Appendix R: Rye Park wind farm Preliminary Documentation – Response to Submissions

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RYE PARK WIND FARM – PRELIMINARY DOCUMENTATION APPENDIX R (EPBC 2020/8837)

Response to Public Submissions

REVISED FINAL

March 2021

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REVISED FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Rye Park Renewable Energy Wind Farm Pty Ltd

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Report No.	4107/R16/Final
Date:	March 2021

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Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
1	Travis Peake	25 February 2021	Travis Peake	25 February 2021
2	Travis Peake	4 March 2021	Travis Peake	4 March 2021
3	Travis Peake	12 March 2021	Travis Peake	12 March 2021
4	Travis Peake	15 March 2021	Travis Peake	15 March 2021

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1.0 Introduction

Rye Park Renewable Energy Pty Ltd (a wholly owned subsidiary of Tilt Renewables Limited), the Proponent, is planning the Rye Park wind farm north of Yass and southeast of Boorowa NSW (the Project). The Project consists of up to 77 turbines and associated infrastructure including a transmission line, internal access tracks, underground cabling, substations, operation and maintenance facilities, temporary construction compounds, laydown areas and concrete batch plants. The Project will generate renewable energy and aims to assist in reducing impacts of climate change and contribute to the shortfall in generation due to the retirement of coal fired generators.

The Project has been determined to be a 'controlled action' (EPBC 2020/8837) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The controlling provision under the EPBC Act is 'listed threatened species and communities' (Sections 18 and 18A) and 'migratory species' (Sections 20 and 20A).

The Commonwealth Department of Agriculture, Water and the Environment (DAWE) has advised the project will be assessed by Preliminary Documentation and this response to submissions report will be part of that documentation.

This Public Submissions Report has been prepared by Umwelt (Australia) Pty Limited (Umwelt) on behalf of the Proponent to address the key issues raised in submissions relating to the Preliminary Documentation.

This Public Submissions Report is a legislative requirement of the EPBC Act, as specified in Section 95B – Procedure after end of period for comment:

> *Procedure if comments are received:*
>
> *(1) If comments are received by the designated proponent within the period for comment, the designated proponent must, as soon as practicable after the end of that period:*
>
> *(a) prepare a document that:*
>
> *(i) sets out the information given to the Minister previously in relation to the action, with any changes or additions needed to take account of the comments; and*
>
> *(ii) contains a summary of the comments received and how those comments have been addressed; and*
>
> *(b) give the Minister:*
>
> *(i) a copy of the document prepared under paragraph (a); and*
>
> *(ii) a copy of the comments received.*
>
> *(1A) The designated proponent is taken not to have given the Minister the documents referred to in paragraph (1)(b) if the required fee has not been paid.*

(2) Within 10 business days after the designated proponent has given the Minister the documents referred to in paragraph (1)(b), the designated proponent must publish, in accordance with the regulations, a copy of the document prepared under paragraph (1)(a).

1.1 Public Comment Process

Preliminary Documentation relating to the Project was exhibited for public comment from 15 January 2021 to 29 January 2021 in accordance with section 95A of the EPBC Act. Copies of the Preliminary Documentation relating to the Project were made available at the following locations:

- Rye Park Local Post Office, Kershaw Street, Rye Park NSW 2586
- Yass Council, 209 Comur Street, Yass NSW 2582
- Yass Library, Memorial Hall, off Comur Street, Yass NSW 2582
- Department of Environment and Energy, 51 Allara Street, Civic ACT 2601

The documents were also able to be viewed or downloaded on the Project website at www.ryeparkwf.com.au. Written feedback was able to be provided by mail to Rye Park Renewable Energy Pty Ltd, Level 23, 535 Bourke Street, Melbourne VIC 3000 and via email to ryeparkwindfarm@tiltrenewables.com.

All submitters were sent a response from the Proponent acknowledging receipt of their submission.

1.2 Consultation with DAWE

As part of the preparation of the referral and this submissions report, the Proponent has consulted with DAWE. A summary of this consultation is below:

- First consulted with DAWE in May 2020,
- Provided DAWE with a draft referral and supporting information in July 2020 for their review,
- Received comments on the draft referral from DAWE. The Proponent addressed the comments on external road development footprint, vegetation zones, habitat areas, prescribed impact for white-throated needletail and superb parrot and striped legless lizard buffers for habitat estimates,
- Meeting with DAWE on 18th September 2020 to discuss proposed approach to addressing DAWE's comments,
- Final Referral submitted on 13th November,
- Decision Notice received on 17th December 2020 – Assessed by Preliminary Documentation (no further information required),
- Meeting with DAWE on 21st December to discuss public exhibition requirements,
- Meeting with DAWE on 15th February to discuss additional information request, and
- Ongoing consultation during this period through phone calls and emails with DAWE.

1.3 Report Structure

This Response to Public Submissions Report includes:

- introductory information about the report (**Section 1.0**)
- a brief overview of the Project to provide context for the submissions (**Section 2.0**)
- analysis of the submissions (**Section 3.0**)
- detailed responses to submissions (**Section 4.0**)
- summary of requests for additional information by DAWE (**Section 5.0**)
- a list of references used in the preparation of this document (**Section 6.0**)
- appendices.

2.0 Overview of the Exhibited Project

The original project approval considered a Site Perimeter within which all proposed project infrastructure was contained within a 200 metre wide corridor, or 'Project Corridor' (NGH 2014). This Project Corridor totalled approximately 4,850 hectares (NGH 2014). The total area of the wider Site Perimeter or 'Project Area' covered the extent of involved landholding lot boundaries and therefore totalled some 14,000 hectares. As part of the original Biodiversity Assessment, this considered a proposed 126 turbine footprint layout (and associated infrastructure).

The EPBC Act Referral (Epuron 2013) (EPBC 2014/7163) considered the proposed 126 turbine footprint layout (and associated infrastructure).

As part of the Biodiversity Assessment Addendum, the proposed turbine footprint layout (and associated infrastructure) was reduced from 126 turbines to 109 turbines. The proposed project footprint assessed as part of the addendum totalled 256.8 hectares (NGH 2016). The proposed 109 turbine footprint was also assessed as part of the Preliminary Documentation (Epuron 2017).

It is important to note however that neither the Biodiversity Assessment (NGH 2014), the Biodiversity Assessment Addendum (NGH 2016), EPBC Act Referral (Epuron 2013) or Preliminary Documentation (Epuron 2017) assessed the ecological impacts associated with the external transport route.

As part of the re-referral and project modification, a detailed project footprint has been subject to the ecological assessment. There are two Development Corridors, totalling approximately 1,327 hectares, being the Development Corridor – Wind Farm and Development Corridor – Permanent Met Masts. The Development Corridors include the extent of wind farm specific work in its entirety, as well as adjoining land, however it excludes the external roads.

Consent Condition 20b of the existing state approval for the project (SSD 6693) stated that the Applicant must "*update the baseline mapping of the vegetation and key habitat within the final disturbance area*". The approved project involved vegetation and key habitat mapping which was completed at a regional scale. As a result of implementing this consent condition Umwelt were required to undertake substantial GIS mapping refinements, where vast areas mapped as 'woodland' were revised to comprise woodlands and derived native grasslands, similarly where vast areas mapped as 'derived native grasslands' were revised to also include remnant woodlands.

As a result of completing this extensive 'update' to baseline mapping and key habitat, in combination with a substantially different project design, it is not possible to present a direct comparison of the extent of impacts to Matters of National Environmental Significance (MNES) considered in the original EPBC Act Referral and Preliminary Documentation (Epuron 2017) with that to the modified re-referral for the proposed modification. Instead, the exhibited re-referral presented, as far as possible, both the information and methodology previously presented, and the information and methodology presented in the current modified project. Where a consistent assessment approach was taken this was presented, while where an assessment approach differs to the original assessment this was also presented.

A Modification Application was lodged under section 4.55(2) of the EP&A Act and seeks approval for several modifications of the original iteration of the Project.

The Project involves the installation of 77 wind turbines and associated infrastructure including a transmission line (33 kV and up to 330 kV), creation of internal access tracks, installation of underground cabling, collector substation, connection substation, operation and maintenance facilities, temporary

construction compounds, laydown areas and concrete batch plants. Construction activities and key project components are described in further detail below.

The Project consists of the following components:

- up to 77 wind turbines, with a maximum tip height of 200 m
- a new 330 kV wind farm connection substation located adjacent to the existing TransGrid 330 kV '3J' transmission line (Yass-Gullen Range) that traverses the southern section of the site
- a new overhead powerline approximately 35 kilometres (km) in length, rated at up to 330 kV (nominal) capacity, running north-south along the length of the wind farm site and within the wind farm site boundary
- a new collection substation located towards the north of the wind farm site
- underground and overhead 33 kV and 330 kV electrical cabling linking the wind turbines to each other and to the on-site collection substations
- operation and maintenance facilities incorporating a control room and equipment storage facilities
- temporary concrete batching plants and construction facilities
- access tracks required for each wind turbine and the related facilities above
- minor upgrades to local roads, as required for the delivery, installation and maintenance of wind turbines and the related facilities above
- six temporary wind monitoring masts and approximately six permanent monitoring masts for wind speed verification, weather and general monitoring purposes. The permanent monitoring masts may be either static guyed structures and will be to a minimum height of the wind turbine hubs.

3.0 Analysis of Submissions

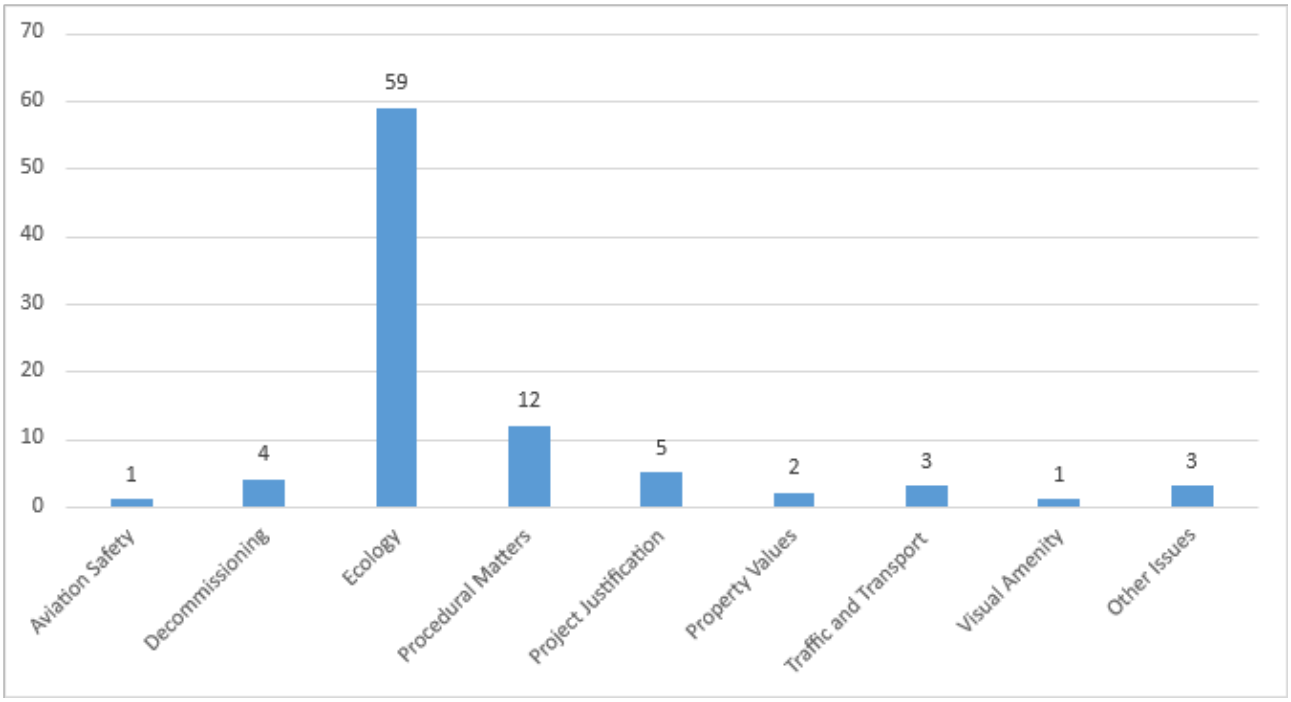
A total of 24 submissions were received during the January 2021 Preliminary Documentation public comment period. Two submissions were from organisations and 22 were from individuals. One submission supported the Project, and 23 submissions opposed the Project.

Appendix A provides a summary of each submission made, with a unique numerical identifier assigned to each of the 24 submissions made. Personal information of each submission has been deliberately removed, including name or business, to maintain confidentiality as the document will be made publicly available. These unique numerical identifiers relate to the submission response spreadsheet in **Appendix A** of this document.

Submissions were analysed to identify key themes, which appear below.

- aviation safety
- decommissioning
- ecology
- procedural matters
- project justification
- property values
- traffic and transport
- visual amenity
- other issues.

Graph 3.1 shows the number of times a key theme was raised, noting that many submissions raised more than one key theme.



Graph 3.1 Frequency of Key Themes in Submissions

As **Graph 3.1** shows, comments were largely concentrated on ecology matters. A small number of submissions raised other key themes. Key themes are addressed in **Section 4.0**.

