

Biodiversity Development Assessment Report (Small Site)

BIALA WIND FARM TRANSMISSION LINE

10 AUGUST 2018

Abbreviations

Abbreviation	Meaning
BAM	Biodiversity Assessment Method
BC Act	Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BOS	Biodiversity Offset Scheme
DA	Development Application
Developments Biala	Newtricity Developments Biala Pty Ltd.
EEC	Endangered Ecological Community
ERM	Environmental Resources Management
IBRA	Interim Biogeographic Regionalisation for Australia
OEH	Office of Environment and Heritage
PCT	Plant Community Type
TBDC	Threatened Biodiversity Data Collection

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1. Introduction

This Biodiversity Development Assessment Report (BDAR) has been prepared for Newtricity Developments Biala Pty Ltd (Developments Biala) to support a development application (DA) for the Biala Wind Farm transmission line (the Project). The transmission line will connect the approved Biala Wind Farm to the existing electricity network at the Gullen Range Wind Farm substation.

One small area of endangered ecological community (EEC): Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland has been identified within the transmission line route (see **Figure 1** and **Figure 2**) and is proposed to be offset in accordance with the *Biodiversity Assessment Method* (BAM). This area of EEC is the subject of this BDAR and is referred to as the Site. All other areas of EEC have been avoided through detailed design. The biodiversity impacts associated with the remaining sections of the transmission line are assessed in the *Ecology Impact Assessment* (Environmental Resources Management (Australia) (ERM) (November 2017)), which forms Annex B of the *Biala Wind Farm Transmission Line Connection and Substation Upgrade: Statement of Environmental Effects* (ERM, 2017).

1.1 Site Location and Description

The Project is located on Lot 4 in DP 1031856, approximately 890 m west of the Gullen Range Wind Farm substation in the suburb of Bannister and the Upper Lachlan Shire Council area (see **Figure 2**). The Site is approximately 0.3 ha, comprising a 20 m corridor through an area of native vegetation identified as the EEC: Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland. An existing property fence marks the northern boundary of the Site.

The Site comprises native woodland vegetation and forms the northern edge of a 9.88 ha patch of native woodland vegetation. A 55 m wide easement separates this patch of woodland from a second 12.3 ha woodland patch to the south. The surrounding areas comprise cleared paddocks with scattered small patches of native vegetation. An extensive area of native vegetation occurs approximately 1.5 km to the south-east. Gurrundah Creek is a second order stream running north-south to the west of the Site.

1.2 Project Description

The proposed development involves construction of a 33 kV underground transmission line with a total length of approximately 12 km (the Project). The works at the Site are within an approximately 200 m section of the transmission line. Clearing within the Site is required to enable trenching and cable laying activities through this area. The total area of clearing will be less than the area of the entire Site as the final construction design will aim to minimise clearing of vegetation to within a 15 m corridor. Nonetheless, this BDAR conservatively assesses the impacts associated with clearing a 20 m corridor through the entire Site.

Construction of the transmission line within the Site will involve excavation trenching and will likely include:

- topsoil stripping and stockpiling;
- trench excavation and stockpiling of the spoil;
- installation of a sand bed layer;
- laying of conductor and earth cables; and
- trench reinstatement including backfilling/compaction of spoil and respread of topsoil.

(ERM, 2017)

1.3 Information Sources

The following information sources were used to inform the BDAR:

- Statement of Environmental Effects, Annex B: Ecology Impact Assessment (ERM, November 2017);
- Bionet Wildlife Atlas (Office of Environment and Heritage (OEH) 2018a);
- Protected Matters Search Tool (Department of Environment and Energy (DoEE) 2018);
- Threatened Biodiversity Data Collection (TBDC) (OEH, 2018b); and
- Biodiversity Assessment for Gullen Range Wind Farm (NGH Environmental, July 2008)

1.4 Licences and Accreditation

This BDAR was prepared by Evelyn Craigie, BAM Accreditation Number: BAAS18088 (issued 14 May 2018), Scientific Licence number SL102066.

Maps and GIS files were prepared by Viet Nguyen of ERM.

1.5 Applicable Legislation and Approval Pathway

1.5.1 Biodiversity Conservation Act 2016

Native plants and animals in NSW are protected by the *Biodiversity Conservation Act 2016* (BC Act), with threatened species and ecological communities listed in the Schedules of the Act. The BC Act aims to conserve biodiversity in NSW through a variety of mechanisms including establishment of the Biodiversity Assessment Methodology (BAM), the BAM Calculator and the Biodiversity Offset Scheme (BOS). The method incorporates the avoid, minimise and offset hierarchy, with an overall objective of 'no net loss' of biodiversity in NSW.

1.5.2 BAM/BOS

Development that involves clearing of native vegetation may require application of the BAM if it will result in a significant impact to threatened species or if it will exceed the BOS thresholds. The development application for the Project was submitted to Council prior to the commencement of the BC Act and therefore, the BAM/BOS is not triggered and the former planning provisions apply. However, as the Project involves clearing of an EEC, Developments Biala has elected to 'opt-in' to the BAM/BOS to offset the impacts of clearing within the Site.

The BAM provides a Streamlined assessment module for Projects that meet the criteria for 'small area development that requires consent'. The field survey and reporting requirements are reduced when using the module and there is also a specific version of the BAM Calculator that must be used. The Project is eligible to use the streamlined assessment module as:

- the land is not included in the shaded area on the Biodiversity Values Map (see Figure 3); and
- the minimum lot size (MLS) applicable to the property under the Local Environmental Plan (LEP) is 100 ha, with up to 0.3 ha proposed to be cleared. Therefore, the area of clearing does not exceed the maximum area limit for application of the module (i.e. less than or equal to 5 ha for properties with a minimum lot size of less than 1000 ha but not less than 40 ha).

