



## **MNES Likelihood of Occurrence Assessment**

Matters of National Environmental Significance (MNES) listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that have the potential to occur in the Proposed Action Area have been identified based on the results of the updated database searches (refer to **Appendix E**), field surveys and database reviews.

An assessment of the likelihood of occurrence of threatened species and ecological communities has been undertaken, using the following definitions:

Likelihood of Occurrence	Definition
Known	Recent and reliable records of this matter exist within the Proposed Development Corridor.
High	Habitats known to support this matter are present in the Proposed Development Corridor and the species is expected to occur based on recent and reliable records within five kilometres of the Development Corridor.
Moderate	Matter is predicted to occur in association with a plant community type and the matter may occur. Recent and reliable records do not occur within five kilometres of the Development Corridor
Low	There are no records for this matter, the matter is conspicuous all year and not recorded during targeted searches, habitat requirements are not met, or its normal distribution range does not coincide with the locality. Despite this, the matter may be present in rare circumstances.
No	There is no potential for the species to occur within the locality.

Abbreviations used within the following table include:

V	Vulnerable	С	CAMBA
E	Endangered	J	JAMBA
EEC	<b>Endangered Ecological Community</b>	K	ROKAMBA
CE	Critically Endangered	В	Bonn.
CEEC	Critically Endangered Ecological		
Comm	unity		
VEC	Vulnerable Ecological Community		

**Note**: The PER Guidelines Section 3.1 highlight that any listing events (i.e. new listing or up-listing of a species or ecological community) that occur after the controlled action decision will be managed in accordance with s158A of the EPBC Act.

This means that any new listings of MNES and or up-listing after the 30 March 2023 are not considered in this assessment of likelihood of occurrence. However, as required by the PER Guidelines, any changes to species distributions are considered. This has been identified in the updated PMST report and review of records held by NSW BioNet wildlife atlas.



MNES Name	Status Database Results for Local		ts for Locality	Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
Wetlands of International Importance	:				
Banrock station wetland complex	MNES	Predicted	Not applicable	No. 900 to 1000 km downstream of Proposed Action Area.	No
Riverland	MNES	Predicted	Not applicable	No. 800 to 900 km downstream of Proposed Action Area.	No
The Coorong and Lakes Alexandrina and Albert Wetland	MNES	Predicted	Not applicable	No. 1000 to 1100 km downstream of Proposed Action Area.	No
Hunter Estuary Wetland	MNES	Predicted	Not applicable	No. 150 to 200 km downstream of Proposed Action Area.	No
The Macquarie Marshes	MNES	Predicted	Not applicable	No. 200 to 300 km downstream of Proposed Action Area.	No
Threatened Ecological Communities					
Central Hunter Valley eucalypt forest and woodland	CE	May occur	-	Not recorded in Development Corridor.	No
Coolibah – Black Box woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	E	Likely to occur	-	Not recorded in Development Corridor.	No
Grey Box (Eucalyptus micorcarpa) Grassy Woodlands and Derived Native Grasslands of the South- eastern Australia	Е	Likely to occur	-	Not recorded in Development Corridor.	No
Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland	CE	May occur	-	Not recorded in Development Corridor.	No
Poplar Box Grassy Woodland on Alluvial Plains	E	May occur	-	Not recorded in Development Corridor.	No
Weeping Myall Woodlands	E	May occur	-	Not recorded in Development Corridor.	No



MNES Name	Status	Database Results for Locality		Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
White Box – Yellow Box – Blakely's Reg Gum Grassy Woodland and Derived Native Grassland	CE	Likely to occur	-	<b>Known.</b> Recorded in Development Corridor associated with PCT 281, PCT 483 (Vegetation Zone 6) and PCT 488 (Vegetation Zone 9).	Yes
Threatened Flora Species					
Androcalva procumbens (syn Commersonia procumbens)	V	Species or habitat likely to occur	5 records within 5 km	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types and restriction to Pillaga sandstone. Targeted surveys undertaken based on nearby records with nearest known record in Ulan NSW, dated 2023, within 5 km of Development Corridor. Other records from 2018.	No
				Not detected in targeted surveys in 2012, 2013, 2015, 2016, 2020, 2021 and 2023 in suitable habitat.	
Dichanthium setosum bluegrass	V	Species or habitat known to occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community type. No local records, nearest record north of Goulburn River National Park.	No
				Not recorded in targeted flora surveys in 2015, 2020 and 2021 in suitable habitat.	
Euphrasia arguta	CE	Species or habitat may occur	No records	Low. No local records.  Not predicted to occur by BAM-Calculator.	No
Homoranthus darwiniodes	V	Species or habitat known to occur	2 records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Known from the eastern end of Goulburn River National Park on sandstone outcrops or ridges. Nearest known record in Ulan NSW, dated 1995 and 1996, within 10 km of Development Corridor.  Species not recorded during searches.	Requested by DCCEEW, see Section 3.6.1.
Leionema lamprophyllum subsp. fractum	CE	Species or habitat may occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records. Main population known from Broken Back Range near Pokolbin in lower Hunter Valley.	No



