</i> DPIE EPBC	E	E	Inhabits eucalypt forests and woodlands with winter flowering eucalypts. <i>Distribution limit: N-Border Ranges National Park. S-South of Eden.</i>	N	Y	Y	Y	Y
Turquoise Parrot <i>Neophema pulchella</i> DPIE	V	-	Inhabits coastal scrubland, open forest and timbered grassland, especially ecotones between dry hardwood forests and grasslands. <i>Distribution limit: N-Near Tenterfield. S-South of Eden.</i>	N	Y	Y	N	Low
Barking Owl <i>Ninox connivens</i> DPIE	V	-	Inhabits principally woodlands but also open forests and partially cleared land and utilises hollows for nesting. <i>Distribution limit: N-Border Ranges National Park. S-Eden.</i>	N	Y	N	N	Unlikely
Powerful Owl <i>Ninox strenua</i> DPIE	V	-	Forests containing mature trees for shelter or breeding and densely vegetated gullies for roosting. <i>Distribution limits: N-Border Ranges National Park. S-Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Masked Owl <i>Tyto novaehollandiae</i> DPIE	V	-	Open forest and woodlands with cleared areas for hunting and hollow trees or dense vegetation for roosting. <i>Distribution limit: N-Border Ranges National Park. S-Eden.</i>	N	Y	N	N	Unlikely
White-throated Needletail ^{MS} <i>Hirundapus caudacutus</i> DPIE EPBC	-	V	Airspace over forests, woodlands, farmlands, plains, lakes, coasts, towns; companies often forage along favoured hilltops and timbered ranges. Breeds Siberia, Himalayas, east to Japan. Summer migrant to eastern Australia. <i>Distribution limit: N-Tweed Heads. S-South of Eden.</i>	N	Y	N	N	Unlikely
Brown Treecreeper <i>Climacteris picumnus victoriae</i> DPIE	V	-	Occupies eucalypt woodlands, open woodland lacking a dense understorey with fallen dead timber. <i>Distribution limit: (Sub species victoriae) Central NSW west of Great Div. Cumberland Plains, Hunter Valley, Richmond, Clarence, and Snowy River Valleys.</i>	N	Y	Y	Y	Y

Speckled Warbler <i>Chthonicola sagittata</i> DPIE	V	-	Found in temperate eucalypt woodland and open forest including forest edges, wooded farmland and urban areas with mature eucalypts. <i>Distribution limit: N-Urbanville. S-Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Regent Honeyeater <i>Xanthomyza Phrygia</i> DPIE EPBC	E4A	CE	Found in temperate eucalypt woodland and open forest including forest edges, wooded farmland and urban areas with mature eucalypts. <i>Distribution limit: N-Urbanville. S-Eden.</i>	N	Y	N	Y	Low
Painted Honeyeater <i>Grantiella picta</i> EPBC	V	V	A nomadic bird occurring in low densities within open forest, woodland and scrubland feeding on mistletoe fruits. Inhabits primarily Boree, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests. <i>Distribution limit: N-Boggabilla. S-Albury with greatest occurrences on the inland slopes of the Great Dividing Range.</i>	N	Y	N	N	Unlikely
Black-chinned Honeyeater <i>Melithreptus gularis gularis</i> DPIE	V	-	Found in woodlands containing box-ironbark associations and River Red Gums, also drier coastal woodlands of the Cumberland Plain and Hunter Richmond and Clarence. <i>Distribution limit: N-Cape York Pen. Qld. S-Victor H. Mt Lofty Ra & Flinders Ra. SA.</i>	N	Y	N	N	Unlikely
Varied Sittella <i>Daphoenositta chrysoptera</i> DPIE	V	-	Open eucalypt woodlands / forests (except heavier rainforests); mallee, inland acacia, coastal tea-tree scrubs; golf courses, shelterbelts, orchards, parks, scrubby gardens. <i>Distribution limit: N-Border Ranges National Park. S-South of Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Dusky Woodswallow <i>Artamus cyanopterus cyanopterus</i> DPIE	V	-	Found in woodlands and dry open sclerophyll forests, usually dominated by eucalypts, including mallee associations. It has also been recorded in shrublands and heathlands and various modified habitats, including regenerating forests; very occasionally in moist forests or rainforests. Prefers habitat with an open understorey. Often observed in farmland tree patches or roadside remnants. <i>Widespread in eastern, southern and south-western Australia.</i>	Y (OEH 2016)	Y	Y	Y	Y
Hooded Robin <i>Melanodryas cucullata cucullata</i> DPIE	V	-	Found in eucalypt woodlands, <i>Acacia</i> scrubland, open forest, and open areas adjoining large woodland blocks, with areas of dead timber. <i>Distribution limit: N-Central Qld. S-Spencer Gulf SA.</i>	N	Y	Y	N	Low
Scarlet Robin <i>Petroica boodang</i> DPIE	V	-	Found in foothill forests, woodlands, watercourses; in autumn-winter, more open habitats: river red gum woodlands, golf courses, parks, orchards, gardens. <i>Distribution limit: N-Tweed Heads. S-South of Eden.</i>	N	Y	Y	Y	Y