1.5.3 Environment Protection and Biodiversity Conservation Act 1999

Consideration of Matters of National Environmental Significance was undertaken for the Site as part of the *Ecology Impact Assessment* (2017) and therefore, has not been included in this BDAR.

2. Landscape Features

Landscape features contain biodiversity values that are important for the site context and the habitat suitability of the subject land and as such, are used to identify the threatened species likely to occur at the Site. For the streamlined assessment module, only the Interim Biogeographic Regionalisation for Australia (IBRA) region and subregion are required to be identified, however, other relevant features have also been identified (see **Table 1**).

Table 1: Landscape Features of the Site	

Landscape Feature	Site
IBRA Region	South Eastern Highlands
IBRA Subregion	Crookwell
Mitchell Landscape	Rockley Plains
Rivers and Streams	Gurrundah Creek (second order stream to the west of the Site)
Connectivity	The Site is part of an isolated patch of vegetation surrounded by cleared paddocks. It is within 100 m of other smaller patches, however, is not connected to any substantial areas of native vegetation.
Native vegetation cover (an estimate of the percent cover of native vegetation within the Site and a 1500 m buffer around the Site, relative to the approximate benchmarks for the plant community type (PCT)).	9.6% (0 - 10% class)
Patch Size (the area of intact native vegetation that occurs on the Site and the vegetation within 100 m of the next area of native vegetation in moderate to good condition. It is used to determine the habitat suitability of the Site for threatened species).	23 ha The Site occurs in a landscape of isolated patches of native vegetation, however, some small patches were within 100 m of the Site and each other.

3. Native Vegetation

3.1 PCT Identification

Native vegetation occurs across the entire Site and was identified in accordance with the Bionet Vegetation Classification Database (OEH, 2018c). Identification of the PCT was informed by previous vegetation mapping, the species assemblage in the canopy, geographic location, landscape position and geology. These features were important in determining the correct PCT due to the lack of native understorey and groundcover species. Information sources included:

• vegetation mapping in the Ecology Impact Assessment (ERM, 2017);

- the topographic map for the area (Six Maps, 2018);
- geology mapping (Department of Industry, Skills and Regional Development, 2009); and
- soil mapping (OEH, 2010).

Field survey was undertaken on 26 July 2018 and included a random meander through the Site and its immediate surrounds and two BAM plots (see **Figure 4**). The BAM identifies the number of plots required based on the size of each vegetation zone (areas of vegetation that are the same PCT and broad condition state). The Site is 0.3 ha and therefore, a minimum of one plot was required.

The location of the plots was largely determined by the small size of the Site, although it is noted the vegetation at the Site was observed to be in similar condition to the vegetation further within the patch as grazing has occurred throughout the vegetation.

3.2 Dominant PCT

The streamlined assessment module requires only the dominant PCT at the Site to be identified. Only one PCT occurs at the Site and therefore, is the dominant PCT: PCT1191 Snow Gum – Candlebark woodland on broad valley flats of the tablelands and slopes, South Eastern Highlands Bioregion (see **Figure 4** and **Photo 1** and **Photo 2**). This PCT is described in the Bionet Vegetation Classification Database as an open forest, woodland (or occasionally grassland patches) with a sparse shrub layer and a dense grassy groundcover. It occurs on frost-hollow flats and footslopes in undulating tableland areas between 600 m and 1100 m (OEH, 2018c).

Vegetation at the Site comprises a remnant woodland canopy dominated by *Eucalyptus dives* (Broadleaved Peppermint). Other canopy species include *Eucalyptus viminalis* (Ribbon Gum) and *Eucalyptus rubida* (Candlebark). As a result of grazing, the Site lacks a shrub layer and comprises only a sparse native groundcover, with weeds also largely absent from the Site. Due to the time of year of the survey and the disturbance from grazing, most grasses at the Site lacked readily identifiable features, however, native grasses such as *Microlaena stipoides* var. *stipoides* (Weeping Grass) and *Rytidosperma* sp. (Wallaby Grass) were recorded. A list of flora recorded at the Site is provided in **Appendix 1**.

The vegetation at the Site is considered to best match PCT1191 as:

- it includes three of the canopy species listed in the Scientific Description for the PCT;
- it occurs on a hillslope adjacent to the flat area associated with Gurrundah Creek;
- it occurs at an altitude of 900 m;
- other likely PCTs are associated with specific geographic locations that do not include the Site location; and
- it is associated with the Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland EEC and the vegetation at the Site is considered to be commensurate with this EEC. Other likely PCTs are not associated with this EEC (see **Sections 3.3** and **3.4**).

A summary of the PCT at the Site is provided in **Table 2** and the data used in the BAM Calculator is provided in **Appendix 3**.

A single vegetation zone (Vegetation Zone 1) was identified for the Site as all the vegetation comprises the same PCT in similar condition.

Table 2: Summary of PCT Information

PCT	1191: Snow Gum – Candlebark woodland on broad valley flats of the tablelands and slopes, South Eastern Highlands Bioregion
Vegetation Zone	1
Vegetation Formation	Grassy Woodlands
Vegetation Class	Subalpine Woodlands
Area	0.3
Patch Size	23
TEC	Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon
Percent Cleared	95
Vegetation Integrity Score	32.3



Photo 1: Typical Condition of PCT1191 (Plot 1)



Photo 2: Typical Condition of PCT1191 (Plot 2)

3.3 Threatened Ecological Community

PCT1191 is commensurate with the Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland EEC. This EEC occurs as an open-forest, woodland or open woodland on valley floors, margins of frost hollows and on footslopes and undulating hills. The main canopy species are *Eucalyptus pauciflora* (Snow Gum), Candlebark, *E. stellulata* (Back Sallee) and Ribbon Gum, with other commonly occurring species including *E. bridgesiana* (Apple Box), Swamp Gum (*E. ovata*), Black Gum (*E. aggregata*), Mountain Gum (*E. dalrympleana*), Broad-leaved Peppermint and Narrow-leaved Peppermint (E. radiata). It occurs between approximately 600 and 1400 m in altitude on a variety of substrates, including basalt, sediments, granite, colluvium and alluvium (OEH, 2017).

