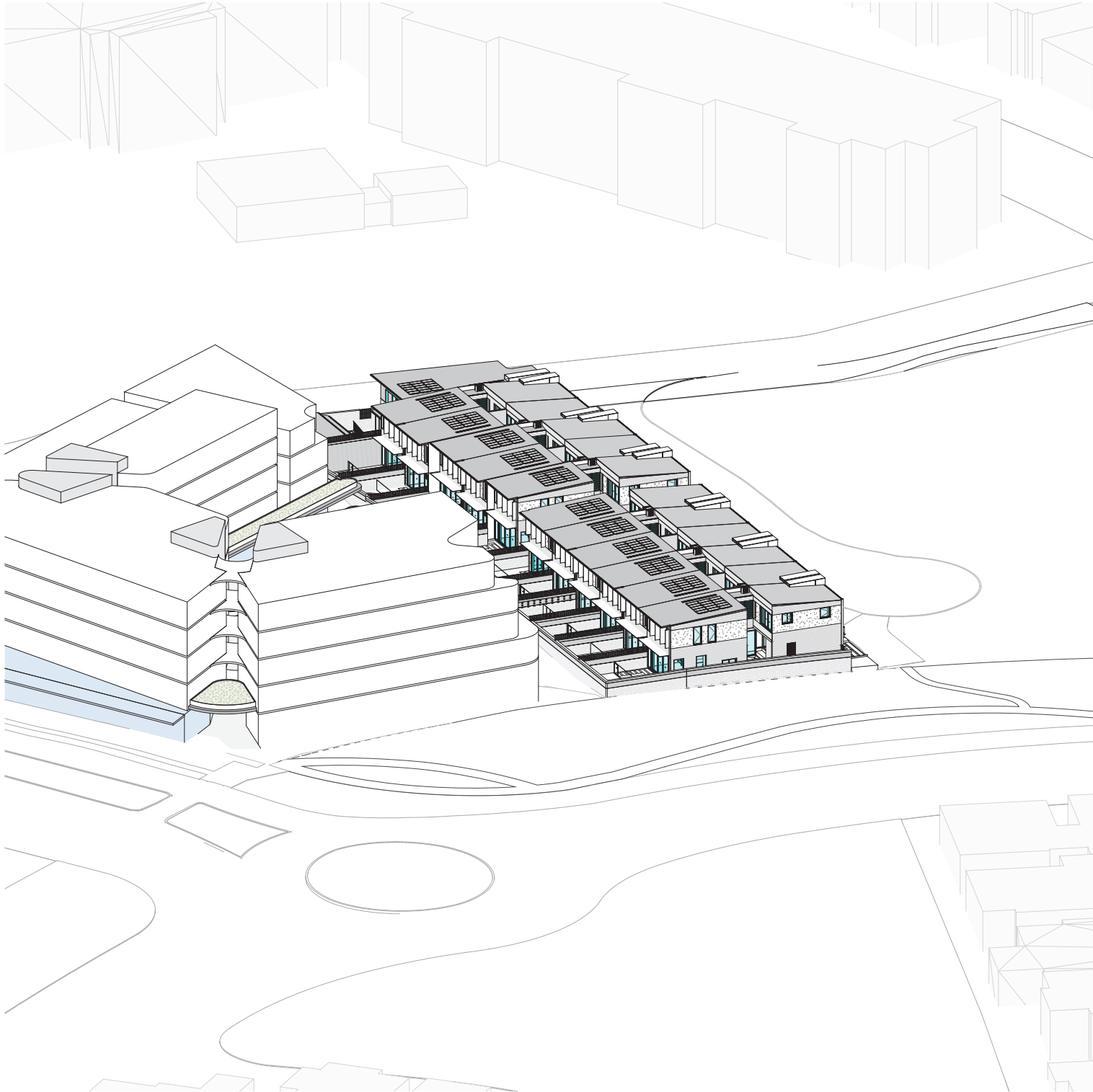




1 VIEW FROM SUN 21 JUNE 1500 - MASS  
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PRELIMINARY

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

| Rev | Date | Revision | By | Chk. |
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Client

podia

Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

VIEW FROM THE SUN (MIDWINTER) - MASS

Date

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| Drawing No. | Revision |         |
| DA-6117     |          |         |

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1 SHADOW PLAN - 21/06 -9.00 - MASS

SCALE 1:500



2 SHADOW PLAN - 21/06 -9.30 -MASS

SCALE 1:500

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PRELIMINARY



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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

| Rev | Date | Revision | By | Chk. |
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Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

SHADOW DIAGRAMS (MIDWINTER) - MASS

Date

Scale

Sheet Size

1 : 500 A1

Drawn

Chk.

Job No.

Author

Checker

6906

Drawing No.

Revision

DA-6121

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1 SHADOW PLAN - 21/06 -10.00 - MASS  
SCALE 1:500



3 SHADOW PLAN - 21/06-10.30 - MASS  
SCALE 1:500

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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

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Client

podia

Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

SHADOW DIAGRAMS (MIDWINTER) - MASS

Date

Scale

1 : 500

Sheet Size

A1

Drawn

Chk.

Job No.

Author

Checker

6906

Drawing No.

DA-6122

Revision

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1 SHADOW PLAN - 21/06 -11.00 - MASS  
SCALE 1: 500



2 SHADOW PLAN - 21/06 -11.30 - MASS  
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PRELIMINARY



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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

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NOTE: MINOR CHANGES TO FORM AND CONFIGURATION MAY BE REQUIRED WHEN DRAWINGS ARE SUBSEQUENTLY PREPARED FOR CONSTRUCTION PURPOSES AFTER THE GRANT OF DEVELOPMENT CONSENT.

Client

podia

Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

SHADOW DIAGRAMS (MIDWINTER) - MASS

Date

Scale

Sheet Size

1 : 500 A1

Drawn

Chk.

Job No.

Author

Checker

6906

Drawing No.

Revision

DA-6123

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1 SHADOW PLAN - 21/06 -12.00 - MASS  
SCALE 1:500



2 SHADOW PLAN - 21/06 -12.30 - MASS  
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0 1 2 5m  
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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

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Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

SHADOW DIAGRAMS (MIDWINTER) - MASS

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Chk.

Job No.

AL

WG

6906

Drawing No.

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2 SHADOW PLAN - 21/06-13.30 - MASS  
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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

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Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

SHADOW DIAGRAMS (MIDWINTER) - MASS

Date

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Sheet Size

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Job No.

Author Checker 6906

Drawing No.

Revision

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1 SHADOW PLAN - 21/06 -14.00 - MASS  
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2 SHADOW PLAN - 21/06 -14.30 - MASS  
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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

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Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

SHADOW DIAGRAMS (MIDWINTER) - MASS

Date

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Job No.

Author

Checker

6906

Drawing No.

Revision

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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

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SHADOW DIAGRAMS (MIDWINTER) - MASS

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Drawing No.

DA-6127

Revision

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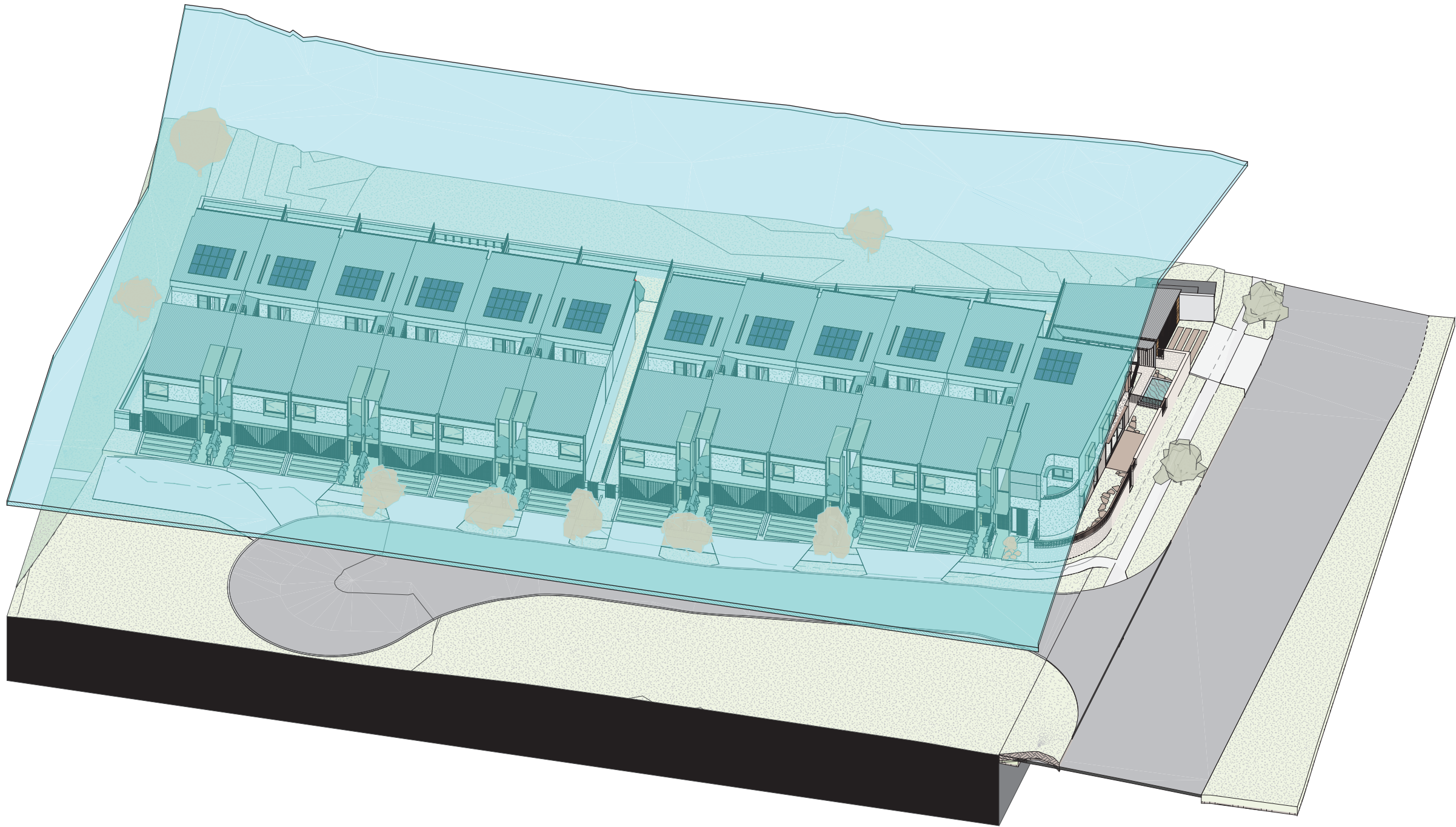
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Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing No.

HEIGHT PLANE

Date

21/10/24

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Drawing No.

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Revision

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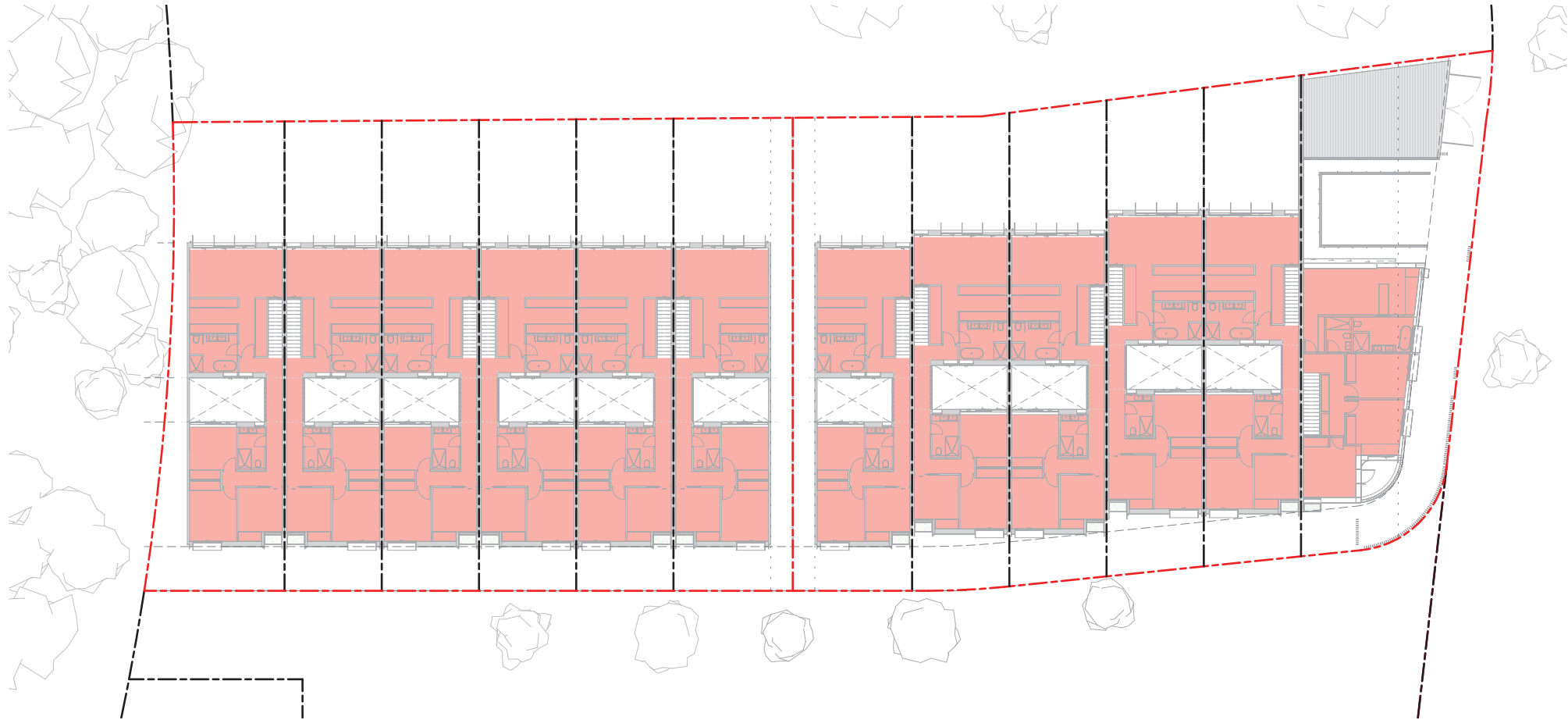
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1 GFA - GROUND  
SCALE 1:200



2 GFA - LEVEL 01  
SCALE 1:200

| GFA SCHEDULE - RESIDENTIAL TERRACES |                     |
|-------------------------------------|---------------------|
|                                     | Residential GFA     |
| GROUND FLOOR*                       | 919 m <sup>2</sup>  |
| LEVEL 01                            | 1364 m <sup>2</sup> |
| Grand total: 69                     | 2284 m <sup>2</sup> |
| TOTAL GFA:                          | 2289 sqm            |
| TOTAL SITE AREA:                    | 2834 sqm            |
| FSR:                                | 0.81:1              |

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Nominated Architects: Adam Haddow-7188 | John Pradel-7004

| Rev | Date     | Revision     | By | Chk. |
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Client

podia

Project

BELLS BOULEVARD  
4-8 BELLS BOULEVARD, KINGSCLIFF

Drawing Name

GFA / FSR

Date

21/10/24

Scale

As indicated

Sheet Size

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Chk.

WG

Job No.

6906

Drawing No.

DA-8001

Revision

/ 2

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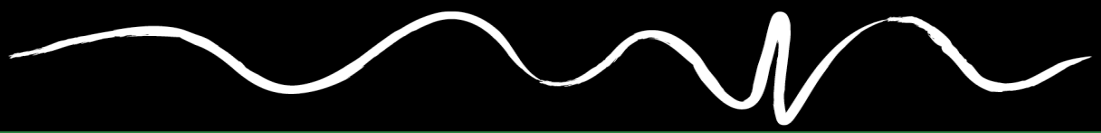
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## Appendix B

### Database Search Results

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Licensed Report of all Valid Records of Threatened (listed on BC Act 2016) Communities in selected area [North: -28.23 West: 153.52 East: 153.62 South: -28.33] returned 0 records for 10 entities.  
Report generated on 10/10/2024 9:45 AM

| Kingdom   | Scientific Name                                                                                                                          | Common Name                                                                                                                       | NSW status | Comm. status | Records |                                                                                       |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------|--------------|---------|---------------------------------------------------------------------------------------|
| Community | <i>Coastal Cypress Pine Forest in the New South Wales North Coast Bioregion</i>                                                          | Coastal Cypress Pine Forest in the New South Wales North Coast Bioregion                                                          | E3         |              | K       |    |
| Community | <i>Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>                               | Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions                               | E3         |              | K       |    |
| Community | <i>Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>      | Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions      | E3         |              | K       |    |
| Community | <i>Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>                             | Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions                             | E3         |              | K       |    |
| Community | <i>Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions</i>                                                             | Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions                                                             | E3         |              | K       |  |
| Community | <i>Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion</i>                                                     | Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion                                                     | E3         |              | K       |  |
| Community | <i>Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion</i>                                                | Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion                                                | E3         |              | P       |  |
| Community | <i>Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>                     | Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions                     | E3         |              | K       |  |
| Community | <i>Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> | Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions | E3         |              | K       |  |
| Community | <i>Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions</i>        | Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions        | E3         |              | K       |  |

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a complete inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (latitudes and longitudes rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Licensed Report Records of Threatened (listed on BC Act 2016) Entities in selected area [North: -28.23 West: 153.52 East: 153.62 South: -28.33] returned a total of 89 species.

