

Biodiversity – Vegetation Fact Sheet



Why was the assessment undertaken?

Native vegetation and habitat can be impacted as a result of the siting of wind turbines, access tracks, transmission lines, and associated infrastructure.

A Biodiversity Development Assessment Report (BDAR) is currently being prepared by Umwelt Pty Ltd to assess the proposed modifications to the wind farm and transmission line development footprint as well as the public road upgrades footprint. The BDAR will assess the change in potential impacts on biodiversity matters associated with the Approved Project and the Modified Project. The completed BDAR will be submitted with the Modification Application that will be lodged with the NSW Department of Planning, Industry and Environment (DPIE).

What was the approach?

The BDAR is being prepared considering the relevant conditions of Development Consent SSD 6696 that was granted for the Project in 2018, and in accordance with the Biodiversity Assessment Method (BAM) under the NSW *Biodiversity Conservation Act 2016* (BC Act). The BDAR is also being prepared considering the relevant conditions of approval granted in 2018 under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The BDAR will have regard to applicable guidelines including:

- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DEC, 2004)
- NSW Guide to Surveying Threatened Plants (OEH, 2016)
- Draft Koala Habitat Protection Guidelines and Koala Habitat Protection SEPP (DPIE, 2020)
- Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth Department of the Environment, 2013)

The BDAR is being informed by extensive general ecosystem surveys and targeted surveys that have been undertaken for both threatened flora and fauna species (including birds and bats) by NGH Environmental Pty Ltd in 2012, 2013, 2015, and 2016, and by Umwelt Pty Ltd in 2020 and 2021.

What did we find and how does it compare to the Approved Project?

The Modified Development Corridor, which is a defined area within the Site Boundary within which all proposed temporary and permanent wind farm and transmission line infrastructure will be located, supports approximately 13,000 hectares (ha) of vegetation, of which approximately 5,200 hectares is identified as non-native vegetation. Only a portion of the ecological values identified in the Development Corridor will be impacted by the Modified Project, where ecological values intersect with the proposed development footprint.

The BDAR will calculate impacts to ecological values (and associated offset requirements) based on the revised indicative development footprint and turbine layout proposed by the Modified Project.

Based on updated knowledge and experience with construction of wind farm infrastructure the revised indicative development footprint associated with the Modified Project is larger than what was originally estimated for the Approved Project. The key reasons for this are:

- Inclusion of impacts associated with approximately 100 km of anticipated public road upgrades, which were not previously considered as part of the Approved Project.
- Increase in the estimated average ground disturbance width for access tracks and underground cabling from 15 m that was assumed for the Approved Project to approximately 37.5 m that has been estimated for the Modified Project. This alone contributes approximately 450 ha of additional ground disturbance within the wind farm site.
- Addition of approximately 17.5 km of transmission line and associated vegetation clearance within the 60 m wide easement.

Following this, the potential impacts to native vegetation and habitat are expected to be greater than was estimated for the Approved Project. Preliminary results suggest that the Modified Project will result in approximately 950 ha of impact to the 11 plant community types (PCTs) listed in the table below (increase of 549 ha).

	Plant Type	Location
PCT 84	River Oak - Rough-barked Apple - red gum - box riparian tall woodland (wetland)	Brigalow Belt South Bioregion and Nandewar Bioregion
PCT 281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats	In the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
PCT 395	Derived speargrass - wallaby grass - wire grass mixed forb grassland	Mainly in the Coonabarabran - Pilliga - Coolah region
PCT 479	Narrow-leaved Ironbark - Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest	On sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion
PCT 481	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest	in the southern Brigalow Belt South Bioregion and Upper Hunter region
PCT 483	Grey Box x White Box grassy open woodland on basalt hills	In the Merriwa region, upper Hunter Valley
PCT 488	Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills	Mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion
PCT 490	Silvertop Stringybark - Forest Ribbon Gum very tall moist open forest	On basalt plateau on the Liverpool Range, Brigalow Belt South Bioregion
PCT 495	Brittle Gum - Silvertop Stringybark grassy open forest	In the Liverpool Range, Brigalow Belt South Bioregion
PCT 1661	Narrow-leaved Ironbark - Black Pine - Sifton Bush heathy open forest	On sandstone ranges of the upper Hunter and Sydney Basin
PCT 1675	Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest	On sandstone ranges of the Sydney Basin

The estimated impacts to threatened ecological communities and threatened species habitat associated with the Modified Project are shown in the table above right.

