

Biodiversity Offset Package for Inland Rail NS2B Project

Final

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3	30/05/2023	Issued as Final to comply with NS2B Approval Conditions. Includes amendments required by DCCEEW. Contains Confidential Information – Not for Public Release
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Glossary

Some terminology that is particularly relevant to this document has been included in the table below. These definitions are also available in the online Glossary.

Table 1 Terminology

TERM	ACRONYM	DEFINITION
Australian Rail Track Corporation Limited	ARTC	ARTC is the corporation responsible for managing the interstate rail network and is delivering Inland Rail on behalf of the Commonwealth Government.
<i>Biodiversity Conservation Act 2016 (NSW)</i>	BC Act	The primary piece of legislation in NSW that protects biodiversity values and establishes the biodiversity offset scheme
Biodiversity Conservation Fund	BCF	The fund that proponents can pay into as an alternative to retiring credits.
Biodiversity Conservation Trust	BCT	Manages Biodiversity Stewardship Agreements and other conservation agreements with landowners. The responsibility for the assessment and approval of BSA applications transferred to the Credit Supply Taskforce on 1 July 2022.
Biodiversity Development Assessment Report	BDAR	The BDAR identifies and assesses the proposed impacts of development on native vegetation and biodiversity values.
Biodiversity Offset Delivery Strategy for NSW	BODS	The Strategy endorsed by ARTC Inland Rail to meet the biodiversity offset obligations for the Inland Rail Program in NSW.
Biodiversity Offset Scheme	BOS	Provides the framework for the operation of the credit supply market and trading rules for biodiversity credits and is given effect under the BC Act.
Borrow Pit	BP	An area where material is extracted to provide ballast for the rail line construction.
Biodiversity Stewardship Agreement	BSA	An agreement made between a landowner and the NSW Environment Minister that protects and manages vegetation in perpetuity.
Biodiversity Stewardship Site	BSS	The portion of a property that a landholder manages for biodiversity gain in perpetuity under the BSA.
Credit Supply Taskforce	CST	Responsible for the assessment and approval of Biodiversity Stewardship Agreement applications
Department of the Environment and Energy	DoEE	The former Commonwealth department responsible for administering the EPBC Act. The function now resides within the Department of Climate Change, Energy, the Environment and Water.
Department of Planning and Environment	DPE	The NSW department responsible for the Biodiversity Offset Scheme
Expressions of Interest	EOI	A process by which a landowner or proponent may submit an expression to supply goods or services, but with no obligation to do so.
<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwth)</i>	EPBC Act	The Australian Government's principal piece of environmental protection legislation.
Hollow-bearing tree	HBT	A tree that contains a hollow or vent that could be used by an animal for shelter and/or breeding.
Interim Biogeographic Regionalisation for Australia	IBRA	The system that categorises Australia into broad zones of similar topography, climate and biotic factors.

TERM	ACRONYM	DEFINITION
Inland Rail	IR	The program to connect Melbourne and Brisbane with a standard gauge rail line via western NSW and Toowoomba in Queensland.
Local Aboriginal Land Council	LALC	Local Aboriginal Land Councils represent Aboriginal communities throughout NSW.
Local Land Services	LLS	Local Land Services is a regional-focused NSW Government agency delivering quality customer services to farmers, landholders and the wider community.
Matters of national environmental significance	MNES	MNES are listed under the EPBC Act and include threatened ecological communities and species.
Narrabri to North Star – Separable Portion 1	N2NS-SP1	The Inland Rail Project from Narrabri to North Star, excluding a portion across the Moree Floodplains
North Star to the New South Wales / Queensland Border	NS2B	The Inland Rail Project from North Star to the New South Wales / Queensland Border
Office of Environment and Heritage	OEH	The Office of Environment and Heritage was dissolved in 2019 and its functions integrated into the Department of Environment and Planning and largely retained within BCS Directorate
Offset Trading Group	OTG	PCTs that have a unique combination of Vegetation Class and extent cleared within the landscape (clearing threshold)
Parkes to Narromine	P2N	The Inland Rail Project from Parkes to Narromine
Plant Community Type	PCT	The lowest form of identification of vegetation communities within NSW
Significant biodiversity value		a threatened species that is a species credit species or an ecological community listed under the BC Act; and/or a threatened species or an ecological community listed under the EPBC Act.
Travelling Stock Reserves	TSR	Travelling Stock Reserves are parcels of Crown land that permit the movement and grazing of stock. Some TSRs also have biodiversity and cultural heritage significance.

EXECUTIVE SUMMARY

The Australian Government has committed to delivering a significant piece of national transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane. The Inland Rail Program (Inland Rail) involves the design and construction of a new inland rail connection, about 1,700 kilometres long, between Melbourne and Brisbane.

Inland Rail has been divided into 13 projects, seven of which are located in New South Wales (NSW). One of these is the North Star to the NSW / Queensland Border (NS2B) project, consisting of approximately 25 kilometres of new track within the existing North Star rail corridor, 5km of new greenfield track, replacement of culverts and bridges, 1 new crossing loop and other associated infrastructure and facilities, including 10 borrow pits.

Australian Rail Track Corporation Ltd (ARTC) sought approval to construct and operate the NS2B project with approval granted from the NSW Minister for Planning under Part 5.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) on 20 February 2023. Approval is also required from the Commonwealth Environment Minister under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Future Freight Joint Venture (FFJV) prepared a Biodiversity Development Assessment Report (BDAR) (FFJV, 2021) to support the EIS. The BDAR calculated the offset requirements in accordance with the NSW Biodiversity Assessment Method (BAM). The BDAR identified 14 Plant Community Types (PCTs), six threatened flora species and three threatened fauna species as requiring biodiversity offsets under the Biodiversity Offsets Scheme (BOS).

ARTC is delivering the biodiversity offset program for Inland Rail in NSW and has committed to delivering land-based biodiversity offsets as far as practicable. Accordingly, ARTC endorsed the Biodiversity Offsets Delivery Strategy (BODS) for NSW that seeks to meet the biodiversity offset obligations for the Inland Rail Projects. The BODS requires, in order of decreasing preference:

1. Generate new credit supply by sourcing and assisting landholders to establish Biodiversity Stewardship Sites (BSS) on their land.
2. Procure existing credits from credit holders on the credit market.
3. Establish new BSS on land acquired by ARTC.
4. Pay into the Biodiversity Conservation Fund.
5. Fund Biodiversity Conservation Actions for some species credit species under the Ancillary Rules.

It was identified early in the process that no existing suitable ecosystem credits or species credits were available to meet the NS2B credit obligation in full. Inland Rail therefore commenced investigations with local landowners to establish new BSS on suitable properties. The aim was to identify proposed offset site options by giving preference to land-based offsets that are strategically located in the impact or adjacent subregions to deliver like-for-like credits.

This offset package has been prepared to demonstrate how the biodiversity offset obligation for NS2B will be met by ARTC in accordance with the NSW BODS and BC Act and includes proposed acquisition and retirement of biodiversity credits and provision of compensatory measures for significant biodiversity values. An estimated total of \$620,000 will be used to fund compensatory measures with the final reconciliation to occur following final funding amounts for each project plan.

1 Introduction

The Australian Government has committed to delivering a significant piece of national transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane. The Inland Rail Program (Inland Rail) involves the design and construction of a new inland rail connection, about 1,700 kilometres long, between Melbourne and Brisbane (Figure 1).



Figure 1 Overview of the Inland Rail Projects (names in bold)

Inland Rail has been divided into 13 projects, seven of which are located in New South Wales (NSW). One of these is the North Star to the NSW / Queensland Border (NS2B) Project, consisting of approximately 25 kilometres of new track within the existing North Star rail corridor, 5km of new track within a greenfield corridor, replacement of culverts and bridges, one new passing loop and other associated infrastructure and facilities, including 10 borrow pits. The proposed Conditions of Approval for NS2B requires that the Australian Rail Track Corporation Limited (ARTC) meet the biodiversity offset obligations for the project.

A range of sources were investigated including the Biodiversity Offset Scheme (BOS) public registers, ARTC’s expressions of interest (EOI) process, spatial analyses using available Plant Community Type (PCT) mapping, property acquisitions and cold-calling landholders to attempt to meet the credit obligation. However, there is a risk that construction commencement may be delayed while residual credits are sought. The NSW Department of Planning and Environment (DPE) endorsed the “Deferred Biodiversity Offset Obligation Policy” (the Policy)

in 2022, which allows eligible Critical State Significant Infrastructure (CSSI) projects two years post-determination to secure and retire credits and deliver compensatory measures.

The offset package has been prepared as part of the Policy requirements to demonstrate how the biodiversity offset obligation will be met for the Project and how credits will be sourced and retired in accordance with the *Biodiversity Conservation Act 2016* (BC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The package also includes compensatory measures that will be implemented as a component of the credit obligation.

Credits and compensatory measures must be retired and delivered, respectively, within two years following approval of the NS2B Project. Any outstanding credit obligations would be met through a payment into the Biodiversity Conservation Fund (BCF).

1.1 Location

The NS2B Project traverses two local government areas (LGA) being the Moree Plains Shire and Gwydir Shire in northern NSW. The Project is located within the existing rail corridor between North Star to Whalan Creek and then a greenfield section to the proposed crossing of the Macintyre River near Toomelah (Figure 2).

The Project traverses the Brigalow Belt South Bioregion and the Northern Outwash and Northern Basalts subregions and the Darling Riverine Plains Bioregion and the Castlereagh-Barwon subregion.

1.2 Project Approvals

The NS2B Project was subject to assessment under Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A) Act as it is State Significant Infrastructure (SSI-9371). Under this pathway, the project required an Environmental Impact Statement (EIS) to be prepared and approved. The Project was approved by the NSW Minister for Planning on 20th February 2023. The Project was also declared a CSSI project on 12 March 2021 under section 5.13 of the EP&A Act and the *State Environmental Planning Policy (State and Regional Development) 2011*.

The Project was referred to the (then) Commonwealth Department of the Environment and Energy (DoEE) on 13 June 2018 and made a controlled action on 17 July 2018. The decision means that the Project must gain approval from the Commonwealth Minister for the Environment in addition to state approvals. At time of finalising this offset package, the Commonwealth approval remains outstanding.

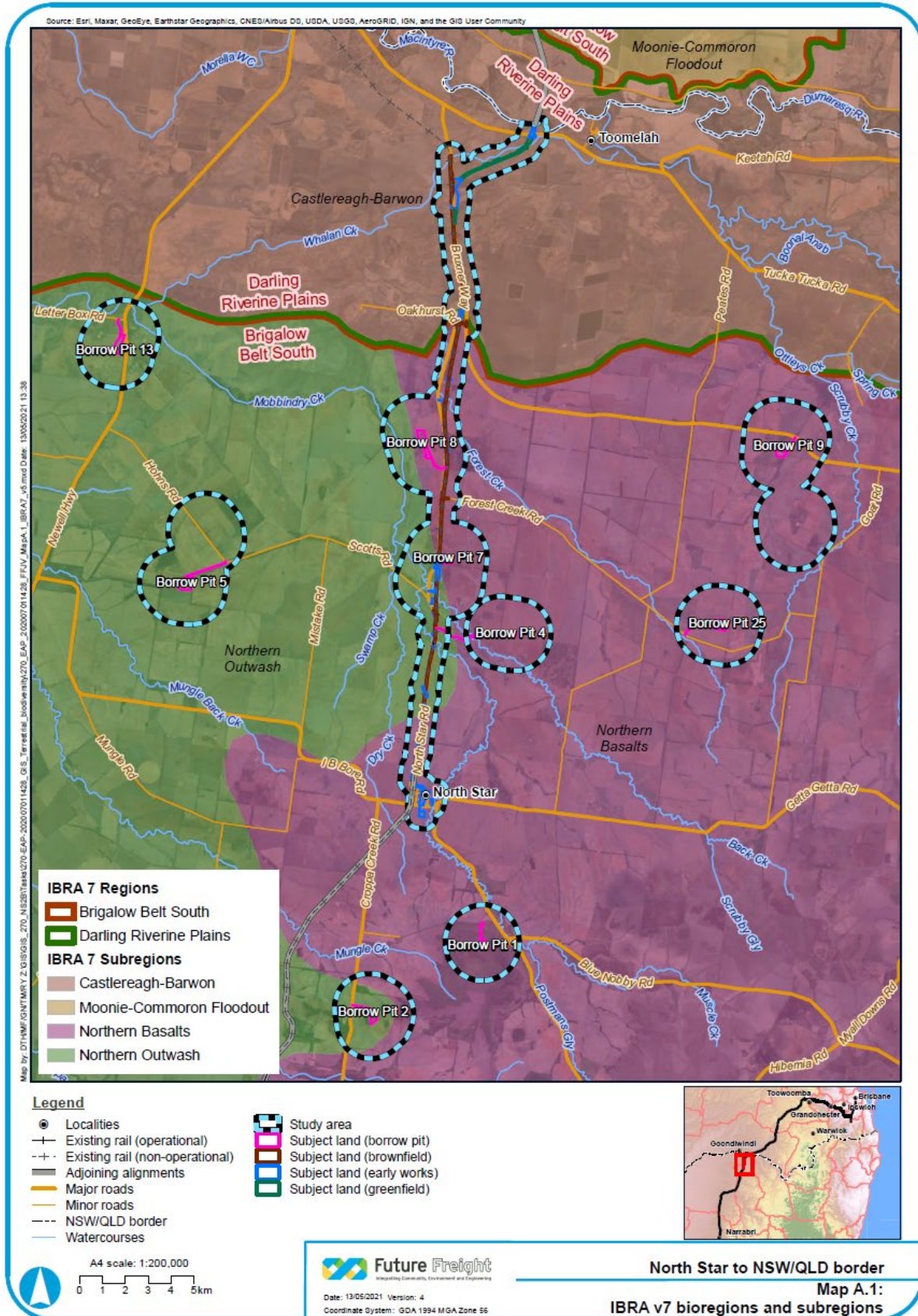


Figure 2 Location of the NS2B Project and IBRA Subregions (extract from the Environmental Impact Statement, FutureFreight Joint Venture, 2021)

1.3 Purpose

The biodiversity credits that must be retired as detailed in the Biodiversity Development Assessment Report (BDAR) (FutureFreight Joint Venture (FFJV), 2021) are inclusive of threatened species and ecological communities likely to be impacted during construction of the project.

Efforts continue to be made to acquire credits under the like-for-like rules in accordance with the BC Act, however ARTC is experiencing challenges in securing all credits, particularly species credits, to meet the credit obligation for NS2B. Therefore, this offset package has been prepared to demonstrate how ARTC will source the required credits and provides the status of credit retirement under the like-for-like rules and where the variation rules are proposed to be enacted. The strategy is also a requirement under “Deferred Biodiversity Offset Obligation Policy” and is a Condition of Approval (CoA) for the Project.

This document:

- Confirms the credit types and quantities for NS2B.
- Identifies the proposed offset options under the BC Act and EPBC Act.
- Confirms the acquisition pathways to secure credits.
- Confirms the initial landholder interest to provide credits.
- Details the challenges experienced in securing credits.
- Details the compensatory measures proposed as a component of the offsets package.

1.4 NS2B Credit Obligations

The NS2B credit obligations are summarised below in Table 2 and in detail in Appendix A. The NS2B Project is being delivered in two broad segments, North Star Corridor (new track within the existing rail corridor) and Macintyre Floodplain (new track within greenfield corridor). There is also a smaller early works segment consisting of temporary laydown areas, accommodation and setup areas, that would commence in readiness for corridor construction.

Table 2 Summary of Biodiversity Credit Obligations for NS2B

PROJECT SEGMENT	DESCRIPTION IN BDAR (FFJV 2021)	ECOSYSTEM CREDITS	SPECIES CREDITS
C2: North Star Corridor	Brownfield Alignment	4,297	7,670
C3: Macintyre Floodplain	Greenfield Alignment	1,354 Plus 1 scattered tree credit	7,746
Laydown area, temporary accommodation and setup areas	Early Works	1,398	1,963
Borrow Pits (BP)	BP1, BP 2, BP4, BP5, BP7, BP8, BP9, BP13, BP25	1,518 Plus 5 scattered tree credits	3,698
	TOTAL	8,567 Plus 6 scattered tree credits	21,077

1.5 EPBC Act listed ecological communities and species

The NS2B Project was referred to the DoEE on 13 June 2018 and deemed the project a 'Controlled Action' on 17 July 2018 due to the potential for significant impacts on listed threatened species and communities. During the EIS process, the BDAR (FFJV 2021) identified the following impacts on listed threatened species and communities:

- The removal of 33.5 ha of *Natural Grassland on Basalt and Fine-textured Alluvial Plains of Northern NSW and Southern Qld* threatened ecological community (TEC) (analogous to PCT52).
- The removal of 0.02 ha of *Weeping Myall Woodlands* TEC (analogous to PCT27).
- The removal of 17.51 ha of *Brigalow (Acacia harpophylla) dominant and co-dominant* TEC (analogous to PCT35).
- The removal of 4.6 ha of *Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions* TEC (analogous to PCT147).
- The removal of habitat for species credit species Koala (Combined populations of Queensland, New South Wales and the Australian Capital Territory), Creeping Tick-trefoil (*Desmodium campylocaulon*), Bluegrass (*Dichanthium setosum*), Belson's Panic (*Homopholis belsonii*), and Slender Darling Pea (*Swainsona murrayana*).
- The removal of habitat for ecosystem credit species including Australasian Bittern (*Botaurus poiciloptilus*), Australian Painted Snipe (*Rostratula australis*), Corben's Long-eared Bat (*Nyctophilus corbeni*), Five-clawed Worm-Skink (*Anomalopus mackayi*), Painted Honeyeater (*Grantiella picta*), Grey-headed Flying-fox (*Pteropus poliocephalus*), Spotted-tailed Quoll (*Dasyurus maculatus maculatus*), Superb Parrot (*Polytelis swainsoni*), Swift Parrot (*Lathamus discolor*) (feeding) and White-bellied Sea-Eagle (*Haliaeetus leucogaster*).

