



HumeLink Biodiversity Offset Package

Biodiversity Offset Package

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HumeLink – Biodiversity Offset Package

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Executive Summary

Project Outline

Transgrid proposes the construction and operation of around 365 km of high-voltage transmission lines and associated infrastructure between Wagga Wagga, Bannaby and Maragle in southern New South Wales. This infrastructure is collectively referred to as HumeLink, critical infrastructure to bring more affordable, reliable and renewable energy to the grid.

Transgrid has received recent NSW approval (November 2024) for the Project under Part 5 Division 5.2 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). The Project has been declared Critical State Significant Infrastructure (CSSI) under State Environmental Planning Policy (Planning Systems) 2021. The Project was also declared a controlled action by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) and requires a separate approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Requirement for a Biodiversity Offset Package

The HumeLink CSSI project has conditions of approval that allow for a delayed delivery of offset obligations, primarily due to the project's required construction start date (anticipated to be Q4 of 2024) which does not allow sufficient time to address the Project's offset requirement. The Project's offset requirement has evolved throughout the biodiversity impact assessment and resultant Biodiversity Development Assessment Report (BDAR) revisions (Niche, June 2024). In addition, the offset obligation is unusually complex as is the process of identifying sources of credits to match the obligation. It has therefore not been possible to significantly progress offset credit retirement, nor will it be possible to have secured all offsets for the project prior to the commencement of development.

Efforts have been made to source biodiversity offsets for the project as part of the Project's Biodiversity Offset Delivery Strategy which was commissioned in September 2023 and which has resulted in the proponent achieving the following:

- formulation of strategy to acquire biodiversity offsets
- identification and preliminary assessment of potential offset sites including desktop and on-ground assessments
- advanced negotiations with landholders regarding progression of biodiversity stewardship site assessments
- assessment of the credit market and correspondence with pending and active credit holders
- lodgement of an expression of interest (EOI) in the credits wanted register for difficult to obtain credits
- lodgement of credit demand EOIs with NSW Nature Markets and Offsets (NMO) (previously NSW Credit Supply Taskforce) Credit Supply Fund.

Progress on the most important features of the above measures is detailed within this BOP. The strategy is continuing to progress with the timeframe and responsibilities for achieving offset measures (as per the relevant section in this BOP) demonstrating successive milestones and a discharge of total obligations by Q3 2026 (a two-year post approval timeframe).

Biodiversity Offset Package

Transgrid is required to deliver biodiversity offset measures as part of the Infrastructure Approval for the Project. This Biodiversity Offset Package (BOP) has been prepared to meet the Infrastructure Approval conditions for



HumeLink relating to biodiversity offsets and will be finalised to the satisfaction of the Planning Head after consultation with BCT and BCS in accordance with the conditions of approval. The BOP examines likely offset measures and calculation of the equivalent payments to the Biodiversity Conservation Fund (BCF) if relevant measures are not implemented and delivered.

The BOP contains a package of measures to offset the project's impacts on biodiversity, which consider four focus areas:

- Reductions in the assumed presence liability for threatened species, achieved via additional survey in accordance with the approved Supplementary Biodiversity Strategy (SBS)
- Establishing new Biodiversity Stewardship Sites on third party owned land (six potential sites in various stages at the time of this report)
- Use of credits from existing Transgrid Biodiversity Agreements
- Credits purchased from the market or via additional sites yet to be identified.

In addition, other NMO measures such as the Credit Supply Fund are considered within this BOP. Table 1 provides a summary of the offset requirement and forecasting scenarios with regard to the biodiversity offset measures proposed for the Project. Following delivery of the preferred measures outlined above and detailed in this report, it is expected that there will be a relatively small residual liability. This may be met in accordance with Ancillary Rules under the Biodiversity Offset Scheme, or with agreement from the BCT, through payment into the BCF.

Table 1 Summary of the HumeLink offset requirement and potential measures to address the requirement under the Biodiversity Offset Package

Biodiversity Conservation Measures	Credit liability (Nov 2024)	Predicted reduction of liability via additional survey	Potential liability addressed via measure to establish 6 x BSAs (preliminary)	Potential liability addressed via use of existing Transgrid BSAs	Potential liability addressed via market purchase or additional BSAs
Ecosystem Credits	15,128	0	7,316	1,491	6,143
Species Credits	232,233	30,813	16,426	1,855	139,467
TOTAL Biodiversity Credits	247,361	30,813	23,742	3,346	145,610

The HumeLink Amendment Report included updated biodiversity mitigation measures and project commitments to minimise potential impacts during finalisation of the detailed design and construction methodology and to confirm meeting final offset requirements based on actual clearing. The BOP will be updated every six months until the offset measures have been met, as required by the Planning Secretary and in consultation with the Biodiversity Conservation and Sciences (BCS) group, to reflect changes to the Project's biodiversity impact and offsets.



Offset requirement and acquittal

Biodiversity impacts from the amended Project have been assessed within the Revised BDAR (Niche, June 2024) as required by the Planning Secretary's Environmental Assessment Requirements (SEARs) and in accordance with the BAM (Department of Planning, Industry and Environment 2020). In addition, liaison with DPHI and BCS has occurred subsequent to submission of the Revised BDAR to determine revised offset requirements after consideration of:

- smoothed clearing polygons
- incorporation of single-use access tracks for construction
- indirect impacts
- prescribed impacts (edge effects and connectivity)
- adjustments for full loss considerations within the Easement Clearing Zone.

Based on these considerations a total offset requirement of 247,361 biodiversity credits must be acquitted, comprising:

- 15,128 ecosystem credits to compensate for clearing of up to 926.78 ha of native vegetation; and
- 232,233 species credits to compensate for the impacts to habitat for 78 threatened flora and fauna species.

At the time of preparing the BOP, Transgrid has not delivered any biodiversity offset measures and therefore the full credit liability currently applies. Transgrid propose to reduce the credit obligation through implementation of a SBS, under which further survey will be undertaken to reduce the area of assumed presence. Transgrid will endeavour to acquit the final offset obligation primarily through a combination of establishing new Biodiversity Stewardship Agreement sites and purchases of existing credits from the market. Other biodiversity conservation measures may also be used to acquit certain offset obligations, including conservation actions, where available, in consultation with BCS and NMO. If these options for securing offsets are exhausted and a residual offset liability remains, agreement from the BCT will be sought to pay the remaining liability into the BCF. Any payment into the BCF would be at the price as calculated by the Biodiversity Offsets Payment Calculator (BOPC) at the time of payment. Transgrid considers that payment into the BCF is a last resort after all other pathways for delivering biodiversity conservation measures have been exhausted.

In accordance with the Project conditions, Transgrid is required to establish a bank guarantee of an amount totalling the amount calculated using the offset payment calculator prices of the final credit obligation being **\$502,332,107¹**. This guarantee provides security to the Minister for Planning and Public Spaces, for the Project's offset obligations under the likely approval. Should the required biodiversity offsets not be delivered in accordance with the BOP, the bank guarantee ensures government funding of offset measures, such as payment to the BCF.

¹ Based on the Biodiversity Conservation Fund estimate received 9/09/2023. Twenty four months of indexation has been applied to the final charge amount.



Glossary and list of abbreviations

Term or abbreviation	Definition
BAM	Biodiversity Assessment Method, which is given force under the Biodiversity Assessment Method Order 2017 and 2020
BC Act	NSW <i>Biodiversity Conservation Act 2016</i>
BCF	Biodiversity Conservation Fund managed by the Biodiversity Conservation Trust that holds payments made to acquit offset obligations
BCS	Biodiversity Conservation and Science group within the NSW DCCEEW
BCT	Biodiversity Conservation Trust, the NSW government organisation responsible for the administration of NSW government's private land conservation schemes and BSAs
BDAR	Biodiversity Development Assessment Report
BOS	Means the NSW Biodiversity Offset Scheme
BOP	Means this document, Biodiversity Offset Package
BSA	Biodiversity Stewardship Agreement, a legally binding agreement made between a landholder and the NSW Government
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
DCCEEW	The Commonwealth or NSW Department of Climate Change, Energy, the Environment and Water
DPHI	The NSW Department of Planning, Housing and Infrastructure, formerly the Department of Planning, Industry and Environment
DPE	The former NSW Department of Planning and Environment
DPIE	The former NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EP&A Act	The NSW <i>Environmental Planning and Assessment Act 1979</i>



Term or abbreviation	Definition
EPBC Act	The Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EWMP	Enabling Works Management Plan
HBT	Hollow-bearing trees
IBRA	Interim Biogeographic Regionalisation for Australia
MNES	Matters of national environmental significance protected under the EPBC Act
MOU	Memorandum of understanding
NMO	Nature Markets and Offsets division within the BCS group. Formerly the Credit Supply Taskforce
OTG	Offset Trading Group, the base tradeable unit for an ecosystem credit
PCT	Plant Community Type, the base unit of vegetation classification in NSW. PCTs can be comprised of several zones identifying a consistent level of condition
PEC	Project EnergyConnect
SAII	Serious and Irreversible Impacts
SBS	Supplementary Biodiversity Strategy
TBDC	Threatened Biodiversity Data Collection database managed by the NSW DCCEEW
TEC	Threatened Ecological Community listed under the NSW BC Act and/or Commonwealth EPBC Act



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1 Introduction

1.1 Overview of HumeLink

Transgrid proposes to increase the energy network capacity in southern NSW through the development of new 500 kilovolt (kV) high-voltage transmission lines and associated infrastructure between Wagga Wagga, Bannaby and Maragle. The project is collectively referred to as HumeLink. The route traverses primarily rural areas including land uses such as cropping, grazing, horticulture, forestry, and renewable power generation (solar and wind). The amended project footprint also extends across State forests including Bago State Forest, Green Hills State Forest, Red Hill State Forest and privately owned plantations. The amended project footprint includes approximately 67% native vegetation, 9.5% non-native vegetation and 23.5% Category 1 lands (lands to which the NSW Biodiversity Offset Scheme (BOS) does not apply), but Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) does apply.

Transgrid has been provided approval for the Project under Part 5 Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The Project has been declared Critical State Significant Infrastructure under State Environmental Planning Policy (Planning Systems) 2021. The Project was also declared a controlled action by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) and requires a separate approval under the EPBC Act. The Project is subject to the bilateral assessment process that has been established between the Commonwealth and NSW governments and the Amending Agreement No. 1 that endorses the BOS as the primary mechanism for meeting biodiversity offset obligations in NSW.

1.2 Conditions of Approval and Project Commitments

1.2.1 Biodiversity offset conditions

This Biodiversity Offset Package (BOP) has been prepared to meet the Conditions of Approval (CoA) for HumeLink relating to biodiversity offsets, primarily B26 and B27 (see Annex 1 for full CoA and Table 2 for summary of relevant CoA).

Transgrid will be required to implement and deliver a package of biodiversity offset measures to meet the Project's biodiversity offset obligation. The BOP details the Project offset obligation and provides the projected cost for payments to the Biodiversity Conservation Fund (BCF) if other relevant measures are not implemented and delivered. The BOP also includes the timing and responsibilities for implementing and delivering the offset measures. Timing is linked to CoA that allow measures to be undertaken within two years of Project approval (by 13 November 2026), unless otherwise agreed with the Planning Secretary. The BOP, or other reporting as agreed, will be updated every 6 months to document progress towards delivery of offset measures.

Further, Transgrid will be required to establish a bank guarantee of an amount totalling **\$502,332,107²** to provide security to the Minister for Planning and Public Spaces for the Project's offset obligations under the approval. Should the required biodiversity offsets not be delivered in accordance with preferred measures outlined within the BOP, the bank guarantee ensures payments can be made to the BCF instead.

² Credit pricing based on Biodiversity Conservation Fund pricing information received 06/09/2024. Twenty-four months of indexation has been applied. Credit numbers are based on Version 9 of the Project's BAMC cases; finalised 03/09/2024 and submitted to BCD as part of revised clearing calculations post-submission of the BDAR.



Table 2 HumeLink Infrastructure Approval Conditions of Approval – biodiversity offsets (SSI 36656827)

Condition No.	Summary of condition of approval relevant to biodiversity offsets	Where addressed
B25	B25. Unless otherwise agreed with the Planning Secretary, the Proponent must: (a) ensure that the vegetation and habitat clearing limits specified in Table 2-1, Table 2-2 and Table 2-3 of Appendix 2 are not exceeded; and (b) minimise: (i) the impacts of the development on hollow-bearing trees; (ii) the impacts of the development on threatened species; and (iii) the clearing of native vegetation and key habitat	Project's Biodiversity Management Plan and Construction Environmental Management Plan.
B26	Prior to carrying out any development that would impact on biodiversity values requiring offset or within 3 months of the date of the Project Approval whichever is sooner, the Proponent must update the Biodiversity Offset Package (Package) that is consistent with the EIS, in consultation with BCS and BCT and to the satisfaction of the Planning Secretary in writing. The Package must include, but not necessarily be limited to: (a) details of the specific biodiversity offset measures to be implemented and delivered in accordance with the EIS; (b) the cost for each specific biodiversity offset measure, as determined in accordance with a BCF Charge Statement indexed on a monthly basis in accordance with the Biodiversity Offsets Payment Calculator Order 2022; (c) the timing and responsibilities for the implementation and delivery of the measures required in the Package; (d) a report to be provided every 6 months from the approval of the updated Package to the Planning Secretary, BCS and the BCT setting out the progress towards delivering each specific biodiversity offset measure; and (e) confirmation that the biodiversity offset measures will have been implemented and delivered no later than 13 November 2026, unless otherwise agreed with the Planning Secretary. Following the Planning Secretary's approval, the Proponent must implement and deliver the Biodiversity Offset Package.	This document (version 3) will be submitted to BCS and the BCT for consideration and to the Planning secretary for approval/sign off. This document will be accompanied by a record of consultation. (a) Section 4 of this document details the proposed offset measures. (b) Annex 3 of this document provides cost for each relevant item. Methods for calculation and summary calculations are provided in Section 5.1. (c) Section 6 of this document. (d) To be included in future versions of this document. The present



Condition No.	Summary of condition of approval relevant to biodiversity offsets	Where addressed
		document indicates current progress in Section 4. (e) Section 1.2.1 and Section 6.
B27	Prior to carrying out any development that could impact the biodiversity values requiring offset, the Proponent must lodge bank guarantee(s) with a total value of \$502,332,107, in accordance with the Deed of Agreement with the Planning Secretary (or delegate) executed on 10 October 2024. The Proponent must comply with the terms of the Deed.	Section 1.2.1 acknowledges the requirement. Section 5.1 provides the basis for the cost calculation.
B28	Prepare a Supplementary Biodiversity Strategy (SBS) detailing survey and assessment methods, in accordance with the BAM, to verify impacts upon relevant biodiversity values, including SAI entities, where a reduction in credit liability for the relevant biodiversity value assumed present is being sought.	Section 1.2.2.1 refers to the SBS. The SBS document will provide details on the survey.
B29	Prepare Biodiversity Assessment Verification Reporting (BAVR) to detail outcomes of surveys undertaken in accordance with the SBS, including any reductions to relevant credit obligations. Where species are found to be present following the surveys undertaken under condition B28 or that are assumed to be present, identify measures to avoid and / or mitigate the impact to those entities for inclusion in a revised version of the Biodiversity Management Plan required under condition B30. Any required changes to biodiversity offset or mitigation measures arising from the Biodiversity Assessment Verification Report must be incorporated into an updated version of the Biodiversity Offset Package under condition B26 in consultation with BCS and BCT.	Section 1.2.2.2 refers to the BAVR. The BAVR will document survey outcomes. Any updates to offset requirements will be reflected in updated versions of this document submitted to BCS and the BCT for consideration and to the Planning secretary for approval/sign off.
B30	Prior to carrying out any development the Proponent must prepare a Biodiversity Management Plan for the development to the satisfaction of the Planning Secretary. The plan must (d) include a description of the measures that would be implemented for: (i) meeting the biodiversity mitigation requirements in condition B25 and as required by condition B29; (ii) minimising: • the amount of vegetation clearing on site;	Project's Biodiversity Management Plan. Reductions to clearing, where they result in a reduction of offsetting requirements, as a result of implementation of this condition will be captured in updated versions of this document.



