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24 May 2022

Jessie Evans
Director, Resource Assessments
Department of Planning and Environment

E| jessie.evans@dpie.nsw.gov.au

Dear Jessie

RE: Martins Creek Quarry Project (SSD 6612) – Addendum to Request for Additional Information – Biodiversity Conservation Division comments

The Department of Planning and Environment (the Department) requested information, dated 14 December 2021, seeking a response to issues raised by the Biodiversity and Conservation Division (BCD) following its review of the Submissions Report for the Martins Creek Quarry Project (SSD-6612).

Daracon responded to the request for information on 2 March 2022. BCD has reviewed the response and is seeking additional information to address several residual biodiversity and water assessment matters. The Department is now requesting additional information. The key points from the Department's correspondence are reproduced below with a response provided.

A meeting was held with BCD on 9 May 2022 to discuss comments and provide additional information. At the meeting, Daracon and Umwelt briefed BCD on some details of the proposed hard rock quarry operations that have been outlined in information provided to date, and BCD advised that these clarifications generally satisfied their queries. As discussed in the meeting, it is noted that the Project relates to a hard rock quarry.

The responses below supplement information provided to BCD Officers in the meeting on 9 May 2022.

Further assessment of Matters of National Environmental Significance (MNES), including:

- **Identification of measures to avoid and minimise impacts to relevant EPBC Act-listed species and communities specific to each MNES for the Amended Project.**
- **Discussion of measures to avoid, mitigate and offset that are particular to the EPBC Act such as Approved Conservation Advice, Recovery Plans and Threat Abatement Plans.**
- **Identification of how the proposed offsets would meet the like-for-like offsetting requirements for each of the relevant EPBC Act-listed species and communities.**

Please refer to **Attachment A** for information.

Further assessment of impacts to watercourse stability and riparian vegetation along downstream waterways, including:

- **potential impacts of the proposed water harvesting system on downstream watercourses supported by baseline condition monitoring. Proposed monitoring and mitigation measures should also be provided consistent with BCD's attached recommendations**
- **potential hydraulic impacts of the final void on riparian health and downstream ecosystems. Proposed monitoring and mitigation measures for long-term impacts to riparian condition due to loss of stream flow should also be provided consistent with BCD's attached recommendations.**

The following response is provided in relation to the specific BCD recommendations on this issue, reproduced below in bold ***italics***.

Evidence of monitoring carried out to date is to be provided so that BCD can assess potential impacts of the water harvesting system. This is to include photographic evidence and assessment of riparian condition prior to the previous expansion of the quarry operations. If no such evidence exists, the upstream unimpacted stream sections may be used as a proxy to produce a baseline condition report. The current condition of the streams at the two points of discharge and for a minimum of 200m downstream is to be similarly documented to provide evidence to support the no impact statement. A long-term monitoring plan is to be prepared and submitted for approval by BCD. This plan should include remedial actions if deterioration of riparian condition or streambank stability is observed.

As discussed in the meeting with BCD on 9 May 2022 and as indicated in the Submissions Report (Umwelt, 2021) for the Revised Project, the streams receiving discharges from the quarry water management system (WMS) via Environment Protection Licence (EPL) 1378 licenced discharge points (LDP) 6 and LDP 8 have been subject to the altered flow regime associated with controlled discharges for approximately 9 years.

In response to BCD's initial request, Daracon committed to undertake baseline riparian condition monitoring for the streams receiving discharges from LDP 6 and LDP 8 for the reaches extending 200 m downstream from the discharge locations as well as upstream unimpacted stream sections, within 3 months of project approval.

Daracon have commenced this work, including undertaking an inspection of unimpacted upstream stream sections and the stream sections downstream of the licensed discharge points in May 2022. A report will be prepared detailing the baseline condition of the unimpacted upstream sections and sections downstream of the licensed discharge points and this will be incorporated into the Water Management Plan (WMP) for the Revised Project, should it be approved.

Long term monitoring requirements will be included in the WMP. Any requirement for remedial actions identified by the baseline monitoring will also be included in the WMP. Daracon will consult with BCD on the preparation of the WMP in relation to the long-term monitoring and any required remedial actions which will be undertaken as part of WMP.

As detailed in Section 4.3.3 of the Submissions Report for the Revised Project (Umwelt 2021), discharges associated with the operation of the Revised Project are not predicted to result in any increase to magnitude of downstream flows relative to what currently occurs in relation to existing and historical operations. While there will be an increase in the percentage of time that lower flow discharges occur from LDP 6, these are not predicted to have any material impacts on downstream bank stability or riparian vegetation.

In addition, detailed reports of the water quality monitoring program at the discharge point are to be provided together with action plans including a requirement for cease to pump when water quality does not meet minimum requirements.

The Surface Water Impact Assessment (SWIA) provided for the Revised Project detailed statistics of water quality monitoring at all licensed discharge points undertaken in accordance with the site EPL 1378 from March 2013 to April 2020 which indicates only one exceedance of a limit condition for suspended solids.

A detailed response in relation to discharge water quality management was provided in the Revised Project Submissions Report (Section 4.1.3) in response to issues raised by the EPA. Daracon committed to undertaking an investigation to assess the impacts associated with nutrients in discharges that will include:

- monitoring of Total Nitrogen (TN), Nitrite (NO2) and Nitrate (NO3) in controlled discharges at each licensed discharge points and in the waterways downstream of the quarry licensed discharge points on a monthly during discharge basis
- additional routine monitoring of Total Nitrogen (TN), Nitrite (NO2) and Nitrate (NO3) in the waterways downstream of the quarry licensed discharge points during natural runoff events (i.e. with no quarry discharge) on a quarterly basis
- routine inspection of the waterways downstream of the quarry licensed discharge points to identify any evidence of eutrophication on a quarterly basis.

As a scheduled premises, all discharges will be managed in accordance with Environment Protection Licence conditions, noting that it is an offence under s.120 of the Protection of Environment Operations Act 1997 (POEO Act) to pollute waters other than in accordance with an EPL.

Water quality monitoring is required to be undertaken under the terms of the EPL with results regularly reported.

The use of the slightly disturbed or moderately disturbed water quality targets is to be justified to reflect the condition of the waterway prior to the commencement of quarry operations.

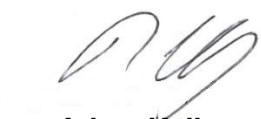
As discussed in the meeting on 9 May 2022, the quarry at Martins Creek has been operating since 1914 and stream sections located downstream of the discharge points are also located in areas that have a long history of agricultural disturbance as well as being located downstream of roads and the Main Northern Rail Line. The characterisations of these waterways as being slightly disturbed to moderately disturbed is consistent with ANZECC Guidelines.

Inconsistencies between detailed reports and the summary of management measures made need to be resolved because these documents will form the basis of an approval should one be granted.

This issue was discussed in the meeting on 9 May 2022 and is understood to have been resolved through further clarifications around the quarry history and design features.

We trust this information meets with your current requirements. Please do not hesitate to contact myself, or Kirsty Davies at Umwelt (0409 372 344 / kdavies@umwelt.com.au) should you require clarification or further information.

Yours Sincerely,



Adam Kelly
Director – Buttai Gravel Pty Ltd
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Attachment A – MNES_V1

Attachment A

The Department of Planning and Environment (the Department) requested information, dated 14 December 2021, seeking a response to issues raised by the Biodiversity and Conservation Division (BCD) following its review of the Submissions Report for the Martins Creek Quarry Project (SSD-6612).

