

Snowy 2.0 Transmission Connection Project

Biodiversity Offset Package

Prepared for Snowy Hydro Ltd

August 2023

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Biodiversity Offset Package

Snowy Hydro Ltd

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August 2023

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4.0	23 August 2023	Nathan Garvey	–	Changes based on feedback from BCD

Approved by

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Director

23 August 2023

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Executive Summary

The Snowy 2.0 project is a large-scale pumped hydro-electric storage and generation project being developed by Snowy Hydro Limited (Snowy Hydro) and their partner Future Generation Joint Venture (FGJV). It will increase hydro-electric capacity within the existing Snowy Mountains Hydro-electric Scheme and is critical to underpinning system security and reliability as Australia transitions to a decarbonised economy.

A new transmission connection is required to connect Snowy 2.0 to the National Energy Market (NEM). The Transmission Connection Project (the project) will include a new 500/330 kilovolt (kV) substation, two 330 kV double-circuit overhead transmission lines, and the construction of new access tracks and upgrade of existing access tracks. The project was approved by the NSW Minister for Planning on 2 September 2022, with specific conditions including the requirement for a Biodiversity Offset Package (BOP).

The project has an offset obligation for impacts outside Kosciuszko National Park (KNP) under the NSW Biodiversity Offsets Scheme (BOS). The proponent has several options to meet this obligation, including the retirement of like-for-like credits, retirement of credits in accordance with the variation rules, or payment into the Biodiversity Conservation Fund (BCF). A review of existing biodiversity credits available in the market indicates that there are limited credits available that would be suitable as offsets for the project, with no credits available under the Biodiversity Assessment Method (BAM) that would meet project needs.

The BOP for the project includes a combination of like-for-like credits and payment into the BCF to meet the residual offset liability. Snowy Hydro is proposing to meet the offset requirements through the development of Biodiversity Stewardship Agreements (BSAs) on suitable land within the project's locality. An initial spatial analysis was conducted to identify potential properties that support the ecosystem and species credits required to offset impacts of the project. Two properties were identified that had the capacity to generate sufficient credits to meet a significant proportion of the offset requirements for the project. Surveys have been conducted on these properties to confirm the biodiversity values present, understand management issues and calculate credit yields. The Phillips property will generate credits across two offset trading groups and at least one species, while the Heinecke property will generate credits for one offset trading group and one species.

It is anticipated that credits generated from the two properties will be able to be traded and retired in early 2024, with residual credit requirements to be met through purchase of credits or payment into the BCF in mid-2024. It is anticipated that all offset obligations will be able to be met by 1 September 2024.

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1 Introduction

1.1 Project overview

Snowy Hydro Ltd (Snowy Hydro) and its partner, Future Generation Joint Venture (FGJV), are developing Snowy 2.0, a large-scale pumped hydro-electric storage and generation project which will increase hydro-electric capacity within the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme). Snowy 2.0 is the largest committed renewable energy project in Australia and is critical to underpinning system security and reliability as Australia transitions to a decarbonised economy. Snowy 2.0 will link the existing Tantangara and Talbingo reservoirs within the Snowy Scheme through a series of underground tunnels and hydro-electric power station.

To connect Snowy 2.0 to the National Energy Market (NEM), a new transmission connection is required. NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust (known as Transgrid) sought approval under Part 5, Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of the Snowy 2.0 Transmission Connection Project (the project) to enable the grid connection of Snowy 2.0 to the NEM.

The key elements of the project are shown on Figure 1.1 and include:

- a new 500/330 kilovolt (kV) substation located within Bago State Forest and adjacent to Transgrid's existing Transmission Line 64 (Line 64)
- two 330 kV double-circuit overhead transmission lines, approximately 9 kilometres (km) long, linking the Snowy 2.0 cable yard in Kosciuszko National Park (KNP) to the new substation
- a short overhead transmission line connection between the substation and Line 64
- construction of new access tracks and upgrade of existing access tracks where required to facilitate the construction of the transmission lines and substation and service ongoing maintenance activities
- establishment of temporary sites and infrastructure needed during construction including crane pads, site compounds, a helipad, and equipment laydown (Jacobs 2021).

The project was approved by the NSW Minister for Planning on 2 September 2022 and the Commonwealth Minister for the Environment on 21 October 2022. A copy of the NSW Infrastructure Approval (SSI 9717) can be found on the NSW Department of Planning and Environment's (DPE) major projects website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/snowy-20-transmission-connection>

A copy of the Commonwealth EPBC Act approval can be found on the Department of Climate Change, Energy, the Environment and Water's (DCCEEW's) website at:

https://epbcpublicportal.awe.gov.au/_entity/sharepointdocumentlocation/9aaefe86-1f2f-ed11-9db1-0022481867fa/2ab10dab-d681-4911-b881-cc99413f07b6?file=2018-8363-Approval-Decision.pdf

1.2 Conditions of approval

The NSW Infrastructure Approval (SSI 9717) contains several conditions which aim to:

- prevent, minimise, or offset adverse environmental impacts of the project
- set standard and performance measures for acceptable environmental performance
- require regular monitoring and reporting
- provide for the ongoing environmental management of the project.

There are a number of conditions in Infrastructure Approval SSI 9717 relating to the management of biodiversity, including conditions B18 and B19, which set out the requirement for a Biodiversity Offset Package (BOP) and a bank guarantee, respectively.

Condition B18 states:

Prior to carrying out any development that would impact on biodiversity values outside Kosciuszko National Park, the Proponent must prepare a Biodiversity Offset Package (Package) that is consistent with the EIS, in consultation with BCS, 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 measures, which would be required to be paid into the NSW Government Department of Planning and Environment 10 Snowy 2.0 Transmission Connection (SSI 9717) Biodiversity Conservation Fund if the relevant measures is not implemented and delivered (as calculated in accordance with Division 6 of the *Biodiversity Conservation Act 2016* (NSW)) and the offset payment calculator that was established as of 9 August 2021;
- (c) the timing and responsibilities for the implementation and delivery of measures required in the Package; and
- (d) confirmation that the biodiversity offset measures will have been implemented and delivered by no later than 1 September 2024.