The BDAR also contained assessments of significance for matters of national environmental significance (MNES) applying the Significant Impact Guidelines 1.1 (DoEE 2013) for the listed communities and species above and concluded that a significant impact was unlikely for Weeping Myall Woodlands, Koala, Bluegrass and Belson's Panic.

Impacts to these listed threatened species and communities are required to be offset. The State of NSW and the Commonwealth have agreed to a Bilateral Agreement that endorses the Biodiversity Offset Scheme (BOS) as it pertains to impact assessment and offsetting for MNES. Under the terms of the agreement, offsets for impacts to MNES can be met through the retirement of biodiversity credits or payments made into the Biodiversity Conservation Fund (BCF).

Subsequent to the controlled action decision, new and upgraded listings have been made for:

- Koala (*Phascolarctos cinereus*), uplisted from vulnerable to endangered.
- Poplar Box Grassy Woodland on Alluvial Plains TEC (Poplar Box Grassy Woodlands)(analogous to PCT56 and PCT244 within the NS2B project area) listed as endangered.
- Glossy Black Cockatoo, (*Calyptorhynchus lathami lathami*) listed as vulnerable.
- White-throated Needletail, (*Hirundapus caudacutus*) listed as vulnerable.

Under the EPBC Act, changes to the status of species and communities after the referral decision is made are not applicable to the Project. As relevant to this offset package, offsets for Poplar Box Grassy Woodlands will be delivered under the like-for-like trading rules for non-threatened communities (Biodiversity Assessment Method (BAM), DPE 2020). Further information is provided in Section 5.3.2.

Under the Bilateral Agreement, the variation rules do not apply to listed EPBC Act communities or species and therefore credits must be retired using the like-for-like rules. Offsets for MNES can also be met through a financial payment into the Biodiversity Conservation Fund (BCF).

2 Inland Rail NSW Biodiversity Offset Delivery Strategy

ARTC is delivering the biodiversity offsets for the Inland Rail Program and credits are sourced that could meet multiple project offset obligations. Credits are held by ARTC until such time as they are retired to meet a project obligation. This approach enables ARTC to be flexible in how credits are proposed to be retired and particularly as project offset obligations and construction dates change over the project development lifecycle.

The Inland Rail Biodiversity Offset Delivery Strategy (BODS) for NSW is the approved strategy that underpins the biodiversity offset program within ARTC. The aims of the BODS are:

- To ensure compliance with legal obligations.
- To deliver the Inland Rail NSW biodiversity offset program within budget.
- To ensure credits are acquired prior to retirement and in accordance with Project Conditions of Approval (CoA).
- To maximise the environmental and community outcomes in the context of delivering biodiversity offsets.

Figure 3 provides a graphical representation of the BODS and identifies the five options for sourcing credits. These are listed as follows in decreasing order of preference:

1. Generate new credit supply by sourcing and assisting landholders to establish a BSS on their land.
2. Procure existing credits from credit holders on the credit market.
3. Establish new BSS on land acquired by ARTC.
4. Pay into the Biodiversity Conservation Fund.
5. Fund Biodiversity Conservation Actions for some species credit species under the Ancillary Rules.

Although there is an order of preference about how credits are sourced, for most Inland Rail Projects a combination of credit sourcing options (i.e. Options 1, 2 & 3) will be required to meet the offset obligations. As a last resort, ARTC will pay into the BCF or fund biodiversity conservation actions, if the Ancillary Rules permit.

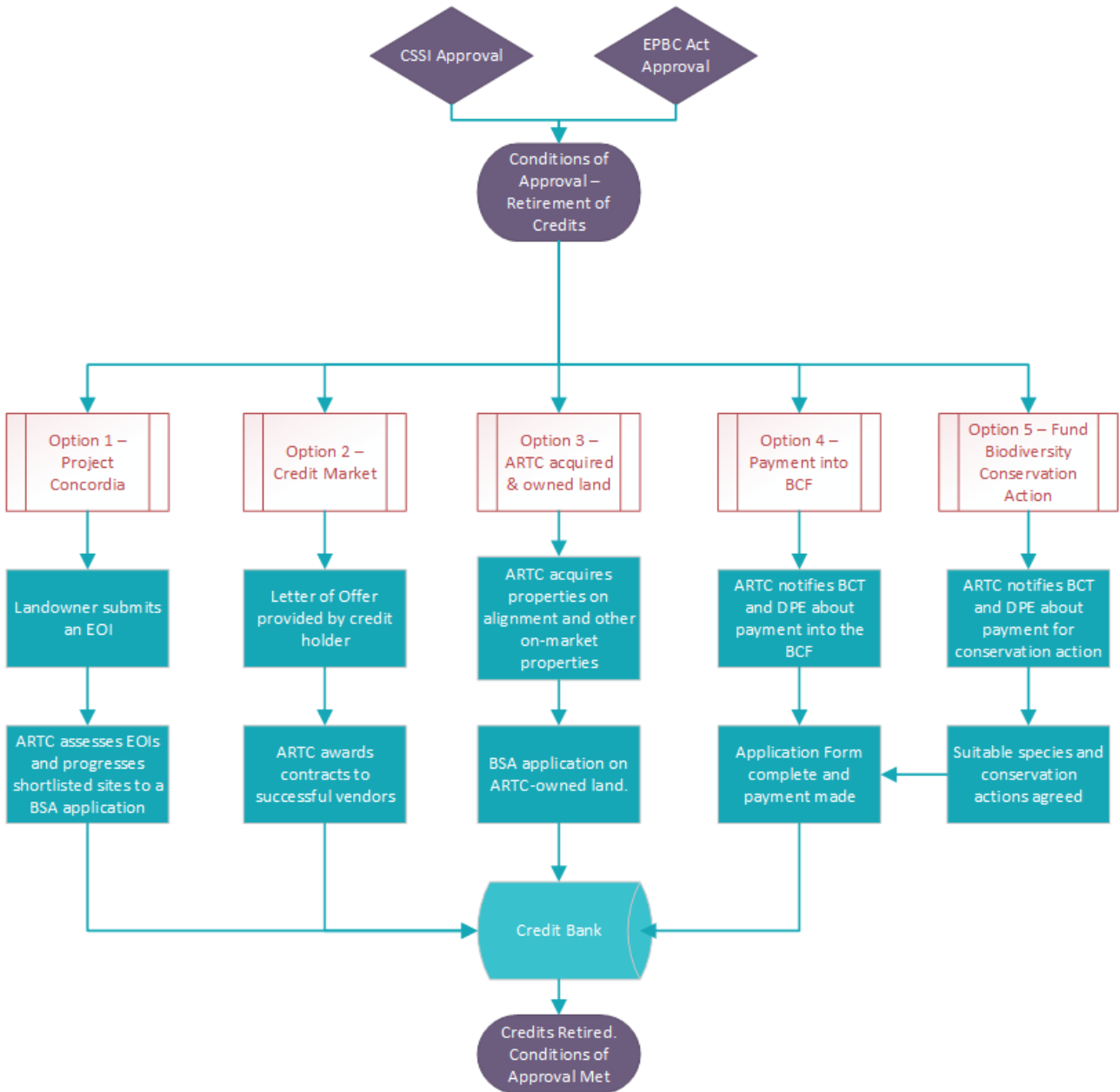


Figure 3 Overview of process for credit acquisition and retirement

3 Biodiversity offset rules

The NS2B Project was assessed and approved under both state and Commonwealth legislation. An EIS was required under Division 5.2 of the EP&A Act, and a BDAR was developed to support the EIS.

The BDAR (FFJV 2021) assessed the biodiversity values that were known and likely to occur in the proposal area and calculated the expected biodiversity credits that must be retired. Under BC Act and the Biodiversity Conservation Regulation 2017 an offset requirement can be satisfied through one or a combination of options which include:

1. Land based offsets through the purchase and retirement of biodiversity credits from the biodiversity credit register or proponent driven land-based offsets using BSA under the BC Act,
2. Making payments into the BCF, or
3. Supplementary measures.

Within option (1) as detailed within the BC Act, the act of retiring credits is determined by following two rules “Like-for-like” or under “Variation” listed below and provided in detail in Appendix B.

3.1 Like-for-Like offsets

Within the BOS, a developer purchases or creates the number and type of biodiversity credits required to compensate for the loss of biodiversity on the development site and then retires those credits. Retiring credits involves removing them from the market so they cannot be traded or used to compensate for other impacts on biodiversity values. Developers may also establish a BSS on their own land to fulfil their offset requirement.

The like-for-like requirements are:

1. For Threatened ecological communities (TEC):

- 1.1 Must be the same TEC,
- 1.2 must be located in the same or an adjoining Interim Biogeographic Regionalisation for Australia (IBRA) subregion as the impacted site or any subregion that is within 100km of the outer edge of the impacted site, and
- 1.3 if the TEC contains hollow bearing trees (HBTs) the proposed offset must also contain HBTs.

2. For non-TECs the vegetation:

- 2.1 Must be within the same class of native vegetation located in the same or adjoining IBRA subregion as the impacted site, or any subregion within 100km of the outer edge of the impacted site,
- 2.2 must be of the same or a higher Offset Trading Group (OTG), and
- 2.3 if the impacted vegetation polygon contains HBTs the proposed offset must also contain HBTs.

The impacted site, as relevant to the NS2B Project, including alignment early works, is taken to be the entire length of the alignment and the subregions that are consequently impacted (as per advice received from Biodiversity, Conservation and Science Directorate, 2/2/2022). The project occurs within the Brigalow Belt South Bioregion (Northern Outwash and Northern Basalts subregions) and the Darling Riverine Plains Bioregion (Castlereagh-Barwon subregion)(Figure 2). Subregions that are **adjoining** or that occur within 100km of the impacted site (alignment) are included in Table 3. Note that impacted sites for the borrow pits are only relevant to certain subregions given that these are discrete packages of work (Appendix A).

Table 3 Applicable subregions for like-for-like offsets on NS2B Alignment

BIOREGION	SUBREGION	IMPACTED OR ADJOINING SUBREGION OR A SUBREGION WITHIN 100 KMS
Brigalow Belt South	Northern Basalts	Impacted subregion
Brigalow Belt South	Northern Outwash	Impacted subregion
Darling Riverine Plains	Castlereagh-Barwon	Impacted subregion
New England Tablelands	Severn River Volcanics	Subregion within 100km of the alignment
Brigalow Belt South	Moonie-Barwon Interfluve	Adjoining subregion
Brigalow Belt South	Pilliga Outwash	Adjoining subregion
Brigalow Belt South	Pilliga	Adjoining subregion
Brigalow Belt South	Liverpool Plains	Adjoining subregion
Brigalow Belt South	Narrandool	Adjoining subregion
Cobar Peneplain	Boorindal Plains	Adjoining subregion
Darling Riverine Plains	Culgoa-Bokhara	Adjoining subregion
Darling Riverine Plains	Warrambool-Moonie	Adjoining subregion
Darling Riverine Plains	Bogan-Macquarie	Adjoining subregion
Darling Riverine Plains	Louth Plains	Adjoining subregion
Mulga Lands	Nebine Plains	Adjoining subregion
Nandewar	Nandewar Northern Complex	Adjoining subregion
Nandewar	Inverell Basalts	Adjoining subregion
Nandewar	Kaputar	Adjoining subregion
Nandewar	Peel	Adjoining subregion

3.2 Variations

Where a developer is unable to locate a suitable like-for-like offset they may request to apply the variation rules. Developers must demonstrate that “reasonable steps” (refer to Section 4) have been taken to obtain the requisite like-for-like biodiversity credits and request the application of the variation rules from the DPE.

The requirements for ecosystem credits include:

1. Biodiversity credits are not required to be from the same TEC or class of vegetation so long as –
 - 1.1 they represent the same vegetation formation,
 - 1.2 they are in the same or higher offset trading group (taken to be the clearing threshold or listed threatened status),
 - 1.3 they are in a location that is in the same IBRA bioregion as the impacted site or any subregion that is within 100km of the outer edge of the impacted site, and
 - 1.4 if the impacted habitat contains HBTs —they represent vegetation that contains HBTs or artificial hollows.

The requirements for species credits:

1. they represent the same kingdom as the impacted species, e.g., an offset obligation for a flora species must be offset with a flora species credit.
2. they represent the same or higher category of listing under Part 4 of the BC Act as a threatened species (e.g. vulnerable, endangered or critically endangered), and
3. they are in a location that is in the same IBRA bioregion as the impacted site or any subregion that is within 100km of the outer edge of the impacted site.

Where Inland Rail proposes to employ the variation rules (within Section 6), a separate request will be made to DPE and will provide detailed information regarding how Inland Rail has met the reasonable steps test. Where like-for-like credits become available, Inland Rail will prioritise the acquisition of such credits provided that they meet procurement and value for money requirements.

4 Credit Sourcing for NS2B

Section 6.4 of the Biodiversity Conservation Regulation 2017 states a proponent must take reasonable steps to achieve a like-for-like credit retirement, otherwise the variation rules may used, if approved by DPE. ARTC has taken reasonable steps to acquire like-for-like credits to meet the NS2B credit obligation, however some credit types and/or quantities are likely to be outstanding at the date of approval of this strategy. Although ARTC will continue to pursue like-for-like credits within the two-year deferral period, the use of the variation rules may be requested prior to credit retirement for some credit types.

Reasonable steps are identified within the clause 6.5 of the BC Regulation 2017:

- set out the reasonable steps that a proponent is required to take to obtain requisite like-for-like biodiversity credits before the variation rules can be applied, which may include:
 - checking the public register of biodiversity credits, and
 - lodging an entry in the public register of persons seeking biodiversity credits for a minimum specified period, and
 - contacting landholders who are entered on the public register of biodiversity stewardship site expressions of interest.

This section details the steps ARTC has taken to acquire like-for-like credits and a summary of activities is provided in Figure 4.

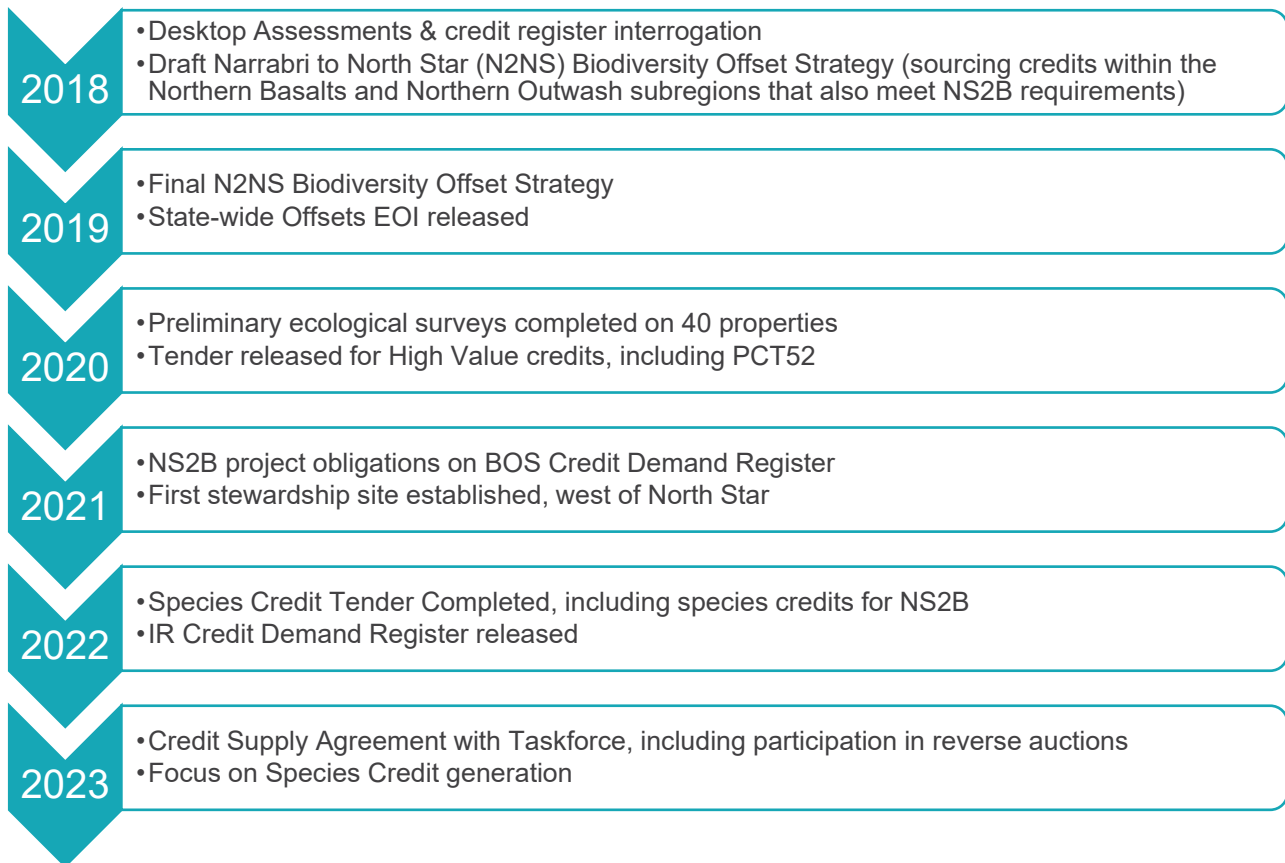


Figure 4 Summary of ARTC's Credit Sourcing and Market Approaches

4.1 Initial desktop investigations for northern NSW Inland Rail Projects

In 2018, an initial desktop assessment was conducted that identified a list of 25 properties that were potentially suitable to meet the offset obligation for Inland Rail projects in northern NSW, being those that predominantly occur within the Northern Basalts and Northern Outwash subregions, and including NS2B. Landholders of the identified properties were contacted through a mail out and a shortlist of 6 properties identified from those landowners who responded favourably. Of these 6 properties, 3 were progressed by ARTC to a BSA application:

1. BON-017. BSA approved, and credits purchased by ARTC. This property was also identified in the Parkes to Narramine (P2N) Biodiversity Offset Strategy and species credits were retired to meet the P2N offset obligation.
2. BON-161. ARTC-owned land. BSA approved and credits released. Some credits were retired to meet the P2N Project offset obligation.
3. BON-162. A Biodiversity Stewardship Site Assessment Report (BSSAR) has been prepared and a BSA application submitted to the Credit Supply Taskforce (CST) for assessment.