The Department requested:

> *Further assessment of Matters of National Environmental Significance (MNES), including:*
>
> - *Identification of measures to avoid and minimise impacts to relevant EPBC Act-listed species and communities specific to each MNES for the Amended Project.*
> - *Discussion of measures to avoid, mitigate and offset that are particular to the EPBC Act such as Approved Conservation Advice, Recovery Plans and Threat Abatement Plans.*
> - *Identification of how the proposed offsets would meet the like-for-like offsetting requirements for each of the relevant EPBC Act-listed species and communities.*

In addition, the BCD response requested:

> *Further information is required in sections 3 and 4 of the MNES Report to enable the assessment of the following:*
>
> *a. Identify measures to avoid and minimises impacts to relevant Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) listed threatened species and communities. This section can be shorted by cross-referencing sections of the BAR, but it must be specific to MNES for the project.*
>
> *b. Discuss measures to avoid, mitigate and offset that are particular to the EPBC Act, such as Approved Conservation Advice, Recovery Plans and Threat Abatement Plans.*
>
> *c. The EPBC Act requires like-for-like offsetting for impacts to MNES, including indirect impacts. More information is required from the proponent that discusses how like-for like offsetting will be met, particularly in the current absence of details of the offset package in the BAR and RTS report. This could include a commitment to meet offset obligations for MNES in accordance with requirements under the EPBC Act, and a commitment to discuss offset requirements with DAWE.*

The following information has been prepared in response to the Department's request.

1.0 EPBC Act Contextual Information on Project Biodiversity Assessment and Offsetting Requirements

Contextual information has been provided regarding the following requirements and their association with the proposed impact avoidance and offsetting for this Project, including:

- EPBC Act Environmental Offsets Policy
- EPBC Act Assessment Bilateral Agreement and Relationship to the Project
- Summary of Project Biodiversity Offset Delivery Details
- EPBC Act Likelihood of Occurrence And Significant Impact Assessment Results Summary.

1.1 EPBC Act Environmental Offsets Policy and Relationship to the Project

The EPBC Act Environmental Offsets Policy (the Policy) identifies that an offsets package is a suite of actions that a proponent undertakes to compensate for the residual significant impact of a project on Matters of National Environmental Significance (MNES). This is different to the NSW Biodiversity Offsets Scheme and the NSW Biodiversity Offsets Policy for Major Projects which require all the residual adverse direct impacts of a project to be offset.

The Policy identifies that offsets for significantly impacted MNES can comprise a combination of direct offsets and other compensatory measures. The Policy also identifies that biodiversity offsets should align with conservation priorities for the impacted protected matter and be tailored specifically to the attribute of the protected matter that is impacted to deliver a conservation gain. Direct offsets are defined under the Policy as those actions that provide a measurable conservation gain for an impacted protected matter and the Policy requires that a minimum of 90 percent of the offset requirements for significant impacts must be met through direct offsets.

The Policy endorses the use of market-based mechanisms for delivering offsets and as a means of determining the conservation value of both the proposed action site and the proposed offset, where such mechanisms are based on reproducible and scientifically robust information. The Framework for Biodiversity Assessment (FBA), under the NSW *Threatened Species Conservation 1995* (TSC Act), was endorsed under the EPBC Act through the NSW Assessment Bilateral Agreement. With the repeal of the TSC Act, the current NSW Biodiversity Offsets Scheme (BOS), incorporating the Biodiversity Assessment Method (BAM), established under the *Biodiversity Conservation Act 2016* (BC Act) was also endorsed under EBPC Act via the NSW Assessment Bilateral Agreement – Amending Agreement No.1.

For this Project, the adverse direct impacts associated with the Project will be offset in accordance with the requirements of the FBA and the NSW Biodiversity Offsets Scheme, using direct offsets.

1.2 EPBC Act Assessment Bilateral Agreement and Relationship to the Project

The Bilateral Agreement made under Section 45 of the EPBC Act relating to environmental assessment between the Commonwealth of Australia and The State of New South Wales was signed by both parties in 2015. This Agreement enables NSW to conduct a single environmental assessment process. When the assessment process is complete, NSW provides a report to the Australian Government assessing the likely impacts of the project on MNES. There are two approval decisions, and approval conditions are issued (if relevant) for each approval.

Section 7.1 of the original bilateral agreement made in 2015, endorses the NSW Biodiversity Offsets Policy, including the FBA, as the assessment process for offsets where an action will have a residual significant adverse impact on a nationally listed threatened species, threatened ecological communities and/or migratory species.

An Amending Agreement between the Commonwealth of Australia and The State of New South Wales was entered into on 24 March 2020. The proposed development is subject to the transitional arrangements under Section 5 of the Amending Agreement, which identifies that the provisions of the original Bilateral Agreement continue to apply, without the amendments made by the Amending Agreement.

For this Project, the direct adverse residual impacts associated with the Project will be offset in accordance with:

- the credit requirements identified in the Biodiversity Assessment Report (BAR) (Conacher Consulting 2021a)
- the Biodiversity Offset Strategy (BOS) prepared by Conacher Consulting (2021b)
- the Framework for Biodiversity Assessment (FBA)
- the original Bilateral Agreement relating to environmental assessment between the Commonwealth of Australia and The State of New South Wales.

For impacts to MNES, offsets are only required under the EPBC Act for the residual significant adverse impacts on MNES. Impacts to nationally listed threatened and migratory biodiversity at the project site are not required under the EPBC Act, where those entities will not be subject to a significant adverse impact.

1.3 Summary of Project Biodiversity Offset Delivery Details

The Project has been determined to be a Controlled Action under the EPBC Act, due to residual significant adverse impacts on the slaty red gum (*Eucalyptus glaucina*) and the koala (*Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT)). Like-for-like direct offsets for the residual adverse significant impacts associated with the Project are proposed to be delivered through the NSW BOS which is a market-based scheme. The number of species and ecosystem credits required have been calculated in the BAR (Conacher Consulting 2021a) in accordance with the requirements of the FBA (NSW OEH 2014).

The current NSW BOS will be utilised to secure direct offsets for the Project, and the biodiversity offset credit requirements which have been determined under the FBA will be subject to a conversion process known as an 'Assessment of Reasonable Equivalence'. The Assessment of Reasonable Equivalence is undertaken by

Department of Planning and Environment (DPE) following Project Approval and will ensure that the credits retired meet the regulatory requirements of the FBA and the current NSW BOS which has superseded the FBA.

The proponent has identified potential land-based candidate biodiversity offset sites for this Project in the Biodiversity Offset Strategy (Conacher Consulting 2021b). The actual number of credits to be generated at the candidate biodiversity offset sites will be determined if the proponent progresses with a formal biodiversity stewardship application and agreement, under the NSW BOS. Any residual credit obligations not offset at the candidate biodiversity offset sites will be purchased on the market in the form of ecosystem and/or species credits from other land-based biodiversity offset sites established as biodiversity stewardship sites or biobanking sites, or through payment for credits to the NSW Biodiversity Conservation Fund (BCF) through the NSW Biodiversity Conservation (BCT).

The BCT is responsible for facilitating the supply of biodiversity credits, managing the Biodiversity Stewardship Payments Fund and securing biodiversity offsets on behalf of development proponents who opt to pay into the Biodiversity Conservation Fund to meet NSW state and Commonwealth offset obligations.

1.4 EPBC Act Likelihood of Occurrence and Significant Impact Assessment Results Summary

An assessment of the likelihood of occurrence for nationally listed threatened species, threatened ecological communities and migratory species was completed as part of the BAR (Conacher Consulting 2021a). Significant Impact Assessments were prepared in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013), for the species which were observed during surveys, or which were considered to have potential to occur within the Development Site.

The following nationally listed species were identified in the BAR (Conacher Consulting 2021a) as occurring at the Development Site:

- Slaty Red Gum (*Eucalyptus glaucina*)
- Scrub Turpentine (*Rhodamnia rubescens*)
- Koala (*Phascolarctos cinereus*) combined populations of QLD, NSW & the ACT
- Grey-headed Flying-fox (*Pteropus poliocephalus*)
- Rufous Fantail (*Rhipidura rufifrons*)
- Black-faced Monarch (*Monarcha melanopsis*).

The following additional nationally listed species were identified in the BAR (Conacher Consulting 2021a) as having potential to occur at the Development Site:

- Regent Honeyeater (*Anthochaera phrygia*)
- Swift Parrot (*Lathamus discolor*)
- Spotted-tailed Quoll (*Dasyurus maculatus maculatus*) SE Mainland population

- Large-eared Pied (*Chalinolobus dwyeri*)
- Greater Glider (*Petauroides volans*).