The vegetation at the Site is considered to be commensurate with the EEC as:

- the vegetation comprises a woodland with Candlebark, Ribbon Gum and Broad-leaved Peppermint. Apple Box was observed in the adjoining vegetation to the south of the Site;
- it occurs at an altitude of 900 m on a hillslope adjacent to the flat area associated with Gurrundah Creek;
- the Taralga soil landscape is mapped at the Site, which is associated with basalt plateaux and valley fills (OEH, 2010); and
- mapping shows the underlying geology comprises a mix of basalt lava flows and sedimentary
 rocks like sandstone and siltstone that have metamorphosed to slate and quartzite, and
 volcanic rocks such as dacite and airfall tuffs (Department of Industry, Skills and Regional
 Development, 2009).

3.4 PCT Identification

Vegetation assemblages and condition can be highly variable and a matching PCT can be difficult to identify. In such cases it is necessary to identify the *likely* PCT based on the species present and, where applicable, the vegetation in the surrounding landscape, geographic location, landscape position and associated geology and soil landscapes. Both PCT1097 and 1191 are likely PCTs for the vegetation at the Site, however, PCT1191 was selected in this BDAR as, in addition to matching the description in the Bionet Vegetation Classification Database, it is also associated with the Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland EEC in the BAM Calculator.

It is noted that the *Ecology Impact Assessment* (ERM, 2017) identified the *likely* PCT as PCT1097 (Ribbon Gum - Narrow-leaved Peppermint grassy open forest on basalt plateaux, Sydney Basin Bioregion and South Eastern Highlands Bioregion). This PCT is described as open forest with a sparse shrub layer and dense groundcover of herbs and grasses, occurring on undulating basalt tablelands between 600 and 1200m, mainly between Oberon and Moss Vale (OEH, 2018c). In the current version of the BAM Calculator, PCT1097 is associated with the Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions EEC and not the identified (and confirmed during field survey) Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland EEC.

4. Threatened Species

The BAM provides a six-step process for assessing whether habitat at the Site is suitable for threatened species and thereby whether targeted field survey and offsetting are required. The BAM Calculator generates a list of 'ecosystem credit' species and 'species credit' species based on the landscape features and vegetation information associated with the Site (see **Table 3** and **Table 4** respectively). This comprises Step 1 in the assessment of habitat suitability.

An analysis of the likelihood of occurrence was also undertaken as part of Step 1 for all species recorded within 10 km of the Site (see **Appendix 2**). Some additional species to those predicted by the BAM Calculator have potential to occur at the Site, however, the streamlined assessment module does not provide an option to add species to the predicted species list. Impacts to these ecosystem credit species have been addressed in accordance with the former planning provisions in the *Ecology Impact Assessment* (ERM, 2017), which concluded a low risk of potential impact.

In accordance with Step 2 of the threatened species habitat suitability assessment, habitat constraints were considered. A habitat constraint is a particular element or feature that must be present on a site for the species to occupy or periodically use the site. For example, species dependent on rocky areas will not occupy or use sites without rocks. Where a species has habitat constraints identified in the TBDC, and each is assessed as absent on the Site, the species may be removed from the list and no further assessment is required. Species for which habitat constraints occur at the Site or that do not have identified habitat constraints in the TBDC are 'candidate species' and were retained for further assessment.

Species retained for further assessment were considered under Step 3, whereby the species' likelihood of utilising the Site is considered based the presence and condition of habitat constraints or microhabitats. Species that are considered unlikely to use the Site due to it being substantially degraded are not considered further.

Step 4 involves determining presence/absence of the remaining species either through targeted survey, assuming presence or obtaining an expert report. Targeted survey must be undertaken during the months specified in the BAM Calculator for that species. Survey was undertaken for all remaining species credit species and none were observed at the Site. Therefore, identification of habitat

location, area and condition in accordance with steps 5 and 6 of the threatened species habitat suitability assessment was not undertaken for any species.

4.1 Ecosystem Credit Species

Ecosystem credit species do not require targeted survey as they can be predicted to occur at a site based on vegetation surrogates and landscape features. These species also have a low probability of detection through targeted survey. These species are assessed in accordance with Step 1 and Step 2 only.

Ecosystem credit species predicted for the Project are shown in **Table 3**. Two ecosystem credit species were excluded from the assessment as the habitat constraints identified in the TBDC do not occur at the Site.