Following approval, the Proponent must implement and deliver the Biodiversity Offset Package.

Condition B19 states:

Prior to carrying out any development outside of the Kosciuszko National Park that could impact the biodiversity values requiring offset, the Proponent or its nominee must lodge a bank guarantee with a total value of \$24,869,236, in accordance with the Deed of Agreement with the Planning Secretary executed on 1 September 2022. The Proponent must comply with the terms of the Deed.

Condition 7 of the Commonwealth EPBC Act approval requires the residual impacts of the project to be offset in accordance with the NSW Infrastructure Approval. It states:

To offset the impacts of the Action on protected matters, the approval holder must implement conditions B18, B19 and B20 of the State Infrastructure Approval.

This BOP has been prepared to address the requirements of Condition B18 of the NSW Infrastructure Approval. The requirement for the bank guarantee is also discussed in this BOP (see Section 4).

1.3 Offset requirements

Impacts and offset requirements for the project have been determined by Jacobs in the *Biodiversity Development Assessment Report Snowy 2.0 Transmission Connection Project* (BDAR) (Jacobs, 2022). While Jacobs (2022) assesses impacts and required offsets within both the Australian Alps and South Eastern Highlands Interim Biogeographic Regionalisation of Australia (IBRA) regions, this BOP only considers impacts and offsets outside KNP in accordance with Condition B18 of Infrastructure Approval SSI 9717 and the mechanisms outlined in the NSW Biodiversity Offsets Scheme (BOS).

The project will result in clearing of approximately 118 hectares (ha) of native vegetation and habitat for threatened species, including approximately 44 ha of clearing outside KNP. Offset requirements, including ecosystem and species credits, are summarised in Table 1.1. The credit calculations are based upon the transmission connection layout as proposed in the *Amendment Report Snowy 2.0 Transmission Connection Project* (Transgrid, 2022) and the BDAR (Jacobs, 2022). The credits required to be offset may be less than what is set out in the below tables, subject to final design refinement.

Table 1.1 Offset requirements for impacts outside KNP

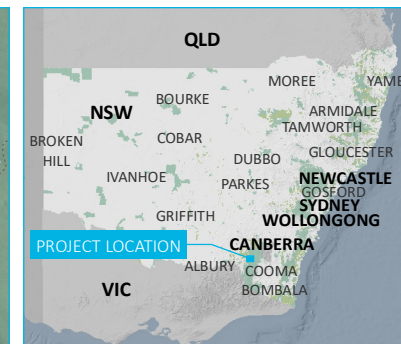
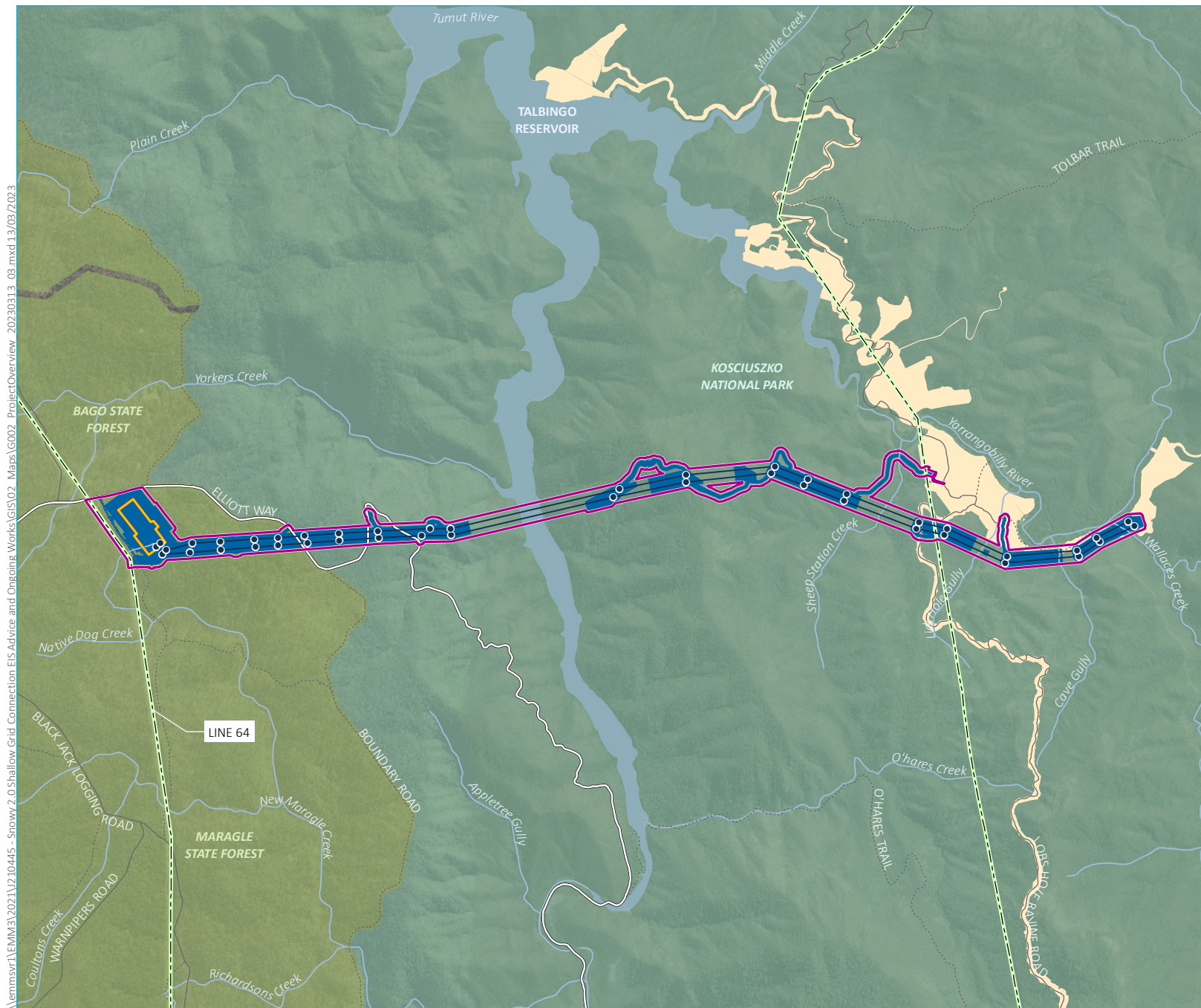
Plant community type (PCT) or species	Offset trading group	Total credits
Ecosystem credits		
PCT 285 - Broad-leaved Sally grass – sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion	Upper Riverina Dry Sclerophyll Forests; >=70% and <90%	87
PCT 300 - Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern - grass tall open forest on deep clay loam soils in the upper NSW South Western Slopes Bioregion and western Kosciuszko escarpment	Southern Tableland Wet Sclerophyll Forests; <50%	452
PCT 1196 - Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion	Subalpine Woodlands; <50%	825
Total ecosystem credits		1,364
Species credits		
Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)	-	1,721
Eastern Pygmy-possum (<i>Cercartetus nanus</i>)	-	1,789
Yellow-bellied Glider (<i>Petaurus australis</i>) endangered population on the Bago Plateau	-	1,697
Masked Owl (<i>Tyto novaehollandiae</i>)	-	417
Total species credits		5,624
Total credits		6,988

