#### Submission 72 - Marita Stinton

#### 1 December 2022

## Infrastructure planning guidelines for drone delivery services – Public consultation draft – November 2022

It completely defies logic that the Federal Government would be considering approving drones and eVTOIs as part of Australia's transport networks without first ensuring that there is a strong and effective system of noise regulation.

I have only recently made submissions in response to the draft PIR for Brisbane Airport's NPR, identifying the way in which plane noise from the new flight paths has so significantly impacted my life and many others in Brisbane. I am both incredibly angry as well as disappointed that your government, which was elected on the basis of concerns about climate change, can so blithely commence your draft guidelines by talking about money. Just because technology makes something possible does not mean it is automatically a good idea.

Drone delivery services, other than for medical or emergency purposes, should **not be allowed** until you have put in place regulations that ensure communities have a voice and that environments are protected against noise. It is completely apparent to anyone who gives this a moment's thought that the noise and environmental issues created by drones delivering food, drink and small packages will be a complete nightmare. Your government says that it is now trying to address all the problems that humans have created on land, but you are basically now proposing something that will just be transferring those problems to the sky instead.

The articles available from a quick google search show the immediate issues. Someone sitting at home in the suburbs orders multiple drone deliveries to his house, because it doesn't cost him any more than if he went to the shop to buy it. But instead of one trip to the shops, which requires some planning, hopefully a reusable bag instead of plastic packaging, and some exercise in leaving the house, the resident just orders every time he thinks about having a drink or snack, so multiple drone deliveries with multiple sets of packaging, increased expenditure, increased (junk?) consumption, and massive noise issues for the neighbours.

As explained in my PIR/BAC/NPR submission, noise issues are exacerbated in areas like mine at Upper Brookfield, because we have low ambient noise levels and an amplification effect due to the topography of our valley. I simply can't imagine how anyone would be able to live here if we have both plane and drone noise.

I understand that your government will shortly release new environmental laws. I hope that there is provision for proper community input. Many people are no longer prepared to put up with big business riding roughshod over people and nature. This was clear at the recent federal election, where 3 seats in Brisbane were won by Greens reps. Your government really must listen to the views of the community.

My suburb at Upper Brookfield is a rural residential area, with a number of species of plants and animals that are at risk or endangered. I have **attached** an EPBC Act Protected Matters Report generated today from the Australian Government's Department of Climate Change, Energy, the Environment and Water's website, for the Upper Brookfield/Brookfield area. As you can see, the report lists many Threatened Ecological Communities, Threatened Species and Migratory Species –

we have plants, birds, frogs, insects, bats, koalas, gliders still surviving here that **must** now be prioritised over commerce. I firmly believe that the risks for many of these have already been increased by the current plane noise. You must realise that allowing drones to access this area could be disastrous for birds, bats, gliders and other species that use the same airspace.

I do not have the time or expertise to directly address all of the deficiencies in your guidelines, but as a bare minimum, I provide the following comments:

- 1. The guidelines suggest that there is appropriate noise regulation already in place. Well, I can assure you that it is abundantly clear from the Brisbane flight path debacle that there is not. Planes can fly over our houses at all hours of the day and night and there is nothing we have been able to do so far to stop or limit that. How on earth do you think they will work any better for drones?
- 2. Commercial drone operators are required to self-assess is that some kind of sick joke?
- 3. It is asserted that local governments have responsibility for local plans that are consistent with regional plans and state planning policies. I have a number of written responses from Brisbane City Council saying that aviation noise is **not** within their responsibly or powers. I assume the guidelines are really talking about the hubs sure, that might be something local governments can consider, but in terms of noise created by a drone delivery near my house, then as far as I am aware, the Council will say it's not their problem.
- 4. The guidelines refer to local governments consulting with the department to "appropriately manage" community feedback. How about you properly consider community feedback before drone delivery services are allowed to go any further? The issue is not about "managing" community feedback, which is basically what Airservices and BAC are trying to do with flight path complaints. It is about genuinely engaging with communities and making sure that what is proposed is something that has support and will provide real benefits, not destroy people's homes and lives.
- 5. We already know from our plane noise experiences how noise measurement and noise approval processes can be manipulated and we have absolutely no faith that the actual noise effects will be properly recorded or reported. Or that anything will be done even if the data shows there is a noise problem.
- 6. I cannot express enough how absolutely horrified I am at the information that commercial drone delivery aircraft produce noise between 50dB and 70dB at a distance of 25-30m. The guidelines acknowledge that this is similar to "commercial and light industrial areas" with "kerbside heavy traffic" at 75dB. I cannot understand how this can even be included in your guidelines, apparently as some sort of reassurance that those noise levels are really not that bad, when clearly most people don't live 25-30m from kerbside heavy traffic. The guidelines