Table 3: Predicted Ecosystem	Species
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Scientific Name	Common Name	Status BC Act	Status EPBC Act	Habitat Constraints (Step 2)	Sensitivity to Gain Class	Considered Further
Anthochaera Phrygia (Foraging habitat)	Regent Honeyeater	Critically Endangered	Critically Endangered	Foraging habitat constraints are not listed for the species in the TBDC. Breeding habitat constraints are addressed in Table 4.	High	Assumed to occur based on landscape and vegetation features
Calyptorhyncus lathami (Foraging habitat)	Glossy Black- cockatoo	Vulnerable	Not listed	Presence of Allocasuarina and Casuarina species	High	No. Habitat constraints do not occur at the Site.
Chthonicola sagittata	Speckled Warbler	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	High	Assumed to occur based on landscape and vegetation features
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	High	Assumed to occur based on landscape and vegetation features
Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Endangered	No habitat constraints are listed in the TBDC	High	Assumed to occur based on landscape and vegetation features
Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	High	Assumed to occur based on landscape

						and vegetation features
Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not listed	Within 1 km of rivers, lakes, large dams or creeks, wetland and coastlines	High	No. Habitat constraints do not occur at the Site.
Melanodryas cucullata cucullatta	Hooded Robin (south-eastern form)	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	Moderate	Assumed to occur based on landscape and vegetation features
Miniopterus schreibersii oceanensis (Foraging habitat)	Eastern Bentwing-bat	Vulnerable	Not listed	Foraging habitat constraints are not listed for the species in the TBDC. Breeding habitat constraints are addressed in Table 4.	High	Assumed to occur based on landscape and vegetation features
Petroica boodang	Scarlet Robin	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	Moderate	Assumed to occur based on landscape and vegetation features
Petroica phoenicea	Flame Robin	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	Moderate	Assumed to occur based on landscape and vegetation features
Phascolarctos cinereus (Foraging habitat)	Koala	Vulnerable	Vulnerable	Foraging habitat constraints are not listed for the species in the TBDC. Breeding habitat constraints are addressed in Table 4.	High	Assumed to occur based on landscape and vegetation features

Stagonopleura guttata	Diamond Firetail	Vulnerable	Not listed	No habitat constraints are listed in the TBDC	Moderate	Assumed to occur based on landscape and vegetation features

4.2 Species Credit Species

The likelihood of occurrence of species credit species cannot be confidently predicted by vegetation surrogates and landscape features. These species can also be reliably detected through targeted survey. The species credit species predicted to occur at the Site in the BAM Calculator are shown in **Table 4**. The majority of these species are only classed as species credit species in relation to their breeding habitat, i.e. the species only requires targeted survey if suitable breeding habitat occurs at the Site.

The following field surveys have been undertaken at the Site:

- 24 & 25 October 2016: random meander throughout the Site to identify the PCT and search for threatened flora species;
- March 2018: mapping of hollow bearing trees; and
- 26 July 2018: random meander and BAM plots.

Survey tracks hollow bearing trees are shown in Figure 5.

Scientific Name	Common Name	Habitat Constraint	Geographic Constraint	Species Requiring Further Assessment (Step 2)	Candidate Species (Steps 3 and 4)
Anthochaera phrygia (Breeding habitat only)	Regent Honeyeater	N/A	N/A	No. The species is only a species credit species with respect to its breeding habitat, which is as per mapped areas (OEH, 2018b). Breeding in NSW is restricted to the Capertee Valley (near Lithgow) and the Bundarra-Barraba Region in the Northern Tablelands (OEH, 2018b).	N/A
Aprasia parapulchella	Pink-tailed Legless Lizard	Rocky areas or within 50 m of rocky areas	South of Grabben Gullen	No. Whilst the Site is south of Grabben Gullen, rocky areas do not occur at the Site, nor is it within 50 m of rocky areas.	N/A
Calyptorhyncus lathami Breeding habitat only - Living or dead tree with hollows greater than 15cm diameter and greater than 5m above ground (OEH, 2018).	Glossy Black- cockatoo	N/A	N/A	Yes. Some hollows at the Site fit the criteria for breeding habitat for the species.	No. The species has not been observed at the Site during surveys for this BDAR or the ERM survey in March 2018. Observations of hollows within the Site from the ground (with binoculars) in March and July 2018 did not identify evidence of the species. This is within the survey timeframes identified for the species in the BAM Calculator. In addition, the closest record of the species to the Site is

Table 4: Predicted Species Credit Species

					greater than 30 km away, despite targeted surveys being undertaken in the vicinity of the Site for the Gullen Range Wind Farm.
Commersonia prostrata	Dwarf Kerrawang	N/A	N/A	Yes	No. The species has not been observed at the Site during surveys for this BDAR or the ERM survey in October 2016, which were within the survey timeframes identified for the species in the BAM Calculator. In addition, the closest record of the species to the Site is greater than 30 km away, despite survey being undertaken in the locality for the Gullen Range Wind Farm.
Diuris aequalis	Buttercup Doubletail	N/A	Within 20 km of the Great Dividing Range	Yes	No. The species was not observed during the survey undertaken by ERM in October 2016 which is within the survey timeframes identified for the species in the BAM Calculator. In addition, the closest record of the species to the Site is greater than 25 km away, despite survey being undertaken in the locality for the Gullen Range Wind Farm.
Eucalyptus aggregata	Black Gum	N/A	N/A	Yes	No. The species has not been observed at the Site during surveys for this BDAR or the ERM survey in October 2016, which were within the

					survey timeframes identified for the species in the BAM Calculator.
Haliaeetus leucogaster (Breeding habitat only)	White- bellied Sea- Eagle	N/A	N/A	No. The species is only a species credit species with respect to its breeding habitat, i.e. living or dead mature trees within suitable vegetation within 1 km of rivers, lakes, large dams or creeks, wetland and coastlines. The Site is not within 1 km of any such features and no Eagle nests were observed at the Site.	N/A
Miniopterus schreibersii oceanensis (Breeding habitat only)	Eastern Bentwing- bat	N/A	N/A	No. The species is only a species credit species with respect to its breeding habitat, i.e. caves, tunnels, mines, culverts or other structures known or suspected to be used for breeding. This habitat does not occur at the Site.	N/A
Phascolarctos cinereus (Breeding habitat only)	Koala	N/A	N/A	No. The species is only a species credit species with respect to its breeding habitat, i.e areas identified via survey as important habitat. Important habitat is defined by the density of koalas and quality of habitat determined by on-site survey. There are no recent records of the species in the vicinity of the Site, despite surveys being undertaken in the locality for the Gullen Range Wind Farm.	N/A

Thesium australe	Austral	N/A	N/A	Yes	No. The species was not observed
	Toadflax				during the survey undertaken by ERM
					in October 2016, which is within the
					survey timeframes identified for the
					species in the BAM Calculator. In
					addition, the closest record of the
					species to the Site is south of
					Canberra, despite survey being
					undertaken in the locality for the
					Gullen Range Wind Farm.

