Report

9 July 2026

[redacted]

1. Introduction

South Energy on behalf of SE Campbell Development Pty Ltd (the Applicant) proposes to construct and operate a solar farm (the Project) at a site approximately 140 km south of Perth and 30 km north-east of Bunbury in the Shire of Harvey (the Site).

Clearing of 0.94 ha of native vegetation is required for the project. All clearing in Western Australia must be completed under an approved native vegetation clearing permit (NVCP), unless an exemption applies under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004. As there are no NVCP exemptions that apply to this proposal, a NVCP is required.

A native vegetation clearing permit was previously approved for the Project under CPS 8793/1 in August 2020. This permit expired in August 2025 and a new NVCP is therefore required to authorise the proposed clearing for the Project.

1.1 Purpose and scope

This report was prepared to support the re-application for a NVCP (purpose permit) for development of the Benger Solar Farm as CPS 8793-01 expired in August 2025. This report is an addendum to the original Benger Solar Farm Native Vegetation Clearing Permit Application report produced by AECOM (2020), providing revised Protected Matters Search Tool (PMST) results, ownership details and a cumulative impact assessment.

The removal of native vegetation is necessary for the Project to prevent significant impacts to the productivity of the solar farm from inefficient layouts and overshadowing of solar panels.

2. Limitations

This report: has been prepared by GHD for South Energy and may only be used and relied on by South Energy for the purpose agreed between GHD and South Energy as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than South Energy arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 3 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

This document is in draft form. The contents, including any opinions, conclusions or recommendations contained in, or which may be implied from, this draft document must not be relied upon. GHD reserves the right, at any time, without notice, to modify or retract any part or all of the draft document. To the maximum extent permitted by law, GHD disclaims any responsibility or liability arising from or in connection with this draft document.

GHD has prepared this report on the basis of information provided by South Energy and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

3. Assumptions

- This document is read as an addendum to the Benger Solar Farm Native Vegetation Clearing Permit application (AECOM 2020).
- There have been no significant changes to Lot 0 Campbell Road Benger since the biological survey was undertaken by AECOM in 2019.

4. Site description

The development is located at Lot 0 Campbell Road, Benger, which is owned in freehold by the proponent, SE Campbell Pty Ltd.

A copy of the Certificate of Title for the lot is provided as Appendix 1 of this report. Table 1 summarises the lot details.

Table 1 Lot description

Landgate ID	Lot on Plan	Vol/Folio	Description	Registered Owner	Area (ha)
3039815	Lot 0 on D000685	2075/513	Lot 0 Campbell Road, Benger WA 6710	SE Campbell Pty Ltd	179.06

The lot has previously been largely cleared of native vegetation for agricultural use. The facility layout is designed so existing vegetation will be retained where possible and only 0.94 ha of native vegetation which is the subject of this permit.

As part of offset requirements of NVCP CPS 9305/1 for an adjacent lot, 6.7 hectares of native vegetation within the subject lot is to be revegetated and rehabilitated. These areas are shown in Appendix 2.

Since the original approval of CPS 8793/1, development activities for the Project have been adversely impacted by COVID-19 and modifications of connection arrangements to the project's associated switchyard. This delay has led to the expiry of CPS 8793/1 prior to works commencing and has also impacted the project timeline overall. The project now has a target operation date of Q1 2028.

The proposed clearing area includes approximately 55 isolated native paddock trees consisting of marri (*Conrymbia calophylla*) and *Eucalyptus* spp. with a total canopy area of 0.94 ha and no native mid-or understory species and high weed cover. The proposed clearing area is surrounded by previously cleared agricultural land including sparsely distributed paddock trees to the north, east and south and is adjacent to the Collie River and associated riparian vegetation to the west.

The vegetation within the proposed clearing area is in Completely Degraded condition (AECOM 2020).

5. Avoidance and mitigation measures

6.7 ha of native vegetation within the Project is being retained on the site and will be revegetated and rehabilitated as part of the offset requirements for CPS 9305/1. These areas represent vegetation in "good" condition and high quality foraging habitat within the site and have been actively retained and excluded from the application area (AECOM 2020).