Condition No.	Summary of condition of approval relevant to biodiversity offsets	Where addressed
	• the loss of key fauna habitat (including tree hollows); • the impacts of fauna on site, including undertaking pre-clearance surveys; and • potential indirect impacts on threatened flora and fauna species; (xii) minimising impacts on entities at risk of a serious and irreversible impact (SAIL), including for Box Gum Woodland, Rice Flower (<i>Pimelea bracteata</i>) and Sooty Owl (<i>Tyto tenebricosa</i>) and other entities that are identified as requiring mitigation measures in the Biodiversity Assessment Verification Report required by condition B29 and the additional mitigation measures outlined in the additional information (Transgrid proposal dated 2 September 2024) within three years of the date of the Project Approval (over and above the relevant credit obligations);	



1.2.2 Approval conditions context and required documentation

The BDAR for the Environmental Impact Statement and Revised BDAR for the Amendment Report were prepared with the following field survey limitations (as acknowledged in reporting):

- Certain land was inaccessible at the time of the survey and therefore vegetation and habitat could not be fully assessed
- Targeted survey for particular species were not able to be completed within the correct season according to the Threatened Species Data Collection (TBDC)
- Targeted survey for particular species were not able to be completed during appropriate climatic requirements according to the TBDC
- Overall survey effort was not met due to difficulty reaching requirements outlined in relevant survey guidelines
- Some cryptic species were not detectable during the surveys.

As such, the presence and associated offset liability for a large number of species has been assumed (in accordance with the BAM), resulting in an over-estimation of the likely impact. The mapping of PCTs within inaccessible lands has also been completed on a conservative basis, influencing inflated species and ecosystem impacts in some cases. Acknowledging the above, Conditions 28 and 29 (Table 2) facilitate additional avoidance and mitigation measures via refinement of actual Project impacts, and in turn reduction of the offset liability to more closely reflect reduced impacts.

1.2.2.1 Supplementary Biodiversity Strategy

Transgrid will facilitate preparation of a Supplementary Biodiversity Strategy (SBS), prepared in consultation with BCS, detailing survey and assessment methods, in accordance with the BAM, including for SAIL entities, and other entities where a reduction in credit liability for the relevant biodiversity value assumed present is being sought.

1.2.2.2 Biodiversity Assessment Verification Report (BAVR)

Conditions are partly informed by the Project's approved Biodiversity Development Assessment Report (BDAR) which defines clearing limits for the Project. The BAVR together with the SBS will be the basis for informing any credit reductions for incorporation into updates of the BOP; i.e. any required changes to biodiversity offset arising from the Biodiversity Assessment Verification Report will be incorporated into an updated version of the Biodiversity Offset Package under condition B26 in consultation with BCS and BCT.



1.2.3 Other relevant policies and commitments

1.2.3.1 Biodiversity Management Plan and mitigation measures

The Project Environmental Impact Statement (EIS) provides proposed mitigation measures in Appendix D of the EIS Main Report. These mitigation measures have been updated for the Amendment Report and are designed to avoid or minimise potential impacts from the Project. The relevant measures are summarised as follows:

- Measure B1: avoidance of areas of high biodiversity value (such as TEC, SAI candidate species and/or threatened species habitat) through the establishment of ‘no go zones’ and micro-siting of infrastructure and access tracks during detailed design
- Measure B2: supplementary surveys within areas not previously subject to biodiversity survey (inaccessible lands) to close out survey gaps and assess the condition of vegetation and habitats where threatened biodiversity has conservatively been assumed to be present
- Measure B3: infrastructure and access tracks will be located and constructed to minimise impacts to riparian corridors and waterways
- Measure B4: development and implementation of the following management plans:
 - Biodiversity Management Plan to minimise and monitor impacts of construction and operation of biodiversity
 - Connectivity Strategy to minimise impacts of fragmentation on biodiversity development
 - Biosecurity Management Plan to identify priority weeds, pests and pathogens and stipulate management and monitoring requirements
 - Supplementary Hollow and Nest Strategy to provide alternative roosting and/or nesting habitat for threatened fauna displaced during clearing
 - Adaptive management measures for uncertain impacts as part of the Biodiversity Management Plan, such as those associated with inaccessible lands and unexpected finds
 - Bush Fire Emergency Management and Evacuation Plan, to manage any increased risk of bushfire
 - Storm Water Management Plan, Erosion and Sediment Control Plan and Water Quality Management Plan as part of the Construction Environmental Management Plan (CEMP) to manage water quality impacts during construction of the amended project.

A Biodiversity Management Plan (BMP) will be required as part of the Project’s CEMP and approval conditions. The BMP will include measures that will be implemented to avoid and minimise impacts to native vegetation, flora, fauna and associated habitats, and will be informed by a Pre-clearing and Clearing Procedure. Clearing of vegetation will be monitored and tracked against the likely clearing limits for the Project, as identified within the CoA, to ensure that limits are not breached. Transgrid will forecast predicted clearing, based on the final detailed design footprint, and compare against the approved limits. If the forecasts indicate potential exceedances of the limits, Transgrid will contact and discuss the matter with the DPHI. If clearing outcomes are less than forecast a reconciliation of the Project credit liability may be made via 6-monthly updates of this BOP.

Construction will commence immediately following project approval for enabling works, prior to approval of the BMP. Enabling works broadly involve preparation of work sites for construction and are consistent with Chapter 26 of the EIS. An Enabling Works Management Plan (EWMP) has been prepared to describe how works will be delivered and outlines the associated environmental controls that will apply. Enabling works locations have been chosen that avoid significant impacts on biodiversity values and are restricted to areas of existing hardstand, other disturbance such as pasture improvement, or areas of low biodiversity constraint. The EWMP has been submitted to DPHI with project approval documentation. All biodiversity impacts and offsets associated with enabling works are encompassed within this BOP.



1.2.4 Project commitments

The Amendment Report includes updated environmental mitigation measures and project commitments to further avoid and minimise potential impacts during finalisation of the detailed design and construction methodology and to confirm and meet final offset requirements based on actual clearing. Biodiversity impacts from the amended Project have been assessed within the Revised BDAR (Niche, June 2024) as required by the Planning Secretary's Environmental Assessment Requirements (SEARs) and in accordance with the Biodiversity Assessment Method (Department of Planning, Industry and Environment 2020). In addition, liaison with DPHI and BCS has occurred subsequent to submission of the Revised BDAR to determine revised (increased) offset requirements after consideration of:

- smoothed clearing polygons
- incorporation of single-use access tracks for construction
- indirect impacts
- prescribed impacts (edge effects and connectivity)
- adjustments for full loss considerations within the Easement Clearing Zone.

The commitment to meet the liability is described in this BOP. Transgrid will carry out the Project in accordance with these commitments.



2 Biodiversity Offset Scheme and Offset Rules

2.1 Offset Rules

Clause 6.1 of the NSW Biodiversity Conservation Regulation 2017 (BC Regulation) defines the trading rules for ecosystem and species credits under the NSW BOS. The rules for trading ecosystem credits have been distilled by the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW), previously the Department of Planning and Environment (DPE), in *Offset Rules and Ecosystem Credits – Guidance on Credit Retirement Options for Ecosystem Credits Under the Offset Rules* (DPE 2023). A summary of the relevant trading rules for ecosystem and species credits are provided below.

2.2 Like-for-like trading rules for ecosystem credits

Like-for-like credit retirement is defined as:

- Impacts on native vegetation being offset with vegetation that is in the same local area as the impact (being the same or adjacent IBRA (Interim Biogeographic Regionalisation for Australia) subregions³), and
 - if a Threatened Ecological Community (TEC) was impacted, the offset must be for the same TEC, or
 - if other native vegetation (i.e. vegetation that is not a TEC) was impacted, the offset must be vegetation that is the same vegetation class and in the same or higher offset trading group (OTG).
- If the impacted vegetation contains hollow bearing trees (HBT) the offset must also contain HBT.

The OTGs for TECs are identified in Table 3 and the OTGs for non-threatened PCTs are identified in Table 4.

Table 3 OTGs for TECs

Threat status	OTG name for ecosystem credits
Critically endangered ecological community	Name of the critically endangered ecological community
Endangered ecological community	Name of the endangered ecological community
Vulnerable ecological community	Name of the vulnerable ecological community

Table reproduced from Table 4 of the BAM (DPIE 2020)

³ IBRA subregions are identified under the Interim Biogeographic Regionalisation for Australia (IBRA) system, which divides Australia into bioregions and subregions on the basis of their dominant landscape-scale attributes. It can be the same or an adjoining IBRA subregion as the impacted site, or any subregion that is within 100 km of the outer edge of the impacted site.



Table 4 OTGs for non-threatened PCTs

Threat status group	Offset trading group tiers for ecosystem credits
Very High Threat (VHT)	Tier 1: PCTs in the same vegetation class with a percentage cleared value $\geq 90\%$ (being the name of the vegetation class - percentage cleared value $\geq 90\%$)
High Threat (HT)	Tier 2: PCTs in the same vegetation class with a percent cleared value $\geq 70\%$ and $< 90\%$ (being the name of the vegetation class - percentage cleared value $\geq 70\%$ and $< 90\%$)
Moderate Threat (MT)	Tier 3: PCTs in the same vegetation class with a percentage cleared value $\geq 50\%$ and $< 70\%$ (being the name of the vegetation class - percentage cleared value $\geq 50\%$ and $< 70\%$)
Low Threat (LT)	Tier 4: PCTs in the same vegetation class with a percentage cleared value $< 50\%$ (being the name of the vegetation class - percentage cleared value $< 50\%$)

2.3 Offset Trading Rules – Species Credits

Like-for-like rules apply that require impacts on a threatened species to be offset with biodiversity credits that represent the same threatened species. Local area rules do not typically apply to species credits enabling species credits to be sought from the whole of NSW.

2.4 Reasonable steps and the application of the variation rules

Section 6.4 of the BC Regulation sets out the variation rules for ecosystem credit retirement. The *Offset Rules and Ecosystem Credits – Guidance on Credit Retirement Options for Ecosystem Credits Under the Offset Rules* (DPE 2023) notes that these rules provide increased flexibility to acquit offset obligations by allowing offsetting using a broader suite of biodiversity values and locations. They further note that before applying the variation rules, proponents must seek approval from the decision-maker (being the DPHI in the case of HumeLink) and demonstrate that they have been unable to find like-for-like credits after following the reasonable steps, set out in the *Ancillary rules: Reasonable steps to seek like-for-like biodiversity credits*, which are listed in and subject to the minimum timeframes shown in Table 5.

The variation rules require that impacts on a TEC must be offset with a TEC:

- in the same vegetation formation and in the same or a higher OTG
- located in
- the same IBRA bioregion as the impacted site, or
- a subregion that is within 100 km of the outer edge of the impacted site (i.e. the amended project footprint).

In addition, if the impacted vegetation contained hollow bearing trees, the offset site must also contain hollow bearing trees or artificial hollows.

The variation rules require that impacts on non-threatened vegetation must be offset with native vegetation (including a TEC):

- in the same vegetation formation that is in the same or a higher OTG
- located in
- the same IBRA bioregion as the impacted site, or
- a subregion that is within 100 km of the outer edge of the impacted site.

In addition, if the impacted vegetation contained hollow bearing trees, the offset site must also contain hollow bearing trees or artificial hollows.



Section 6.4 (c) of the BC Regulations provide for the variation rules for species credit retirement. It states that the ordinary offset rules for the determination of the like-for-like credits may be varied as follows:

'(c) In the case of impacts on threatened species that are species credit species—the credits to be retired need not represent the same threatened species, so long as—

- a. if the impacted species is a plant—they represent a plant, and
- b. if the impacted species is an animal—they represent an animal, and
- c. they represent a species that has the same or a higher category of listing under Part 4 of the Act as a threatened species, and
- d. they represent a location that is in—
 - i. the same or an adjoining Interim Biogeographic Regionalisation of Australia subregion as the impacted site, or
 - ii. any such subregion that is within 100 kilometres of the outer edge of the impacted site.

Application of the variation rules for species credits are subject to approval from DPHI and also to the minimum timeframes shown in Table 5.

The variation rules do not apply to matters that are listed as critically endangered under the BC Act, nor to any matter, species or TECs, listed under the EPBC Act.

Table 5 Minimum timeframes to complete reasonable steps to seek like-for-like biodiversity credits

30 days*	60 days*	90 days*	Up to 120 days*
Step 1: Contact credit holders on the 'biodiversity credits public register' who own the relevant credits			
Step 2: Contact landholders on the 'biodiversity stewardship site expression of interest public register' who may be able to generate the relevant credits			
Step 3: Place an entry in the 'biodiversity credits wanted public register'			
Negotiate with anyone who responds			
			Submit an application if all negotiation is concluded unsuccessfully. All negotiations can be considered to be concluded unsuccessfully if agreement has not been reached after 120 days from the offset search start date

*Days from offset search start date

Transgrid is committed to carrying out this process in accordance with the BOS and will seek to secure like for like offsets where available. Due to the complex nature of the Project credit liability, and in particular the large number of species requiring offset, the application of the variation rules will likely be required to enable Transgrid to maximise the proportion of it's offset liability it can acquit via credit retirement from BSAs and avoid payments into the BCF.



Once all options to secure like-for-like credits to offset Project impacts have been exhausted, Transgrid would lodge a formal application to DPHI seeking to apply the 'variation rules' for the Project after the reasonable steps have been completed. An expression of interest would be lodged on the public register for 90 days (i.e. three months), and there are minimum timeframes in relation to good faith negotiation with credit holders, or landholders who express interest in providing biodiversity credits. Expressions of interest are only displayed for up to three-months from the date of submission of the expression, at which point they are automatically removed. The expression of interest may be re-lodged for consecutive three-month periods for up to 12 months, or until the credit liability has been met. Regardless, for the purpose of applying the variation rules this step is considered complete after the first 90 days. Documentation of each step taken with evidence of any negotiations for credit acquisition would be retained to support an application.

2.5 Local area

To meet a like-for-like requirement, Section 6.3 of the Biodiversity Conservation Regulation 2017 requires ecosystem credits be sourced from the local area, which is defined as:

- (i) the same or an adjoining Interim Biogeographic Regionalisation of Australia subregion as the impacted site, or
- (ii) any such subregion that is within 100 kilometres of the outer edge of the impacted site

The "impacted site" in the application of the like-for-like offset rules is taken to be the entire subject land described in the BDAR.

For HumeLink, the amended project footprint (impacted site) spans six IBRA subregions. In practice this means that any ecosystem credit requirement for the project is considered to be associated with all six of the identified impacted subregions. Therefore, offsets for ecosystem credits can be sourced from any of the identified subregions in Table 6. The IBRA bioregions and subregions that comprise the local area for the HumeLink BOP are provided in Table 6.

Table 6 IBRA bioregions and subregions comprising the local area of the HumeLink BOP (Ticks indicate subregions from which the HumeLink ecosystem credit liability can be acquitted on a like-for-like basis).

IBRA bioregion	IBRA subregion	Impacted site	Adjoining	Within 100km
Australian Alps	Snowy Mountains	✓		
Brigalow Belt South	Pilliga		✓	
	Talbragar Valley		✓	
Darling Riverine Plains	Bogan-Macquarie		✓	
NSW South Western Slopes	Capertee Valley		✓	
	Inland Slopes	✓		
	Lower Slopes		✓	
Riverina	Murray Fans		✓	✓
	Murrumbidgee			✓
South Eastern Highlands	Bathurst			✓
	Bondo	✓		



IBRA bioregion	IBRA subregion	Impacted site	Adjoining	Within 100km
	Bungonia	✓		
	Capertee Uplands		✓	
	Crookwell	✓		
	Hill End		✓	
	Kanangra		✓	
	Kybeyan-Gourock		✓	✓
	Oberon		✓	
	Orange		✓	
	Monaro		✓	
	Murrumbateman	✓		
South East Corner	Bateman		✓	
	South East Coastal Ranges		✓	✓
Sydney Basin	Burratorang		✓	
	Cumberland			✓
	Ettrema		✓	
	Illawarra			✓
	Kerrabee		✓	
	Jervis			✓
	Moss Vale			✓
	Sydney Cataract			✓
	Wollemi		✓	

2.6 Biodiversity Conservation Measures

Section 6.4(1) of the BC Act provides for biodiversity conservation measures to offset or compensate for impacts on biodiversity values after any steps taken to avoid or minimise those impacts. For the purposes of the BOS, these measures may include:

- The retirement of biodiversity credits
- Other actions that benefit the biodiversity values of the impacted land or other biodiversity values.