Within each of the nine key themes of submissions, a range of sub-themes were specifically raised. These are displayed by a numerical number atop each key theme column in **Graph 3.1**. This was particularly the case for Ecology Related Submissions e.g., general ecological submissions, increased turbine heights, matters of national environmental significance…etc. Sub-themes were categorised from each submission and were addressed in the text boxes presented in **Section 4.0**.

In addition to the submissions discussed above, DAWE sought additional information for several topics. This is summarised in **Section 5.0** and addressed in detail within **Appendix B**.

4.0 Response to Submissions

Issues raised in submissions relating to Preliminary Documentation about the Project are identified in the following sections in text boxes, with the response provided following each text box. Submissions were grouped into two broad categories, ecologically related matters (**Section 4.1**) and general topics (**Section 4.2**).

At the end of each issue raised, we have included the unique numerical identifier discussed above in **Section 3.0** within parenthesis.

4.1 Ecology Related Submissions

General ecological submissions

'Wildlife and environment will have to suffer extensively and irreversibly as a direct result' (1)

'Loss / disturbance of native wildlife and natural environments from the increase of transport on routes' (2)

'Increased development footprint' (6)

'Broadly pointing out impacts to threatened entities and impacts to remnant vegetation' (7)

'Doubling of the disturbance area compared with the original approval' (9)

'Significant habitat loss for fauna. Loss/ disturbance to flora species. Disagree with approach of avoiding and reducing impacts as it does not create more of a value' (9)

'Project modifications will cause impacts/ push threatened species further to extinction - interfering with the ability of animals to detect prey and predators, will cause harm to native fauna. Impacts will push endangered fauna and flora towards extinction' (10)

'Habitat destruction-loss/disturbance from clearing of land, Loss of hollow bearing trees- Concerned with disturbance of white box-yellow box - Blakely's gum grassland woodland and Red flowering ironbark and native vegetation' (11)

'While supportive of wind farms as alternate and clean energy source, concerned about this project in the local environment. Impacts to CEEC and Superb Parrot. Added concern about this project in light of additional impacts from bush fires, floods, drought...etc' (14)

'Increased Footprint' (15)

'Clearing of land / native vegetation, Increase loss/stress to native wildlife' (18)

'Concerned for the displacement/loss of native wildlife and vegetation and clearing of land' (20)

'Loss of native vegetation due to clearing. Impacts to native fish species from contamination. Loss / impacts to native fauna and flora and habitat' (23)

The EPBC Act is federal legislation through which impacts to MNES are assessed. Where impacts to MNES are identified for any proposed action, approval from the Australian Government's Environment Minister is required. Of relevance to this assessment are nationally threatened and migratory species and ecological communities.

The Referral process is an initial key stage of the environmental assessment process required by the EPBC Act. The Referral stage determines whether or not a proposed action requires approval under the EPBC Act. The second key stage is the Assessment/Decision Whether to Approve. The Project has been prepared through the method of Preliminary Documentation and direction to publish as stated in **Section 1.1**.

The extent of change in Development Footprint for the Project is recognised as being substantially different to that originally approved. It is for this reason that the Project was required to submit a Modification for the Project under the relevant NSW legislation. Furthermore, this extent of change has resulted in increased impacts to MNES, requiring the Project to be re-referred under the EPBC Act.

The Referral for the Rye Park Wind Farm Modification proposed action was prepared per the requirements of the EPBC Act. Furthermore, consultation was undertaken with DAWE to clarify several components of the assessment. The referral document provides a full description of the impacts to MNES from the proposed action, and where appropriate the Referral includes comparison to the original assessment. This step was important to understand the nature of changes proposed as part of the modification and the need to re-refer.

In relation to the general ecology submissions listed above, these matters have been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Section 4.2.1 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses Biodiversity (vegetation) in further detail. These matters are further assessed within the final Biodiversity Development Assessment Report (BDAR) (Umwelt 2020a) contained at Appendix B of the Response to Submissions Report, provided in **Appendix C**.

Increased Turbine Heights

'Concerned with Increased impact on the local environment, waterways and our native flora and fauna with the height increase' (2)

'Threats of strike rate increase to bird species due to increased RSA' (22)

The increased height of turbines proposed as part of the Modification, associated increased Rotor Swept Area (RSA) and revised number of proposed turbines were all factors that led to an updated assessment of the risk of turbine strike to avifauna being completed for the Project.

A detailed Prescribed Impact Assessment of turbine strike risk to aerial fauna species (including birds and bats) was completed as part of the Biodiversity Assessment for the Project (Umwelt 2020a). This assessment was completed for the suite of species identified as having the greatest potential risk of impact from the Project, a list that was determined through consultation with the Biodiversity Conservation Division (BCD). This included consideration of MNES species recorded in the Project area, superb parrot and painted honeyeater.

As part of this assessment, the likely impact on aerial species, rate of impact per turbine per year and consequences of impacts for the persistence of bioregional populations were assessed for each species. This assessment was undertaken for the proposed Modification project. The detailed assessment of prescribed impacts of turbine strike for the Project was provided in full within Appendix E of the BDAR (Umwelt 2020a).

As the impacts to avifauna from turbine strike can only be based on predictions made from data captured on the site and literature on the species, the Bird and Bat Adaptive Management Plan (BBAMP) being prepared for the Project will be employed to monitor the resulting operational impacts from the Project. The BBAMP presents a strategy to monitor and mitigate impacts to birds and bats attributable to the operation of the Project. The BBAMP being prepared will be reviewed by the Department of Planning, Industry and Environment (DPIE) in accordance with Condition 23 of Schedule 3 of the NSW Development Consent and by the Commonwealth Minister for the Environment in accordance with the Commonwealth Conditions of Approval.

The BBAMP will broadly comprise operational phase monitoring of birds and bats, risk assessments, impact triggers, mitigation strategy and reporting requirements.

Matters of National Environmental Significance

'Concern of impact on superb parrot-impacts on hollow bearing trees, Golden sun moth, striped legless lizard, white-throated needletail-Impacts from clearing of vegetation' (3)

'Striped legless lizard - lizards are important for other wildlife so there is impact on other species' (5)

'Koala - general objection' (5)

'Golden sun moth - moths are important for other wildlife so there is impact on other species' (5)

'White-throated Needletail - general objection' (5)

'Regent honeyeater - general objection, impact of this species is rated the same as swift parrot' (5)

'Painted honeyeater - general objection, impact of this species is rated the same as swift parrot' (5)

'Impacts to CEEC, superb parrot, golden sun moth, striped legless lizard and white-throated needletail. But additional concerns for WTE [wedge-tailed eagle], koalas, wallaby's and possums' (12)

'Impact from construction and ongoing operation will have on the old forest bushland, crucial habitat of many birds and native animals, five of which are on either the threatened or endangered list, i.e., the superb parrot, swift parrot, white throated needle tail, regent honeyeaters, painted honeyeaters, striped legless lizard and golden sun moth' (19)

'Threats to native fauna / flora, loss/disturbance to CEEC. Removal of habitat/ resource trees for Koalas. Superb parrot, striped legless lizard, golden sun moth - loss of habitat due to land clearing' (22)

As discussed above, the EPBC Act is the federal legislation through which impacts to MNES are assessed. The Referral process is used to determine whether or not a proposed action requires approval under the EPBC Act. The Project has been prepared through the method of Preliminary Documentation and direction to publish, where the Minister will consider the assessment on the information provided upon Referral.

The key component of this process is undertaking Assessments of Significance (AoS) for the MNES that are identified as being impacted, or having the potential to be impacted, by the proposed actions of a Project. AoS must be completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines 1.1 (DoE 2013).

For this Project, AoS were prepared for ten MNES, being:

- White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community,
- Superb parrot,
- Swift parrot,
- White-throated needletail,
- Regent honeyeater,
- Painted honeyeater,
- Striped legless lizard,
- Golden sun moth,
- Koala,
- Rainbow bee-eater,
- Grey falcon, and
- Spotted-tailed quoll.

The AoS were prepared in accordance with Significant Impact Criteria in the Significant Impact Guidelines 1.1 and the majority are provided in Appendix N of the Referral document (Umwelt 2020b). The AoS for the last two species, grey falcon and spotted-tailed quoll, are provided in **Appendix B** of this document.

The Proponent is committed to delivering a biodiversity offset strategy that appropriately compensates for the unavoidable loss of ecological values as a result of the Project.

The offset strategy will be implemented in accordance with the NSW Biodiversity Conservation Regulation 2017 and the Commonwealth-NSW EPBC Bilateral Agreement, and the final details of the offset strategy may evolve as the Project progresses. The strategy could change as the Development Footprint is finalised and as such credit requirement is finalised, extent of credit yield from potential Biodiversity Stewardship Sites and public credit registers are investigated further. As per Condition 21 of the existing state Development Consent (SSD 6693), the Proponent must retire the required biodiversity credits for the Project.

The biodiversity offset strategy being finalised is proposing to utilise up to three offset options available under the BC Act and BC Regulation including:

- Land based offsets through the establishment of new Biodiversity Stewardship Sites (and subsequent retirement of credits). The Proponent would retire the required number and class of credits determined in accordance with the BDAR and the offset rules in the BC Regulation.
- Securing (purchasing) credits through the open credit market, and/or
- Paying into to the Biodiversity Conservation Fund (BCF).

The Proponent intends to satisfy as much as possible of their credit liability for the Project through land-based Biodiversity Stewardship Sites. There are currently four sites being considered that are relatively close to the Project, while other sites are being considered further afield from the Project but are expected to satisfy the like-for-like offsetting rules.

Offset Strategy

'Potential management of listed threatened species and communities. Details provided to not in any way alleviate their concerns about the irreversible and permanent damage that will be associated with the widening of necessary access to install 200m turbines' (21)

The Proponent is committed to delivering a biodiversity offset strategy that appropriately compensates for the unavoidable loss of ecological values as a result of the Project.

The offset strategy will be implemented in accordance with the NSW Biodiversity Conservation Regulation 2017 and the Commonwealth-NSW EPBC Bilateral Agreement. The final composition of the offset strategy may evolve as the Project progresses; further detail on this matter is described in the response above.

Impacts to Superb Parrot

'Project to undo long work of Landcare, LLS and Greening Aust. for superb parrot' (3)

'Superb parrot- Impacts from clearing of vegetation, Negative impacts on wildlife -forcing them towards public roads' (4)

'Superb parrot - concern that overall risk rating is high and development of multiple projects in the area will impact on habitat loss and blade strike. Singular focus on this one project does not recognise flight patterns across the region. Added concern of the loss of hollow bearing trees and time taken to generate the trees' (5)

'Superb parrot - concern of the project having an impact on the local community projects relating to superb parrot, particularly the saving our species programs' (5)

'Primary concern is impact of project on superb parrot. Mention of community programs and going against the recovery plan.' (6)

'Superb parrot- Impacts from clearing of tress/ habitat and impacts to hollow bearing trees - will increase competition from other bird species' (8)

'Superb parrot - Loss of breeding / feeding opportunities from land clearing. Loss of potential hollow bearing trees with deep nest chambers extending to ground level. Stress/competition with other displaced birds- Yellow tailed black cockatoo' (11)

'Impacts to CEEC, superb parrot, golden sun moth, striped legless lizard and white-throated needletail. But additional concerns for WTE, koalas, wallaby's and possums' (12)

'Destruction/loss of hollow bearing trees, disturbance to threatened species -Superb parrot and community programs for the species. Impacts to native fauna and blade impact on bird flight paths. Cumulative effect of wind projects in the region' (15)

'Loss / disturbance of native vegetation, Superb parrot - habitat loss /clearing of hollow bearing trees' (17)

'Superb parrot and other bird species' (18)

'Impact from construction and ongoing operation will have on the old forest bushland, crucial habitat of many birds and native animals, five of which are on either the threatened or endangered list, i.e., the superb parrot…' (19)

'A family of Superb Parrots nested in a hollow in a Yellow Box tree in the next-door garden this Spring. When walking my dogs along Lagoon Creek Road, I witnessed birds including Superb Parrots inhabiting the old forest trees' (19)

'Superb parrot- Impacts from clearing of habitat, hollow bearing trees, and impacts to native fauna/flora due to height of wind turbines and clearing of land. Lack of consideration for cumulative impact on Bango from the WFs in the region. Particular concern of increased turbine size meaning wider easement for transport. 5 species with high impact rating. It is very diverse and should result in ceasing the huge increase size of turbines, because of destruction of further large land areas' (21)

'Threats to native fauna / flora, loss/disturbance to CEEC. Removal of habitat/ resource trees for Koalas. Superb parrot, striped legless lizard, golden sun moth - loss of habitat due to land clearing' (22)

The increased height of turbines proposed as part of the Modification, associated increased RSA and revised number of proposed turbines were all factors that led to an updated assessment of the risk of turbine strike to avifauna being completed for the Project.

A key component of the Prescribed Impact Assessment was in relation to the risk posed to the superb parrot as noted in the section above regarding increases to turbine heights.

As noted above, AoS were completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines (DoE 2013).

An AoS was prepared for the superb parrot and is provided in Appendix N of the Referral document (Umwelt 2020b). This assessment was completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines 1.1 (DoE 2013). The Prescribed Impact Assessment, discussed above, was considered during the preparation of the AoS.