Species	Conservation Status		Preliminary Areas of Impact Total Indicative Development Footprints (ha)
	BC Act	EPBC Act	
Threatened Ecological Community			
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions	CEEC	-	546.6
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	-	CEEC	305
Threatened Species Habitat			
Silky swainson-pea (Swainsona sericea)	V	-	15.1
Squirrel glider (Petaurus norfolcensis)	V	-	292.6
Regent honeyeater (Anthochaera phrygia)	CE	CE	601.4
Swift parrot (Lathamus discolor)	CE	CE	277.9
*CEEC – Critically Endangered Ecological Community *CE – Critically Endangered * V – Vulnerable			

Throughout the design optimisation process numerous measures have been implemented such as modifying turbine locations and ancillary infrastructure as much as practicable, to avoid significant biodiversity impacts.

The revised indicative development footprint which is informing the Modification Application is considered to be a worst-case estimate of ground disturbance and vegetation removal, and we will attempt to minimise impacts wherever practicable, as the Project progresses into construction.

The Project will be re-referred under the EPBC Act on the basis of impacts to White Box, Yellow Box, Blakely's Red Gum Woodland and Derived Native Grassland CEEC, and potential habitat for threatened birds (regent honeyeater and swift parrot). The EPBC referral process will be undertaken independently of DPIE's assessment of the Modification Application.

The complete analysis of the potential impacts of the Modified Project on biodiversity values is currently being finalised and will be fully detailed in the BDAR and Modification Application.

What are the proposed mitigation strategies?

We have adopted an 'avoid-minimise-mitigate' approach throughout the design review and layout optimisation process for the Modified Project. Wherever practicable, existing cleared areas and farm access tracks are proposed to be used to locate wind farm infrastructure. Where impacts to native vegetation and habitat cannot be avoided, relevant offsets will be required to ensure impacts are mitigated appropriately.

A strategy is currently being prepared on how the Project will secure the required biodiversity credits to compensate for the loss of biodiversity values. To offset impacts resulting from the Modified Project, it could be through a mix of land-based offsets and payment into the NSW Biodiversity Conservation Fund. To ensure biodiversity impacts are further minimised and managed, a suite of environmental management plans will be prepared, including a Biodiversity Management Plan (BMP) and Biodiversity Offset Management Plan (BOMP), in accordance with the existing conditions of the Development Consent and the EPBC Approval.

We are also commencing negotiations with landholders whose land may contain relevant plant community types (PCTs) and habitat values impacted by the Modified Project with a view to establishing potential biodiversity stewardship sites and satisfying our offset obligations.

Assessment against Development Consent and EPBC Approval

DEVELOPMENT CONSENT

The Modified Project can comply with the existing conditions of the Development Consent relating to biodiversity, in particular:

- Preparation of a Biodiversity Management Plan (BMP) for approval by the Secretary of the DPIE
- Sourcing and retiring of the necessary biodiversity offset credits in accordance with the NSW Biodiversity Offsets Policy for Major Projects, within two years of the commencement of construction

An update to the native vegetation/habitat clearing limits set out in the Development Consent will be required to account for the revised Project layout as well as any clearing required to construct the anticipated public road upgrades, which were not previously quantified by the Approved Project.

EPBC APPROVAL

The Modified Project can comply with the existing conditions of the Commonwealth EPBC approval, in particular:

- Preparation of a Vegetation Management Plan (VMP) for approval by the Minister for Environment
- Preparation of an Offset Strategy for approval by the Minister for Environment
- Securing required offsets within two years of the commencement of construction
- Preparation of a Biodiversity Offset Management Plan (BOMP) for approval by the Minister for Environment
- Preparation of a Bird and Bat Management Plan for approval by the Minister for Environment
- Undertake compliance audits and preparation of audit reports for approval if and when requested by the Minister for Environment

An update to the native vegetation/habitat clearing limits set out in the EPBC Approval will likely be required to account for the revised Project layout as well as any clearing required to construct the anticipated public road upgrades, which were not previously quantified by the Approved Project.

BIODIVERSITY CREDITS

Biodiversity impacts associated with the Modified Project are likely to be offset through a combination of methods. The preferred approach is the establishment of land-based Biodiversity Stewardship Sites or by retiring credits from existing Biodiversity Stewardship Sites. The required number and type of credits determined in accordance with the project approval and the offset rules in the Biodiversity Conservation Regulation, would be retired. Where suitable offset sites cannot be secured, required payments will be made into the NSW Government's Biodiversity Conservation Fund to satisfy the offset obligations. For further information see the following website: www.bct.nsw.gov.au/biodiversity-offsets-program

For more information, please visit the website below

or call us anytime to ask questions using: **1800 WE TILT (938 458)**

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