state that an accepted noise limit for residential areas during the day is between 40dB and 50dB – but you are suggesting that increasing that up to 70dB is somehow okay?

And what about residential areas that do NOT have noise levels of 40dB to 50dB. Do you have any idea what that sound level is like in a quiet rural neighbourhood with no other noise sources (other than those bloody awful planes)? I'd be happy for you to come and visit Upper Brookfield and experience what it's like over a 24 hour period, when the noise of one plane follows straight on the previous one, and you are woken up late at night or early in the morning by a jet or turboprop overhead (with regular noise levels of 60-80dB despite being 30kms away from the airport). Seriously, if you think there are a lot of noise complaints now, just wait till people who don't currently suffer from plane noise are suddenly subjected to their neighbour's drone deliveries. And those already suffering from plane noise have drones added to the mix.

- 7. The guidelines acknowledge that there are a range of factors that can influence how noise is experienced including local topography. How can you possibly approve guidelines that would allow commercial drone operations in our residential suburbs? The guidelines state that no independent noise measurement is required when the infrastructure is within commercial or industrial areas. Isn't the whole point of commercial operations to allow drones to fly into residential areas to make deliveries? So the location of the infrastructure will be irrelevant. If drones are to be allowed to operate on a commercial basis, there must be independent noise measurement requirements.
- 8. Your department has done nothing to respond to our concerns about plane noise as I have set out in detail in my PIR submission so I have no faith at all that your department would do any better in "managing" (yes, there's that word again) complaints about drone noise. Seriously, this is not about the department and local authorities making sure community feedback is "recorded"! You need to listen to communities, properly engage, and give some consideration to the possibility that a lot of people do not want money and profits to be given higher priority than their ability to live peacefully in their homes.
- 9. No, a separation distance of 100-400m between drone delivery hubs and residential areas is NOT reasonable! Can you or anyone who is involved in this process seriously say that you would be happy to have such a hub 100m from your house? And until drones are developed which make no noise at all, then the question of what is mitigation to "acceptable levels" is really a complete furphy that just means money wins over the environment, again.

I submit that these guidelines should be put on hold, and no commercial drone deliveries are allowed until there is a genuine community consultation process and proper regulation of aircraft noise put into place.

Regards,

**Marita Stinton** 



# **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: 01-Dec-2022

**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 <u>Administrative Guidelines on Significance</u>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	52
Listed Migratory Species:	17

## 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 <a href="https://www.dcceew.gov.au/parks-heritage/heritage">https://www.dcceew.gov.au/parks-heritage/heritage</a>

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	22
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

### Extra Information

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

State and Territory Reserves:	3
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	1
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

## **Details**

## Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)	[ Resource Information ]
Ramsar Site Name	Proximity
Moreton bay	20 - 30km upstream
	from Ramsar site

## Listed Threatened Ecological Communities

[ Resource Information ]

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

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

Community Name	Threatened Category	Presence Text
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community may occur within area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within 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