The BAR (Conacher Consulting 2021a) identified that no nationally listed threatened ecological communities occur at the Development Site.

Assessments undertaken in the BAR under the EPBC Act Significant Impact Guidelines (DEWHA 2013), have identified that the following nationally listed threatened species are likely to be subject to adverse residual significant impacts:

- Slaty Red Gum (*Eucalyptus glaucina*)
- Koala (*Phascolarctos cinereus*) combined populations of QLD, NSW & the ACT.

2.0 Additional Information on Project Impact Avoidance and Offsetting in Relation to the EPBC Act for Threatened and Migratory Species with Potential to Occur

The Department has requested the following further assessment information on MNES:

- Identification of measures to avoid and minimise impacts to relevant EPBC Act-listed species and communities specific to each MNES for the Amended Project.
- Discussion of measures to avoid, mitigate and offset that are particular to the EPBC Act such as Approved Conservation Advice, Recovery Plans and Threat Abatement Plans
- Identification of how the proposed offsets would meet the like-for-like offsetting requirements for each of the relevant EPBC Act-listed species and communities.

The following additional information has been provided for each nationally listed species identified in the BAR (Conacher Consulting 2021a) as either occurring or having potential to occur at the Development Site.

2.1 Slaty Red Gum (*Eucalyptus glaucina*)

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas are mapped in Figure 5.1 of the BAR (Conacher Consulting 2021a). Impact avoidance for this species was achieved early in project planning through the avoidance of Slaty Red Gum in the southern sections of Lot 42 DP 815628 and Lot 5 DP 242210. Further impact avoidance has also been achieved through removal of a noise bund from the proposed disturbance area within Lot 1 DP 1006375. These allotments are shown in Figure 2.1 of the BAR.

The south-eastern extent of the impact avoidance area identified in Figure 5.1 of the BAR also contains some Slaty Red Gum trees.

Alternative sites within the property which will not be impacted by the proposal may further avoid impacts to Slaty Red Gum habitat, however impacting these areas would result in impacts to other biodiversity values such as larger sections of higher order watercourses, other areas of the vulnerable ecological community Lower Hunter Valley Dry Rainforest and other threatened species including the nationally listed critically endangered flora species, Scrub Turpentine (*Rhodamnia rubescens*).

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the proposal

- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and also the area of habitat for this species which is proposed to be impacted.

Proposed impact mitigation measures of relevance to Slaty Red Gum include:

- Fencing of the development footprint adjoining areas of native vegetation not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during the project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

These measures will effectively act to minimise and avoid potential impacts to this retained areas of habitat for this species, particularly those which are either indirect impacts or unintended impacts with potential to occur during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The BAR (Conacher Consulting 2021a) identifies that the extent of proposed impact on Slaty Red Gum includes 2887 individuals over 13.43 hectares (refer to the species polygon in Figure 4.5 of the BAR).

The BAR provides an assessment in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013), which identifies that the action is likely to have a significant impact on this species. Like-for-like offsets for the adverse residual impacts of the proposal are required for this species. The proponent will offset the adverse residual impacts to this species according to the like-for-like credit requirements calculated in the BAR in accordance with the FBA (NSW OEH 2014). The ecosystem credit requirement for the action calculated under the FBA to achieve a direct offsetting outcome is identified in Table 7.1 of the BAR.

The credits required for this species will be determined by a formal assessment of reasonable equivalence of biodiversity credits made by DPE, following project approval. The actual number of credits to be generated at the identified land-based candidate biodiversity offset site/s will be determined if the proponent progresses with a formal biodiversity stewardship application and agreement. Any residual credit obligations not offset at candidate biodiversity offset site/s will be purchased on the market in the form of Slaty Red Gum species credits from other land-based biodiversity offset sites established as biodiversity stewardship sites or biobanking sites, or through payment for Slaty Red Gum species credits to the BCT.

The BAR identifies that the extent of proposed impact on Slaty Red Gum includes 2887 individuals over 13.43 hectares (refer to the species polygon in Figure 4.5 of the BAR). The BAR identifies that the total

number of Slaty Red Gum species credits that will be retired to directly offset the proposed impact is 40,418 credits.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for Slaty Red Gum prepared by the then Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008), identifies that the main threats to this species include clearing and fragmentation of habitat for development. The regional priority recovery and threat abatement actions for the mitigation of habitat loss, disturbance and modification identified by DEWHA (2008), include investigation of formal conservation arrangements such as the use of covenants or conservation agreements. The relevant local priority actions for these impacts identified by DEWHA (2008), include minimisation of adverse impacts from land use at known sites and the protection of populations through development of conservation agreements or covenants.

The proponent has committed to investigate the establishment of a Biodiversity Stewardship Agreement over the residual lands surrounding the quarry and on lands located in close proximity to the Development Site, which contain known habitat for this species. If the proponent proceeds with a Biodiversity Stewardship Agreement for potential land based offsets, the credits generated from the Biodiversity Stewardship Sites would be retired to meet the biodiversity credit requirements for the Project. Otherwise species credit requirements for Slaty Red Gum would be met through purchase of credits from the BCT or the purchase of credits directly from the market. The offset requirements for this species would therefore be achieved through like-for-like offsetting.

There are no Recovery Plans of Threat Abatement Plans made or adopted under the EPBC Act which are of direct relevance to the proposed development and impact avoidance and minimisation considerations. It is acknowledged however that opportunities to implement management actions in accordance with several threat abatement plans are likely to occur at the candidate biodiversity offset sites if a biodiversity stewardship agreement is secured by the proponent. These actions include monitoring and management of feral goats, rabbits, and feral pigs which have potential to degrade habitat for this species.

A detailed assessment of compliance between the project impact avoidance and minimisation measures proposed and the Approved Conservation Advice (DEWHA 2008) for this species is provided in **Table 2.1**.

Table 2.1 Assessment of Project impact avoidance, minimisation and offsetting correlation with the threat and priority actions in the EPBC Act Slaty Red Gum Approved Conservation Adv

National Approved Conservation Advice	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Threats	
The main identified threats to Slaty Red Gum include clearing and fragmentation of habitat for agriculture and development, timber harvesting activities, and lack of regeneration through grazing pressure	The proposal has implemented design measures to minimise unnecessary clearing of habitat for Slaty Red Gum through targeting of future clearing to resource rich areas and situation of roads and associated infrastructure in existing cleared areas and future resource extraction areas where possible.
The main potential threat to Slaty Red Gum is frequent fires that may suppress regeneration	The proposal is not likely to directly cause fires in retained Slaty Red Gum habitat and any fires which occur will be managed to prevent spread in accordance with the Integrated Facilities Management Plan.

National Approved Conservation Advice	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Research Priorities	
Design and implement a monitoring program.	The proponent is investigating options to establish a biodiversity stewardship site in the lands surrounding the Martins Creek Quarry. This would provide an opportunity to monitor retained and adjoining habitat where this species occurs.
More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes	The population size of this species has been assessed within the proposed impact area and the on adjoining sites. Apart from direct impacts associated with habitat removal, it is considered that the proposed quarry operations are not likely to be a threat to the ongoing persistence of this species in the locality. The Flora and Fauna Management Plan, Soil and Water Management Plan and Integrated Facilities Management Plan will mitigate potential future indirect and unintended impacts to this species.
Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants	An appropriate level of surveys has been undertaken to locate and assess the extent of this species present within the development footprint and adjoining areas where impacts will be avoided.
Undertake seed germination trials to determine the requirements for successful establishment	Opportunities for seed germination trials may be investigated if the proponent establishes a Biodiversity Stewardship Site as part of the proposed offsets package.
Regional Priority Actions	
<u>Habitat Loss, Disturbance and Modification:</u> • Monitor known populations to identify key threats. • Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary. • Identify populations of high conservation priority. • Control the removal of Slaty Red Gum for firewood or fencing material (DECC, 2005). • Ensure agriculture and timber harvesting activities (or other infrastructure or development activities involving substrate or vegetation disturbance) in areas where Slaty Red Gum occurs do not adversely impact on known populations. • Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure.	The proponent has identified five candidate biodiversity offset sites as part of the Biodiversity Offset Strategy prepared for the project by Conacher Consulting (2021b). The establishment of a formal Biodiversity Stewardship Agreement over these sites will provide an opportunity to address these Regional Priority Actions which relate to the monitoring and management of habitat loss, disturbance and modification. Specifically, opportunities and requirements for monitoring of a sub-set of the local population and impacts associated with removal and agriculture would be controlled and prevented.