1.4 Consultation

This BOP has been prepared in consultation with the Biodiversity Conservation Division (BCD) of DPE. A briefing was provided to BCD in December 2022 which included an overview of the structure of the BOP, an update on the status of efforts to identify offset sites, including an estimate of credits generated at shortlisted sites and next steps.

The BOP was provided to BCD in August 2023 and this version has been updated based on comments received from BCD and DPE.

At the request for BCD and DPE, regular six-monthly updates will be provided on the status of the BOP and actions herein.



- KEY**
- Project area
 - Snowy 2.0 disturbance footprint
 - Proposed disturbance footprint
 - Proposed 500kV substation
 - Proposed structure
 - Proposed transmission line
- Existing environment**
- Electricity transmission line
 - Major road
 - Minor road
 - Vehicular track
 - Named watercourse
 - Named waterbody
 - NPWS reserve
 - State forest
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

Snowy 2.0 Transmission Connection Project overview

Snowy 2.0 Transmission Connection Project
Biodiversity Offset Package
Figure 1.1

2 Biodiversity offset scheme overview

Under the BOS, several pathways are available to meet the offset obligation arising from the project for impacts outside KNP. These pathways are shown in Plate 2.1.

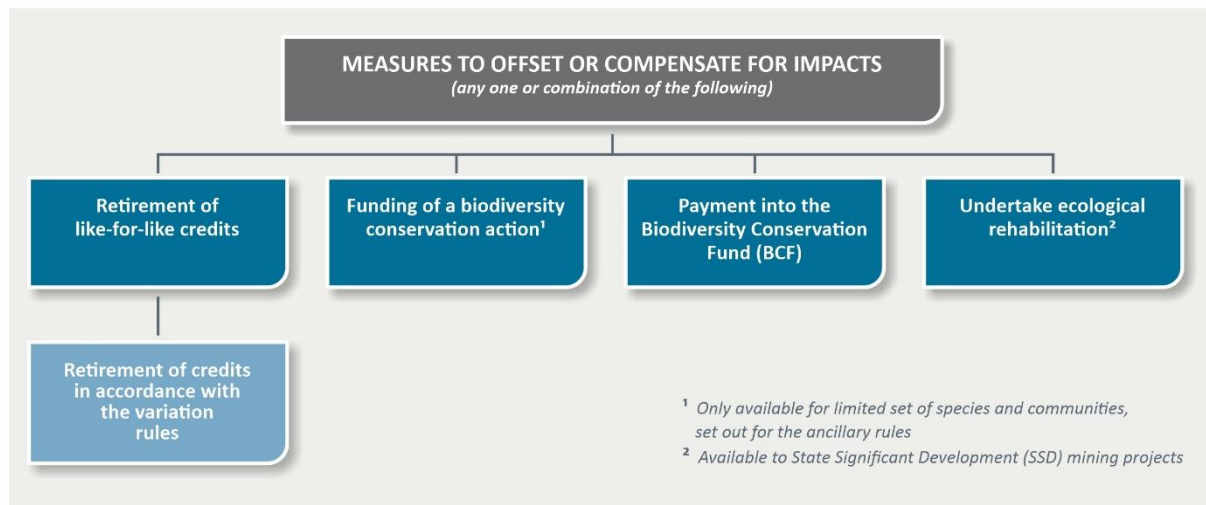


Plate 2.1 NSW Biodiversity Offset Scheme offset options

Funding of a biodiversity conservation action is only available for a limited set of species and communities, as set out in the *Ancillary rules: Biodiversity conservation actions* (OEH, 2017). The project is not a State significant development (SSD) mining project and thus ecological rehabilitation is not available. This means that offsets will need to be provided via retirement of like-for-like credits, retirement of credits in accordance with the variation rules, or payment into the Biodiversity Conservation Fund (BCF).

The various options available to meet the offset requirements of the project for impacts occurring outside of KNP are discussed below.