This AoS considered all potential impacts of the Project on the species, including the direct impacts to 20.08 ha of suitable breeding habitat and 233 potentially suitable hollow-bearing trees. Furthermore, detailed assessment of flight data of the superb parrot within the Project area was undertaken to consider potential impacts to the species during operation i.e., impacts from turbine strike. While impacts to superb parrot have been assessed for the Project, based on avoidance of confirmed breeding areas and the low frequency of observed flights at proposed turbine locations, it was determined the Project is unlikely to lead to a long-term decrease in the national population.

An assessment for the superb parrot is provided in Section 1.2 of Appendix N of the Referral document (Umwelt 2020b), concluding that the Project has a "low potential of significant impact on the superb parrot".

As the impacts to avifauna from turbine strike can only be based on predictions made from data captured on the site and literature on species, the BBAMP being prepared for the Project will be employed to monitor the resulting operational impacts from the Project. The BBAMP presents a strategy to monitor and mitigate impacts to the superb parrot attributable to the operation of the Project. The BBAMP being prepared will be reviewed by DPIE in response to Condition 23 of Schedule 3 of the NSW Development Consent and by the Commonwealth Minister for the Environment in accordance with the Commonwealth Conditions of Approval.

The BBAMP will broadly comprise operational phase monitoring of birds and bats, risk assessments, impact triggers, mitigation strategy and reporting requirements.

A key component of the current land-based offset strategy being prepared for the Project is securing suitable breeding habitat for the superb parrot in perpetuity. One of the sites being considered in detail in the local region provides suitable breeding habitat and has had superb parrots confirmed as being present. It is therefore highly likely the species may breed on the property.

In addition to the land-based offset package being focussed on securing breeding habitat for the superb parrot, the Project is also required to prepare and implement a Superb Parrot Conservation Research Plan (SPCRP) as part of Condition 15 of the existing federal approval (EPBC 2014/7163). The Proponent is also required to provide at least $50,000 each year for five years to fund the research activities outlined in the SPCRP. This funding will be used directly to research and implement conservation measures for the species, beyond the coverage of the land-based offsets being considered.

New approval conditions will be assessed, and this commitment will be updated to reflect the requirements of the new EPBC approval, which is currently pending.

The combined outcome of the land-based offset package, the SPCRP and the substantial funding toward the SPCRP is expected to provide the superb parrot with a substantial conservation outcome. This is expected to enhance the knowledge and understanding of the superb parrot in addition to positive outcomes for the species such as planting of suitable vegetation.

The national recovery plan for the superb parrot (Baker-Gabb, D. 2011) describes the reduction in range and population numbers of the species across its pre-European range. The recovery plan documents the major threats to the species being, loss and degradation of habitat, irrigation and regulated flows, firewood collection, timber production, disturbance, illegal removal of wild birds, road-kills, poisoning and competition for nest hollows (Baker-Gabb, D. 2011). Wind energy projects are not documented as being a major threat to the species. However, the removal of suitable breeding habitat for the species as part of the Project is acknowledged to contribute towards the loss of habitat for the species. The recovery plan focusses disturbance on the species as being the removal of river red gum (*Eucalyptus camaldulensis*)

forests. The project is not impacting any stands of this species. In summary, the Project is not considered to be inconsistent with the national recovery plan for the superb parrot.

Impacts to white box yellow box Blakely's red gum grassy woodland and derived native grassland Critically Endangered Ecological Community (CEEC)

'Concerned with the loss /impacts of native ecological communities-White box-Yellow box-Blakely's red gum woodland and DNG' (3)

'CEEC - object that the assessment concludes the project will have a significant impact' (5)

'Loss/disturbance of ecological communities-White box-Yellow box-Blakely's red gum grassy woodland and DNG' (6)

'CEEC - object to the project having a detrimental impact on its own survival and species that rely on it' (6)

'Loss/disturbance of heavy wooded landscapes from land clearing of ecological communities - white box-yellow box-Blakely's gum grassy woodland and DNG. rehab Trees in compensation will not support native wildlife' (8)

'Impacts to CEEC, increases from original approval to modification. Extremely high risk of extinction in the immediate future' (9)

'Impacts to CEEC, superb parrot, golden sun moth, striped legless lizard and white-throated needletail. But additional concerns for WTE, koalas, wallaby's and possums' (12)

'Loss / impacts to Ecological communities - white box - yellow box, Apple box, Stringy bark and Iron bark trees' (18)

'Threats to native fauna / flora, loss/disturbance to CEEC. Removal of habitat/ resource trees for Koalas. Superb parrot, striped legless lizard, golden sun moth - loss of habitat due to land clearing' (22)

'Threats to ecological communities-White box-yellow box-Blakely's gum grass woodland and DNG and stringy bark red gum forests' (23)

As discussed above, the EPBC Act is federal legislation through which impacts to MNES are assessed. The Referral process is used to determine whether or not a proposed action requires approval under the EPBC Act. The Project has been prepared through the method of Preliminary Documentation and direction to publish, where the Minister will consider the assessment on the information provided upon Referral.

As stated above, undertaking AoS for those MNES is the key component of this process and must be completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines (DoE 2013).

An AoS was prepared for the white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC and is provided in Appendix N of the Referral document (Umwelt 2020b). This assessment was completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines 1.1 (DoE 2013).

This AoS considered the removal of 35.73 ha of white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC. While all patches of the community to be impacted by the Project are locally important, the 35.73 ha of impact to the community is not considered important to the long-term survival of the community as a whole.

Nonetheless, the AoS for the white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC is provided in Section 1.1 of Appendix N of the Referral document (Umwelt 2020b), concluding that the Project is "likely to have a significant impact" on the community.

The national recovery plan for the white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC (DECCW 2010) describes the substantial reduction in extent of the community, with some studies suggesting that less than 1% of the pre-1750 extent remains in the Central Lachlan region and less than 4% for the NSW South Western Slopes. The recovery plan documents the key threats to the community being, agricultural and horticultural development, rural residential and urban development, mining, public infrastructure, grazing regimes and pasture management, firewood collection, changed fire regimes, increased soil nutrients and use of chemicals, mowing or slashing regimes, revegetation management, weed invasion, climate change, salinity, acid soils, declining tree health and regeneration (DECCW 2010). Wind energy projects are not documented as being a major threat to the species. As stated in 'Criterion C' of the AoS prepared for the white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC, given its threatened status, important habitat for the community is assumed to consist of patches that meet the condition thresholds of the CEEC. The assessment concluded that while 35.73 ha of the community is proposed to be impacted by the Project, the stands were not considered to be critical to the survival of the community. Justification of this position was largely based on the existing fragmented condition of the community in the locality. Broadly, the stands of the community to be impacted by the Project will not be removed in entirety however existing patches will be reduced in size.

In summary, the Project is not considered to be inconsistent with the national recovery plan for the white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC.

Consideration of National Recovery Plans

'Recovery plans for threatened species/ ecological communities - white box -yellow box-Blakely's gum grass woodland and DNG, striped legless lizard, Superb parrot, Golden sun moth and white-throated needletail' (13)

National recovery plans for white box yellow box Blakely's red gum grassy woodland and derived native grassland CEEC and superb parrot have been considered and assessed in the sections above. In summary, the Project is not considered to be inconsistent with the national recovery plans for either of these values.

There is no nationally prepared recovery plan for the striped legless lizard. However, a national recovery plan for the species was prepared by NSW National Parks and Wildlife Service and Wildlife Pty Ltd (Smith and Robertson 1999). This plan took effect under the EPBC Act from July 2000. The Assessment of Significance for the species concluded that while the Project would impact on 43.29 ha of important habitat for a local population, the remaining 82.82 ha of important habitat would maintain the long-term viability of the important population. Therefore, the Project was considered unlikely to cause adverse impacts to

habitat critical to the survival of the species, including the local occurrence of the important population. The Project and its impacts to striped legless lizard does not contradict the specific objectives of the national recovery plan for the species (Smith and Robertson 1999).

There are no national recovery plans in place for golden sun moth or white-throated needletail.

Impacts to Swift Parrot

'Swift parrot - general objection, impact of this species is rated the same as regent honeyeater and painted honeyeater' (5)

'Swift parrot-imminent assisted extinction due to land clearing and height of turbines. Loss / disturbance to red flowering ironbark' (11)

'Impact from construction and ongoing operation will have on the old forest bushland, crucial habitat of many birds and native animals, five of which are on either the threatened or endangered list, i.e., swift parrot' (19)

The swift parrot was not recorded during extensive surveys for the Project. This includes targeted surveys conducted by NGH Environmental from 8-12 July 2013 or by Umwelt during extensive bird surveys conducted during September and October 2018 and April, July and September 2019.

The swift parrot is an uncommon visitor to woodlands in the Boorowa, Rye Park and Yass region, though the greater south-west slopes region provides key foraging habitat for this species (Saunders and Saunders and Henson 2008). All records in the Boorowa, Rye Park and Yass region since 2000 are from the Frogmore area, approximately 15 kilometres north of the Project where swift parrot were observed in 2001, 2008, 2013 and 2014.

Records of the swift parrot within the Project area made by a member of the community is recognised as being plausible. Detail on the record however is not publicly available, i.e., it has not been submitted to the NSW Atlas, so the location, date and nature of the record could not be considered during the assessment for the species on the Project. The swift parrot assessment did not conclude that the species will not occur in the Project, but rather it was not recorded during the extensive multiple surveys. The Assessment of Significance, discussed above, was completed with reference to public records in the wider region as well as potentially suitable habitat for the species.

Despite the swift parrot not being recorded during extensive surveys for the Project, in recognition of the potential for the species to occur in the region, an AoS was prepared for the swift parrot and is provided in Appendix N of the Referral document (Umwelt 2020b). This assessment was completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines (DoE 2013).

Specifically, the AoS for the swift parrot is provided in Section 1.3 of Appendix N of the Referral document (Umwelt 2020b), concluding that the Project was "unlikely to have a significant impact on the swift parrot".

Cumulative Effects

'Cumulative effect of turbines in the region will further increase likelihood of blade strike, reduced habitat and breeding areas' (5)

'Cumulative effect of turbines in the region will further increase likelihood of blade strike, reduced habitat and breeding areas' (6)

A detailed assessment of turbine strike risk to aerial fauna species (including birds and bats) was completed as part of the Biodiversity Assessment for the Project (Umwelt 2020a). This assessment was completed for the suite of species identified as having the greatest potential risk of impact from the Project, a list that was developed through consultation with BCD. This included consideration of MNES species recorded by the Project, superb parrot and painted honeyeater.

As part of this assessment, cumulative impacts of potential turbine impacts from the Project as well as existing wind farms in the region were considered for superb parrot. The detailed assessment of prescribed impacts of turbine strike for the Project was provided in full within Append E of the BDAR (Umwelt 2020a). Specifically, the cumulative impact assessment was provided in Section 6.0 of that document.

The assessment of prescribed impacts of turbine strike for the Project was summarised for the superb parrot in Appendix H the EPBC Act re-referral process (Umwelt 2020b). This can be found in Section 2.4.2.

At present there are a total of 122 operational turbines in the region with a further 131 under construction and 75 approved. The installation of 77 wind turbines at RPWF will result in a 32% increase in the number of turbines in the region (assuming prior completion of the three wind farms currently under construction). It is noted that the impact of each turbine on the species assessed here would not be equal across the region considering variability in abundance and site occupancy at multiple spatial scales (i.e. landscape scale, within wind farm scale) and variability in turbine specifications would influence the likelihood of collisions.

Cumulative impacts on the extent of wind turbines in the region is documented in the state submissions report (Tilt Renewables 2020b). Specifically, in regard to bird and bat strikes this is presented in Section 4.5.3, for cumulative visual impacts this is presented in Section 4.2.5, for cumulative noise impacts this is presented in Section 4.5.7 and for cumulative health impacts this is presented in Section 4.2.12 (Tilt Renewables 2020b).

Furthermore, for those EPBC Act listed species recorded or considered likely to occur in the Indicative Development Footprints based on the identification of suitable habitat, an AoS was undertaken (Umwelt 2020b). These assessments were completed in accordance with the Significant Impact Criteria in the Significant Impact Guidelines 1.1 (DoE 2013).

Superb parrot nest site preference

'A recent study (11.12.20) released by the ANU, indicates the difficulty for Superb Parrots to find suitable nesting trees with only 0.5% of hollow bearing trees being suitable. With this in mind, no hollow bearing trees should be removed from the Rye Park Wind Farm site, as each tree may be the only suitable' (5)

'Recent findings by The Australian National University indicate that Superb Parrots are "picky" about the trees that they nest in with only 0.5% of tree hollows fitting their preferred criteria. This new research indicates that the removal of any hollow bearing tree could be the only tree that the birds would choose in the area, and therefore no trees should be removed at the Rye Park Wind Farm site, to ensure the survival of this species. Ref: Dejan Stojanovic et al. Suitable nesting sites for specialized cavity dependent wildlife are rare in woodland, Forest Ecology and Management (2020)' (6)

'A recent study carried out in partnership between ANU and the Environment, Planning and Sustainable Development Directorate found that Superb parrots like hollows in large tree limbs that have deep chambers, wide entrances and enough space on the floor for a big family and that this particular combination of traits is especially rare, and only 0.5 per cent of tree hollows in a woodland actually fit these criteria' (8)

'Recent studies have confirmed that this parrot species is "picky" about suitable nesting sites (see attached recent article), whereas I have known virtually all my life this species enters an old eucalypt tree through a narrow entry and then the actual nesting chamber is very deep within that tree often even at ground level' (11)

'Recent ABC News Television released information relating to new studies re "picky" choice of tree types chosen for nesting. "The particular combinations of traits is especially rare, and only 0.5% of tree hollows fit this criteria" Dr D Stojanovic (ANU December 2020)' (21)

In the preparation of this response to submissions report, Umwelt considered research from the Australian National University (ANU) relating to how selective (or "picky") the superb parrot is with the types of tree hollows they nest in (Stojanovic et al. 2021).