National Approved Conservation Advice	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Trampling, Browsing or Grazing: • Develop and implement a stock management plan for roadside verges and travelling stock routes. • Modify grazing in known stands of Slaty Red Gum to enhance regeneration. Fencing may be required (DECC, 2005).	Management of trampling, browsing and grazing at a regional level is outside of the scope of this project.
Fire: • Develop and implement a suitable fire management strategy for Slaty Red Gum that includes avoiding frequent fires that may suppress regeneration (DECC, 2005). • Identify appropriate intensity and interval of fire to promote vegetation regeneration. • Provide maps of known occurrences to local and state rural fire services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.	It is considered that the proposal is not likely to result in fire impacts to retained Slaty Red Gum habitat. The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to mitigate too frequent fires and implement a suitable fire management strategy. This information could then be utilised to inform future RFS Bushfire Risk Management Planning in the region.
Conservation Information: • Raise awareness of Slaty Red Gum within the local community, especially among landholders.	This priority action is not relevant to impact avoidance and minimisation considerations for the proposed development.
Enable Recovery of Additional Sites and/or Populations: • Undertake appropriate seed collection and storage. • Investigate options for linking, enhancing or establishing additional populations. • Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites will provide an opportunity to enable recovery of additional sites, particularly existing cleared and previously quarried habitats which form part of these areas.
Local Priority Actions	
Habitat Loss, Disturbance and Modification: • Minimise adverse impacts from land use at known sites. • Protect populations of the listed species through the development of conservation agreements and/or covenants.	Impact minimisation will be achieved during project construction and operation through the implementation of a Flora and Fauna Management Plan, Soil and Water Management Plan and Integrated Facilities Management Plan. The potential establishment of Biodiversity Stewardship Agreements at the candidate biodiversity offset sites would also result in long term protection of this species locally.

National Approved Conservation Advice	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Trampling, Browsing or Grazing: • Manage known sites on private property to ensure appropriate cattle grazing regimes are conducted, i.e. that enable seedling regeneration. • Prevent grazing pressure at known sites on leased crown land through exclusion fencing or other barriers.	The Development Site is not currently subject to grazing, however some of the proposed biodiversity offset areas have been grazed in the past. Any future grazing within these areas would be either prevented or only undertaken in a strategic manner which does not have an adverse effect on this species.
Fire: • Implement an appropriate fire management regime for local populations.	It is considered that the proposal is not likely to result in fire impacts to retained Slaty Red Gum habitat. The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to mitigate too frequent fires and implement a suitable fire management strategy. This information could then be utilised to inform future RFS Bushfire Risk Management Planning in the locality.

2.2 Scrub Turpentine (*Rhodamnia rubescens*)

Impact Avoidance Measures

The BAR (Conacher Consulting 2021a) identifies that the critically endangered scrub turpentine (*Rhodamnia rubescens*) was observed during the biodiversity surveys undertaken for the development, in a pit area which has subsequently been removed from the development footprint. The proposal will not result in any direct impacts to this species. The BAR also identifies that this species is not likely to be significantly impacted by the proposal, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

The areas of habitat proposed to be retained around this species will provide a suitable buffer to potential development impacts. Proposed impact mitigation measures which will be undertaken as part of the project include:

- Fencing of the development footprint adjoining areas of native vegetation not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during the project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

These measures will effectively act to ensure impacts to this species and its retained habitats are avoided, particularly potential indirect impacts and unintended impacts with potential to occur during the construction and operation phases of the project.

Offsetting for Significant Residual Adverse Impacts

The proposal will not require the removal of any of the identified Scrub Turpentine and the proposal has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Therefore, biodiversity offsets for this species are not required for the project under the FBA, the EPBC Act Environmental Offsets Policy or the original Bilateral Agreement.

Discussion on measures to avoid, mitigate offset impacts particular to the EPBC Act

There are no Recovery Plans of Threat Abatement Plans made or adopted under the EPBC Act which are of direct relevance to the proposed development and impact avoidance and minimisation considerations.

The Project will not require offsets for this species as impacts will be avoided due to project revisions what have resulted in the locations where this species was observed during surveys being removed from the proposed development footprint. The areas of habitat proposed to be retained around this species will provide a suitable buffer to potential development. This species has and continues to experience population decline due to the introduction and establishment of exotic rust fungi. The NSW Threatened Species Scientific Committee advice, included as part of the EPBC Act Conservation Advice (Threatened Species Scientific Committee 2020) identifies that '*no effective or practical chemical, biological or management control is currently available for protecting populations of Rhodamnia rubescens in natural ecosystems from A. psidii infection*'. The Threatened Species Scientific Committee (2020) also identify that some populations may have undergone decline due to land clearing, fragmentation and weed invasion. The Project to retain and avoid impacts to this species will assist in its persistence within the site and locality.

2.3 Koala (*Phascolarctos cinereus*) combined populations of QLD, NSW & the ACT

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR, which identifies that changes to the project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable koala habitat (Conacher Consulting 2021a).

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the proposal
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of habitat for the koala which is proposed to be removed.

Proposed impact mitigation measures of relevance to the koala include:

- Fencing of the development footprint adjoining areas of koala habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during the project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

As part of the Flora and Fauna Management, trees are to be checked prior to clearing for the presence of koalas. Any trees containing koalas are not to be cleared while koalas are present.

These measures will effectively act to minimise and mitigate potential impacts to areas of suitable habitat for this species retained during the construction and operation phases of the project.

Offsetting for Significant Residual Adverse Impacts

The BAR has assessed the proposal, in accordance with the EPBC Act Referral Guidelines for the Koala (DoE 2014), as likely to have a significant impact on this species. This species was listed as vulnerable at the time that the BAR was prepared and its listing status under the EPBC Act has now been updated to Endangered. Like-for-like offsets for the adverse residual impacts of the proposal are required for this species. The proponent will offset the adverse residual impacts to this species according to the like-for-like credit requirements calculated in the BAR in accordance with the FBA. The ecosystem credit requirement for the proposal calculated under the FBA to achieve a direct offsetting outcome is identified in Table 7.1 of the BAR.

According to the BAR, the extent of proposed impact on the Koala includes 21.13 hectares of suitable habitat (refer to the species polygon in Figure 4.9 of the BAR). A direct offset of 549 Koala species credits has been identified in the BAR for this impact.

The credits required for this species will be determined by a formal assessment of reasonable equivalence of biodiversity credits made by DPE, following project approval. The actual number of credits to be generated at the identified land-based candidate biodiversity offset sites would be determined during a formal biodiversity stewardship application and agreement. Otherwise obligations not offset at the candidate biodiversity offset sites will be purchased on the market in the form of koala species credits from other land-based biodiversity offset sites established as biobanking or biodiversity stewardship sites, or through payment for koala species credits to the BCT.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for the Koala (DAWE 2022a) and the National Recovery Plan for the Koala (DAWE 2022b), identifies that the main threats to this species include climate change, human related activities, and disease. The conservation and recovery actions identified which are most relevant to this

Project include increased habitat protection, strategic habitat restoration and integration of koala conservation in policy and statutory land use planning.

A detailed assessment of the impact avoidance and minimisation measures proposed, and the threats and recovery actions contained in the Approved Conservation Advice and National Recovery Plan Recovery Actions for this species is provided in **Table 2.2**.