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	EPBC Act	PMST	BioNet Records		Required?
Lepidium aschersonii Spiny peppercress	V	Species or habitat may occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records.	No
Lepidium monoplocoides winged peppercress	E	Species or habitat may occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records.	No
Leucochrysum albicans subsp. tricolor hoary sunray	Е	-	10 records	Low, while there are recent records in the Ulan area it is not predicted to occur with any of the PCTs in the Development Corridor.	No.
Ozothamnus tesselatus	V	Species or species habitat may occur within area	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Nearest records south of the Development Corridor in Munghorn Gap Nature Reserve and further south of the Goulburn River National Park near Wollar.	Requested by DCCEEW, see Section 3.6.2.
Prasophyllum petilum Tarengo leek orchid	Е	Species or habitat may occur	2 records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Nearest known records in Ulan NSW, dated 2020, within 5 km of Development Corridor.  Not recorded in targeted surveys in 2012, 2013, 2016, 2020 and 2021.	No
Prasophyllum sp Wybong (C. Phelps ORG 5269)	CE	Species or habitat known to occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records, nearest record is 50 km to east of Development Corridor. Not recorded in targeted surveys in 2012, 2013, 2016, 2020 and 2021.	No
Pultenaea glabra smooth bush-pea	V	Species or habitat known to occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records not expected in Development Corridor.	No
Swainsona murrayana Slender Darling-pea	V	Species or species habitat may occur within area	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records.	No



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	EPBC Act	PMST	BioNet Records		Required?
Swainsona recta small purple-pea	E	Species or habitat may occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Nearest record about 35 km south of Development Corridor – External Transmission Line. High disturbance caused by grazing in potential habitat limits likelihood of occurrence. Targeted searches conducted in October 2020 and September 2021.	No
Thesium austral Austral toadflax	V	Species or habitat known to occur	2 records within 5 km	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Old record at Cassilis (1959) more recent record, dated 2001, about 5 km to north of Indicative Development Footprint – Wind Farm in Bundella. Not recorded in targeted surveys in 2021.	No
Tylophora linearis	E	Species or habitat likely to occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records, nearest records south of Bylong or west of Weetalibah Nature Reserve. Not recorded in targeted surveys in 2012, 2013, 2015, 2016, 2020 and 2021.	No
Threatened Fauna Species					
Amphibians					
Litoria booroolongensis booroolong frog	E	Species or habitat likely to occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records.	No
Birds					
Anthochaera phrygia regent honeyeater	CE	Species or habitat known to occur	2 records in 10 km, none in 5 km	Moderate. Nearest known record about seven km to south of Development Corridor – External Transmission Line. Numerous records Munghorn Gap from before 2000s.  NSW Threatened Biodiversity Data Collection (TBDC) predicts association with PCT84, 281, 479, 481, 483 and 488 but excluding low quality derived grassland vegetation zones.  The Development Corridor is not mapped important habitat. Assessed under BAM-C as an ecosystem credit species.	Yes, <b>Section 3.7.1</b>