Listed Threatened Species		[ Resource Information ]
Status of Conservation Dependent and E Number is the current name ID.	xtinct are not MNES unde	er the EPBC Act.
Scientific Name	Threatened Category	Presence Text
BIRD		
Anthochaera phrygia		
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within

area

Scientific Name	Threatened Category	Presence Text
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat known to occur within area
FISH		
Neoceratodus forsteri Australian Lungfish, Queensland Lungfish [67620]	Vulnerable	Species or species habitat known to occur within area
FROG		
Mixophyes fleayi Fleay's Frog [25960]	Endangered	Species or species habitat may occur within area
INSECT		
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
MAMMAL		
MAMMAL Chalinolobus dwyeri		
	Vulnerable	Species or species habitat may occur within area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat	Vulnerable  Endangered	habitat may occur
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]  Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji	Endangered	habitat may occur within area  Species or species habitat likely to occur
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]  Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]  Dasyurus maculatus maculatus (SE mai Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland	Endangered  nland population)	habitat may occur within area  Species or species habitat likely to occur within area  Species or species habitat likely to occur

Scientific Name	Threatened Category	Presence Text
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	ations of Qld, NSW and the Endangered	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
PLANT		
Arthraxon hispidus		
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Corchorus cunninghamii Native Jute [14659]	Endangered	Species or species habitat likely to occur within area
Cryptocarya foetida Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat may occur within area
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area
<u>Dichanthium setosum</u> bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Haloragis exalata subsp. velutina Tall Velvet Sea-berry [16839]	Vulnerable	Species or species habitat may occur within area
Leichhardtia longiloba listed as Marsdeni Clear Milkvine [91911]	a longiloba Vulnerable	Species or species habitat may occur within area
Lepidium peregrinum Wandering Pepper-cress [14035]	Endangered	Species or species habitat may occur within area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat known to occur within area
Macadamia ternifolia Small-fruited Queensland Nut, Gympie Nut [7214]	Vulnerable	Species or species habitat likely to occur within area
Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough- leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
Notelaea Iloydii Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area
Planchonella eerwah Shiny-leaved Condoo, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat may occur within area
Plectranthus nitidus Nightcap Plectranthus, Silver Plectranthus [55742]	Endangered	Species or species habitat may occur within area
Plectranthus omissus [55729]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Rhodamnia rubescens		
Scrub Turpentine, Brown Malletwood	Critically Endangered	Species or species
[15763]		habitat known to occur within area
Rhodomyrtus psidioides	• · · · · · · · ·	
Native Guava [19162]	Critically Endangered	Species or species habitat likely to occur
		within area
Samadera bidwillii	Vulnerable	Charles or appoins
Quassia [29708]	vuirierable	Species or species habitat likely to occur
		within area
Sophora fraseri		
[8836]	Vulnerable	Species or species
		habitat known to
		occur within area
Thesium australe		
Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species
		habitat may occur within area
		within area
REPTILE		
<u>Delma torquata</u> Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species
Adomed Delma, Collared Delma [1030]	vuillerable	habitat known to
		occur within area
Furina dunmalli		
Dunmall's Snake [59254]	Vulnerable	Species or species
		habitat may occur
		within area
Hemiaspis damelii		
Grey Snake [1179]	Endangered	Species or species
		habitat likely to occur within area
		mami aroa
Listed Migratory Species		[ Resource Information ]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds	<u> </u>	
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur
		within area
Minuston Terrestrial O		
Migratory Terrestrial Species Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo		Species or species
·		
[86651]		habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Symposiachrus trivirgatus as Monarcha Spectacled Monarch [83946]	<u>trivirgatus</u>	Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	· Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

# Other Matters Protected by the EPBC Act

Listed Marine Species		[ Resource Information ]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis		
Cattle Egret [66521]		Breeding likely to occur within area overfly marine area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area
Rostratula australis as Rostratula bengha	alensis (sensu lato)	
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Symposiachrus trivirgatus as Monarcha	trivirgatus	
Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area

## **Extra Information**

State and Territory Reserves			[ Resource Information ]
Protected Area Name	Reserve Type	State	
D'Aguilar	National Park	QLD	
Smith's Rainforest (Area A)	Nature Refuge	QLD	
Smith's Rainforest (Area B)	Nature Refuge	QLD	

EPBC Act Referrals			[ Resource Information ]
Title of referral	Reference	Referral Outcome Assessmen	nt Status

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed

## 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

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# Please feel free to provide feedback via the Contact us page.

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Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111