Table 2.2 Assessment of project impact avoidance, minimisation and offsetting relationship with the EPBC Act approved conservation advice and national recovery plan for the Koala

Threats, Conservation and Recovery Actions for the koala	Impact Avoidance, Mitigation and Offsetting Proposed for Project
Threats	
Climate change driven processes and drivers: • loss of climatically suitable habitat • increased intensity / frequency of drought • increased intensity/frequency or heatwaves • increased intensity/frequency of bushfire • declining nutritional value of foliage	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with bushfires. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources and shelter habitat.
Human Related Activities: • clearing and degradation of koala habitat • encounter mortality with vehicles and dogs	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity offset the impacts of the proposal and conserve these areas in perpetuity. Management of pest species such as feral dogs would also occur. Strategic fencing can also be utilised as part of the fauna management of the site to prevent vehicle related mortality within the quarry area.
Disease: • Koala retrovirus and Chlamydia	This threat is not identified in the approved conservation advice as being of relevance to the type of development proposed.
Conservation and Recovery Actions / Supporting Strategies	
Build and share knowledge	This strategy is not identified in the approved conservation advice as being of relevance to the type of development proposed.
Engage and partner with the community in conservation of the Koala population listed under the EPBC Act.	This strategy is not identified in the approved conservation advice as being of relevance to the type of development proposed.
Increase the area of protected habitat for the listed koala	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would increase formal habitat protection for the koala.
Integrate listed koala conservation into policy, statutory and land use plans	The proposal has been assessed against the appropriate policy and statutory land-use planning instruments.

Threats, Conservation and Recovery Actions for the koala	Impact Avoidance, Mitigation and Offsetting Proposed for Project
Conservation and Recovery Actions / On-Ground Strategies	
Strategically restore listed koala habitat	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would allow for strategic habitat restoration through implementation of best practice revegetation and restoration methods.
Active metapopulation management	Metapopulation management would be at a greater scale than the site and candidate biodiversity offset sites. Despite the establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would partially contribute top active metapopulation management, particularly in relation to fire and predator management.

2.4 Grey-headed Flying-fox (*Pteropus poliocephalus*)

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable foraging habitat for the vulnerable grey-headed flying-fox (*Pteropus poliocephalus*).

The BAR identifies that no roost or camp sites for the grey-headed flying-fox were observed during surveys and this species not likely to be significantly impacted by the loss of foraging habitat which is likely to occur as a result of the proposal, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the proposal.
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of foraging habitat for the grey-headed flying-fox which is proposed to be removed.

Proposed impact mitigation measures of relevance to the grey-headed flying-fox include:

- Fencing of the development footprint from adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during the project construction and operation phases:

- Flora and Fauna Management Plan
- Soil and Water Management Plan
- Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate potential impacts to areas of suitable habitat for this species retained during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The proposal has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy or the Bilateral Assessment Agreement, where a significant residual adverse impact will not occur.

Despite offsets not being required under the EPBC Act Environmental Offsets Policy, foraging habitat for this species is offset as part of the ecosystem credit obligations for the Project under the NSW FBA. The proponent will offset the adverse residual impacts which require ecosystem credits, according to the like-for-like credit requirements calculated in the BAR in accordance with the FBA. The ecosystem credit requirement for the proposal calculated under the FBA to achieve a direct offsetting outcome, is identified in Table 7.1 of the BAR (Conacher Consulting 2021a).

The ecosystem credits required will be determined by a formal assessment of reasonable equivalence of biodiversity credits made by DPE, following Project approval. The actual number of credits to be generated at the identified land-based candidate biodiversity offset sites will be determined if the proponent progresses with a formal biodiversity stewardship application and agreement. Any residual credit obligations not offset at the candidate biodiversity offset sites will be purchased on the market using like-for-like ecosystem credits from other land-based biodiversity offset sites established as biobanking or biodiversity stewardship sites, or through payment for ecosystem credits to the BCT.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The National Recovery Plan for the Grey-headed Flying-fox (DAWE 2021a) identifies that the main threats to this species include climate change, human related activities, and disease. The conservation and recovery actions identified which are most relevant to this Project include increased habitat protection, strategic habitat restoration and integration of Grey-headed Flying-fox conservation in policy and statutory land use planning.

A detailed assessment between the Project impact avoidance and minimisation measures proposed and the threats and recovery actions contained in the Conservation Advice and National Recovery Plan Recovery Actions for this species is provided in **Table 2.3**.

Table 2.3 Assessment of Project impact avoidance, minimisation and offsetting correlation with the EPBC Act Grey-headed Flying-fox national recovery plan

National Recovery Plan (DAWE 2021a)	Impact Avoidance, Mitigation and Offsetting Proposed by Project
Threats	
Human related activities: • Habitat loss • Loss of required continuous temporal sequence of productive foraging habitats and suitable roosting habitat • Clearing of winter forage • Camp disturbance • Increased urban and rural development surrounding roosting habitat • Attempts to remove animals from camps and break the fidelity of individual Grey-headed Flying-foxes to specific camps • Encounter mortality with vehicles and dogs • Entanglement in netting and barbed wire fencing • Electrocution on power lines	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to offset the impacts of the proposal and conserve these areas in perpetuity. Management of pest species would also occur. Upgrades to fencing can also be utilised to prevent injury associated with barbed wire.
Climate change driven processes and drivers: • Loss of climatically suitable habitat • Increased intensity / frequency of drought • Increased intensity/frequency or heatwaves • Increased intensity/frequency of bushfire • Declining nutritional value of foliage	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with bushfires. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources and shelter habitat.
Priority Recovery Actions	
Building on field verification and spatially identifying key foraging areas and vegetation communities used by the Grey-headed Flying-fox through an annual cycle.	This strategy is not identified in the national recovery plan as being of relevance to the type of development proposed.
Increase the extent and viability of foraging habitat for the Grey-headed Flying-fox that is productive during winter and spring	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would increase formal habitat protection for the Grey-headed Flying-fox.
Protect and increase native roosting habitat critical to the survival of the Grey-headed Flying-fox.	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would allow for strategic habitat restoration through implementation of best practice revegetation and restoration methods.

National Recovery Plan (DAWE 2021a)	Impact Avoidance, Mitigation and Offsetting Proposed by Project
Continue to conduct periodic range-wide assessments of the Grey-headed Flying-fox as part of the National Flying-Fox Monitoring Program.	This strategy is not identified in the national recovery plan as being of relevance to the type of development proposed.
Develop robust models of Grey-headed Flying-fox life history and population dynamics, to enable predictions of the likely impacts of threats on population viability.	This strategy is not identified in the national recovery plan as being of relevance to the type of development proposed.
Develop and publish information for the community to build their capacity to coexist with Grey-headed Flying-foxes	This strategy is not identified in the national recovery plan as being of relevance to the type of development proposed.
Identify existing flying-fox roosting habitat, opportunities for creating or rehabilitating habitat away from people and areas unsuitable for development due to potential conflict.	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would allow for creation or rehabilitation of habitat for the Grey-headed Flying-fox.
Establish a formal process for collecting data on management interventions at Grey-headed Flying-fox camps and maintain a database of camp interventions, their drivers, context and outcomes to support the development of improved methods for camp management.	This strategy is not identified in the national recovery plan as being of relevance to the type of development proposed.
Promote practical and cost-effective non-lethal measures to protect commercial crops from flying-fox damage (e.g. netting), particularly in newly occupied areas.	This strategy is not identified in the national recovery plan as being of relevance to the type of development proposed.

2.5 Regent Honeyeater (*Anthochaera phrygia*)

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable habitat for the critically endangered regent honeyeater (*Anthochaera phrygia*) (Conacher Consulting 2021a).

This species was not observed during surveys and the Development Site is not included on the NSW Important Area Habitat Map prepared by DPE (2022). The BAR identifies that this species was not observed during surveys, the action avoids impacting potential habitat for the regent honeyeater, and the species is not likely to be significantly impacted by the proposal, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the proposal

- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of suitable habitat for the regent honeyeater which is proposed to be removed.

Proposed impact mitigation measures of relevance to the Regent Honeyeater include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate potential impacts to areas of suitable habitat for this species retained during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The proposal has been assessed in the BAR (as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) as a significant residual impact will not occur. The Development Site is also not included on the Important Area Habitat Map prepared by DPE (2022), where impacts require offsetting with species credits and are a potential serious and irreversible impact as defined under the BC Act.