MNES Name	Status	Database Results for Locality		Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
Botaurus poiciloptilus Australasian bittern	E	Species or habitat may occur	No records	No. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records.  Nearest known record in Castlereagh River area, dated 2000, west of the Development Corridor.	No
Calidris ferruginea curlew sandpiper	CE	Species or habitat may occur	No records	No. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records.	No
Callocephalon fimbriatium gang-gang cockatoo	Е	Species or habitat known to occur	11 records in 10 km including 5 records within 5 km.	Low. Predicted to occur in BAM-C in PCT 281 only, however vegetation not considered suitable breeding habitat (typically tall mountain forests). Not recorded in surveys by Umwelt or NGH.  Nearest known record in Moolarban NSW, south of the Development Corridor, dated 2021.	Yes, Section 3.7.2.
Calyptorhynchus lathami lathami South-eastern glossy black-cockatoo	V	Species or habitat known to occur	Numerous records within 10 km of Development Corridor.	Known. Evidence of presence (chewed cones) recorded in surveys by NGH along Development Corridor – External Transmission Line. Most recent record in Cassilis Park Rest Area, dated 2023, within 5 km of Development Corridor.	Yes, Section 3.7.3
Erythrotriorchis radiatus red goshawk	V	Species or habitat likely to occur	No records	No. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records, not within known distribution. Not expected to occur.	No
Falco hypoleucos grey falcon	V	Species or habitat known to occur	No records	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Noted as recorded in Coolah Tops National Park in the Plan of Management (NPWS 2002) however no BioNet records. Atlas of Living Australia includes record northeast of Coolah. Birdlife Australia have advised that the record is well outside of normal range and doubtful.	Requested by DCCEEW, see Section 3.7.4.



MNES Name	Status	Database Results for Locality		Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
Grantiella picta painted honeyeater	V	Species or habitat known to occur	Numerous records	Known. TBDC predicts association with PCT 84, 281, 479, 481, 483, 488 and 495 excluding derived grasslands with low densities of trees. Moderate likelihood of blade strike.  BioNet records occur in habitats contiguous with the Development Corridor – External Transmission Line including 4 BioNet records in Durridgere SCA from 2012, 7 records Durridgere Road Turill 2018 and 2019, numerous records at Ulan, Ulan Mine and Goulburn River National Park.  Nearest known record in Ulan NSW, dated 2022, within 5 km of Development Corridor.	Yes, Section 3.7.5.
Hirundapus caudacutus white-throated needletail	V,C,J,K	Roosting known to occur	Numerous records	Known. Records of flocks of this species in Development Corridor  – Wind Farm at Ulan, Coolah and nearby Coolah Tops. Not recorded in surveys.  Predicted to occur in BAM-C. High likelihood of blade strike.  Nearest known record in Ulan NSW, dated 2020, within 5 km of Development Corridor.	Yes, Section 3.7.6
Lathamus discolor swift parrot	CE	Species or habitat known to occur	8 records in 10 km including 3 within 5 km	Moderate. TBDC predicts association with PCT 84, 281, 479, 481, 483, 488, 495, 1661 and 1675. Not recorded during targeted surveys in 2020 and 2021.  BioNet records north of Ulan and near Moorlaben Mine at the southern end of the Development Corridor – External Transmission Line.  The Development Corridor is not mapped important habitat.  Assessed under BAM-C as an ecosystem credit species.  Nearest known record in Ulan NSW, dated 2014, within 5 km of Development Corridor.	Yes, Section 3.7.7.
Leipoa ocellata malleefowl	V	Species or habitat known to occur	1 record in 5 km	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. One record near Turill in 2015, older records in Goulburn River National Park more than 20 km to the east.	No



MNES Name	Status	Database Results for Locality		Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
Numenius madagascariensis eastern curlew	CE	Species or habitat may occur	No records	No. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records. Not habitat in Development Corridor.	No
Pedionomus torquatus Plains-wanderer	CE	Species or species habitat may occur within area	1 record	Low. Species not predicted to occur in BAM-Calculator based on associated plant community types. Nearest known record in Uarbry NSW, dated 1984, within 10 km of Development Corridor.	No
Polytelis swainsonii superb parrot	V	Species or habitat known to occur	1 record	Low. Recorded opportunistically in Coolah township (Umwelt 2022), BioNet record in 2015 from near Coolah. Large aggregation of records about 60 km to west of Development Corridor – External Transmission Line.  Predicted to occur in PCT 84 and 281 and 395.	Requested by DCCEEW, see Section 3.7.8.
Pycnoptilus floccosus pilotbird	V	Species or habitat known to occur	5 records within 10 km including 1 record within 5 km	Low. BioNet records in Ulan are from 2003 and 2006. No recent records. Habitat for lowland pilotbirds is dense forests with heavy undergrowth around wetter forests. Not predicted to occur in any of the PCTs identified in the Development Corridor.  Not recorded in surveys completed by NGH or Umwelt.	Requested by DCCEEW, see Section 3.7.9.
Rostratula australis Australian painted snipe	E	Species or habitat likely to occur	No records	No. Species not predicted to occur in BAM-Calculator based on associated plant community types. No local records, marginal habitat.	No
Fish					
Galaxias rostratus flathead galaxias	CE	Species or habitat may occur	Not applicable	No habitat for this species. Not predicted to occur in waterways in the Proposed Action Area or locality (DPI 2023).	No
Maccullochella macquariensis trout cod	С	Species or habitat may occur	Not applicable	No habitat for this species. Predicted to occur in Macquarie River, not predicted to occur in waterways in the Proposed Action Area or locality (DPI 2023).	No
Maccullochella peelii Murray cod	V	Species or habitat known to occur	Not applicable	No habitat for this species in the waterways in the Proposed Action Area.	No