2.1 Retirement of like-for-like credits from existing sites

The rules for like-for-like credits are outlined in section 6.3 of the *NSW Biodiversity Conservation Regulation 2017* (BC Regulation). This states:

- (2) In the case of impacts on threatened ecological communities, like-for-like biodiversity credits represent—
 - (a) the same threatened ecological community located 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, and
 - (b) if the threatened ecological community contains hollow bearing trees—vegetation that contains hollow bearing trees.

- (3) In the case of impacts on the habitat of threatened species that are ecosystem credit species or other native vegetation (other than impacts on threatened ecological communities), like-for-like biodiversity credits represent—
 - (a) the same class of native vegetation located 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, and
 - (b) the same or a higher offset trading group, and
 - (c) if the impacted habitat contains hollow bearing trees—vegetation that contains hollow bearing trees.
- (4) In the case of impacts on threatened species that are species credit species, like-for-like biodiversity credits represent the same threatened species.

The IBRA subregions within 100 km of the outer edge of the project from which credits can be used to offset impacts arising from the project are outlined in Table 2.1.

Table 2.1 IBRA subregions within 100 km of the outer edge of the project

IBRA region	IBRA subregion
Australian Alps	Snowy Mountains
Australian Alps	Victorian Alps
NSW South Western Slopes	Inland Slopes
NSW South Western Slopes	Lower Slopes
Riverina	Victorian Riverina
South East Corner	South East Coastal Ranges
South Eastern Highlands	Bondo
South Eastern Highlands	Highlands-Northern Fall
South Eastern Highlands	Kybeyan-Gourock
South Eastern Highlands	Monaro
South Eastern Highlands	Murrumbateman

A review of existing biodiversity credits available in the market indicates that there are limited credits available that would be suitable as offsets for the project, with no credits available under the Biodiversity Assessment Method (BAM) that would meet project needs.

A review of like-for-like biodiversity credits available in the market to offset impacts of the project outside KNP is provided in Table 2.2.

Table 2.2 **Summary of like-for-like credits available to offset impacts of project for impacts outside KNP**

PCT/species	Offset trading group	Credits required	Credits available
PCT 285 - Broad-leaved Sally grass - sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion	Upper Riverina Dry Sclerophyll Forests; >=70% and <90%	87	0
PCT 300 - Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern - grass tall open forest on deep clay loam soils in the upper NSW South Western Slopes Bioregion and western Kosciuszko escarpment	Southern Tableland Wet Sclerophyll Forests; <50%	452	0
PCT 1196 - Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion	Subalpine Woodlands; <50%	825	300 ²
Gang-gang Cockatoo	N/A	1,721	280 ¹
Eastern Pygmy-possum	N/A	1,789	4,050 ¹
Yellow-bellied Glider endangered population on the Bago Plateau	N/A	1,697	0
Masked Owl	N/A	417	0

Notes: Credit availability as of 29 May 2023

1. BAM equivalence credits.

2. Pending review.

Snowy Hydro has made contact with all existing credit owners to seek credit availability and pricing. This contact has determined that while a number of credits are listed on these registers some credits are either committed or are no longer available.

Credits are available to suit one offset trading group (Subalpine Woodlands; <50%) and two species credits species (Gang-gang Cockatoo and Eastern Pygmy-possum), meeting 60% of the ecosystem credit requirements and 62% of the species credit requirements of the project.

In addition to the above, there are a small number of sites which have submitted an expression of interest (EOI) to generate BAM credits for two of the species listed above. At this stage the number of credits these sites are capable of generating is unknown and these sites would need to develop a Biodiversity Stewardship Agreement (BSA) to realise these credits and make them available for the project. Initial contact with these landholders indicates they are not willing to enter into a BSA for the number of credits required.

Snowy Hydro is also investigating the potential to develop a BSA on suitable sites to generate credits to meet the needs of the project. This would allow for the retirement of like-for-like credits in accordance with the BOS. An overview is provided in Section 3.1.

2.2 Credits under the variation rules

Following reasonable steps to obtain like-for-like credits, Snowy Hydro may seek to retire credits under the variation rules. The variation rules allow broader trading as follows:

- For ecosystem credits:
 - they represent the same vegetation formation
 - they are in the same or a higher offset trading group
 - they represent a location that is in:
 - the same IBRA region as the impacted site, or
 - a subregion that is within 100 km of the outer edge of the impacted site
 - if the impacted habitat contains hollow bearing trees—they represent vegetation that contains hollow bearing trees or artificial hollows.
- For species credits:
 - if the impacted species is a plant—they represent a plant
 - if the impacted species is an animal—they represent an animal
 - they represent a species that has the same or a higher category of listing under the BC Act as a threatened species
 - they represent a location that is in:
 - the same IBRA region as the impacted site, or
 - a subregion that is within 100 km of the outer edge of the impacted site.

A review of public registers indicates that currently there are limited credits available under the variation rules, with most credits committed to existing projects. There are over 4,000 credits available to meet the species credit requirements of the project under the variation rules. However, many of these are credits from completely different family groups. Snowy Hydro will continue to investigate these options if credits cannot be sourced through other means.

2.3 Payment into the Biodiversity Conservation Fund

The offset liability for all impacts occurring outside of KNP can be met by paying \$24.87 million (M) into the BCF (Table 2.3).

Table 2.3 Total credits and cost of payment into the BCF for impacts of project outside of KNP

Credit type	Credits	Payment into BCF (all impacts outside KNP)
Ecosystem	1,364	\$9,645,387.41
Species	5,625	\$15,221,587.67
Total	6,988	\$24,866,975.08

Notes: Costs calculated using BCF prices as on 5 July 2022

3 Biodiversity offset package

The biodiversity offset requirements outlined in Section 1.3 are proposed to be met via a combination of like-for-like credits and payment of the residual offset liability into the BCF, as discussed below.

3.1 Biodiversity stewardship sites

Snowy Hydro has been investigating potential biodiversity stewardship sites for the project, including land within the locality of the project. It is proposed that a BSA would be developed on suitable sites to generate credits to meet the needs of the project.