The study found that individuals of the species prefer hollows in large tree limbs, with a wide entrance, deep chambers and space on the hollow floor, a combination of characteristics that only 0.5 per cent of tree hollows in a woodland actually meet (Stojanovic et al. 2021). .

The approach taken within the BDAR (Umwelt 2020) assessed all of Vegetation Zone 3, PCT 350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion, as being potential breeding habitat for the superb parrot. It recognised that within this habitat, both known and potential superb parrot nest trees were identified. In addition to this, it is widely recognised that the Project occurs in a locality of NSW that is widely used by superb parrots. The approach taken in assessing impacts to all of Vegetation Zone 3 accounts for all hollow-bearing trees that occur within it, which have the potential to be used for superb parrot nests.

The research by ANU finds that it is difficult to determine whether or not a hollow bearing tree is in fact suitable for superb parrot (Stojanovic et al. 2021), without intensive and intrusive means. In the absence of this, the precautionary approach of considering all eucalypt woodland habitat, of PCT 350, as potential nesting habitat for the species is considered suitable for the Project.

Additional impact consideration following recent bushfire seasons

'wake of the 219-2020 bushfires and the extensive loss of our native forests and bushland…there is an enormous pressure to keep White box -Yellow box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in our region and Rye Park' (3)

'…removal of trees and impact of future bushfire reduces habitat for koalas. Minimising destruction of koala habitat should be a national priority' (5)

'With the huge loss of habitat for many species in the 2020 Summer bushfires, further destruction or removal of any plant matter should be avoided. The Orroral Valley bushfire, burnt almost 63000 hectares of bushland, only 2 hours drive from Rye Park. Members of the Rye Park community have indicated that they are seeing birdlife in the area, that have not been there before, as surviving birds search for feeding and roosting areas, as their own habitat has been destroyed by fire. This puts further pressure on the feeding grounds and habitat of the Superb Parrot, which would be further exacerbated by the Wind Farm project.' (6)

'There has been a significant recent loss of habitat of many species following the 2020 summer bushfires. It is my clients' position, that the proposed clearing of further habitat to make way for the modified Rye Park Wind Farm with an operating lifespan of 25 years, in an area already saturated with wind farms, will lead to unacceptable and irreversible environmental damage and is wrong' (9)

'…the devastating Summer of 2019/2020 many of these fires where less than 100/150 kilometres away…will all add to further pushing *Polytelis swainsonii* towards extinction?' (11)

'The destruction of native bush land and wildlife, following the horrendous fires last year [2020] is incomprehensible' (15)

A number of submissions expressed concerns about the ecological impacts of the Project in light of the recent bushfires in NSW and ACT, specifically those in the 2019 and 2020 fire seasons. The Applicant recognises that these fires are regarded as being unprecedented in Australia for bushfires and that the community is understandably concerned about the risk and impacts of wild bushfires. See Section 4.2.10 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses fire and bushfire in further detail. The state Response to Submissions Report is provided in **Appendix C.**

In relation to the perceived cumulative ecological impact of the Project in light of the recent bush fire season, it is worth noting that the particular region of the Project was largely unaffected by them. Using the publicly available 'Google Earth Engine Burnt Area Map' (DPIE 2020), the three closest known burnt areas were:

- Approximately 82 kilometres south near Braidwood, NSW,
- Approximately 88 kilometres to the south-east at Tolwong, NSW, and
- Approximately 94 kilometres to the east at Bannaby, NSW.

It is recognised that recent, and even historic, bush fires cause substantial impact to flora and fauna species (threatened and non-threatened) directly as well as indirectly through habitat destruction and will affect demographics, movement patterns and habitat resources in nearby areas not directly affected by the fire itself. However, the substantial distance at which these recent bushfire events occurred in relation to the Project is not considered likely to lead to an increased cumulative impact (resulting from the project and the fires) on the species and habitats identified.

Erosion

'Erosion from construction will impact the environment, waterways, habitats of endangered fish' (3)

'Increased erosion and impact on southern pygmy perch in Blakeney Creek' (6)

'Erosion from construction will impact vegetation, platypus, water rats and native fish' (21)

'Erosion issues in the region and increased risk from construction of project' (23)

As part of the current state Development Consent (SSD-6693), the Project is required to prepare a Biodiversity Management Plan (BMP) in consultation with Biodiversity Conservation Division (BCD) to the satisfaction of the Secretary. The BMP is currently in preparation and yet to be finalised. It is noted that a Roadside Vegetation Management Plan will no longer be prepared for the Project. Instead, relevant information that would have otherwise being addressed in such a management plan will now be incorporated within the BMP.

Key components of the BMP include measures that will be implemented to minimise potential indirect impacts on several threatened flora and fauna species, rehabilitating and revegetating temporary disturbance areas and controlling erosion.

In relation to temporary disturbance areas, the Project will preferentially revegetate these areas with previously collected native grasses, prioritising the use of wallaby grasses (*Rytidosperma* spp.) and spear grasses (*Austrostipa* spp.). This measure will assist in minimising the risk of erosion during the construction and operation of the Project.

The Ground Disturbance Permit process will identify where erosion issues are likely to occur as a result of the ground disturbance / construction works.

Where an erosion risk is identified, the construction environment representative will prepare and implement an Erosion and Sediment Control Plan with reference to the *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004). This plan will be implemented prior to commencement of major ground disturbance works in the area. The plan will ensure that all aspects of the Project are constructed and maintained to minimise soil erosion.

Non-EPBC Act listed Entities

'Potential disturbance to creek beds -southern pygmy perch' (6)

'Impacts /contamination to Pudman Creek records of platypus - impacts to habitat form land clearing' (8)

'Impacts /contamination to creek beds- Southern Pygmy Perch, Pudman Creek records of platypus - impacts to habitat form land clearing' (8)

'Diamond firetail-loss/disturbance from habitat/ vegetation structure and food sources from land clearing' (11)

'Additional concerns for…wallaby's and possums' (12)

'Impacts on water quality for eastern pygmy perch. Loss of native fauna and flora' (17)

'As well the black tailed wallaby, eastern grey kangaroo, possums, echidnas, frilled neck and shingle back lizards and Wedgetail Eagles' (19)

'Erosion from construction will impact vegetation, platypus, water rats and native fish' (21)

A number of the species referred to in these submissions are not listed as threatened species under the EPBC Act, namely diamond firetail, platypus, wallaby, possum, black tailed wallaby, eastern grey kangaroo, echidna, frilled neck and shingle back lizards and wedge-tailed eagle. As such, they do not require specific assessment as part of the Referral process.

However, a detailed assessment of turbine strike risk to aerial fauna species was completed as part of the Biodiversity Assessment for the Project (Umwelt 2020a). This assessment was completed for the suite of species identified as having the greatest potential risk of impact from the Project, a list that was developed through consultation with the BCD. The wedge-tailed eagle was included in this list of species.

The detailed assessment of prescribed impacts of turbine strike for the Project on the wedge-tailed eagle is provided in full within Append E of the BDAR (Umwelt 2020a). Specifically, the predictions of likelihood of impact and rates of impact for the species is provided in Section 4.3.3 of that document.

4.2 General Topic Submissions

4.2.1 Aviation Safety

'DAWE should revisit the above Rules, as Air Services Australia are intending to restrict Class G air space in CTA to 1.500 ft AGL in a few month's time!' 'For light aircraft scud running under heavy clouds, in bad weather things are going to get very tight in missing 200-metre-high Turbine Towers. Which raises the question - Does this 1500 ft AGL get measured from the ground or the Tips of the Wind Turbine Blades?' (12)

This matter has been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Section 4.3.2 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses aviation safety in further detail. The state Response to Submissions Report is provided in **Appendix C**.

4.2.2 Decommissioning

'Is there a guaranteed undertaking that all non-functioning end-of-life wind farms will be properly decommissioned, and the sites repatriated? This must be considered a mandatory requirement, surely, for a truly 'green' environment into the future.' (1)

'Accountability for decommissioning the turbines and rehabilitation – an even greater issue with the proposed modifications.' (2)

'…not to mention the difficulties of managing their decommissioning and waste management.' (4)

'…their decommissioning creates a problem in that the blades cannot be recycled and have to be buried.' (19)

These matters have been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Section 4.5.17 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses general decommissioning and rehabilitation in further detail. The state Response to Submissions Report is provided in **Appendix C**.

4.2.3 Procedural Matters

'I would like to voice my disapproval because the community was not given notice of this EPBC in the December 2020 Rye Park Wind Farm Newsletter, nor at the November 2020 Community Consultative Committee Meeting. It does not demonstrate an open and transparent process by TILT. I have not been able to view the document as Rye Park Post Office is only open 4 hours a week in total and the hours it is open, I am at' work 45 Kms away. (3)

'The local community was not given notice of this EPBC in the December 2020 Rye Park Wind Farm Newsletter or at the November 2020 Community Consultative Committee Meeting. This EPBC has been submitted at holiday time when the community's focus is on other things. Boorowa local people, who don't have access to the internet, have to go to Rye Park Post Office (check opening hours), Yass or Canberra to view other copies of the report.' (5)

'...this EPBC was not mentioned in either the December Newsletter about the Wind Farm, nor at the November 2020 Community Consultative Committee Meeting, of which I am a member. With only 2 weeks to read the Rye Park Wind Farm EPBC 2020/8837 document, to check details and to formulate a response, whilst still working fulltime and running a farming property, I believe that the process continues to support the developer and hinder the community. This is not adequate time to give this document the response it deserves.' (6)

'Also being that this project is in the Hilltops region why was this not on exhibition at Boorowa the next closest town? Instead, it was on exhibition in another electorate at Yass. Yes, it was on exhibition at Rye Park but this project effects a large area including residents of Boorowa.' (7)

'Incomplete maps (my house isn't on your map or school bus stop/routes)' (7)

'TILT's lack of commitment to Community Consultation is again evident by the omission of any mention of this in the TILT December 'Newsletter' and not sending it to community members on their 'mailing list'. It again breaches their stated 'Do not go under the radar' commitment (Appx I page 13). One notice hidden in a Sydney newspaper and one supposedly in the Boorowa newspaper, that no one can find and that a newspaper employee states was never submitted, is not Community Consultation. The rationale behind the Community's submissions/comment having to be sent to TILT and not the DPIE was not explained. Requests for information about this from the DPIE and the Office of the Windfarm Commissioner were not responded to. The Rye Park Post Office is on Yass Street and is only open for 1 hour (9.30am to 10.30am) 4 days a week. Why was no documentation /information made available in Boorowa?' (8)

'While there are hints of high voltage power lines running on or under High Rock Road the supplied maps are just mud maps, no real use for residents to evaluate proposed work.' (12)

'Tilt did not provide any of these documents for Public Exhibition to the Hilltops Council for local people to view! I only found out about this need for a submission last Thursday! To date, not one member of Tilt's team or their contractors has ever visited my property to see potential our problems! Where is the Hilltop Council? As usual asleep in the RPWF local project management! Also have NSW Government departments responsible been preforming their duties in oversight of the RPFW project?' (12)

'Please forward this submission to the Federal Minister of the Environment Sussan Ley for her consideration.' (14)

'TILT submissions to provide compensation does not in any form offer a solution. It is disappointing that so little time has been given to respond to such an important issue. TILT has not given the wide community notification; mentioned in a small low circulation of a local newspaper and the Daily Telegraph has not been

satisfactory. (It was accidental that we found out.) Opportunity existed for notification in December Newsletter, also from TILT employee who has made several personal visits to Rye Park this year. It is well known that Covid19 issues re public meetings can be totally accommodated in total safety at Rye Park.' (21)

'Access to written information has been welcomed, however the 1160 pages is a massive amount to process, and with a total of 9 hours access, including last day of submission, has been inadequate. TILT is aware of the total 4 hours a week of Rye Park Post Office hours. This has made the response task most difficult.' (21)

'We like to take this opportunity for those involved in the EPBC for notification for this submission as you are fully aware, we were not given any invitation or notification to take part in any way in this submission. So again, it shows the integrity of Tilt which there is none. We notify by neighbour regards the EPBC issue on the 28th of January 2021 at 6pm. This has put us in a position of submitting a submission that is incomplete.' (22)

The Proponent followed all directives and processes prescribed by DAWE in regard to locations where Preliminary Documentation was to be exhibited, the length of the exhibition period, and requirements to advertise in newspapers circulated regionally and throughout NSW.

Preliminary Documentation was published in three online locations: within the CCC Minutes webpage, on the EPBC Public Exhibition page, and on the Rye Park Wind Farm website.