Note that BSA names have been replaced with ARTC's site codes to maintain confidentiality.

4.2 Checking the public registers

ARTC has been attempting to source biodiversity credits for the Inland Rail Projects, including NS2B, within regional NSW since 2019. Descriptions of the offset obligations were placed on the then Office of Environment and Heritage's (OEH) 'credits wanted' and 'expression of interest' registers for the number and

type of credits required for the southern NSW projects (e.g. P2N) and northern NSW projects (e.g. NS2B, N2NS). The following responses, relevant to the offset requirements of the NS2B Project, were received:

- BON-089 (Pilliga subregion) – Potential for koala habitat.
- Nambucca Shire Council – potential for koala credits within council's Off River Storage Area.
- Site near Casino – landowner submitting biobanking agreement application and some available koala credits are committed, leaving approximately 768 koala credits available.
- Landowners near Nyngan (Canbelego Downs subregion) interested to explore offset options on various properties they own, including protection of PCT55 and PCT56 (consistent with the Poplar Box Grassy Woodlands TEC).
- Individual interested to explore offset options for Qld Bluegrass and Poplar Box Grassy Woodlands vegetation types. Considering buying property near Walgett for offsetting that has existing cultivation and goat farm operations.

Of the above responses, the landowners near Nyngan were supported by ARTC to prepare an application for a BSA site, however they declined to proceed with lodging the application. No other respondents progressed to an application for a BSA.

Should ARTC apply to DPE for use of the variation rules, extracts of the Biodiversity Credit Supply Register will be provided as evidence of this work.

4.3 Upload of Inland Rail's Credit Obligation to the Public Registers

In November 2021, the credit obligation for all Inland Rail Projects in NSW, including NS2B was uploaded to the DPE's Credit Demand public register (via the Biodiversity Offsets and Agreements Management System (BOAMS)) to advertise the full obligation and gather further interest into the program with landowners (Figure 5 and Figure 6). Following the upload to the register, Inland Rail has been contacted by several interested landowners, however none have passed an initial desktop assessment.

Following upload of the Inland Rail credit register, ARTC was contacted by a private entity and offered existing credits for purchase (PCT56 and PCT244 within the Castlereagh-Barwon subregion). ARTC agreed to purchase the credits and completed the transaction in early 2022.

ARTC has also participated in the previous three reverse auctions completed by the Credit Supply Taskforce and is preparing to purchase credits secured as a result of these auctions. Several other transactions are proposed to occur from late 2023 and early 2024.

Case	Contact Name	Subject	Date Opened ↓	Status	Owner	
1	00029577	Dave Fleming	Credit Wanted	19/11/2021 11:37 am	Terminated	ARTC
2	00029576	Dave Fleming	Credit Wanted	19/11/2021 11:35 am	Terminated	ARTC
3	00029575	Dave Fleming	Credit Wanted	19/11/2021 11:33 am	Terminated	ARTC
4	00029574	Dave Fleming	Credit Wanted	19/11/2021 11:28 am	Terminated	ARTC
5	00029573	Dave Fleming	Credit Wanted	19/11/2021 11:26 am	Terminated	ARTC
6	00029572	Dave Fleming	Credit Wanted	19/11/2021 11:23 am	Terminated	ARTC
7	00029570	Dave Fleming	Credit Wanted	19/11/2021 11:19 am	Terminated	ARTC
8	00029569	Dave Fleming	Credit Wanted	19/11/2021 11:17 am	Terminated	ARTC
9	00029568	Dave Fleming	Credit Wanted	19/11/2021 11:15 am	Terminated	ARTC

Figure 5 Extract from BOAMS Credits Wanted Report

Case
Credit Wanted

Status Application Number
Terminated 00029577

Details

Subject	Status
Credit Wanted	Terminated
Description	Type
Public Register Expiry Date	
9/05/2022	
Contact Person on Register	
CP-29213	

Case Information

Contact Name
[Dave Fleming](#)

[Vegetation & Threatened Species](#) [Edit](#) [Submit](#)

Case Parties (2) [New](#)

Party ID	Parent Ca...	Last Name	First Name
CP-29054		Flemming	Dave
CP-29213		ARTC	

[View All](#)

Attachments (0) [Upload Files](#)

[Upload Files](#)

Or drop files

Vegetation & Threatened Species listing (5)

Public R...	Type	Plant Co...	Species N...
a0P7F00...	Species		Masked Owl
a0P7F00...	Species		Belson's P...
a0P7F00...	Species		Finger Pa...
a0P7F00...	Species		Glossy Bla...
a0P7F00...	Species		Pale-head...

[View All](#)

Figure 6 Extract from BOAMS Case Number 29577 identifying NS2B's partial obligation

4.4 State-wide Expression of Interest

In late 2019, ARTC conducted a state-wide Expression of Interest (EOI) to determine landowner interest in establishing a BSA, in which approximately 140 EOIs were received. ARTC proposed to support landowners with the upfront costs to prepare a BSA application and in return would purchase all credits generated from the BSA. From the EOI responses, 40 properties were shortlisted based on a desktop assessment and preliminary field surveys completed on each. Of these, 15 properties were confirmed to contain vegetation suitable to generate required credits and were progressed to prepare a BSA application. However, approximately 50% of the landowners have subsequently submitted an application for a BSA. The remaining 89% of EOI responses were unable to progress due to:

- Credit types not required by Inland Rail Projects,
- Small areas of vegetation proposed to be protected that were financially unviable, meaning that the likely cost to create the credits was higher than the amount to pay into the BCF; or,
- Did not meet ARTC's internal requirements for financial disclosure or conflicts of interest.

Properties identified from the EOI process that were progressed to a BSA application by ARTC are shown in Table 4. Two out of four applications have yet to be progressed.

Table 4 Properties suitable for a BSA site, identified from a statewide EOI and relevant to NS2B

PROPERTIES	APPLICATION STAGE	OFFSET TRADING GROUPS OF RELEVANCE TO NS2B
BON-117	BSA Application withdrawn by Landowner	<ul style="list-style-type: none"> – 118 credits of Brigalow TEC – Within the Pilliga Outwash subregion
BON-044 (CH-331)	Credits released and purchased by ARTC	<ul style="list-style-type: none"> – 713 credits of NW Slopes Dry Sclerophyll Woodlands; Moderate threat status – 657 credits of Box Gum Woodlands TEC – 5,478 Koala species credits – Within the Northern Basalts subregion
BON-063	Agreement not reached with owner	<ul style="list-style-type: none"> – 34 credits of Myall Woodland TEC – 13 credits of Inland Floodplain Swamps, High threat status – Within the Northern Outwash subregion
BON-017 (CH-203)	Approved and credits transferred to ARTC	<ul style="list-style-type: none"> – 503 credits of Inland Floodplain Woodlands, High threat status (Poplar Box Grassy Woodlands) – 23 credits of North-west Floodplain Woodlands, High threat status

4.5 Open and Select Tenders

ARTC has completed a series of open and select tenders to acquire credits from the market, including:

- **Strategic Procurement of Biodiversity Credits.** This tender included advertising within major metropolitan and regional newspapers and online media. The tender specified credit types and quantities to fulfil credits for Inland Rail Projects in northern NSW and allowed tenderers to offer existing and proposed credits (e.g. credits that were to be created at a later date). The tender resulted in four submissions, however no contracts were awarded and the tender was closed.
- **Species Credit Tender.** A tender was completed in mid-2022 to acquire species credits off the market. The objective of species tender was to acquire species credits to fulfil Inland Rail's NSW project obligations, including species credits for NS2B. The species credit tender was a select tender and was issued to all credit owners identified on the Credit Supply Register. It was not advertised to the wider community. Whilst 17 submissions were made in response to the tender, it was identified there is a limited credit market for particular species required in the Inland Rail credit obligation. Tenderers offered those credits for species that are relatively common and widespread across the state such as Koala (*Phascolarctos cinereus*) and Squirrel Glider (*Petaurus norfolcensis*). Tenderers did not provide an offer for other species credit species which are relevant for NS2B (Section 5.4).

4.6 Property Acquisition

The acquisition of property is a viable option for ARTC, in which desktop assessments are undertaken on properties with potential offset suitability identified through the current property market, or through discussions with local real-estate agents for properties coming onto the market. Two properties have been acquired to date that will provide credits for NS2B, BON-161 which is located within the Pilliga subregion and BON-189, which is located within the Castlereagh-Barwon subregion.

4.7 Partnership Options

Inland Rail has been consulting with NSW Government departments such as Crown Lands and Local Lands Services (LLS) to explore possible opportunities to establish a BSA site on Crown land and Travelling Stock Reserves (TSR). However, there are significant issues that must be overcome to establish a BSS on Crown land and to date no opportunities have been progressed.

A Local Aboriginal Land Council (LALC), within proximity of the NS2B project, expressed an interest in using their landholdings to establish a BSA and to sell the credits to ARTC. ARTC completed a desktop assessment

on each of the LALC’s holdings and identified several properties that showed potential for further investigation. To date, no further negotiations have been progressed with the LALC to establish a BSS.

A Credit Supply Agreement has been executed with the Credit Supply Taskforce to supply in demand credits. The Agreement provides certainty to the Taskforce that ARTC will purchase in demand credits that have been procured through the reverse auctions.

4.8 Variation Assessment

As demonstrated in Section 4, ARTC has taken reasonable steps to secure like-for-like biodiversity credits to meet the project’s obligations, however some obligations remain unfulfilled. Therefore, the variation rules have been considered for some OTGs, pending formal request and approval from DPE, which are discussed in Table 5 and species credit species as shown in Table 6.

Table 5 Variation Assessment for Ecosystem Credit Obligations for NS2B

THREATENED ECOLOGICAL COMMUNITY OR OFFSET TRADING GROUP	VEGETATION FORMATION	USE OF THE VARIATION RULES - VEGETATION CLASS (AVAILABLE PCT)
ECOSYSTEM CREDITS		
Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Semi-arid Woodlands	Listed under the EPBC Act as Brigalow (<i>Acacia harpophylla</i>) dominant and co-dominant and therefore the variation rules are not available
Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions (and northern outwash variation)	Semi-arid Woodlands	Listed under the EPBC Act as Weeping Myall Woodlands and therefore the variation rules are not available
Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions	Rainforests	Listed under the EPBC Act as Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and the Nandewar Bioregions and therefore the variation rules are not available
Semi-arid Floodplain Grasslands; >=70-<90% (high threat status)	Grasslands	Listed under the EPBC Act as Natural Grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland and therefore the variation rules are not available
Floodplain Transition Woodlands; >=70-<90% (high threat status)	Grassy Woodlands	Can use: <ul style="list-style-type: none"> – Western Slopes Grassy Woodlands; High threat status (202, 267, 274, 275, 278, 280, 286, 301, 383, 433, 437, 444, 509, 516, 589, 590, 593, 599, 955, 1303, 1304, 1315, 1329, 1383, 1695) – Western Slopes Grassy Woodlands; Very high threat status (201, 266, 276, 277, 282, 283, 337, 426, 441, 483, 847)
Carbeen Open Forest community in the Darling Riverine Plains and Brigalow Belt South Bioregions	Grassy Woodlands (PCT628)	Can use: <ul style="list-style-type: none"> – Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (76, 80, 81, 82, 101, 110, 237, 248) – 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 (many PCTs)
Inland Riverine Forests; >=50-<70% (moderate threat status)	Forested Wetlands	Only vegetation class within the formation. No opportunity to use variation rules.

THREATENED ECOLOGICAL COMMUNITY OR OFFSET TRADING GROUP	VEGETATION FORMATION	USE OF THE VARIATION RULES - VEGETATION CLASS (AVAILABLE PCT)
Inland Floodplain Swamps; >=50-<70%	Freshwater Wetlands	Can use: <ul style="list-style-type: none"> - Inland Floodplain Swamps; Very High threat status (205, 360) - Inland Floodplain Swamps; High threat status (66, 204, 335, 447, 465, 1291) - Inland Floodplain Swamps; Moderate threat status (47, 238, 336, 361, 416) - Inland Floodplain Shrublands; High threat status (375) - Inland Floodplain Shrublands; Moderate threat status (17, 115, 161, 241, 247)
Inland Floodplain Shrublands; >=50-<70%		
North-west Floodplain Woodlands; >=70-<90%	Semi-arid Woodlands (grassy sub-formation)	Can use: <ul style="list-style-type: none"> - Brigalow Clay Plain Woodlands; Very High threat status (35) - Brigalow Clay Plain Woodlands; High threat status (101) - North-west Floodplain Woodlands; High threat status (55) - Riverine Plains Woodlands; Very High threat status (26) - Riverine Plains Woodlands; High threat status (27)
Subtropical Semi-arid Woodlands; <50%	Semi-arid Woodlands (shrubby sub-formation)	Can use: <ul style="list-style-type: none"> - North-west Alluvial Sand Woodlands, High threat status (71, 227, 376) - North-west Alluvial Sand Woodlands, Moderate threat status (206, 428) - Subtropical Semi-arid Woodlands, High threat status (146) - Subtropical Semi-arid Woodlands, Low threat status (117, 192) - Western Peneplain Woodlands; High threat status (135, 145) - Western Peneplain Woodlands; Moderate threat status (103) - Western Peneplain Woodlands; Low threat status (72, 98, 105, 108, 109, 134, 245, 246)
Western Peneplain Woodlands; <50% (low threat status)		
North-west Slopes Dry Sclerophyll Woodlands; <50% (low threat status)	Dry Sclerophyll Forests (shrub / grass sub-formation)	Can use: <ul style="list-style-type: none"> - Pilliga Outwash Dry Sclerophyll Forest, High threat status (1090, 1384) - Pilliga Outwash Dry Sclerophyll Forest, Moderate threat status (148) - Pilliga Outwash Dry Sclerophyll Forest, Low threat status (702, 141, 411, 88, 397) - North-west Slopes Dry Sclerophyll Forest, High threat status (217, 529, 564, 856, 1586) - North-west Slopes Dry Sclerophyll Forest, Moderate threat status (many) - North-west Slopes Dry Sclerophyll Forest, Low threat status (many)

Table 6 Variation Assessment for Species Credit Obligation for NS2B

THREATENED SPECIES CREDIT SPECIES	KINGDOM	USE OF THE VARIATION RULES -
Koala*	Animals	Listed under the EPBC Act as Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) and therefore the variation rules are not available
Masked Owl, Glossy Black-Cockatoo**, Pale-headed Snake, Squirrel Glider	Animals	Animals listed as vulnerable, endangered or critically endangered
Belson's Panic, Bluegrass, Slender Darling Pea, Winged Peppergrass	Plants	Listed under the EPBC Act and therefore the variation rules are not available

THREATENED SPECIES CREDIT SPECIES	KINGDOM	USE OF THE VARIATION RULES -
Finger Panic Grass, Creeping Tick-trefoil, Native Milkwort	Plants	Plants listed as endangered or critically endangered
<p>* Koala was up listed in 2022 to endangered status. ** Glossy Black-Cockatoo was listed as vulnerable under the EPBC Act in August 2022, however as it was not listed at the time of the Controlled Action decision for the project, the variation rules may apply if approved by DPE.</p>		

5 Compensatory Measures

5.1 Purpose

The NSW Department of Planning and Environment (DPE) has endorsed a policy that allows CSSI projects to apply for a deferral of their biodiversity credit obligations for a period of two years post-determination. As part of the application, CSSI proponents must prepare a Biodiversity Offset Package that details how credits will be sourced as well as implementing compensatory measures that will provide additional benefits to certain significant biodiversity values.