5. Avoid and Minimise Impacts

Consideration of impact avoidance and minimisation measures has been undertaken throughout the planning phase of the proposed development. The transmission line as a whole has been located to avoid native vegetation, EECs and other important biodiversity features as much as possible. Alternative locations for this section of the transmission line were considered, including the easement to the south of the Site and the cleared area in the neighbouring property to the north of the Site. However, these locations are unfeasible due to the maintenance and access restrictions associated with the easement, and the lack of access/use agreements with the property owner to the north of the Site.

Whilst a 20m impact corridor has been assessed, the final construction design will aim to minimise clearing of vegetation to within a 15m corridor and avoid some key biodiversity features such as large hollow bearing trees where possible. The following mitigation measures will also be considered at the Site:

- limit clearing through delineation of designated construction areas. This will help to protect native vegetation and adjacent areas of retained EEC during the construction phase;
- manage clearance of areas of weed infestation, to allow for separate stockpiling and disposal
 of weed material. Vehicle hygiene protocols should also be included and will assist to control
 the movement of both pathogens and weeds;
- the impact area is to be backfilled at completion of the works and revegetated using a native grass mix;
- all workers will be made aware of the potential presence of threatened species and the manner in which they should be treated;
- develop a pre-clearance survey protocol for fauna habitat where hollow bearing trees will be removed and for clearance of noxious weeds; and
- develop a fauna clearance protocol that includes procedures to be followed should any injured fauna be encountered.

6. Impact Summary

The residual impacts associated with the proposed development include:

- clearing of up to 0.3 ha of native vegetation; and
- removal of potential habitat for native species including key features such as hollow bearing trees and fallen logs.

It is acknowledged that clearing may not be undertaken across the entire 20m width of the Site, however, the worst-case scenario has been assumed for this assessment. Therefore, to determine the impacts of the proposed development, the future value score used for all BAM attributes is zero.

Veg Zone	PCT	TEC	Current Vegetation Integrity Score	Future Vegetation Integrity Score	Change in VIS	Biodiversity Risk Weighting	Ecosystem Credits Required
1	1191	Tablelands Snow Gum,	32.3	0	-32.3	2	5

Table 5: Impact Summary

Black Sallee,	
Candlebark	
and Ribbon	
Gum Grassy	
Woodland	

7. Credit Requirement

A total of five ecosystem credits is required to offset the proposed development. Details of offset options are provided in the credit summary report in **Appendix 4**.

There are no species credits required for the proposed development.

8. References

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Figures



_G001_R0.mxd	Transmission Line Connection for the	
Drawing Size: A3	Biala Wind Farm	
Reviewed By: ME	Client: Beijing Jingneng Clean Energy (Australia)	
Zone 55S m	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	ERM
	· · · · · · · · · · · · · · · · · · ·	man had to a



G002_R0.mxd	Transmission Line Connection for the	
Drawing Size: A3	Biala Wind Farm	THEFT
Reviewed By: PD	Client: Beijing Jingneng Clean Energy (Australia)	
one 55S	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	ERM



ues Map	F3	
R_G003_R0.mxd	Transmission Line Connection for the	
Drawing Size: A3	Biala Wind Farm	THEFT
Reviewed By: ME	Client: Beijing Jingneng Clean Energy (Australia)	
Zone 55S	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	ERM



Waterways

Disturbance Area

Source: Transmission Route : Client / ERM Revised 7 July 2017 Base Data : NSW DFSI DCDB and DTDB; Imagery : NSW DFSI WMS Imagery Captured 2/03/2015

Plant Community

Drawing No: 0422199s_BDAR_ 07/08/2018 VN rawn By: ordinate System: WGS 1984 UTM



y '	Types

_G004_R0.mxd	Transmission Line Connection for the	· · · · · ·
Drawing Size: A3	Biala Wind Farm	THEFT
Reviewed By: ME	Client: Beijing Jingneng Clean Energy (Australia)	
Zone 55S 40m	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant lts accuracy.	ERM



_G005_R0.mxd	Transmission Line Connection for the	
Drawing Size: A3	Biala Wind Farm	
Reviewed By: PD	Client: Beijing Jingneng Clean Energy (Australia)	
Zone 55S	This figure may be based on third party data or data which has not	
40m	agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	ERM

Appendix 1: Species List

Table 6: Flora Recorded at the Site

Scientific Name	Common Name
Acetosella vulgaris	Sheep Sorrel
Asperula scoparia	Prickly Woodruff
Centella asiatica	Indian Pennywort
Chondrilla juncea	Skeleton Weed
Dactylis glomerata	Cocksfoot
Eucaluptus rubida	Candlebark
Eucalyptus bridgesiana	Apple Box
Eucalyptus dives	Broad-leaved Peppermint
Eucalyptus viminalis	Ribbon Gum
Geranium molle subsp. molle	Cranesbill Geranium
Gonocarpus tetragynus	
Hypochaeris radicata	Catsear
Juncus sp.	
Lomandra filiformis	Wattle Mat-rush
Medicago truncatula	Barrel Medic
Microlaena stipoides	Weeping Grass
Oreomyrrhis eriopoda	Australian Carraway
Oxalis perennans	
Plantago hispida	
Rubus fruticosis aggregate	Blackberry
<i>Rytidosperma</i> sp.	Wallaby Grass
Solenogyne dominii	
Stellaria pallida	Lesser Chickweed
Trifolium sp.	Clover