Notification about Preliminary Documentation appeared in the Daily Telegraph on 11 and 14 January 2021 and in the Boorowa News on 14 January 2021. Two copies of the Preliminary Documentation were provided to both Yass Council and the Rye Park Post Office. The Preliminary Documentation was also provided to the Yass Library and the DAWE office in Canberra ACT. At the time of this report, the Preliminary Documentation is still on display at Yass Library.

4.2.4 Project Justification

'Have any documented studies been done to ascertain as to how much fossil fuel is being and will be used to construct these farms and the components used in them, as opposed to how much energy will be produced over their lifetime?' (1)

'The increase in the earth's resources that will be required for the additional height, along with the current issue of how the copper and other metals for the turbines are sourced.' (2)

'The industrialisation of our natural landscape and the pouring of resources into a project that has a short life-span.' (2)

'...I believe that these turbines are not an effective way to reduce greenhouse gases to the significant resources needed to build, erect, run and maintain them' (4)

'It has been scientifically calculated that the resourcing of materials, manufacture and installation of one wind tower/turbine creates a greater carbon footprint than what that same tower/turbine can save in twenty-five years of operation. Then at the end of their relatively short life' (19)

These matters have been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Sections 2.4 and 4.5.18 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that address general project justification and project rationale in further detail. The state Response to Submissions Report is provided in **Appendix C**.

4.2.5 Property Values

'Land values being adversely affected' (2)

'Land reimbursements/purchases to adjust roads to deliver the wind turbines' (7)

These matters have been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Section 4.2.11 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses general property values in further detail. The state Response to Submissions Report is provided in **Appendix C**.

Where the Preferred Transport Route encroaches onto private property, the Proponent has obtained a licence with the property owner to compensate for the temporary loss of land during both construction and operation.

4.2.6 Traffic and Transport

'In return for a huge pile of taxpayer money TILT initially will flood Rye Park and surrounding areas with heavy trucks and other heavy equipment trundling through our narrow streets and access roads delivering (sometimes with great difficulty and inconvenience to local traffic) huge and ungainly equipment and associated installation materials.' (1)

'Information on the use of local roads by the RPWF project is very scant, for example the only road to our property is High Rock Road. While all that work is going on, just how do we maintain access to get to the Village?' (12)

'The use of the main Street in Rye Park as a main preferred Route for heavy vehicles is certainly not in the question. This will affect the environment more than is thought effecting people who are living in the area where they come because of the quite country life. This area will become an industrial area not a residential area as it is now. (18)'

These matters have been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Sections 4.2.4 and 4.5.5 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses general traffic and transport issues in further detail. The state Response to Submissions Report is provided in **Appendix C**.

4.2.7 Visual Amenity

General concerns around 'Visual amenity' (2)

This matter has been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Section 4.2.5 and Appendices C and H in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses general visual amenity issues in further detail. The state Response to Submissions Report is provided in **Appendix C**.

4.2.8 Other Issues

'The methodology used in the Shadow Flicker Assessment (SFA) was informed by these guidelines and standard industry practises based on guidelines adopted in the UK (where is not a lot of sunshine) which is common practice in NSW. However, using that methodology does not appear to take into account where a residence/building is located on top of a hill opposite to where the WTG's (Wind Turbine Generators) are located, as is the case of my residence – R38!' (12)

'We understand that our peace and contentment is likely to be severely intruded upon for at least 2 years.' (1)

'Wind turbines are known to alter the surrounding microclimate, particular with reference to humidity and nocturnal temperatures' (10)

The first two matters above have been assessed and addressed as part of the Proponent's request to modify State Significant Development Consent SSD-6693 under the EP&A Act. See Sections 4.5.14 and 4.2.11 in the Response to Submissions Report (Tilt Renewables Limited, 2020b) that addresses general shadow flicker and general socio-economic issues in further detail. The state Response to Submissions Report is provided in **Appendix C**.

Any humidity or temperature changes due to the action of blades will be slight and will have minimal impact.

5.0 Department of Agriculture, Water and the Environment Request for Information

Following exhibition of the re-referral documentation for the Project, several requests for information have been sought by DAWE, which are summarised below.

On Friday 19 February 2021, DAWE provided a formal request for the following information:

- Extent and condition of Box Gum Woodland,
- White-throated needletail mitigation measures,
- Grey falcon (*Falco hypoleucus*), and
- Spotted-tail quoll (*Dasyurus maculatus maculatus*).

On Friday 29 January 2021, DAWE requested the following information:

- A calculation of how many credits are needed to offset impacts to the EPBC listed community, White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC.
- Clarification of impact areas for the Project on EPBC Act listed matters, particularly in relation to striped legless lizard and golden sun moth.
- Provide some additional information regarding 'trigger values' for the Bird and Bat Adaptive Management Plan, explaining what these are and how they would work.

On Tuesday 2 February 2021, DAWE requested the following information:

- Please provide the department with a copy of the offset strategy for the project.

A formal response to all four components above is provided in **Appendix B**.

6.0 References

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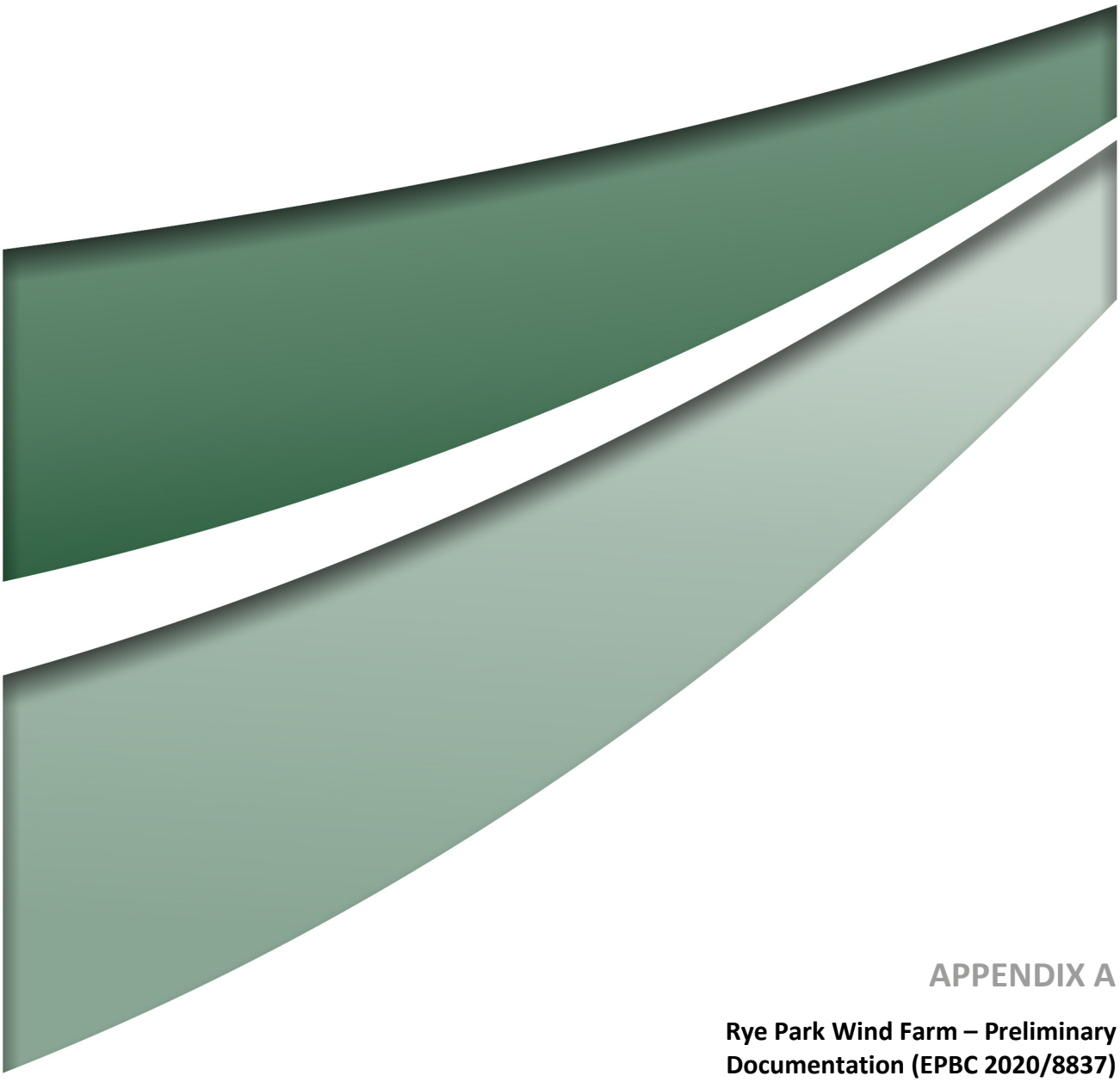


APPENDIX A

Rye Park Wind Farm – Preliminary Documentation (EPBC 2020/8837) Submissions Summary

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
26-Jan-21	1	Not supportive	Other Issues	"We understand that our peace and contentment is likely to be severely intruded upon for at least 2 years."
26-Jan-21	1	Not supportive	Project Justification	"Have any documented studies been done to ascertain as to how much fossil fuel is being and will be used to construct these farms and the components used in them, as opposed to how much energy will be produced over their lifetime?"
26-Jan-21	1	Not supportive	Traffic and Transport	"In return for a huge pile of taxpayer money TILT initially will flood Rye Park and surrounding areas with heavy trucks and other heavy equipment trundling through our narrow streets and access roads delivering (sometimes with great difficulty and inconvenience to local traffic) huge and ungainly equipment and associated installation materials."
26-Jan-21	1	Not supportive	Ecology	Wildlife (much of it Native to this region only) and environment will have to suffer extensively and irreversibly (and therefore expensively) as a direct result. Will undoubtedly include the loss of some species of flora and fauna.
26-Jan-21	1	Not supportive	Decommissioning	"Is there a guaranteed undertaking that all non-functioning end-of-life wind farms will be properly decommissioned, and the sites repatriated? This must be considered a mandatory requirement, surely, for a truly 'green' environment into the future."
28-Jan-21	2	Not supportive	Ecology	Loss / disturbance of native wildlife and natural environments from the increase of transport on routes. Concerned with Increased impact on the local environment, waterways and our native flora and fauna with the height increase. We'd be really interested to see a Natural Capital Accounting process completed for equivalent wind farms at 157m and 200m, so that we have clarification on the value of the ecosystem processes being impacted by the project, versus the value of the energy being generated.
28-Jan-21	2	Not supportive	Decommissioning	"Accountability for decommissioning the turbines and rehabilitation – an even greater issue with the proposed modifications."