5.2 Compensatory Measures

The retirement of biodiversity credits will provide land-based offsets to compensate for the impacts of the NS2B Project on biodiversity values, however additional measures are also proposed to provide other benefits to threatened species and communities. These compensatory measures include activities that meet gaps in current knowledge of species and communities’ distributions and/or ecology or seek to increase the extent of threatened communities. These activities are intended to contribute as compensatory measures and will also inform the Construction Environmental Management Plans and Biodiversity Sub-plans for NS2B (and other Inland Rail Projects in NSW and Queensland) ensuring up to date management practices can be implemented. The compensatory measures are in addition to current legislative requirements and other commitments made in the EIS.

The following compensatory measures will commence once the project plans have been approved, delivery partners have been formally engaged and land access granted by landowners (Table 7 and 8).

The individual scopes have been refined using the estimated cost of each measure as a guide. There are likely to over and underruns on each measure, however ARTC will endeavour to ensure that the total spend across all measures remain consistent with those proposed in Table 7 and 8, being a cumulative \$616,720. The total spend has been calculated based on the BCF Charge Quote received November 2022 and 27 months of indexation has been applied to each base credit price (to February 2025). The indexed amount is used for this calculation in recognition that a similar calculated amount is currently held in a security account by National Australia Bank (NAB). At the time of credit retirement, the total amount spent on compensatory measures would be reconciled and any adjustments to the proposed reduction in credit obligations applied and using the correct indexation at the time of retirement.

Table 7 Project Plan for Semi-evergreen Vine Thicket TEC

COMPENSATORY MEASURE PROJECT ATTRIBUTE	PROJECT DETAILS
Significant Biodiversity Value	Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions threatened ecological community listed as Endangered under the BC Act and the Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions threatened ecological community listed Endangered under the EPBC Act.
Scope	Supporting the <i>Relict Rainforest & Woodland Conservation Project</i> Research on the seed biology of plants within the SEVT TEC is needed to ensure community persistence within the landscape at pressure from clearing. The Relict Rainforest project focuses on understanding how flowering, seed production and seed germination respond to climate, with a goal to share seed conservation knowledge with local land managers and community groups. The work of this project will inform future restoration and management to enable successful propagation and growth of these species and other on-ground conservation outcomes.
(a) project objectives;	This project will cover the collection and research of seeds and plant tissue from a list key indicator species of SEVT in NSW to: 1. provide genomic data on the evolutionary and adaptive potential of target species to maximise long-term resilience of species in NSW;

COMPENSATORY MEASURE PROJECT ATTRIBUTE	PROJECT DETAILS																																
	2. guide seed strategies to support genetically representative collections for ex situ seedbanking and restoration end-use; 3. provide recommendations on the seed germination traits that contribute to the likelihood of plant establishment in restoration, and; 4. develop guidelines that support restoration efforts and future on-ground actions for SEVT and plant communities in northwest NSW.																																
(b) responsible parties including agencies, key stakeholders and delivery partners	<ul style="list-style-type: none"> – Responsible Party – ARTC Inland Rail is responsible for ensuring that the project is fully funded in accordance with the proposal (Appendix D). – Delivery Partner – Australian Botanic Garden (ABG) Mount Annan is responsible for delivery of the project and ensuring that the objectives are met within the stated timeframes – Stakeholder – Landowners – Stakeholders – Lachlan Thurtell (Accountable Officer, BCD), Dave Coote (BCD) 																																
€ activities to be completed including identification of the specific project sites and/or project area in which activities will be undertaken;	This project would be completed in four stages, being: <ul style="list-style-type: none"> – Stage 1 – Seed and genetic material collection. – Stage 2 – Genomic analyses. – Stage 3 – Seed research and storage. – Stage 4 – Evaluation and reporting. 																																
Total Estimated Liability at End of Deferral Period	\$955,799.46 comprising a total charge of \$840,447.90 and indexation over 27 months totalling \$115,351.56. All charges quoted are excluding GST.																																
(d) funding required for each activity;	Total project budget is \$518,800.00 (54% of the total estimated liability), comprising: <ul style="list-style-type: none"> – Stage 1 – Seed and genetic material collection = \$78,800.00 – Stage 2 – Genomic analyses = \$270,000.00 – Stage 3 – Seed research and storage = \$147,000.00 – Stage 4 – Evaluation and reporting = \$19,000.00 																																
(e) timing for completion of each activity and where, relevant, reporting milestones to ensure completion of each measure within 2 years from the date of this approval;	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ACTIVITY</th> <th style="text-align: left;">EXPECTED START</th> <th style="text-align: left;">EXPECTED COMPLETION</th> </tr> </thead> <tbody> <tr> <td>Collection of plant tissues</td> <td>1 July 2023</td> <td>1 April 2024</td> </tr> <tr> <td>Collection of seeds</td> <td>1 September 2023</td> <td>1 January 2026</td> </tr> <tr> <td>Genetic testing and analyses</td> <td>1 April 2024</td> <td>1 April 2025</td> </tr> <tr> <td>Seed research</td> <td>1 January 2024</td> <td>1 January 2026</td> </tr> <tr> <td>Reporting</td> <td>1 January 2026</td> <td>1 July 2026</td> </tr> </tbody> </table> <p>The project is proposed to be completed over 3 years from July 2023 to June 2026. However, under the CoA for the Project, the offset package and project plans must be completed by 20 February 2025. In discussion with the ABG and BCD, it was agreed that fully funding the study upfront, while allowing the project to be delivered by the recognised experts in the field, ABG, ARTC will have been taken to have discharged its obligations under the offsets package and consequently met the CoA for NS2B.</p> <p>The ABG has confirmed that the project requires the full three-year timeframe in order to deliver the desired outcomes.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MILESTONE REPORT</th> <th style="text-align: left;">MILESTONES</th> <th style="text-align: left;">DUE DATE</th> </tr> </thead> <tbody> <tr> <td>Report #1 (first six months)</td> <td>Any adjustments to project activities/objectives (to be agreed by all project partners); fieldwork planning completed; collections of plant tissue and seeds commenced.</td> <td>1 January 2024</td> </tr> <tr> <td>Report #2</td> <td>Collection of plant tissue completed; all genetic samples sequenced; seed research completed for 20 collections.</td> <td>1 January 2025</td> </tr> <tr> <td>Report #3</td> <td>40 seed collections made; seed research completed for 40 collections; genomic analyses completed.</td> <td>1 January 2026</td> </tr> </tbody> </table>			ACTIVITY	EXPECTED START	EXPECTED COMPLETION	Collection of plant tissues	1 July 2023	1 April 2024	Collection of seeds	1 September 2023	1 January 2026	Genetic testing and analyses	1 April 2024	1 April 2025	Seed research	1 January 2024	1 January 2026	Reporting	1 January 2026	1 July 2026	MILESTONE REPORT	MILESTONES	DUE DATE	Report #1 (first six months)	Any adjustments to project activities/objectives (to be agreed by all project partners); fieldwork planning completed; collections of plant tissue and seeds commenced.	1 January 2024	Report #2	Collection of plant tissue completed; all genetic samples sequenced; seed research completed for 20 collections.	1 January 2025	Report #3	40 seed collections made; seed research completed for 40 collections; genomic analyses completed.	1 January 2026
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COMPENSATORY MEASURE PROJECT ATTRIBUTE	PROJECT DETAILS
	Final Report Data analyses completed; guidelines and recommendations provided. 1 July 2026
(f) identification of potential risks to achieving project objectives, and how these risks will be managed; and	<ul style="list-style-type: none"> – Risk: Access to suitable property cannot be secured. The ABG have an existing network of SEVT locations and these will be supplemented by Inland Rail existing connections with local landowners with known populations of SEVT. – Risk: Target species do not seed at the expected time or seasonal conditions are not conducive to seed production. The ABG will determine which species to target during each field trip to maximise the chance that target species will have sufficient seed to collect. The collections will also be completed over several years to minimise risk of unsuitable weather conditions during collection.
(g) monitoring activities related to the project objectives.	No monitoring is proposed as part of the project.

Table 8 Project Plan for Koala

COMPENSATORY MEASURE PROJECT ATTRIBUTE	PROJECT DETAILS
Significant Biodiversity Value	Koala (<i>Phascolarctos cinereus</i>) listed as Endangered under the BC Act and Koala (Combined populations of Queensland, New South Wales and the Australian Capital Territory) listed as Endangered under the EPBC Act
Scope	<p>Inland Rail Koala Genetics Study The purpose of the Inland Rail Koala Genetics Study is to provide an understanding of, and contribute new knowledge to, the current status of inland Koala populations in NSW and Queensland. This is a program wide study from Narromine in NSW to Acacia Ridge in Queensland that was commenced in 2022.</p> <p>Koala surveys were completed within the North Star region in July 2022. These included sample locations along North Star Road, Forest Creek Road and Scotts Road, as well as areas to the south of the Macintyre River. No scats were found by the detection dog team during these surveys.</p> <p>Inland Rail Koala Genetics Study – Extension for NS2B Following on from this initial survey, a further 5 days of surveys for the NS2B section are proposed to be undertaken as part of the NS2B Project Plan. These surveys will have a focus on areas where Koalas have been sighted recently and are additional to the original surveys completed in 2022. The scope for the NS2B project includes:</p> <ul style="list-style-type: none"> – Completing 5 days of Koala scat collection within the NS2B region (North Star to the Macintyre River). – Incorporate the results from the NS2B survey and diet analysis into the larger dataset collected during the original study. These data will be made available to the CSIRO’s National Koala Monitoring Program (NKMP); and – Identify health characteristics such as the presence of disease, particularly Chlamydia (<i>Chlamydia pecorum</i>), in the population of Koala within the NS2B region.
(a) project objectives;	<p>The expected outcomes of the Inland Rail Koala Genetics Study are to:</p> <ol style="list-style-type: none"> 1. Provide rigorous and robust data to inform evidence-based approaches to infrastructure design and delivery to avoid and minimise impacts to koala populations, specifically to identify proposed locations for koala crossings on the NS2B project; 2. Identify existing koala movement and connectivity across the landscape to provide targeted management and mitigation measures; 3. Enable the development of ongoing monitoring programs; and 4. Enable open access to findings to facilitate further work and research. <p>The NS2B surveys will provide a standalone report covering the extent, health and viability of the local population, and how the population compares to other populations. Results will</p>

COMPENSATORY MEASURE PROJECT ATTRIBUTE	PROJECT DETAILS
	<p>include identifying individuals (genotypes), health (prevalence of chlamydia), relatedness and if enough individuals with some relationships are identified, scale of movement. Metabarcoding will be used to analyse diet and compare to species identified in vegetation assessments, to identify trees selected for foraging compared to available trees in the landscape. These data will contribute to filling information gaps on koalas, and to align with the NSW Koala Strategy, the NKMP and the National Recovery Plan for the Koala. Data will be provided to the CSIRO for integration into the NKMP at the conclusion of the field surveys and at the conclusion of genetic analyses components.</p> <p>The proposal from ERM is provided in Appendix E.</p>
<p>(b) responsible parties including agencies, key stakeholders and delivery partners</p>	<ul style="list-style-type: none"> – Responsible: ARTC Inland Rail is responsible for ensuring that the project meets the project objectives – Delivery Partner: ERM is the primary delivery partner and is responsible for delivery of the project in accordance with the proposal and preparation of final report – Delivery Partner: University of Southern Queensland (Detection Dogs for Conservation) – Key Stakeholders: landowners, CSIRO (NKMP, Dr. Andrew Hoskins)
<p>(c) activities to be completed including identification of the specific project sites and/or project area in which activities will be undertaken;</p>	<p>The Koala Genetics Study is being delivered in partnership with the University of the Sunshine Coast (USC), ERM and Inland Rail. Previous records provided from ARTC are on the northern end of the NS2B alignment, in the Macintyre River riparian zone, adjacent to Bruxner Way and the northern end of North Star Road. There was some success using this approach to focus in on areas where construction phase sites were sampled, with an additional 10 scats found north of Moree in the Mehi River riparian zone around Moree and Croppa Creek during a second visit completed in December 2022 in the NSW sections.</p> <p>The following methods will be employed specifically for the NS2B surveys:</p> <ol style="list-style-type: none"> 1. Desktop Assessment <ol style="list-style-type: none"> 1.1 Identification of koala hotspots within the NS2B project area and surrounds (desktop and ARTC EIS data review). 2. Fieldwork & Laboratory Analysis: <ol style="list-style-type: none"> 2.1 5 days of survey effort along the NS2B alignment and on the Macintyre River. Use of Koala detection dogs to detect and collect koala scats less than 2 weeks old for genetic analysis. The field surveys are completed by a University of Sunshine Coast dog handler and ERM ecologist with experience in fauna surveys. 2.2 Collection field vegetation data and scats from the hotspots. Provision of presence/absence data to CSIRO NKMP. 2.3 DNA analysis of scats. <ol style="list-style-type: none"> 2.3.1 Diet analysis of scats and comparison of available trees in the area. Diet preference and vegetation assessment is undertaken by ERM ecologists walking transects of the survey sites mapping the vegetation structure. Leaves from Koala food trees are collected to allow for investigation into accurate Koala diet preference, to be confirmed via scat samples analysis by the USC team. 3. Preparing a standalone sub-report that provides a discussion on: <ol style="list-style-type: none"> 3.1 the health and viability of the local koala population, and 3.2 how the local koala population compares with other populations analysed from the larger project. 3.3 Provision of genetic analysis data to the CSIRO NKMP. 3.4 Incorporation of the koala survey results into the detailed design of the NS2B project including design of suitable fauna crossing infrastructure at likely crossing locations.
<p>Total Estimated Liability at End of Deferral Period</p>	<p>\$808,116.12 comprising a total charge of \$710,580.78 and indexation over 27 months totalling \$97,535.34. All charges quoted are excluding GST.</p>
<p>(d) funding required for each activity;</p>	<p>\$97,920.00 (12% of total estimated liability). The current proposal includes a portion of funding assigned to completing genetic analysis on any scats collected (\$18,075). Due to the low abundance of koalas within the project area, fresh scats that are suitable for analysis, may not be present for collection. Should this be the case, the portion of the project budget for the analysis would not be spent and there would be a commensurate alteration to the final credit obligation at the time of reconciliation.</p>

COMPENSATORY MEASURE PROJECT ATTRIBUTE	PROJECT DETAILS
<p>(e) timing for completion of each activity and where, relevant, reporting milestones to ensure completion of each measure within 2 years from the date of this approval;</p>	<ol style="list-style-type: none"> 1. Approval to proceed: June 2023 2. Desktop assessment and field survey plan: within 1 week of approval to proceed 3. Land access approval from ARTC: within 2 weeks of field survey plan. 4. Field survey complete: within 2 weeks of land access approval 5. Provision of data to CSIRO. This data supports the Koala observations monitoring method (presence/absence) employed by NKMP. 6. Genetic and diet analyses: within 2 months of conclusion of field survey 7. Draft report: within two weeks of genetic analyses 8. Final report: within one week of consolidated ARTC comments. Provision of data to CSIRO. These data will be provided in the format required by NKMP.
<p>(f) identification of potential risks to achieving project objectives, and how these risks will be managed; and</p>	<p>Surveys will be completed at the optimal time of year to collect fresh scat and vegetative material. However, koala populations within western regions are naturally sparse and animals are transient within their range. The Koala Genetics Study requires the collection of fresh scat, which therefore limits the window for collection and increases the risk that useful scats cannot be collected (generally >2 weeks). Should fresh scat not be collected, the portion of funding allocated to the genetic analysis component would not be used and consequently the total reduction of the credit obligation would be adjusted to reflect this.</p> <p>Regardless, re-surveying for koala within the NS2B area will provide additional data on the presence of koala within the region as a negative result is also essential when analysing presence / absence data in the context of the larger study.</p>
<p>(g) monitoring activities related to the project objectives.</p>	<p>No ongoing monitoring is proposed as part of the NS2B Koala surveys.</p>

6 Meeting Credit Obligations

Sourcing credits for NS2B is ongoing, with issues as outlined in this document limiting the ability of finding credits on the market or contacting landholders to enter into the scheme to create the necessary credits for the Project.

This section outlines the likely credit obligation as per the BDAR that was submitted for consent. The following tables outline the BSS which are currently in assessment with the Credit Supply Taskforce or have been previously approved and credits transferred to ARTC.

6.1 BSA Application Timing

Table 10 provides the status of BSA applications made by ARTC on behalf of landowners or where ARTC has purchased or intends to purchase a substantial quantity of credits. For BSA applications that are being prepared, an estimated credit release date is provided with as much certainty as possible, although credit release is subject to many factors and delays often occur.