Report generated on 10/10/2024 9:39 AM

| Kingdom  | Class     | Family          | Species Code | Scientific Name                         | Common Name                                | NSW status | Comm. status | Records |
|----------|-----------|-----------------|--------------|-----------------------------------------|--------------------------------------------|------------|--------------|---------|
| Animalia | Aves      | Laridae         | 0117         | <i>Sternula albifrons</i>               | Little Tern                                | E1,P       | C,J,K        | 21      |
| Animalia | Gastropod | Camaenidae      | 1002         | <i>Thersites mitchellae</i>             | Mitchell's Rainforest Snail                | E1         | CE           | 88      |
| Animalia | Aves      | Scolopacidae    | 0161         | <i>Calidris ferruginea</i>              | Curlew Sandpiper                           | E4A,P      | CE,C,J,K     | 1       |
| Animalia | Aves      | Ardeidae        | 0197         | <i>Botaurus poiciloptilus</i>           | Australasian Bittern                       | E1,P       | E            | 1       |
| Animalia | Aves      | Procellariidae  | 0929         | <i>Macronectes giganteus</i>            | Southern Giant Petrel                      | E1,P       | E            | 1       |
| Animalia | Aves      | Procellariidae  | 8684         | <i>Pterodroma leucoptera leucoptera</i> | Gould's Petrel                             | V,P        | E            | 2       |
| Animalia | Mammalia  | Dasyuridae      | 1008         | <i>Dasyurus maculatus</i>               | Spotted-tailed Quoll                       | V,P        | E            | 1       |
| Animalia | Mammalia  | Phascolarctidae | 1162         | <i>Phascolarctos cinereus</i>           | Koala                                      | E1,P       | E            | 479     |
| Animalia | Mammalia  | Pseudocheiridae | 1133         | <i>Petauroides volans</i>               | Southern Greater Glider                    | E1,P       | E            | 4       |
| Animalia | Reptilia  | Cheloniidae     | 2004         | <i>Caretta caretta</i>                  | Loggerhead Turtle                          | E1,P       | E            | 25      |
| Animalia | Aves      | Scolopacidae    | 0152         | <i>Limosa limosa</i>                    | Black-tailed Godwit                        | V,P        | E,C,J,K      | 2       |
| Animalia | Aves      | Procellariidae  | 0072         | <i>Ardenna carneipes</i>                | Flesh-footed Shearwater                    | V,P        | J,K          | 1       |
| Animalia | Amphibia  | Hylidae         | 3202         | <i>Litoria olongburensis</i>            | Olongburra Frog                            | V,P        | V            | 3       |
| Animalia | Aves      | Cacatuidae      | 8862         | <i>^Calyptorhynchus lathami lathami</i> | South-eastern Glossy Black-Cockatoo        | V,P,2      | V            | 43      |
| Animalia | Aves      | Diomedidae      | 0086         | <i>Diomedea exulans</i>                 | Wandering Albatross                        | E1,P       | V            | 1       |
| Animalia | Aves      | Diomedidae      | 0088         | <i>Thalassarche melanophris</i>         | Black-browed Albatross                     | V,P        | V            | 1       |
| Animalia | Aves      | Procellariidae  | 0937         | <i>Macronectes halli</i>                | Northern Giant-Petrel                      | V,P        | V            | 1       |
| Animalia | Mammalia  | Potoroidae      | 1175         | <i>Potorous tridactylus</i>             | Long-nosed Potoroo, Cobaki Lakes and Tweed | E2,V,P     | V            | 4       |
| Animalia | Mammalia  | Potoroidae      | 1175         | <i>Potorous tridactylus</i>             | Long-nosed Potoroo                         | V,P        | V            | 4       |
| Animalia | Mammalia  | Pteropodidae    | 1280         | <i>Pteropus poliocephalus</i>           | Grey-headed Flying-fox                     | V,P        | V            | 44      |
| Animalia | Reptilia  | Cheloniidae     | 2007         | <i>Chelonia mydas</i>                   | Green Turtle                               | V,P        | V            | 13      |
| Animalia | Aves      | Apodidae        | 0334         | <i>Hirundapus caudacutus</i>            | White-throated Needletail                  | V,P        | V,C,J,K      | 76      |
| Animalia | Aves      | Scolopacidae    | 0165         | <i>Calidris tenuirostris</i>            | Great Knot                                 | V,P        | V,C,J,K      | 3       |
| Animalia | Aves      | Scolopacidae    | 0168         | <i>Gallinago hardwickii</i>             | Latham's Snipe                             | V,P        | V,J,K        | 22      |
| Animalia | Amphibia  | Myobatrachidae  | 3137         | <i>Crinia tinnula</i>                   | Wallum Froglet                             | V,P        |              | 212     |
| Animalia | Aves      | Accipitridae    | 0218         | <i>Circus assimilis</i>                 | Spotted Harrier                            | V,P        |              | 2       |
| Animalia | Aves      | Accipitridae    | 0226         | <i>Haliaeetus leucogaster</i>           | White-bellied Sea-Eagle                    | V,P        |              | 49      |
| Animalia | Aves      | Accipitridae    | 0225         | <i>Hieraaetus morphnoides</i>           | Little Eagle                               | V,P        |              | 2       |
| Animalia | Aves      | Accipitridae    | 8739         | <i>Pandion cristatus</i>                | Eastern Osprey                             | V,P,3      |              | 132     |
| Animalia | Aves      | Alcedinidae     | 0327         | <i>Todiramphus chloris</i>              | Collared Kingfisher                        | V,P        |              | 7       |
| Animalia | Aves      | Anseranatidae   | 0199         | <i>Anseranas semipalmata</i>            | Magpie Goose                               | V,P        |              | 3       |
| Animalia | Aves      | Ardeidae        | 0196         | <i>Ixobrychus flavicollis</i>           | Black Bittern                              | V,P        |              | 4       |
| Animalia | Aves      | Burhinidae      | 0174         | <i>Burhinus grallaris</i>               | Bush Stone-curlew                          | E1,P       |              | 179     |
| Animalia | Aves      | Burhinidae      | 0175         | <i>Esacus magnirostris</i>              | Beach Stone-curlew                         | E4A,P      |              | 8       |
| Animalia | Aves      | Ciconiidae      | 0183         | <i>Ephippiorhynchus asiaticus</i>       | Black-necked Stork                         | E1,P       |              | 8       |
| Animalia | Aves      | Columbidae      | 0025         | <i>Ptilinopus magnificus</i>            | Wompoo Fruit-Dove                          | V,P        |              | 6       |
| Animalia | Aves      | Columbidae      | 0021         | <i>Ptilinopus regina</i>                | Rose-crowned Fruit-Dove                    | V,P        |              | 7       |
| Animalia | Aves      | Columbidae      | 0023         | <i>Ptilinopus superbus</i>              | Superb Fruit-Dove                          | V,P        |              | 1       |
| Animalia | Aves      | Haematopodidae  | 0131         | <i>Haematopus fuliginosus</i>           | Sooty Oystercatcher                        | V,P        |              | 26      |
| Animalia | Aves      | Haematopodidae  | 0130         | <i>Haematopus longirostris</i>          | Pied Oystercatcher                         | E1,P       |              | 50      |
| Animalia | Aves      | Meliphagidae    | 0610         | <i>Lichenostomus fasciolaris</i>        | Mangrove Honeyeater                        | V,P        |              | 1       |
| Animalia | Aves      | Monarchidae     | 0376         | <i>Carterornis leucotis</i>             | White-eared Monarch                        | V,P        |              | 1       |
| Animalia | Aves      | Neosittidae     | 0549         | <i>Daphoenositta chrysoptera</i>        | Varied Sittella                            | V,P        |              | 1       |
| Animalia | Aves      | Petroicidae     | 0380         | <i>Petroica boodang</i>                 | Scarlet Robin                              | V,P        |              | 2       |
| Animalia | Aves      | Podargidae      | 0314         | <i>Podargus ocellatus</i>               | Marbled Frogmouth                          | V,P        |              | 1       |
| Animalia | Aves      | Procellariidae  | 0971         | <i>Pterodroma solandri</i>              | Providence Petrel                          | V,P        |              | 1       |
| Animalia | Aves      | Rallidae        | 0053         | <i>Amauornis moluccana</i>              | Pale-vented Bush-hen                       | V,P        |              | 16      |
| Animalia | Aves      | Strigidae       | 0248         | <i>Ninox strenua</i>                    | Powerful Owl                               | V,P,3      |              | 1       |
| Animalia | Aves      | Tytonidae       | 0252         | <i>Tyto longimembris</i>                | Eastern Grass Owl                          | V,P,3      |              | 22      |
| Animalia | Aves      | Tytonidae       | 0250         | <i>Tyto novaehollandiae</i>             | Masked Owl                                 | V,P,3      |              | 2       |
| Animalia | Mammalia  | Burramyidae     | 1150         | <i>Cercartetus nanus</i>                | Eastern Pygmy-possum                       | V,P        |              | 1       |
| Animalia | Mammalia  | Dasyuridae      | 1045         | <i>Planigale maculata</i>               | Common Planigale                           | V,P        |              | 5       |
| Animalia | Mammalia  | Emballonuridae  | 1321         | <i>Saccolaimus flaviventris</i>         | Yellow-bellied Sheath-tail                 | V,P        |              | 4       |
| Animalia | Mammalia  | Miniopteridae   | 1346         | <i>Miniopterus australis</i>            | Little Bent-winged Bat                     | V,P        |              | 15      |
| Animalia | Mammalia  | Miniopteridae   | 3330         | <i>Miniopterus orianae</i>              | Large Bent-winged Bat                      | V,P        |              | 4       |
| Animalia | Mammalia  | Molossidae      | 1329         | <i>Micronomus norfolkensis</i>          | Eastern Coastal Free-tailed                | V,P        |              | 1       |

| Kingdom  | Class    | Family                                        | Species Code | Scientific Name                   | Common Name              | NSW status | Comm. status | Records |
|----------|----------|-----------------------------------------------|--------------|-----------------------------------|--------------------------|------------|--------------|---------|
| Animalia | Mammalia | Molossidae                                    | 1937         | <i>Ozimops lumsdenae</i>          | Northern Free-tailed Bat | V,P        |              | 2       |
| Animalia | Mammalia | Otariidae                                     | 1543         | <i>Arctocephalus forsteri</i>     | New Zealand Fur-seal     | V,P        |              | 1       |
| Animalia | Mammalia | Otariidae                                     | 1882         | <i>Arctocephalus pusillus</i>     | Australian Fur-seal      | V,P        |              | 1       |
| Animalia | Mammalia | Petauridae                                    | 1137         | <i>Petaurus norfolcensis</i>      | Squirrel Glider          | V,P        |              | 1       |
| Animalia | Mammalia | Physeteridae                                  | 1578         | <i>Physeter macrocephalus</i>     | Sperm Whale              | V,P        |              | 1       |
| Animalia | Mammalia | Pteropodidae                                  | 1294         | <i>Syconycteris australis</i>     | Common Blossom-bat       | V,P        |              | 8       |
| Animalia | Mammalia | Vespertilionidae                              | 1357         | <i>Myotis macropus</i>            | Southern Myotis          | V,P        |              | 10      |
| Animalia | Mammalia | Vespertilionidae                              | 1336         | <i>Nyctophilus bifax</i>          | Eastern Long-eared Bat   | V,P        |              | 2       |
| Animalia | Mammalia | Vespertilionidae                              | 1361         | <i>Scoteanax rueppellii</i>       | Greater Broad-nosed Bat  | V,P        |              | 1       |
| Plantae  | Flora    | Myrtaceae                                     | 4282         | <i>Rhodamnia maideniana</i>       | Smooth Scrub Turpentine  | E4A        | CE           | 4       |
| Plantae  | Flora    | Myrtaceae                                     | 4284         | <i>Rhodomyrtus psidioides</i>     | Native Guava             | E4A        | CE           | 3       |
| Plantae  | Flora    | Cunoniaceae                                   | 10944        | <i>Davidsonia johnsonii</i>       | Smooth Davidson's Plum   | E1         | E            | 1       |
| Plantae  | Flora    | Orchidaceae                                   | 4480         | ^^ <i>Phaius australis</i>        | Southern Swamp Orchid    | E1,P,2     | E            | 4       |
| Plantae  | Flora    | Rubiaceae                                     | 8297         | <i>Randia moorei</i>              | Spiny Gardenia           | E1         | E            | 1       |
| Plantae  | Flora    | Rutaceae                                      | 6457         | <i>Acronychia littoralis</i>      | Scented Acronychia       | E1         | E            | 49      |
| Plantae  | Flora    | Sapindaceae                                   | 5889         | ^^ <i>Diploglottis campbellii</i> | Small-leaved Tamarind    | E1,2       | E            | 1       |
| Plantae  | Flora    | Fabaceae<br>(Faboideae)                       | 2833         | <i>Desmodium acanthocladum</i>    | Thorny Pea               | V          | V            | 1       |
| Plantae  | Flora    | Lauraceae                                     | 3477         | <i>Cryptocarya foetida</i>        | Stinking Cryptocarya     | V          | V            | 30      |
| Plantae  | Flora    | Lauraceae                                     | 3491         | <i>Endiandra hayesii</i>          | Rusty Rose Walnut        | V          | V            | 2       |
| Plantae  | Flora    | Myrtaceae                                     | 4292         | <i>Syzygium moorei</i>            | Durobby                  | V          | V            | 5       |
| Plantae  | Flora    | Proteaceae                                    | 5446         | <i>Macadamia tetraphylla</i>      | Rough-shelled Bush Nut   | V          | V            | 3       |
| Plantae  | Flora    | Cyperaceae                                    | 2423         | <i>Eleocharis tetraquetra</i>     | Square-stemmed Spike-    | E1         |              | 2       |
| Plantae  | Flora    | Euphorbiaceae                                 | 9851         | <i>Chamaesyce psammogeton</i>     | Sand Spurge              | E1         |              | 1       |
| Plantae  | Flora    | Fabaceae                                      | 1892         | <i>Cassia marksiana</i>           |                          | E1         |              | 4       |
| Plantae  | Flora    | (Caesalpinioidea<br>Fabaceae<br>(Mimosoideae) | 7757         | <i>Archidendron hendersonii</i>   | White Lace Flower        | V          |              | 6       |
| Plantae  | Flora    | Flacourtiaceae                                | 3114         | <i>Xylosma terrae-reginae</i>     | Queensland Xylosma       | E1         |              | 1       |
| Plantae  | Flora    | Lindsaeaceae                                  | 8129         | <i>Lindsaea fraseri</i>           | Fraser's Screw Fern      | E1,3       |              | 2       |
| Plantae  | Flora    | Orchidaceae                                   | 6672         | ^^ <i>Geodorum densiflorum</i>    | Pink Nodding Orchid      | E1,P,2     |              | 8       |
| Plantae  | Flora    | Orchidaceae                                   | 4479         | ^^ <i>Peristeranthus hillii</i>   | Brown Fairy-chain Orchid | V,P,2      |              | 3       |
| Plantae  | Flora    | Poaceae                                       | 9108         | <i>Elionurus citreus</i>          | Lemon-scented Grass      | E1         |              | 1       |
| Plantae  | Flora    | Rubiaceae                                     | 6449         | <i>Oldenlandia galioides</i>      | Sweet False Galium       | E1         |              | 2       |
| Plantae  | Flora    | Sapindaceae                                   | 8291         | <i>Lepiderema pulchella</i>       | Fine-leaved Tuckeroo     | V          |              | 5       |
| Plantae  | Flora    | Urticaceae                                    | 6227         | <i>Dendrocide moroides</i>        | Gympie Stinger           | E1         |              | 2       |



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 10-Oct-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment Significance

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

|                                                               |      |
|---------------------------------------------------------------|------|
| <a href="#">World Heritage Properties:</a>                    | None |
| <a href="#">National Heritage Places:</a>                     | None |
| <a href="#">Wetlands of International Importance (Ramsar)</a> | None |
| <a href="#">Great Barrier Reef Marine Park:</a>               | None |
| <a href="#">Commonwealth Marine Area:</a>                     | 1    |
| <a href="#">Listed Threatened Ecological Communities:</a>     | 6    |
| <a href="#">Listed Threatened Species:</a>                    | 111  |
| <a href="#">Listed Migratory Species:</a>                     | 71   |

## Other Matters Protected by the EPBC Act

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

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

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

|                                                                     |      |
|---------------------------------------------------------------------|------|
| <a href="#">Commonwealth Lands:</a>                                 | None |
| <a href="#">Commonwealth Heritage Places:</a>                       | None |
| <a href="#">Listed Marine Species:</a>                              | 107  |
| <a href="#">Whales and Other Cetaceans:</a>                         | 12   |
| <a href="#">Critical Habitats:</a>                                  | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a>                  | None |
| <a href="#">Australian Marine Parks:</a>                            | None |
| <a href="#">Habitat Critical to the Survival of Marine Turtles:</a> | None |

## Extra Information

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

|                                                         |      |
|---------------------------------------------------------|------|
| <a href="#">State and Territory Reserves:</a>           | 1    |
| <a href="#">Regional Forest Agreements:</a>             | 1    |
| <a href="#">Nationally Important Wetlands:</a>          | 1    |
| <a href="#">EPBC Act Referrals:</a>                     | 11   |
| <a href="#">Key Ecological Features (Marine):</a>       | None |
| <a href="#">Biologically Important Areas:</a>           | 8    |
| <a href="#">Bioregional Assessments:</a>                | None |
| <a href="#">Geological and Bioregional Assessments:</a> | None |

# Details

## Matters of National Environmental Significance

### Commonwealth Marine Area

[\[ Resource Information \]](#)

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

#### Feature Name

#### Buffer Status

Commonwealth Marine Areas (EPBC Act)

In buffer area only

### Listed Threatened Ecological Communities

[\[ Resource Information \]](#)

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

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

#### Community Name

#### Threatened Category

#### Presence Text

#### Buffer Status

[Coastal Swamp Oak \(Casuarina glauca\) Forest of New South Wales and South East Queensland ecological community](#)

Endangered

Community likely to occur within area

In feature area

[Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland](#)

Endangered

Community likely to occur within area

In buffer area only

[Littoral Rainforest and Coastal Vine Thickets of Eastern Australia](#)

Critically Endangered

Community likely to occur within area

In buffer area only

[Lowland Rainforest of Subtropical Australia](#)

Critically Endangered

Community likely to occur within area

In buffer area only

[Subtropical and Temperate Coastal Saltmarsh](#)

Vulnerable

Community likely to occur within area

In feature area

[Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions](#)

Endangered

Community likely to occur within area

In feature area

### Listed Threatened Species

[\[ Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

#### Scientific Name

#### Threatened Category

#### Presence Text

#### Buffer Status

BIRD

| Scientific Name                                                                                | Threatened Category   | Presence Text                                                      | Buffer Status       |
|------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------|---------------------|
| <a href="#">Anthochaera phrygia</a><br>Regent Honeyeater [82338]                               | Critically Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area     |
| <a href="#">Ardenna grisea</a><br>Sooty Shearwater [82651]                                     | Vulnerable            | Species or species habitat may occur within area                   | In buffer area only |
| <a href="#">Arenaria interpres</a><br>Ruddy Turnstone [872]                                    | Vulnerable            | Roosting known to occur within area                                | In buffer area only |
| <a href="#">Botaurus poiciloptilus</a><br>Australasian Bittern [1001]                          | Endangered            | Species or species habitat likely to occur within area             | In feature area     |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                             | Vulnerable            | Roosting known to occur within area                                | In feature area     |
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]                                       | Vulnerable            | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                                  | Critically Endangered | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Calidris tenuirostris</a><br>Great Knot [862]                                      | Vulnerable            | Roosting known to occur within area                                | In buffer area only |
| <a href="#">Calyptorhynchus lathami lathami</a><br>South-eastern Glossy Black-Cockatoo [67036] | Vulnerable            | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Charadrius leschenaultii</a><br>Greater Sand Plover, Large Sand Plover [877]       | Vulnerable            | Species or species habitat likely to occur within area             | In feature area     |
| <a href="#">Charadrius mongolus</a><br>Lesser Sand Plover, Mongolian Plover [879]              | Endangered            | Roosting known to occur within area                                | In buffer area only |
| <a href="#">Climacteris picumnus victoriae</a><br>Brown Treecreeper (south-eastern) [67062]    | Vulnerable            | Species or species habitat may occur within area                   | In feature area     |

| Scientific Name                                                                                                                            | Threatened Category   | Presence Text                                          | Buffer Status       |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------|---------------------|
| <a href="#">Cyclopsitta diophthalma coxeni</a><br>Coxen's Fig-Parrot [59714]                                                               | Critically Endangered | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Diomedea antipodensis</a><br>Antipodean Albatross [64458]                                                                      | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Diomedea antipodensis gibsoni</a><br>Gibson's Albatross [82270]                                                                | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Diomedea epomophora</a><br>Southern Royal Albatross [89221]                                                                    | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Diomedea exulans</a><br>Wandering Albatross [89223]                                                                            | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Erythrotriorchis radiatus</a><br>Red Goshawk [942]                                                                             | Endangered            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Falco hypoleucos</a><br>Grey Falcon [929]                                                                                      | Vulnerable            | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Fregetta grallaria grallaria</a><br>White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438] | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863]                                                               | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]                                                                   | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Lathamus discolor</a><br>Swift Parrot [744]                                                                                    | Critically Endangered | Species or species habitat may occur within area       | In feature area     |