An initial spatial analysis was completed to identify potential properties that support the ecosystem and species credits required to offset impacts of the project outside of KNP. A total of 95 lots across 52 landholders were identified as potentially supporting suitable PCTs and threatened species habitat.

Based on the above, contact was made with landowners to ascertain their interest in entering into a BSA, with preliminary assessments, including PCT mapping and initial surveys for the Yellow-bellied Glider, undertaken at five properties. This preliminary work identified that two properties, shown in Figure 3.1, had the capacity to generate sufficient credits to meet a significant proportion of the offset requirements for the project across two offset trading groups and one species, with the Yellow-bellied Glider confirmed at both properties.

Since this time, more detailed surveys have been undertaken at these two properties to confirm the biodiversity values present, understand management issues and calculate credit yields. Detailed information on each property is provided below.

3.1.1 Lot 16, DP 755852 (Phillips)

It is proposed to develop a BSA within Lot 16, Deposited Plan (DP) 755852, the 'Phillips' property. This property is located approximately 11 km east of Tumbarumba (Figure 3.1).

Surveys undertaken to date include detailed PCT mapping, plot surveys to ascertain vegetation condition and credit yield and targeted surveys for the Yellow-bellied Glider using acoustic recording devices. Further surveys are underway, including targeted surveys for the Eastern Pygmy-possum and Gang-gang Cockatoo.

Surveys to date have recorded four PCTs within the site (680, 952, 1100, and 1196) as well as the Yellow-bellied Glider. A summary of the biodiversity values present, and potential credit yield, is provided in Table 3.1 with biodiversity values shown in Figure 3.2.

Table 3.1 Mapped PCTs and threatened species, and an estimate of the potential credit yield for Lot 16, DP 755852

PCT	Trading group	Area (ha)	Estimate of credits generated	Credits required	Percentage of credits requirement met
680	Southern Tableland Grassy Woodlands >= 90%	3.4	16	0	-
952	Subalpine Woodlands; > 50% and <70%	201.9	1,400	0 ¹	-
1196	Subalpine Woodlands; <50%	367.0	2,306	825	280%
1100	Tableland Clay Grassy Woodlands; >=70% and <90%	4.9	25	0	-
Yellow-bellied Glider (<i>Petaurus australis</i>) endangered population on the Bago Plateau		577.3	3,747	1,697	221%

Notes: Credits as of 13 February 2023

1. This offset trading group can be used to offset impacts to PCT 1196, if required, as it is a higher offset trading group.

3.1.2 Lot 2, DP 556593 (Heinecke)

It is proposed to develop a BSA within Lot 2, DP 556593, the 'Heinecke' property. This property is located approximately 10 km north-north-east of Tumbarumba (Figure 3.1).

Surveys undertaken to date include detailed PCT mapping, plot surveys to ascertain vegetation condition and credit yield, and targeted surveys for the Yellow-bellied Glider using acoustic recording devices. Further surveys are underway, including targeted surveys for the Eastern Pygmy-possum and Gang-gang Cockatoo.

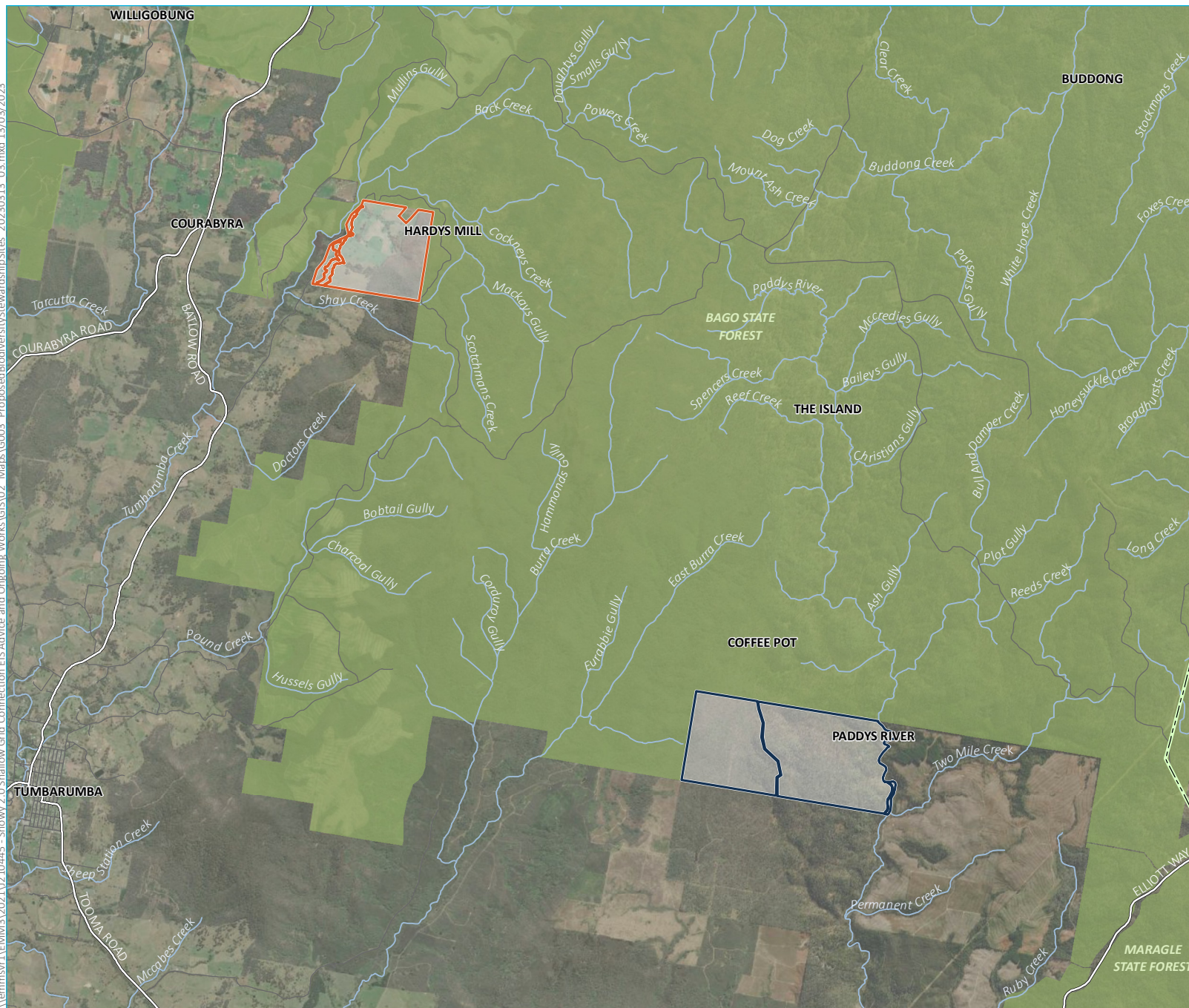
Surveys to date have recorded two PCTs within the site (300 and 953) as well as the Yellow-bellied Glider. A summary of the biodiversity values present, and potential credit yield, is provided in Table 3.2 with biodiversity values shown in Figure 3.3.