Transgrid have committed to meeting the biodiversity offset obligation for HumeLink through meeting the biodiversity offset measures detailed in this BOP (see Section 4). The biodiversity conservation measures available to offset or compensate for residual impacts of a proposal on biodiversity are provided in section 6.2(2) of the BC Regulation.

Section 6.2.2 (c) of the BC Regulation allows for 'conservation actions' to be funded that would benefit the relevant threatened species or ecological community. Conservation actions remain an option to offset impacts of



the HumeLink project, especially for species that were recorded within the HumeLink survey area and are difficult to offset via land-based offsets. Once the final scale of offsets for these species is quantified, offset mechanisms can be determined in consultation with NSW DCCEW and may include conservation actions where appropriate. The details and progression of conservation actions to address species credits would be developed in consultation with NSW BCS and NMO, and included in BOP updates.

Transgrid will consult with NSW DCCEW regarding development of any new offset mechanisms that might be available to the project. The need for new measures has been identified within the NSW Plan for Nature to meet the urgency of the Electricity Infrastructure Roadmap (State of NSW 2024).



3 Biodiversity Offset Liability

3.1 Introduction

Potential biodiversity impacts from the amended Project have been assessed within the Revised BDAR (Niche, June 2024) as required by the Planning Secretary's Environmental Assessment Requirements (SEARs) and in accordance with the BAM (DPIE 2020). Note that increases in credit requirements for some entities were agreed to post submission of the revised BDAR after liaison with DPHI and BCS to include consideration of:

- smoothed clearing polygons
- incorporation of single-use access tracks for construction
- indirect impacts
- prescribed impacts (edge effects and connectivity)
- adjustments for full loss considerations within the Easement Clearing Zone.

The commitment to meet the liability for the Project is described in this BOP along with measures to reduce the required offset liability (Section 1). Transgrid will carry out the Project in accordance with these commitments.

BOP updates will report on progress of biodiversity offset measures (including credit retirement) and the equivalent and outstanding payment value for each offset entity. Calculated BCF payment values will use estimates of BCF pricing (see Section 5.1) provided by the BCT specifically for this project in September 2024 and also used to determine the specified amount for the bank guarantee within CoA (\$502,332,107). The indexation rate applied (5.7%) has been determined by the Biodiversity Conservation Trust's (BCT) published rate to pay into the BCF, calculated monthly (NSW BCT 2024). Given the two-year time frame to deliver conservation measures for the Project, 24 months of indexation has been applied in determining estimated values to pay into the BCF within this report.

To meet the CoA the following values will be provided for each offset entity within 6 monthly updated BOP reporting:

- original amount (as per Annex 3 including 24 months of indexation)
- amount addressed through survey, avoidance or offset measures as a proportion of the original amount
- amount remaining (based on the outstanding credit requirement).

3.2 Ecosystem offset requirement

3.2.1 Overall Impacts

Native vegetation within the amended project footprint comprises 11 vegetation formations and 25 OTGs, including 5 TECs. The amended project footprint traverses potential habitats for a range of threatened species, some of which have been detected during biodiversity surveys and others that have been assumed present due to survey constraints including inaccessible land.

The total impact offset requirement of 15,128 ecosystem credits (Table 7) must be acquitted by Transgrid to compensate for clearing of up to 926.78 ha of native vegetation. Over 84.1% of the total ecosystem credit obligation is comprised of five OTGs, shown below in decreasing proportion of credit liability:

- 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 TEC (40.8%)
- Southern Tablelands Dry Sclerophyll Forests, low threat status (16.2%)
- Southern Tablelands Dry Sclerophyll Forests, moderate threat status (12.9%)



- Montane Wet Sclerophyll Forests, low threat status (8.7%)
- Subalpine Woodlands, low threat status (5.5%)

Direct impacts from the project have been entered into the BAM Calculator (BAMC) and a credit requirement generated directly (Annex 1). Indirect impacts (for ecosystem credits) and prescribed impacts (for species credits) have been calculated for the project outside of the BAMC and added to the liability as described in sections 3.2.2 and 3.3 respectively.

Additional surveys will be completed, in accordance with the Supplementary Biodiversity Strategy (SBS), within areas of assumed benchmark condition vegetation with the aim of reducing the offset requirement for these PCTs. The results of survey will be documented in the Project BAVR and appropriate credit reconciliation performed within updates to this BOP.

Similarly, reductions to the credit liability may occur following design and construction changes as part of commitments and conditions to further avoid and minimise impacts. These measures would be reported via the Project BMP and appropriate credit reconciliation performed within updates to this BOP.

3.2.2 Indirect Impacts

The total offset requirement for indirect impacts (included within the 15,128 ecosystem credits for the project) that must be acquitted by Transgrid is 497 ecosystem credits. This has been calculated by considering the area likely to be indirectly impacted by edge effects from the Project (177.7 ha of native vegetation) and assuming a 10% decrease in vegetation integrity (VI) for impacted vegetation zones based on an average credit generation rate of 28 credits / ha.

The total number of ecosystem credits required by the Project for both direct and indirect impacts is shown in Table 7.

3.3 Species offset requirement

3.3.1 Overall impacts

An offset requirement of 232,233 species credits must be acquitted by Transgrid to compensate for the impacts to habitat for 78 threatened flora and fauna species (Table 9 and **Error! Reference source not found.**). The offset requirement constitutes credits required for clearing of native vegetation as well as prescribed impacts under the BAM (e.g. impacts on movement corridors) for relevant species. Prescribed impacts were calculated by increasing the credit requirement for each relevant species by 5%.

Of the species credits, 124,979 (54%) are for flora count species, represented almost exclusively by two high-density species (Hoary Sunray *Leucochrysum albicans* var. *tricolor* and Yass Daisy *Ammobium craspedioides*). Table 9 identifies the threatened species likely to be impacted by the Project and the quantum of credits required to compensate for those impacts.

Table 10 identifies those species where an impact from the Project is less likely to occur. It is noted the presence of species within some habitat areas has been assumed due to inaccessible land or where surveys could not be completed within the correct season or conditions.

Additional surveys will be completed, in accordance with the Supplementary Biodiversity Strategy (SBS), within areas of 'assumed presence' habitat with the aim of reducing the offset requirement for these species (see Section 4.2), accepting that in some instances assumed presence species may be recorded. The results of survey will be documented in the Project BAVR and appropriate credit reconciliation performed within updates to this BOP, as supported by revised BAMC credit reporting.



Similarly, reductions to the credit liability may occur following design and construction changes as part of commitments and conditions to further avoid and minimise impacts. These measures would be reported via the Project BMP and appropriate credit reconciliation performed within updates to this BOP.

3.3.2 Prescribed impacts

The BDAR outlines species that may be impacted by loss of connectivity, and outlines mitigation measures for a number of these species. Where residual prescribed impacts due to connectivity loss are likely to remain, proposed offsets have been calculated by applying 5% of the total impact area per impacted species as a proportional connectivity loss. This method has been applied to the total impact area of affected species as a conservative measure, regardless of the species polygon intersection with a major, moderate or minor corridor.

The credit liability for connectivity impacts will be subject to recalculation once additional surveys are completed and the final area of impact is known per species, along with the final location of connectivity corridors and degree to which these provide minimisation of impacts per species. The Biodiversity Assessment Verification Report will outline the method, consultation and reporting for this process.

Table 7 Prescribed impact calculations for connectivity loss

Species	Direct impact area (ha)	5% of impact area (ha)	Average credits per ha	Credit equivalent
Broad-toothed Rat <i>Mastacomys fuscus</i>	0.03	0.00	0	0
Koala <i>Phascolarctos cinereus</i>	484.70	24.23	27	654
Eastern Pygmy-possum <i>Cercartetus nanus</i>	252.58	22.90	27	618
Smoky Mouse <i>Pseudomys fumeus</i>	5.78	0.29	33	10
Yellow-bellied Glider (<i>Petaurus australis</i>) population on the Bago Plateau	134.77	6.74	25	169
Southern Greater Glider <i>Petauroides volans</i>	158.36	7.91	36	285
Squirrel Glider <i>Petaurus norfolcensis</i>	66.73	3.34	11	37
Squirrel Glider (<i>Petaurus norfolcensis</i>) in the Wagga Wagga Local Government Area (endangered population).	10.46	0.52	31	16
Pink-tailed Legless-Lizard <i>Aprasia parapulchella</i>	36.58	1.83	17	31
Striped legless lizard	90.65	4.53	4	18



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Table 8 Ecosystem offset requirement for HumeLink

PCT	PCT name	Offset Trading Group	Direct impact credits	Indirect impact credits	Total credit liability
870	Grey Gum - Thin-leaved Stringybark grassy woodland	Central Gorge Dry Sclerophyll Forests <50%	52	5	57
301	Drooping Sheoke - Ricinocarpus bowmannii - grasstree tall open shrubland of the Coolac - Tumut Serpentine Belt	Coolac-Tumut Serpentine Shrubby Woodland	63	0	63
335	Tussock grass - sedgeland fen - - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South-Western Slopes Bioregion	Inland Floodplain Swamps >=70% - <90%	16	0	16
5	River Red Gum herbaceous-grassy very tall open forest wetland on inner floodplains	Inland Riverine Forests <50%	29	3	32
319	Tumbledown Red Gum - White Cypress Pine hill woodland	Inland Rocky Hill Woodlands >=50% - <70%	23	0	23
679	Black Sallee - Snow Gum low woodland of montane valleys, South-Eastern Highlands Bioregion and Australian Alps Bioregion	Monaro Tableland Cool Temperate Grassy Woodland	34	0	34
939	Montane wet heath and bog of the eastern tablelands	Montane Peatlands and Swamps	8	0	8
1256	Tableland swamp meadow on impeded drainage sites		7	0	7



PCT	PCT name	Offset Trading Group	Direct impact credits	Indirect impact credits	Total credit liability
637	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas	Montane Wet Sclerophyll Forests <50%	1	0	1
638	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas		1,132	70	1,202
1150	Silvertop Ash - Blue-leaved Stringybark shrubby open forest on ridges	South East Dry Sclerophyll Forests <50%	428	32	460
1151	Silvertop Ash - Broad-leaved Peppermint dry shrub forest	South East Dry Sclerophyll Forests >=90%	457	19	476
953	Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges	Southern Tableland Dry Sclerophyll Forests <50%	2,204	85	2,289
299	Riparian Ribbon Gum - Robertson's Peppermint - Apple Box riverine very tall open forest	Southern Tableland Dry Sclerophyll Forests >=50% - <70%	353	15	368
349	Inland Scribbly Gum - Red Stringybark open forest on hills composed of silicious substrates		63	1	64
351	Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest		129	4	133
727	Broad-leaved Peppermint - Brittle Gum - Red Stringybark dry open forest		89	3	92
1093	Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest		1,072	56	1,128



PCT	PCT name	Offset Trading Group	Direct impact credits	Indirect impact credits	Total credit liability
731	Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills	Southern Tableland Grassy Woodlands >=70% - <90%	201	3	204
295	Robertson's Peppermint - Broad-leaved Peppermint - Norton's Box - stringybark shrub-fern open forest	Southern Tableland Wet Sclerophyll Forests <50%	66	0	66
300	Ribbon Gum - Narrow-leaved (Robertson's) Peppermint montane fern - grass tall open forest on deep clay loam soils		472	23	495
679	Black Sallee - Snow Gum low woodland of montane valleys, South-Eastern Highlands Bioregion and Australian Alps Bioregion	Subalpine Woodlands <50%	87	7	94
1196	Snow Gum - Mountain Gum shrubby open forest of montane areas		637	28	665
952	Mountain Gum - Narrow-leaved Peppermint - Snow Gum dry shrubby open forest on undulating tablelands	Tableland Basalt Forest	80	0	80
1097	Ribbon Gum - Narrow-leaved Peppermint grassy open forest on basalt plateaux		3	0	3
1107	River Peppermint - Narrow-leaved Peppermint open forest on sheltered escarpment slopes		2	1	3
953	Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges		11	1	12



PCT	PCT name	Offset Trading Group	Direct impact credits	Indirect impact credits	Total credit liability
1224	Sub-alpine dry grasslands and heathlands of valley slopes	Temperate Montane Grasslands <50%	1	0	1
294	Norton's Box - Red Box - White Box tussock grass open forest	Upper Riverina Dry Sclerophyll Forests <50%	2	0	2
297	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills		26	3	29
306	Red Box - Red Stringybark - Norton's Box hill heath shrub - tussock grass open forest of the Tumut region		13	0	13
290	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills	Upper Riverina Dry Sclerophyll Forests >=50% - <70%	183	10	193
314	Apple Box - Red Stringybark basalt scree open forest in the upper Murray River region		124	5	129
285	Broad-leaved Sally grass - sedge woodland on valley flats and swamps	Upper Riverina Dry Sclerophyll Forests >=70% - <90%	271	2	273
322	Inland Scribbly Gum - Red Stringybark - Black Cypress Pine hillslope shrub-tussock grass open forest	Western Slopes Dry Sclerophyll Forests <50%	15	0	15
287	Long-leaved Box - Red Box - Red Stringybark mixed open forest	Western Slopes Dry Sclerophyll Forests >=50% - <70%	184	8	192



PCT	PCT name	Offset Trading Group	Direct impact credits	Indirect impact credits	Total credit liability
343	Mugga Ironbark - Red Box - Red Stringybark - Western Grey Box grass/shrub woodland on metamorphic substrates in the Tarcutta - Gundagai region	Western Slopes Dry Sclerophyll Forests $\geq 70\%$ - $< 90\%$	60	0	60
316	Norton's Box - Red Box - Red Stringybark +/- Nodding Flax Lily forb-grass open forest	Western Slopes Grassy Woodlands $\geq 50\%$ - $< 70\%$	479	23	502
266	White Box grassy woodland	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland	1,650	0	1,650
268	White Box - Blakely's Red Gum - Long-leaved Box - Norton's Box - Red Stringybark grass-shrub woodland on shallow soils on hills		829	18	847
277	Blakely's Red Gum - Yellow Box grassy tall woodland		533	6	539
278	Riparian Blakely's Red Gum - box - shrub - sedge - grass tall open forest		89	2	91
280	Red Stringybark - Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland		952	38	990
352	Red Stringybark - Blakely's Red Gum hillslope open forest on meta-sediments in the Yass - Boorowa - Crookwell region		38	0	38
1330	Yellow Box - Blakely's Red Gum grassy woodland on the tablelands		1370	19	1389
283	Apple Box - Blakely's Red Gum moist valley and footslopes grass-forb open forest		90	6	96



PCT	PCT name	Offset Trading Group	Direct impact credits	Indirect impact credits	Total credit liability
		Totals	14,631	497	15,128



Table 9 Species credit species likely to be impacted

Species Name	Common Name	Clearing impacts	Prescribed impacts	Total credits
Flora				
<i>Ammobium craspedioides</i>	Yass Daisy	17,366	0	17,366
<i>Acacia bynoeana</i>	Bynoe's Wattle	128	0	128
<i>Kunzea cabbagei</i>	Cabbage Kunzea	282	0	282
<i>Leucochrysum albicans</i> var. <i>tricolor</i>	Hoary Sunray	107,500	0	107,500
<i>Pimelea bracteata</i>	Pimelea bracteata	88	0	88
<i>Pomaderris cotoneaster</i>	Cotoneaster Pomaderris	300	0	300
<i>Prasophyllum bagoense</i>	Bago Leek-orchid	3	0	3
<i>Prasophyllum innubum</i>	Brandy Marys Leek-orchid	1	0	1
<i>Prasophyllum keltonii</i>	Kelton's Leek Orchid	2	0	2
<i>Prasophyllum petilum</i>	Tarengo Leek Orchid	827	0	827
<i>Pterostylis oreophila</i>	Blue-tongued Greenhood	11	0	11
<i>Solanum armourense</i>	Solanum armourense	19	0	19
<i>Swainsona recta</i>	Small Purple-pea	1,249	0	1,249
<i>Swainsona sericea</i>	Silky Swainson-pea	2,059	0	2,059
<i>Thesium australe</i>	Austral Toadflax	902	0	902
<i>Xerochrysum palustre</i>	Swamp Everlasting	8	0	8
Fauna				
<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	618	31	649
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	12,838	0	12,838
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	1,423	0	1,423
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	6700	618	7,318
<i>Delma impar</i>	Striped Legless Lizard	357	18	375
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	61	0	61
<i>Hieraaetus morphnoides</i>	Little Eagle	1,999	0	1,999
<i>Keyacris scurra</i>	Key's Matchstick Grasshopper	2,167	0	2,167
<i>Litoria castanea</i>	Yellow-spotted Tree Frog	39	0	39
<i>Lophoictinia isura</i>	Square-tailed Kite	824	0	824