| Scientific Name                                                                                                    | Threatened Category   | Presence Text                                                      | Buffer Status       |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------|---------------------|
| <a href="#">Limosa lapponica baueri</a><br>Nunivak Bar-tailed Godwit, Western<br>Alaskan Bar-tailed Godwit [86380] | Endangered            | Species or species<br>habitat known to<br>occur within area        | In feature area     |
| <a href="#">Limosa limosa</a><br>Black-tailed Godwit [845]                                                         | Endangered            | Roosting known to<br>occur within area                             | In buffer area only |
| <a href="#">Macronectes giganteus</a><br>Southern Giant-Petrel, Southern Giant<br>Petrel [1060]                    | Endangered            | Species or species<br>habitat may occur<br>within area             | In buffer area only |
| <a href="#">Macronectes halli</a><br>Northern Giant Petrel [1061]                                                  | Vulnerable            | Species or species<br>habitat may occur<br>within area             | In buffer area only |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew<br>[847]                           | Critically Endangered | Species or species<br>habitat known to<br>occur within area        | In feature area     |
| <a href="#">Pachyptila turtur subantarctica</a><br>Fairy Prion (southern) [64445]                                  | Vulnerable            | Species or species<br>habitat known to<br>occur within area        | In feature area     |
| <a href="#">Phoebastria fusca</a><br>Sooty Albatross [1075]                                                        | Vulnerable            | Species or species<br>habitat may occur<br>within area             | In buffer area only |
| <a href="#">Pluvialis squatarola</a><br>Grey Plover [865]                                                          | Vulnerable            | Roosting known to<br>occur within area                             | In buffer area only |
| <a href="#">Pterodroma leucoptera leucoptera</a><br>Gould's Petrel, Australian Gould's Petrel<br>[26033]           | Endangered            | Species or species<br>habitat may occur<br>within area             | In feature area     |
| <a href="#">Pterodroma neglecta neglecta</a><br>Kermadec Petrel (western) [64450]                                  | Vulnerable            | Foraging, feeding or<br>related behaviour may<br>occur within area | In feature area     |
| <a href="#">Rostratula australis</a><br>Australian Painted Snipe [77037]                                           | Endangered            | Species or species<br>habitat likely to occur<br>within area       | In feature area     |

| Scientific Name                                                                                      | Threatened Category | Presence Text                                         | Buffer Status       |
|------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------|---------------------|
| <a href="#">Stagonopleura guttata</a><br>Diamond Firetail [59398]                                    | Vulnerable          | Species or species habitat may occur within area      | In feature area     |
| <a href="#">Sternula nereis nereis</a><br>Australian Fairy Tern [82950]                              | Vulnerable          | Species or species habitat may occur within area      | In feature area     |
| <a href="#">Thalassarche carteri</a><br>Indian Yellow-nosed Albatross [64464]                        | Vulnerable          | Species or species habitat may occur within area      | In feature area     |
| <a href="#">Thalassarche cauta</a><br>Shy Albatross [89224]                                          | Endangered          | Species or species habitat may occur within area      | In buffer area only |
| <a href="#">Thalassarche impavida</a><br>Campbell Albatross, Campbell Black-browed Albatross [64459] | Vulnerable          | Species or species habitat may occur within area      | In buffer area only |
| <a href="#">Thalassarche melanophris</a><br>Black-browed Albatross [66472]                           | Vulnerable          | Species or species habitat may occur within area      | In feature area     |
| <a href="#">Thalassarche salvini</a><br>Salvin's Albatross [64463]                                   | Vulnerable          | Species or species habitat may occur within area      | In buffer area only |
| <a href="#">Thalassarche steadi</a><br>White-capped Albatross [64462]                                | Vulnerable          | Species or species habitat may occur within area      | In buffer area only |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832]                              | Endangered          | Species or species habitat known to occur within area | In feature area     |
| <a href="#">Turnix melanogaster</a><br>Black-breasted Button-quail [923]                             | Vulnerable          | Species or species habitat may occur within area      | In feature area     |
| <a href="#">Xenus cinereus</a><br>Terek Sandpiper [59300]                                            | Vulnerable          | Roosting known to occur within area                   | In buffer area only |

## FISH

| Scientific Name                                                                                                                                                        | Threatened Category    | Presence Text                                          | Buffer Status       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------|---------------------|
| <a href="#">Epinephelus daemeli</a><br>Black Rockcod, Black Cod, Saddled Rockcod [68449]                                                                               | Vulnerable             | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Hippocampus whitei</a><br>White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]                                                                      | Endangered             | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Seriolella brama</a><br>Blue Warehou [69374]                                                                                                               | Conservation Dependent | Species or species habitat known to occur within area  | In buffer area only |
| FROG                                                                                                                                                                   |                        |                                                        |                     |
| <a href="#">Litoria olongburensis</a><br>Wallum Sedge Frog [1821]                                                                                                      | Vulnerable             | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Mixophyes fleayi</a><br>Fleay's Frog [25960]                                                                                                               | Endangered             | Species or species habitat likely to occur within area | In feature area     |
| INSECT                                                                                                                                                                 |                        |                                                        |                     |
| <a href="#">Argynnis hyperbius inconstans</a><br>Australian Fritillary [88056]                                                                                         | Critically Endangered  | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Phyllodes imperialis smithersi</a><br>Pink Underwing Moth [86084]                                                                                          | Endangered             | Species or species habitat likely to occur within area | In buffer area only |
| MAMMAL                                                                                                                                                                 |                        |                                                        |                     |
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]                                                                                                               | Endangered             | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Chalinolobus dwyeri</a><br>Large-eared Pied Bat, Large Pied Bat [183]                                                                                      | Endangered             | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Dasyurus maculatus maculatus (SE mainland population)</a><br>Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184] | Endangered             | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Eubalaena australis</a><br>Southern Right Whale [40]                                                                                                       | Endangered             | Species or species habitat likely to occur within area | In feature area     |

| Scientific Name                                                                                          | Threatened Category | Presence Text                                          | Buffer Status       |
|----------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------|---------------------|
| <a href="#"><u>Petauroides volans</u></a>                                                                |                     |                                                        |                     |
| Greater Glider (southern and central) [254]                                                              | Endangered          | Species or species habitat known to occur within area  | In buffer area only |
| <a href="#"><u>Petaurus australis australis</u></a>                                                      |                     |                                                        |                     |
| Yellow-bellied Glider (south-eastern) [87600]                                                            | Vulnerable          | Species or species habitat likely to occur within area | In feature area     |
| <a href="#"><u>Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</u></a>             |                     |                                                        |                     |
| Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104] | Endangered          | Species or species habitat known to occur within area  | In feature area     |
| <a href="#"><u>Potorous tridactylus tridactylus</u></a>                                                  |                     |                                                        |                     |
| Long-nosed Potoroo (northern) [66645]                                                                    | Vulnerable          | Species or species habitat known to occur within area  | In feature area     |
| <a href="#"><u>Pseudomys novaehollandiae</u></a>                                                         |                     |                                                        |                     |
| New Holland Mouse, Pookila [96]                                                                          | Vulnerable          | Species or species habitat may occur within area       | In feature area     |
| <a href="#"><u>Pteropus poliocephalus</u></a>                                                            |                     |                                                        |                     |
| Grey-headed Flying-fox [186]                                                                             | Vulnerable          | Roosting known to occur within area                    | In feature area     |
| <a href="#"><u>Xeromys myoides</u></a>                                                                   |                     |                                                        |                     |
| Water Mouse, False Water Rat, Yirrkoo [66]                                                               | Vulnerable          | Species or species habitat may occur within area       | In feature area     |
| PLANT                                                                                                    |                     |                                                        |                     |
| <a href="#"><u>Acronychia littoralis</u></a>                                                             |                     |                                                        |                     |
| Scented Acronychia [8582]                                                                                | Endangered          | Species or species habitat known to occur within area  | In feature area     |
| <a href="#"><u>Arthraxon hispidus</u></a>                                                                |                     |                                                        |                     |
| Hairy-joint Grass [9338]                                                                                 | Vulnerable          | Species or species habitat likely to occur within area | In feature area     |
| <a href="#"><u>Baloghia marmorata</u></a>                                                                |                     |                                                        |                     |
| Marbled Baloghia, Jointed Baloghia [8463]                                                                | Vulnerable          | Species or species habitat likely to occur within area | In buffer area only |
| <a href="#"><u>Bosistoa transversa</u></a>                                                               |                     |                                                        |                     |
| Three-leaved Bosistoa, Yellow Satinheart [16091]                                                         | Vulnerable          | Species or species habitat likely to occur within area | In feature area     |

| Scientific Name                                                                                                         | Threatened Category | Presence Text                                          | Buffer Status       |
|-------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------|---------------------|
| <a href="#">Cryptocarya foetida</a><br>Stinking Cryptocarya, Stinking Laurel [11976]                                    | Vulnerable          | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Cryptostylis hunteriana</a><br>Leafless Tongue-orchid [19533]                                               | Vulnerable          | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Cynanchum elegans</a><br>White-flowered Wax Plant [12533]                                                   | Endangered          | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Davidsonia jerseyana</a><br>Davidson's Plum [67219]                                                         | Endangered          | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Davidsonia johnsonii</a><br>Smooth Davidsonia, Smooth Davidson's Plum, Small-leaved Davidson's Plum [67178] | Endangered          | Species or species habitat likely to occur within area | In buffer area only |
| <a href="#">Diospyros mabacea</a><br>Red-fruited Ebony, Silky Persimmon, Ebony [18548]                                  | Endangered          | Species or species habitat likely to occur within area | In buffer area only |
| <a href="#">Diploglottis campbellii</a><br>Small-leaved Tamarind [21484]                                                | Endangered          | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Endiandra floydii</a><br>Floyd's Walnut, Crystal Creek Walnut [52955]                                       | Endangered          | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Endiandra hayesii</a><br>Rusty Rose Walnut, Velvet Laurel [13866]                                           | Vulnerable          | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Fontainea australis</a><br>Southern Fontainea [24037]                                                       | Vulnerable          | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Gossia fragrantissima</a><br>Sweet Myrtle, Small-leaved Myrtle [78867]                                      | Endangered          | Species or species habitat may occur within area       | In buffer area only |

| Scientific Name                                                                                                                                                                   | Threatened Category   | Presence Text                                          | Buffer Status       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------|---------------------|
| <a href="#"><u>Hicksbeachia pinnatifolia</u></a><br>Monkey Nut, Bopple Nut, Red Bopple, Red Bopple Nut, Red Nut, Beef Nut, Red Apple Nut, Red Boppel Nut, Ivory Silky Oak [21189] | Vulnerable            | Species or species habitat likely to occur within area | In buffer area only |
| <a href="#"><u>Leichhardtia longiloba listed as Marsdenia longiloba</u></a><br>Clear Milkvine [91911]                                                                             | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#"><u>Macadamia integrifolia</u></a><br>Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]                                           | Vulnerable            | Species or species habitat may occur within area       | In feature area     |
| <a href="#"><u>Macadamia tetraphylla</u></a><br>Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]                                | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#"><u>Ochrosia moorei</u></a><br>Southern Ochrosia [11350]                                                                                                               | Endangered            | Species or species habitat likely to occur within area | In buffer area only |
| <a href="#"><u>Owenia cepiodora</u></a><br>Onionwood, Bog Onion, Onion Cedar [11344]                                                                                              | Vulnerable            | Species or species habitat may occur within area       | In feature area     |
| <a href="#"><u>Pedleya acanthoclada listed as Desmodium acanthocladum</u></a><br>Thorny Pea [93275]                                                                               | Vulnerable            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#"><u>Phaius australis</u></a><br>Lesser Swamp-orchid [5872]                                                                                                             | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#"><u>Randia moorei</u></a><br>Spiny Gardenia [10577]                                                                                                                    | Endangered            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#"><u>Rhodamnia maideniana</u></a><br>Smooth Scrub Turpentine [20665]                                                                                                    | Critically Endangered | Species or species habitat known to occur within area  | In feature area     |
| <a href="#"><u>Rhodamnia rubescens</u></a><br>Scrub Turpentine, Brown Malletwood [15763]                                                                                          | Critically Endangered | Species or species habitat likely to occur within area | In feature area     |

| Scientific Name                                                                                                       | Threatened Category   | Presence Text                                                     | Buffer Status       |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------|---------------------|
| <a href="#">Rhodomyrtus psidioides</a><br>Native Guava [19162]                                                        | Critically Endangered | Species or species habitat known to occur within area             | In feature area     |
| <a href="#">Sophora fraseri</a><br>[8836]                                                                             | Vulnerable            | Species or species habitat may occur within area                  | In buffer area only |
| <a href="#">Syzygium hodgkinsoniae</a><br>Smooth-bark Rose Apple, Red Lilly Pilly [3539]                              | Vulnerable            | Species or species habitat likely to occur within area            | In feature area     |
| <a href="#">Syzygium moorei</a><br>Rose Apple, Coolamon, Robby, Durobby, Watermelon Tree, Coolamon Rose Apple [12284] | Vulnerable            | Species or species habitat known to occur within area             | In feature area     |
| <a href="#">Thesium australe</a><br>Austral Toadflax, Toadflax [15202]                                                | Vulnerable            | Species or species habitat likely to occur within area            | In feature area     |
| <a href="#">Vincetoxicum woollsii</a> listed as <a href="#">Tylophora woollsii</a><br>[40080]                         | Endangered            | Species or species habitat may occur within area                  | In feature area     |
| REPTILE                                                                                                               |                       |                                                                   |                     |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]                                                           | Endangered            | Breeding known to occur within area                               | In feature area     |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]                                                                 | Vulnerable            | Foraging, feeding or related behaviour known to occur within area | In feature area     |
| <a href="#">Coeranoscincus reticulatus</a><br>Three-toed Snake-tooth Skink [59628]                                    | Vulnerable            | Species or species habitat may occur within area                  | In buffer area only |
| <a href="#">Delma torquata</a><br>Adorned Delma, Collared Delma [1656]                                                | Vulnerable            | Species or species habitat may occur within area                  | In feature area     |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]                              | Endangered            | Species or species habitat known to occur within area             | In feature area     |

| Scientific Name                                                                                                      | Threatened Category    | Presence Text                                                      | Buffer Status       |
|----------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------|---------------------|
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]                                                    | Vulnerable             | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Furina dunmalli</a><br>Dunmall's Snake [59254]                                                           | Vulnerable             | Species or species habitat may occur within area                   | In buffer area only |
| <a href="#">Lepidochelys olivacea</a><br>Olive Ridley Turtle, Pacific Ridley Turtle [1767]                           | Endangered             | Breeding likely to occur within area                               | In feature area     |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]                                                         | Vulnerable             | Foraging, feeding or related behaviour known to occur within area  | In feature area     |
| SHARK                                                                                                                |                        |                                                                    |                     |
| <a href="#">Carcharias taurus (east coast population)</a><br>Grey Nurse Shark (east coast population) [68751]        | Critically Endangered  | Foraging, feeding or related behaviour likely to occur within area | In feature area     |
| <a href="#">Carcharodon carcharias</a><br>White Shark, Great White Shark [64470]                                     | Vulnerable             | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Galeorhinus galeus</a><br>School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453] | Conservation Dependent | Species or species habitat may occur within area                   | In buffer area only |
| <a href="#">Pristis zijsron</a><br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]                            | Vulnerable             | Breeding may occur within area                                     | In buffer area only |
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680]                                                               | Vulnerable             | Species or species habitat may occur within area                   | In feature area     |
| <a href="#">Sphyrna lewini</a><br>Scalloped Hammerhead [85267]                                                       | Conservation Dependent | Species or species habitat likely to occur within area             | In buffer area only |
| SNAIL                                                                                                                |                        |                                                                    |                     |
| <a href="#">Thersites mitchellae</a><br>Mitchell's Rainforest Snail [66774]                                          | Critically Endangered  | Species or species habitat known to occur within area              | In feature area     |

| Listed Migratory Species                                  |                     |                                                                    | [ Resource Information ] |
|-----------------------------------------------------------|---------------------|--------------------------------------------------------------------|--------------------------|
| Scientific Name                                           | Threatened Category | Presence Text                                                      | Buffer Status            |
| <b>Migratory Marine Birds</b>                             |                     |                                                                    |                          |
| <a href="#">Anous stolidus</a>                            |                     |                                                                    |                          |
| Common Noddy [825]                                        |                     | Species or species habitat likely to occur within area             | In feature area          |
| <a href="#">Apus pacificus</a>                            |                     |                                                                    |                          |
| Fork-tailed Swift [678]                                   |                     | Species or species habitat likely to occur within area             | In feature area          |
| <a href="#">Ardena carneipes</a>                          |                     |                                                                    |                          |
| Flesh-footed Shearwater, Fleshy-footed Shearwater [82404] |                     | Foraging, feeding or related behaviour likely to occur within area | In feature area          |
| <a href="#">Ardena grisea</a>                             |                     |                                                                    |                          |
| Sooty Shearwater [82651]                                  | Vulnerable          | Species or species habitat may occur within area                   | In buffer area only      |
| <a href="#">Calonectris leucomelas</a>                    |                     |                                                                    |                          |
| Streaked Shearwater [1077]                                |                     | Species or species habitat known to occur within area              | In buffer area only      |
| <a href="#">Diomedea antipodensis</a>                     |                     |                                                                    |                          |
| Antipodean Albatross [64458]                              | Vulnerable          | Species or species habitat may occur within area                   | In buffer area only      |
| <a href="#">Diomedea epomophora</a>                       |                     |                                                                    |                          |
| Southern Royal Albatross [89221]                          | Vulnerable          | Species or species habitat may occur within area                   | In buffer area only      |
| <a href="#">Diomedea exulans</a>                          |                     |                                                                    |                          |
| Wandering Albatross [89223]                               | Vulnerable          | Species or species habitat may occur within area                   | In buffer area only      |
| <a href="#">Fregata ariel</a>                             |                     |                                                                    |                          |
| Lesser Frigatebird, Least Frigatebird [1012]              |                     | Species or species habitat known to occur within area              | In feature area          |
| <a href="#">Fregata minor</a>                             |                     |                                                                    |                          |
| Great Frigatebird, Greater Frigatebird [1013]             |                     | Species or species habitat likely to occur within area             | In buffer area only      |
| <a href="#">Macronectes giganteus</a>                     |                     |                                                                    |                          |
| Southern Giant-Petrel, Southern Giant Petrel [1060]       | Endangered          | Species or species habitat may occur within area                   | In buffer area only      |

| Scientific Name                                                                                      | Threatened Category | Presence Text                                    | Buffer Status       |
|------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------|---------------------|
| <a href="#">Macronectes halli</a><br>Northern Giant Petrel [1061]                                    | Vulnerable          | Species or species habitat may occur within area | In buffer area only |
| <a href="#">Phaethon lepturus</a><br>White-tailed Tropicbird [1014]                                  |                     | Species or species habitat may occur within area | In buffer area only |
| <a href="#">Phoebastria fusca</a><br>Sooty Albatross [1075]                                          | Vulnerable          | Species or species habitat may occur within area | In buffer area only |
| <a href="#">Sternula albifrons</a><br>Little Tern [82849]                                            |                     | Species or species habitat may occur within area | In feature area     |
| <a href="#">Thalassarche carteri</a><br>Indian Yellow-nosed Albatross [64464]                        | Vulnerable          | Species or species habitat may occur within area | In feature area     |
| <a href="#">Thalassarche cauta</a><br>Shy Albatross [89224]                                          | Endangered          | Species or species habitat may occur within area | In buffer area only |
| <a href="#">Thalassarche impavida</a><br>Campbell Albatross, Campbell Black-browed Albatross [64459] | Vulnerable          | Species or species habitat may occur within area | In buffer area only |
| <a href="#">Thalassarche melanophrys</a><br>Black-browed Albatross [66472]                           | Vulnerable          | Species or species habitat may occur within area | In feature area     |
| <a href="#">Thalassarche salvini</a><br>Salvin's Albatross [64463]                                   | Vulnerable          | Species or species habitat may occur within area | In buffer area only |
| <a href="#">Thalassarche steadi</a><br>White-capped Albatross [64462]                                | Vulnerable          | Species or species habitat may occur within area | In buffer area only |
| Migratory Marine Species                                                                             |                     |                                                  |                     |
| <a href="#">Balaenoptera edeni</a><br>Bryde's Whale [35]                                             |                     | Species or species habitat may occur within area | In buffer area only |