Table 3.2 Mapped PCTs and threatened species, and an estimate of the potential credit yield for Lot 2, DP556593

PCT	Trading group	Area (ha)	Estimate of credits generated	Credits required	Percentage of credits requirement met
300	Southern Tableland Wet Sclerophyll Forests <50%	95.7	646	452	143%
953	Subalpine Tableland Dry Sclerophyll Forest <50%	5.5	38	0	-
Yellow-bellied Glider (<i>Petaurus australis</i>) endangered population on the Bago Plateau		101.2	694	1,697	41

Notes: Credits as of 13 February 2023

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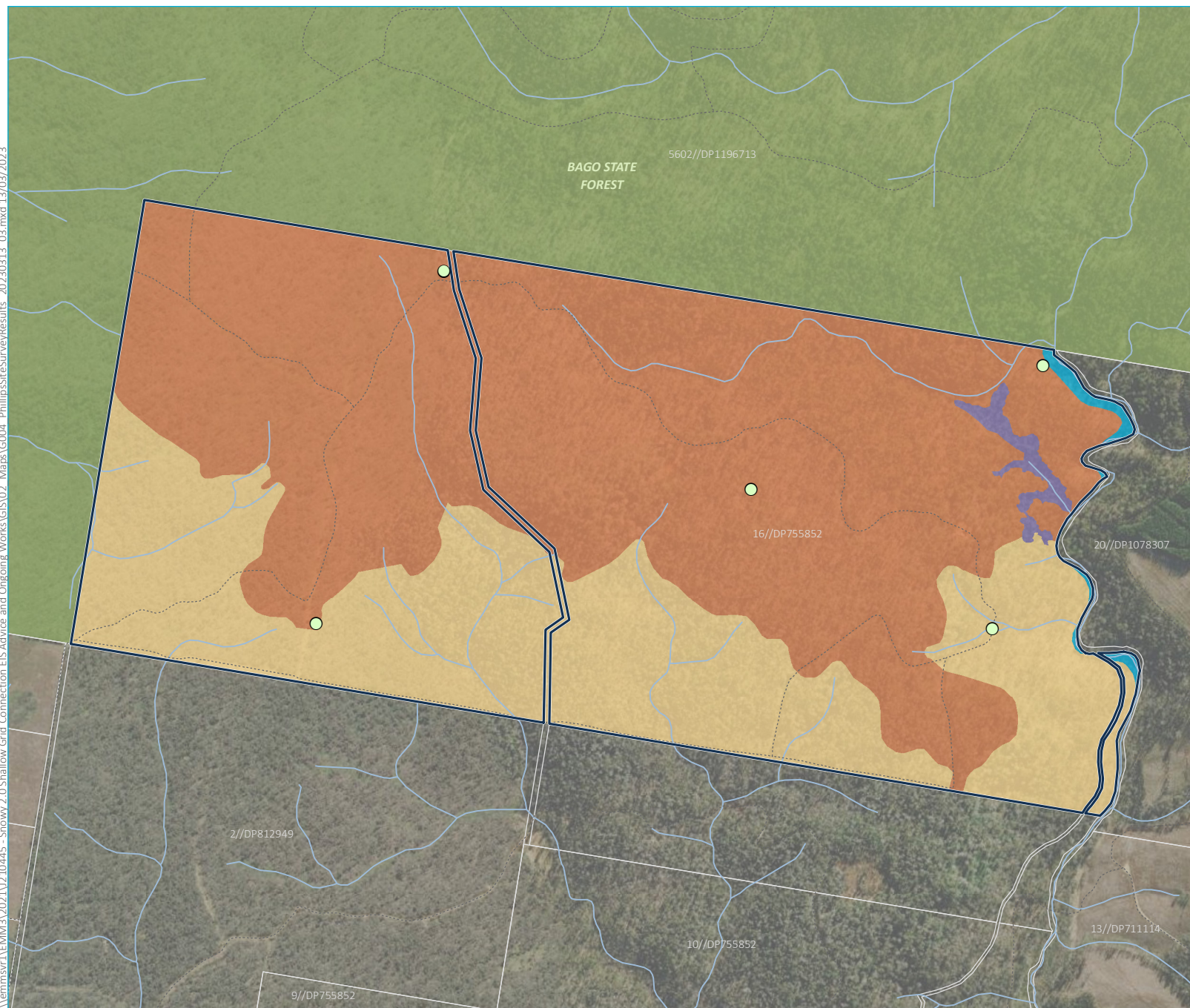