Species Name	Common Name	Clearing impacts	Prescribed impacts	Total credits
<i>Myotis macropus</i>	Southern Myotis	1,188	0	1,188
<i>Ninox connivens</i>	Barking Owl	7,281	0	7,281
<i>Ninox strenua</i>	Powerful Owl	7,120	0	7,120
<i>Petauroides volans</i>	Greater Glider	4,213	285	4,498
<i>Petaurus australis</i> - endangered population	Yellow-bellied Glider population on the Bago Plateau	3,396	169	3,565
<i>Petaurus norfolcensis</i>	Squirrel Glider	2,034	37	2,071
<i>Petaurus norfolcensis</i> - endangered population	Squirrel Glider (Wagga Wagga LGA)	358	16	374
<i>Petroica rodinogaster</i>	Pink Robin	932	0	932
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	4,944	0	4,944
<i>Phascolarctos cinereus</i>	Koala	12,776	654	13,430
<i>Polytelis swainsonii</i>	Superb Parrot	2,884	0	2,884
<i>Synemon plana</i>	Golden Sun Moth	165	0	165
<i>Tyto novaehollandiae</i>	Masked Owl	5,600	0	5,600
<i>Tyto tenebricosa</i>	Sooty Owl	2,180	0	2,180
Total offset requirement (in credits)		212,842	1,828	214,670



Table 10 Species credit species with limited potential to be impacted

Scientific name	Common name	Clearing impacts	Prescribed impacts	Total credits
Flora				
<i>Acacia ausfeldii</i>	Ausfeld's Wattle	555	0	555
<i>Acacia flocktoniae</i>	Flockton Wattle	385	0	385
<i>Baloskion longipes</i>	Dense Cord-rush	45	0	45
<i>Bossiaea fragrans</i>	Bossiaea fragrans	254	0	254
<i>Bossiaea oligosperma</i>	Few-seeded Bossiaea	57	0	57
<i>Caesia parviflora</i> var. <i>minor</i>	Small Pale Grass-lily	29	0	29
<i>Caladenia concolor</i>	Crimson Spider Orchid	1,559	0	1,559
<i>Caladenia montana</i>	Caladenia montana	4,543	0	4,543
<i>Commersonia prostrata</i>	Dwarf Kerrawang	4	0	4
<i>Cullen parvum</i>	Small Scurf-pea	387	0	387
<i>Dillwynia glauca</i>	Michelago Parrot-pea	45	0	45
<i>Diuris aequalis</i>	Buttercup Doubletail	1,075	0	1,075
<i>Diuris tricolor</i>	Pine Donkey Orchid	13	0	13
<i>Eucalyptus aggregata</i>	Black Gum	4	0	4
<i>Eucalyptus macarthurii</i>	Paddy's River Box, Camden Woollybutt	82	0	82
<i>Eucalyptus robertsonii</i> subsp. <i>hemisphaerica</i>	Robertson's Peppermint	3	0	3
<i>Genoplesium superbum</i>	Superb Midge Orchid	543	0	543
<i>Grevillea iaspicula</i>	Wee Jasper Grevillea	24	0	24
<i>Grevillea wilkinsonii</i>	Tumut Grevillea	994	0	994
<i>Lepidium hyssopifolium</i>	Aromatic Peppergrass	450	0	450
<i>Persoonia marginata</i>	Clandulla Geebung	162	0	162
<i>Persoonia mollis</i> subsp. <i>revoluta</i>	A geebung	52	0	52
<i>Phyllota humifusa</i>	Dwarf Phyllota	381	0	381
<i>Pomaderris delicata</i>	Delicate Pomaderris	77	0	77
<i>Pomaderris pallida</i>	Pale Pomaderris	67	0	67
<i>Pterostylis alpina</i>	Alpine Greenhood	69	0	69
<i>Pterostylis foliata</i>	Slender Greenhood	1,150	0	1,150



Scientific name	Common name	Clearing impacts	Prescribed impacts	Total credits
<i>Pultenaea humilis</i>	Dwarf Bush-pea	569	0	569
<i>Senecio garlandii</i>	Woolly Ragwort	269	0	269
<i>Thelymitra alpicola</i>	Alpine Sun-orchid	5	0	5
Fauna				
<i>Burhinus grallarius</i>	Bush Stone-curlew	1,684	0	1,684
<i>Crinia sloanei</i>	Sloane's Froglet	14	0	14
<i>Cyclodomorphus praealtus</i>	Alpine She-oak Skink	925	0	925
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	93	0	93
<i>Litoria booroolongensis</i>	Booroolong Tree Frog	2	0	2
<i>Mastacomys fuscus</i>	Broad-toothed Rat	1	0	1
<i>Mixophyes balbus</i>	Stuttering Frog	791	0	791
<i>Pseudomys fumeus</i>	Smoky Mouse	191	10	201
Total offset requirement (in credits)		17,553	10	17,563



4 Biodiversity Offset Measures

4.1 Introduction

The BOP for the Project includes four key components upon which to report:

- Reduction of the species offset liability via further avoidance measures and additional field surveys of the development area
- Establishing Biodiversity Stewardship Agreements (BSA) on lands with equivalent biodiversity values to those impacted by the Project
- Purchasing credits from the market from established BSAs
- Making a payment into the BCF for any outstanding liability.

Transgrid has committed to acquitting all biodiversity conservation measures in accordance with the BOP. The BOP will primarily acquit the Project's biodiversity offset liability through the establishment of a series of BSAs, then market credit purchases of 'like for like' credits. Retirement of credits following the BOS variation rules would also be considered when like-for-like acquittal options have been exhausted, particularly for assumed presence species. Any residual credit liability not met through these offset strategies will be met through least preferred options such as payment into the BCF or through available biodiversity conservation actions. Transgrid will also consult with NSW DCCEEW regarding any new offset mechanism that might be available to the project, as identified within the NSW Plan for Nature to meet the urgency of the Electricity Infrastructure Roadmap.

4.2 Proposed future survey to reduce credit obligations

The BDAR for the Environmental Impact Statement and Revised BDAR for the Amendment Report was prepared with the following field survey limitations (as acknowledged in reporting):

- Certain land was inaccessible at the time of the survey and therefore vegetation and habitat could not be fully assessed
- Targeted survey for particular species were not able to be completed within the correct season according to the Threatened Species Data Collection (TBDC)
- Surveys for species were not able to be completed during appropriate climatic requirements according to the TBDC
- Overall survey effort was not met due to difficulty reaching conservative requirements outlined in relevant survey guidelines
- Some cryptic species were not detectable during the surveys.

As such, the presence and associated offset liability for a large number of species has been assumed (in accordance with the BAM), resulting in an over-estimation of the likely impact. The mapping of PCTs within inaccessible lands has also been completed on a conservative basis, influencing inflated species impacts in some cases. Transgrid will undertake additional survey effort prior to impacts upon biodiversity occurring in order to refine the assessed biodiversity impacts to more closely reflect actual Project impacts, and provide the Project opportunity to reduce its offset liability. All survey will be undertaken in accordance with conditions B28 (Supplementary Biodiversity Strategy) and B29 (Biodiversity Assessment Verification Report) of the HumeLink Infrastructure Approval (SSI 36656827) (see Section 1.2).

The Supplementary Biodiversity Strategy (SBS) defines the relevant biodiversity values to be targeted by additional survey effort, and details the approved survey methods, strategy and reporting requirements. Biodiversity Assessment Verification Reporting (BAVR) will detail outcomes of surveys undertaken in accordance with the SBS, identify any additional measures to avoid / minimise impacts upon those values and provide



findings relating to reduction of relevant credit obligations or additional obligations following unexpected finds. In some instances species currently assessed as assumed present may be recorded.

In consultation with BCS, additional targeted surveys for the Project commenced in spring 2024 and are continuing into 2025 targeting potential SAll entities and many of the hardest to offset species thereby increasing the ability to deliver offset measures without significant payments into the BCF. Following Planning Secretary approval of verification reporting, changes to the credit liability of any relevant biodiversity values will be reconciled in 6-monthly updates to this BOP.

4.3 Establishment of Biodiversity Stewardship Agreements

4.3.1 New BSA sites to be established

Ecosystem and species credits are created through the establishment of a BSA site with funding of ongoing management (being the costs to manage the BSA site and improve biodiversity condition). Ecosystem credits are generated through the protection and management of native vegetation and species credits are generated through the protection and management of specific habitat and/or habitat features such as HBTs. Active Restoration Management Actions (ARMA) can also be applied where appropriate to regenerate degraded habitat which can lead to additional ecosystem and species credit generation.

Potentially suitable properties are being investigated by Transgrid for establishing new BSA sites. A summary of progress towards BSA site identification and establishment is provided below.

- Detailed desktop and spatial assessments conducted have identified many properties with:
 - OTGs of interest
 - Species credit records; or
 - Species credit modelled habitat which has been run over a large area to assist with finding required species.
- Consultation with several experts for key species has been conducted to assist with site identification.
- 38 landholders have been successfully contacted by Transgrid with 26 properties being subject to preliminary field assessments, of these:
 - Two properties have been the subject of a compelling business case and have progressed to landholder negotiations regarding a Memorandum of Understanding (MoU), being a legal agreement that allows Transgrid to progress biodiversity surveys on the landholder's property for a period of time.
 - Four Memorandum of Understanding (MoU), executed with landholders (>2,000 ha).
 - Investigations of other properties subject to preliminary assessment is expected to advance additional MoUs.
- The four MOUs and two potential MoU sites would supply approximately 7,316 ecosystem credits. This would satisfy approximately 48% of the ecosystem credit requirement for the project (without considering any use of variation rules)
- The four MOUs and two potential MoU sites are currently forecast to supply 16,426 species credits. This would satisfy approximately 7% of the species credit requirement for the project (without considering liability reductions from additional survey or any use of variation rules).
- An additional 59 properties have recently been identified and contact with landholders is in-progress.

Table 11 provides a summary of the ecosystem and species credits currently forecast at each of the six sites. The sites are also shown in Figure 1. As Transgrid are progressing additional sites, this BOP will be updated every 6 months with any new advancements.



Table 11 Initial tranche of proposed new BSA sites

BSA code and area	OTGs / species	Estimated number of usable credits	Percentage obligation met
NC012 - BSA4 Murrumbateman Executed MOU	– White Box - Yellow Box - Blakely's Red Gum Grassy Woodland	– 1,260	– 22%
	– Southern Tableland Grassy Woodlands >=70% - <90%	– 182	– 89%
	– Upper Riverina Dry Sclerophyll Forests >=70% - <90%	– 222	– 81%
	– Inland Riverine Forests <50% (>90% on site)	– 23	– 72%
	– Superb Parrot – Striped Legless Lizard – Pink-tailed Legless Lizard – Golden Sun Moth	– 70 – 253 – 83 – 165	– 2% – 67% – 13% – 100%
	SUB-TOTAL	2,258	
NC003 Bondo MOU in negotiation	– Southern Tableland Wet Sclerophyll Forests <50%*	– 356*	– 63%*
	– Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions*	– 3*	– 20%*
	– Key's Matchstick Grasshopper – Kelton's Leek Orchid – Bago Leek-orchid – Powerful Owl	– 105 – 2 – 3 – 572	– 5% – 100% – 100% – 8%
	SUB-TOTAL	1,041	
NC009 (Monaro) MOU in negotiation	– Southern Tableland Wet Sclerophyll Forests <50%*	– 76*	– 14%*
	– Southern Tableland Dry Sclerophyll Forests <50%	– 2,005	– 88%
	– Monaro Tableland Cool Temperate Grassy Woodland	– 34	– 100%
	– Southern Tableland Dry Sclerophyll Forests >=50% - <70%*	– 1,576*	– 88%*
	– Gang-gang Cockatoo – Koala – <i>Pomaderris pallida</i> *	– 266 – 7,495 – 106*	– 2% – 56% – 100%*



BSA code and area	OTGs / species	Estimated number of usable credits	Percentage obligation met
	SUB-TOTAL	11,558	
NC017 (Australian Alps) Executed MOU	– Montane Wet Sclerophyll Forests <50%	– 470	– 39%
	– Southern Tableland Wet Sclerophyll Forests <50%*	– 165*	– 29%*
	– Subalpine Woodlands <50%*	– 759*	– 100%*
	– Gang-gang Cockatoo – Powerful Owl – Squirrel Glider	– 66 – 2,018 – 196	– 1% – 28% – 9%
	SUB-TOTAL	3,674	
NC021 (Australian Alps) Executed MOU	– Montane Peatlands and Swamps*	– 15*	– 100%*
	– Subalpine Woodlands <50%*	– 759*	– 100%*
	– Alpine She-oak Skink – Barking Owl – Eastern Pygmy-possum – Broad-toothed Rat	– 735 – 1,055 – 1,250 – 1	– 79% – 14% – 17% – 100%
	SUB-TOTAL	3,815	
NC022 (Monaro) Executed MOU	– Southern Tableland Dry Sclerophyll Forests ≥50% - <70%*	– 1,636*	– 92%*
	– Gang-gang Cockatoo – Koala	– 66 – 1,958	– 1% – 15%
	SUB-TOTAL	3,660	
	GRAND TOTAL	Total Usable Ecosystem Credits = 7,316 (excluding surplus credits)	48%
	*OTG or species with surplus credits NB: where over 100% of an OTG/species was met (due to surplus at one site or several sites combined), surplus credits were not counted in the total percentage obligation met.	Total Ecosystem Credits Projected = 9,541 credits (including 2,225 credit surplus for some OTGs)	
		Total Usable Species Credits = 16,426 (excluding surplus credits)	7%
		Total Species Credits Projected = 16,465 (including 39 credit surplus for one species)	