Table 7: Fauna Observed at the Site

Scientific Name	Common Name	Observation Type
Aquila audax	Wedge-tail Eagle	0
Cacatua galerita	Sulphur-crested Cockatoo	Н
Cacatua sanguinea	Little Corella	0
Corvus coronoides	Australian Crow	0
Cracticus tibicen	Australian Magpie	0
Crinia signifera	Common Eastern Froglet	0
Dacelo novaeguineae	Laughing Kookaburra	0
Grallina cyanoleuca	Magpie-lark	0
Platycercus elegans	Common Rosella	0
Rhipidura leucophrys	Willie Wagtail	0
H – Heard		
O - Observed		

Appendix 2: Likelihood of Occurrence Analysis

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Ecological Commun	ities					
Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland		E	Not listed	Remnants may occur on the lower, more fertile parts of the landscape where resources such as water and nutrients are abundant; sites on midslope situations where resources are scarcer are more common.	Recorded	Included in the BAM Calculations
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derved Native Grassland		E	CE	White Box-Yellow Box-Blakely's Red Gum Gum Grassy Woodlands and Derived Grasslands are characterised by a species- rich understorey of native tussock grasses, herbs and scattered shrubs, and the dominance, or prior dominance, of White Box, Yellow Box or Blakely's Red Gum trees. The tree-cover is generally discontinuous and consists of widely-spaced trees of medium height in which the canopies are clearly separated. Areas in which an overstorey exists without a substantially native understorey are degraded and are no longer a viable part of the ecological community. In order for an area to be included in the listed ecological community, a patch must have a	Not recorded during surveys	No

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
				predominantly native understorey. The patch does not need to contain overstorey species to be listed as the ecological community.		
Plants						
Ammobium craspedioides	Yass Daisy	V	V	Found in moist or dry forest communities, Box-Gum Woodland and secondary grassland derived from clearing of these communities. Grows in association with a large range of eucalypts (<i>Eucalyptus blakelyi</i> , <i>E. bridgesiana, E. dives, E. goniocalyx, E.</i> <i>macrorhyncha, E. mannifera, E. melliodora,</i> <i>E. polyanthemos, E. rubida</i>). Apparently unaffected by light grazing, as populations persist in some grazed sites.	Potential to occur, however, ERM survey undertaken in October 2016 was during the months specified in the BAM Calculator and the species was not recorded	No
Amphibromus fluitans	River Swamp Wallaby- grass	V	V	Amphibromus fluitans grows mostly in permanent swamps. The species needs wetlands which are at least moderately fertile and which have some bare ground, conditions which are produced by seasonally- fluctuating water levels. Habitats in south- western NSW include swamp margins in mud, dam and tank beds in hard clay and in semi-dry mud of lagoons with Potamogeton and Chamaeraphis species.	None, suitable habitat does not occur	No

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Eucalyptus aggregata	Black Gum	V	V	Grows in the lowest parts of the landscape. Grows on alluvial soils, on cold, poorly- drained flats and hollows adjacent to creeks and small rivers. Often grows with other cold- adapted eucalypts, such as Snow Gum or White Sallee (<i>Eucalyptus pauciflora</i>), Manna or Ribbon Gum (<i>E. viminalis</i>), Candlebark (<i>E.</i> <i>rubida</i>), Black Sallee (<i>E. stellulata</i>) and Swamp Gum (<i>E. ovata</i>). Black Gum usually occurs in an open woodland formation with a grassy groundlayer dominated either by River Tussock (<i>Poa labillardierei</i>) or Kangaroo Grass (<i>Themeda australis</i>), but with few shrubs. Also occurs as isolated paddock trees in modified native or exotic pastures.	Considered in the BA	M Calculations
Lepidium hyssopifolium	Basalt Pepper-cress	E	E	In NSW the species was known to have occurred in both woodland with a grassy understorey and in grassland. The species may be a disturbance opportunist, as it was discovered at the most recently discovered site (near Bungendore) following soil disturbance.	Potential to occur, however, ERM survey undertaken in October 2016 was during the months specified in the BAM Calculator and the species was not recorded	No

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Pelargonium sp. Striatellum	Omeo Stork's-bill	E	E	It has a narrow habitat that is usually just above the high-water level of irregularly inundated or ephemeral lakes, in the transition zone between surrounding grasslands or pasture and the wetland or aquatic communities. It sometimes colonises exposed lake beds during dry periods.	None, suitable habitat does not occur	No
Rutidosis leptorrhynchoides	Button Wrinklewort	E	E	Occurs in Box-Gum Woodland, secondary grassland derived from Box-Gum Woodland or in Natural Temperate Grassland; and often in the ecotone between the two communities. Grows on soils that are usually shallow, stony red-brown clay loams; tends to occupy areas where there is relatively less competition from herbaceous species (either due to the shallow nature of the soils, or at some sites due to the competitive effect of woodland trees). Exhibits an ability to colonise disturbed areas (eg. vehicle tracks, bulldozer scrapings and areas of soil erosion).	Unlikely, suitable habitat does not occur. Species can be surveyed at any time of year (TSPD) and was not observed during survey for this BDAR or the ERM survey in October 2016.	No
Frogs						
Litoria booroolongensis	Booroolong Frog	E	E	Live along permanent streams with some fringing vegetation cover such as ferns, sedges or grasses. Adults occur on or near cobble banks and other rock structures within stream margins. Shelter under rocks or	None, suitable habitat does not occur	No