- KEY**
- Proposed Biodiversity Stewardship Sites
 - Lot 16, DP755852 (Phillips)
 - Lot 2, DP556593 (Heinecke)
 - Existing environment
 - Electricity transmission line
 - Major road
 - Minor road
 - Named watercourse
 - State forest

Regional location of the proposed Biodiversity Stewardship Sites

Snowy 2.0 Transmission Connection Project
Biodiversity Offset Package
Figure 3.1

\\lemmsvr1\EMM3\2021\U2.10445 - Snowy 2.0 Shallow Grid Connection EIS Advice and Ongoing Works\GIS\02 Maps\G004 PhillipsSiteSurveyResults 20230313 03.mxd 13/03/2023



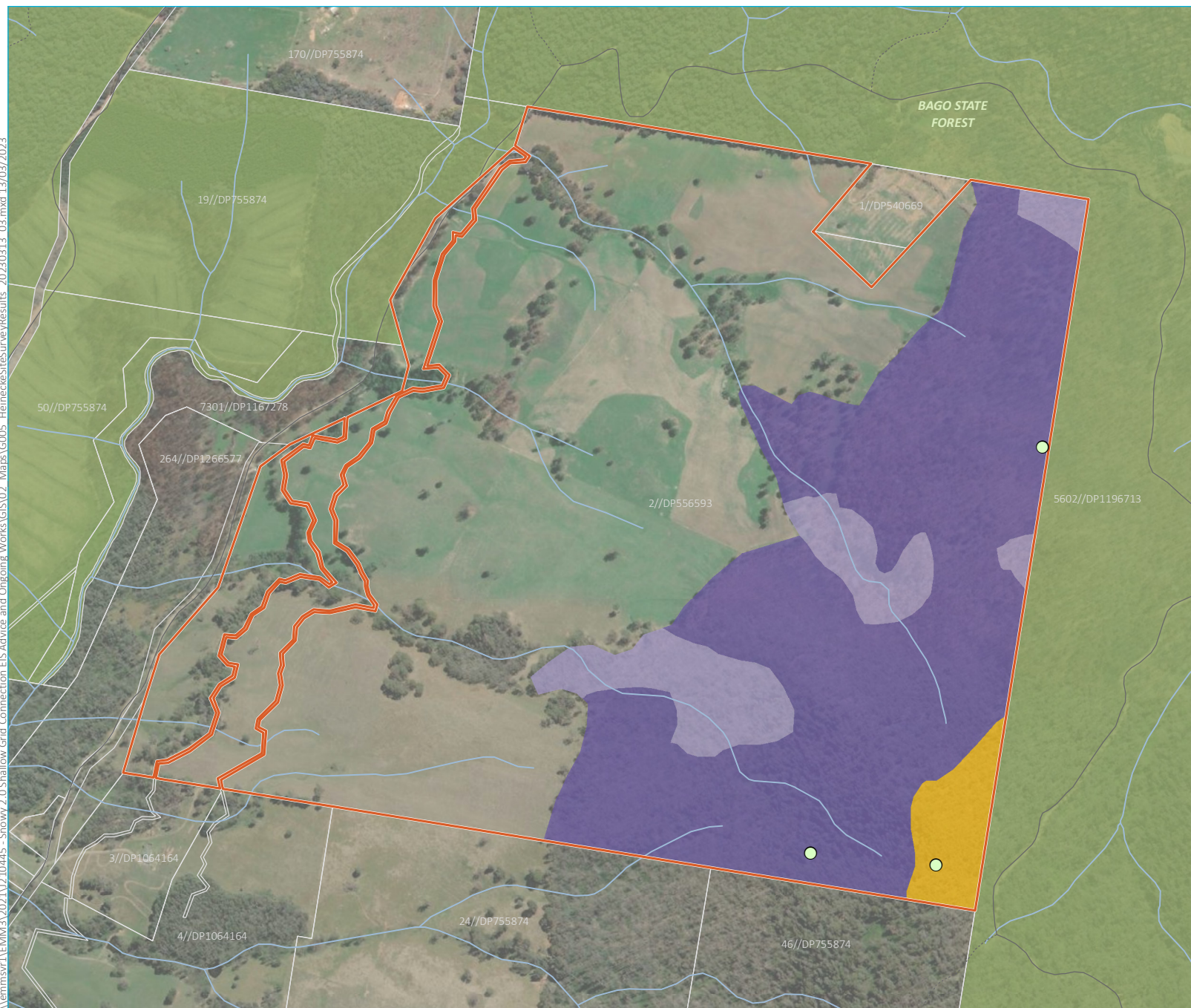
KEY

- Proposed biodiversity stewardship site
Lot 16, DP755852 (Phillips)
- Yellow-bellied Glider survey location
- PCT mapping (EMM, 2022)
- 680 | Black Sallee - Tussock Grass open woodland of the South Eastern Highlands Bioregion
- High
- 952 | Mountain Gum - Narrow-leaved Peppermint - Snow Gum dry shrubby open forest on undulating tablelands, southern South Eastern Highlands Bioregion
- High
- 1100 | Ribbon Gum - Snow Gum grassy forest on damp flats, eastern South Eastern Highlands Bioregion
- High
- 1196 | Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion
- High
- Existing environment
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary
- State forest

Proposed biodiversity stewardship site at Lot 16, DP755852 (Phillips), including PCT mapping

Snowy 2.0 Transmission Connection Project
Biodiversity Offset Package
Figure 3.2

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KEY

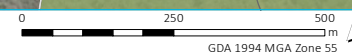
- Proposed biodiversity stewardship site
Lot 2, DP556593 (Heinecke)
- Yellow-bellied Glider survey location
- PCT mapping (EMM, 2022)
- 300 | Ribbon Gum - Narrow-leaved
(Robertsons) Peppermint montane fern
- grass tall open forest on deep clay
loam soils in the upper NSW South
Western Slopes Bioregion and western
Kosciuszko escarpment
- High
- Poor
- 953 | Mountain Gum - Snow Gum -
Broad-leaved Peppermint shrubby open
forest of montane ranges, South Eastern
Highlands Bioregion and Australian Alps
Bioregion
- High
- Existing environment
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary
- State forest

Proposed biodiversity stewardship
site at Lot 2, DP556593 (Heinecke),
including PCT mapping

Snowy 2.0 Transmission Connection Project
Biodiversity Offset Package
Figure 3.3



Source: EMM (2023); DFSI (2020, 2021); ESRI (2022)



3.2 Residual offset liability

A summary of the credits generated by the two proposed biodiversity stewardship sites and the residual offset liability is provided in Table 3.2.