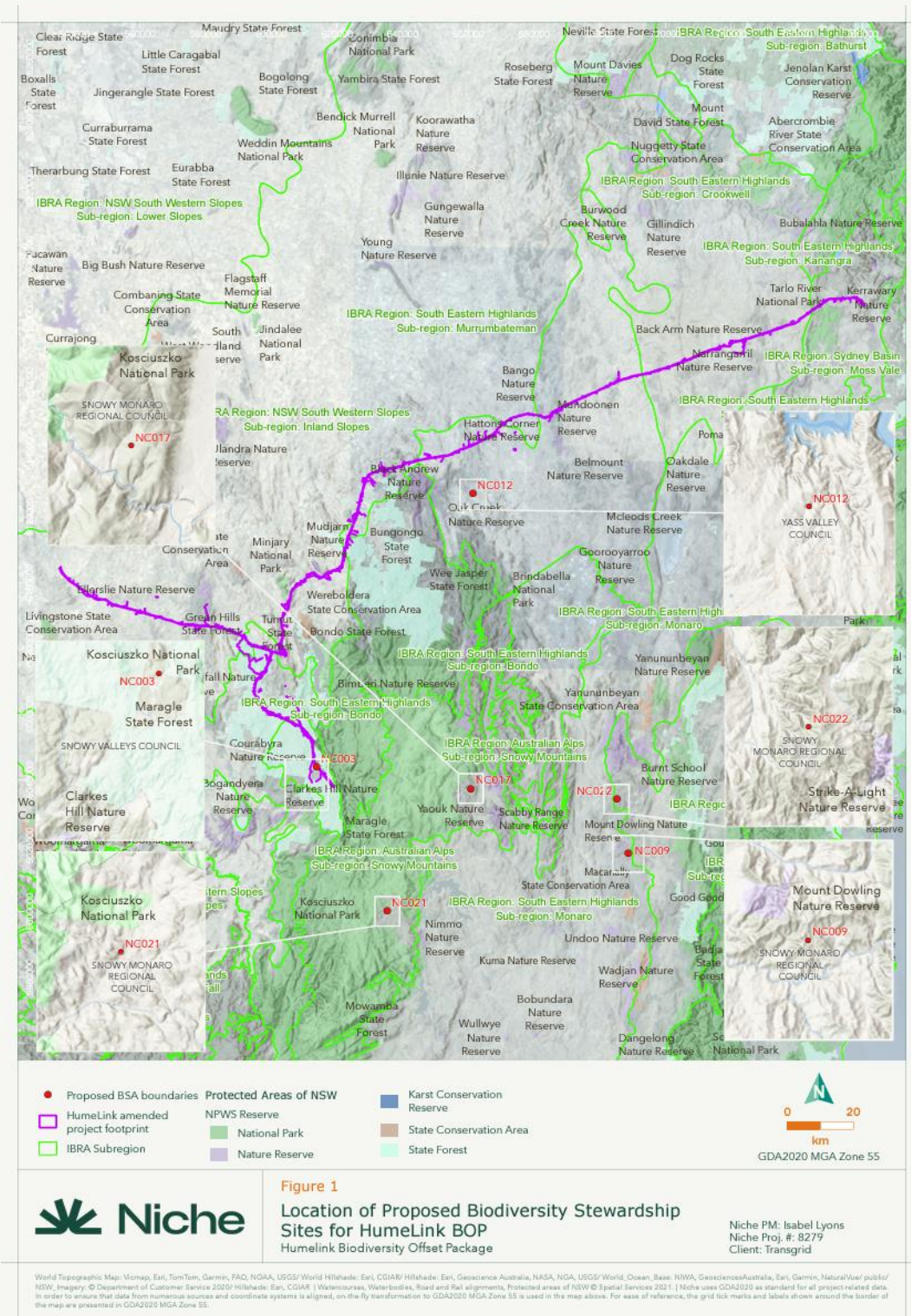


Figure 1 Location of Proposed Biodiversity Stewardship Sites for Humelink BOP



4.3.2 Existing BSAs

Transgrid has established several BSAs over properties that they own for the Project EnergyConnect (PEC) East and West projects (Table 11). Based on the location of the properties, Ardmore, Parkview, The Overflow, Wood Park and Singorimbah are located within relevant subregions for HumeLink under the like-for-like rules. However, only Ardmore has potential surplus credits in OTGs that are relevant for HumeLink.

Table 12 Transgrid BSA site 'Ardmore' and applicable OTGs and species credits

Subregion	Applicable to HumeLink	OTGs generated at the BSA site relevant to HumeLink's project obligation	Surplus credits available or potentially available	Percentage obligation met
Inland Slopes	Impacted Subregion	– 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	– 1,297 (all usable)	– 23%
		– Western Slopes Dry Sclerophyll Forests, moderate threat status	– 1,510 (177 usable)	– 100%
		– Western Slopes Dry Sclerophyll Forests, high threat status	– 17 (all usable)	– 28%
		– Squirrel Glider species credits	– 2,678 (1,855 usable)	– 100%

4.4 Purchase of existing credits

Transgrid has the opportunity to approach brokers and landholders who have credits for sale. Registered credits are shown on the Credit Supply Register and landholders can also indicate that they potentially have credits available (though not yet created) through an expression of interest within the register. Table 12 and Table 13 provide a snapshot of ecosystem and species credits, respectively, that are shown on the Credit Supply Register (as at 30 May 2024) and that meet the like-for-like rules for Transgrid's obligation. Credits with a status of 'Equivalence Credit', 'Pending Review' and 'Issued' have been listed. Further comprehensive analysis of market credits will occur for the Project as required and as a better understanding of residual credits required after survey reductions and BSA establishment is progressed.

It should be noted that the Credit Supply Register does not differentiate between credits that are available for sale; those credits that are committed for sale; or for use on a project. As such, each credit seller must be contacted individually to determine whether the credits are for sale or are unavailable. For the purposes of this assessment, credits are considered available for sale if the credit holder is a private landholder or a company that is known to be in the business of establishing BSA sites and selling credits. Conversely, credits held by companies known or likely to be proponents of developments have been excluded. From this perspective, the following summary may represent an under-estimate of potentially available market credits applicable to the HumeLink Project. Credits have been filtered by the relevant IBRA subregions (refer to Table 6) in accordance with the like-for-like rules.



Table 13 Summary of potentially available ecosystem credits within the BOS market

PCT	Offset Trading Group*	Vegetation formation	Total obligation	Market credits	Percentage obligation met per OTG
870	Central Gorge Dry Sclerophyll Forests, LT	Dry Sclerophyll Forests (Shrub/grass sub-formation)	57	<u>660</u> credits potentially available (Niche project)	100%
301	Coolac-Tumut Serpentine Shrubby Woodland TEC	Grassy Woodlands	63	0	0%
335	Inland Floodplain Swamps, HT	Freshwater Wetlands	16	0	0%
5	Inland Riverine Forests, LT	Forested Wetlands	32	<u>90</u> credits potentially available (private landholders)	100%
319	Inland Rocky Hill Woodlands, MT	Semi-arid Woodlands (Shrubby sub-formation)	23	0	0%
1191	Monaro Tableland Cool Temperate Grassy Woodland	Grassy Woodlands	3	<u>156</u> credits potentially available (no name)	100%
679			34		
939	Montane Peatlands and Swamps	Freshwater Wetlands	8	<u>52</u> credits potentially available (no name)	100%
1256			7		
637	Montane Wet Sclerophyll Forests, LT	Wet Sclerophyll Forests (Grassy sub-formation)	1	<u>132</u> credits potentially available (no name)	11%
638			1,202		
1150	South East Dry Sclerophyll Forests, LT	Dry Sclerophyll Forests (Shrubby sub-formation)	460	<u>288</u> credits potentially available (consultant) 1,542 credits unlikely to be available (property developer)	10%
953			2,289		
1151	South East Dry Sclerophyll Forests, VT		476	197 credits unlikely to be available (Tilt Renewables)	0%
731	Southern Tableland Grassy Woodlands, HT	Grassy Woodlands	204	0	0%
300	Southern Tableland Wet Sclerophyll Forests, LT	Wet Sclerophyll Forests (Grassy sub-formation)	495	<u>1,284</u> credits potentially available (no name)	100%
295			66		
1093	Southern Tablelands Dry Sclerophyll Forests, MT	Dry Sclerophyll Forests (Shrubby sub-formation)	1,128	59 credits unlikely to be available (property)	100%
299			368		



PCT	Offset Trading Group*	Vegetation formation	Total obligation	Market credits	Percentage obligation met per OTG
351			133	developers, BCT, Credit Supply Fund) <u>3,768</u> credits potentially available (private landholders, consultants)	
727			92		
349			64		
1196	Subalpine Woodlands, LT	Grassy Woodlands	665	<u>122</u> credits potentially available (no name)	16%
679			94		
1191	Subalpine Woodlands, VT	Grassy Woodlands	3	<u>31</u> credits potentially available (no name)	100%
952	Tableland Basalt Forest	Grassy Woodlands	80	0	0%
953		Dry Sclerophyll Forests (Shrubby sub-formation)	12		
1097		Wet Sclerophyll Forests (Grassy sub-formation)	3		
1107		Wet Sclerophyll Forests (Shrubby sub-formation)	3		
1224	Temperate Montane Grasslands, LT	Grasslands	1	<u>924</u> credits potentially available of higher OTG (private landholders)	100%
285	Upper Riverina Dry Sclerophyll Forest, HT	Dry Sclerophyll Forests (Shrub/grass sub-formation)	273	0	0%
297	Upper Riverina Dry Sclerophyll Forest, LT	Dry Sclerophyll Forests (Shrub/grass sub-formation)	29	0	100% (utilising credits from higher OTG, see below)
306			13		
294			2		
290	Upper Riverina Dry Sclerophyll Forest, MT	Dry Sclerophyll Forests (Shrub/grass sub-formation)	193	43 credits unlikely to be available (property developer, BCT) <u>4,011</u> credits potentially available (private landholder)	100%
314			129		
343	Western Slope Dry Sclerophyll Forests, HT	Dry Sclerophyll Forests (Shrubby sub-formation)	60	23 unlikely to be available (Tilt Renewables)	0%
287	Western Slope Dry Sclerophyll Forests, MT	Dry Sclerophyll Forests (Shrubby sub-formation)	192	<u>2,191</u> (Whitehaven Coal, Glencore, Newcrest,	100%



PCT	Offset Trading Group*	Vegetation formation	Total obligation	Market credits	Percentage obligation met per OTG
				Inland Rail, Niche project, BCT)	
322	Western Slopes Dry Sclerophyll Forests, LT	Dry Sclerophyll Forests (Shrubby sub-formation)	15	11,018 credits unlikely to be available (Niche project, Adbri, Whitehaven Coal, Glencore, Squadron Energy, Inland Rail, BCT) <u>461</u> credits potentially available (Niche projects, no name)	100%
316	Western Slopes Grassy Woodlands, MT	Grassy Woodlands	502	<u>85</u> credits potentially available (Niche project, private landholder) 77 unlikely to be available (Tilt Renewables)	17%
266	White Box Yellow Box Blakely's Red Gum 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	Grassy Woodlands	1,650	11,264 credits unlikely to be available (LightsourceBP, Peet, BCT, Squadron Energy, Global Power Generation, Credit Supply Fund, property developers, Newcrest Mining, Tilt Renewables, Inland Rail) <u>10,021</u> credits likely to be available (private landholders, Niche projects)	100%
1330			1,389		
280			990		
268			847		
277			539		
283			96		
278			91		
352		Dry Sclerophyll Forests (Shrubby sub-formation)	38		
Total			15,128		60.2%
* Threatened ecological communities listed under the BC Act and / or EPBC Act are highlighted in bold .					



Table 14 Summary of available species credits within the BOS market

Scientific name	Common name	Total credits required	Market credits*	Percentage obligation met (per species)
Flora				
<i>Acacia ausfeldii</i>	Ausfeld's Wattle	555		0%
<i>Acacia bynoeana</i>	Bynoe's Wattle	128	103 (quarry, government). Unlikely to be for sale	0%
<i>Acacia flocktoniae</i>	Flockton Wattle	385		0%
<i>Ammobium craspedioides</i>	Yass Daisy	17,366		0%
<i>Baloskion longipes</i>	Dense Cord-rush	45		0%
<i>Bossiaea fragrans</i>	-	254		0%
<i>Bossiaea oligosperma</i>	Few-seeded Bossiaea	57		0%
<i>Caesia parviflora</i> var. <i>minor</i>	Small Pale Grass-lily	29		0%
<i>Caladenia concolor</i>	Crimson Spider Orchid	1,559		0%
<i>Caladenia montana</i>	-	4,543		0%
<i>Commersonia prostrata</i>	Dwarf Kerrawang	4		0%
<i>Cullen parvum</i>	Small Scurf-pea	387		0%
<i>Dillwynia glauca</i>	Michelago Parrot-pea	45	11 credits likely for sale (private landholder)	24.4%
<i>Diuris aequalis</i>	Buttercup Doubletail	1,075		0%
<i>Diuris tricolor</i>	Pine Donkey Orchid	13	3,445 (Glencore). Unlikely to be available	0%
<i>Eucalyptus aggregata</i>	Black Gum	4		0%
<i>Eucalyptus macarthurii</i>	Paddy's River Box, Camden Woollybutt	82		0%
<i>Eucalyptus robertsonii</i> subsp. <i>hemisphaerica</i>	Robertson's Peppermint	3		0%
<i>Genoplesium superbum</i>	Superb Midge Orchid	543		0%
<i>Grevillea iaspicula</i>	Wee Jasper Grevillea	24		0%
<i>Grevillea wilkinsonii</i>	Tumut Grevillea	994		0%
<i>Kunzea cabbagei</i>	Cabbage Kunzea	282		0%
<i>Lepidium hyssopifolium</i>	Aromatic Peppercress	450		0%



Scientific name	Common name	Total credits required	Market credits*	Percentage obligation met (per species)
<i>Leucochrysum albicans</i> var. <i>tricolor</i>	Hoary Sunray	107,500	8,636 credits potentially available (private landholder, no name)	8%
<i>Persoonia marginata</i>	Clandulla Geebung	162		0%
<i>Persoonia mollis</i> subsp. <i>revoluta</i>	-	52		0%
<i>Phyllota humifusa</i>	Dwarf Phyllota	381		0%
<i>Pimelea bracteata</i>	Pimelea bracteata	88		
<i>Pomaderris cotoneaster</i>	Cotoneaster Pomaderris	300		0%
<i>Pomaderris delicata</i>	Delicate Pomaderris	77		0%
<i>Pomaderris pallida</i>	Pale Pomaderris	67	17 credits potentially available (private landholder)	25%
<i>Prasophyllum bagoense</i>	Bago Leek-orchid	3		0%
<i>Prasophyllum innubum</i>	Brandy Marys Leek-orchid	1		0%
<i>Prasophyllum keltonii</i>	Kelton's Leek Orchid	2		0%
<i>Prasophyllum petilum</i>	Tarengo Leek Orchid	827	3,445 (Glencore). Unlikely to be for sale	0%
<i>Pterostylis alpina</i>	Alpine Greenhood	69		0%
<i>Pterostylis foliata</i>	Slender Greenhood	1,150		0%
<i>Pterostylis oreophila</i>	Blue-tongued Greenhood	11		0%
<i>Pultenaea humilis</i>	Dwarf Bush-pea	569		0%
<i>Senecio garlandii</i>	Woolly Ragwort	269		0%
<i>Solanum armourense</i>	-	19		0%
<i>Swainsona recta</i>	Small Purple-pea	1,249		0%
<i>Swainsona sericea</i>	Silky Swainson-pea	2,059	4,298 (property developer, private landholder, BCT, Credit Supply Fund). 4,122 credits potentially available	100%
<i>Thelymitra alpicola</i>	Alpine Sun-orchid	5		0%
<i>Thesium australe</i>	Austral Toadflax	902	43 (Niche project, BCT). 23 credits available for sale	2.5%
<i>Xerochrysum palustre</i>	Swamp Everlasting	8		0%
Fauna				



Scientific name	Common name	Total credits required	Market credits*	Percentage obligation met (per species)
<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	649	2,895 (Peet, Malabar Resources, Pacific Blue, BCT, private landholder). <u>2,742</u> credits potentially available	100%
<i>Burhinus grallarius</i>	Bush Stone-curlew	1,684		0%
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	12,838	<u>280</u> credits potentially available (private landholder)	2%
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo			0%
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	7,318	5,204 (Whitehaven Coal, property developer, Ecological consultancy, Credit Supply Fund, Hornsby Shire Council). Unlikely to be for sale	0%
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	93		0%
<i>Crinia sloanei</i>	Sloane's Froglet	14		0%
<i>Cyclodomorphus praealtus</i>	Alpine She-oak Skink	925		0%
<i>Delma impar</i>	Striped Legless Lizard	375		0%
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	61		0%
<i>Hieraaetus morphnoides</i>	Little Eagle	1,999	52 credits (Inland Rail). Unlikely to be for sale	0%
<i>Keyacris scurra</i>	Key's Matchstick Grasshopper	2,167	<u>749</u> credits potentially available (private landholder)	35%
<i>Litoria booroolongensis</i>	Booroolong Frog	2		0%
<i>Litoria castanea</i>	Yellow-spotted Tree Frog	39		0%
<i>Lophoictinia isura</i>	Square-tailed Kite	824		0%
<i>Mastacomys fuscus</i>	Broad toothed Rat	1		0%
<i>Mixophyes balbus</i>	Stuttering Frog	791		0%
<i>Myotis macropus</i>	Southern Myotis	1,188	3,343 (Private landholders, property developers, NSW government, BCT, Bunnings). <u>780</u> credits potentially available.	65.7%
<i>Ninox connivens</i>	Barking Owl	7,281	4,358 (Inland Rail, private landholder). <u>4,212</u> credits potentially available	58%
<i>Ninox strenua</i>	Powerful Owl	7,120	<u>3,225</u> (private landholders)	45.3%