Table 9 Status of BSA Applications Progressed by ARTC

BSA NO OR CREDIT HOLDING	CREDITS GENERATED/PURCHASED TO MEET AN NS2B OFFSET OBLIGATION (VEGETATION CLASS, TEC OR SPECIES)	ANTICIPATED CREDIT RELEASE / ACQUISITION
CH-203	– North-west Floodplain Woodlands	Credits held by ARTC
CR-219	– Koala	Credits held by ARTC
CH-287	– Squirrel Glider	Credits held by ARTC
CR-805	– Native Milkwort	Credits held by ARTC
CH-269	– Floodplain Transition Forests (Poplar Box Grassy Woodlands)	Credits held by ARTC
CH-366	– Native Milkwort	Credits held by ARTC
BON-044 CH-337	– 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 Bioregions (proposed to be used under Variation Rules for Carbeen TEC subject to DPE approval) – Koala species credits	Credits held by ARTC
BON-032 CH-347	– North-west Slopes Dry Sclerophyll Forests	Credits held by ARTC
BON-049	– Winged Peppercross – Pale-headed Snake species – Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions TEC	BSSAR being prepared Credit release Q3, 2023
BON-050 & BON-048	– Pale-headed Snake species – Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions TEC	BSSAR being prepared Credit release Q4, 2023
BON-189	– Floodplain Transition Forests (Poplar Box Grassy Woodlands) – Western Peneplain Woodlands	ARTC owned property Credit release Q4, 2023
BON-113	– Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions TEC	Preliminary Inspection completed Credit release, Q1, 2024
BON-193	– Semi-arid Floodplain Grasslands; High Threat Status & Natural Grasslands on Basalt and Fine-textured Alluvial Soils of Northern NSW and Southern Qld	Preliminary Inspection completed Uncertain credit release
Credit Supply Fund	Reverse Auction No. 1: – No relevant credits offered	Credit Supply Agreement executed with the Credit Supply

BSA NO OR CREDIT HOLDING	CREDITS GENERATED/PURCHASED TO MEET AN NS2B OFFSET OBLIGATION (VEGETATION CLASS, TEC OR SPECIES)	ANTICIPATED CREDIT RELEASE / ACQUISITION
	<p>Reverse Auction No. 2:</p> <ul style="list-style-type: none"> - Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions TEC - Semi-arid Floodplain Grasslands; High Threat Status & Natural Grasslands on Basalt and Fine-textured Alluvial Soils of Northern NSW and Southern Qld - Slender Darling Pea - Winged Peppergrass. <p>Reverse Auction No. 3:</p> <ul style="list-style-type: none"> - Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions TEC 	<p>Taskforce in November 2022. Finalisation of the Reverse Auction offers and purchase of credits is dependent upon the timing of each BSA application</p>

6.2 Outstanding Ecosystem Credit Obligations

Based on the work in progress and as shown in Table 12, ARTC have identified the following ecosystem credit types that are yet to be acquired in full:

- PCT628, Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions TEC
- PCT147, Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions TEC
- PCT53, Inland Floodplain Swamps
- PCT247, Inland Floodplain Shrublands.

ARTC continues to source these ecosystem credit types in accordance with the BODS as described in Section 2. Given the approval and implementation of compensatory measures outlined in Table 8 to 10, it is expected that the ecosystem credit obligation for PCT52 and PCT147 can be reduced by 10 to 50%, respectively.

6.3 Outstanding Species Credit Obligations

ARTC has completed a significant body of work to identify suitable properties that may contain habitat for species credit species. In order to generate credits, evidence of the species within the proposed BSA site, or an expert report must be supplied with the BSA application. From the outset, ARTC identified that an expert report was the method most likely to lead to the generation of species credits for the least cost. Several experts were engaged to assess the most likely sites from ARTC’s landowner database and identify the sites with the most potential to contain species habitat. Once a shortlist of properties had been identified, each expert completed a site inspection to confirm that habitat features were present and develop a species polygon, if possible, for their respective species. An expert report was commissioned for; Koala (five properties), Pale-headed Snake (4 properties) and Masked Owl/Barking Owl (four properties) and Little Eagle/Square-tailed Kite (14 properties). Furthermore, an expert was contacted regarding eastern pygmy possum, however an arrangement could not be reached with the expert.

ARTC and its accredited assessors, Niche, have identified two properties containing known habitat (BON-009) and likely habitat based on expert report (BON-044) for Masked Owl. The number of potential species credits generated is unknown due to way in which credits for dual credit species such as Masked Owl are created. ARTC is waiting on a decision from DPE regarding how to generate a species polygon from an expert report.

To generate credits for Glossy Black-Cockatoo, this requires either targeting properties that have a known breeding population of the species present or completing surveys on potential sites during winter to detect breeding activity. To date, no suitable properties have been identified that contain a known breeding pair of birds, although the species has been observed on several proposed offset sites. This obligation will likely be

met through applying for the variation rules or making a payment to the Biodiversity Conservation Fund. Under the Variation Rules, surplus species credits from other fauna species can be used to meet the Glossy Black-Cockatoo obligation. ARTC is progressing several work streams to generate and acquire Koala and Squirrel Glider credits with the intent that any surplus credits will be used to meet the outstanding credit obligations if sufficient like-for-like credits cannot be obtained. As Koala and Squirrel Glider are both listed as vulnerable, under the Variation Rules, any surplus credits can be used to meet the credit obligation for other species credit species listed as vulnerable, such as Glossy Black-Cockatoo.

Likewise, no properties have been identified that contain a population of required threatened flora species. ARTC is pursuing expression of interests on the Credit Supply Register, however no arrangements have been made. Given that there are limited, if any, flora species credits available within the market, ARTC will likely meet the obligation through a payment into the Biodiversity Conservation Fund.

6.4 Threatened Ecological Communities (TEC)

The following section summarises the NS2B Project credit obligations for TECs under the BC Act and/or EPBC Act and how ARTC may meet the obligation via the sources described in Section 4. The proposed credit retirements are not fixed and are subject to change as negotiations with landowners progress and BSA applications are assessed by the Credit Supply Taskforce. The Variation Rules are only proposed for TECs that are not listed under the EPBC Act and where a formal application to DPE is made and approval gained.

Where there are predicted residual obligations, the total cost to fully acquit the remaining obligation is provided and has been calculated based on the BCF Charge Rate for the applicable credit and including indexation for a 27-month period from the BCT’s Charge Quote of November 2022.

An example of how ARTC will meet an ecosystem credit obligation for a TEC is shown below.

PCT Name				NS2B Obligation	BSA Site / Credit Holding	NS2B Remaining obligation
Plant Community Type	Offset Trading Group	Subregion	Hollow-bearing Trees Present?		ARTC site code	
PCT ID	The OTG for the obligation and proposed credits to be retired	The subregion of the obligation and proposed credits to be retired	Yes or No	Obligation from the BDAR [^]	Number of credits proposed to be used to meet the obligation	Obligation remaining following proposed retirement
[^] NS2B Obligations: - C2 - Central Package 2 (North Star Corridor) - C3 - Central Package 3 (Macintyre Floodplain) - EW - Early Works - BP – Borrow Pits						

6.4.1 Brigalow within the Brigalow Belt South, Nandewar, and Darling Riverine Plains Bioregions

PCT35 meets the definition of Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions TEC under the BC Act and the obligation must be met with credits of the same TEC as per the like-for-like rules. PCT35 is also equivalent to the Brigalow (Acacia harpophylla dominant and subdominant) TEC listing under the EPBC Act. Therefore, the variation rules cannot be applied.

Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion				NS2B obligation	BSA Sites		NS2B Remaining obligation	
PCT	OTG	Subregion	HBTs		BON-49	BON-113		
35	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Northern Basalts	Yes	253 (C2) 13 (EW) 16 (BP1)		247		
			No	32 (C2) 9 (BP1)		308		
		Northern Outwash	No	8 (C2) 217 (EW) 10 (BP2)				
			Yes	4 (C2) 33 (EW)				
		Pilliga Outwash	No		657			
			Yes		59			
TOTAL				595	225	555	0	

6.4.2 Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions

Credits required to meet the Carbeen TEC obligation cannot be sourced in full from the existing credit market, nor other sources pursued by ARTC. Therefore, unless other like-for-like credits become available and are purchased, ARTC may seek to use the variation rules to partially meet this obligation. Any proposal to use the variation rules would be made through a formal request and approval sought from DPE.

It is proposed that *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* (Box-Gum Woodlands) TEC credits and *Fuzzy Box Woodland on alluvial soils of the Southern Western Slopes, Darling Riverine Plains and the Brigalow Belt South Bioregions* will be used to meet the Carbeen TEC obligation.

As per the Biodiversity Conservation Regulation 2017, impacts to TECs must be met with credits that meet the Variation Rules (Appendix B):

- Carbeen TEC (PCT628) and Box-Gum Woodlands occur within the Grassy Woodlands vegetation formation.
- Carbeen TEC is listed as endangered under the BC Act and Box-Gum Woodland is listed as critically endangered under the BC Act. Therefore, the credits proposed to be retired at in a higher offset trading group.
- The BSA site is located within the Northern Basalts subregion, which is an impacted subregion.
- The Carbeen TEC obligation contains hollow-bearing trees and non-hollow bearing trees. The Box-Gum Woodland credits contain hollow-bearing trees.
- The residual obligation for Carbeen Open Forest community in the Darling Riverine Plains and Brigalow Belt South Bioregions is \$4,679,656.80 (ex GST) based on a residual obligation of 588 credits.

Carbeen +/- Coolabah grassy woodland on floodplain clay loam soil on north-western NSW floodplains, mainly Darling Riverine Plain Bioregion				NS2B obligation	BSA Sites / Credit Holding		NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		CH-337	Reverse Auction	
628	Carbeen Open Forest community in the Darling Riverine Plains and Brigalow Belt South Bioregions	Castlereagh-Barwon	No	15 (C3) 139 (C2) 252 (EW)			
			Yes	128 (C2) 144 (EW)			
-		Northern Outwash	Yes			17	
589	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 Bioregions	Northern Basalts	Yes		53*		
599			Yes		20*		
TOTAL				678	73*	17	588**

* Assumes that ARTC submits a variation request that is approved by DPE.

** Remaining obligation is 661 credits if the variation rules are not approved by DPE.

6.4.3 Semi-evergreen Vine Thickets of the Brigalow Belt South and Nandewar Bioregions

PCT147 meets the definition of Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions TEC under the BC Act and the obligation must be met with credits of the same TEC as per the like-for-like rules. PCT147 is also equivalent to the Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions TEC listing under the EPBC Act. Therefore, the variation rules cannot be applied.

The residual obligation for Semi-evergreen Vine Thickets of the Brigalow Belt South and Nandewar Bioregions (SEVT) TEC is \$436,506.84 (ex GST) based on a residual obligation of 58 credits. The SEVT project plan (Section 5.2) is proposed to be completed within two years of the project approval and will reduce the credit obligation for the TEC by approximately 55%. Final number of credits to be retired will be determined based on the final credit reconciliation prior to retirement.

Mock Olive – Wilga – Peach Bush – Carissa semi-evergreen vine thicket (dry rainforest) mainly on basalt soils in the Brigalow Belt South Bioregion				NS2B obligation	BSA Sites	NS2B Remaining obligation
PCT	OTG	Subregion	HBTs			
147	Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions	Northern Basalts	No	127 (BP1)		
TOTAL				127		
TOTAL including proposed 55% reduction from compensatory measures.				58		58

6.4.4 Myall Woodland Open Woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion

PCT27 meets the definition of Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina, and NSW South Western Slopes bioregions (and northern outwash variation) TEC under the BC Act and the obligation must be met with credits of the same TEC as per the like-for-like rules. PCT27 also equivalent to the Weeping Myall Woodlands TEC listed under the EPBC Act and therefore the variation rules cannot be applied.

Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion				NS2B obligation	BSA Sites		NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		BON-189	BON-193	
27	Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina, and NSW South Western Slopes bioregions (and northern outwash variation)	Northern Outwash	No	74 (C2) 56 (EW)	104		
		Northern Basalts	No				
		Castlereagh-Barwon	No			325	
TOTAL				130	104	325	0

6.4.5 Natural Grasslands on Basalt and Fine-textured Alluvial Soils of Northern NSW and Southern Qld

PCT52 within the Castlereagh-Barwon subregion is not listed under the BC Act as a TEC. However, PCT52 is equivalent to the Natural grasslands on basalt and fine-textured alluvial soils of northern NSW and southern Queensland TEC (Natural Grasslands TEC) listed under the EPBC Act. Therefore, the variation rules cannot be applied.

Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion				NS2B obligation	BSA Sites		NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		Reverse Auction	BON-193	
52	Semi-arid Floodplain Grasslands; >=70-<90% & Natural Grasslands on Basalt and Fine-textured Alluvial Soils of Northern NSW and Southern Qld (EPBC-listed TEC)	Castlereagh-Barwon	No	1,076 (C3) 308 (C2)			
TOTAL				1,384	694	2,173	0

6.5 Non-threatened ecological communities

The following section summarises the NS2B credit obligations for ecosystem credits that are not listed as a TEC under the BC Act and/or EPBC Act and how ARTC may be meeting the obligation via the sources described in Section 5.1. The obligations are categorised within the relevant Vegetation Formation, although the variation rules are only proposed to be enacted as expressly specified and would follow a formal application to DPE and gaining approval of each application. The proposed credit retirements are not fixed and are subject to change as negotiations with landowners progress and BSA applications are assessed by the Credit Supply Taskforce.

An example of how ARTC will meet an ecosystem credit obligation for a non-TEC is shown below.

PCT Name				NS2B Obligation [^]	BSA Site / Credit Holding	NS2B Remaining obligation
Plant Community Type	Offset Trading Group	Subregion	Hollow-bearing Trees Present?		ARTC site code	
PCT ID	The OTG for the obligation and proposed credits to be retired	The subregion of the obligation and proposed credits to be retired	Yes or No	Obligation from the BDAR	Number of credits proposed to be used to meet the obligation	Obligation remaining following proposed retirement
[^] NS2B Obligations: - C2 – Central Package 2 (North Star Corridor) - C3 – Central Package 3 (Macintyre Floodplain) - EW – Early Works - BP – Borrow Pits						

6.5.1 Freshwater Wetlands Vegetation Formation

The residual obligation for PCT53 is \$1,203,361.11 (ex GST) based on 147 credits and the residual obligation for PCT247 is \$1,002,169.80 (ex GST) based on 230 credits.

Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains				NS2B obligation	BSA Sites	NS2B Remaining obligation
Lignum shrubland wetland on regularly flooded alluvial depressions in the Brigalow Belt South Bioregion and Darling Riverine Plains Bioregion						
PCT	OTG	Subregion	HBTs			
53	Inland Floodplain Swamps; >=50-<70%	Northern Basalts	No	107 (C2) 40 (EW)		147
247	Inland Floodplain Shrublands; >=50-<70%	Castlereagh-Barwon	No	192 (C2) 38 (C3)		230

6.5.2 Grassy Woodlands Vegetation Formation

Poplar Box – Belah woodland on clay-loam soils on alluvial plains of north-central NSW				NS2B obligation	BSA Sites / Credit Holding			NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		BON-189		CH-269	
56	Floodplain Transition Woodlands; >=70-<90%	Castlereagh Barwon	No	46 (EW)				0
				583 (C2) 10 (EW) 2 (BP7) 787 (BP8)				0
		Northern Outwash	No	31 (C2) 17 (EW) 5 (BP7)				0
			Yes	443 (C2) 125 (EW)				0
		Northern Basalts	Yes	1,131 (C2) 210 (EW)				0
			No	525 (C2) 112 (EW)				0
244		Castlereagh-Barwon	Yes	146 (C3) 138 (C2)	2,389		1,992	0
			No	75 (C2)				0
TOTAL				4,381	2,389		1,992	0

6.5.3 Forested Wetlands Vegetation Formation

River Red Gum tall to very tall open forest / woodland wetland				NS2B obligation	BSA Sites / Credit Holding		NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		CH-347	CH-282	
36	Inland Riverine Forests; >=50-<70%	Castlereagh Barwon	Yes	24 (C3) 22 (C2) 84 (EW)			0
		Northern Outwash	Yes	21 (C2)			0
		Northern Basalts	Yes		31		
78		Northern Basalts	Yes		36		
		Pilliga	Yes			84	
TOTAL				151	115	84	0

6.5.4 North-west Slopes Dry Sclerophyll Woodlands Vegetation Formation

Silver-leaved Ironbark – White Cypress Pine – box dry shrub grass woodland of the Pilliga Scrub – Warialda region, Brigalow Belt South Bioregion				NS2B obligation	BSA Sites / Credit Holding		NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		CH-347	CH-337	
418	North-west Slopes Dry Sclerophyll Woodlands; <50%	Northern Basalts	No	40 (BP25)			0
		Northern Outwash	Yes	81 (BP2)			0
			No	104 (BP2) 137 (BP9)			0
413		Northern Basalts	Yes		31		

597	Northern Basalts	Yes	9	650	
		No		63	
TOTAL			362	40	713
					0

6.5.5 Semi-arid Woodlands (Grassy Sub-formation) Vegetation Formation

Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions				NS2B obligation	BSA Sites / Credit Holding	NS2B Remaining obligation
PCT	OTG	Subregion	HBTs		CH-203	
55	North-west Floodplain Woodlands; >=70- <90%	Northern Basalts	No	8 (C2)	8	0

6.5.6 Semi-arid Woodlands (Shrubby Sub-formation) Vegetation Formation

The residual obligation for PCT192 is \$1,254,890.88 (ex GST) based on 288 credits.