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
				amongst vegetation near the ground on the stream edge.		
Reptiles						
Aprasia parapulchella	Pink-tailed Worm-lizard	V	V	Inhabits sloping, open woodland areas with predominantly native grassy groundlayers, particularly those dominated by Kangaroo Grass (<i>Themeda australis</i>). Sites are typically well-drained, with rocky outcrops or scattered, partially-buried rocks. Commonly found beneath small, partially-embedded rocks and appear to spend considerable time in burrows below these rocks; the burrows have been constructed by and are often still inhabited by small black ants and termites.	Considered in the BA	M Calculations
Delma impar	Striped Legless Lizard		V	Found mainly in Natural Temperate Grassland but has also been captured in grasslands that have a high exotic component. Also found in secondary grassland near Natural Temperate Grassland and occasionally in open Box-Gum Woodland. Habitat is where grassland is dominated by perennial, tussock-forming grasses such as Kangaroo Grass <i>Themeda</i> <i>australis</i> , spear-grasses <i>Austrostipa</i> spp. and poa tussocks <i>Poa</i> spp., and occasionally wallaby grasses <i>Austrodanthonia</i> spp.	None, suitable habitat does not occur	No

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Birds						
Anthochaera phrygia	Regent Honeyeater	CE	CE	The species inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. Regent Honeyeaters inhabit woodlands that support a significantly high abundance and species richness of bird species. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. Every few years non-breeding flocks are seen foraging in flowering coastal Swamp Mahogany and Spotted Gum forests, particularly on the central coast and occasionally on the upper north coast.	Considered in the BA	M Calculations
Artamus cyanopterus cyanopterus	Dusky Woodswallo w	V		Primarily inhabit dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. It has also been recorded in shrublands, heathlands and very occasionally in moist forest or rainforest. Also found in farmland, usually at the edges of forest or woodland.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded a low risk of potential impact.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Calidris ferruginea	Curlew Sandpiper	E	CE	It generally occupies littoral and estuarine habitats, and in New South Wales is mainly found in intertidal mudflats of sheltered coasts. It also occurs in non-tidal swamps, lakes and lagoons on the coast and sometimes inland. It forages in or at the edge of shallow water, occasionally on exposed algal mats or waterweed, or on banks of beach-cast seagrass or seaweed.	None, suitable habitat does not occur	No
Callocephalon fimbriatum	Gang-gang Cockatoo	V		In spring and summer, generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands, particularly box-gum and box- ironbark assemblages, or in dry forest in coastal areas and often found in urban areas.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded a low risk of potential impact.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V		Found in eucalypt woodlands (including Box- Gum Woodland) and dry open forest of the inland slopes and plains inland of the Great Dividing Range; mainly inhabits woodlands dominated by stringybarks or other rough- barked eucalypts, usually with an open grassy understorey, sometimes with one or more shrub species; also found in mallee and River Red Gum (<i>Eucalyptus camaldulensis</i>) Forest bordering wetlands with an open understorey of acacias, saltbush, lignum, cumbungi and grasses; usually not found in woodlands with a dense shrub layer; fallen timber is an important habitat component for foraging; also recorded, though less commonly, in similar woodland habitats on the coastal ranges and plains.	Considered in the BA	M Calculations
Daphoenositta chrysoptera	Varied Sittella	V		Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded a low risk of potential impact.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Epthianura albifrons	White-fronted Chat	V		Gregarious species, usually found foraging on bare or grassy ground in wetland areas, singly or in pairs. They are insectivorous, feeding mainly on flies and beetles caught from or close to the ground. Isolated flowering trees in open country, e.g. paddocks, roadside remnants and urban trees also help sustain viable populations of the species.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact</i> <i>Assessment</i> (ERM 2017) which concluded a low risk of potential impact.
Glossopsitta pusilla	Little Lorikeet	V		Forages primarily in the canopy of open Eucalyptus forest and woodland, yet also finds food in Angophora, Melaleuca and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity.	Considered in the BAM Calculations	
Grantiella picta	Painted Honeyeater	V	V	Inhabits Boree/ Weeping Myall (<i>Acacia pendula</i>), Brigalow (<i>A. harpophylla</i>) and Box-Gum Woodlands and Box-Ironbark Forests. A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded a low risk of potential impact.
Hieraaetus morphnoides	Little Eagle	V		Occupies open eucalypt forest, woodland or open woodland. Sheoak or Acacia woodlands and riparian woodlands of interior NSW are also used.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded a low risk of potential impact.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Lathamus discolor	Swift Parrot	E	CE	On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Favoured feed trees include winter flowering species such as Swamp Mahogany <i>Eucalyptus robusta</i> , Spotted <i>Gum Corymbia maculata</i> , Red Bloodwood <i>C. gummifera</i> , Mugga Ironbark <i>E.</i> <i>sideroxylon</i> , and White Box <i>E. albens</i> .	Considered in the BA	M Calculations
Ninox strenua	Powerful Owl	V		The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. The species breeds and hunts in open or closed sclerophyll forest or woodlands and occasionally hunts in open habitats.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact</i> <i>Assessment</i> (ERM 2017) which concluded a low risk of potential impact.
Petroica boodang	Scarlet Robin	V		The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. This species lives in both mature and regrowth vegetation. It occasionally occurs in mallee or wet forest communities, or in wetlands and tea-tree swamps. Scarlet Robin habitat usually contains abundant logs and	Considered in the BAM Calculations	