Scientific name	Common name	Total credits required	Market credits*	Percentage obligation met (per species)
<i>Petauroides volans</i>	Southern Greater Glider	4,498	4,160 (Tilt Renewables, private landholders, agribusiness). <u>2,465</u> credits potentially available	54.8%
<i>Petaurus australis (Bago)</i>	Yellow-bellied Glider population on the Bago Plateau	3,565		0%
<i>Petaurus norfolcensis</i>	Squirrel Glider	2,071	34,555 (private landholders, Inland Rail, Whitehaven Coal, Newcrest, property developers, Malabar Resources, NSW government, BCT, Credit Supply Fund, Tilt Renewables). <u>4,587</u> credits potentially available	100%
<i>Petaurus norfolcensis</i>	Squirrel Glider in the Wagga Wagga City Local Government Area	2,071	0 credits available	0%
<i>Petroica rodinogaster</i>	Pink Robin	932		0%
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	4,944	17,552 (Niche project, private landholders, Transport for NSW, quarry, Glencore). <u>13,478</u> credits potentially available	100%
<i>Phascolarctos cinereus</i>	Koala	13,430	53,245 (private landholders, Niche projects, Inland Rail, Hunter Water, Squadron Energy, South32, Whitehaven Coal, Transport for NSW, BCT). <u>19,524</u> credits potentially available	100%
<i>Polytelis swainsonii</i>	Superb Parrot	2,884	422 (Newcrest, property developer). Unlikely to be available	0%
<i>Pseudomys fumeus</i>	Smoky Mouse	201		0%
<i>Synemon plana</i>	Golden Sun Moth	165	948 (property developer, Squadron Energy, private landholder). <u>691</u> credits potentially available	100%
<i>Tyto novaehollandiae</i>	Masked Owl	5,600	146 (Inland Rail). Unlikely to be for sale	0%
<i>Tyto tenebricosa</i>	Sooty Owl	2,180		0%
	Total	232,233		19%



4.5 NMO Credit Supply Fund

The NMO Division periodically organises reverse auctions to source in-demand credits from the credit market. The reverse auctions allow the NMO to act as an intermediary between the credit holder and credit buyer, completing the negotiation and purchasing the credits directly from the successful credit holder. The credits are then sold to credit buyers. The reverse auctions allow the NMO to aggregate credit demand across multiple projects and as such allows credit holders to complete a single transaction rather than negotiating and selling smaller quantities of credits to multiple proponents. The NMO also assists interested landholders to establish a BSA on their land if their land is able to generate in-demand credits.

Transgrid will participate in the reverse auctions to identify any additional sources of credits, particularly species credits, given that there are no locational restrictions regarding where species credits can be sourced from.

4.6 Ancillary Rules: Biodiversity conservation actions

Section 6.5 of the BC Regulation allows proponents with an offset liability to fund biodiversity conservation actions to offset impacts from their projects. The ability to fund conservation actions is limited to a number of threatened flora and fauna species as identified in table 1 within the ancillary rules (The State of NSW, 2017). One species, Flockton Wattle (*Acacia flocktoniae*), is listed in table 1 and is potentially impacted by the Project. Transgrid has the option to fund conservation actions including targeted surveys across the species predicted range or research to understand critical threats requirement management credits.

The Environment Agency Head is authorised under the BC Reg to publish the ancillary rules and regularly review the list of conservation actions.

4.7 Biodiversity Conservation Fund

Section 6.2 of the BC Regulation allows proponents with an offset liability to make payments into the Biodiversity Conservation Fund determined in accordance with the offsets payment calculator to satisfy the requirement to retire biodiversity credits.

This measure is the least likely to be used for the Project, with above options (Section 4.2 to 4.6) including use of variation rules where approved preferred prior to any payments in the BCF. If all other options for securing offsets are exhausted and a residual offset liability remains, agreement from the BCT will be sought to pay the remaining liability into the BCF. Any payment into the BCF will be at the price as calculated by the Biodiversity Offsets Payment Calculator (BOPC) at the time of payment.



5 Projected offset requirement

5.1 Present cost for payments into the BCF

BCT price estimates and quotes allow proponents to forecast the cost of acquitting a biodiversity offset obligation through payment into the BCF. Quotes are valid for three years and a new quote may be requested each financial year. The quotes comprise a charge per entity, which includes the base credit price for each PCT or species as well as a risk premium and delivery fee. The total charge per credit is also subject to monthly indexation, which is calculated as the number of months between the date of the quote and the date of payment into the BCF.

Transgrid sought a quote for the Project from the BCT in September 2023 and again in September 2024. A statement of estimate provided by the BCT in September 2024 (see Annex 4), in response to the most recent quote request, is used within this BOP to estimate the future cost of payment into the BCF were the Project to satisfy the entire offset obligation via this mechanism (Table 15). A reduced species credit obligation (see section 5.2) has not been factored into the amounts calculated, which are intended to represent a maximum cost liability for the project rather than the actual cost of offset delivery.

For the purposes of the BOP, the estimated liability has been calculated based on the assumption that the CoA will allow the delivery of biodiversity conservation measures within two years of Project approval. A total of 24 months of indexation, in accordance with a 5.7% annual rate calculated from the September 2024 statement of estimate, has therefore been applied to the total charge per credit in accordance with BCF practices.

Table 15 HumeLink biodiversity offset cost estimate if paying entirety into BCF

Credit type	Credits required	Total charge price (BCF)	Total charge price (BCF) with 24 months indexation
Ecosystem credits	15,128	\$82,118,910	\$91,480,276.80
Species credits	232,233 (107,254 area) (124,979 count)	\$368,807,091	\$410,851,830.18
Total	247,361	\$450,926,001	\$502,332,107

As identified previously, Transgrid is committed to reducing the offset liability through additional survey. Numerous options which prioritise land-based offsets will then be preferred to satisfy the offset requirement prior to payment to the BCF to address residual obligations. Therefore, amounts presented are significantly higher than the projected final amount which would be paid into the BCF.

5.2 Calculation of reduced species credit obligation

A two-step process was completed to determine likely offset liability reduction through additional threatened species survey consistent with Section 4.2 of this document and drawing upon knowledge of the species/ecosystem involved, including their likely distribution and habitat requirements.

Specific and detailed consideration was given to the 26 highest-cost species (those species with the largest cost liability calculated using the BCF charge rate), representing 88% of the total BCF species liability. A conservative



best-case scenario was applied that considered the likely reduction of the obligation for each species through survey, informed by:

- Actual occurrence of the species or relevant habitat versus assumed presence (i.e. if a species was likely to occur a reduction in the credit requirement via survey was limited compared with a species with very low likelihood of occurrence)
- Size of the area to be surveyed and its complexity in terms of number and size of polygons
- Ease of survey based on complexity of survey requirements (i.e. if a species was difficult to survey for and its polygon spread over numerous small sites less of a reduction was assumed).

Out of the 26 species considered, 21 species were considered likely to experience significant credit reductions (Table 22).

For the next 22 highest-cost species, it was considered whether survey would be a significant measure in credit reduction. Where this was deemed to be the case (17 species), the average proportional reduction calculated for the highest-cost 21 species was applied to the species (Table 22). The remaining species (30 species) were not accounted for, given their relatively small contribution to overall cost of offsetting.

Notwithstanding the credit reduction estimated to result from post-approval surveys, the credit obligation will be determined by the actual survey outcomes and this may include increases in credit obligations for some species.

The estimated total reduction to be achieved from targeted surveys is shown in Table 16. Justifications for each species calculated reduction are provided in Annex 3. It is noted that the credit reduction statistics provided below are heavily skewed by two 'count' plant species that require approximately 50% of the overall credits for the project (Hoary Sunray and Yass Daisy), both of which have not been considered species that would rely on survey as a significant measure to address offset requirements.

Table 16 Summary of revised species credit obligations following credit reduction surveys

Current BDAR species credit obligation	Estimated total reduction to be achieved from targeted surveys
232,233 credits	30,813 credits

5.3 Threatened ecological communities under the EPBC Act

An analysis of the likelihood for significant impact to matters of national environmental significance (MNES) is outlined in Table 16 below. Impacts to MNES will be offset through the NSW BOS.

Table 17 Biodiversity offsets required for EPBC Act listed TECs

PCT	PCT name	BC Act listed community	EPBC Act listed community	Total credits
939	Montane wet heath and bog of the eastern tablelands	Montane Peatlands and Swamps TEC	Alpine Sphagnum Bogs and Associated Fens TEC	8
1256	Tableland swamp meadow on impeded drainage sites			7



PCT	PCT name	BC Act listed community	EPBC Act listed community	Total credits
266	White Box grassy woodland	White Box Yellow Box Blakely's Red Gum 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 TEC	White Box Yellow Box Blakely's Red Gum Woodland and Derived Native Grassland TEC	1650
1330	Yellow Box - Blakely's Red Gum grassy woodland on the tablelands			1389
280	Red Stringybark - Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland			990
268	White Box - Blakely's Red Gum - Long-leaved Box - Norton's Box - Red Stringybark grass-shrub woodland on shallow soils on hills			847
277	Blakely's Red Gum - Yellow Box grassy tall woodland			539
283	Apple Box - Blakely's Red Gum moist valley and footslopes grass-forb open forest			96
278	Riparian Blakely's Red Gum - box - shrub - sedge - grass tall open forest			91
352	Red Stringybark - Blakely's Red Gum hillslope open forest on meta-sediments in the Yass - Boorowa - Crookwell region			38
Total				5,655

5.3.1 Alpine Sphagnum Bogs and Associated Fens TEC

The obligation for Alpine Sphagnum Bogs and Associated Fens TEC would be met through the establishment of two new BSA sites, NC003 and NC004. These sites may deliver up to 17 credits (3 credits and 14 credits, respectively), which would meet the obligation for 7 credits.

5.3.2 White Box Yellow Box Blakely's Red Gum Woodland and Derived Native Grassland TEC

The obligation for White Box Yellow Box Blakely's Red Gum Woodland and Derived Native Grassland TEC credits could be partially met through the establishment of one new BSA site (NC012), which may deliver up to 1,260 credits. Part of the obligation can also be met through the existing Ardmore BSA site, which may deliver up to 1,297 credits. The residual obligation is available to be met through market purchases (refer Table 12), although additional BSA establishment will be pursued first.



5.3.3 Threatened species

Table 17 provides the credit requirement for species listed as threatened under the EPBC Act.

Table 18 Biodiversity offsets required for EPBC Act listed threatened species

Scientific Name	Common Name	EPBC Act - Conservation Status	Total credit requirement
<i>Acacia bynoeana</i>	Bynoe's Wattle	Vulnerable	128
<i>Acacia flocktoniae</i>	Flockton Wattle	Vulnerable	385
<i>Ammobium craspedioides</i>	Yass Daisy	Vulnerable	17,366
<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	Vulnerable	649
<i>Baloskion longipes</i>	Dense Cord-rush	Vulnerable	45
<i>Bossiaea fragrans</i>	-	Critically Endangered	254
<i>Bossiaea oligosperma</i>	Few-seeded Bossiaea	Vulnerable	57
<i>Caladenia concolor</i>	Crimson Spider Orchid	Vulnerable	1,559
<i>Calyptorhynchus lathami lathami</i>	Glossy Black-Cockatoo	Vulnerable	1,423
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Vulnerable	93
<i>Commersonia prostrata</i>	Dwarf Kerrawang	Endangered	4
<i>Crinia sloanei</i>	Sloane's Froglet	Endangered	14
<i>Cyclodomorphus praealtus</i>	Alpine She-oak Skink	Endangered	925
<i>Delma impar</i>	Striped Legless Lizard	Vulnerable	375
<i>Diuris aequalis</i>	Buttercup Doubletail	Vulnerable	1,075
<i>Eucalyptus aggregata</i>	Black Gum	Vulnerable	4
<i>Eucalyptus macarthurii</i>	Paddys River Box, Camden Woollybutt	Endangered	82
<i>Eucalyptus robertsonii</i> subsp. <i>hemisphaerica</i>	Robertson's Peppermint	Vulnerable	3
<i>Grevillea iaspicula</i>	Wee Jasper Grevillea	Endangered	24
<i>Grevillea wilkinsonii</i>	Tumut Grevillea	Endangered	994
<i>Kunzea cabbagei</i>	Cabbage Kunzea	Vulnerable	282
<i>Lepidium hyssopifolium</i>	Aromatic Peppercress	Endangered	450
<i>Leucochrysum albicans</i> subsp. <i>tricolor</i>	Hoary Sunray	Endangered	107,500
<i>Litoria booroolongensis</i>	Booroolong Frog	Endangered	2
<i>Litoria castanea</i>	Yellow-spotted Tree Frog	Endangered	39
<i>Mastacomys fuscus</i>	Broad toothed Rat	Endangered	1



<i>Mixophyes balbus</i>	Stuttering Frog	Vulnerable	791
<i>Persoonia marginata</i>	Clandulla Geebung	Vulnerable	162
<i>Petauroides volans</i>	Southern Greater Glider	Vulnerable	4,498
<i>Phascolarctos cinereus</i>	Koala	Endangered	13,430
<i>Phyllota humifusa</i>	Dwarf Phyllota	Vulnerable	381
<i>Pimelea bracteata</i>	Pimelea bracteata	Critically Endangered	88
<i>Polytelis swainsonii</i>	Superb Parrot	Vulnerable	2,884
<i>Pomaderris cotoneaster</i>	Cotoneaster Pomaderris	Endangered	300
<i>Pomaderris delicata</i>	Delicate Pomaderris	Critically Endangered	77
<i>Pomaderris pallida</i>	Pale Pomaderris	Vulnerable	67
<i>Prasophyllum bagoense</i>	Bago Leek-orchid	Critically Endangered	3
<i>Prasophyllum innubum</i>	Brandy Marys Leek-orchid	Critically Endangered	1
<i>Prasophyllum keltonii</i>	Kelton's Leek Orchid	Critically Endangered	2
<i>Prasophyllum petilum</i>	Tarengo Leek Orchid	Endangered	827
<i>Pseudomys fumeus</i>	Smoky Mouse	Endangered	201
<i>Pterostylis oreophila</i>	Blue-tongued Greenhood	Critically Endangered	11
<i>Swainsona recta</i>	Small Purple-pea	Endangered	1,249
<i>Synemon plana</i>	Golden Sun Moth	Critically Endangered	165
<i>Thesium australe</i>	Austral Toadflax	Vulnerable	902
<i>Xerochrysum palustre</i>	Swamp Everlasting	Vulnerable	8
			159,780

5.4 Updates to the BOP

The BOP is a working document which will be updated every 6 months (particularly in relation to survey within the impact area and execution of other measures in the BOP) and until such time as the biodiversity conservation measures have been met, or as required by the Planning Secretary and in consultation with BCS and BCT. BOP updates will include reporting on the scoping and progress of any conservation actions being delivered to acquit the offset liability. This will ensure that Transgrid can deliver the biodiversity conservation measures through as many available mechanisms as possible prior to the offset acquittal deadline of the CoA. Equivalent BCF payments in future revisions of the BOP will be calculated using credits that are remaining at the time of the revision and the relevant BCF charge inclusive of delivery fee, risk premium and appropriate indexing.

Each BOP update will be accompanied by a tracking spreadsheet that reconciles any changes to the offset liability and acquittal since the time of last reporting, as supported by revised BAMC credit reporting, Biodiversity Assessment Verification Reporting and accompanying spatial data. The spreadsheet will include (but not be limited to):

- Direct, indirect and prescribed impact areas / credit liability per offset entity at approval
- Changes to these figures following additional survey, offset acquittal and final design/construction outcomes



- References to the source of any liability changes and associated approvals.

Updates to the BOP will occur in consultation with the Energy Assessments Section of DPHI, the BCT and BCS of NSW DCCEEW, to the satisfaction of the Planning Secretary.