Despite offsets not being required under the EPBC Act Environmental Offsets Policy, foraging habitat for this species will be offset as part of the NSW ecosystem credit obligations for the Project. The proponent will offset the adverse residual impacts which require ecosystem credits, according to the like-for-like credit requirements calculated in the BAR in accordance with the FBA. The ecosystem credit requirement for the proposal calculated under the FBA to achieve a direct offsetting outcome is identified in Table 7.1 of the BAR (Conacher Consulting 2021a).

The ecosystem credits required will be determined by a formal assessment of reasonable equivalence of biodiversity credits made by DPE, which is only available following project approval. The actual number of credits to be generated at the identified land-based candidate biodiversity offset sites will be determined if the proponent progresses with a formal biodiversity stewardship application and agreement. Any residual credit obligations not offset at the candidate biodiversity offset sites will be purchased on the market using like-for-like ecosystem credits from other land-based biodiversity offset sites established as biobanking or biodiversity stewardship sites, or through payment for ecosystem credits to the BCT.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for the Regent Honeyeater (Department of Environment 2015) and the National Recovery Plan for the Regent Honeyeater (Department of Environment 2016), identifies that the main threats to this species include climate change, small population size, human related activities and competition. The conservation and recovery actions identified which are most relevant to this Project include increased habitat protection, strategic habitat restoration and integration of regent honeyeater conservation in policy and statutory land use planning.

A detailed assessment of the proposed impact avoidance and minimisation measures and the threats and recovery actions contained in the Approved Conservation Advice and National Recovery Plan Recovery Actions for this species is provided in **Table 2.4**.

Table 2.4 Assessment of Project impact avoidance, minimisation and offsetting correlation with the EPBC Act Regent Honeyeater approved conservation advice and national recovery plan

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Threats	
Climate change driven processes and drivers: • Loss of climatically suitable habitat • Increased intensity / frequency of drought • Increased intensity/frequency or heatwaves • Increased intensity/frequency of bushfire • Declining nutritional value of foliage	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with bushfires. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources and habitat.
Small population size: • Severe loss of genetic variability	Large areas of suitable habitat exist for this species across its range. Issues related to small population size are not likely to be of direct relevance to the type of development proposed.
Human Related Activities: • Clearing, fragmentation, and degradation of regent Honeyeater habitat • Degradation of remnant habitat	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity offset the impacts of the proposal and conserve these areas in perpetuity.
Competition: • Greater predation pressure • Increased harassment from other aggressive honeyeaters	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with competition. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with excluding aggressive honeyeaters.
Conservation and Management Actions	
Improve the extent and quality of regent honeyeater habitat	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would allow for strategic habitat restoration through implementation of best practice revegetation and restoration methods.

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Bolster the wild population with captive-bred birds until the wild population becomes self sustaining.	This action is not identified in the approved conservation advice as being of relevance to the type of development proposed.
Maintain and increase community awareness, understanding and involvement in the recovery program	This action is not identified in the approved conservation advice as being of relevance to the type of development proposed.

2.6 Swift Parrot (*Lathamus discolor*)

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable habitat for the critically endangered swift parrot (*Lathamus discolor*) (Conacher Consulting 2021a).

This species was not observed during surveys and the Development Site is not included on the NSW Important Area Habitat Map prepared by DPE (2022). The BAR identifies that this species was not observed during surveys, the action avoids impacting potential foraging habitat for the swift parrot, and the species is not likely to be subject to a significant residual adverse impact, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the proposal
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of suitable habitat for the Swift Parrot which is proposed to be removed.

Proposed impact mitigation measures of relevance to the Regent Honeyeater include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan

- Soil and Water Management Plan
- Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate potential impacts to areas of suitable habitat for this swift parrot retained during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The proposal has been assessed in the BAR as being not likely to have a significant impact on the swift parrot in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for the swift parrot are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) where a significant impact will not occur.

The Development Site is also not included on the Important Area Habitat Map prepared by NSW Planning, Industry and Environment (DPIE) (2022), where impacts require offsetting with species credits and are a potential serious and irreversible impact as defined under the BC Act.

Despite offsets not being required under the EPBC Act Environmental Offsets Policy, foraging habitat for this species will be offset as part of the NSW ecosystem credit obligations for the Project, according to the like-for-like credit requirements calculated in the BAR using the FBA. The ecosystem credit requirement for the proposal calculated under the FBA to achieve a direct offsetting outcome is identified in Table 7.1 of the BAR the action avoids impacting potential habitat for the.

The ecosystem credits required will be determined by a formal assessment of reasonable equivalence of biodiversity credits made by DPE, which is only available following project approval. The actual number of credits to be generated at the identified land-based candidate biodiversity offset sites will be determined if the proponent progresses with a formal biodiversity stewardship application and agreement. Any residual credit obligations not offset at the candidate biodiversity offset sites will be purchased on the market using like-for-like ecosystem credits from other land-based biodiversity offset sites established as biobanking or biodiversity stewardship sites, or through payment for ecosystem credits to the BCT.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for the Swift Parrot (Department of Environment 2016a) and the National Recovery Plan for the Swift Parrot (Saunders and Tzaros 2011) identify that the main threats to this species include habitat loss and alteration, climate change, collision mortality, competition, disease, and illegal wildlife capture and trading. The conservation and recovery actions identified which are most relevant to this Project include increased habitat protection, strategic habitat restoration and integration of Swift Parrot conservation in policy and statutory land use planning.

A detailed assessment of the Project impact avoidance and minimisation measures proposed and the threats and recovery actions contained in the Approved Conservation Advice and National Recovery Plan Recovery Actions for this species is provided in **Table 2.5**.

Table 2.5 Assessment of Project impact avoidance, minimisation and offsetting correlation with the EPBC Act Swift Parrot Approved Conservation Advice and National Recovery Plan

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Threats	
Habitat loss and alteration: • Forestry activities including firewood harvesting • Residential and industrial development • Agricultural tree senescence and dieback • Regeneration suppression • Frequent fire	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to offset the impacts of the Project on swift parrot over winter foraging habitat. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources.
Climate change driven processes and drivers: • Loss of climatically suitable habitat • Increased intensity / frequency of drought • Increased intensity/frequency or heatwaves • Increased intensity/frequency of bushfire • Declining nutritional value of foliage	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with bushfires. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources and shelter habitat.
Collison mortality: • Collision with wire netting, mesh fencing, windows, and cars	The Project is not likely to significantly increase the potential for collision mortality or provide a practical opportunity to manage this threat.
Competition: • Greater predation pressure particularly from sugar gliders (nesting in Tasmania) • Increased harassment from other aggressive honeyeaters • Increased competition with introduced birds and bees within altered habitats • Increased competition with honeybees and starlings for tree cavities (nesting in Tasmania)	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with competition from aggressive honeyeater through strategic revegetation initiatives. Predation from sugar gliders not relevant.
Disease: • Psittacine Beak and Feather Disease	This threat is not identified in the approved conservation advice as being of relevance to the type of development proposed.
Illegal wildlife capture and trading	This threat is not identified in the approved conservation advice as being of relevance to the Project.

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Conservation and Management Actions	
Identify the extent and quality of habitat: • Identify and map foraging and nesting habitat throughout the breeding range and prioritise sites • Identify and map foraging and roosting habitat	This action would be undertaken as part of the establishment of a formal Biodiversity Stewardship Agreement for potential over wintering foraging habitat in candidate biodiversity offset sites.
Manage and protect Swift Parrot habitat at the landscape scale • Manage and protect nesting and foraging habitat • Monitor and manage for climate change	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage and protect foraging habitat. The candidate biodiversity offset sites would also allow for strategic habitat restoration through implementation of best practice revegetation and restoration methods.
Monitor and manage the incidence of collisions, competition, and diseases: • monitor and manage the incidence of collisions • monitor the incidence of competition from large aggressive honeyeaters as well as introduced birds and bees for nesting and foraging resources • develop and implement a Psittacine Beak and Feather Disease management protocol	This strategy is not identified in the approved conservation advice as being of relevance to the Project.
Monitor population and habitat: • Develop and implement an effective population monitoring program during the breeding season • Collect and analyse information on population dynamics and viability • Establish and maintain coordination of volunteer surveys	Not applicable as breeding habitat limited to Tasmania

2.7 Spotted-tailed Quoll (*Dasyurus maculatus maculatus*) SE Mainland population

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable foraging habitat for the endangered spotted-tailed quoll (*Dasyurus maculatus maculatus*) SE Mainland population (Conacher Consulting 2021a).