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Within the vegetation of the site, the seven trees with hollows identified as potentially suitable breeding habitat for the three black cockatoo species Baudin's Cockatoo (*Calyptorhynchus baudinii*), Carnaby's Cockatoo (*Zanda latirostris*) and Forest Red-Tailed Black Cockatoo (FRTBC) (*Calyptorhynchus banksii naso*), identified during the black cockatoo habitat assessment (AECOM 2020) have been retained and are excluded from the application area.

6. Cumulative impact assessment

Cumulative effects to the environment result from multiple activities whose direct impacts may be relatively minor, but in combination with other activities can result in significant environmental and social effects.

Cumulative impacts to environmental values resulting from the current Project and the related transmission line NVCP (CP 9305/1) and across the Swan Coastal Plain (SCP) were assessed in Table 2, focusing on environmental values that are at risk of being impacted by the Project including:

- Native vegetation
- Banksia Woodlands
- Baudins Cockatoo foraging habitat
- Carnaby's Cockatoo foraging habitat
- Forest Red Tailed Black Cockatoo (FRTBC) foraging habitat

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Table 2 Cumulative impact assessment – Benger Solar Farm

Environmental Value	Benger Solar Farm (Current proposal)	Benger Transmission Line (CPS 9305/1)	Proposals and DWER clearing permits across the SCP	Foreseeable cumulative impact across the SCP	Estimated total extent across the SCP	% of impact from foreseeable cumulative impacts across the SCP	% of impact from Current Proposal and CPS 9305/1) across the SCP
Native vegetation	0.94 ha	4.70 ha	10,633.48 ha	10,639.12 ha	468,378.68 ha	2.27%	0.0012%
Banksia Woodland TEC	-	1.99 ha	6,012.59 ha	6,014.58 ha	186,692.58 ha	3.22%	0.0011%
Baudin's Cockatoo Foraging Habitat	0.94 low quality foraging habitat	1.89 ha low quality foraging habitat 2.39 ha good to moderate quality foraging habitat	9,099.96 ha	9,105.18 ha	499,563.41 ha	1.82%	0.0010%
Carnaby's Cockatoo Foraging Habitat	0.94 low quality foraging habitat	1.89 ha low quality foraging habitat 2.39 ha good to moderate quality foraging habitat	9,099.96 ha	9,105.18 ha	499,563.41 ha	1.82%	0.0010%
FRTBC Cockatoo Foraging Habitat	0.94 low quality foraging habitat	1.89 ha low quality foraging habitat 2.81 ha good to moderate quality foraging habitat	4,610.80 ha	4,616.44 ha	120,468.05 ha	3.83%	0.0047%

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7. Other Environment and Planning Approvals

A development application was submitted to the Shire of Harvey in July 2019 and was subsequently approved (P120/19) with conditions in 2020. A Development Approval Amendment was submitted on 31/03/2025 and subsequently approved with conditions on 4/04/2025.

The proposal is not expected to require referral under Part IV of the *Environmental Protection Act 1986* (EP Act), but a Native Vegetation clearing permit is required.

No EPBC Act listed TECs or flora species were recorded during the survey or are expected to occur within the Project. The project requires clearing of scattered potential habitat trees for black cockatoo species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). None of the trees proposed to be cleared have hollows and the combined area of foraging habitat impacted is less than one hectare of low to moderate quality foraging habitat and therefore below the EPBC referral threshold (DAWE, 2022).

8. EPBC Self-assessment

The EPBC Act safeguards nationally significant animals, plants, habitats, and places within Australian territories. In WA, a self-assessment under the EPBC Act helps project proponents understand their responsibilities and determine whether their project might impact any protected matters. This process involves identifying protected matters and assessing the likely impacts of the proposed action.

A controlled action decision indicates that the proposed action is likely to have a significant impact on protected matters. To reach this decision, the minister requires a referral that assesses the impacts of the proposed action on protected matters, following the Significant Impact Guidelines 1.1 (DoE, 2013). The referral must also outline the avoidance and mitigation measures planned. If the minister determines the proposal is a controlled action, it will undergo further assessment, and the minister or their delegate will decide on its approval. The assessment and approval phases focus solely on the impacts identified during the controlled action decision.