Poplar Box – White Cypress Pine – Wilga – Ironwood shrubby woodland on red sandy-loam soils in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion				NS2B obligation	BSA Sites	NS2B Remaining obligation
Silver-leaved Ironbark – Poplar Box +/- Ironwood shrub – grass woodland on rises in the north-western plains of NSW					BON-189	
PCT	OTG	Subregion	HBTs			
98	Western Penepplain Woodlands; <50%	Northern Basalts	No	75 (C2)		
		Northern Outwash	No	12 (BP13)		
145	Western Penepplain Woodlands; >=70- <90%	Castlereagh-Barwon	Yes		87	0
192	Subtropical Semi-arid Woodlands; <50%	Castlereagh-Barwon	Yes	56 (C3) 30 (EW)		
			No	9 (C2)		
		Northern Outwash	Yes	193 (BP5)		0

6.6 Threatened Species

6.6.1 Species Credits Species

Table 11 and Table 12 summaries the species credit obligations for NS2B and provides the likely sources of species credits secured or proposed to be secured by ARTC to meet the species obligations. A 10% credit reduction has been applied to the credit obligation for Koala although the final credit reduction will be calculated at the time of final reconciliation prior to retirement.

Glossy Black Cockatoo and Masked Owl are dual credit species and have been detected on several properties currently being assessed for a BSA or are considered likely to occur based on expert report. ARTC is awaiting a decision from the DPE regarding how the species polygons should be created for dual credit species where an expert has identified likely breeding habitat. Following the decision, ARTC will either apply for a variation to existing BSAs or update applications to include the relevant species credits.

Table 10 Total Species Credit (Fauna) Obligation and Proposed Sources of Credits

Species	NS2B obligation	BSA Site				Credits owned by ARTC	NS2B Remaining obligation & Cost
		CH-337	BON-050	BON-048 & BON-49	On Market Purchases		
Koala (breeding)	779 (C2) 208 (EW)	5,478				8,630	0
	Total 987	5,478				8,630	
	Inc. 10% reduction 889*						
Masked Owl	225 (C3) 1,749 (C2) 509 (EW) 127 (BP1) 785 (BP8) 184 (BP9)						3,579
	Total 3,579						\$20,319,987.24
Glossy Black-Cockatoo	225 (C3) 1,551 (C2) 513 (EW) 247 (BP2) 229 (BP5) 2 (BP7) 787 (BP8) 184 (BP9) 32 (BP25)						3,770
	Total 3,770						\$16,027,853.40
Pale-headed Snake	225 (C3) 37 (C2) 134 (EW) 257 (BP5)		17	107			529
	Total 653		17	107			\$1,509,184.10
Squirrel Glider	1,039 (C2) 95 (EW)				1,068	9,622	0
	Total 1,134						
TOTAL							\$37,677,024.74

*Final number of credits to be retired will be determined based on the final credit reconciliation prior to retirement.

Table 11 Total Species Credit (Flora) Obligation and Proposed Sources of Credits

Species	NS2B obligation	Credits owned by ARTC	CST Reverse Auction	NS2B Remaining obligation	Total Residual Cost
Creeping Tick-Trefoil	1,222 (C3) 12 (C2)				
	Total 1,234			1,234	\$2,678,532.74

Species	NS2B obligation	Credits owned by ARTC	CST Reverse Auction	NS2B Remaining obligation	Total Residual Cost
Finger Panic Grass	1,265 (C3) 2,493 (C2) 432 (EW) 121 (BP1) 177 (BP2)				
	Total 4,488			4,488	\$12,803,815.20
Belson’s Panic	1,222 (C3) 1 (C2) 72 (EW) 127 (BP1) 182 (BP2)				
	Total 1,604			1,604	\$4,576,051.60
Bluegrass	1,076 (C3)				
	Total 1,076			1,076	\$2,335,576.36
Slender Darling Pea	1,222 (C3)		2,996		
	Total 1,222			0	\$0
Winged Peppergrass	1,064 (C3) 9 (C2)		9,587		
	Total 1,073			0	\$0
Native Milkwort	253 (BP5)	351			
	Total 253			0	\$0
TOTAL				8,402	\$22,393,975.90

6.6.2 MNES Species

The BDAR identifies several species, listed under the EPBC Act, that are ecosystem credit species. These are fauna species that are consistently associated with PCTs and so can be reliably predicted to occur based on the presence of vegetation communities. Impacts to these species have been assessed in accordance with the BAM and any residual impacts will be offset through the retirement of relevant ecosystem credits. In other words, the offset obligations for ecosystem credit species will be met through the retirement of ecosystem credits (Table 12) (refer to Table 10.6 of the BDAR, FFJV 2021).

Table 12 Ecosystem Credit Species that are Listed under EPBC Act

COMMON NAME (SCIENTIFIC NAME)	EPBC ACT STATUS*	APPROVED IMPACT UNDER CSSI	CREDIT OBLIGATION	ECOSYSTEM ASSOCIATIONS (PCT) & PROPOSED OFFSET SITES / CREDIT HOLDINGS
Australasian Bittern (<i>Botaurus poiciloptilus</i>)	E	20.19 ha	506	PCT36 - CH-347; CH-282 PCT53 - 147 credits obligation remaining PCT247 - 230 credits obligation remaining

COMMON NAME (SCIENTIFIC NAME)	EPBC ACT STATUS*	APPROVED IMPACT UNDER CSSI	CREDIT OBLIGATION	ECOSYSTEM ASSOCIATIONS (PCT) & PROPOSED OFFSET SITES / CREDIT HOLDINGS
Australian Painted Snipe (<i>Rostratula australis</i>)	E	53.61 ha	1,890	PCT36 - CH-347; CH-282 PCT52 - Reverse Auction, BON-193 PCT53 - 147 credits obligation remaining PCT247 - 230 credits obligation remaining
Corben's Long-eared Bat (<i>Nyctophilus corbeni</i>)	V	247.62 ha	6,188	PCT35 - BON-049, BON-113 PCT36 - CH-347; CH-282 PCT55 - CH-203 PCT56 & 244 - BON-189, CH-269 PCT98 - BON-189 PCT147 - 58 credits obligation remaining PCT192 - BON-189 PCT247 - 230 credits obligation remaining PCT418 - CH-347, CH-337
Five-clawed Worm-Skink (<i>Anomalopus mackayi</i>)	V	268.17 ha	7,562	PCT27 - BON-189, BON-193 PCT35 - BON-049, BON-113 PCT36 - CH-347; CH-282 PCT36 (scattered trees) - CH-347; CH-282 PCT52 - Reverse Auction, BON-193 PCT55 - CH-203 PCT56 & 244 - BON-189, CH-269 PCT56 (scattered trees) - BON-189, CH-269 PCT247 - 230 credits obligation remaining PCT628 - 588 credits obligation remaining (Variation Rules)
Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	V	26.3 ha	4,496	PCT35 - BON-049, BON-113 PCT36 - CH-347; CH-282 PCT55 - CH-203 PCT56 & 244 - BON-189, CH-269 PCT147 - 58 credits obligation remaining PCT418 - CH-347, CH-337
Koala (<i>Phascolarctos cinereus</i>) (foraging)	E	140.88 ha	4,073	PCT35 - BON-049, BON-113 PCT36 - CH-347; CH-282 PCT36 (scattered trees) - CH-347; CH-282 PCT55 - CH-203 PCT56 & 244 - BON-189, CH-269 PCT56 (scattered trees) - BON-189, CH-269 PCT98 - BON-189 PCT147 - 58 credits obligation remaining PCT192 - BON-189 PCT247 - 230 credits obligation remaining PCT418 - CH-347, CH-337 PCT628 - 588 credits obligation remaining (Variation Rules)
Painted Honeyeater (<i>Grantiella picta</i>)	V	139.4 ha	4,177	PCT27 - BON-189, BON-193 PCT35 - BON-049, BON-113 PCT36 - CH-347; CH-282 PCT55 - CH-203 PCT56 & 244 - BON-189, CH-269 PCT98 - BON-189 PCT147 - 58 credits obligation remaining PCT192 - BON-189 PCT628 - 588 credits obligation remaining (Variation Rules)

COMMON NAME (SCIENTIFIC NAME)	EPBC ACT STATUS*	APPROVED IMPACT UNDER CSSI	CREDIT OBLIGATION	ECOSYSTEM ASSOCIATIONS (PCT) & PROPOSED OFFSET SITES / CREDIT HOLDINGS
Spotted-tailed Quoll <i>(Dasyurus maculatus maculatus)</i>	E	84.38 ha	1,111	PCT36 - CH-347; CH-282 PCT147 - 58 credits remaining obligation PCT192 – BON-189 PCT244 – BON-189, CH-269 PCT418 - CH-347, CH-337 PCT628 - 588 credits obligation remaining (Variation Rules)
Swift Parrot <i>(Lathamus discolor)</i> (Feeding)	CE	12.99 ha	177	PCT418 – CH-347, CH-337
<p>* EPBC Act status: - V = Vulnerable - E = Endangered - CE = Critically Endangered</p>				

6.7 Summary of Credit Deficits Remaining

Table 13 and Table 14 show the residual credit obligations remaining following retirement of credits secured by ARTC or proposed to be created. These are estimates based on a range of factors and ongoing works to prove up credit yields and ongoing negotiations with landowners.

Table 13 Summary of Ecosystem Credit Deficit Remaining

PROJECT SEGMENT	DESCRIPTION IN BDAR	ECOSYSTEM CREDITS OBLIGATION	INCLUDING REDUCTION FOR COMPENSATORY MEASURES	CREDITS SECURED OR IN PROGRESS	CREDIT DEFICIT
North Star Corridor (C2)	Brownfield Alignment	4,297	4,297	4,158	139
Macintyre Floodplain (C3)	Greenfield Alignment	1,354 Plus 1 scattered tree credit	1,354	834	520
Laydown area, temporary accommodation and setup areas	Early Works	1,398	1,398	963	435
Borrow Pits (BP)	BP1, BP, 2, BP4, BP5, BP7, BP8, BP9, BP13, BP25	1,518 Plus 5 scattered tree credits	1,449 (-69 credits for BP1)	1,186	263
	TOTAL	8,567 Plus 6 scattered tree credits	8,498	7,141	1,357

Table 14 Summary of Species Credit Deficit Remaining

PROJECT SEGMENT	DESCRIPTION IN BDAR	SPECIES CREDITS	INCLUDING 10% REDUCTION FOR COMPENSATORY MEASURES	CREDITS SECURED OR IN PROGRESS	CREDIT DEFICIT
North Star Corridor (C2)	Brownfield Alignment	7,670	7,670	1,746	5,843

PROJECT SEGMENT	DESCRIPTION IN BDAR	SPECIES CREDITS	INCLUDING 10% REDUCTION FOR COMPENSATORY MEASURES	CREDITS SECURED OR IN PROGRESS	CREDIT DEFICIT
Macintyre Floodplain (C3)	Greenfield Alignment	7,746	7,746	2,261	5,460
Laydown area, temporary accommodation and setup areas	Early Works	1,963	1,844 (- 119 credits for Koala)	184	1,660
Borrow Pits (BP)	BP1, BP, 2, BP4, BP5, BP7, BP8, BP9, BP13, BP25	3,698	3,698	381	3,317
	TOTAL	21,077	20,958	4,678	16,280

6.8 Payment into the Biodiversity Conservation Fund

Based on the BSAs in progress or proposed in Table 10, ARTC will acquire 7,141 ecosystem credits out of an obligation of 8,498 (plus 6 scattered tree credits and assuming reductions from delivery of compensatory measures) and 4,678 species credits out of an obligation of 20,958 credits (including a reduction in Koala credits through delivery of the proposed compensatory measure). ARTC is committed to delivering land-based offsets to meet the residual ecosystem credit obligation and will continue to employ the BODS to deliver new BSA applications and further engage with the credit market. However, at the time of document preparation, the outstanding ecosystem credit liability is approximately \$7.3 million at the BCF Charge Rate (Appendix G).

As noted in Section 6.3, the creation of new BSA sites for species credits is uncertain and therefore a payment to the Biodiversity Conservation Fund may total \$60.1 million at the BCF Charge Rate (Appendix G) should ARTC not be able to acquire credits for:

- Masked Owl (if variation rules are not used)
- Glossy Black-Cockatoo (if variation rules are not used)
- Pale-headed Snake (residual obligation if variation rules are not used)
- Creeping Tick-trefoil
- Finger Panic Grass
- Belson's Panic
- Bluegrass.

7 Timing and Responsibilities

Target schedule for delivery of the Biodiversity Offsets Package for NS2B is provided in Table 15. Many of the timings provided are assumed based on current works underway and forecast milestones to meet the expected credit retirement date (in accordance with the deferral policy) of February 2025.

ARTC's experience to date with developing new BSA sites has shown that it takes at least 12-18 months from initial site identification to credit release. Credit generation is also reliant on deliverables by third parties, with the Credit Supply Taskforce's assessment and approval timeframes currently taking between 6 to 12 months. ARTC will continue to be guided by the Taskforce with regards to actual timing on credit releases.

As the BODS is being delivered as a program, responsibility is retained by ARTC through the Inland Rail Director - Health, Safety and Environment (HSE) with support from a dedicated NSW Offset Team and accredited assessors.

ARTC will continue to source and procure credits in line with the BODS and overall program goals. Any opportunities presented will be promptly investigated and ARTC will continue to proactively seek new opportunities to acquire credits in support of the program. However, payment into the BCF for any outstanding credit deficits remains as an option. Therefore, this document is proposed to be updated as new credit sources are identified and other works are ongoing.

Table 15 Timing and Responsibility for Delivery of the Offset Package

OFFSET SITE / WORK PACKAGES	STATUS	FORECAST DATES	RESPONSIBILITY
BON-032	Credits owned by ARTC	Complete	
BON-044	Credits owned by ARTC	Complete	
BON-049	BSSAR preparation	Q2, 2023	Inland Rail
	BSA Approved	Credit release 1, 2024	Credit Supply Taskforce
BON-050 & BON-048 (combined into one BSA)	BSSAR preparation	Q3, 2023	Inland Rail
	BSA Approved	Credit release Q1, 2024	Credit Supply Taskforce
BON-189	ARTC acquiring property	Complete	
	BSSAR preparation	Q3, 2023	Accredited Assessor
	BSA Approved	Credit release Q1, 2024	Credit Supply Taskforce
BON-113	BSSAR preparation	Q2, 2023	Accredited Assessor
	BSA Approved	Credit release Q1, 2024	Credit Supply Taskforce
Expressions of Interest	Available from Inland Rail's website upon request	Ongoing	Inland Rail
Credit Supply Taskforce – Reverse Auction transactions	3 Reverse auctions completed and transactions progressing	Ongoing	Credit Supply Taskforce Inland Rail

Appendix A. Bioregion and Subregions for Borrow Pits

NS2B ACTIVITY	IMPACTED / ADJOINING OR WITHIN 100KM	BIOREGION	SUBREGION
BP1	Impacted subregion	Brigalow Belt South	Northern Basalts
BP1	Subregion within 100km of the impacted site	New England Tablelands	Severn River Volcanics
BP1	Subregion within 100km of the impacted site	New England Tablelands	Binghi Plateau
BP1	Subregion within 100km of the impacted site	New England Tablelands	Eastern Nandewars
BP1	Adjoining subregion	Brigalow Belt South	Northern Outwash
BP1	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP1	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP1	Adjoining subregion	Nandewar	Nandewar Northern Complex
BP1	Adjoining subregion	Nandewar	Inverell Basalts
BP1	Adjoining subregion	Nandewar	Kaputar
BP1	Adjoining subregion	Nandewar	Peel
BP2	Impacted subregion	Brigalow Belt South	Northern Outwash
BP2	Subregion within 100km of the impacted site	Nandewar	Nandewar Northern Complex
BP2	Subregion within 100km of the impacted site	Nandewar	Inverell Basalts
BP2	Subregion within 100km of the impacted site	Nandewar	Peel
BP2	Subregion within 100km of the impacted site	New England Tablelands	Severn River Volcanics
BP2	Subregion within 100km of the impacted site	New England Tablelands	Eastern Nandewars
BP2	Adjoining subregion	Brigalow Belt South	Northern Basalts
BP2	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP2	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP5	Impacted subregion	Brigalow Belt South	Northern Outwash
BP5	Subregion within 100km of the impacted site	Nandewar	Nandewar Northern Complex
BP5	Subregion within 100km of the impacted site	Nandewar	Inverell Basalts
BP5	Subregion within 100km of the impacted site	Nandewar	Peel
BP5	Adjoining subregion	Brigalow Belt South	Northern Basalts
BP5	Adjoining subregion	Brigalow Belt South	Liverpool Plains