6 Timing and Responsibilities

Key milestones for elements of the BOP and the other relevant requirements from the likely CoA are presented in Table 19. The responsibility for each action associated with biodiversity offsetting remains with Transgrid, supported by specialist ecological consultants where required, as indicated in the table.

All biodiversity offset measures described in this BOP, and future updates to the BOP, will be delivered by 13 November 2026, unless otherwise agreed with the Planning Secretary, in accordance with condition B26 (e) of the HumeLink Infrastructure Approval. Table 19 will be updated as additional proposed BSAs are confirmed, as described in Section 4.3.

Table 19 Biodiversity Offset Package key milestones and responsibilities

Milestone	Component	Status	Forecast Dates (based on calendar year)	Responsibility
Relevant biodiversity value surveys	Site surveys	In Progress	Ongoing until Q2 2026	Project Biodiversity Manager
Biodiversity Offset Package	BOP submitted	In Progress	Q4 2024	Project Biodiversity Manager
	BOP approved	Not started	Q1 2025	Project Biodiversity Manager/BCS/BCT Planning Secretary
	BOP updated	Not started	Every six months to Q2 2026	Project Biodiversity Manager
Expressions of Interest	On existing public registers	Not started	Q3 2024	Offset Program Manager
Rapid ecological surveys and landholder consultation	Site surveys	In Progress	Q3 2024/Ongoing	Offset Program Manager
Updated Biodiversity Offset Package	Stakeholder consultation	Not started	Six-monthly from approval	Offset Program Manager
	Approval	Not started	Six-monthly	Offset Program Manager
Bank guarantee	Guarantees lodged with the Planning Secretary	Not started	Prior to impacts (Q1 2025)	Project Director
Submit Biodiversity Stewardship Agreement applications	Approved and credits released	Not started	Q2 2025/Ongoing	Biodiversity Offset Manager
Conservation Action scoping and consultation	Offset acquittal	Not started	Six-monthly from Q2 2025	Biodiversity Offset Manager
Purchase credits from market participants or NMO reverse auctions	Credits transferred	Not started	Ongoing until Q3 2026	Biodiversity Offset Manager



Milestone	Component	Status	Forecast Dates (based on calendar year)	Responsibility
Residual payments to the BCF	For any outstanding credits for HumeLink	Not started	Q3 2026	Project Biodiversity Manager



7 References

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Annex 1 – Relevant Conditions of Approval

The Project's instrument of approval can be accessed via:

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSL-36656827%2120241114T030117.651%20GMT>

Offsetting conditions relevant to this document are provided below.



Annex 2 - BAMC summary reports



Annex 3 – Present credit requirement cost for payments into the BCF

Table 20 Ecosystem credit liability analysis

PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
870	Bungonia	Grey Gum - Thin-leaved Stringybark grassy woodland	Central Gorge Dry Sclerophyll Forests <50%	57	\$10,515.60	\$599,389.20	\$667,720.80
301	Inland Slopes	Drooping Sheoke - Ricinocarpus bowmannii - grass tree tall open shrubland of the Coolac - Tumut Serpentine Belt	Coolac-Tumut Serpentine Shrubby Woodland	63	\$16,573.50	\$1,044,130.50	\$1,163,155.14
335	Crookwell	Tussock grass - sedgeland fen - - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South-Western Slopes Bioregion	Inland Floodplain Swamps >=70% - <90%	16	\$11,544.30	\$184,708.80	\$205,767.36
5	Inland Slopes	River Red Gum herbaceous-grassy very tall open forest wetland on inner floodplains	Inland Riverine Forests <50%	32	\$2,971.80	\$95,097.60	\$105,941.76



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
319	Inland Slopes	Tumbledown Red Gum - White Cypress Pine hill woodland	Inland Rocky Hill Woodlands >=50% - <70%	23	\$17,373.60	\$399,592.80	\$445,143.84
679	Crookwell	Black Sallee - Snow Gum low woodland of montane valleys, South-Eastern Highlands Bioregion and Australian Alps Bioregion	Monaro Tableland Cool Temperate Grassy Woodland	34	\$6,515.10	\$221,513.40	\$246,768.60
1191	Crookwell	Snow Gum - Candle Bark woodland on broad valley flats of the tablelands and slopes		3	\$6,515.10	\$19,545.30	\$21,773.70
1256	Crookwell	Tableland swamp meadow on impeded drainage sites	Montane Peatlands and Swamps	5	\$21,145.50	\$105,727.50	\$117,780.30
939	Snowy Mountains	Montane wet heath and bog of the eastern tablelands		8	\$7,886.70	\$63,093.60	\$70,285.92
1256	Murrumbateman	Tableland swamp meadow on impeded drainage sites		2	\$7,886.70	\$15,773.40	\$17,571.48
638	Snowy Mountains	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas	Montane Wet Sclerophyll Forests <50%	1077	\$6,858.00	\$7,386,066.00	\$8,228,193.84
638	Bondo	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas		125	\$6,858.00	\$857,250.00	\$954,990.00
637	Snowy Mountains	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas		1	\$6,858.00	\$6,858.00	\$7,639.92



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
1150	Bungonia	Silvertop Ash - Blue-leaved Stringybark shrubby open forest on ridges	South East Dry Sclerophyll Forests <50%	460	\$4,457.70	\$2,050,542.00	\$2,284,258.80
1151	Crookwell	Silvertop Ash - Broad-leaved Peppermint dry shrub forest	South East Dry Sclerophyll Forests >=90%	476	\$8,001.00	\$3,808,476.00	\$4,242,588.00
953	Snowy Mountains	Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges	Southern Tableland Dry Sclerophyll Forests <50%	2289	\$4,572.00	\$10,465,308.00	\$11,658,517.92
1093	Murrumbateman	Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest	Southern Tableland Dry Sclerophyll Forests >=50% - <70%	608	\$4,572.00	\$2,779,776.00	\$3,096,714.24
299	Bondo	Riparian Ribbon Gum - Robertson's Peppermint - Apple Box riverine very tall open forest		364	\$4,572.00	\$1,664,208.00	\$1,853,953.92
1093	Crookwell	Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest		313	\$4,686.30	\$1,466,811.90	\$1,634,029.02
1093	Bungonia	Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest		208	\$4,686.30	\$974,750.40	\$1,085,872.32
351	Murrumbateman	Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest		133	\$4,572.00	\$608,076.00	\$677,406.24



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
727	Crookwell	Broad-leaved Peppermint - Brittle Gum - Red Stringybark dry open forest		92	\$4,686.30	\$431,139.60	\$480,289.68
349	Murrumbateman	Inland Scribbly Gum - Red Stringybark open forest on hills composed of siliceous substrates		64	\$4,572.00	\$292,608.00	\$325,969.92
299	Inland Slopes	Riparian Ribbon Gum - Robertson's Peppermint - Apple Box riverine very tall open forest		4	\$4,000.50	\$16,002.00	\$17,826.00
731	Crookwell	Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills	Southern Tableland Grassy Woodlands >=70% - <90%	171	\$5,143.50	\$879,538.50	\$979,799.22
731	Inland Slopes	Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills		17	\$5,143.50	\$87,439.50	\$97,406.94
731	Murrumbateman	Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills		16	\$5,143.50	\$82,296.00	\$91,677.12
300	Snowy Mountains	Ribbon Gum - Narrow-leaved (Robertson's) Peppermint montane fern - grass tall open forest on deep clay loam soils	Southern Tableland Wet Sclerophyll Forests <50%	458	\$3,200.40	\$1,465,783.20	\$1,632,861.60
295	Bondo	Robertson's Peppermint - Broad-leaved Peppermint - Norton's Box - stringybark shrub-fern open forest		54	\$3,200.40	\$172,821.60	\$192,520.80



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
300	Bondo	Ribbon Gum - Narrow-leaved (Robertson's) Peppermint montane fern - grass tall open forest on deep clay loam soils		37	\$3,200.40	\$118,414.80	\$131,912.40
295	Inland Slopes	Robertson's Peppermint - Broad-leaved Peppermint - Norton's Box - stringybark shrub-fern open forest		12	\$3,200.40	\$38,404.80	\$42,782.40
1196	Snowy Mountains	Snow Gum - Mountain Gum shrubby open forest of montane areas	Subalpine Woodlands <50%	665	\$7,200.90	\$4,788,598.50	\$5,334,430.50
679	Snowy Mountains	Black Sallee - Snow Gum low woodland of montane valleys, South-Eastern Highlands Bioregion and Australian Alps Bioregion		94	\$7,200.90	\$676,884.60	\$754,039.80
952	Crookwell	Mountain Gum - Narrow-leaved Peppermint - Snow Gum dry shrubby open forest on undulating tablelands	Tableland Basalt Forest	80	\$8,001.00	\$640,080.00	\$713,040.00
1097	Bungonia	Ribbon Gum - Narrow-leaved Peppermint grassy open forest on basalt plateaux		3	\$8,001.00	\$24,003.00	\$26,739.00
1107	Bungonia	River Peppermint - Narrow-leaved Peppermint open forest on sheltered escarpment slopes		3	\$8,001.00	\$24,003.00	\$26,739.00



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
953	Bondo	Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges		12	\$21,031.20	\$252,374.40	\$281,145.60
1224	Snowy Mountains	Sub-alpine dry grasslands and heathlands of valley slopes	Temperate Montane Grasslands <50%	1	\$3,086.10	\$3,086.10	\$3,437.94
297	Inland Slopes	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills	Upper Riverina Dry Sclerophyll Forests <50%	29	\$5,257.80	\$152,476.20	\$169,855.32
306	Inland Slopes	Red Box - Red Stringybark - Norton's Box hill heath shrub - tussock grass open forest of the Tumut region		13	\$5,257.80	\$68,351.40	\$76,142.04
294	Inland Slopes	Norton's Box - Red Box - White Box tussock grass open forest		2	\$5,257.80	\$10,515.60	\$11,714.16
290	Inland Slopes	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills	Upper Riverina Dry Sclerophyll Forests >=50% - <70%	190	\$5,257.80	\$998,982.00	\$1,112,845.20
314	Inland Slopes	Apple Box - Red Stringybark basalt scree open forest in the upper Murray River region		129	\$5,257.80	\$678,256.20	\$755,563.32
290	Bondo	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills		3	\$5,257.80	\$15,773.40	\$17,571.24



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
285	Bondo	Broad-leaved Sally grass - sedge woodland on valley flats and swamps	Upper Riverina Dry Sclerophyll Forests >=70% - <90%	248	\$7,543.80	\$1,870,862.40	\$2,084,122.56
285	Snowy Mountains	Broad-leaved Sally grass - sedge woodland on valley flats and swamps		25	\$7,543.80	\$188,595.00	\$210,093.00
322	Murrumbateman	Inland Scribbly Gum - Red Stringybark - Black Cypress Pine hillslope shrub-tussock grass open forest	Western Slopes Dry Sclerophyll Forests <50%	15	\$2,633.90	\$39,508.50	\$44,012.10
287	Inland Slopes	Long-leaved Box - Red Box - Red Stringybark mixed open forest	Western Slopes Dry Sclerophyll Forests >=50% - <70%	173	\$3,200.40	\$553,669.20	\$616,779.60
287	Murrumbateman	Long-leaved Box - Red Box - Red Stringybark mixed open forest		19	\$3,200.40	\$60,807.60	\$67,738.80
343	Inland Slopes	Mugga Ironbark - Red Box - Red Stringybark - Western Grey Box grass/shrub woodland on metamorphic substrates in the Tarcutta - Gundagai region	Western Slopes Dry Sclerophyll Forests >=70% - <90%	60	\$9,029.70	\$541,782.00	\$603,543.60
316	Inland Slopes	Norton's Box - Red Box - Red Stringybark +/- Nodding Flax Lily forb-grass open forest	Western Slopes Grassy Woodlands >=50% - <70%	502	\$4,000.50	\$2,008,251.00	\$2,237,163.00
266	Inland Slopes	White Box grassy woodland		1633	\$5,143.50	\$8,399,335.50	\$9,356,796.06



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
268	Inland Slopes	White Box - Blakely's Red Gum - Long-leaved Box - Norton's Box - Red Stringybark grass-shrub woodland on shallow soils on hills	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland	847	\$5,143.50	\$4,356,544.50	\$4,853,157.54
280	Inland Slopes	Red Stringybark - Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland		753	\$5,143.50	\$3,873,055.50	\$4,314,554.46
1330	Murrumbateman	Yellow Box - Blakely's Red Gum grassy woodland on the tablelands		579	\$5,143.50	\$2,978,086.50	\$3,317,565.78
277	Inland Slopes	Blakely's Red Gum - Yellow Box grassy tall woodland		539	\$5,143.50	\$2,772,346.50	\$3,088,372.98
1330	Crookwell	Yellow Box - Blakely's Red Gum grassy woodland on the tablelands		428	\$5,143.50	\$2,201,418.00	\$2,452,362.96
280	Murrumbateman	Red Stringybark - Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland		194	\$5,143.50	\$997,839.00	\$1,111,585.08
278	Inland Slopes	Riparian Blakely's Red Gum - box - shrub - sedge - grass tall open forest		91	\$5,143.50	\$468,058.50	\$521,413.62
280	Crookwell	Red Stringybark - Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland		43	\$5,143.50	\$221,170.50	\$246,382.26
352	Murrumbateman	Red Stringybark - Blakely's Red Gum hillslope open forest on meta-sediments in the Yass - Boorowa - Crookwell region		38	\$5,143.50	\$195,453.00	\$217,733.16



PCT	IBRA Subregion	PCT name	Offset Trading Group*	Total credits	BCF charge rate^	BCF total charge - no indexation	BCF total charge - 24 months indexation^^
283	Murrumbateman	Apple Box - Blakely's Red Gum moist valley and footslopes grass-forb open forest		31	\$5,143.50	\$159,448.50	\$177,624.42
266	Murrumbateman	White Box grassy woodland		17	\$5,143.50	\$87,439.50	\$97,406.94
1330	Bungonia	Yellow Box - Blakely's Red Gum grassy woodland on the tablelands		382	\$8,001.00	\$3,056,382.00	\$3,404,766.00
283	Crookwell	Apple Box - Blakely's Red Gum moist valley and footslopes grass-forb open forest		58	\$5,143.50	\$298,323.00	\$332,329.56
283	Bungonia	Apple Box - Blakely's Red Gum moist valley and footslopes grass-forb open forest		7	\$8,001.00	\$56,007.00	\$62,391.00
			Total	15,128		\$82,118,910.00	\$91,480,276.80

* Threatened Ecological Communities are highlighted in **Bold**

^ The BCF Charge Rate is based on the total charge per credit and includes the base credit charge, risk premium and delivery fee.