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
28-Jan-21	2	Not supportive	Project Justification	"The increase in the earth's resources that will be required for the additional height, along with the current issue of how the copper and other metals for the turbines are sourced."
28-Jan-21	2	Not supportive	Property Values	"Land values being adversely affected"
28-Jan-21	2	Not supportive	Project Justification	"The industrialisation of our natural landscape and the pouring of resources into a project that has a short life-span."
28-Jan-21	2	Not supportive	Visual Amenity	General concerns around "Visual amenity"
28-Jan-21	3	Not supportive	Ecology	Erosion from construction will impact the environment, waterways, habitats of endangered fish.
28-Jan-21	3	Not supportive	Procedural Matters	"I would like to voice my disapproval because the community was not given notice of this EPBC in the December 2020 Rye Park Wind Farm Newsletter, nor at the November 2020 Community Consultative Committee Meeting. It does not demonstrate an open and transparent process by TILT. I have not been able to view the document as Rye Park Post Office is only open 4 hours a week in total and the hours it is open, I am at work 45 Kms away."
28-Jan-21	3	Not supportive	Ecology	Concern of impact on superb parrot-impacts on hollow bearing trees, Golden sun moth, striped legless lizard, white-throated needletail-Impacts from clearing of vegetation. Concerned with the loss /impacts of native ecological communities -White box-Yellow box-Blakely's red gum woodland and DNG. Impacts will put pressure on threatened species and wildlife. Concern of 30-year life expectancy for project and long-lasting impact on species. Project to undo long work of Landcare, LLS and Greening Aust. for superb parrot.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
28-Jan-21	3	Not supportive	Ecology	In the wake of the 219-2020 bushfires and the extensive loss of our native forests and bushland in the ACT region, Braidwood, Southern Highlands, and South Coast regions there is an enormous pressure to keep White box -Yellow box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in our region and Rye Park.
29-Jan-21	4	Not supportive	Ecology	Superb parrot- Impacts from clearing of vegetation, Negative impacts on wildlife -forcing them towards public roads. Increase of 200m height will cause impacts on native vegetation and wildlife.
29-Jan-21	4	Not supportive	Project Justification	"…I believe that these turbines are not an effective way to reduce greenhouse gases to the significant resources needed to build, erect, run and maintain them"
29-Jan-21	4	Not supportive	Decommissioning	"...not to mention the difficulties of managing their decommissioning and waste management."
29-Jan-21	5	Not supportive	Ecology	Cumulative effect of turbines in the region will further increase likelihood of blade strike, reduced habitat and breeding areas. Increased development footprint.
29-Jan-21	5	Not supportive	Ecology	Striped legless lizard - lizards are important for other wildlife so there is impact on other species.
29-Jan-21	5	Not supportive	Ecology	Koala - general objection
29-Jan-21	5	Not supportive	Ecology	Golden sun moth - moths are important for other wildlife so there is impact on other species.
29-Jan-21	5	Not supportive	Ecology	CEEC - object that the assessment concludes the project will have a significant impact.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
29-Jan-21	5	Not supportive	Ecology	Superb parrot - concern that overall risk rating is high and development of multiple projects in the area will impact on habitat loss and blade strike. Singular focus on this one project does not recognise flight patterns across the region. Added concern of the loss of hollow bearing trees and time taken to generate the trees.
29-Jan-21	5	Not supportive	Ecology	Superb parrot - concern of the project having an impact on the local community projects relating to superb parrot, particularly the saving our species programs.
29-Jan-21	5	Not supportive	Ecology	White-throated Needletail - general objection
29-Jan-21	5	Not supportive	Ecology	Regent honeyeater - general objection, impact of this species is rated the same as swift parrot.
29-Jan-21	5	Not supportive	Ecology	Swift parrot - general objection, impact of this species is rated the same as regent honeyeater and painted honeyeater.
29-Jan-21	5	Not supportive	Ecology	Painted honeyeater - general objection, impact of this species is rated the same as swift parrot.
29-Jan-21	5	Not supportive	Ecology	There will be an impact (even if it not considered significant at this stage) by the reduction of trees. The removal of trees and impact of future bushfire reduces habitat for koalas. Minimising destruction of koala habitat should be a national priority
29-Jan-21	5	Not supportive	Ecology	A recent study (11.12.20) released by the ANU, indicates the difficulty for Superb Parrots to find suitable nesting trees with only 0.5% of hollow bearing trees being suitable. With this in mind, no hollow bearing trees should be removed from the Rye Park Wind Farm site, as each tree may be the only suitable.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
29-Jan-21	5	Not supportive	Procedural Matters	"The local community was not given notice of this EPBC in the December 2020 Rye Park Wind Farm Newsletter or at the November 2020 Community Consultative Committee Meeting. This EPBC has been submitted at holiday time when the community's focus is on other things." "Boorowa local people, who don't have access to the internet, have to go to Rye Park Post Office (check opening hours), Yass or Canberra to view other copies of the report."
27-Jan-21	6	Not supportive	Ecology	Cumulative effect of turbines in the region will further increase likelihood of blade strike, reduced habitat and breeding areas. Increased development footprint.
27-Jan-21	6	Not supportive	Ecology	Increased erosion and impact on southern pygmy perch in Blakney Creek.
27-Jan-21	6	Not supportive	Procedural Matters	"...this EPBC was not mentioned in either the December Newsletter about the Wind Farm, nor at the November 2020 Community Consultative Committee Meeting, of which I am a member." "With only 2 weeks to read the Rye Park Wind Farm EPBC 2020/8837 document, to check details and to formulate a response, whilst still working fulltime and running a farming property, I believe that the process continues to support the developer and hinder the community. This is not adequate time to give this document the response it deserves."
27-Jan-21	6	Not supportive	Ecology	Potential disturbance to creek beds -southern pygmy perch, Loss/disturbance of ecological communities -White box-Yellow box -blakely's red gum grassy woodland and DNG.
27-Jan-21	6	Not supportive	Ecology	CEEC - object to the project having a detrimental impact on its own survival and species that rely on it.
27-Jan-21	6	Not supportive	Ecology	Primary concern is impact of project on superb parrot. Mention of community programs and going against the recovery plan.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
27-Jan-21	6	Not supportive	Ecology	With the huge loss of habitat for many species in the 2020 Summer bushfires, further destruction or removal of any plant matter should be avoided. The Orroral Valley bushfire, burnt almost 63000 hectares of bushland, only 2 hours drive from Rye Park. Members of the Rye Park community have indicated that they are seeing birdlife in the area, that have not been there before, as surviving birds search for feeding and roosting areas, as their own habitat has been destroyed by fire. This puts further pressure on the feeding grounds and habitat of the Superb Parrot, which would be further exacerbated by the Wind Farm project.
27-Jan-21	6	Not supportive	Ecology	Recent findings by The Australian National University indicate that Superb Parrots are “picky” about the trees that they nest in with only 0.5% of tree hollows fitting their preferred criteria. This new research indicates that the removal of any hollow bearing tree could be the only tree that the birds would choose in the area, and therefore no trees should be removed at the Rye Park Wind Farm site, to ensure the survival of this species. Ref: Dejan Stojanovic et al. Suitable nesting sites for specialized cavity dependent wildlife are rare in woodland, Forest Ecology and Management (2020)
29-Jan-21	7	Not supportive	Ecology	Broadly pointing out impacts to threatened entities and impacts to remnant vegetation.
29-Jan-21	7	Not supportive	Procedural Matters	"Also being that this project is in the Hilltops region why was this not on exhibition at Boorowa the next closest town? Instead, it was on exhibition in another electorate at Yass. Yes, it was on exhibition at Rye Park but this project effects a large area including residents of Boorowa."
29-Jan-21	7	Not supportive	Property Values	"Land reimbursements/purchases to adjust roads to deliver the wind turbines"
29-Jan-21	7	Not supportive	Procedural Matters	"Incomplete maps (my house isn’t on your map or school bus stop/routes)"

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
29-Jan-21	8	Not supportive	Ecology	Loss/disturbance of heavy wooded landscapes from land clearing of ecological communities - white box-yellow box-Blakely's gum grassy woodland and DNG. rehab Trees in compensation will not support native wildlife.
29-Jan-21	8	Not supportive	Ecology	Impacts /contamination to creek beds- Southern Pygmy Perch, Pudman Creek records of platypus - impacts to habitat form land clearing
29-Jan-21	8	Not supportive	Ecology	Superb parrot- Impacts from clearing of tress/ habitat and impacts to hollow bearing trees - will increase competition from other bird species.
29-Jan-21	8	Not supportive	Ecology	A recent study carried out in partnership between ANU and the Environment, Planning and Sustainable Development Directorate found that Superb parrots like hollows in large tree limbs that have deep chambers, wide entrances and enough space on the floor for a big family and that this particular combination of traits is especially rare, and only 0.5 per cent of tree hollows in a woodland actually fit these criteria.
29-Jan-21	8	Not supportive	Procedural Matters	"TILT's lack of commitment to Community Consultation is again evident by the omission of any mention of this in the TILT December 'Newsletter' and not sending it to community members on their 'mailing list'. It again breaches their stated 'Do not go under the radar' commitment (Appx I page 13). One notice hidden in a Sydney newspaper and one supposedly in the Boorowa newspaper, that no one can find and that a newspaper employee states was never submitted, is not Community Consultation." "The rationale behind the Community's submissions/comment having to be sent to TILT and not the DPIE was not explained. Requests for information about this from the DPIE and the Office of the Windfarm Commissioner were not responded to." "The Rye Park Post Office is on Yass Street and is only open for 1 hour (9.30am to 10.30am) 4 days a week. Why was no documentation /information made available in Boorowa?"
29-Jan-21	9	Not supportive	Ecology	Doubling of the disturbance area compared with the original approval.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
29-Jan-21	9	Not supportive	Ecology	Significant habitat loss for fauna. Loss/ disturbance to flora species. Disagree with approach of avoiding and reducing impacts as it does not create more of a value.
29-Jan-21	9	Not supportive	Ecology	Impacts to CEEC, increases from original approval to modification. Extremely high risk of extinction in the immediate future.
29-Jan-21	9	Not supportive	Ecology	There has been a significant recent loss of habitat of many species following the 2020 summer bushfires. It is my clients' position, that the proposed clearing of further habitat to make way for the modified Rye Park Wind Farm with an operating lifespan of 25 years, in an area already saturated with wind farms, will lead to unacceptable and irreversible environmental damage and is wrong.
15-Jan-21	10	Not supportive	Other Issues	"Wind turbines are known to alter the surrounding microclimate, particular with reference to humidity and nocturnal temperatures"
15-Jan-21	10	Not supportive	Ecology	Project modifications will cause impacts/ push threatened species further to extinction - interfering with the ability of animals to detect prey and predators, will cause harm to native fauna. Impacts will push endangered fauna and flora towards extinction
29-Jan-21	11	Not supportive	Ecology	Habitat destruction-loss/disturbance from clearing of land, Loss of hollow bearing trees-Concerned with disturbance of white box-yellow box -Blakely's gum grassland woodland and Red flowering ironbark and native vegetation.
29-Jan-21	11	Not supportive	Ecology	Diamond firetail-loss/disturbance from habitat/ vegetation structure and food sources from land clearing.
29-Jan-21	11	Not supportive	Ecology	Superb parrot - Loss of breeding / feeding opportunities from land clearing. Loss of potential hollow bearing trees with deep nest chambers extending to ground level. Stress/competition with other displaced birds- Yellow tailed black cockatoo

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
29-Jan-21	11	Not supportive	Ecology	Swift parrot-imminent assisted extinction due to land clearing and height of turbines. Loss / disturbance to red flowering ironbark.
29-Jan-21	11	Not supportive	Ecology	Also attached an article I wrote circa Spring 2007 regarding this subject for Australian Aviary Life “Superb Parrot Under Attack from Wind Farm Development” whilst dated, since now the combined footprint of the Rye Park and Bango projects have increased massively added to both projects’ height and rotor swing areas’ massive increases? Recent studies have confirmed that this parrot species is “picky” about suitable nesting sites (see attached recent article), whereas I have known virtually all my life this species enters an old eucalypt tree through a narrow entry and then the actual nesting chamber is very deep within that tree often even at ground level.
29-Jan-21	11	Not supportive	Ecology	Combining all this with the competition on limited habitat resources by displaced birds such as the Yellow Tailed Black Cockatoo Calyptorhynchus funereus from the devastating Summer of 2019/2020 many of these fires where less than 100/150 kilometres away, and the manmade redistribution of another cockatoo the Short-Billed Corella Cacatua sanguinea gymnopsis will all add to further pushing Polytelis swainsonii towards extinction?
1-Feb-21	12	Not supportive	Ecology	Impacts to CEEC, superb parrot, golden sun moth, striped legless lizard and white-throated needletail. But additional concerns for WTE, koalas, wallaby's and possums.
1-Feb-21	12	Not supportive	Traffic and Transport	"Information on the use of local roads by the RPWF project is very scant, for example the only road to our property is High Rock Road." While all that work is going on, just how do we maintain access to get to the Village?"
1-Feb-21	12	Not supportive	Aviation Safety	"For light aircraft scud running under heavy clouds, in bad weather things are going to get very tight in missing 200 metre high Turbine Towers. Which raises the question - Does this 1500 ft AGL get measured from the ground or the Tips of the Wind Turbine Blades?"