Flame Robin <i>Petroica phoenicea</i> DPIE	V	-	Summer: forests, woodlands, scrubs, from sea-level to c. 1800 m. Autumn-winter: open woodlands, plains, paddocks, golf courses, parks, orchards. <i>Distribution limit: N northern NSW tablelands. S-South of Eden.</i>	N	Y	Y	N	Low
Diamond Firetail <i>Stagonopleura guttata</i> DPIE	V	-	Found in eucalypt woodlands, forests and mallee where there is grassy understorey west of the Great Div. also drier coastal woodlands of the Cumberland Plain and Hunter Richmond and Clarence River Valleys. <i>Distribution limit: N-Rockhampton Q. S-Eyre Pen Kangaroo Is. SA.</i>	N	Y	Y	N	Low
Spotted-tailed Quoll <i>Dasyurus maculatus</i> DPIE EPBC	V	E	Dry and moist open forests containing rock caves, hollow logs or trees. <i>Distribution limit: N-Mt Warning National Park. S-South of Eden.</i>	N	Y	N	N	Unlikely
Koala <i>Phascolarctos cinereus</i> DPIE EPBC	V	V	Inhabits both wet and dry eucalypt forest on high nutrient soils containing preferred feed trees. <i>Distribution limit: N-Tweed Heads. S-South of Eden.</i>	N	Y	Y	Y	Y
Eastern Pygmy Possum <i>Cercatetus nanus</i> DPIE	V	-	Found in a variety of habitats from rainforest through open forest to heath. Feeds on insects but also gathers pollen from banksias, eucalypts and bottlebrushes. Nests in banksias and myrtaceous shrubs. <i>Distribution limit: N-Tweed Heads. S-Eden.</i>	N	N	N	N	Not likely
Squirrel Glider <i>Petaurus norfolcensis</i> DPIE	V	-	Mixed aged stands of eucalypt forest & woodlands including gum barked & high nectar producing species & hollow bearing trees. <i>Distribution limit: N-Tweed Heads. S-Albury.</i>	N	Y	N	N	Unlikely
Greater Glider <i>Petauroides volans</i> DPIE EPBC	-	V	Favours forests with a diversity of eucalypt species, due to seasonal variation in its preferred tree species. Population density is optimal at elevation levels at 845 m above sea level. Prefer overstorey basal areas in old-growth tree stands. Highest abundance typically in taller, montane, moist eucalypt forests, with relatively old trees and abundant hollows <i>Distribution limit: N-Border Ranges National Park. S- South of Eden.</i>	N	N	N	N	Not likely
Brush-tailed Rock-wallaby <i>Petrogale penicillata</i> EPBC	E	V	Found in rocky gorges with a vegetation of rainforest or open forests to isolated rocky outcrops in semi-arid woodland country. <i>Distribution limit: N-North of Tenterfield. S-Bombala.</i>	N	N	N	N	Not likely
Grey-headed Flying-fox	V	V	Found in a variety of habitats including rainforest, mangroves, paperbark swamp, wet and dry open forest and cultivated areas. Forms camps commonly found in gullies and in vegetation with a dense canopy. <i>Distribution limit: N-Tweed Heads. S-Eden.</i>	N	Y	Y	Y	Y