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
				fallen timber: these are important components of its habitat.		
Petroica phoenicea	Flame Robin	V		Breeds in upland tall moist eucalypt forests and woodlands, often on ridges and slopes. Prefers clearings or areas with open understoreys. The groundlayer of the breeding habitat is dominated by native grasses and the shrub layer may be either sparse or dense. Occasionally occurs in temperate rainforest, and also in herbfields, heathlands, shrublands and sedgelands at high altitudes.	Considered in the B	AM Calculations
Polytelis swainsonii	Superb Parrot	V	V	Inhabit Box-Gum, Box-Cypress-pine and Boree Woodlands and River Red Gum Forest. In the Riverina the birds nest in the hollows of large trees (dead or alive) mainly in tall riparian River Red Gum Forest or Woodland. On the South West Slopes nest trees can be in open Box-Gum Woodland or isolated paddock trees. Species known to be used are Blakely's Red Gum, Yellow Box, Apple Box and Red Box.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded that no suitable habitat is available due to the lack of box gum woodland.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Rostratula australis	Australian Painted Snipe	E	E	Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber. Nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds.	None, suitable habitat does not occur	No
Mammals						
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	Roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the Fairy Martin (<i>Petrochelidon ariel</i>), frequenting low to mid-elevation dry open forest and woodland close to these features. Found in well-timbered areas containing gullies.	Unlikely	No
Dasyurus maculatus	Spotted- tailed Quoll	V	E	Recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites.	Considered in the BAM Calculations	
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V		Prefers moist habitats, with trees taller than 20 m. Generally roosts in eucalypt hollows, but has also been found under loose bark on trees or in buildings.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact Assessment</i> (ERM 2017) which concluded a low risk of potential impact.

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	V		Caves are the primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures. Hunt in forested areas, catching moths and other flying insects above the tree tops.	Considered in the BAM Calculations	
Phascolarctos cinereus	Koala	V	V	Inhabit eucalypt woodlands and forests.	Considered in the BAM Calculations	
Pseudomys novaehollnadiae	New Holland Mouse			Heathland, woodland and open forest habitats. Prefers recently burned or other naturally disturbed habitats (Museum Victoria, 2018).	Unlikely	Potential impacts to the species are considered in the <i>Ecology Impact</i> <i>Assessment</i> (ERM 2017) which concluded that the Project is outside of the species known distribution and no areas of potential habitat are available.
<i>Pteropus</i> <i>poliocephalus</i>	Grey-headed Flying-fox	V	V	Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Feed on the nectar and pollen of native trees, in particular Eucalyptus, Melaleuca and Banksia, and fruits of rainforest trees and vines.	Potential	Potential impacts to the species are considered in the <i>Ecology Impact</i> <i>Assessment</i> (ERM 2017) which concluded that the Project is located at the extent of the predicted distribution of this species and any individuals would not be

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Preferred Habitat	Likelihood of Occurrence	Considered for Further Assessment
						dependent on any of the resources present.

Species listed under the EPBC Act that are not also listed under the BC Act are not included in the above table. Potential impacts to these species are addressed in the *Ecology Impact Assessment* (ERM 2017).

Appendix 3: BAM Plot Data

Attribute	Plot 1	Plot 2
Zone Composition Data		
Number of Tree Species	2	2
Number of Shrub Species	0	0
Number of Grass and grass like Species	2	3
Number of Forb Species	4	3
Number of Fern Species	0	0
Number of Other Species	0	0
Zone Structure Data		
Tree Cover	65	70
Shrub Cover	0	0
Grass and grass like cover	2	2.1
Forb cover	0.4	0.3
Fern cover	0	0
Other Cover	0	0
Zone Function Data		
Regeneration	Present	Present
Stem Classes (cm)	5 – 9	10 – 19
	20 - 29	30 - 49
	30 - 49	
Number of large trees	5	7
Number hollow-bearing trees	6	5
Leaf litter	23	46
Length coarse woody debris	79.6	78.9
High threat weed cover	0.5	0.5

Appendix 4: BAM Credit Report



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name		BAM data last updated *
00011702/BAAS18088/18/00011703	Biala Wind Farm Tran	smission Line	24/02/2018
Assessor Name Evelyn Craigie	Assessor Number BAAS18088		BAM Data version * 3
Proponent Names	Report Created 10/08/2018	* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. calculator database may not be completely aligned with Bic	

Candidate Serious and Irreversible Impacts Nil

Nil

Additional Information for Approval

PCTs With Customized Benchmarks No Changes

Predicted Threatened Species Not On Site



Name

BAM Biodiversity Credit Report (Like for like)

Calyptorhynchus lathami / Glossy Black-Cockatoo

732, 797, 802, 803, 804, 1100, 1101, 1102,

1103, 1110, 1191, 1197, 1199, 1228, 1229,

Haliaeetus leucogaster / White-bellied Sea-Eagle

1295, 1501)

Ecosystem Credit Summary

PCT		TEC		Area	Credits			
1191-Snow Gum - Candle Bark woodland on broad valley flats of the tablelands and slopes, South Eastern Highlands Bioregion		Tablelands Snow C and Ribbon Gum C South Eastern Higl East Corner and N Bioregions	Gum, Black Sallee, Candlebark Grassy Woodland in the hlands, Sydney Basin, South SW South Western Slopes	0.3	5.00			
Credit classes for 1191	Like-for-like options							
	Any PCT with the below TEC	Containing HBT	In the below IBRA subregion	5				
	Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes Bioregions (including PCT's 285, 302, 303, 304, 350, 677, 679, 680,	Yes	Crookwell,Bungonia, Inland S Kanangra, Monaro, Murrumb Oberon and Orange. or Any IBRA subregion that is w kilometers of the outer edge	ilopes, bateman, ithin 100 of the				

impacted site.



BAM Biodiversity Credit Report (Like for like)

Credit classes for 1191

Species Credit Summary No Species Credit Data