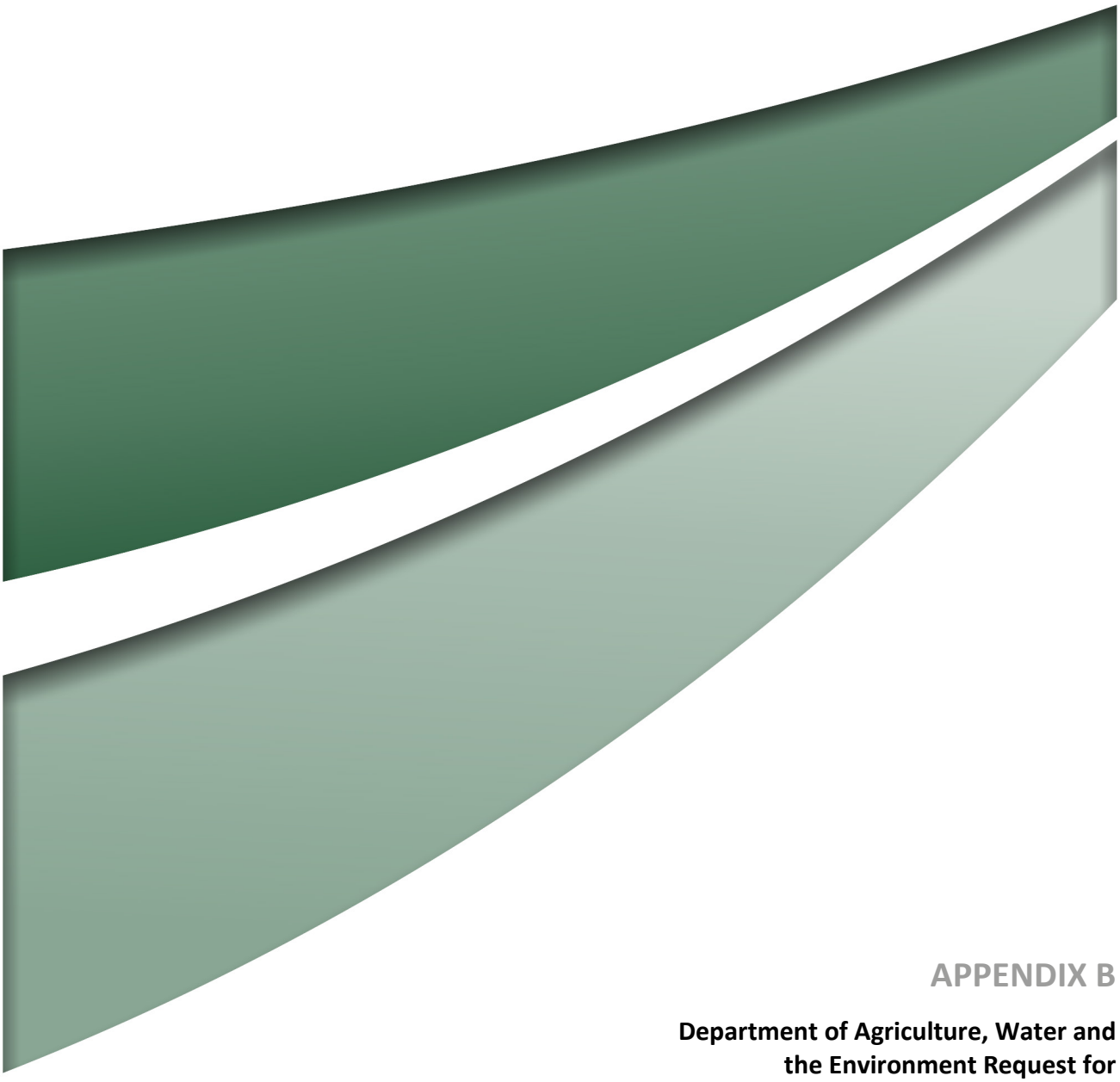
Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
1-Feb-21	12	Not supportive	Procedural Matters	"While there are hints of high voltage power lines running on or under High Rock Road the supplied maps are just mud maps, no real use for residents to evaluate proposed work."
1-Feb-21	12	Not supportive	Procedural Matters	"Tilt did not provide any of these documents for Public Exhibition to the Hilltops Council for local people to view!" "I only found out about this need for a submission last Thursday!" "To date, not one member of Tilt's team or their contractors has ever visited my property to see potential our problems!" "Where is the Hilltop Council? As usual asleep in the RPWF local project management! Also have NSW Government departments responsible been preforming their duties in oversight of the RPFW project?"
1-Feb-21	12	Not supportive	Other Issues	"The methodology used in the Shadow Flicker Assessment (SFA) was informed by these guidelines and standard industry practises based on guidelines adopted in the UK (where is not a lot of sunshine) which is common practice in NSW. However, using that methodology does not appear to take into account where a residence/building is located on top of a hill opposite to where the WTGs are located, as is the case of my residence – R38!"
27-Jan-21	13	Requests more information	Ecology	Recovery plans for threatened species/ ecological communities - white box -yellow box-Blakely's gum grass woodland and DNG, striped legless lizard, Superb parrot, Golden sun moth and white-throated needletail.
29-Jan-21	14	Not supportive	Ecology	While supportive of wind farms as alternate and clean energy source, concerned about this project in the local environment. Impacts to CEEC and Superb Parrot. Added concern about this project in light of additional impacts from bush fires, floods, drought...etc.
29-Jan-21	14	Not supportive	Procedural Matters	"Please forward this submission to the Federal Minister of the Environment Sussan Ley for her consideration."
28-Jan-21	15	Not supportive	Ecology	Increased Footprint. Destruction/loss of hollow bearing trees, disturbance to threatened species -Superb parrot and community programs for the species. Impacts to native fauna and blade impact on bird flight paths. Cumulative effect of wind projects in the region.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
28-Jan-21	15	Not supportive	Ecology	The destruction of native bush land and wildlife, following the horrendous fires last year is incomprehensible. The removal of hollow bearing trees will have an impact on all bird life, especially the nesting of the Superb Parrot, these trees are over a hundred years old and cannot be replaced.
28-Jan-21	16	Supportive	Ecology	Understand that some impacts will occur. Have read umwelt ecological reports and understand that outlined threatened species- e.g.: striped legless lizard will be negligible.
28-Jan-21	17	Not supportive	Ecology	Loss / disturbance of native vegetation, Superb parrot - habitat loss /clearing of hollow bearing trees. Impacts on water quality for eastern pygmy perch. Loss of native fauna and flora.
29-Jan-21	18	Not supportive	Ecology	Clearing of land / native vegetation, Increase loss/stress to native wildlife. Superb parrot and other bird species. Loss / impacts to Ecological communities - white box - yellow box, Apple box, Stringy bark and Iron bark trees.
29-Jan-21	18	Not supportive	Traffic and Transport	"The use of the main Street in Rye Park as a main preferred Route for heavy vehicles is certainly not in the question. This will affect the environment more than is thought effecting people who are living in the area where they come because of the quite country life. This area will become an industrial area not a residential area as it is now."
27-Jan-21	19	Not supportive	Project Justification	"It has been scientifically calculated that the resourcing of materials, manufacture and installation of one wind tower/ turbine creates a greater carbon footprint than what that same tower/ turbine can save in twenty-five years of operation. Then at the end of their relatively short life"

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
27-Jan-21	19	Not supportive	Ecology	Impact from construction and ongoing operation will have on the old forest bushland, crucial habitat of many birds and native animals, five of which are on either the threatened or endangered list, i.e. the superb parrot, swift parrot, white throated needle tail, regent honeyeaters, painted honeyeaters, striped legless lizard and golden sun moth. As well the black tailed wallaby, eastern grey kangaroo, possums, echidnas, frilled neck and shingle back lizards and Wedgetail Eagles. Age of vegetation these species utilise is old and will take substantial time to be replaced. The increased risk of bird strike due to the proposed increased blade height with a sweep of only thirty metres above the ground. I have observed birds and their habits all my life and many fly at thirty metres or more particularly the Wedgetail Eagle and the Superb Parrot. A family of Superb Parrots nested in a hollow in a Yellow Box tree in the next-door garden this Spring. When walking my dogs along Lagoon Creek Road, I witnessed birds including Superb Parrots inhabiting the old forest trees.
27-Jan-21	19	Not supportive	Decommissioning	"...their decommissioning creates a problem in that the blades cannot be recycled and have to be buried."
29-Jan-21	20	Not supportive	Ecology	Concerned for the displacement/loss of native wildlife and vegetation and clearing of land.
28-Jan-21	21	Not supportive	Ecology	Potential management of listed threatened species and communities. Details provided to no in any way alleviate their concerns about the irreversible and permanent damage that will be associated with the widening of necessary access to install 200m turbines.
28-Jan-21	21	Not supportive	Ecology	Erosion from construction will impact vegetation, platypus, water rats and native fish.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
28-Jan-21	21	Not supportive	Ecology	Superb parrot- Impacts from clearing of habitat, hollow bearing trees, and impacts to native fauna/flora due to height of wind turbines and clearing of land. Lack of consideration for cumulative impact on Bango from the WFs in the region. Particular concern of increased turbine size meaning wider easement for transport. 5 species with high impact rating. It is very diverse and should result in ceasing the huge increase size of turbines, because of destruction of further large land areas.
28-Jan-21	21	Not supportive	Ecology	For many years this area has attracted much positive attention as being a hub for the Superb Parrot. Volunteer and financial grants have enable stabilizing and securing the environment. So much will have been to no avail. Fires 2019-2020 resulted in massive flora and fauna finance desperately required to assist recovery – no funding could again be directed to saving the superb parrot.
28-Jan-21	21	Not supportive	Ecology	Recent ABC News Television released information relating to new studies re “picky” choice of tree types chosen for nesting. “The particular combinations of traits is especially rare, and only 0.5% of tree hollows fit this criteria” Dr D Stojanovic (ANU December 2020).
28-Jan-21	21	Not supportive	Procedural Matters	"TILT submissions to provide compensation does not in any form offer a solution. It is disappointing that so little time has been given to respond to such an important issue. TILT has not given the wide community notification; mentioned in a small low circulation of a local newspaper and the Daily Telegraph has not been satisfactory. (It was accidental that we found out.) Opportunity existed for notification in December Newsletter, also from TILT employee who has made several personal visits to Rye Park this year. It is well known that Covid19 issues re public meetings can be totally accommodated in total safety at Rye Park."
28-Jan-21	21	Not supportive	Procedural Matters	"Access to written information has been welcomed, however the 1160 pages is a massive amount to process, and with a total of 9 hours access, including last day of submission, has been inadequate. TILT is aware of the total 4 hours a week of Rye Park Post Office hours. This has made the response task most difficult."
29-Jan-21	22	Not supportive	Ecology	Threats to native fauna / flora, loss/disturbance to CEEC. Removal of habitat/ resource trees for Koalas. Superb parrot, striped legless lizard, golden sun moth - loss of habitat due to land clearing.

Date	Unique Numerical ID	Supportive / Not Supportive	Newly Categorised Issues	Summary
29-Jan-21	22	Not supportive	Ecology	Threats of strike rate increase to bird species due to increased RSA.
29-Jan-21	22	Not supportive	Procedural Matters	"We like to take this opportunity for those involved in the EPBC for notification for this submission as you are fully aware, we were not given any invitation or notification to take part in any way in this submission. So again, it shows the integrity of Tilt which there is none. We notify by neighbour regards the EPBC issue on the 28th January 2021 at 6pm. This has put us in a position of submitting a submission that is incomplete."
29-Jan-21	23	Not supportive	Ecology	Erosion issues in the region and increased risk from construction of project.
29-Jan-21	23	Not supportive	Ecology	Loss of native vegetation due to clearing. Impacts to native fish species from contamination. Loss / impacts to native fauna and flora and habitat. threats to ecological communities White box-yellow box-Blakely's gum grass woodland and DNG and stringy bark red gum forests.
29-Jan-21	23	Not supportive	Ecology	Impacts on habitat, flora and fauna was not seriously considered in the assessment projects.
29-Jan-21	23	Not supportive	Ecology	We have lost much of the state's forest to bushfire in 2020 and any left should be prioritised to keep, not cut down.

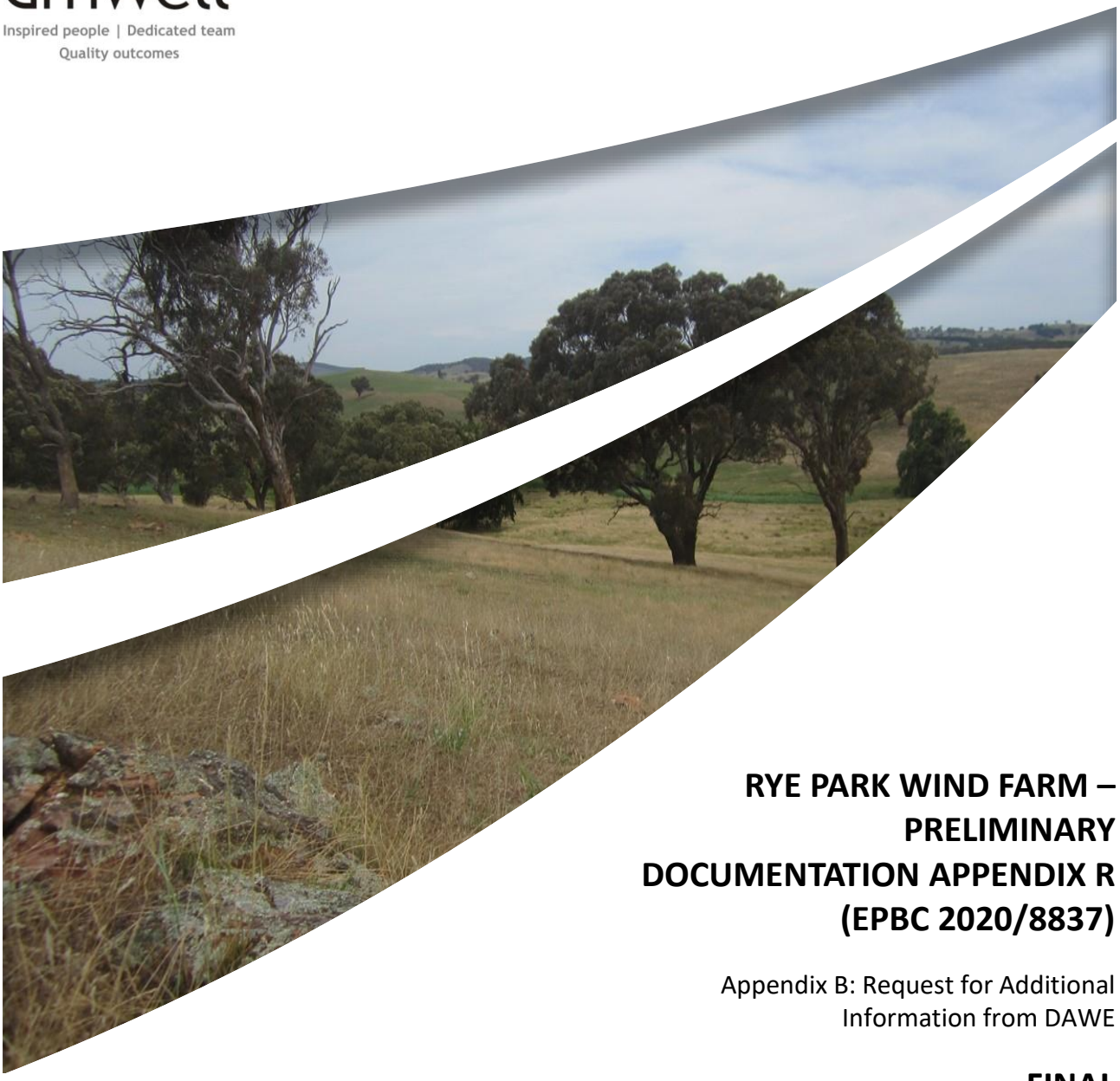


APPENDIX B

Department of Agriculture, Water and the Environment Request for Information

umwelt

Inspired people | Dedicated team
Quality outcomes



RYE PARK WIND FARM – PRELIMINARY DOCUMENTATION APPENDIX R (EPBC 2020/8837)

Appendix B: Request for Additional Information from DAWE

FINAL

March 2021

RYE PARK WIND FARM – PRELIMINARY DOCUMENTATION APPENDIX R (EPBC 2020/8837)

Appendix B: Request for Additional Information from DAWE

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Tilt Renewables

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Project Manager: Bill Wallach
Report No. R16
Date: March 2021

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This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
1	Travis Peake	24/02/2021	Travis Peake	25/02/2021
2	Travis Peake	04/03/2021	Travis Peake	04/03/2021
3	Travis Peake	12/03/2021	Travis Peake	12/03/2021
4	Travis Peake	15 March 2021	Travis Peake	15 March 2021

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1.0 Introduction

Umwelt (Australia) Pty Limited (Umwelt) has prepared this report on behalf of Tilt Renewables (the Proponent) to respond to requests for additional information from the Department of Agriculture, Water and the Environment (DAWE) regarding the proposed Rye Park Wind Farm modification (the Project).