Not a controlled action decision means the proposed action is unlikely to significantly impact protected matters, regardless of how it is carried out. Consequently, no further assessment is needed, but the action must be undertaken as described in the referral. If the minister decides the proposal is not a controlled action, the proponent cannot be prosecuted under the EPBC Act for executing the work, even if it ultimately has a significant impact on a protected matter or Commonwealth land.

To determine if a referral under the EPBC Act is necessary for the Project, a desktop assessment of similar projects, their environmental impacts on Black Cockatoos, and referral outcomes was conducted (Table 3).

The analysis concluded referred projects which involved clearing of more than 1 ha of high-value foraging habitat for Black Cockatoos were deemed a controlled action. Projects clearing 1 ha or greater of low to moderate foraging value were not deemed controlled actions, and did not require assessment under the EPBC Act. As none of the trees proposed to be cleared have hollows and the combined area of foraging habitat impacted is less than one hectare of low to moderate quality foraging habitat and below the EPBC referral threshold (DAWE, 2022) a referral under the EPBC Act is unlikely to be required.

Table 3 Desktop assessment against impacts on Black Cockatoos of similar projects and their referral decisions

Project	Start date	Impacts on Black Cockatoos	Referral decision
Baldivis Residential Development - Spires Estate	02/12/2024	Loss of: – 1.83 ha of low-quality foraging habitat – 9 potential nesting trees (suitable Diameter at Breast Height (DBH)), no suitable hollows – 39 potential roosting trees	Not a controlled action
Donningtons Gravel Quarry	01/10/2024	Loss of: – 3.73 ha of low to medium-quality foraging habitat	Not a controlled action

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Project	Start date	Impacts on Black Cockatoos	Referral decision
		– 2.48 ha of potential breeding habitat – 134 potential nesting trees, no suitable hollows – Evidence of foraging recorded – Known to breed within 2 km	
Upgrade of Flynn Drive to dual carriageway between Tranquil Vista to Old Yanchep Road, CARRAMAR, BANKSIA GROVE and NEERABUP	01/12/2024	Loss of: – 5.7 ha of high to very high-quality foraging habitat – 2 potential nesting trees, no suitable hollows	Controlled action
806 South West Highway Commercial Development	14/01/2024	Loss of: – 2.99 ha of low to very high-quality foraging habitat – 44 potential nesting trees, no suitable hollows – 1 tree with suitable nesting hollow, currently occupied by galahs – 107 potential roosting trees	Not a controlled action
Dunsborough water supply pipeline upgrade	01/12/2024	Loss of: – 0.06 ha of low to negligible-quality foraging habitat – No potential nesting or roosting trees	Not a controlled action
Raphael Road Residential Development	01/08/2024	Loss of: – Less than 1 ha of low-quality foraging habitat – 35 foraging habitat trees – 141 potential nesting trees, no suitable hollows – 191 potential roosting trees – Foraging evidence recorded	Not a controlled action
Kargotich Road Widening Project	01/10/2024	– No impacts to Carnaby's Black Cockatoos. For Forest Red-tailed Black Cockatoos, Loss of: – 2.88 ha foraging habitat – 15 potential nesting trees, no suitable hollows	Not a controlled action
Orton Road Upgrade Project	01/10/2024	Loss of: – 0.62 ha of degraded foraging habitat – 10 potential nesting trees, no suitable hollows	Not a controlled action
Keirnan Park Recreation Precinct	01/11/2023	Loss of: – 0.64 ha of high-quality foraging habitat – 47 potential nesting trees, no suitable hollows – Carnaby's recorded and foraging evidence recorded – Red-tailed Black Cockatoo roosting observed	Not a controlled action
Tree removal for road widening - Eighth Road, Armadale, WA	01/01/2024	Loss of: – 3 potential nesting trees, no suitable hollows	Not a controlled action
Bullsbrook South – Stage 1 Residential Development	29/01/2025	Loss of: – 1.46 ha of black cockatoo foraging habitat – 185 black cockatoo potential breeding trees	Not a controlled action
Lot 16 Barfield Road: Residential Development	28/03/2023	Loss of: – 1.56 ha moderate to high value black cockatoo foraging habitat – 1.6 ha Banksia TEC	Controlled action
Hammond Park Mixed Use Development	01/10/2024	Loss of: – 1.27 ha of moderate to high value black cockatoo foraging habitat	Controlled action

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9. References

AECOM (2020) Benger Solar Farm. Native Vegetation Clearing Permit Application, prepared for SE Campbell Development Pty Ltd (South Energy).