NS2B ACTIVITY	IMPACTED / ADJOINING OR WITHIN 100KM	BIOREGION	SUBREGION
BP5	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP7	Impacted subregion	Brigalow Belt South	Northern Basalts
BP7	Impacted subregion	Brigalow Belt South	Northern Outwash
BP7	Subregion within 100km of the impacted site	New England Tablelands	Severn River Volcanics
BP7	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP7	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP7	Adjoining subregion	Nandewar	Nandewar Northern Complex
BP7	Adjoining subregion	Nandewar	Inverell Basalts
BP7	Adjoining subregion	Nandewar	Kaputar
BP7	Adjoining subregion	Nandewar	Peel
BP8	Impacted subregion	Brigalow Belt South	Northern Basalts
BP8	Subregion within 100km of the impacted site	New England Tablelands	Severn River Volcanics
BP8	Adjoining subregion	Brigalow Belt South	Northern Outwash
BP8	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP8	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP8	Adjoining subregion	Nandewar	Nandewar Northern Complex
BP8	Adjoining subregion	Nandewar	Inverell Basalts
BP8	Adjoining subregion	Nandewar	Kaputar
BP8	Adjoining subregion	Nandewar	Peel
BP9	Impacted subregion	Brigalow Belt South	Northern Basalts
BP9	Subregion within 100km of the impacted site	New England Tablelands	Beardy River Hills
BP9	Subregion within 100km of the impacted site	New England Tablelands	Severn River Volcanics
BP9	Subregion within 100km of the impacted site	New England Tablelands	Binghi Plateau
BP9	Adjoining subregion	Brigalow Belt South	Northern Outwash
BP9	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP9	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP9	Adjoining subregion	Nandewar	Nandewar Northern Complex
BP9	Adjoining subregion	Nandewar	Inverell Basalts
BP9	Adjoining subregion	Nandewar	Kaputar

NS2B ACTIVITY	IMPACTED / ADJOINING OR WITHIN 100KM	BIOREGION	SUBREGION
BP9	Adjoining subregion	Nandewar	Peel
BP13	Impacted subregion	Brigalow Belt South	Northern Outwash
BP13	Subregion within 100km of the impacted site	Nandewar	Nandewar Northern Complex
BP13	Subregion within 100km of the impacted site	Nandewar	Inverell Basalts
BP13	Subregion within 100km of the impacted site	Nandewar	Peel
BP13	Adjoining subregion	Brigalow Belt South	Northern Basalts
BP13	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP13	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP25	Impacted subregion	Brigalow Belt South	Northern Basalts
BP25	Subregion within 100km of the impacted site	New England Tablelands	Beardy River Hills
BP25	Subregion within 100km of the impacted site	New England Tablelands	Severn River Volcanics
BP25	Subregion within 100km of the impacted site	New England Tablelands	Binghi Plateau
BP25	Subregion within 100km of the impacted site	New England Tablelands	Eastern Nandewars
BP25	Adjoining subregion	Brigalow Belt South	Northern Outwash
BP25	Adjoining subregion	Brigalow Belt South	Liverpool Plains
BP25	Adjoining subregion	Darling Riverine Plains	Castlereagh-Barwon
BP25	Adjoining subregion	Nandewar	Nandewar Northern Complex
BP25	Adjoining subregion	Nandewar	Inverell Basalts
BP25	Adjoining subregion	Nandewar	Kaputar
BP25	Adjoining subregion	Nandewar	Peel

Appendix B. NS2B Biodiversity Credit Reports (Like-for-Like)

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00014150	DRP CB PCT 192 Paddock Trees	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	Date Finalised
Dave Fleming ,	14/11/2022	15/10/2021
Assessment Revision	Assessment Type	BAM Case Status
0	Scattered Trees	Finalised
BOS entry trigger	* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.	

Potential Serious and Irreversible Impacts

Nil

Additional Information for Approval

PCTs With Customized Benchmarks

No Changes

Ecosystem Credit Summary

BAM Biodiversity Credit Report (Like for like)

PCT	TEC	HBT Cr	No HBT Cr	Credits
36-River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	Not a TEC	1	0	1

Credit classes for 36	Like-for-like options				
Class	Trading group	HBT	Credits	IBRA region	
Inland Riverine Forests	Inland Riverine Forests $\geq 50\%$ and $< 70\%$	Yes	1	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00014244	Inland Rail NS2B - Northern Bassalts	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
8	Major Projects	15/10/2021

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Endangered Ecological Community	35-Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion
Species		
Nil		



BAM Biodiversity Credit Report (Like for like)

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

Limosa limosa / Black-tailed Godwit

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

BAM Biodiversity Credit Report (Like for like)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
55-Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.	Not a TEC	0.6	0	8	8
98-Poplar Box - White Cypress Pine - Wilga - Ironwood shrubby woodland on red sandy-loam soils in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Not a TEC	2.2	0	75	75
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Not a TEC	72.5	1341	637	1978
53-Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains	Not a TEC	4.2	0	147	147

53-Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Inland Floodplain Swamps This includes PCT's: 47, 53, 66, 204, 205, 238, 335, 336, 360, 361, 416, 447, 465, 1291	Inland Floodplain Swamps >=50% and <70%	53_BR_Med	No	107	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	Inland Floodplain Swamps This includes PCT's: 47, 53, 66, 204, 205, 238, 335, 336, 360, 361, 416, 447, 465, 1291	Inland Floodplain Swamps $\geq 50\%$ and $< 70\%$	53_TP_Med	No	40	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
55-Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.	Like-for-like credit retirement options					
	Class North-west Floodplain Woodlands This includes PCT's: 55	Trading group North-west Floodplain Woodlands $\geq 70\%$ and $< 90\%$	Zone 55_BR_High	HBT No	Credits 8	IBRA region Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

<p>55-Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.</p>						
<p>56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW</p>	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$	56_BR_High01	Yes	1031	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$	56_TP_High	Yes	98	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	<p>56_TP_Low</p>	<p>No</p>	<p>112 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	<p>56_BR_Med</p>	<p>Yes</p>	<p>100 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

BAM Biodiversity Credit Report (Like for like)

	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	<p>56_TP_Med</p>	<p>Yes</p>	<p>112 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	<p>56_BR_Low</p>	<p>No</p>	<p>525 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

BAM Biodiversity Credit Report (Like for like)

98-Poplar Box - White Cypress Pine - Wilga - Ironwood shrubby woodland on red sandy-loam soils in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Western Peneplain Woodlands This includes PCT's: 72, 98, 103, 105, 108, 109, 134, 135, 145, 245, 246	Western Peneplain Woodlands <50%	98_BR_High	No	75	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	56_BR_High01, 56_TP_High, 56_BR_Med, 56_TP_Med, 98_BR_High	44.6	1415.00
Digitaria porrecta / Finger Panic Grass	35_BR_High, 56_BR_High01, 56_TP_Low, 56_BR_Med, 56_BR_Low, 53_BR_Med	34.4	792.00
Homopholis belsonii / Belson's Panic	56_TP_High, 56_BR_Low	1.8	59.00

BAM Biodiversity Credit Report (Like for like)

Petaurus norfolcensis / Squirrel Glider	55_BR_High, 56_BR_High01, 56_TP_High	34.3	1107.00
Phascolarctos cinereus / Koala	56_BR_High01, 56_TP_High	21.1	688.00
Tyto novaehollandiae / Masked Owl	35_BR_High, 35_TP_High, 56_BR_High01, 56_TP_High, 56_BR_Med, 56_TP_Med, 98_BR_High	50.2	1681.00

Credit Retirement Options

Like-for-like credit retirement options

Calyptorhynchus lathami / Glossy Black-Cockatoo	Spp	IBRA subregion
	Calyptorhynchus lathami / Glossy Black-Cockatoo	Any in NSW
Digitaria porrecta / Finger Panic Grass	Spp	IBRA subregion
	Digitaria porrecta / Finger Panic Grass	Any in NSW
Homopholis belsonii / Belson's Panic	Spp	IBRA subregion
	Homopholis belsonii / Belson's Panic	Any in NSW
Petaurus norfolcensis / Squirrel Glider	Spp	IBRA subregion
	Petaurus norfolcensis / Squirrel Glider	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Phascolarctos cinereus / Koala	Spp	IBRA subregion
	Phascolarctos cinereus / Koala	Any in NSW
Tyto novaehollandiae / Masked Owl	Spp	IBRA subregion
	Tyto novaehollandiae / Masked Owl	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00014394	FFJV Inland Rail - CB	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
9	Major Projects	15/10/2021

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added



BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
Antechinomys laniger / Kultarr
Aspidites ramsayi / Woma
Falco hypoleucos / Grey Falcon
Phaps histrionica / Flock Bronzewing

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

BAM Biodiversity Credit Report (Like for like)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
247-Lignum shrubland wetland on regularly flooded alluvial depressions in the Brigalow Belt South Bioregion and Darling Riverine Plains Bioregion	Not a TEC	10.6	0	230	230
52-Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion	Not a TEC	33.5	0	1384	1384
36-River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	Not a TEC	4.7	129	0	129
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Not a TEC	20.5	593	46	639
192-Silver-leaved Ironbark - Poplar Box +/- Ironwood shrub - grass woodland on rises in the north-western plains of NSW	Not a TEC	7.3	86	9	95
244-Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).	Not a TEC	11.1	284	75	359

BAM Biodiversity Credit Report (Like for like)

36-River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Inland Riverine Forests This includes PCT's: 9, 36, 78, 79, 112, 249, 356, 362	Inland Riverine Forests >=50% and <70%	36_TP_High	Yes	24	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Inland Riverine Forests This includes PCT's: 9, 36, 78, 79, 112, 249, 356, 362	Inland Riverine Forests >=50% and <70%	36_TP_Med01	Yes	60	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	

BAM Biodiversity Credit Report (Like for like)

	Inland Riverine Forests This includes PCT's: 9, 36, 78, 79, 112, 249, 356, 362	Inland Riverine Forests >=50% and <70%	36_BR_Med	Yes	22	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Inland Riverine Forests This includes PCT's: 9, 36, 78, 79, 112, 249, 356, 362	Inland Riverine Forests >=50% and <70%	36_GR_Med01	Yes	23	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

52-Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Semi-arid Floodplain Grasslands This includes PCT's: 52	Semi-arid Floodplain Grasslands >=70% and <90%	52_GR_Medium	No	1076	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.



BAM Biodiversity Credit Report (Like for like)

	Semi-arid Floodplain Grasslands This includes PCT's: 52	Semi-arid Floodplain Grasslands >=70% and <90%	52_BR_Med	No	308	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. <div style="text-align: center;">or</div> Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.												
Like-for-like credit retirement options																		
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="width: 15%;">Class</th> <th style="width: 15%;">Trading group</th> <th style="width: 10%;">Zone</th> <th style="width: 5%;">HBT</th> <th style="width: 10%;">Credits</th> <th style="width: 30%;">IBRA region</th> </tr> </thead> <tbody> <tr> <td colspan="6" style="height: 100px;"> </td> </tr> </tbody> </table>							Class	Trading group	Zone	HBT	Credits	IBRA region						
Class	Trading group	Zone	HBT	Credits	IBRA region													

BAM Biodiversity Credit Report (Like for like)

	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	56_BR_Low	Yes	583	<p>Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie.</p> <p>or</p> <p>Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	56_TP_Med	Yes	10	<p>Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie.</p> <p>or</p> <p>Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

BAM Biodiversity Credit Report (Like for like)

	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands >=70% and <90%	56_TP_Low	No	46	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
192-Silver-leaved Ironbark - Poplar Box +/- Ironwood shrub - grass woodland on rises in the north-western plains of NSW	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Like for like)

	<p>Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192</p>	<p>Subtropical Semi-arid Woodlands <50%</p>	<p>192_GR_Low</p>	<p>Yes</p>	<p>17 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192</p>	<p>Subtropical Semi-arid Woodlands <50%</p>	<p>192_GR_Medium</p>	<p>Yes</p>	<p>39 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

BAM Biodiversity Credit Report (Like for like)

	<p>Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192</p>	<p>Subtropical Semi-arid Woodlands <50%</p>	<p>192_TP_Low</p>	<p>No</p>	<p>9 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192</p>	<p>Subtropical Semi-arid Woodlands <50%</p>	<p>192_TP_Med</p>	<p>Yes</p>	<p>30 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

BAM Biodiversity Credit Report (Like for like)

244-Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands >=70% and <90%	244_GR_Medium	Yes	146	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	<p>244_BR_Medium</p>	<p>Yes</p>	<p>138 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628</p>	<p>Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$</p>	<p>244_BR-Low</p>	<p>No</p>	<p>75 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

BAM Biodiversity Credit Report (Like for like)

247-Lignum shrubland wetland on regularly flooded alluvial depressions in the Brigalow Belt South Bioregion and Darling Riverine Plains Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Inland Floodplain Shrublands This includes PCT's: 17, 115, 161, 241, 247, 375	Inland Floodplain Shrublands >=50% and <70%	247_BR_Medium	No	94	Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	<p>Inland Floodplain Shrublands This includes PCT's: 17, 115, 161, 241, 247, 375</p>	<p>Inland Floodplain Shrublands >=50% and <70%</p>	<p>247_GR_Low</p>	<p>No</p>	<p>38 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
	<p>Inland Floodplain Shrublands This includes PCT's: 17, 115, 161, 241, 247, 375</p>	<p>Inland Floodplain Shrublands >=50% and <70%</p>	<p>247_BR-Low</p>	<p>No</p>	<p>98 Castlereagh-Barwon, Bogan-Macquarie, Boorindal Plains, Culgoa-Bokhara, Liverpool Plains, Louth Plains, Moonie-Barwon Interfluve, Narrandool, Nebine Plains, Northern Basalts, Northern Outwash, Pilliga, Pilliga Outwash and Warrambool-Moonie. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	192_GR_Medium, 244_GR_Medium, 628_BR_Med, 244_BR_Medium, 36_TP_High, 56_TP_Med, 36_TP_Med01, 628_TP_Med01, 36_BR_Med, 36_GR_Med01, 192_TP_Med	22.6	802.00
Desmodium campylocaulon / Creeping Tick-trefoil	52_GR_Medium, 244_GR_Medium, 52_BR_Med	30.2	1234.00
Dichanthium setosum / Bluegrass	52_GR_Medium	26.1	1076.00
Digitaria porrecta / Finger Panic Grass	247_BR_Medium, 52_GR_Medium, 56_BR_Low, 244_GR_Medium, 52_BR_Med, 628_BR_Low, 628_BR_Med, 244_BR_Medium, 244_BR- Low, 247_GR_Low, 247_BR- Low, 56_TP_Med, 56_TP_Low	76.9	2671.00
Homopholis belsonii / Belson's Panic	52_GR_Medium, 244_GR_Medium	29.9	1222.00

BAM Biodiversity Credit Report (Like for like)

Hoplocephalus bitorquatus / Pale-headed Snake	192_GR_Medium, 244_GR_Medium, 36_TP_High, 36_TP_Med01, 36_GR_Med01, 192_TP_Med	11.2	359.00
Lepidium monoplocoides / Winged Peppercross	52_GR_Medium, 56_BR_Low	26.1	1073.00
Petaurus norfolcensis / Squirrel Glider	36_TP_High	0.7	27.00
Phascolarctos cinereus / Koala	628_BR_Med, 36_TP_High, 628_TP_Med01	6.7	299.00
Swainsona murrayana / Slender Darling Pea	52_GR_Medium, 244_GR_Medium	29.9	1222.00
Tyto novaehollandiae / Masked Owl	192_GR_Medium, 244_GR_Medium, 628_BR_Med, 244_BR_Medium, 36_TP_High, 56_TP_Med, 36_TP_Med01, 628_TP_Med01, 36_BR_Med, 36_GR_Med01, 192_TP_Med	22.6	802.00

Credit Retirement Options

Like-for-like credit retirement options

Calyptorhynchus lathami / Glossy Black-Cockatoo	Spp	IBRA subregion
	Calyptorhynchus lathami / Glossy Black-Cockatoo	Any in NSW

BAM Biodiversity Credit Report (Like for like)

Desmodium campylocaulon / Creeping Tick-trefoil	Spp	IBRA subregion
	Desmodium campylocaulon / Creeping Tick-trefoil	Any in NSW
Dichanthium setosum / Bluegrass	Spp	IBRA subregion
	Dichanthium setosum / Bluegrass	Any in NSW
Digitaria porrecta / Finger Panic Grass	Spp	IBRA subregion
	Digitaria porrecta / Finger Panic Grass	Any in NSW
Homopholis belsonii / Belson's Panic	Spp	IBRA subregion
	Homopholis belsonii / Belson's Panic	Any in NSW
Hoplocephalus bitorquatus / Pale-headed Snake	Spp	IBRA subregion
	Hoplocephalus bitorquatus / Pale-headed Snake	Any in NSW
Lepidium monoplocoides / Winged Peppergrass	Spp	IBRA subregion
	Lepidium monoplocoides / Winged Peppergrass	Any in NSW
Petaurus norfolcensis / Squirrel Glider	Spp	IBRA subregion

BAM Biodiversity Credit Report (Like for like)