The BAR identifies that this species was not observed during surveys and is not likely to be significantly impacted by the Project, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the Project
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of suitable habitat for the Spotted-tailed Quoll which is proposed to be removed.

Proposed impact mitigation measures of relevance to the spotted-tailed quoll include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate potential impacts to this species and areas of retained habitat during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The Project has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) where a significant impact will not occur.

Despite offsets not being required under the EPBC Act Environmental Offsets Policy, foraging habitat for this species will be offset as part of the NSW ecosystem credit obligations for the Project. The proponent will offset the adverse residual impacts which require ecosystem credits, according to the like-for-like credit requirements calculated in the BAR in accordance with the FBA. The ecosystem credit requirement for the Project calculated under the FBA to achieve a direct offsetting outcome is identified in Table 7.1 of the BAR (Conacher Consulting 2021a).

The ecosystem credits required will be determined by a formal assessment of reasonable equivalence of biodiversity credits made by DPE, following project approval. The actual number of credits to be generated at the identified land-based candidate biodiversity offset sites will be determined if the proponent progresses with a formal biodiversity stewardship application and agreement. Any residual credit obligations not offset at the candidate biodiversity offset sites will be purchased on the market using like-

for-like ecosystem credits from other land-based biodiversity offset sites established as biobanking or biodiversity stewardship sites, or through payment for ecosystem credits to the BCT.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for the Spotted-tailed Quoll (Department of Environment 2016b) and the National Recovery Plan for the Spotted-tailed Quoll (DELWP 2016), identify that the main threats to this species include habitat loss and fragmentation, climate change, invasive species, fire, purposeful killing, and illegal wildlife capture and trading. The conservation and recovery actions identified which are most relevant to this Project include increased habitat protection, strategic habitat restoration and integration of Spotted-tailed Quoll conservation in policy and statutory land use planning.

A detailed assessment of between the Project impact avoidance and minimisation measures proposed and the threats and recovery actions contained in the Approved Conservation Advice and National Recovery Plan Recovery Actions for this species is provided in **Table 2.6**.

Table 2.6 Assessment of Project impact avoidance, minimisation and offsetting correlation with the EPBC Act Spotted-tailed Quoll approved conservation advice and national recovery plan

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Threats	
Habitat loss and fragmentation • Habitat loss and modification • Timber production • Mortality associated with road traffic	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to offset the impacts of the Project on Spotted-tailed Quoll habitat. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources and shelter habitat. Strategic fencing can also be utilised as part of the fauna management of the site to minimise potential for vehicle related mortality within the Development Site.
Climate change driven processes and drivers: • Loss of climatically suitable habitat • Increased intensity / frequency of drought • Increased intensity/frequency or heatwaves • Increased intensity/frequency of bushfire • Declining nutritional value of foliage	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage the adverse impacts associated with bushfires. Strategic revegetation and replanting of existing disturbed areas within these sites would also assist with the provision of foraging resources and shelter habitat. In the case of a bushfire, the Bushfire Emergency Response Procedure in the IFMP would be implemented.
Invasive species: • Predation by feral cats (*Felis catus*) • Predation by European Red Fox (*Vulpes vulpes*) • Wild dogs (*Canis lupus familiaris*) • Cane toads (*Rhinella marina*) • Poisoning associated with control of non-native predators	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to offset the impacts of the Project and conserve these areas in perpetuity. Management of pest species such as feral cats, foxes, and dogs would also occur.

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Fire: • Too frequent burning • Increase fire frequency/intensity due to climate change	This threat is not identified in the approved conservation advice as being of relevance to the type of development proposed.
Purposeful killing	This threat is not relevant to the type of development proposed.
Illegal wildlife capture and trading	This threat is not relevant to the type of development proposed.
Conservation and Management Actions	
Determine the distribution and status of Spotted-tailed Quoll populations throughout the range, and identify key threats and implement threat abatement management actions.	This action is not of direct relevance to the Project. The establishment of a formal Biodiversity Stewardship Site would provide an opportunity to undertake threat abatement management actions over the candidate biodiversity offset sites.
Investigate key aspects of biology and ecology of the Spotted-tailed Quoll to acquire targeted information to aid recovery.	This action is not relevant to this type of development, or the offset strategy proposed.
Reduce the rate of habitat loss and fragmentation on private land	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would allow for a reduction in the rate of habitat loss and fragmentation of Spotted-tailed Quoll habitat by providing an opportunity to offset the impacts of the Project on Spotted-tailed Quoll habitat.
Evaluate and manage the risk posed by silvicultural practices.	This action is not relevant to this type of development, or the offset strategy proposed.
Determine and manage the threat posed by introduced predators (foxes, cats, wild dogs) and of predator control practices on Spotted-tailed Quoll populations.	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage introduced predators.
Determine and manage the impact of fire regimes on Spotted-tailed Quoll populations	The establishment of a formal Biodiversity Stewardship Agreement over the candidate biodiversity offset sites would provide an opportunity to manage fire regimes on the candidate biodiversity offset sites.
Reduce deliberate killings of Spotted-tailed Quolls.	This action is not relevant to this type of development, or the offset strategy proposed.
Reduce the frequency of Spotted-tailed Quoll road mortality	The Project is not likely to reduce road mortality associated with this species.
Assess the threat Cane Toads pose to Spotted-tailed Quolls and implement threat abatement actions if necessary	This action is not relevant to this type of development, or the offset strategy proposed.
Determine the likely impact of climate change on Spotted-tailed Quoll populations.	This action is not relevant to this type of development, or the offset strategy proposed.
Increase community awareness of the Spotted-tailed Quoll and involvement in the Recovery Program	This action is not relevant to this type of development, or the offset strategy proposed.

2.8 Large-eared Pied Bat (*Chalinolobus dwyeri*)

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable foraging habitat for the vulnerable large-eared pied bat (*Chalinolobus dwyeri*).

The BAR identifies that this species was not observed during surveys and is not likely to be significantly impacted by the Project, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

Potential impacts to this species have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the Project
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of suitable foraging habitat for the Large-eared Pied-bat which is proposed to be removed.

Proposed impact mitigation measures of relevance to the Large-eared Pied-bat include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate potential impacts to retained areas of suitable habitat during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The Project has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) where a significant impact will not occur.

This species is a dual credit species under the NSW FBA, with foraging habitat offset using ecosystem credits. The ecosystem credit requirement for the Project calculated under the FBA to achieve a direct offsetting outcome is identified in Table 7.1 of the BAR. It is noted that this species is a species credit species under the BAM, however no suitable breeding habitat is present and this species was not observed during surveys, therefore no offsetting is required (Conacher Consulting 2021a).

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for the Large-eared Pied Bat (DAWE 2021b) and the National Recovery Plan for the Large-eared Pied Bat (DERM 2011), identifies that the main threats to this species include climate change, human related activities and disease. The conservation and recovery actions identified which are most relevant to this Project include increased habitat protection, strategic habitat restoration and integration of large-eared pied bat conservation in policy and statutory land use planning.

A detailed assessment of between the project impact avoidance and minimisation measures proposed and the threats and recovery actions contained in the Approved Conservation Advice and National Recovery Plan Recovery Actions for this species is provided in **Table 2.7**.