| Scientific Name                                                                                 | Threatened Category | Presence Text                                                      | Buffer Status       |
|-------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------|---------------------|
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]                                        | Endangered          | Species or species habitat may occur within area                   | In feature area     |
| <a href="#">Carcharhinus longimanus</a><br>Oceanic Whitetip Shark [84108]                       |                     | Species or species habitat may occur within area                   | In feature area     |
| <a href="#">Carcharias taurus</a><br>Grey Nurse Shark [64469]                                   |                     | Foraging, feeding or related behaviour likely to occur within area | In feature area     |
| <a href="#">Carcharodon carcharias</a><br>White Shark, Great White Shark [64470]                | Vulnerable          | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]                                     | Endangered          | Breeding known to occur within area                                | In feature area     |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]                                           | Vulnerable          | Foraging, feeding or related behaviour known to occur within area  | In feature area     |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]        | Endangered          | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]                               | Vulnerable          | Species or species habitat known to occur within area              | In feature area     |
| <a href="#">Eubalaena australis as Balaena glacialis australis</a><br>Southern Right Whale [40] | Endangered          | Species or species habitat likely to occur within area             | In feature area     |
| <a href="#">Lamna nasus</a><br>Porbeagle, Mackerel Shark [83288]                                |                     | Species or species habitat may occur within area                   | In buffer area only |
| <a href="#">Lepidochelys olivacea</a><br>Olive Ridley Turtle, Pacific Ridley Turtle [1767]      | Endangered          | Breeding likely to occur within area                               | In feature area     |

| Scientific Name                                                                              | Threatened Category | Presence Text                                                     | Buffer Status       |
|----------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------|---------------------|
| <a href="#">Megaptera novaeangliae</a><br>Humpback Whale [38]                                |                     | Congregation or aggregation known to occur within area            | In buffer area only |
| <a href="#">Mobula alfredi as Manta alfredi</a><br>Reef Manta Ray, Coastal Manta Ray [90033] |                     | Species or species habitat may occur within area                  | In buffer area only |
| <a href="#">Mobula birostris as Manta birostris</a><br>Giant Manta Ray [90034]               |                     | Species or species habitat may occur within area                  | In buffer area only |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]                                 | Vulnerable          | Foraging, feeding or related behaviour known to occur within area | In feature area     |
| <a href="#">Orcinus orca</a><br>Killer Whale, Orca [46]                                      |                     | Species or species habitat may occur within area                  | In feature area     |
| <a href="#">Pristis zijsron</a><br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]    | Vulnerable          | Breeding may occur within area                                    | In buffer area only |
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680]                                       | Vulnerable          | Species or species habitat may occur within area                  | In feature area     |
| <a href="#">Sousa sahalensis as Sousa chinensis</a><br>Australian Humpback Dolphin [87942]   |                     | Breeding known to occur within area                               | In buffer area only |
| Migratory Terrestrial Species                                                                |                     |                                                                   |                     |
| <a href="#">Cuculus optatus</a><br>Oriental Cuckoo, Horsfield's Cuckoo [86651]               |                     | Species or species habitat may occur within area                  | In feature area     |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]                     | Vulnerable          | Species or species habitat known to occur within area             | In feature area     |
| Migratory Wetlands Species                                                                   |                     |                                                                   |                     |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                               |                     | Species or species habitat known to occur within area             | In feature area     |

| Scientific Name                                                                          | Threatened Category   | Presence Text                                          | Buffer Status       |
|------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------|---------------------|
| <a href="#">Arenaria interpres</a><br>Ruddy Turnstone [872]                              | Vulnerable            | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                       | Vulnerable            | Roosting known to occur within area                    | In feature area     |
| <a href="#">Calidris alba</a><br>Sanderling [875]                                        |                       | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]                                 | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                            | Critically Endangered | Species or species habitat known to occur within area  | In feature area     |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                           |                       | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Calidris ruficollis</a><br>Red-necked Stint [860]                            |                       | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Calidris tenuirostris</a><br>Great Knot [862]                                | Vulnerable            | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Charadrius bicinctus</a><br>Double-banded Plover [895]                       |                       | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Charadrius leschenaultii</a><br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable            | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Charadrius mongolus</a><br>Lesser Sand Plover, Mongolian Plover [879]        | Endangered            | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Charadrius veredus</a><br>Oriental Plover, Oriental Dotterel [882]           |                       | Roosting known to occur within area                    | In buffer area only |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863]             | Vulnerable            | Species or species habitat known to occur within area  | In feature area     |

| Scientific Name                                                                       | Threatened Category   | Presence Text                                         | Buffer Status       |
|---------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------|---------------------|
| <a href="#">Gallinago megala</a><br>Swinhoe's Snipe [864]                             |                       | Roosting likely to occur within area                  | In buffer area only |
| <a href="#">Gallinago stenura</a><br>Pin-tailed Snipe [841]                           |                       | Roosting likely to occur within area                  | In buffer area only |
| <a href="#">Limosa lapponica</a><br>Bar-tailed Godwit [844]                           |                       | Species or species habitat known to occur within area | In feature area     |
| <a href="#">Limosa limosa</a><br>Black-tailed Godwit [845]                            | Endangered            | Roosting known to occur within area                   | In buffer area only |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area | In feature area     |
| <a href="#">Numenius minutus</a><br>Little Curlew, Little Whimbrel [848]              |                       | Roosting known to occur within area                   | In buffer area only |
| <a href="#">Numenius phaeopus</a><br>Whimbrel [849]                                   |                       | Roosting known to occur within area                   | In buffer area only |
| <a href="#">Pandion haliaetus</a><br>Osprey [952]                                     |                       | Breeding known to occur within area                   | In feature area     |
| <a href="#">Pluvialis fulva</a><br>Pacific Golden Plover [25545]                      |                       | Roosting known to occur within area                   | In buffer area only |
| <a href="#">Pluvialis squatarola</a><br>Grey Plover [865]                             |                       | Roosting known to occur within area                   | In buffer area only |
| <a href="#">Tringa brevipes</a><br>Grey-tailed Tattler [851]                          |                       | Roosting known to occur within area                   | In buffer area only |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832]               | Endangered            | Species or species habitat known to occur within area | In feature area     |
| <a href="#">Tringa stagnatilis</a><br>Marsh Sandpiper, Little Greenshank [833]        |                       | Roosting known to occur within area                   | In buffer area only |

| Scientific Name                                           | Threatened Category | Presence Text                       | Buffer Status       |
|-----------------------------------------------------------|---------------------|-------------------------------------|---------------------|
| <a href="#">Xenus cinereus</a><br>Terek Sandpiper [59300] | Vulnerable          | Roosting known to occur within area | In buffer area only |

## Other Matters Protected by the EPBC Act

| Listed Marine Species                                                                                                | [ Resource Information ] |                                                                            |                     |
|----------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------|---------------------|
| Scientific Name                                                                                                      | Threatened Category      | Presence Text                                                              | Buffer Status       |
| Bird                                                                                                                 |                          |                                                                            |                     |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                                       |                          | Species or species habitat known to occur within area                      | In feature area     |
| <a href="#">Anous stolidus</a><br>Common Noddy [825]                                                                 |                          | Species or species habitat likely to occur within area                     | In feature area     |
| <a href="#">Anseranas semipalmata</a><br>Magpie Goose [978]                                                          |                          | Species or species habitat may occur within area overfly marine area       | In feature area     |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]                                                            |                          | Species or species habitat likely to occur within area overfly marine area | In feature area     |
| <a href="#">Ardenna carneipes as Puffinus carneipes</a><br>Flesh-footed Shearwater, Fleshy-footed Shearwater [82404] |                          | Foraging, feeding or related behaviour likely to occur within area         | In feature area     |
| <a href="#">Ardenna grisea as Puffinus griseus</a><br>Sooty Shearwater [82651]                                       | Vulnerable               | Species or species habitat may occur within area                           | In buffer area only |
| <a href="#">Arenaria interpres</a><br>Ruddy Turnstone [872]                                                          | Vulnerable               | Roosting known to occur within area                                        | In buffer area only |

| Scientific Name                                                                          | Threatened Category   | Presence Text                                                             | Buffer Status       |
|------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------|---------------------|
| <a href="#">Bubulcus ibis as Ardea ibis</a><br>Cattle Egret [66521]                      |                       | Species or species habitat may occur within area overfly marine area      | In feature area     |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                       | Vulnerable            | Roosting known to occur within area                                       | In feature area     |
| <a href="#">Calidris alba</a><br>Sanderling [875]                                        |                       | Roosting known to occur within area                                       | In buffer area only |
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]                                 | Vulnerable            | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                            | Critically Endangered | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                           |                       | Species or species habitat may occur within area overfly marine area      | In feature area     |
| <a href="#">Calidris ruficollis</a><br>Red-necked Stint [860]                            |                       | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Calidris tenuirostris</a><br>Great Knot [862]                                | Vulnerable            | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Calonectris leucomelas</a><br>Streaked Shearwater [1077]                     |                       | Species or species habitat known to occur within area                     | In buffer area only |
| <a href="#">Charadrius bicinctus</a><br>Double-banded Plover [895]                       |                       | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Charadrius leschenaultii</a><br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable            | Species or species habitat likely to occur within area                    | In feature area     |

| Scientific Name                                                                                                 | Threatened Category | Presence Text                                                                | Buffer Status       |
|-----------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------|---------------------|
| <a href="#">Charadrius mongolus</a><br>Lesser Sand Plover, Mongolian Plover [879]                               | Endangered          | Roosting known to occur within area                                          | In buffer area only |
| <a href="#">Charadrius ruficapillus</a><br>Red-capped Plover [881]                                              |                     | Roosting known to occur within area<br>overfly marine area                   | In buffer area only |
| <a href="#">Charadrius veredus</a><br>Oriental Plover, Oriental Dotterel [882]                                  |                     | Roosting known to occur within area<br>overfly marine area                   | In buffer area only |
| <a href="#">Diomedea antipodensis</a><br>Antipodean Albatross [64458]                                           | Vulnerable          | Species or species habitat may occur within area                             | In buffer area only |
| <a href="#">Diomedea antipodensis gibsoni</a> as <a href="#">Diomedea gibsoni</a><br>Gibson's Albatross [82270] | Vulnerable          | Species or species habitat may occur within area                             | In buffer area only |
| <a href="#">Diomedea epomophora</a><br>Southern Royal Albatross [89221]                                         | Vulnerable          | Species or species habitat may occur within area                             | In buffer area only |
| <a href="#">Diomedea exulans</a><br>Wandering Albatross [89223]                                                 | Vulnerable          | Species or species habitat may occur within area                             | In buffer area only |
| <a href="#">Fregata ariel</a><br>Lesser Frigatebird, Least Frigatebird [1012]                                   |                     | Species or species habitat known to occur within area                        | In feature area     |
| <a href="#">Fregata minor</a><br>Great Frigatebird, Greater Frigatebird [1013]                                  |                     | Species or species habitat likely to occur within area                       | In buffer area only |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863]                                    | Vulnerable          | Species or species habitat known to occur within area<br>overfly marine area | In feature area     |
| <a href="#">Gallinago megala</a><br>Swinhoe's Snipe [864]                                                       |                     | Roosting likely to occur within area<br>overfly marine area                  | In buffer area only |

| Scientific Name                                                                              | Threatened Category   | Presence Text                                                             | Buffer Status       |
|----------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------|---------------------|
| <a href="#">Gallinago stenura</a><br>Pin-tailed Snipe [841]                                  |                       | Roosting likely to occur within area overfly marine area                  | In buffer area only |
| <a href="#">Haliaeetus leucogaster</a><br>White-bellied Sea-Eagle [943]                      |                       | Species or species habitat known to occur within area                     | In feature area     |
| <a href="#">Himantopus himantopus</a><br>Pied Stilt, Black-winged Stilt [870]                |                       | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]                     | Vulnerable            | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Lathamus discolor</a><br>Swift Parrot [744]                                      | Critically Endangered | Species or species habitat may occur within area overfly marine area      | In feature area     |
| <a href="#">Limosa lapponica</a><br>Bar-tailed Godwit [844]                                  |                       | Species or species habitat known to occur within area                     | In feature area     |
| <a href="#">Limosa limosa</a><br>Black-tailed Godwit [845]                                   | Endangered            | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Macronectes giganteus</a><br>Southern Giant-Petrel, Southern Giant Petrel [1060] | Endangered            | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Macronectes halli</a><br>Northern Giant Petrel [1061]                            | Vulnerable            | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]                                    |                       | Species or species habitat may occur within area overfly marine area      | In feature area     |

| Scientific Name                                                                       | Threatened Category   | Presence Text                                                             | Buffer Status       |
|---------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------|---------------------|
| <a href="#">Monarcha melanopsis</a><br>Black-faced Monarch [609]                      | Critically Endangered | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Myiagra cyanoleuca</a><br>Satin Flycatcher [612]                          |                       | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847] |                       | Species or species habitat known to occur within area                     | In feature area     |
| <a href="#">Numenius minutus</a><br>Little Curlew, Little Whimbrel [848]              |                       | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Numenius phaeopus</a><br>Whimbrel [849]                                   |                       | Roosting known to occur within area                                       | In buffer area only |
| <a href="#">Pachyptila turtur</a><br>Fairy Prion [1066]                               | Vulnerable            | Species or species habitat known to occur within area                     | In feature area     |
| <a href="#">Pandion haliaetus</a><br>Osprey [952]                                     |                       | Breeding known to occur within area                                       | In feature area     |
| <a href="#">Phaethon lepturus</a><br>White-tailed Tropicbird [1014]                   |                       | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Phoebastria fusca</a><br>Sooty Albatross [1075]                           |                       | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Pluvialis fulva</a><br>Pacific Golden Plover [25545]                      |                       | Roosting known to occur within area                                       | In buffer area only |
| <a href="#">Pluvialis squatarola</a><br>Grey Plover [865]                             | Vulnerable            | Roosting known to occur within area overfly marine area                   | In buffer area only |

| Scientific Name                                                                                                  | Threatened Category | Presence Text                                                              | Buffer Status       |
|------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------|---------------------|
| <a href="#">Pterodroma cervicalis</a><br>White-necked Petrel [59642]                                             |                     | Species or species habitat may occur within area                           | In feature area     |
| <a href="#">Recurvirostra novaehollandiae</a><br>Red-necked Avocet [871]                                         |                     | Roosting known to occur within area overfly marine area                    | In buffer area only |
| <a href="#">Rhipidura rufifrons</a><br>Rufous Fantail [592]                                                      |                     | Species or species habitat known to occur within area overfly marine area  | In feature area     |
| <a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a><br>Australian Painted Snipe [77037] | Endangered          | Species or species habitat likely to occur within area overfly marine area | In feature area     |
| <a href="#">Stercorarius antarcticus as Catharacta skua</a><br>Brown Skua [85039]                                |                     | Species or species habitat may occur within area                           | In buffer area only |
| <a href="#">Sterna striata</a><br>White-fronted Tern [799]                                                       |                     | Foraging, feeding or related behaviour likely to occur within area         | In feature area     |
| <a href="#">Sternula albifrons as Sterna albifrons</a><br>Little Tern [82849]                                    |                     | Species or species habitat may occur within area                           | In feature area     |
| <a href="#">Symposiachrus trivirgatus as Monarcha trivirgatus</a><br>Spectacled Monarch [83946]                  |                     | Species or species habitat known to occur within area overfly marine area  | In feature area     |
| <a href="#">Thalassarche carteri</a><br>Indian Yellow-nosed Albatross [64464]                                    | Vulnerable          | Species or species habitat may occur within area                           | In feature area     |
| <a href="#">Thalassarche cauta</a><br>Shy Albatross [89224]                                                      | Endangered          | Species or species habitat may occur within area                           | In buffer area only |

| Scientific Name                                                                                      | Threatened Category | Presence Text                                                             | Buffer Status       |
|------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------|---------------------|
| <a href="#">Thalassarche impavida</a><br>Campbell Albatross, Campbell Black-browed Albatross [64459] | Vulnerable          | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Thalassarche melanophris</a><br>Black-browed Albatross [66472]                           | Vulnerable          | Species or species habitat may occur within area                          | In feature area     |
| <a href="#">Thalassarche salvini</a><br>Salvin's Albatross [64463]                                   | Vulnerable          | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Thalassarche steadi</a><br>White-capped Albatross [64462]                                | Vulnerable          | Species or species habitat may occur within area                          | In buffer area only |
| <a href="#">Tringa brevipes as Heteroscelus brevipes</a><br>Grey-tailed Tattler [851]                |                     | Roosting known to occur within area                                       | In buffer area only |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832]                              | Endangered          | Species or species habitat known to occur within area overfly marine area | In feature area     |
| <a href="#">Tringa stagnatilis</a><br>Marsh Sandpiper, Little Greenshank [833]                       |                     | Roosting known to occur within area overfly marine area                   | In buffer area only |
| <a href="#">Xenus cinereus</a><br>Terek Sandpiper [59300]                                            | Vulnerable          | Roosting known to occur within area overfly marine area                   | In buffer area only |
| Fish                                                                                                 |                     |                                                                           |                     |
| <a href="#">Acentronura tentaculata</a><br>Shortpouch Pygmy Pipehorse [66187]                        |                     | Species or species habitat may occur within area                          | In feature area     |
| <a href="#">Campichthys tryoni</a><br>Tryon's Pipefish [66193]                                       |                     | Species or species habitat may occur within area                          | In feature area     |
| <a href="#">Corythoichthys amplexus</a><br>Fijian Banded Pipefish, Brown-banded Pipefish [66199]     |                     | Species or species habitat may occur within area                          | In feature area     |

| Scientific Name                                                                                                    | Threatened Category | Presence Text                                    | Buffer Status   |
|--------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------|-----------------|
| <a href="#">Corythoichthys ocellatus</a><br>Orange-spotted Pipefish, Ocellated Pipefish [66203]                    |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Festucalex cinctus</a><br>Girdled Pipefish [66214]                                                     |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Filicampus tigris</a><br>Tiger Pipefish [66217]                                                        |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Halicampus grayi</a><br>Mud Pipefish, Gray's Pipefish [66221]                                          |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippichthys cyanospilos</a><br>Blue-speckled Pipefish, Blue-spotted Pipefish [66228]                   |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippichthys heptagonus</a><br>Madura Pipefish, Reticulated Freshwater Pipefish [66229]                 |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippichthys penicillus</a><br>Beady Pipefish, Steep-nosed Pipefish [66231]                             |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippocampus kelloggi</a><br>Kellogg's Seahorse, Great Seahorse [66723]                                 |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippocampus kuda</a><br>Spotted Seahorse, Yellow Seahorse [66237]                                      |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippocampus planifrons</a><br>Flat-face Seahorse [66238]                                               |                     | Species or species habitat may occur within area | In feature area |
| <a href="#">Hippocampus trimaculatus</a><br>Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720] |                     | Species or species habitat may occur within area | In feature area |