<i>Pteropus poliocephalus</i> DPIE EPBC								
Yellow-bellied Sheath-tail-bat <i>Saccolaimus flaviventris</i> DPIE	V	-	Rainforests, sclerophyll forests and woodlands. <i>Distribution limit: N-North of Walgett. S-Sydney.</i>	N	Y	Y	Y	Y
Eastern Coastal Free-tailed Bat <i>Micronomus norfolkensis</i> DPIE	V	-	Inhabits open forests and woodlands foraging above the canopy and along the edge of forests. Roosts in tree hollows, under bark and buildings. <i>Distribution limit: N-Woodenbong. S-Pambula.</i>	Y (OEH 2016)	Y	Y	Y	Y
Large-eared Pied Bat <i>Chalinolobus dwyeri</i> DPIE EPBC	V	V	Warm-temperate to subtropical dry sclerophyll forest and woodland. Roosts in caves, tunnels and tree hollows in colonies of up to 30 animals. <i>Distribution limit: N-Border Ranges National Park. S-Wollongong.</i>	Y (OEH 2016)	Y	Y	Y	Y
Eastern False Pipistrelle <i>Falsistrellus tasmaniensis</i> DPIE	V	-	Recorded roosting in caves, old buildings and tree hollows. <i>Distribution limit: N-Border Ranges National Park. S-Pambula.</i>	N	Y	Y	Y	Y
Little Bent-winged Bat <i>Miniopterus australis</i> DPIE	V	-	Roosts in caves, old buildings and structures in the higher rainfall forests along the south coast of Australia. <i>Distribution limit: N-Border Ranges National Park. S-Sydney.</i>	Y (OEH 2016, with possible certainty)	Y	Y	Y	Y
Large Bent-winged Bat <i>Miniopterus orianae oceanensis</i> DPIE	V	-	Prefers areas where there are caves, old mines, old buildings, stormwater drains and well-timbered areas. <i>Distribution limit: N-Border Ranges National Park. S-South of Eden.</i>	Y (OEH 2016)	Y	Y	Y	Y
Southern Myotis <i>Myotis macropus</i> DPIE	V	-	Roosts in caves, mines, tunnels, buildings, tree hollows and under bridges. Forages over open water. <i>Distribution limit: N-Border Ranges National Park. S-South of Eden.</i>	N	Y	Y	Y	Y

Greater Broad-nosed Bat <i>Scoteanax rueppellii</i> DPIE	V	-	Inhabits areas containing moist river and creek systems, especially tree lined creeks. <i>Distribution limit: N-Border Ranges National Park. S-Pambula.</i>	N	Y	Y	Y	Y
New Holland Mouse <i>Pseudomys novaehollandiae</i> EPBC	-	V	Occurs in heathlands, woodlands, open forest and paperbark swamps and on sandy, loamy or rocky soils. Coastal populations have a marked preference for sandy substrates, a heathy understorey of leguminous shrubs less than 1m high and sparse ground litter. Recolonise of regenerating burnt areas. <i>Distribution limit: N-Border Ranges National Park. S-South of Eden.</i>	N	N	N	N	Not likely
Cumberland Plain Land Snail <i>Meridolum corneovirens</i> DPIE	E	-	Inhabits remnant eucalypt woodland of the Cumberland Plan. Shelters under logs, debris, clumps of grass, around base of trees and burrowing into loose soil. <i>Distribution limit: Cumberland Plain of Sydney Basin Bioregion.</i>	Y (OEH 2016, with possible certainty)	Y	Y	Y	Y
Dural Land Snail <i>Pommerhelix duralensis</i> DPIE EPBC	E	E	Occurs on shale-sandstone transitional forest landscapes within the Blue Mountains, Penrith, The Hills, Wollondilly, Hornsby and Parramatta LGA's. Occurs in low abundance and shelters under rocks or inside curled-up bark, beneath leaves and light woody debris. <i>Distribution limit: St Albans to Mulgoa with most records from The Hills LGA.</i>	N	Y	N	Y	Low
DPIE	- Denotes species listed within 10km of the development footprint on the <i>Atlas of NSW Wildlife</i>							
EPBC	- Denotes species listed within 10km of the development footprint in the <i>EPBC Act</i> habitat search							
TBE	- Denotes additional species considered by <i>Travers bushfire & ecology</i> to have potential habitat based on regional knowledge and other records							
V	- Denotes vulnerable listed species under the relevant Act							
E or E1	- Denotes endangered listed species under the relevant Act							
E4a or CE	- Denotes critically endangered listed species under the relevant Act							
NOTE:	1. This field is not considered if no suitable habitat is present within the development footprint 2. 'records' refer to those provided by the <i>Atlas of NSW Wildlife</i> 3. 'nearby' or 'recent' records are species specific accounting for home range, dispersal ability and life cycle							
Unlikely	Represents such a low margin but not enough to 100% rule it out. A test of significance is required.							
Not likely	Means 0% change of occurring, despite there being potential habitat. A test of significance is not applied to these species.							

The table below provides an assessment of potential habitat within the study area for nationally *protected* migratory fauna species recorded within 10 km on the *EPBC Act* Protected Matters Tool. Nationally *threatened* migratory species are instead considered above.