The two proposed biodiversity stewardship sites are capable of meeting the offset requirements for the Southern Tableland Wet Sclerophyll Forests; <50% and Subalpine Woodlands; <50% offset trading groups and the Yellow-bellied Glider (*Petaurus australis*) endangered population on the Bago Plateau. The two sites are capable of meeting 94% of the ecosystem credit liability and 30% of the species credit liability. Targeted surveys for the Eastern Pygmy-possum and Gang-gang Cockatoo are currently underway. This may result in credits being generated for these two species and an increase in the percentage of the species credit liability met by these two sites.

Table 3.2 Residual offset liability analysis for project for impacts outside KNP

PCT/species	Offset trading group	Total credits	Phillips BSA	Heinecke BSA	Residual offset liability
Ecosystem credits					
PCT 285 - Broad-leaved Sally grass – sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion	Upper Riverina Dry Sclerophyll Forests; >=70% and <90%	87	-	-	87
PCT 300 - Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern - grass tall open forest on deep clay loam soils in the upper NSW South Western Slopes Bioregion and western Kosciuszko escarpment	Southern Tableland Wet Sclerophyll Forests; <50%	452	-	646	0
PCT 1196 - Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion	Subalpine Woodlands; <50%	825	3,706 ¹	-	0
Species credits					
Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)	N/A	1,721	TBD	TBD	1,721
Eastern Pygmy-possum (<i>Cercartetus nanus</i>)	N/A	1,789	TBD	TBD	1,789
Yellow-bellied Glider (<i>Petaurus australis</i>) endangered population on the Bago Plateau	N/A	1,697	3,747	1,697	0
Masked Owl (<i>Tyto novaehollandiae</i>)	N/A	417	-	-	417

Notes: Credits as of 13 February 2023

1. Includes both Subalpine Woodlands; <50% and Subalpine Woodlands; > 50% and <70% offset trading groups

Options for meeting this residual credit liability for the project are outlined below.

3.2.1 Purchase of credits from the market

The proponent may elect to purchase suitable credits from the market under either the like-for-like or variation rules. However, at this time, there are a limited number of credits available for the ecosystem credits required (see Section 2.1). Some species credits may be available.

3.2.2 Payment into the Biodiversity Conservation Fund for residual offset liability

If credits cannot be secured from the two biodiversity stewardship sites or through purchase of credits from the market, the proponent will meet any residual offset liability through payment into the BCF. Table 3.3 provides a summary of the cost of meeting the current residual offset liability via payment into the BCF.

Table 3.3 Cost of payment into the BCF for the residual offset liability for impacts outside KNP

PCT/ species	Total Credits	Cost of payment into the BCF
PCT 285 - Broad-leaved Sally grass – sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion	87	\$548,724.66
Gang-gang Cockatoo (<i>Callocephalon fimbriatum</i>)	1,721	\$1,100,931.49
Eastern Pygmy-possum (<i>Cercartetus nanus</i>)	1,789	\$1,212,698.51
Masked Owl (<i>Tyto novaehollandiae</i>)	417	\$266,713.20
Total	4,014	\$3,129,067.86

Notes: Costs calculated using BCF prices as on 5 July 2022

4 Timing and responsibilities

The timing and responsibility for the actions required by this BOP are outlined in Table 4.1.

Table 4.1 Timing and responsibility of tasks required by this BOP

Component	Activity	Status	Expected date	Responsibility
BOP	Preparation of BOP	Ongoing	Q2 2023	EMM
	Consultation with BCD	Complete	Q4 2022	EMM
	Approval of BOP	To be completed	Q2 2023	DPE
Bank guarantee	Payment of bank guarantee	To be completed	Prior to carrying out any development outside KNP	Snowy Hydro
Phillips and Heinecke biodiversity stewardship sites	Preliminary investigation	Complete	Q2 2022	EMM
	Detailed investigation	Complete	Q3 2022	EMM
	Targeted surveys	Ongoing	Q1 2023	EMM
	Submit application for BSA	To be completed	Q2 2023	EMM
	Approval of BSA	To be completed	Q4 2023	BCD
	Signing of BSA	To be completed	Q1 2024	Landholder / Snowy Hydro
	Transfer and retirement of credits	To be completed	Q1 2024	Snowy Hydro
Sourcing of residual offset liability from the credit market	Search for credits available on the market to meet residual offset liability (like-for-like or variation)	To be completed	Q4 2023 – Q1 2024	EMM
	Negotiation with landholders around credit availability and pricing	To be completed	Q1 – Q2 2024	Snowy Hydro
	Purchase, transfer and retirement of credits (if available)	To be completed	September 1 2024	Snowy Hydro
Payment into the BCF for residual credit liability	Application for payment into the BCF for residual offset liability	To be completed	Q3 2024	EMM
	Payment into BCF	To be completed	Q2 2024	Snowy Hydro
BOP implemented	All measures outlined in the BOP implemented and all credit liabilities met	To be completed	End Q3 2024	Snowy Hydro

References

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