Table 2.7 Assessment of Project impact avoidance, minimisation and offsetting correlation with the EPBC Act Large-eared Pied-bat approved conservation advice and national recovery plan

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Threats	
Habitat loss and fragmentation: • Destruction of and interference with maternity roosts and other roosts • Vegetation clearance in the proximity of roosts • Mining/closure of roosts • Mine inducted subsidence of cliff lines	This species was not recorded during surveys and no areas of known maternity roost or other roost habitat will be impacted by the Project. Suitable impact mitigation and avoidance measures have been identified for areas of suitable habitat.
Mismanaged fire: • Fire in the proximity of roosts	As above
Invasive species: • habitat disturbance by other animals, including livestock and feral animals • predation by introduced predators	As above
Miscellaneous: • Impact of diseases • Disturbance from human recreational activities • Use of pesticides	As above
Conservation and Management Actions	
Identify priority roost and maternity sites for protection	No roost or maternity sites were observed during surveys.

Approved Conservation Advice and Recovery Plan threats and strategies	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Implement conservation and management strategies for priority sites	This species was not recorded during surveys and no areas of known habitat will be impacted by the Project.
Educate the community and industry to understand and participate in the conservation of the large-eared pied bat	This action is not of relevance to the Project.
Research the large-eared pied bat to augment biological and ecological data to enable conservation management	This action is not of relevance to the Project.
Determine the meta-population dynamics throughout the distribution of the large-eared pied bat	This action is not of relevance to the Project.

2.9 Greater Glider (*Petauroides volans*)

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable foraging habitat for the vulnerable greater glider (*Petauroides volans*).

The BAR identifies that this species was not observed during surveys and is not likely to be significantly impacted by the Project, in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013).

Impact Minimisation and Mitigation Measures

Potential impacts to this species have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the Project
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of suitable habitat for the Greater Glider which is proposed to be removed.

Proposed impact mitigation measures of relevance to the Greater Glider include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan

- Soil and Water Management Plan
- Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate potential impacts to retained areas of suitable habitat during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The Project has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) where a significant impact will not occur. Species credits are therefore not proposed to be provided for this species.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The EPBC Act Conservation Advice for the Greater Glider (Threatened Species Scientific Committee 2016), identifies that the main threats to this species include habitat loss, too intense fire regimes, timber production, climate change, barbed wire fencing and entanglement, hyper-predation by owls, nest competition from Sulphur-crested Cockatoos and Phytophthora root fungus which impacts healthy eucalypts.

A detailed assessment of the Project impact avoidance and minimisation measures proposed and the threats and recovery actions contained in the Approved Conservation Advice for this species is provided in **Table 2.8**.

Table 2.8 Assessment of Project impact avoidance, minimisation and offsetting correlation with the EPBC Act approved conservation advice for the Greater Glider

Approved Conservation Advice Threats and Actions	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Threats	
Habitat loss (through clearing, clearfell logging and the destruction of senescent trees due to prescribed burning) and fragmentation	This species was not recorded during surveys and no areas of known habitat will be impacted by the Project.
Too intense or frequent fires	The Project is not likely to increase the intensity of local fire regimes
Timber production	The Project does not involve timber protection
Climate change	This species was not recorded during surveys and no areas of known habitat will be impacted by the Project.
Barbed wire fencing (entanglement)	As above
Hyper-predation by owls	This species was not recorded during surveys and the Project is not likely to contribute to this threat
Competition from sulphur-crested cockatoos	This species was not recorded during surveys and the Project is not likely to contribute to this threat
Phytophthora root fungus	This species was not recorded during surveys and the Project is not likely to contribute to this threat
Conservation and Management Actions	
Reduce the frequency and intensity of prescribed burns	This species was not observed during surveys and the Project is not likely to result in prescribed burning.

Approved Conservation Advice Threats and Actions	Impact Avoidance, Mitigation and Offsetting Proposed for the Project
Identify appropriate levels of patch retention, habitat tree retention, and logging rotation in hardwood production.	The impact avoidance areas are shown in Figure 5.1 of the BAR. This species was not observed during surveys and the Project is not a logging project.
Protect and retain hollow-bearing trees, suitable habitat and habitat connectivity	The impact avoidance areas are shown in Figure 5.1 of the BAR. This species was not observed during surveys.

2.10 Rufous Fantail (*Rhipidura rufifrons*)

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable foraging habitat for this species.

The BAR identifies that this species was observed during surveys. Assessment completed in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013) in the BAR identifies that the Project is not likely to significantly impact this species.

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable habitat for this species.

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the Project
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of habitat for this species which is proposed to be removed.

Proposed impact mitigation measures of relevance to this species include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan

- Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate impacts to the Rufous Fantail during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The Project has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) where a residual significant impact will not occur. Furthermore, migratory species are not covered by offsetting under the Framework for Biodiversity Assessment and offsetting is not required as there will not be a significant residual impact on this species.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The Rufous Fantail is listed as a migratory species under the EPBC Act. There is no approved conservation advice or approved recovery plan for this species published for the purposes of the EPBC Act.

2.11 Black-faced Monarch (*Monarcha melanopsis*)

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable foraging habitat for this species.

The BAR identifies that this species was observed during surveys. Assessment completed in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013) in the BAR identifies that the Project is not likely to significantly impact this species.

Impact Avoidance Measures

The proposed disturbance area and the impact avoidance areas for the Project are mapped in Figure 5.1 of the BAR. Changes to the Project have resulted in the avoidance of direct impacts to approximately 15.3 ha of suitable habitat for this species.

Impact Minimisation and Mitigation Measures

The impacts proposed have been minimised through implementation of the following measures:

- Investigations to ensure that areas proposed for clearing contain the target resource and site planning to identify the minimum extent of area needed to be cleared to provide infrastructure to support the Project
- Location of roads and new infrastructure within existing cleared areas and the proposed resource extraction footprint where possible.

These measures have minimised the extent of the development footprint and the area of habitat for this species which is proposed to be removed.

Proposed impact mitigation measures of relevance to this species include:

- Fencing of the development footprint adjoining areas of habitat not approved for removal

- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented
- Implementation of the following management plans during project construction and operation phases:
    - Flora and Fauna Management Plan
    - Soil and Water Management Plan
    - Integrated Facilities Management Plan.

These measures will effectively act to minimise and mitigate impacts to the Rufous Fantail during the construction and operation phases of the Project.

Offsetting for Significant Residual Adverse Impacts

The Project has been assessed in the BAR as being not likely to have a significant impact on this species in accordance with the EPBC Act Significant Impact Guidelines (DEWHA 2013). Biodiversity offsets for this species are not required under EPBC Act Environmental Offsets Policy (DSEWPC 2012) where a residual significant impact will not occur. Furthermore, migratory species are not covered by offsetting under the Framework for Biodiversity Assessment and offsetting is not required as there will not be a significant residual impact on this species.

Discussion on measures to avoid, mitigate and offset impacts particular to the EPBC Act

The Black-faced Monarch is listed as a migratory species under the EPBC Act. There is no approved conservation advice or approved recovery plan for this species published for the purposes of the EPBC Act.

3.0 Conclusion

The Project has been assessed as likely to have an adverse residual significant impact on the Slaty Red Gum and the Koala, which are listed threatened species under the EPBC Act. Direct offsets will be provided for each of these species, in accordance with the requirements identified in the Biodiversity Assessment Report (Conacher Consulting 2021a). The biodiversity offset package will meet the requirements of both the Framework for Biodiversity Assessment, the NSW BAM and the NSW BOS through an assessment of reasonable equivalence which will be completed following project approval.

Direct offsets will also be provided for threatened species listed under the EPBC Act which are assessed as ecosystem credit species, including the Grey-headed Flying-fox, Regent Honeyeater, Swift Parrot and Spotted-tailed Quoll. These species have been assessed as not likely to be significantly impacted by the Revised Project and therefore do not require biodiversity offsets to satisfy the requirements of the EPBC Act Bilateral Assessment Agreement, however the offsets are required as part of the NSW assessment process under the FBA. It is considered that no other offsets are required for Project related impacts to nationally listed threatened species or ecological communities listed under the EPBC Act.

Daracon will continue to consult with DAWE in relation to the offset package in order to satisfy any requirements under the EPBC Act.

4.0 References

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