Protected migratory bird habitat assessment

Common name <i>Scientific name</i>	Preferred habitat <i>Migratory breeding</i>	Suitable habitat present (y/n)	Recorded on site (y/n)	Comments
Oriental Cuckoo (<i>Cuculus optatus</i>)	Mainly inhabits forests, occurring in coniferous, deciduous and mixed forest. It feeds mainly on insects and their larvae, foraging for them in trees and bushes as well as on the ground.	Y	N	
Osprey (<i>Pandion haliaetus</i>)	Occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They require extensive areas of open fresh, brackish or saline water for foraging. They frequent a variety of wetland habitats including inshore waters, reefs, bays, coastal cliffs, beaches, estuaries, mangrove swamps, broad rivers, reservoirs and large lakes and waterholes. They exhibit a preference for coastal cliffs and elevated islands in some parts of their range, but may also occur on low sandy, muddy or rocky shores and over coral cays. They may occur over atypical habitats such as heath, woodland or forest when travelling to and from foraging sites. Eastern Ospreys occur sympatrically and sometimes interact with White-bellied Sea-Eagles.	Y	N	
White-throated Needletail (<i>Hirundapus caudacutus</i>)	Airspace over forests, woodlands, farmlands, plains, lakes, coasts, towns; companies often forage along favoured hilltops and timbered ranges. <i>Breeds Siberia, Himalayas, east to Japan. Summer migrant to eastern Australia.</i>	Y	N	
Fork-tailed Swift (<i>Apus pacificus</i>)	Aerial: over open country, from semi-arid deserts to coasts, islands; sometimes over forests, cities. Breeds Siberia, Himalayas, east to Japan south east Asia. Summer migrant to east Australia. Mass movements associated with late summer low pressure systems into east Australia. Otherwise uncommon.	Y	N	-
Rainbow Bee-eater (<i>Merops ornatus</i>)	Open woodlands with sandy, loamy soil; sandridges, sandspits, riverbanks, road cuttings, beaches, dunes, cliffs, mangroves, rainforest, woodlands, golf courses. <i>Breeding resident in northern Australia. Summer breeding migrant to south east and south west Australia.</i>	Y	N	
Black-faced Monarch (<i>Monarcha melanopsis</i>)	Rainforests, eucalypt woodlands; coastal scrubs; damp gullies in rainforest, eucalypt forest; more open woodland when migrating. <i>Summer breeding migrant to coastal south east Australia, otherwise uncommon.</i>	Y	N	
Spectacled Monarch (<i>Monarcha trivirgatus</i>)	Understorey of mountain / lowland rainforest, thickly wooded gullies, waterside vegetation, mostly well below canopy. <i>Summer breeding migrant to south-east Qld and north-east NSW down to Port Stephens from Sept / Oct to May. Uncommon in southern part of range.</i>	N	N	-

Common name <i>Scientific name</i>	Preferred habitat <i>Migratory breeding</i>	Suitable habitat present (y/n)	Recorded on site (y/n)	Comments
Satin Flycatcher (<i>Myiagra cyanoleuca</i>)	Heavily vegetated gullies in forests, taller woodlands, usually above shrub-layer; during migration, coastal forests, woodlands, mangroves, trees in open country, gardens. <i>Breeds mostly south-east Australia and Tasmania over warmer months, winters in north east Qld.</i>	Y	N	-
Rufous Fantail (<i>Rhipidura rufifrons</i>)	Undergrowth of rainforests / wetter eucalypt forests / gullies; monsoon forests, paperbarks, sub-inland and coastal scrubs; mangroves, watercourses; parks, gardens. On migration, farms, streets buildings. <i>Breeding migrant to south-east Australia over warmer months. Altitudinal migrant in north-east NSW in mountain forests during warmer months.</i>	Y	Y	
Yellow Wagtail (<i>Motacilla flava</i>)	The yellow wagtail typically forages in damp grassland and on relatively bare open ground at edges of rivers, lakes and wetlands, but also feeds in dry grassland and in fields of cereal crops.	Y	N	-
Painted Snipe (<i>Rostratula australis</i>)	Generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum or canegrass or sometimes tea-tree. The Australian Painted Snipe sometimes utilises areas that are lined with trees, or that have some scattered fallen or washed-up timber. Breeding habitat requirements may be quite specific: shallow wetlands with areas of bare wet mud and both upper and canopy cover nearby. Nest records are all, or nearly all, from or near small islands in freshwater wetlands, provided that these islands are a combination of very shallow water, exposed mud, dense low cover and sometimes some tall dense cover. Has also been recorded nesting in and near swamps, canegrass swamps, flooded areas including samphire, grazing land, among cumbungi, sedges, grasses, salt water couch (<i>Paspalum</i>), saltbush (<i>Halosarcia</i>) and grass, also in ground cover of water-buttons and grasses, at the base of tussocks and under low saltbush.	N	N	