MNES Name	Status	Database Results for Locality		Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
<i>Macquaria australasica</i> Macquarie perch	E	Species or habitat may occur	Not applicable	No habitat for this species. Not predicted to occur in waterways in the Proposed Action Area or locality (DPI 2023).	No
Mammals					
Chalinolobus dwyeri large-eared pied bat	V	Species or habitat known to occur	Numerous records	Known. Recorded at one location within Durridgere SCA (NGH 2013a, 2013b and 2017). Numerous BioNet records in the locality at the southern end of the Development Corridor – External Transmission Line.  TBDC predicts association with PCT 281, 495 and 488 within two km of mapped rocky areas.	Yes, Section 3.8.1.
				Most recent record in Bungaba NSW, dated 2023, within 5 km of Development Corridor.	
Dasyurus maculatus maculatus (SE mainland population) spotted-tail quoll	Е	Species or habitat known to occur	5 records within 10 km including 2 records within 5 km	High. TBDC predicts association with PCT 84, 281, 488, 495, 1661 and 1675.  Most recent record in Ulan NSW, dated 2021, within 5 km of Development Corridor.  Call heard in the north east of the Development Corridor -Wind Farm.	Yes, <b>Section</b> Error! Reference source not found.
Nyctophilus corbeni Corben's long-eared bat	V	Species or habitat known to occur	9 records	Known. Recorded by NGH in 2012 surveys in Development Corridor – Wind Farm and Development Corridor – External Transmission Line. BioNet records near the Development Corridor – External Transmission Line in Durridgere SCA, Turill State Forest and Goulburn River National Park. TBDC predicts association with PCT 84, 488, 1661 and 1675, excluding grassland with scattered trees. Moderate likelihood of blade strike.	Yes, Section 3.8.3.



MNES Name	Status	Database Results for Locality		Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
Petauroides volans greater glider (southern and central)	E	Species or habitat known to occur	Numerous records from before 1998, only 2 records after 2000 in 5 km	Known. Recorded by NGH (2013a) in original Proposed Action Area near Coolah Tops however the precise location of the record was not documented.  Known from Coolah Tops National Park (NPWS 2002), Ulan, Turril and Goulburn River National Park.  Most recent record in Coolah Tops National Park, dated 2006, within 5 km of Development Corridor.	Yes, Section 3.8.4.
Petaurus australis australis yellow-bellied glider (south-eastern)	V	Species or habitat may occur	No records	<b>Known.</b> Recorded by Umwelt in the north-east corner of the Development Corridor – Wind Farm and in the west of Coolah Tops National Park along Forest Road.	Yes, Section 3.8.5
Petrogale penicillata brush-tailed rock-wallaby	V	Species or habitat known to occur	2 records in 10 km including 1 record in 5 km	Low. BioNet records from Wollar Road Bylong.  Marginal habitat in steep slopes in the north of the Proposed Action Area.  Not recorded during surveys in 2012, 2013, 2015, 2016, 2020 and 2021.  Most recently recorded in Goulburn River National Park, dated 2017. Nearest record in Wilpinjong NSW, dated 2001, within 10 km of Development Corridor.	No
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) koala	E	Species or habitat known to occur	24 records in 10 km including 8 records in 5 km	High. Four records in Development Corridor - Wind Farm from BioNet dating from 1980s. There are a number of recent records in the locality since 2021 including 3 from the Moolarben area to the south east of the Development Corridor, Ulan Cemetery, 1 from north of Coolah, and Barracks Campground in the Coolah Tops National Park. In addition to BioNet records a population of koala have been recently detected in Coolah Tops National Park as part of state wide surveys.  TBDC predicts association with PCT 281, 479, 481, 483, 488, 490, 495, 1661 and 1675 moderate/good condition vegetation zones. Not recorded in targeted surveys in 2012, 2013, 2015, 2016, 2020, 2021 and 2023.	Yes, Section 3.8.6.