	Petaurus norfolcensis / Squirrel Glider	Any in NSW
Phascolarctos cinereus / Koala	Spp	IBRA subregion
	Phascolarctos cinereus / Koala	Any in NSW
Swainsona murrayana / Slender Darling Pea	Spp	IBRA subregion
	Swainsona murrayana / Slender Darling Pea	Any in NSW
Tyto novaehollandiae / Masked Owl	Spp	IBRA subregion
	Tyto novaehollandiae / Masked Owl	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00014414	FFJV Inland Rail NS2B Northern Outwash	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Open
Assessment Revision	Assessment Type	Date Finalised
6	Major Projects	To be finalised

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Endangered Ecological Community	35-Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion
Species		
Nil		

BAM Biodiversity Credit Report (Like for like)

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

Falco hypoleucos / Grey Falcon

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
36-River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	Not a TEC	0.7	21	0	21
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Not a TEC	40.0	48	568	616

BAM Biodiversity Credit Report (Like for like)

36-River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Inland Riverine Forests This includes PCT's: 9, 36, 78, 79, 112, 249, 356, 362	Inland Riverine Forests >=50% and <70%	36_BR_Medium	Yes	6	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Inland Riverine Forests This includes PCT's: 9, 36, 78, 79, 112, 249, 356, 362	Inland Riverine Forests >=50% and <70%	36_BR_High	Yes	15	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Like for like)

	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$	56_BR_Medium	Yes	14	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$	56_BR_Low	No	443	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands $\geq 70\%$ and $< 90\%$	56_TP_Low	No	125	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands >=70% and <90%	56_TP_High	Yes	17	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands >=70% and <90%	56_BR_High	Yes	17	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptrorhynchus lathami / Glossy Black-Cockatoo	36_BR_Medium, 36_BR_High, 56_BR_Medium, 56_TP_High, 56_BR_High	3.6	72.00

BAM Biodiversity Credit Report (Like for like)

Digitaria porrecta / Finger Panic Grass	35_TP_High01, 56_BR_Medium, 56_BR_Low, 27_NO_Med, 35_TP_Low, 56_TP_Low, 56_TP_High, 56_BR_High	41.8	727.00
Homopholis belsonii / Belson's Panic	35_TP_High01	0.3	14.00
Hoplocephalus bitorquatus / Pale-headed Snake	36_BR_Medium, 36_BR_High, 56_BR_Medium, 56_BR_High	1.6	37.00

Credit Retirement Options

Like-for-like credit retirement options

Calyptorhynchus lathami / Glossy Black-Cockatoo	Spp	IBRA subregion
	Calyptorhynchus lathami / Glossy Black-Cockatoo	Any in NSW
Digitaria porrecta / Finger Panic Grass	Spp	IBRA subregion
	Digitaria porrecta / Finger Panic Grass	Any in NSW
Homopholis belsonii / Belson's Panic	Spp	IBRA subregion
	Homopholis belsonii / Belson's Panic	Any in NSW
Hoplocephalus bitorquatus / Pale-headed Snake	Spp	IBRA subregion
	Hoplocephalus bitorquatus / Pale-headed Snake	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016941	Inland Rail Borrow Pit 9	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
4	Major Projects	15/10/2021

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added



BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
418-White Cypress Pine - Silver-leaved Ironbark - Wilga shrub grass woodland of the Narrabri-Yetman region, Brigalow Belt South Bioregion	Not a TEC	8.0	137	0	137

418-White Cypress Pine - Silver-leaved Ironbark - Wilga shrub grass woodland of the Narrabri-Yetman region, Brigalow Belt South Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Like for like)

	<p>North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613</p>	<p>North-west Slopes Dry Sclerophyll Woodlands <50%</p>	<p>418_Med</p>	<p>Yes</p>	<p>44 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
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BAM Biodiversity Credit Report (Like for like)

	North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613	North-west Slopes Dry Sclerophyll Woodlands <50%	418_High	Yes	93 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
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BAM Biodiversity Credit Report (Like for like)

	North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613	North-west Slopes Dry Sclerophyll Woodlands <50%	418_Low	No	0 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
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Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	418_Med, 418_High	6.9	184.00
Tyto novaehollandiae / Masked Owl	418_Med, 418_High	6.9	184.00

Credit Retirement Options

Like-for-like credit retirement options

BAM Biodiversity Credit Report (Like for like)

<i>Calyptrorhynchus lathami</i> / Glossy Black-Cockatoo	Spp	IBRA subregion
	<i>Calyptrorhynchus lathami</i> / Glossy Black-Cockatoo	Any in NSW
<i>Tyto novaehollandiae</i> / Masked Owl	Spp	IBRA subregion
	<i>Tyto novaehollandiae</i> / Masked Owl	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016958	Inland Rail NS2B Borrow Pit 13	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
2	Major Projects	15/10/2021

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Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added

BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
98-Poplar Box - White Cypress Pine - Wilga - Ironwood shrubby woodland on red sandy-loam soils in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Not a TEC	0.6	0	12	12



BAM Biodiversity Credit Report (Like for like)

98-Poplar Box - White Cypress Pine - Wilga - Ironwood shrubby woodland on red sandy-loam soils in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Western Peneplain Woodlands This includes PCT's: 72, 98, 103, 105, 108, 109, 134, 135, 145, 245, 246	Western Peneplain Woodlands <50%	98_High	No	12	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

No Species Credit Data

Credit Retirement Options

Like-for-like credit retirement options



BAM Biodiversity Credit Report (Like for like)

Assessment Id

00013930/BAAS17097/19/00016958

Proposal Name

Inland Rail NS2B Borrow Pit 13

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BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016964	Inland Rail NS2B Borrow Pit 5	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
5	Major Projects	15/10/2021

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Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added



BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
192-Silver-leaved Ironbark - Poplar Box +/- Ironwood shrub - grass woodland on rises in the north-western plains of NSW	Not a TEC	12.3	193	0	193

192-Silver-leaved Ironbark - Poplar Box +/- Ironwood shrub - grass woodland on rises in the north-western plains of NSW	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Like for like)

	Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192	Subtropical Semi-arid Woodlands <50%	192_High	Yes	155	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192	Subtropical Semi-arid Woodlands <50%	192_Med	Yes	17	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Subtropical Semi-arid Woodlands This includes PCT's: 117, 146, 192	Subtropical Semi-arid Woodlands <50%	192_Low	Yes	21	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	192_High, 192_Med	10.4	229.00
Hoplocephalus bitorquatus / Pale-headed Snake	192_High, 192_Med, 192_Low	12.3	257.00
Polygala linariifolia / Native Milkwort	192_High, 192_Med, 192_Low	12.3	257.00

Credit Retirement Options

Like-for-like credit retirement options

Calyptorhynchus lathami / Glossy Black-Cockatoo	Spp	IBRA subregion
	Calyptorhynchus lathami / Glossy Black-Cockatoo	Any in NSW
Hoplocephalus bitorquatus / Pale-headed Snake	Spp	IBRA subregion
	Hoplocephalus bitorquatus / Pale-headed Snake	Any in NSW
Polygala linariifolia / Native Milkwort	Spp	IBRA subregion
	Polygala linariifolia / Native Milkwort	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016969	Inland Rail Borrow Pit 8	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
4	Major Projects	15/10/2021

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Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added

BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Not a TEC	21.1	787	0	787

BAM Biodiversity Credit Report (Like for like)

56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands >=70% and <90%	56_Medium	Yes	787	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	56_Medium	21.1	787.00
Tyto novaehollandiae / Masked Owl	56_Medium	21.1	785.00

Credit Retirement Options

Like-for-like credit retirement options

Species	Spp	IBRA subregion
Calyptorhynchus lathami / Glossy Black-Cockatoo		



BAM Biodiversity Credit Report (Like for like)

	Calyptrorhynchus lathami / Glossy Black-Cockatoo	Any in NSW
Tyto novaehollandiae / Masked Owl	Spp	IBRA subregion
	Tyto novaehollandiae / Masked Owl	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016970	Inland Rail Borrow Pit 7	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
4	Major Projects	15/10/2021

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Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added

BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Not a TEC	0.1	2	0	2

BAM Biodiversity Credit Report (Like for like)

56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Floodplain Transition Woodlands This includes PCT's: 56, 74, 76, 80, 81, 82, 237, 244, 248, 251, 628	Floodplain Transition Woodlands >=70% and <90%	56_High	Yes		2 Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	56_High	0.1	2.00

Credit Retirement Options

Like-for-like credit retirement options

Species	Spp	IBRA subregion
Calyptorhynchus lathami / Glossy Black-Cockatoo	Calyptorhynchus lathami / Glossy Black-Cockatoo	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Assessment Id

00013930/BAAS17097/19/00016970

Proposal Name

Inland Rail Borrow Pit 7

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BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016988	Inland Rail Borrow Pit 25	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
3	Major Projects	18/10/2021

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCT Outside Ibra Added



BAM Biodiversity Credit Report (Like for like)

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
418-White Cypress Pine - Silver-leaved Ironbark - Wilga shrub grass woodland of the Narrabri-Yetman region, Brigalow Belt South Bioregion	Not a TEC	3.0	0	40	40

418-White Cypress Pine - Silver-leaved Ironbark - Wilga shrub grass woodland of the Narrabri-Yetman region, Brigalow Belt South Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Like for like)

	<p>North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613</p>	<p>North-west Slopes Dry Sclerophyll Woodlands <50%</p>	<p>418_Medium</p>	<p>No</p>	<p>24 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
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BAM Biodiversity Credit Report (Like for like)

	North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613	North-west Slopes Dry Sclerophyll Woodlands <50%	418_Low01	No	16 Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
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Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	418_Medium	1.5	32.00

Credit Retirement Options

Like-for-like credit retirement options



BAM Biodiversity Credit Report (Like for like)

Calyptrorhynchus lathami / Glossy Black-Cockatoo	Spp	IBRA subregion
	Calyptrorhynchus lathami / Glossy Black-Cockatoo	Any in NSW



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016994	Inland Rail Borrow Pit FFJV Site 2	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
4	Major Projects	18/10/2021

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Endangered Ecological Community	35-Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion
Species		
Nil		



BAM Biodiversity Credit Report (Like for like)

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
418-White Cypress Pine - Silver-leaved Ironbark - Wilga shrub grass woodland of the Narrabri-Yetman region, Brigalow Belt South Bioregion	Not a TEC	12.9	81	104	185



BAM Biodiversity Credit Report (Like for like)

418-White Cypress Pine - Silver-leaved Ironbark - Wilga shrub grass woodland of the Narrabri-Yetman region, Brigalow Belt South Bioregion	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613	North-west Slopes Dry Sclerophyll Woodlands <50%	418_High	Yes	81	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	North-west Slopes Dry Sclerophyll Woodlands This includes PCT's: 228, 380, 381, 382, 384, 385, 386, 389, 390, 391, 393, 394, 412, 413, 418, 429, 432, 435, 453, 506, 517, 527, 529, 543, 549, 555, 562, 563, 564, 573, 587, 588, 591, 594, 595, 596, 597, 598, 856, 1165, 1306, 1308, 1317, 1387, 1560, 1586, 1587, 1605, 1606, 1607, 1611, 1613	North-west Slopes Dry Sclerophyll Woodlands <50%	418_Medium	No	104	Northern Outwash, Castlereagh-Barwon, Liverpool Plains and Northern Basalts. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
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Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Calyptorhynchus lathami / Glossy Black-Cockatoo	418_High, 418_Medium	12.9	247.00
Digitaria porrecta / Finger Panic Grass	35_Low, 418_High, 418_Medium	9.5	177.00
Homopholis belsonii / Belson's Panic	418_High, 418_Medium	9.7	182.00

BAM Biodiversity Credit Report (Like for like)

Credit Retirement Options

Like-for-like credit retirement options

Calyptrorhynchus lathami / Glossy Black-Cockatoo	Spp	IBRA subregion
	Calyptrorhynchus lathami / Glossy Black-Cockatoo	Any in NSW
Digitaria porrecta / Finger Panic Grass	Spp	IBRA subregion
	Digitaria porrecta / Finger Panic Grass	Any in NSW
Homopholis belsonii / Belson's Panic	Spp	IBRA subregion
	Homopholis belsonii / Belson's Panic	Any in NSW

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id 00013930/BAAS17097/21/00024373	Proposal Name Inland Rail NS2B Borrow Pit 7	BAM data last updated * 10/06/2021
Assessor Name Sarah Glauert	Assessor Number BAAS17097	BAM Data version * 45
Proponent Names Dave Fleming ,	Report Created 14/11/2022	Date Finalised 15/10/2021
Assessment Revision 0	Assessment Type Scattered Trees	BAM Case Status Finalised
BOS entry trigger Major Project	* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.	

Potential Serious and Irreversible Impacts

Nil

Additional Information for Approval

PCTs With Customized Benchmarks

No Changes

Ecosystem Credit Summary

BAM Biodiversity Credit Report (Like for like)

PCT	TEC	HBT Cr	No HBT Cr	Credits
56-Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Not a TEC	5	0	5

Credit classes for	Like-for-like options				
56	Class	Trading group	HBT	Credits	IBRA region
	Floodplain Transition Woodlands	Floodplain Transition Woodlands >=70% and <90%	Yes	5	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.



BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00013930/BAAS17097/19/00016992	Inland Rail Borrow Pit FFJV Site 1	10/06/2021
Assessor Name	Assessor Number	BAM Data version *
Sarah Glauert	BAAS17097	45
Proponent Names	Report Created	BAM Case Status
ARTC, Dave Fleming	14/11/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
3	Major Projects	18/10/2021

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Endangered Ecological Community	35-Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion
Species		
Nil		

BAM Biodiversity Credit Report (Like for like)

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

Phascolarctos cinereus / Koala

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
35-Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	1.6	0	25	25

BAM Biodiversity Credit Report (Like for like)

35-Brigalow - Belah open forest / woodland on alluvial often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion	Like-for-like credit retirement options					
	Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions This includes PCT's: 35, 56, 87, 101, 244, 445, 629	-	35_Low	No	9	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions This includes PCT's: 35, 56, 87, 101, 244, 445, 629	-	35_medium	No	16	Northern Basalts, Castlereagh-Barwon, Inverell Basalts, Kaputar, Liverpool Plains, Nandewar Northern Complex, Northern Outwash and Peel. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	

BAM Biodiversity Credit Report (Like for like)

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Digitaria porrecta / Finger Panic Grass	147_High, 147_Med, 35_Low, 35_medium	4.9	121.00
Homopholis belsonii / Belson's Panic	147_High, 147_Med, 35_medium	4.7	127.00
Tyto novaehollandiae / Masked Owl	147_High, 147_Med	4.6	127.00

Credit Retirement Options

Like-for-like credit retirement options

Species	Options	IBRA subregion
Digitaria porrecta / Finger Panic Grass	Spp	IBRA subregion
	Digitaria porrecta / Finger Panic Grass	Any in NSW
Homopholis belsonii / Belson's Panic	Spp	IBRA subregion
	Homopholis belsonii / Belson's Panic	Any in NSW
Tyto novaehollandiae / Masked Owl	Spp	IBRA subregion
	Tyto novaehollandiae / Masked Owl	Any in NSW

Appendix C. Offset Legislative Rules from the Biodiversity Conservation Regulation 2017

Section 6.3 Like-for-like biodiversity credits

- (1) This clause applies to the determination of like-for-like biodiversity credits for the purposes of the application of the offset rules or variation rules.
- (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.

Section 6.4 Variation rules under biodiversity offsets scheme

- (1) The circumstances in which the ordinary offset rules for the determination of the like-for-like biodiversity credits required to be retired as a biodiversity conservation measure may be varied are as follows (the **variation rules**)—
 - (a) The proponent who is to retire the biodiversity credits has taken reasonable steps to obtain the requisite like-for-like biodiversity credits and requests the variation of the ordinary offset rules.
 - (b) In the case of impacts on threatened ecological communities or on the habitat of threatened species that are ecosystem credit species or other native vegetation—the biodiversity credits to be retired need not represent the same threatened ecological community or the same class of vegetation or represent a location in the same or adjoining Interim Biogeographic Regionalisation of Australia subregion, so long as—
 - (i) they represent the same vegetation formation, and
 - (ii) they are in the same or a higher offset trading group, and
 - (iii) they represent a location that is in—

(A) the same Interim Biogeographic Regionalisation of Australia region as the impacted site, or

(B) a subregion that is within 100 kilometres of the outer edge of the impacted site, and

(iv) if the impacted habitat contains hollow bearing trees—they represent vegetation that contains hollow bearing trees or artificial hollows.

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

(i) if the impacted species is a plant—they represent a plant, and

(ii) if the impacted species is an animal—they represent an animal, and

(iii) 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

(iv) they represent a location that is in—

(A) the same or an adjoining Interim Biogeographic Regionalisation of Australia subregion as the impacted site, or

(B) any such subregion that is within 100 kilometres of the outer edge of the impacted site.

(2) The variation rules do not apply in relation to impacts on threatened species or ecological communities that are excluded by the Environmental Agency Head.

Source: <<https://www.legislation.nsw.gov.au/#/view/regulation/2017/432/part6/div6.1/sec6.3>>