| Scientific Name                                                                                                            | Threatened Category | Presence Text                                                | Buffer Status   |
|----------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------|-----------------|
| <a href="#">Hippocampus whitei</a><br>White's Seahorse, Crowned Seahorse,<br>Sydney Seahorse [66240]                       | Endangered          | Species or species<br>habitat likely to occur<br>within area | In feature area |
| <a href="#">Lissocampus runa</a><br>Javelin Pipefish [66251]                                                               |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Maroubra perserrata</a><br>Sawtooth Pipefish [66252]                                                           |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Micrognathus andersonii</a><br>Anderson's Pipefish, Shortnose Pipefish<br>[66253]                              |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Micrognathus brevirostris</a><br>thorntail Pipefish, Thorn-tailed Pipefish<br>[66254]                          |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Microphis manadensis</a><br>Manado Pipefish, Manado River Pipefish<br>[66258]                                  |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Solegnathus dunckeri</a><br>Duncker's Pipehorse [66271]                                                        |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Solegnathus hardwickii</a><br>Pallid Pipehorse, Hardwick's Pipehorse<br>[66272]                                |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Solegnathus spinosissimus</a><br>Spiny Pipehorse, Australian Spiny<br>Pipehorse [66275]                        |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Solenostomus cyanopterus</a><br>Robust Ghostpipefish, Blue-finned Ghost<br>Pipefish, [66183]                   |                     | Species or species<br>habitat may occur<br>within area       | In feature area |
| <a href="#">Solenostomus paradoxus</a><br>Ornate Ghostpipefish, Harlequin Ghost<br>Pipefish, Ornate Ghost Pipefish [66184] |                     | Species or species<br>habitat may occur<br>within area       | In feature area |

| Scientific Name                                                                                                       | Threatened Category | Presence Text                                                     | Buffer Status   |
|-----------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------|-----------------|
| <a href="#">Stigmatopora nigra</a><br>Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]                 |                     | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Syngnathoides biaculeatus</a><br>Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279] |                     | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Trachyrhamphus bicoarctatus</a><br>Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280] |                     | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Urocampus carinirostris</a><br>Hairy Pipefish [66282]                                                     |                     | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Vanacampus margaritifer</a><br>Mother-of-pearl Pipefish [66283]                                           |                     | Species or species habitat may occur within area                  | In feature area |
| Reptile                                                                                                               |                     |                                                                   |                 |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]                                                           | Endangered          | Breeding known to occur within area                               | In feature area |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]                                                                 | Vulnerable          | Foraging, feeding or related behaviour known to occur within area | In feature area |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]                              | Endangered          | Species or species habitat known to occur within area             | In feature area |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]                                                     | Vulnerable          | Species or species habitat known to occur within area             | In feature area |
| <a href="#">Hydrophis elegans</a><br>Elegant Sea Snake, Bar-bellied Sea Snake [1104]                                  |                     | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Hydrophis platura as Pelamis platurus</a><br>Yellow-bellied Sea Snake [93746]                             |                     | Species or species habitat may occur within area                  | In feature area |

| Scientific Name                                                                                      | Threatened Category | Presence Text                                                     | Buffer Status   |
|------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------|-----------------|
| <a href="#">Hydrophis stokesii</a> as <a href="#">Astrotia stokesii</a><br>Stokes' Sea Snake [93510] |                     | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Lepidochelys olivacea</a><br>Olive Ridley Turtle, Pacific Ridley Turtle [1767]           | Endangered          | Breeding likely to occur within area                              | In feature area |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]                                         | Vulnerable          | Foraging, feeding or related behaviour known to occur within area | In feature area |

| Whales and Other Cetaceans                                                            |            | [ Resource Information ]                               |                     |
|---------------------------------------------------------------------------------------|------------|--------------------------------------------------------|---------------------|
| Current Scientific Name                                                               | Status     | Type of Presence                                       | Buffer Status       |
| Mammal                                                                                |            |                                                        |                     |
| <a href="#">Balaenoptera acutorostrata</a><br>Minke Whale [33]                        |            | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Balaenoptera edeni</a><br>Bryde's Whale [35]                              |            | Species or species habitat may occur within area       | In buffer area only |
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]                              | Endangered | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Delphinus delphis</a><br>Common Dolphin, Short-beaked Common Dolphin [60] |            | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Eubalaena australis</a><br>Southern Right Whale [40]                      | Endangered | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Grampus griseus</a><br>Risso's Dolphin, Grampus [64]                      |            | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Megaptera novaeangliae</a><br>Humpback Whale [38]                         |            | Congregation or aggregation known to occur within area | In buffer area only |

| Current Scientific Name                                                                                 | Status | Type of Presence                                       | Buffer Status       |
|---------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------|---------------------|
| <a href="#">Orcinus orca</a><br>Killer Whale, Orca [46]                                                 |        | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Sousa sahulensis</a><br>Australian Humpback Dolphin [87942]                                 |        | Breeding known to occur within area                    | In buffer area only |
| <a href="#">Stenella attenuata</a><br>Spotted Dolphin, Pantropical Spotted Dolphin [51]                 |        | Species or species habitat may occur within area       | In feature area     |
| <a href="#">Tursiops aduncus</a><br>Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418] |        | Species or species habitat likely to occur within area | In feature area     |
| <a href="#">Tursiops truncatus s. str.</a><br>Bottlenose Dolphin [68417]                                |        | Species or species habitat may occur within area       | In feature area     |

## Extra Information

| State and Territory Reserves <a href="#">[ Resource Information ]</a> |                |       |                     |
|-----------------------------------------------------------------------|----------------|-------|---------------------|
| Protected Area Name                                                   | Reserve Type   | State | Buffer Status       |
| Cudgen                                                                | Nature Reserve | NSW   | In buffer area only |

| Regional Forest Agreements <a href="#">[ Resource Information ]</a>                                                                                                                           |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information. |  |

| RFA Name                           | State           | Buffer Status   |
|------------------------------------|-----------------|-----------------|
| <a href="#">North East NSW RFA</a> | New South Wales | In feature area |

| Nationally Important Wetlands <a href="#">[ Resource Information ]</a> |       |                     |
|------------------------------------------------------------------------|-------|---------------------|
| Wetland Name                                                           | State | Buffer Status       |
| <a href="#">Cudgen Nature Reserve</a>                                  | NSW   | In buffer area only |

| EPBC Act Referrals <a href="#">[ Resource Information ]</a> |           |                   |                   |                     |
|-------------------------------------------------------------|-----------|-------------------|-------------------|---------------------|
| Title of referral                                           | Reference | Referral Outcome  | Assessment Status | Buffer Status       |
| <a href="#">Kings Forest Residential Development</a>        | 2012/6328 |                   | Post-Approval     | In buffer area only |
| Controlled action                                           |           |                   |                   |                     |
| <a href="#">Shopping Centre Development, Kingscliff</a>     | 2005/1937 | Controlled Action | Completed         | In buffer area only |

| Title of referral                                                                                            | Reference | Referral Outcome      | Assessment Status | Buffer Status       |
|--------------------------------------------------------------------------------------------------------------|-----------|-----------------------|-------------------|---------------------|
| Controlled action                                                                                            |           |                       |                   |                     |
| <a href="#">Staged commercial, industrial and residential development</a>                                    | 2002/715  | Controlled Action     | Completed         | In buffer area only |
| <a href="#">Tugun Bypass</a>                                                                                 | 2004/1861 | Controlled Action     | Post-Approval     | In feature area     |
| <a href="#">Tugun Bypass Four-lane Dual Motorway</a>                                                         | 2003/1122 | Controlled Action     | Completed         | In feature area     |
| Not controlled action                                                                                        |           |                       |                   |                     |
| <a href="#">construction of two sports fields, car park, amenities block and access road fro</a>             | 2004/1376 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Hanson Tweed Sand Plant Expansion</a>                                                            | 2021/9095 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a> | 2015/7522 | Not Controlled Action | Completed         | In feature area     |
| <a href="#">Koala Beach Estate -Stage 7</a>                                                                  | 2003/1306 | Not Controlled Action | Completed         | In buffer area only |
| <a href="#">Tourist resort and public recreation area</a>                                                    | 2002/805  | Not Controlled Action | Completed         | In feature area     |
| Referral decision                                                                                            |           |                       |                   |                     |
| <a href="#">Breeding program for Grey Nurse Sharks</a>                                                       | 2007/3245 | Referral Decision     | Completed         | In feature area     |
| Biologically Important Areas <a href="#">[ Resource Information ]</a>                                        |           |                       |                   |                     |
| Scientific Name                                                                                              |           | Behaviour             | Presence          | Buffer Status       |
| Dolphins                                                                                                     |           |                       |                   |                     |
| <a href="#">Sousa chinensis</a>                                                                              |           |                       |                   |                     |
| Indo-Pacific Humpback Dolphin [50]                                                                           |           | Foraging              | Likely to occur   | In feature area     |
| <a href="#">Tursiops aduncus</a>                                                                             |           |                       |                   |                     |
| Indo-Pacific/Spotted Bottlenose Dolphin [68418]                                                              |           | Breeding              | Likely to occur   | In feature area     |
| Marine Turtles                                                                                               |           |                       |                   |                     |
| <a href="#">Caretta caretta</a>                                                                              |           |                       |                   |                     |
| Loggerhead Turtle [1763]                                                                                     |           | Internesting          | Likely to occur   | In buffer area only |
| <a href="#">Caretta caretta</a>                                                                              |           |                       |                   |                     |
| Loggerhead Turtle [1763]                                                                                     |           | Nesting               | Known to occur    | In buffer area only |
| Seabirds                                                                                                     |           |                       |                   |                     |
| <a href="#">Ardenna carneipes</a>                                                                            |           |                       |                   |                     |
| Flesh-footed Shearwater [82404]                                                                              |           | Foraging              | Known to occur    | In buffer area only |

| Scientific Name                        | Behaviour                      | Presence        | Buffer Status       |
|----------------------------------------|--------------------------------|-----------------|---------------------|
| <a href="#">Procellaria parkinsoni</a> |                                |                 |                     |
| Black Petrel [1048]                    | Foraging                       | Likely to occur | In buffer area only |
| Sharks                                 |                                |                 |                     |
| <a href="#">Carcharias taurus</a>      |                                |                 |                     |
| Grey Nurse Shark [64469]               | Foraging                       | Known to occur  | In feature area     |
| Whales                                 |                                |                 |                     |
| <a href="#">Megaptera novaeangliae</a> |                                |                 |                     |
| Humpback Whale [38]                    | Migration<br>(north and south) | Known to occur  | In buffer area only |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

### Threatened ecological communities

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

### Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

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

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

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

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

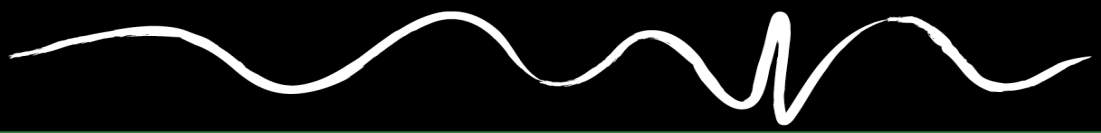
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## Appendix C

# Photographs



Plate C.1 North-east corner of study area, looking towards northern boundary, with Bitou Bush, introduced grasses colonising disturbed sand. One introduced shrub, *Casuarina equisetifolia* in rear left.



Plate C.2 North-east corner of study area looking towards southern boundary showing introduced grasses colonising disturbed sand with low organic matter. Distant shrubs are introduced *Acacia saligna*.



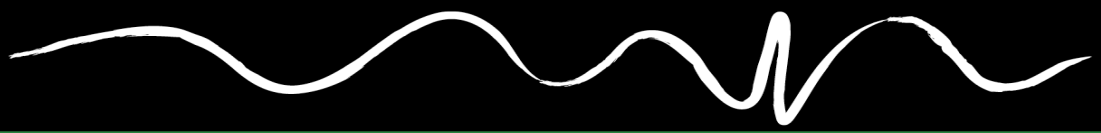
Plate C.3 North-east corner of study area looking west. Distant trees are planted vegetation in roadside reserve Lot 75 DP 1075495, along Casuarina Way.



Plate C.4 North-west corner of study area, depicts Bitou Bush, introduced grasses and approximately three *Acacia longifolia*. Other shrubs are the introduced *Acacia saligna*. Emergent trees are Norfolk Pines planted along Casuarina Way and Bells Boulevard outside the lot boundary.



Plate C.5 Planted vegetation along western boundary outside the study area. Planting includes local coastal native species, and some introduced species used for landscaping purposes.



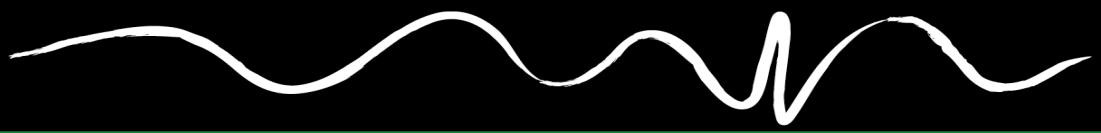
## Appendix D

# Flora Inventory

**Table D.1 Flora Inventory** (plants recorded within the study area during 5 m wide foot traverses on 31/01/2024)

| Scientific Name                                              | Common Name                   | Family         |
|--------------------------------------------------------------|-------------------------------|----------------|
| <i>Acacia longifolia</i> subsp. <i>sophorae</i>              | Coastal Wattle                | FABACEAE       |
| * <i>Acacia saligna</i>                                      | West Australian Golden Wattle | FABACEAE       |
| * <i>Ageratum houstonianum</i>                               | Blue Billygoat Weed           | ASTERACEAE     |
| * <i>Ambrosia artemisiifolia</i>                             | Ragweed                       | ASTERACEAE     |
| * <i>Casuarina equisetifolia</i>                             | Horesetail She-Oak            | CASUARINACEAE  |
| * <i>Chamaecrista rotundifolia</i>                           | Round-Leaf Cassia             | FABACEAE       |
| * <i>Chloris gayana</i>                                      | Rhodes Grass                  | POACEAE        |
| * <i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i> | Bitou Bush                    | ASTERACEAE     |
| * <i>Conyza bonariensis</i>                                  | Fleabane                      | ASTERACEAE     |
| * <i>Crotalaria incana</i>                                   | Woolly Rattlepod              | FABACEAE       |
| * <i>Desmodium tortuosum</i>                                 | Florida Beggarweed            | FABACEAE       |
| <i>Eragrostis interrupta</i>                                 | Coastal Lovegrass             | POACEAE        |
| <i>Indigofera hirsuta</i>                                    | Hairy Indigo                  | FABACEAE       |
| <i>Ipomoea brasiliensis</i>                                  | Goat's Foot                   | CONVOLVULACEAE |
| * <i>Ipomoea cairica</i>                                     | Coastal Morning-Glory         | CONVOLVULACEAE |
| * <i>Lantana camara</i>                                      | Lantana                       | VERBENACEAE    |
| * <i>Macroptilium atropurpureum</i>                          | Siratro                       | FABACEAE       |
| * <i>Melinis minutiflora</i>                                 | Molasses Grass                | POACEAE        |
| * <i>Melinis repens</i>                                      | Red Natal Grass               | POACEAE        |
| * <i>Oenothera drummondii</i>                                | Beach Evening Primrose        | ONAGRACEAE     |
| * <i>Oenothera mollissima</i>                                | Argentine Evening Primrose    | ONAGRACEAE     |
| * <i>Paspalum dilatatum</i>                                  | Paspalum                      | POACEAE        |
| * <i>Richardia brasiliensis</i>                              | Mexican Clover                | RUBIACEAE      |
| * <i>Ricinus communis</i>                                    | Castor Oil Plant              | EUPHORBIACEAE  |
| * <i>Solanum seaforthianum</i>                               | Climbing Nightshade           | SOLANACEAE     |
| * <i>Sonchus oleraceus</i>                                   | Common Sowthistle             | ASTERACEAE     |
| * <i>Vigna parkeri</i>                                       | Shaw Creeping Vigna           | FABACEAE       |

**\*Denotes exotic species**



## Appendix E

# Threatened Fauna Potential Occurrence Assessment

## Threatened Fauna Potential Occurrence Assessment

For this proposed activity, the likelihood of occurrence of threatened and migratory species and populations was determined based on the criteria shown in **Table E.1**.

**Table E.1 Potential of occurrence criteria for threatened fauna species and populations**

| Potential of Occurrence | Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Known</b>            | The species was observed in the study area either during the current survey or during another survey less than one year prior.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>High</b>             | A species has a high likelihood of occurrence if: <ul style="list-style-type: none"><li>■ the study area contains or forms part of a large area of high-quality suitable habitat</li><li>■ important habitat elements (i.e. for breeding or important life cycle periods such as winter foraging periods) are abundant within the study area</li><li>■ the species has been recorded recently in similar habitat in the locality</li><li>■ the study area is likely to support resident populations or to contain habitat that is visited by the species during regular seasonal movements or migration.</li></ul>                                                                                                |
| <b>Moderate</b>         | A species has a moderate likelihood of occurrence if: <ul style="list-style-type: none"><li>■ the study area contains or forms part of a small area of high-quality suitable habitat</li><li>■ the study area contains or forms part of a large area of marginal habitat</li><li>■ important habitat elements (i.e. for breeding or important life cycle periods such as winter foraging periods) are sparse or absent within the study area</li><li>■ the study area is unlikely to support resident populations or to contain habitat that is visited by the species during regular seasonal movements or migration but is likely to be used occasionally during seasonal movements and/or dispersal.</li></ul> |
| <b>Low</b>              | A species has a low likelihood of occurrence if: <ul style="list-style-type: none"><li>■ potentially suitable habitat exists but the species has not been recorded recently (previous 10 years) in the locality despite intensive survey (i.e. the species is considered to be locally extinct)</li><li>■ the species is considered to be a rare vagrant, likely only to visit the study area very rarely; e.g. during juvenile dispersal or exceptional climatic conditions (e.g. extreme drought conditions in typical habitat of inland birds).</li></ul>                                                                                                                                                      |
| <b>None</b>             | Suitable habitat is absent from the study area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Table E.2 Threatened fauna potential occurrence assessment\***