MNES Name	Status	Database Result	s for Locality	Likelihood to Occur within Development Corridor	Assessment
	EPBC Act	PMST	BioNet Records		Required?
Pseudomys novaehollandiae New Holland mouse	V	Species or habitat known to occur	6 records in 10 km including 3 records in 5 km	Low. No local records for this species.  Nearest known record in Ulan NSW, dated 2021, within 5 km of Development Corridor.	No
Pteropus poliocephalus grey-headed flying-fox	V	Foraging, feeding or related behaviour may occur	No records	<b>Known.</b> 2 recorded overhead in January 2023 in the north of the Development Corridor. No BioNet records, nearest records near Mudgee south of Development Corridor – External Transmission Line. TBDC predicts association with PCT 84, 281, 488 and 495.	Requested by DCCEEW, see Section 3.8.7.
Reptiles					
Aprasia parapulchella pink-tailed worm-lizard	V	Species or habitat likely to occur	No records	Low. Not detected in targeted surveys.	No
Delmar impar striped legless lizard	V	Species or habitat may occur	No records	Low. No local records, nearest record about 90 km to east of Development Corridor, near Muswellbrook, NSW.	No
Listed Migratory Species (Sections 20	and 20A)				
Apus pacificus fork-tailed swift	C,J,K	Species or habitat likely to occur	2 records in 5 km	Low, not recorded in surveys to date. Rarely recorded in locality with nearest known record in Turill from 2019, previously recorded 1999.	No
Hirundapus caudacutus white-throated needletail	V,J,C,K	Roosting known to occur	Numerous records	<b>Known.</b> Records of flocks of this species in Development Corridor – Wind Farm near Ulan, Coolah and nearby Coolah Tops.	Yes, see Section 3.7.6.
Monarcha melanopsis black-faced monarch	В	-	No records	Low. Identified as occurring, at the western limit of their distribution, in Coolah Tops National Park in the Plan of Management (NPWS 2003a). Not recorded during surveys.	Requested by DCCEEW, see Section 3.9.3.
Motacilla flava yellow wagtail	C,J,R	Species or habitat may occur	No records	Low, no habitat in Development Corridor for this species. Not recorded during surveys.	No



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	EPBC Act	PMST	BioNet Records		Required?
Myiagra cyanoleuca satin flycatcher	В	Species or habitat known to occur	No records	Low, while there are no records in the Ulan area in vegetation contiguous with the southern end of the transmission line easement, preferred habitat (heavily vegetated gullies are absent). Not recorded in surveys to date for the Action.	Requested by DCCEEW, see Section 3.9.2.
Rhipidura rufifrons rufous fantail	В	Species or habitat known to occur	No records	Low. Identified as occurring, at the western limit of their distribution, in Coolah Tops National Park in the Plan of Management (NPWS 2003a).  No habitat in Development Corridor. Not recorded during surveys.	Requested by DCCEEW, see Section 3.9.3.
Actitis hypoleucos common sandpiper	C,J,K	Species or habitat likely to occur	2 records in 5 km	No. No habitat in Development Corridor for this species. Not recorded during surveys. Rarely recorded in locality most recently 2003 at Goulburn River National Park.	No
Calidris acuminata sharp-tailed sandpiper	B,C,J,K	Species or habitat may occur	3 records in 5 km	No. No habitat in Development Corridor for this species. Not recorded during surveys. No nationally important wetland habitat in locality.  Rarely record, most recently at Turill in October 2018.	No
Calidris ferruginea curlew sandpiper	CE,C,J.K,	Species or habitat may occur	No records	No. No habitat in Development Corridor for this species. Not recorded during surveys. No nationally important wetland habitat in locality.	No
Calidris melanotos pectoral sandpiper	C,J,K	Species or habitat may occur	No records	No. No habitat in Development Corridor for this species. Not recorded during surveys. No nationally important wetland habitat in locality.	No
Gallinago hardwickii Latham's snipe	B,C,J,K	Species or habitat known to occur	3 records in 5 km	Low. No habitat in Development Corridor for this species. Not recorded during surveys. No nationally important wetland habitat in locality.  Rarely recorded, most recently at Ulan in December 2016.	No
Numenius madagascariensis eastern curlew	CE,C,J,K	Species or habitat may occur	No records	No. No habitat in Development Corridor for this species. Not recorded during surveys. No nationally important wetland habitat in locality.	No