DAWE. (2022). *Referral guideline for 3 WA threatened black cockatoo species Carnaby's Cockatoo (Zanda latirostris), Baudin's Cockatoo (Zanda baudinii) and the Forest Red-tailed Black-cockatoo*

DoE. (2013). *Significant impact guidelines.* Department of the Environment. Australian Government.

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Appendix B – Protected Matters Search Tool results

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EPBC Act Protected Matters Report

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

Report created: 06-Jul-2026

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.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	35
Listed Migratory Species:	12

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.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
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:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	6
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

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
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within 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
BIRD		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Falco hypoleucos		
Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata		
Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula nereis nereis		
Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Zanda baudinii listed as Calyptorhynchus baudinii		
Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-cockatoo [87736]	Endangered	Breeding likely to occur within area
Zanda latirostris listed as Calyptorhynchus latirostris		
Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding likely to occur within area
FISH		
Galaxiella nigrostriata		
Blackstriped Dwarf Galaxias, Black-stripe Minnow [88677]	Endangered	Species or species habitat likely to occur within area
MAMMAL		
Dasyurus geoffroii		
Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Pseudocheirus occidentalis](#) Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely to occur within area
[Setonix brachyurus](#) Quokka [229]	Vulnerable	Species or species habitat may occur within area
OTHER		
[Westralunio carteri](#) Carter's Freshwater Mussel, Ambiguus Mussel [86266]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
[Andersonia gracilis](#) Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
[Banksia mimica](#) Summer Honeypot [82765]	Endangered	Species or species habitat may occur within area
[Caladenia procera](#) Carbunup King Spider Orchid [68679]	Critically Endangered	Species or species habitat may occur within area
[Diuris drummondii](#) Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat likely to occur within area
[Diuris micrantha](#) Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
[Diuris purdiei](#) Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat likely to occur within area
[Drakaea elastica](#) Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
[Drakaea micrantha](#) Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat may occur within area
Morelotia australiensis listed as Tetraria australiensis Southern Tetraria [92784]	Vulnerable	Species or species habitat may occur within area
Synaphea sp. Fairbridge Farm (D.Papenfus 696) Selena's Synaphea [82881]	Critically Endangered	Species or species habitat likely to occur within area
Synaphea sp. Pinjarra Plain (A.S.George 17182) [86878]	Endangered	Species or species habitat may occur within area
Synaphea sp. Serpentine (G.R.Brand 103) [86879]	Critically Endangered	Species or species habitat may occur within area
Synaphea stenoloba Dwellingup Synaphea [66311]	Endangered	Species or species habitat likely to occur within area
Thelymitra variegata Queen of Sheba [12582]	Critically Endangered	Species or species habitat may occur within area
SHARK		
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Migratory Terrestrial Species		

Scientific Name	Threatened Category	Presence Text
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may 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]	Vulnerable	Species or species habitat may occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Charadrius leschenaultii](#) Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
[Pandion haliaetus](#) Osprey [952]		Species or species habitat may occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	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
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]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Yarragadee Water Supply Development	2005/2073	Controlled Action	Completed
Not controlled action			
Benger Solar Farm Connection Project - WA	2020/8763	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Kemerton Lateral Gas Pipeline Project	2005/2388	Not Controlled Action	Completed
Not controlled action (particular manner)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

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 is 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 on the contents of this report.

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 point locations and environmental data layers.

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 when time permits.

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 breeding sites; and
- 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

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-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
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-Museum and Art Gallery of the Northern Territory
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-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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