\*Pelagic marine species identified in the search results are not assessed as no habitat occurs at the site

| Scientific Name               | Common Name          | Status<br>BC Act | EPBC Act | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                | Suitability of Site Habitat                                          | Potential Occurrence<br>and Need for Test of<br>Significance                                                         |
|-------------------------------|----------------------|------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Amphibians</b>             |                      |                  |          |                                                                                                                                     |                                                                      |                                                                                                                      |
| <i>Crinia tinnula</i>         | Wallum Froglet       | V                | -        | Acid paperbark and sedge swamps known as 'wallum', a banksia-dominated lowland heath ecosystem characterised by acidic waterbodies. | Paperbark/ wetland vegetation is not on the site, nor near the site. | None. No suitable habitat within the site.<br><br>Not considered further                                             |
| <i>Litoria olongburensis</i>  | Olongburra Frog      | V                | V        | Paperbark swamps and sedge swamps of the coastal 'wallum' country amongst sedges and rushes.                                        | Paperbark/ wetland vegetation is not on the site, nor near the site. | None. No suitable habitat within the site.<br><br>Not considered further.                                            |
| <b>Avifauna</b>               |                      |                  |          |                                                                                                                                     |                                                                      |                                                                                                                      |
| <i>Amauromis moluccana</i>    | Pale-vented Bush-hen | V                | -        | Variety of coastal wetlands from wetlands, mangroves, lagoons and swamps to river margins and creeks running through rainforest.    | Paperbark/ wetland vegetation is not on the site, nor near the site. | Low. Preferred habitat does not occur within the site. May occur in greater locality.<br><br>Not considered further. |
| <i>Anseranas semipalmata</i>  | Magpie Goose         | V                | -        | Shallow wetlands (<1 m deep), large swamps and dams with dense growth of rushes or sedge.                                           | Paperbark/ wetland vegetation is not on the site, nor near the site. | None. No suitable habitat within the site.<br><br>Not considered further.                                            |
| <i>Botaurus poeciloptilus</i> | Australasian Bittern | E                | E        | Permanent freshwater wetlands with tall dense vegetation, particularly bullrushes and spikerushes.                                  | Paperbark/ wetland vegetation is not on the site, nor near the site. | None. No suitable habitat within the site.<br><br>Not considered further.                                            |



| Scientific Name                 | Common Name           | Status    |             | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                                         | Suitability of Site Habitat                                                                                                                                               | Potential Occurrence<br>and Need for Test of<br>Significance                                                                                   |
|---------------------------------|-----------------------|-----------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |                       | BC<br>Act | EPBC<br>Act |                                                                                                                                                                              |                                                                                                                                                                           |                                                                                                                                                |
| <i>Burhinus grallarius</i>      | Bush Stone-curlew     | E         | -           | Lightly timbered open forest and woodland, and partly cleared farmland with woodland remnants, preferring areas with dry leaf-litter, fallen timber and sparse ground cover. | Recorded nesting and foraging in the locality, using residential areas and road verges. Potential for foraging on site of insects attracted to house and street lighting. | <b>High. Species recorded proximate to site. Species known to occur in urban environments in the locality. AoS completed.</b>                  |
| <i>Calidris tenuirostris</i>    | Great Knot            | V         | -           | Tidal mudflats, sandy ocean shores and occasionally inland freshwater or salt-lakes.                                                                                         | Suitable habitat is absent from site and study area.                                                                                                                      | None. No suitable habitat within the site.<br><br>Not considered further.                                                                      |
| <i>Calyptorhynchus lathamii</i> | Glossy Black-Cockatoo | V         | -           | Sheoaks in coastal forests and woodlands, timbered watercourses, and moist and dry eucalypt forests of the coast and the Great Divide up to 1,000 m.                         | No suitable feed or nesting trees ( <i>Allocasuarina torulosa</i> and <i>A. littoralis</i> ) occur.                                                                       | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |
| <i>Carterornis leucotis</i>     | White-eared Monarch   | V         | -           | Coastal rainforest, swamp forest and wet eucalypt forest, prefers edges where trees frequently covered with vines.                                                           | Suitable habitat is absent from site and study area.                                                                                                                      | None. No suitable habitat within the site.<br><br>Not considered further.                                                                      |
| <i>Circus assimilis</i>         | Spotted Harrier       | V         | -           | Grassy open woodland, inland riparian woodland, grassland and shrub steppe.                                                                                                  | Suitable habitat is absent from site and study area.                                                                                                                      | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |



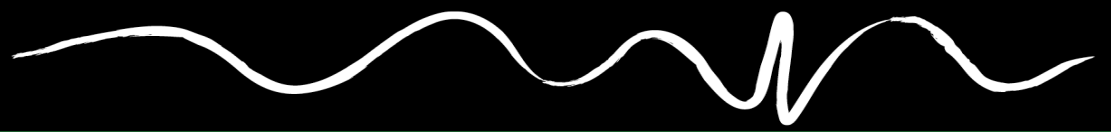
| Scientific Name                   | Common Name             | Status    |             | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                                                                                                                                | Suitability of Site Habitat                                                                 | Potential Occurrence<br>and Need for Test of<br>Significance                                                                         |
|-----------------------------------|-------------------------|-----------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|                                   |                         | BC<br>Act | EPBC<br>Act |                                                                                                                                                                                                                                                                     |                                                                                             |                                                                                                                                      |
| <i>Daphoenositta chrysoptera</i>  | Varied Sittella         | V         | -           | Inhabits eucalypt forests and woodlands, especially rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.                                                                                                              | Suitable habitat is absent from site and study area.                                        | None. No suitable habitat within the site.<br><br>Not considered further.                                                            |
| <i>Ephippiorhynchus asiaticus</i> | Black-necked Stork      | E         | -           | Swamps, mangroves, mudflats, dry floodplains.                                                                                                                                                                                                                       | Suitable habitat is absent from site and study area.                                        | None. No suitable habitat within the site.<br><br>Not considered further.                                                            |
| <i>Esacus magnirostris</i>        | Beach Stone-curlew      | CE        | -           | Tidal flats at the mouth of estuaries or on open beaches.                                                                                                                                                                                                           | Suitable habitat is absent from site and study area.                                        | None. No suitable habitat within the site.<br><br>Not considered further.                                                            |
| <i>Haematopus fuliginosus</i>     | Sooty Oystercatcher     | V         | -           | Intertidal rocky and coral reefs, mostly ocean shores.                                                                                                                                                                                                              | Suitable habitat is absent from site and study area.                                        | None. No suitable habitat within the site.<br><br>Not considered further.                                                            |
| <i>Haematopus longirostris</i>    | Pied Oystercatcher      | E         | -           | Open beaches, intertidal flats, sandbanks and occasionally rocky headlands.                                                                                                                                                                                         | Preferred habitat is absent from site may intermittently occur due to proximity to coast.   | <b>Moderate. Marginal habitat on site however, due to recent record in close proximity to site as a precautionary AoS completed.</b> |
| <i>Haliaeetus leucogaster</i>     | White-bellied Sea-eagle | V         | -           | Coastal habitats and around terrestrial wetlands characterised by the presence of large areas of open water (larger rivers, swamps, lakes, ocean). Habitats may include freshwater swamps, lakes, reservoirs, billabongs, saltmarsh and sewage ponds in addition to | Suitable habitat is absent from site and study area.<br><br>No stick nests on subject site. | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.                      |



| Scientific Name                  | Common Name         | Status    |             | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                                                                                                                                                                                                                                     | Suitability of Site Habitat                                                                                                                          | Potential Occurrence<br>and Need for Test of<br>Significance              |
|----------------------------------|---------------------|-----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
|                                  |                     | BC<br>Act | EPBC<br>Act |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                      |                                                                           |
|                                  |                     |           |             | bays and inlets, beaches, reefs, lagoons, estuaries and mangroves.                                                                                                                                                                                                                                                                                                       |                                                                                                                                                      | Not considered further.                                                   |
| <i>Ixobrychus flavicollis</i>    | Black Bittern       | V         | -           | Dense vegetation fringing and in streams, swamps, tidal creeks and mudflats, particularly amongst swamp sheoaks and mangroves.                                                                                                                                                                                                                                           | Suitable habitat is absent from site and study area.<br><br>No stick nests on subject site.                                                          | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Lichenostomus fasciularis</i> | Mangrove Honeyeater | V         | -           | Mangrove forest, also near coastal forests and woodlands including casuarina and paperbark swamps.                                                                                                                                                                                                                                                                       | Suitable habitat is absent from site and study area.                                                                                                 | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Ninox strenua</i>             | Powerful Owl        | V         | -           | Woodland and open forest to tall moist forest and rainforest. Requires large tracts of forest or woodland habitat but may also occur in fragmented landscapes.                                                                                                                                                                                                           | Suitable habitat is absent from site and study area.                                                                                                 | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Pandion cristatus</i>         | Eastern Osprey      | V         | -           | Littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. Typically occur in coastal areas but occasionally travel inland along major rivers. Wetland habitats include inshore waters, reefs, bays, coastal cliffs, beaches, estuaries, mangrove swamps, broad rivers, reservoirs and large lakes and waterholes. | Known to occur in the locality. Utilises poles erected as nest sites for Osprey at Cudgen Creek. Site provides no potential habitat for the species. | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Petroica boodang</i>          | Scarlet Robin       | V         | -           | Dry eucalypt forests and woodlands with an open and grassy understorey with few scattered shrubs. Both mature and regrowth vegetation are utilised; habitat                                                                                                                                                                                                              | Suitable habitat is absent from site and study area.                                                                                                 | None. No suitable habitat within the site.<br><br>Not considered further. |



| Scientific Name              | Common Name             | Status |          | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                      | Suitability of Site Habitat                                | Potential Occurrence<br>and Need for Test of<br>Significance              |
|------------------------------|-------------------------|--------|----------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------|
|                              |                         | BC Act | EPBC Act |                                                                                                                           |                                                            |                                                                           |
|                              |                         |        |          | usually contains abundant logs and fallen timber.                                                                         |                                                            |                                                                           |
| <i>Ptilinopus magnificus</i> | Wompoo Fruit-dove       | V      | -        | Rainforests, low-elevation moist eucalypt forest, and Brush Box forests.                                                  | Suitable habitat is absent from site and study area.       | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Ptilinopus regina</i>     | Rose-crowned Fruit-dove | V      | -        | Subtropical and dry rainforest, moist eucalypt forest and swamp forest.                                                   | Suitable habitat is absent from site and study area.       | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Sternula albifrons</i>    | Little Tern             | E      | -        | Coastal waters, bays, shallow inlets, salt or brackish lakes. May be further inland in harbours or rivers.                | Suitable habitat is absent from site and study area.       | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Todiramphus chloris</i>   | Collared Kingfisher     | V      | -        | Restricted to mangroves and other estuarine habitats, occur about mouths of larger coastal rivers.                        | Suitable habitat is absent from site and study area.       | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Tyto longimembris</i>     | Eastern Grass Owl       | V      | -        | Areas of tall grass, including tussocks in swampy areas, grassy plains, swampy heath, cane grass, sedges on flood plains. | Suitable sized habitat is absent from site and study area. | None. No suitable habitat within the site.<br><br>Not considered further. |
| <i>Tyto novaehollandiae</i>  | Masked Owl              | V      | -        | Dry eucalypt forest and woodlands. Uses large tree hollows or caves for nesting.                                          | Suitable habitat is absent from site and study area.       | None. No suitable habitat within the site.<br><br>Not considered further. |



| Scientific Name             | Common Name                 | Status |          | Habitat Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Suitability of Site Habitat                          | Potential Occurrence and Need for Test of Significance                           |
|-----------------------------|-----------------------------|--------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------|
|                             |                             | BC Act | EPBC Act | (EPBC Act SPRAT and/ or DPIE/ EES Threatened Species Profiles websites)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                                                  |
| Gastropods                  |                             |        |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                                                  |
| <i>Thersites mitchellae</i> | Mitchell's Rainforest Snail | E      | CE       | <p>Remnant areas of lowland subtropical rainforest and swamp forest on alluvial soils, found amongst leaf litter on the forest floor.</p> <p>Parkyn (2014) found that the MRS's behaviour is largely nomadic, and that coarse woody debris should be considered a key habitat component. As well as dependence on high moisture levels, low fire frequency, and a well-developed leaf litter layer. Recorded preferred shelter/ retreat sites include <i>Gahnia clarkei</i> stems and Bangalow Palm (<i>Archontophoenix cunninghamiana</i>) fronds.</p> | Suitable habitat is absent from site and study area. | <p>None. No suitable habitat within the site.</p> <p>Not considered further.</p> |
| Mammals                     |                             |        |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                                                  |
| <i>Cercartetus nanus</i>    | Eastern Pygmy Possum        | V      | -        | In north-eastern NSW they are most frequently encountered in rainforest. They may occupy small patches of vegetation in fragmented landscapes and although the species prefers habitat with a rich shrub understory, they are known to occur in grassy woodlands and the presence of Eucalypts alone is sufficient to support populations in low densities                                                                                                                                                                                              | Suitable habitat is absent from site and study area. | <p>None. No suitable habitat within the site.</p> <p>Not considered further.</p> |



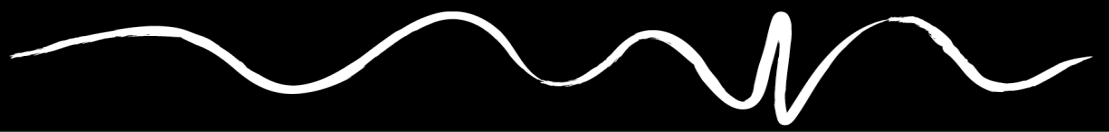
| Scientific Name                       | Common Name                     | Status    |             | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                                                | Suitability of Site Habitat                          | Potential Occurrence<br>and Need for Test of<br>Significance                                                                                   |
|---------------------------------------|---------------------------------|-----------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|                                       |                                 | BC<br>Act | EPBC<br>Act |                                                                                                                                                                                     |                                                      |                                                                                                                                                |
| <i>Dasyurus maculatus</i>             | Spotted-tailed Quoll            | V         | E           | Dry and moist eucalypt forests and rainforests, fallen hollow logs, large rocky outcrops.                                                                                           | Suitable habitat is absent from site and study area. | None. No suitable habitat within the site.<br><br>Not considered further.                                                                      |
| <i>Micronomus norfolkensis</i>        | Eastern Coastal Free-tailed Bat | V         | -           | Occurs in dry sclerophyll forest and woodland east of the Great Dividing Range. Roosts in tree hollows.                                                                             | Suitable habitat is absent from site and study area. | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |
| <i>Miniopterus australis</i>          | Little Bent-winged Bat          | V         | -           | Moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Generally found in well-timbered areas. | Suitable habitat is absent from site and study area. | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |
| <i>Miniopterus orianae oceanensis</i> | Large Bent-winged Bat           | V         | -           | Forest or woodland, roost in caves, old mines and stormwater channels.                                                                                                              | Suitable habitat is absent from site and study area. | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |
| <i>Myotis macropus</i>                | Southern Myotis                 | V         | -           | Bodies of water, rainforest streams, large lakes, reservoirs.                                                                                                                       | Suitable habitat is absent from site and study area. | None. No suitable habitat within the site.<br><br>Not considered further.                                                                      |



| Scientific Name               | Common Name              | Status    |             | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                   | Suitability of Site Habitat                                                                                       | Potential Occurrence<br>and Need for Test of<br>Significance                                                                                                                                                                                                                                                 |
|-------------------------------|--------------------------|-----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                          | BC<br>Act | EPBC<br>Act |                                                                                                                                                        |                                                                                                                   |                                                                                                                                                                                                                                                                                                              |
| <i>Nyctophilus bifax</i>      | Eastern Long-eared Bat   | V         | -           | Lowland subtropical rainforest and wet and swamp eucalypt forest, extending to adjacent moist eucalypt forest.                                         | Suitable habitat is absent from site and study area                                                               | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further.                                                                                                                                                               |
| <i>Ozimops lumsdenae</i>      | Northern Free-tailed Bat | V         | -           | Rainforests to open forests and woodlands often along watercourses.                                                                                    | Suitable habitat is absent from site and study area.                                                              | None. No suitable habitat within the site.<br><br>Not considered further.                                                                                                                                                                                                                                    |
| <i>Petaurus norfolcensis</i>  | Squirrel Glider          | V         | -           | Blackbutt, bloodwood and ironbark eucalypt forest with heath understorey in coastal areas, and box-ironbark woodlands and River Red Gum forest inland. | Suitable habitat is absent from site and study area.                                                              | None. No suitable habitat within the site.<br><br>Not considered further.                                                                                                                                                                                                                                    |
| <i>Phascolarctos cinereus</i> | Koala                    | E         | E           | Appropriate food trees in forests and woodlands, and treed urban areas.                                                                                | Suitable habitat is absent from site, some planted secondary Koala feed trees are in close proximity to the site. | <b>Moderate. No foraging habitat within site, however, some potential foraging habitat occurs in close proximity to the site. Additionally, the species is known to occur in the locality and may come in close proximity to the site whilst moving through the locality. As a precaution AoS completed.</b> |

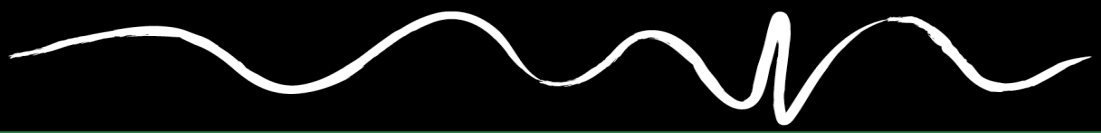


| Scientific Name                 | Common Name                    | Status    |             | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                  | Suitability of Site Habitat                                                                                                     | Potential Occurrence<br>and Need for Test of<br>Significance                                                                                   |
|---------------------------------|--------------------------------|-----------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |                                | BC<br>Act | EPBC<br>Act |                                                                                                                                                       |                                                                                                                                 |                                                                                                                                                |
| <i>Planigale maculata</i>       | Common Planigale               | V         | -           | Rainforest, eucalypt forest, heathland, marshland, grassland and rocky areas with surface cover close to water.                                       | Suitable habitat is absent from site and study area.                                                                            | None. No suitable habitat within the site.<br><br>Not considered further.                                                                      |
| <i>Potorous tridactylus</i>     | Long-nosed Potoroo             | V         | V           | Cool temperate rainforest, moist and dry forests, and wet heathland, inhabiting dense layers of grass, ferns, vines and shrubs.                       | Suitable habitat is absent from site and study area.                                                                            | None. No suitable habitat within the site.<br><br>Not considered further.                                                                      |
| <i>Pteropus poliocephalus</i>   | Grey-headed Flying-fox         | V         | V           | Subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. | Suitable habitat is absent from site and study area. Foraging habitat available in broader locality, no roosts or camps nearby. | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |
| <i>Saccolaimus flaviventris</i> | Yellow-bellied Sheath-tail-bat | V         | -           | Forages in a variety of habitats, roosts in tree hollows and buildings.                                                                               | Suitable habitat is absent from site and study area.                                                                            | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |
| <i>Scoteanax rueppellii</i>     | Greater Broad-nosed Bat        | V         | -           | Woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest.                                | Suitable habitat is absent from site and study area.                                                                            | Low. Preferred habitat does not occur in the site. May occur as a fly-over whilst foraging in greater locality.<br><br>Not considered further. |



| Scientific Name               | Common Name        | Status |          | Habitat Requirement<br>(EPBC Act SPRAT and/ or DPIE/<br>EES Threatened Species Profiles<br>websites)                                                               | Suitability of Site Habitat                          | Potential Occurrence<br>and Need for Test of<br>Significance |
|-------------------------------|--------------------|--------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|
|                               |                    | BC Act | EPBC Act |                                                                                                                                                                    |                                                      |                                                              |
| <i>Syconycteris australis</i> | Common Blossom-bat | V      | -        | Feeds in heathland and paperbark swamps; roosts in littoral rainforest. Also recorded in subtropical rainforest, wet sclerophyll forest and other coastal forests. | Suitable habitat is absent from site and study area. | None.<br><br>Not considered further.                         |

V = Vulnerable; E = Endangered; CE = Critically Endangered



## Appendix F

# Tests of Significance



## Assessments of Significance (BC Act)

Assessments of significance ('five-part tests') under Section 7.3 of the BC Act have been completed for the following threatened species with potential to occur on the site or be potentially indirectly impacted by the Proposal. These species have been recorded within the study area in the past twenty years:

- Bush Stone-curlew (*Burhinus grallarius*) listed as Endangered under the BC Act
- Pied Oystercatcher (*Haematopus longirostris*) listed as Endangered under the BC Act
- Koala (*Phascolarctos cinereus*) listed as Endangered under the BC Act.

### Five-part Test (BC Act listed Threatened Fauna)

- a) ***In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,***

Potential impacts from the Proposal include direct impacts (removal of vegetation dominated by introduced species) and indirect impacts (such as light spill, noise, potential pollution and runoff).