^^ The Residual BCF Payment is calculated by Total Credits x (BCF Charge Rate + (Indexation Rate x 24 months))



Table 21 Species credits liability analysis

Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate^	BCF total charge payment	BCF total charge payment with 24 months indexation^^
Flora							
<i>Acacia ausfeldii</i>	Ausfeld's Wattle	Vulnerable	Not Listed	555	\$1,825	\$1,012,919	\$1,128,404
<i>Acacia bynoeana</i>	Bynoe's Wattle	Endangered	Vulnerable	128	\$3,578	\$457,932	\$510,125
<i>Acacia flocktoniae</i>	Flockton Wattle	Vulnerable	Vulnerable	385	\$4,778	\$1,839,430	\$2,049,086
<i>Ammobium craspedioides</i>	Yass Daisy	Vulnerable	Vulnerable	17,366	\$229	\$3,982,024	\$4,436,318
<i>Baloskion longipes</i>	Dense Cord-rush	Vulnerable	Vulnerable	45	\$7,167	\$322,497	\$359,261
<i>Bossiaea fragrans</i>	-	Critically Endangered	Critically Endangered	254	\$9,544	\$2,424,189	\$2,700,520
<i>Bossiaea oligosperma</i>	Few-seeded Bossiaea	Vulnerable	Vulnerable	57	\$4,778	\$272,331	\$303,371
<i>Caesia parviflora var. minor</i>	Small Pale Grass-lily	Endangered	Not Listed	29	\$7,167	\$207,832	\$231,524
<i>Caladenia concolor</i>	Crimson Spider Orchid	Endangered	Vulnerable	1,559	\$14,322	\$22,327,671	\$24,873,081
<i>Caladenia montana</i>	-	Vulnerable	Not Listed	4,543	\$14,322	\$65,063,892	\$72,481,339
<i>Commersonia prostrata</i>	Dwarf Kerrawang	Endangered	Endangered	4	\$4,778	\$19,111	\$21,289
<i>Cullen parvum</i>	Small Scurf-pea	Endangered	Not Listed	387	\$3,578	\$1,384,527	\$1,542,330



Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate^	BCF total charge payment	BCF total charge payment with 24 months indexation^^
<i>Dillwynia glauca</i>	Michelago Parrot-pea	Endangered	Not Listed	45	\$1,257	\$56,552	\$63,000
<i>Diuris aequalis</i>	Buttercup Doubletail	Endangered	Vulnerable	1,075	\$4,778	\$5,136,071	\$5,721,473
<i>Diuris tricolor</i>	Pine Donkey Orchid	Vulnerable	Not Listed	13	\$4,778	\$62,111	\$69,190
<i>Eucalyptus aggregata</i>	Black Gum	Vulnerable	Vulnerable	4	\$350	\$1,398	\$1,557
<i>Eucalyptus macarthurii</i>	Paddy's River Box, Camden Woollybutt	Endangered	Endangered	82	\$688	\$56,446	\$62,881
<i>Eucalyptus robertsonii</i> subsp. <i>hemisphaerica</i>	Robertson's Peppermint	Vulnerable	Vulnerable	3	\$2,404	\$7,213	\$8,035
<i>Genoplesium superbum</i>	Superb Midge Orchid	Endangered	Not Listed	543	\$14,322	\$7,776,732	\$8,663,299
<i>Grevillea iaspicula</i>	Wee Jasper Grevillea	Critically Endangered	Endangered	24	\$1,038	\$24,915	\$27,755
<i>Grevillea wilkinsonii</i>	Tumut Grevillea	Critically Endangered	Endangered	994	\$10,744	\$10,679,735	\$11,897,106
<i>Kunzea cabbagei</i>	Cabbage Kunzea	Vulnerable	Vulnerable	282	\$4,778	\$1,347,323	\$1,500,889
<i>Lepidium hyssopifolium</i>	Aromatic Peppergrass	Endangered	Endangered	450	\$9,544	\$4,294,823	\$4,784,387
<i>Leucochrysum albicans</i> var. <i>tricolor</i>	Hoary Sunray	Not Listed	Endangered	107,500	\$229	\$24,649,750	\$27,461,950



Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate^	BCF total charge payment	BCF total charge payment with 24 months indexation^^
<i>Persoonia marginata</i>	Clandulla Geebung	Vulnerable	Vulnerable	162	\$2,404	\$389,508	\$433,909
<i>Persoonia mollis</i> subsp. <i>revoluta</i>	-	Vulnerable	Not Listed	52	\$1,257	\$65,349	\$72,800
<i>Phyllota humifusa</i>	Dwarf Phyllota	Vulnerable	Vulnerable	381	\$2,404	\$916,065	\$1,020,489
<i>Pimelea bracteata</i>	Pimelea bracteata	Critically Endangered	Critically Endangered	88	\$7,167	\$630,662	\$702,554
<i>Pomaderris cotoneaster</i>	Cotoneaster Pomaderris	Endangered	Endangered	300	\$9,544	\$2,863,215	\$3,189,591
<i>Pomaderris delicata</i>	Delicate Pomaderris	Critically Endangered	Critically Endangered	77	\$4,778	\$367,886	\$409,817
<i>Pomaderris pallida</i>	Pale Pomaderris	Vulnerable	Vulnerable	67	\$2,404	\$161,093	\$179,456
<i>Prasophyllum bagoense</i>	Bago Leek-orchid	Critically Endangered	Critically Endangered	3	\$10,744	\$32,233	\$35,907
<i>Prasophyllum innubum</i>	Brandy Marys Leek-orchid	Critically Endangered	Critically Endangered	1	\$14,322	\$14,322	\$15,955
<i>Prasophyllum keltonii</i>	Kelton's Leek Orchid	Critically Endangered	Critically Endangered	2	\$14,322	\$28,644	\$31,909
<i>Prasophyllum petilum</i>	Tarengo Leek Orchid	Endangered	Endangered	827	\$7,167	\$5,926,786	\$6,602,412
<i>Pterostylis alpina</i>	Alpine Greenhood	Vulnerable	Not Listed	69	\$14,322	\$988,204	\$1,100,861



Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate^	BCF total charge payment	BCF total charge payment with 24 months indexation^^
<i>Pterostylis foliata</i>	Slender Greenhood	Vulnerable	Not Listed	1,150	\$9,544	\$10,975,658	\$12,226,766
<i>Pterostylis oreophila</i>	Blue-tongued Greenhood	Critically Endangered	Critically Endangered	11	\$14,322	\$157,540	\$175,500
<i>Pultenaea humilis</i>	Dwarf Bush-pea	Vulnerable	Not Listed	569	\$7,167	\$4,077,801	\$4,542,651
<i>Senecio garlandii</i>	Woolly Ragwort	Vulnerable	Not Listed	269	\$1,257	\$338,058	\$376,600
<i>Solanum armourense</i>	-	Endangered	Not Listed	19	\$2,404	\$45,683	\$50,891
<i>Swainsona recta</i>	Small Purple-pea	Endangered	Endangered	1,249	\$4,778	\$5,967,397	\$6,647,553
<i>Swainsona sericea</i>	Silky Swainson-pea	Vulnerable	Not Listed	2,059	\$1,825	\$3,757,840	\$4,186,276
<i>Thelymitra alpicola</i>	Alpine Sun-orchid	Vulnerable	Not Listed	5	\$9,544	\$47,720	\$53,160
<i>Thesium australe</i>	Austral Toadflax	Vulnerable	Vulnerable	902	\$3,578	\$3,226,986	\$3,594,786
<i>Xerochrysum palustre</i>	Swamp Everlasting	Not Listed	Vulnerable	8	\$2,404	\$19,235	\$21,428
Fauna							
<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	Vulnerable	Vulnerable	649	\$1,825	\$1,184,477	\$1,319,521
<i>Burhinus grallarius</i>	Bush Stone-curlew	Endangered	Not Listed	1,684	\$1,257	\$2,116,316	\$2,357,600
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Vulnerable	Not Listed	12,838	\$3,578	\$45,929,100	\$51,163,923



Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate^	BCF total charge payment	BCF total charge payment with 24 months indexation^^
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	Vulnerable	Not Listed	1,423	\$3,578	\$5,090,911	\$5,671,153
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	Vulnerable	Not Listed	7,318	\$1,257	\$9,196,677	\$10,245,200
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Vulnerable	Vulnerable	93	\$1,257	\$116,875	\$130,200
<i>Crinia sloanei</i>	Sloane's Froglet	Vulnerable	Endangered	14	\$7,167	\$100,333	\$111,770
<i>Cyclodomorphus praealtus</i>	Alpine She-oak Skink	Endangered	Endangered	925	\$10,744	\$9,938,385	\$11,071,251
<i>Delma impar</i>	Striped Legless Lizard	Vulnerable	Vulnerable	375	\$4,778	\$1,791,653	\$1,995,863
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	Vulnerable	Not Listed	61	\$1,825	\$111,330	\$124,023
<i>Hieraaetus morphnoides</i>	Little Eagle	Vulnerable	Not Listed	1,999	\$1,825	\$3,648,335	\$4,064,287
<i>Keyacris scurra</i>	Key's Matchstick Grasshopper	Endangered	Not Listed	2,167	\$3,578	\$7,752,638	\$8,636,253
<i>Litoria booroolongensis</i>	Booroolong Frog	Endangered	Endangered	2	\$3,578	\$7,155	\$7,971
<i>Litoria castanea</i>	Yellow-spotted Tree Frog	Critically Endangered	Endangered	39	\$7,167	\$279,498	\$311,359
<i>Lophoictinia isura</i>	Square-tailed Kite	Vulnerable	Not Listed	824	\$1,825	\$1,503,866	\$1,675,324
<i>Mastacomys fuscus</i>	Broad toothed Rat	Vulnerable	Vulnerable	1	\$7,167	\$7,167	\$7,984



Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate^	BCF total charge payment	BCF total charge payment with 24 months indexation^^
<i>Mixophyes balbus</i>	Stuttering Frog	Endangered	Vulnerable	791	\$10,744	\$8,498,662	\$9,467,416
<i>Myotis macropus</i>	Southern Myotis	Vulnerable	Not Listed	1,188	\$1,257	\$1,492,983	\$1,663,200
<i>Ninox connivens</i>	Barking Owl	Vulnerable	Not Listed	7,281	\$1,257	\$9,150,178	\$10,193,400
<i>Ninox strenua</i>	Powerful Owl	Vulnerable	Not Listed	7,120	\$1,257	\$8,947,846	\$9,968,000
<i>Petauroides volans</i>	Southern Greater Glider	Not Listed	Vulnerable	4,498	\$688	\$3,096,243	\$3,449,246
<i>Petaurus australis (Bago)</i>	Yellow-bellied Glider population on the Bago Plateau	Endangered	Not Listed	3,565	\$2,404	\$8,571,579	\$9,548,674
<i>Petaurus norfolcensis</i>	Squirrel Glider	Vulnerable	Not Listed	2,071	\$688	\$1,425,594	\$1,588,126
<i>Petaurus norfolcensis</i> - endangered population	Squirrel Glider in the Wagga Wagga City Local Government Area	Vulnerable	Not Listed	374	\$1,257	\$470,013	\$523,600
<i>Petroica rodinogaster</i>	Pink Robin	Vulnerable	Not Listed	932	\$2,404	\$2,240,873	\$2,496,315
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	Vulnerable	Not Listed	4,944	\$688	\$3,403,252	\$3,791,257
<i>Phascolarctos cinereus</i>	Koala	Vulnerable	Endangered	13,430	\$1,257	\$16,877,750	\$18,802,000
<i>Polytelis swainsonii</i>	Superb Parrot	Vulnerable	Vulnerable	2,884	\$3,578	\$10,317,770	\$11,493,749



Scientific name	Common name	BC Act status	EPBC Act status	Total credits	BCF charge rate [^]	BCF total charge payment	BCF total charge payment with 24 months indexation ^{^^}
<i>Pseudomys fumeus</i>	Smoky Mouse	Critically Endangered	Endangered	201	\$4,778	\$960,326	\$1,069,782
<i>Synemon plana</i>	Golden Sun Moth	Endangered	Critically Endangered	165	\$2,404	\$396,721	\$441,944
<i>Tyto novaehollandiae</i>	Masked Owl	Vulnerable	Not Listed	5,600	\$1,257	\$7,037,632	\$7,840,000
<i>Tyto tenebricosa</i>	Sooty Owl	Vulnerable	Not Listed	2,180	\$1,257	\$2,739,650	\$3,052,000
	Total			232,233	\$378,207	\$368,807,091	\$410,851,830
	[^] The BCF Charge Rate is based on the total charge per credit and includes the base credit charge, risk premium and delivery fee. ^{^^} The Residual BCF Payment is calculated by Total Credits x (BCF Charge Rate + (Indexation Rate x 24 months))						



Annex 4 – Revision of species credit obligations after additional surveys predictions

Table 22 Revision of species credit obligations after additional surveys predictions

Scientific Name	Common Name	Total credit requirement	Survey reduction assumptions	Survey reduction (credits)
Species subject to detailed consideration of future survey likelihood				
<i>Caladenia concolor</i>	Crimson Spider Orchid	1,559	Survey of 15 polygons >0.5ha	1,319
<i>Caladenia montana</i>	Caladenia montana	4,543	Survey of 23 polygons > 2ha.	3,755
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	12,838	25% reduction due to survey work (hollows)	3,147
<i>Calyptrorhynchus lathami lathami</i>	Glossy Black-Cockatoo	1,423	25% reduction due to survey work (hollows)	355
<i>Cyclodomorphus praealtus</i>	Alpine She-oak Skink	925	Survey of 8 polygons >0.5ha. NB Burnt areas limit survey ability.	194
<i>Diuris aequalis</i>	Buttercup Doubletail	1,075	Survey of 19 polygons >0.5ha	886
<i>Genoplesium superbum</i>	Superb Midge Orchid	543	Survey of 2 polygons >0.5ha	453
<i>Grevillea wilkinsonii</i>	Tumut Grevillea	994	Survey of 11 polygons >0.5ha	865
<i>Hieraaetus morphnoides</i>	Little Eagle	1,999	25% reduction due to survey work (nest trees)	499



<i>Keyacris scurra</i>	Key's Matchstick Grasshopper	2,167	Survey of 19 polygons >2ha	1,532
<i>Lepidium hyssopifolium</i>	Aromatic Peppergrass	450	Survey of 8 polygons >1.5ha	395
<i>Mixophyes balbus</i>	Stuttering Frog	791	All areas surveyed confirmed absent	710
<i>Ninox connivens</i>	Barking Owl	7,281	25% reduction due to survey work	1,785
<i>Ninox strenua</i>	Powerful Owl	7,120	25% reduction due to survey work	1,770
<i>Polytelis swainsonii</i>	Superb Parrot	2,884	25% reduction due to survey work	682
<i>Prasophyllum petilum</i>	Tarengo Leek Orchid	827	Survey of 16 polygons >0.5ha	673
<i>Pterostylis foliata</i>	Slender Greenhood	1,150	Survey of 12 polygons >0.5ha	1,042
<i>Pultenaea humilis</i>	Dwarf Bush-pea	569	Survey of 10 polygons >0.5 ha	435
<i>Swainsona recta</i>	Small Purple-pea	1,249	Survey of 9 polygons >1ha	966
<i>Swainsona sericea</i>	Silky Swainson-pea	2,059	Survey of 19 polygons >1.5ha	1,340
<i>Tyto novaehollandiae</i>	Masked Owl	5,600	25% reduction due to survey work	1382
Species considered to benefit from survey but without detailed analysis of likely reduction amount				
<i>Acacia ausfeldii</i>	Ausfeld's Wattle	555	Based on average survey reduction for 25 most expensive species	314
<i>Acacia bynoeana</i>	Bynoe's Wattle	128	Based on average survey reduction for 25 most expensive species	79
<i>Acacia flocktoniae</i>	Flockton Wattle	385	Based on average survey reduction for 25 most expensive species	236
<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	649	Based on average survey reduction for 25 most expensive species	370
<i>Bossiaea fragrans</i>	-	254	Based on average survey reduction for 25 most expensive species	154
<i>Burhinus grallarius</i>	Bush Stone-curlew	1,684	Based on average survey reduction for 25 most expensive species	941
<i>Cullen parvum</i>	Small Scurf-pea	387	Based on average survey reduction for 25 most expensive species	210
<i>Kunzea cabbagei</i>	Cabbage Kunzea	282	Based on average survey reduction for 25 most expensive species	173



<i>Lophoictinia isura</i>	Square-tailed Kite	824	Based on average survey reduction for 25 most expensive species	505
<i>Myotis macropus</i>	Southern Myotis	1,188	Based on average survey reduction for 25 most expensive species	669
<i>Petroica rodinogaster</i>	Pink Robin	932	Based on average survey reduction for 25 most expensive species	572
<i>Phyllota humifusa</i>	Dwarf Phyllota	381	Based on average survey reduction for 25 most expensive species	234
<i>Pimelea bracteata</i>	Pimelea bracteata	88	Based on average survey reduction for 25 most expensive species	54
<i>Pomaderris cotoneaster</i>	Cotoneaster Pomaderris	300	Based on average survey reduction for 25 most expensive species	184
<i>Pterostylis alpina</i>	Alpine Greenhood	69	Based on average survey reduction for 25 most expensive species	42
<i>Thesium australe</i>	Austral Toadflax	902	Based on average survey reduction for 25 most expensive species	553
<i>Tyto tenebricosa</i>	Sooty Owl	2,180	Based on average survey reduction for 25 most expensive species	1,338
		69,234	Total	30,813



Annex 5 - Statement of Estimate from BCF



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