#### *Bush Stone-curlew*

The Bush Stone-curlew is found across most of Australia, with the exception of the central southern coast, inland areas, the far southeast corner, and Tasmania. While it remains common in northern Australia, it has become rare or even extinct across much of its former range in the southeast.

*"In NSW, Bush Stone-curlews occur in lowland grassy woodland and open forest. Habitat is described by broad ground and understorey structural features and is not necessarily associated with any particular vegetation communities. In general, habitat occurs in open woodlands with few, if any, shrubs, and short, sparse grasses of less than 15cm in height, with scattered fallen timber, leaf litter and bare ground present. In coastal areas, structurally similar elements of tidal and estuarine communities provide suitable habitat, for example Bush Stone curlews are recorded within Casuarina woodlands, saltmarsh and mangroves (Price 2004). The important structural elements of Bush Stone-curlew habitat appear to be:*

- *a low sparse ground cover*
- *some fallen timber and leaf litter*
- *a general lack of a shrubby understorey*
- *open woodlands (DECC, 2006: 8)*

*Foraging however, has been noted to occur over a broader spectrum of habitats including paddocks, grasslands, domestic areas (gardens, sports fields, [golf courses, residential areas pers. Obs] etc), estuarine areas (mudflats, saltmarsh, mangrove forest, swamp oak, melaleuca forest) (NPWS, 1999; 2006).*

*The Bush Stone-curlew nests on the ground, near dead timber, usually under trees within open woodlands that have an understorey of short grass or among brushwood (Wilson 1989 in NPWS, 1999). The nest site is typically in or near the edge of open grassy woodland or within a cleared paddock where there is good visibility across the surrounding lands (Johnson and Baker-Gabb 1994 in DECC, 2006)" (Planit Consulting Pty Ltd, 2021).*

Threatening processes for Bush Stone-curlew include:

- Predation by foxes and cats.
- Trampling of eggs by cattle.
- Clearance of woodland habitat for agricultural and residential development.

- Modification and destruction of ground habitat through removal of litter and fallen timber, introduction of exotic pasture grasses, grazing and frequent fires.
- Disturbance in the vicinity of nest sites.
- Negative impacts of pesticides on wildlife when used around nesting sites and habitat.
- Loss, modification and fragmentation of habitat.

### Local population

*“The local population of resident fauna species comprises those individuals known or likely to occur in the study area, as well as any individuals occurring in adjoining areas (contiguous or otherwise) that are known or likely to utilise habitats in the study area” (OEH, 2018).*

A local population of Bush Stone-curlew is known to occur within and proximate to the study area.

### Impacts

Potential impacts from the Proposal include direct impacts (removal of vegetation dominated by introduced species) and indirect impacts (such as light spill, noise, potential pollution and runoff).

The Proposal is unlikely to have an adverse effect on the life cycle of Bush Stone-curlew such that a viable local population is likely to be placed at risk of extinction as follows:

- Predation by foxes and cats:
  - *“Given the highly urbanised locality, the proposed development is unlikely to exacerbate predation by foxes upon the curlew.*
  - *Cats and dogs are not permitted to free-roam public open spaces.*
  - *Dogs should be kept on a leash while in public places (unless otherwise signed).*
  - *Tweed Shire Council can issue a Nuisance Cat Order and an infringement notice to those owners who allow their cats to roam unattended.” (Planit Consulting Pty Ltd, 2021).*
- Trampling of eggs by cattle:
  - The Proposal will not introduce cattle.
- Clearance of woodland habitat for agricultural and residential development:
  - The site does not constitute woodland habitat and does not conform to a Plant Community Type (PCT). The site is highly disturbed, both historically from sand mining, and more recently with residential and tourist development, fill deposition and removal.
  - Construction will require removal of three native shrubs and two immature introduced native trees on the northern edge of the site.
- Modification and destruction of ground habitat through removal of litter and fallen timber, introduction of exotic pasture grasses, grazing and frequent fires:
  - The majority of the site is already colonised with introduced grass and herb species.
  - The site has been regularly mown/ managed with no fallen timber present.
- Disturbance in the vicinity of nest sites.
  - No documented Bush Stone-curlew roosting and breeding habitat occur on or proximate to site. The closest breeding record is located north of the subject, off Casuarina Way. Two Council records of a *“Pair +/- fledged chick(s)”* occur immediately within and on the outer edge of the boundary of the study area. This species is mobile through the residential area, venturing out from vegetated areas.
- Negative impacts of pesticides on wildlife when used around nesting sites and habitat:

- The proposal is not for agricultural purposes, pesticide use would likely be low.
- Loss, modification and fragmentation of habitat:
  - Given the occurrence of available habitat within the locality, the Proposal represents a negligible reduction in foraging habitat which may be utilised by Bush Stone-curlew.
  - Operational lighting is not expected to be significantly different to that which is currently occurring in potential foraging and roosting habitat in the locality.
  - Lighting is unlikely to affect Bush Stone-curlew behaviour within the context of an urbanised area where extensive lighting is already present in the landscape.
- Given the current pedestrian volume and associated disturbance on site and adjoining roads, the Proposal comprises a nominal increase in disturbance to any Bush Stone-curlews in the locality.

In summary, the Proposal is unlikely to exacerbate existing threats and is unlikely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

#### *Pied Oystercatcher*

The Proposal is unlikely to have an adverse effect on the life cycle of Pied Oystercatcher such that a viable local population is likely to be placed at risk of extinction as:

- The recorded sighting on the nearby park would not have been a common location for Pied Oystercatcher to be foraging.
- The Pied Oystercatcher is very unlikely to use the site for foraging or nesting.
- The proposed design and safeguards would mitigate any potential for reduction in water quality in nearby estuaries. No major alterations to hydrology or flow patterns resulting from the Proposal are predicted.
- Noise during construction would be temporary and no significant ongoing future noise increases from the Proposal are predicted.
- Operational lighting is not expected to be significantly different to that which is currently occurring.

#### *Koala*

The Proposal is unlikely to have an adverse effect on the life cycle of the Koala such that a viable local population is likely to be placed at risk of extinction as:

- The sighting recorded adjacent to the study area was not in core Koala habitat.
- The subject vegetation on site comprises no foraging habitat or connectivity for traveling individuals.
- Given the occurrence of forested habitat within the locality, the Proposal represents a negligible reduction in foraging habitat which may be utilised by the subject species.
- Noise during construction would be temporary and no significant ongoing future noise increases from the Proposal are predicted.
- The site is several kilometres from mapped High Koala Activity area.
- Operational lighting is not expected to be significantly different to that which is currently occurring.

#### ***b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:***

- i. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or***

- 
- ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,***

No consideration under this part of the assessment is required.

**c) *In relation to the habitat of a threatened species or ecological community:***

- i. *the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and***

- No preferred habitat is likely to be removed or modified as a result of the proposed development.
- Retained areas of adjacent forest will continue to provide foraging and refuge resources.
- The extent of potential habitat to be removed is negligible. The extent of potential habitat to be removed is minor in context to substantial quality habitat for Bush Stone-curlew within the broader area. The works would have no impact on naturally occurring habitat for the species in the locality and impacts of lighting are unlikely to affect foraging behaviour.

The Proposal is therefore unlikely to adversely impact the long-term survival of any of the subject species.

- (ii) *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and***

The Proposal would not further fragment available habitat in the locality for any of the subject species. The site does not currently provide any whole or mosaic connectivity within the landscape.

- (iii) *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,***

- No core habitat is likely to be removed or modified as a result of the proposed development, as the site provides very limited habitat features due to past disturbance. The scale of habitat removal is minor in context to quality habitat available within the locality.
- The Proposal is unlikely to fragment or isolate important areas of habitat.

- d) *whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),***

One area of outstanding biodiversity value has been declared in Tweed LGA (Stotts Island Nature Reserve – critical habitat for Mitchell's Rainforest Snail). The Proposal would have no impact on this site.

- e) *whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.***

A key threatening process (KTP) is a process that threatens, or may have the capability to threaten, the survival or evolutionary development of species or ecological communities. KTPs listed in the BC Act, and whether the Proposal is recognised as a KTP is shown in **Table F.1**.

**Table F.1 Key Threatening Processes (KTP)**

| Key Threatening Process (as per Schedule 4 of the BC Act)                                                                                      | Is the development or activity proposed of a class of development or activity that is recognised as a threatening process? |          |          |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------|----------|
|                                                                                                                                                | Likely                                                                                                                     | Possible | Unlikely |
| Aggressive exclusion of birds by noisy miners ( <i>Manorina melanoccephala</i> )                                                               |                                                                                                                            |          | ✓        |
| Alteration of habitat following subsidence due to longwall mining                                                                              |                                                                                                                            |          | ✓        |
| Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands                                                |                                                                                                                            |          | ✓        |
| Anthropogenic climate change                                                                                                                   |                                                                                                                            | ✓        |          |
| Bushrock removal                                                                                                                               |                                                                                                                            |          | ✓        |
| Clearing of native vegetation                                                                                                                  |                                                                                                                            |          | ✓        |
| Competition and grazing by the feral European Rabbit ( <i>Oryctolagus cuniculus</i> )                                                          |                                                                                                                            |          | ✓        |
| Competition and habitat degradation by feral goats ( <i>Capra hircus</i> )                                                                     |                                                                                                                            |          | ✓        |
| Competition from feral honeybees ( <i>Apis mellifera</i> )                                                                                     |                                                                                                                            |          | ✓        |
| Death or injury to marine species following capture in shark control programs on ocean beaches                                                 |                                                                                                                            |          | ✓        |
| Entanglement in or ingestion of anthropogenic debris in marine and estuarine environments                                                      |                                                                                                                            |          | ✓        |
| Forest eucalypt dieback associated with over-abundant psyllids and bell miners                                                                 |                                                                                                                            |          | ✓        |
| Habitat degradation and loss by Feral Horses, <i>Equus caballus</i>                                                                            |                                                                                                                            |          | ✓        |
| Herbivory and environmental degradation caused by feral deer                                                                                   |                                                                                                                            |          | ✓        |
| High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition |                                                                                                                            |          | ✓        |
| Importation of red imported fire ants ( <i>Solenopsis invicta</i> )                                                                            |                                                                                                                            |          | ✓        |
| Infection by <i>Psittacine circoviral</i> (beak and feather) disease affecting endangered psittacine species and populations                   |                                                                                                                            |          | ✓        |
| Infection of frogs by amphibian chytrid causing the disease chytridiomycosis                                                                   |                                                                                                                            |          | ✓        |
| Infection of native plants by <i>Phytophthora cinnamomi</i>                                                                                    |                                                                                                                            |          | ✓        |
| Introduction and Establishment of Exotic Rust Fungi of the order Pucciniales pathogenic on plants of the family Myrtaceae                      |                                                                                                                            |          | ✓        |
| Introduction of the large earth bumblebee ( <i>Bombus terrestris</i> )                                                                         |                                                                                                                            |          | ✓        |
| Invasion and establishment of exotic vines and scramblers                                                                                      |                                                                                                                            |          | ✓        |
| Invasion and establishment of Scotch Broom ( <i>Cytisus scoparius</i> )                                                                        |                                                                                                                            |          | ✓        |
| Invasion and establishment of the Cane Toad ( <i>Bufo marinus</i> )                                                                            |                                                                                                                            |          | ✓        |



| Key Threatening Process (as per Schedule 4 of the BC Act)                                                              | Is the development or activity proposed of a class of development or activity that is recognised as a threatening process? |          |          |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------|----------|
|                                                                                                                        | Likely                                                                                                                     | Possible | Unlikely |
| Invasion, establishment and spread of Lantana ( <i>Lantana camara</i> )                                                |                                                                                                                            |          | ✓        |
| Invasion of native plant communities by African Olive ( <i>Olea europaea</i> <i>L. subsp. cuspidata</i> )              |                                                                                                                            |          | ✓        |
| Invasion of native plant communities by <i>Chrysanthemoides monilifera</i>                                             |                                                                                                                            |          | ✓        |
| Invasion of native plant communities by exotic perennial grasses                                                       |                                                                                                                            |          | ✓        |
| Invasion of the Yellow Crazy Ant ( <i>Anoplolepis gracilipes</i> ) into NSW                                            |                                                                                                                            |          | ✓        |
| Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants |                                                                                                                            |          | ✓        |
| Loss of hollow-bearing trees                                                                                           |                                                                                                                            |          | ✓        |
| Loss or degradation (or both) of sites used for hill-topping by butterflies                                            |                                                                                                                            |          | ✓        |
| Predation and hybridisation by feral dogs ( <i>Canis lupus familiaris</i> )                                            |                                                                                                                            |          | ✓        |
| Predation by the European Red Fox ( <i>Vulpes vulpes</i> )                                                             |                                                                                                                            |          | ✓        |
| Predation by the feral cat ( <i>Felis catus</i> )                                                                      |                                                                                                                            |          | ✓        |
| Predation by <i>Gambusia holbrooki</i> (Plague Minnow or Mosquito Fish)                                                |                                                                                                                            |          | ✓        |
| Predation by the Ship Rat ( <i>Rattus rattus</i> ) on Lord Howe Island                                                 |                                                                                                                            |          | ✓        |
| Predation, habitat degradation, competition and disease transmission by feral pigs ( <i>Sus scrofa</i> )               |                                                                                                                            |          | ✓        |
| Removal of dead wood and dead trees                                                                                    |                                                                                                                            |          | ✓        |

Two KTPs likely to be reduced by the Proposal are Lantana and Bitou Bush invasion. The site currently is a seed source of both weeds.

The Proposal may be characteristic of one KTP:

- Anthropogenic climate change.

The Proposal may incrementally contribute to anthropogenic climate change, through the generation of carbon dioxide during operation of machinery and vehicles and associated fuel consumption however the impact is not considered significant.

The Proposal does not meet the definition of 'clearing of native vegetation'.

## Conclusion

It is considered unlikely that the Proposal would result in a significant adverse impact on any of the subject threatened species that would put at risk the local viability of these species.

# Bush Stone-curlew Management Plan

## 4-8 Bells Boulevard, Kingscliff



Quality solutions. Sustainable future.



### GeoLINK Consulting Pty Ltd

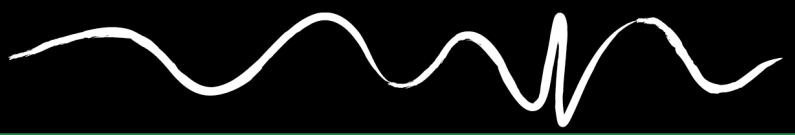
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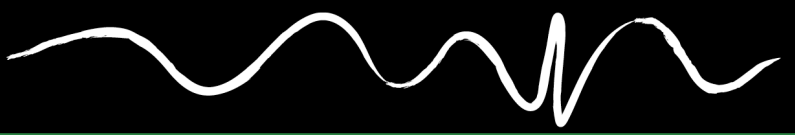
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## Certification

|             | Name          | Signature                                                                            | Date       |
|-------------|---------------|--------------------------------------------------------------------------------------|------------|
| Prepared by | Grant McLean  |  | 24/02/2025 |
| Reviewed by | Troy Jennings |   | 25/02/2025 |

| UPR       | Description          | Issued By    | Date Issued |
|-----------|----------------------|--------------|-------------|
| 4841-1024 | Version 1 - Draft    | Grant McLean | 26/02/2025  |
| 4841-1026 | Version 2 – Final V1 | Grant McLean | 27/02/2025  |
| 4841-1030 | Version 3 – Final V2 | Grant McLean | 05/05/2025  |

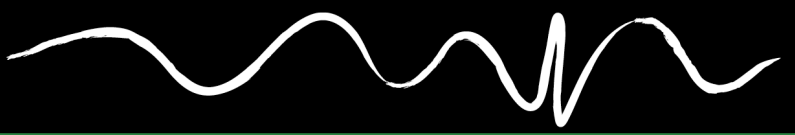


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# 1. Introduction

## 1.1 Overview

This Bush Stone-curlew Management Plan (BSMP) has been prepared for Bells Boulevard Pty Ltd (Podia) to address General Condition 30 pertaining to DA24/0089 at 4-8 Bells Boulevard, Kingscliff.

As per General Condition 30, the BSMP details suitable best practice construction phase avoidance and mitigation measures, having regard for the Recovery Plan for the Bush Stone-curlew (*Burhinus grallarius*) dated February 2006 prepared by NSW DEC.

Council issued a Construction Certificate/ Subdivision Works Certificate (CC25/0060) on 29 April 2025, with the requirement for a satisfactory response pertaining to Condition 30 of DA24/0089. The subject BSMP has been updated in accordance with Council's request.

## 1.2 Background

The site and study area have been assessed multiple times. The following documents have been used to inform the subject BSMP:

- *Biodiversity Assessment Report 4-8 Bells Boulevard, Kingscliff NSW*. Prepared for Bells Boulevard Pty Ltd (GeoLINK, 2024).
- *Bush-stone Curlew RFI Response 4-8 Bells Boulevard, Kingscliff NSW* (GeoLINK, 2024).
- *Bush-stone Curlew Impact Assessment and Management Plan 4-8 Bells Boulevard, Kingscliff*. Prepared for GTDP Investments Pty Ltd (Planit Consulting Pty Ltd, 2021).

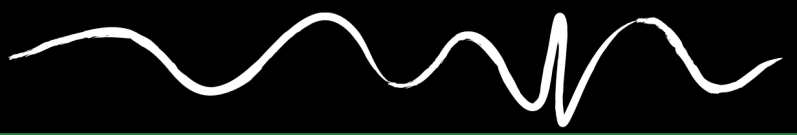
Post submission of the Biodiversity Assessment Report, Podia received the *Bush-stone Curlew Impact Assessment and Management Plan 4-8 Bells Boulevard, Kingscliff | Lot 169 on DP 1075495 and Lot 930 on DP 1079118* (herein referred to as BCIAMP), initially prepared for the previous owner of the site, GTDP Investments Pty Ltd. The BCIAMP was prepared by Planit Consulting in March 2021. Several sections of the BCIAMP have been integrated into the subject BSMP verbatim. The BCIAMP prepared under the previous DA20/0466 is considered applicable to the subject DA given:

- The subject site assessed in the BCIAMP is identical (in scale and extent of disturbance) to the subject site assessed in the Biodiversity Assessment Report for the subject DA.
- Targeted Bush Stone-curlew survey undertaken to inform the BCIAMP in 2021 are comprehensive and within the recommended 5-year period.
- Avoidance and mitigation measures addressed in section 6.1 of the BCIAMP are considered current, comprehensive and applicable to the subject DA.

## 1.3 The Site

The site comprises Lot 169/ DP1075495 & Lot 930/ DP1079118 located at 4-8 Bells Boulevard, Kingscliff, NSW (refer to **Illustration 1.1**). The site is zoned R1 General Residential (southern portion) and SP3 Tourist (northern portion) under the Tweed Local Environmental Plan (LEP) 2014. The site is bordered by Casuarina Way to the west, Barrel Street to the south, Gunnamatta Avenue to the east and Bells Boulevard to the north. The site is surrounded by resort and residential developments, with parks, foredune and riparian vegetated areas further afield zoned R1, R2, RE1 and SP3.

The site occurs within the Burringbar-Conondale Ranges subregion of the South Eastern Queensland Bioregion as per the Interim Biogeographic Regionalisation for Australia (IBRA), Version 7 (refer (Thackway & Cresswell 1995)).



## 1.4 The Proposal

The approved development provides consent for a fifteen (15) lot subdivision with associated civil and road works. The subdivision will feature 14-lot Torrens title residential lots and a residual 15th lot, with associated civil and road infrastructure.

Refer to **Illustration 1.1** for the site and the Proposal footprint.



#### LEGEND

- Study area
- Stage 1 works
- Cadastre

0 20 Metres



## 2. Vegetation

The site and study area are highly disturbed, both historically from sand mining, and more recently with residential and tourist development, fill deposition and removal. Consequently, the original vegetation is no longer visible. Additionally, the original topography and soil profile are likely to be radically different, precluding reestablishment of original plant communities unassisted. Native vegetation extent within the study area is extremely limited. The majority of the site is colonised with introduced grass and herb species. A scattering of the native grass, Coastal Love Grass (*Eragrostis interrupta*), covers approximately 2% through the centre of the site. Along the northern boundary of the study area are three native Coastal Wattle (*Acacia longifolia* subsp *sophorae*), and the locally introduced but native Western Australian Golden Wattle (*Acacia saligna*) and Horsetail She-Oak (*Casuarina equisetifolia*).

Patches of planted vegetation occur in the broader locality, with mixed native and ornamental plantings along roads and skirting the carpark. Further to the east of the site, revegetated areas along the dunes contain Plant Community Type (PCT) 3788 Coastal Foredune Wattle Scrub. At the western edge of the broader residential area, Cudgen Creek riparian area contains a mosaic of PCTs, influenced largely by elevation, with patches of PCT 4091 Grey Mangrove- River Mangrove Forest, PCT 4090 Far North Estuarine Mangrove- Swamp Oak Forest, PCT 3961 Coast Sands Lepironia Sedgeland and PCT 4004 Northern Melaleuca quinquenervia Swamp Forest (NSW Department of Planning and Environment 2024b). Many of these coastal lowland PCTs are associated with TECs, but they do not occur on the site.

The site is not assigned a PCT on the Trees Near Me website, reflecting its cleared state. This is corroborated by Tweed Shire Council fine scale vegetation mapping, identifying the vegetation community as “highly modified/ disturbed” and the vegetation type as “substantially cleared of native vegetation” (Tweed Shire Council Mapping, accessed 09/10/2024).

Vegetation mapping is provided in **Illustration 3.1**.



## 3. Bush Stone-curlew Overview

### 3.1 Bush Stone-curlew Species Profile

The Bush Stone-curlew (*Burhinus grallarius*) is listed as Endangered under the *Biodiversity Conservation Act 2016*.

The Bush Stone-curlew is found across most of Australia, with the exception of the central southern coast, inland areas, the far southeast corner, and Tasmania. While it remains common in northern Australia, it has become rare or even extinct across much of its former range in the southeast.

*“In NSW, Bush Stone-curlews occur in lowland grassy woodland and open forest. Habitat is described by broad ground and understorey structural features and is not necessarily associated with any particular vegetation communities. In general, habitat occurs in open woodlands with few, if any, shrubs, and short, sparse grasses of less than 15cm in height, with scattered fallen timber, leaf litter and bare ground present. In coastal areas, structurally similar elements of tidal and estuarine communities provide suitable habitat, for example, Bush Stone curlews are recorded within Casuarina woodlands, saltmarsh and mangroves (Price 2004). The important structural elements of the Bush Stone-curlew habitat appear to be:*

- *A low, sparse ground cover.*
- *Some fallen timber and leaf litter.*
- *A general lack of a shrubby understorey.*
- *Open woodlands (DECC, 2006: 8).*

*Bush Stone-curlews have a generalist diet, foraging on a wide variety of flying and ground-dwelling invertebrates (including locusts and grasshoppers), seeds, small fruit, crustaceans, molluscs, frogs, lizards, snakes and even mice (Marchant & Higgins 1993, Barker and Vestjens 1989).*

*The Bush Stone-curlew breeding season begins with a noisy courtship around August-September in NSW and has generally finished by March (Marchant and Higgins 1993, Price 2004).*

*A breeding pair will have between one and three clutches within a breeding season (most frequently one or two), with each clutch usually containing two eggs (Andrews 1997, Johnson and Baker-Gabb 1993).*

*Eggs are laid directly on bare ground, with grass and leaves scraped away (Johnson and Baker-Gabb 1994). The nest site is typically in or near the edge of open grassy woodland or within a cleared paddock where there is good visibility across the surrounding lands (Johnson and Baker-Gabb 1994). Nest sites can be near or beside a fallen log or exposed tree root, and this may provide some camouflage for nesting birds (C. Price DEC pers. obs).*

*The incubation period is between 22 and 30 days, with both parents participating in the incubation and care of the young (Andrews 1997). The chicks are nidifugous, leaving the nest site within an hour or two of hatching, and often remain with the parents until the next breeding attempt.*

*Foraging however, has been noted to occur over a broader spectrum of habitats including paddocks, grasslands, domestic areas (gardens, sports fields, [golf courses, residential areas pers. Obs] etc), estuarine areas (mudflats, saltmarsh, mangrove forest, swamp oak, melaleuca forest) (NPWS, 1999; 2006).*

*The Bush Stone-curlew nests on the ground, near dead timber, usually under trees within open woodlands that have an understorey of short grass or among brushwood (Wilson 1989 in NPWS, 1999). The nest site is typically in or near the edge of open grassy woodland or within a cleared*

paddock where there is good visibility across the surrounding lands (Johnson and Baker-Gabb 1994 in DECC, 2006)” (Planit Consulting Pty Ltd, 2021).

Threatening processes for Bush Stone-curlew include:

- Predation by foxes and cats.
- Trampling of eggs by cattle.
- Clearance of woodland habitat for agricultural and residential development.
- Modification and destruction of ground habitat through removal of litter and fallen timber, introduction of exotic pasture grasses, grazing and frequent fires.
- Disturbance in the vicinity of nest sites.
- Negative impacts of pesticides on wildlife when used around nesting sites and habitats.
- Loss, modification and fragmentation of habitat.

## 3.2 Bush Stone-curlew Records and Habitat

### 3.2.1 Records and Habitat

A breeding pair of Bush Stone-curlews were recorded in January, February and March 2021, approximately 120 m north of the study area, with the same pair observed off the nest in Michael Palmer Memorial Park Playground, approximately 90 m north-west of the study area (Planit Consulting Pty Ltd, 2021). Bush Stone-curlew were also recorded in 2014 at the carpark area. They were reported as a pair with a fledgling. They have also been reported nearby at Michael Palmer Park in 2013 with two chicks.

Paperbark swamp/ rainforest vegetation to the west of the study area provides known habitat for the species. In 2005, nesting sites were reported south-west of the study area, and in the larger Lot 500 to the south.

Bush Stone-curlew are known to occur more broadly within Tweed Shire in both rural and residential areas. Preferably, the Bush Stone-curlew inhabits open forests and woodlands with a sparse grassy ground layer and fallen timber. The species is largely nocturnal, being especially active on moonlit nights. Nesting is completed on the ground in a scrape or small bare patch; two eggs are laid in spring and early summer. Bush Stone-curlews were not observed to be currently nesting or raising young on the site, nor using it for day-time roosting.

Council records in relation to the subject site for Bush Stone-curlew are listed as follows:

| Year | Suburb     | Location                              | Record Type               | Easting | Northing | Total # Bir | Breeding Pairs | Adult Birds | No Eggs L | No Eggs H | Chicks Fledged |
|------|------------|---------------------------------------|---------------------------|---------|----------|-------------|----------------|-------------|-----------|-----------|----------------|
| 2019 | Casuarina  | Casuarina Way & Gunnamatta Ave        | Breeding                  | 556522  | 6871974  | 3           |                | 1           | 2         |           | 1              |
| 2020 | Casuarina  | Casuarina Way                         | Pair +/- fledged chick(s) | 556417  | 6871983  | 3           |                | 1           | 2         | 2         | 1              |
| 2020 | Kingscliff | Bells Blvd                            | Pair +/- fledged chick(s) | 556534  | 6871993  | 2           |                | 0           | 2         |           |                |
| 2019 | Casuarina  | SALT Resort                           | Breeding                  | 556456  | 6872058  | 2           |                | 1           | 2         | 2         | 1              |
| 2023 | Casuarina  | Cnr Casuarina Way and Barrel Street   | Single bird               | 556365  | 6871832  | 1           |                | 0           | 1         |           |                |
| 2019 | Casuarina  | Gunnamatta Avenue                     | Pair +/- fledged chick(s) | 556522  | 6871974  | 3           |                | 1           | 2         |           |                |
| 2022 | Casuarina  | Cnr Casuarina Way and Bundeena Street | Single bird               | 556324  | 6871802  | 1           |                | 0           | 1         |           |                |
| 2020 | Casuarina  | Casuarina Way, SALT                   | Pair +/- fledged chick(s) | 556461  | 6871919  | 2           |                | 1           | 2         |           |                |

## 3.3 Bush Stone-curlew Local Population

*“The local population of resident fauna species comprises those individuals known or likely to occur in the study area, as well as any individuals occurring in adjoining areas (contiguous or otherwise) that are known or likely to utilise habitats in the study area” (OEHL, 2018).*

The local population is considered all Bush Stone-curlew occurring within and proximate to the study area.



#### LEGEND

- Site boundary
- No PCT (substantially cleared)

#### BioNET Threatened Fauna Record

- Bush Stone-curlew

#### Planit Consulting Threatened Fauna Record

- Bush Stone-curlew

#### Council Bush Stone-curlew Record

- ▲ Breeding
- ▲ Pair +/- fledged chick(s)
- ▲ Single bird

0 40 Metres

### Bush Stone-curlew Records - Illustration 3.1



## 4. Proposal Impacts to Bush Stone-curlew

Direct impacts on individual Bush Stone-curlew and their potential breeding/ roosting habitat from the Proposal will be primarily associated with clearing and earthworks.

As this species does not have a specific habitat type (utilises a wide variety of habitat types, including residential areas), all works within the project area are considered to potentially impact the species.

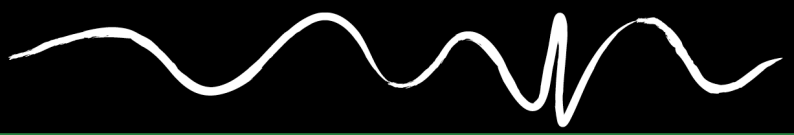
The following impacts on Bush Stone-curlew may occur because of the Proposal:

- Individual mortality from construction activities, including clearing, earthworks and vehicle strike.
- Destruction of habitat values (although considered to be poor within the site), including food resources and shelter.
- Disruption to breeding activity. Construction activities can result in localised short-term and intermittent levels of noise, vibration and light. During the breeding season, birds may abandon nests if disturbed frequently by people. Being frequently disturbed will cause resident Bush Stone-curlews to move from commonly used roost sites.

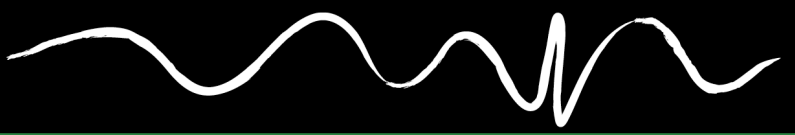
Tests of Significance undertaken as part of the Biodiversity Assessment (GeoLINK, 2024) and the BCIAMP (Planit Consulting, 2021) found the Proposal is unlikely to exacerbate existing threats and is unlikely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

The Proposal is unlikely to have an adverse effect on the life cycle of Bush Stone-curlew, such that a viable local population is likely to be placed at risk of extinction as follows:

- Predation by foxes and cats:
  - *“Given the highly urbanised locality, the proposed development is unlikely to exacerbate predation by foxes upon the curlew.*
  - *Cats and dogs are not permitted to free-roam public open spaces.*
  - *Dogs should be kept on a leash while in public places (unless otherwise signed).*
  - *Tweed Shire Council can issue a Nuisance Cat Order and an infringement notice to those owners who allow their cats to roam unattended.”* (Planit Consulting Pty Ltd, 2021).
- Trampling of eggs by cattle:
  - The Proposal will not introduce cattle.
- Clearance of woodland habitat for agricultural and residential development:
  - The site does not constitute a woodland habitat and does not conform to a PCT. The site is highly disturbed, both historically from sand mining, and more recently with residential and tourist development, fill deposition and removal.
  - Construction will require the removal of three native shrubs and two immature introduced native trees on the northern edge of the site.
- Modification and destruction of ground habitat through removal of litter and fallen timber, introduction of exotic pasture grasses, grazing and frequent fires:
  - The majority of the site is already colonised with introduced grass and herb species.
  - The site has been regularly mown/ managed with no fallen timber present.



- Disturbance in the vicinity of nest sites.
  - No documented Bush Stone-curlew roosting and breeding habitat occurs on or proximate to the site. The closest breeding record is located north of the site, off Casuarina Way. Two Council records of a “*Pair +/- fledged chick(s)*” occur immediately within and on the outer edge of the boundary of the study area. This species is mobile through the residential area, venturing out from vegetated areas.
- Negative impacts of pesticides on wildlife when used around nesting sites and habitat:
  - The Proposal is not for agricultural purposes; pesticide use would likely be low.
- Loss, modification and fragmentation of habitat:
  - Given the occurrence of available habitat within the locality, the Proposal represents a negligible reduction in foraging habitat which may be utilised by Bush Stone-curlew.
  - Operational lighting is not expected to be significantly different to that which is currently occurring in potential foraging and roosting habitats in the locality.
  - Lighting is unlikely to affect Bush Stone-curlew behaviour within the context of an urbanised area where extensive lighting is already present in the landscape.
- Given the current pedestrian volume and associated disturbance on site and adjoining roads, the Proposal comprises a nominal increase in disturbance to any Bush Stone-curlews in the locality.



## 5. Management Actions and Monitoring

### 5.1 Bush Stone-Curlew Find Protocol

Where roosting or nesting of Bush Stone-curlew is observed onsite immediately prior to or during construction, a construction exclusion zone of at least 30 metres radius is to be established around the nest or roost site. Open style temporary fencing is to be installed around the perimeter of the exclusion zone where practicable.

In the case of nesting birds, all works are to cease in the exclusion area until chicks have fledged. In the case of roosting bird/s, all works must cease in the exclusion area until the roosting bird/s move offsite at their own volition.

Council's Environmental Planning Officer in the Sustainability and Environment Unit shall be immediately notified of Bush Stone-curlew presence.

### 5.2 Pre-construction Site Preparation Phase

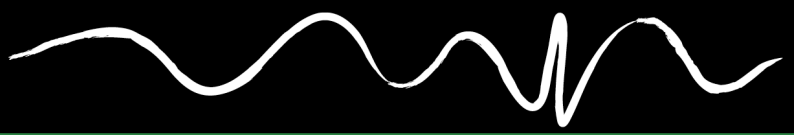
The below recommendations are designed to create an environment that discourages Bush Stone-curlews nesting in the construction area during (and pre) construction phase, post approval:

- Minimise fencing of the site.
- Minimise night lighting, which encourages Bush Stone-curlew food sources.
- Minimise mowing as low vegetation encourages nesting birds. Keep grasses high (yet not overgrown) until lower levels are necessary.
- Ensure drainage covers are used to minimise storm drain damage to Bush Stone-curlew breeding.

### 5.3 Management Actions (Pre-Construction)

Pre-construction management actions for the conservation of Bush Stone-curlew are outlined below:

- A pre-construction works survey would be undertaken by a suitably qualified ecologist to identify any resident Bush Stone-curlew within or proximate to the site. If Bush Stone-curlew are identified, the Bush Stone-Curlew Find Protocol applies.
- A Bush Stone-curlew induction and training would be conducted with all relevant contractors and staff working on the Proposal. This training would identify what the subject species looks like, the importance of protecting and avoiding impacts to Bush Stone-curlew, identify key threats and place emphasis on the importance of following the clearing and rehabilitation protocols.
- All retained habitat (i.e. bushland along the western boundary) will be clearly delineated with highly visible flagging prior to any earthworks and signed with consistent wording e.g. Exclusion Zone or Environmental Protection Zone.
- Existing cleared and open areas shall be utilised for laydown areas and site facilities wherever possible to further minimise vegetation clearing.
- All suitable fallen timber located during the pre-clearing assessment shall be relocated to adjacent habitat areas prior to the commencement of clearing/ earthworks.
- The Construction Contractor will prepare a Construction Environment Management Plan (CEMP) to detail specific measures to minimise environmental risks throughout the course of the project. Management measures provided within this document should be incorporated within the CEMP.



## 5.4 Management Actions (During Construction)

Works (during construction) management actions for the conservation of Bush Stone-curlew are outlined below.

- Where practical, clearing and earthwork activities should aim to be undertaken outside of the Bush Stone-curlew breeding season (August - March) to avoid impacts to the breeding cycle.
- Clearing and earthworks should occur in a sequential manner to allow any fauna to move away from the works on their own accord.
- An ecologist must be present during the initial clearing/ earthwork activities to undertake a pre-clearing survey immediately prior to clearing works. If Bush Stone-curlew are identified, the Bush Stone-Curlew Find Protocol applies.
- At any time during the construction phase, in the event of an unexpected Bush Stone-curlew discovery on site, the Bush Stone-curlew Find Protocol applies. Construction staff are to stop works and inform the Council.
- Any shocked, injured or juvenile Bush Stone-curlews should only be handled by a licensed spotter/ catcher/ ecologist and be taken to the nearest wildlife carer or veterinarian.
- Implement appropriate vehicle speed limits during construction to minimise the risk of vehicle strike and resultant injury and/ or mortality to Bush Stone-curlews.
- Daily checks shall be undertaken by the onsite project manager or project ecologist (if present) for curlew presence before work commencement.

## 5.5 Management Actions (Post Construction)

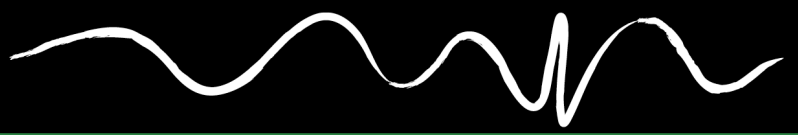
Works management actions (post construction) for the conservation of Bush stone-curlew are outlined below:

- All Bush Stone-curlew will be given the opportunity to move out of the site on their own accord.
- Landscaping will predominantly utilise native and locally sourced species.
- No cats or dogs are permitted to free-roam the open space areas of the site.

## 5.6 Monitoring

The effectiveness of management actions detailed throughout this document will be monitored through the compilation of incidental, weekly and monthly reporting in accordance with the Contractor's CEMP.

If injury or death to Bush Stone-curlew occurs during construction activities, Tweed Shire Council are to be immediately made aware of it.



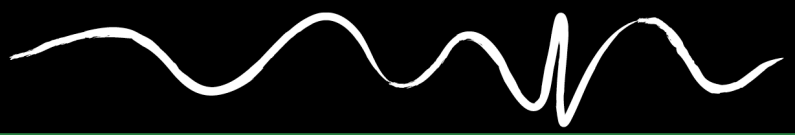
## References

Department of Environment and Conservation NSW, 2006. *NSW Recovery Plan for the Bush Stone-curlew *Burhinus grallarius**. DEC, Sydney.

GeoLINK, 2024. *Biodiversity Assessment Report 4-8 Bells Boulevard, Kingscliff NSW*. Report prepared for Bells Boulevard Pty Ltd.

Planit Consulting Pty Ltd, 2021. *Bush-stone Curlew Impact Assessment and Management Plan 4-8 Bells Boulevard, Kingscliff*. Prepared for GTDP Investments Pty Ltd.

Tweed Shire Council, undated. Bush Stone-curlew (*Burhinus grallarius*). TSC, Murwillumbah.



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## Appendix B

### Masterplan *(Please note that only Stage 3 of the broader masterplan is the subject of this BDAR waiver application.)*