Following exhibition of the re-referral documentation for the Project, several requests for information have been sought by DAWE which are summarised below.

On Friday 19 February 2021, DAWE provided a formal request for the following information:

- Extent and condition of Box Gum Woodland,
- White-throated needletail mitigation measures,
- Grey falcon (*Falco hypoleucus*), and
- Spotted-tailed quoll (*Dasyurus maculatus maculatus*).

On Friday 29 January 2021, DAWE requested the following information:

- A calculation of how many credits are needed to offset impacts to the EPBC listed community, White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland Critically Endangered Ecological Community (CEEC).
- Clarification of impact areas for the Project on EPBC Act listed matters, particularly in relation to striped legless lizard and golden sun moth.
- Provide some additional information regarding 'trigger values' for the Bird and Bat Adaptive Management Plan, explaining what these are and how they would work.

On Tuesday 2 February 2021, DAWE requested the following information:

- Please provide the department with a copy of the offset strategy for the project.

Each of these requests are addressed below.

2.0 2020/8837 Rye Park Wind Farm – Additional Information Request and Example Conditions (19 February 2021)

2.1 Extent and condition of Box Gum Woodland

- *Please provide information on the condition of the 0.74 ha of BGW within the indicative development footprint - external transport route i.e. hectares of Vegetation Zone 3 – moderate to good, and/or hectares of Vegetation Zone 4 derived native grassland.*

- *The preliminary documentation states that there are 67.64 ha of BGW in the development corridor, "comprising 36.61 hectares of remnant woodland (Vegetation Zone 3) and 31.34 hectares of derived native grassland (Vegetation Zone 4)" (see Table 9, MNES Biodiversity Attachment). However, 36.61 + 31.34 ≠ 67.64. Please amend or provide explanation.*

Of the 0.74 ha of White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC identified within the Indicative Development Footprint – External Roads, 0.64 ha comprises remnant woodland (Vegetation Zone 3) and 0.10 ha comprises derived native grassland (Vegetation Zone 4).

Umwelt confirms that 67.64 ha of White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC was identified within the Development Corridors of the Project. This comprises 36.31 ha of remnant woodland (Vegetation Zone 3), not the 36.61 ha incorrectly stated in the Preliminary Documentation. The total impact does comprise 31.34 ha of derived native grassland (Vegetation Zone 4) as reported in the Preliminary Documentation. As the Preliminary Documentation accurately documents the total area of the CEEC within the Development Corridors, the subsequent calculations referring to the extent of the CEEC that would persist following impacts of the Project remain accurate.

2.2 White-throated needletail mitigation measures

- *Please confirm that specific mitigation measures for the White-throated Needletail will be provided in both the Biodiversity Management Plan (BMP) and the Bird and Bat Adaptive Management Plan (BBAMP).*

- *The Conservation Advice for this species lists collision with wind turbines and overhead wires as a threat impacting the White-throated Needletail. Please provide an assessment of potential impacts to this species from the transmission line infrastructure to be installed as part of the proposed action, and if necessary, measures to mitigate these impacts.*

The BBAMP currently being prepared will be employed to monitor the resulting operational impacts from the Project. The BBAMP presents a strategy to monitor and mitigate impacts to birds and bats attributable to the construction and operation of the Project. The BBAMP being prepared will be reviewed by the Department of Planning, Industry and Environment (DPIE) in response to Condition 23 of Schedule 3 of the NSW Development Consent and by the Commonwealth Minister for the Environment in accordance with the Commonwealth Conditions of Approval.

The BBAMP will broadly comprise operational phase monitoring of birds and bats, risk assessments, impact triggers, mitigation strategy and reporting requirements.

Below is a summary of 'Triggers' being considered for the Project.

- *Impact trigger thresholds will be employed for threatened species* – impacts will be classed as the detection of one carcass, injured individual or featherspot under or near a turbine. Where a threatened species impact is triggered, reporting will be required to the RPWF representative within two business days (to allow for detailed identification, if required), from which point the RPWF representative must then notify BCD of the event within two working days. After which an investigation into the incident to determine the cause and likelihood of recurrence of impact and determine if further action is required. The reporting and decision-making framework is still being resolved through the BBAMP preparation.

- *Impact trigger thresholds will be employed for non-threatened species* – there will be separate impact thresholds for wedge-tailed eagles, other non-threatened species, and introduced or unprotected native species (being sulphur-crested cockatoo, galah, little raven and Australian raven). Where a non-threatened species impact is triggered, reporting will be required to the RPWF representative within two business days (to allow for detailed identification, if required), from which point the RPWF representative must then notify BCD of the event within two working days. After which an investigation into the incident to determine the cause and likelihood of recurrence of impact and determine if further action is required. The reporting and decision-making framework is still being resolved through the BBAMP preparation.

In addition to impact 'Triggers' a suite of mitigation measures are also being prepared in the BBAMP, including Carrion Removal Program, Pest Animal Control and Lighting.

While the Conservation Advice for the white-throated needletail (Threatened Species Scientific Committee 2019) identifies collision with overhead wires as being a threat impacting the species. It acknowledges that the threat is of low severity and affects a small number of birds (Threatened Species Scientific Committee 2019).

Nevertheless, the BBAMP will factor in the risk of collision for white-throated needletail with overhead transmission lines. The current draft BBAMP stipulates bird surveys to be completed in February, April, July and November, of which the white-throated needletail will likely be in the region during February. It is proposed, that if the species is recorded during BBAMP surveys in these months, an additional survey component may be required. Specifically, a 200-metre-long walked meandering transect will be completed directly beneath the overhead wires of the transmission line constructed for the Project. If required, this survey will be completed in the closest and most readily accessible location to where the white-throated needletail was recorded. The meandering transect will involve a visual search of the ground stratum, generally 10 metres either side of the transect, for white-throated needletail carcasses or potential featherspots. These will be known as 'white-throated needletail meandering transects'. This method is proposed to be completed separately to the carcass search due to the timing of the surveys and requirement for survey to occur directly following the species being identified in the airspace of the Project. If the species is recorded at multiple bird survey locations, a maximum of three white-throated needletail meandering transects will be required per survey program.

2.3 Grey falcon (*Falco hypoleucus*)

The department's ERT report shows this species as likely to occur in the proposed action area, however no assessment of the likelihood of significant impact has been provided. Please provide the following information on this species:

- *Occurrence of the species in the proposed action area, including details of any targeted surveys.*

- *An assessment of the potential use and importance of the project area for the species.*

- *An assessment of the significance of impacts on the species from the proposed action, particularly from blade strike.*

- *If necessary, proposed avoidance, mitigation and/or offset measures e.g. inclusion of Grey Falcon in the BBAMP.*

Umwelt ran the EPBC Act Protected Matters Report for the Project on 21 February 2020, with a 10-km-wide buffer. In this report, the grey falcon (*Falco hypoleucus*) was not identified as a species likely or known to occur in the proposed action area. It is noted however that the species wasn't listed under the EPBC Act until July 2020, therefore this may have been the reason for its omission from the report. Furthermore, the species was not recorded within 10 km of the Project based on a search of the NSW BioNet Atlas. These searches were completed during the preparation of the detailed assessment of the Project. The results of these searches at that time assisted in the generation of the list of threatened species requiring assessment for the project.

Since both database searches not identifying the species as occurring within 10 km of the Project, the species was not considered likely to occur and therefore was originally not assessed further.

Nevertheless, extensive bird utilisation surveys completed as part of the Biodiversity Assessment, suitably surveyed the Project to assess potential or likely occurrence of the species in the proposed action area.

A series of general and targeted diurnal bird surveys were conducted at RPWF during November 2011, April 2012, July 2013, and November 2013 (NGH Environmental 2014). In addition to this, Umwelt conducted bird utilisation surveys during November 2018, January/February 2019, March 2019 and July 2019. A total of 48 vantage point surveys were completed at seven sites as part of the bird utilisation surveys, each of the sites occurring along prominent ridgelines within the proposed action areas (treatment sites) and at least 500 away from turbine locations (control sites). The grey falcon was not recorded during these extensive bird utilisation surveys.

Based on the database searches described above, the nearest record, from 2001, of grey falcon to the proposed action area is almost 60 kilometres to the north, near Cowra, NSW (BCD 2021a). However, through the process of addressing this request for information from DAWE, Umwelt has been made aware of a grey falcon record from 2013 on the Hume Highway north of Yass, approximately 11 kilometres to the south-west of the Project. This record occurs on the Atlas of Living Australia (2021). Subsequent searches of NSW BioNet Atlas confirm this record is not within that database.

Irrespective of the 2013 record, based on the broader records of the species, the proposed action area is outside the core distribution of the species, being further inland within arid habitats. The Threatened Biodiversity Data Collection (TBDC) profile for the species states it is "chiefly" distributed throughout the Murray-Darling Basin, with an occasional vagrant east of the Great Dividing Range. It adds the species is considered to be extinct from locations of NSW with more than 500mm of rainfall, based on climate data records from Boorowa Post Office, the region has a mean annual rainfall of 612.6mm (BOM 2021). Furthermore, the Conservation Advice for the species describes it as occurring in arid and semi-arid Australia with less than 500mm of annual rainfall (TSSC 2020). While the species can occur more broadly when wet years are followed by drought, the species is essentially confined to arid and semi-arid zones at all times (TSSC 2020). This summary provides further support that the species is unlikely to occur in the proposed action area.

Despite the information provided above, as requested, an assessment of significance for grey falcon has been prepared and is presented below in **Table 2.1.**

Table 2.1 Assessment of Significance of grey falcon

	An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:
Criterion	a) lead to a long-term decrease in the size of an important population of a species
Response	The Project is considered to be outside of the characteristic distribution for the grey falcon. The TBDC profile for the species states it is "chiefly" distributed throughout the Murray-Darling Basin, with an occasional vagrant east of the Great Dividing Range. It adds that the species is considered to be extinct from locations of NSW with more than 500mm of rainfall. Based on climate data records from Boorowa Post Office, the region has a mean annual rainfall of 612.6mm (BOM 2021). Furthermore, the Conservation Advice for the species describes it as occurring in arid and semi-arid Australia with less than 500mm of annual rainfall (TSSC 2020). While the species can occur more broadly when wet years are followed by drought, the species is essentially confined to arid and semi-arid zones at all times (TSSC 2020). A series of general and targeted diurnal bird surveys were conducted at RPWF during November 2011, April 2012, July 2013, and November 2013 (NGH Environmental 2014). In addition to this, Umwelt conducted bird utilisation surveys during November 2018, January/February 2019, March 2019 and July 2019. A total of 48 vantage point surveys were completed at seven sites as part of the bird utilisation surveys, each of the sites occurring along prominent ridgelines within the proposed action areas (treatment sites) and at least 500 away from turbine locations (control sites). The grey falcon was not recorded during these extensive bird utilisation surveys; therefore the Project is not considered likely to support an important population of the grey falcon. Based on the information above the grey falcon is considered unlikely to occur in the proposed action area, thus the Project is unlikely to lead to long-term decrease in the size of an important population of the species.
Criterion	b) reduce the area of occupancy of an important population
Response	Based on the information presented above in 'Criterion a', the Project is not considered likely to support an important population of the grey falcon. Thus, the Project is not considered likely to reduce the occupancy of an important population.
Criterion	c) fragment an existing important population into two or more populations
Response	Based on the information presented above in 'Criterion a', the Project is not considered likely to support an important population of the grey falcon. Thus, the Project is not considered likely to fragment an existing important population.
Criterion	d) adversely affect habitat critical to the survival of a species
Response	Based on the information presented above in 'Criterion a', the Project is not considered likely to support habitat critical to the survival of the grey falcon.
Criterion	e) disrupt the breeding cycle of an important population
Response	Based on the information presented above in 'Criterion a', the Project is not considered likely to support an important population of the grey falcon. Thus, the Project is not considered likely to disrupt the breeding cycle of an important population.
Criterion	f) modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
Response	Based on the information above in 'Criterion a', the grey falcon is considered unlikely to occur in the proposed action area, thus the Project is unlikely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

	An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:
Criterion	g) result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat
Response	Based on the information above in 'Criterion a', the proposed action area is not considered likely to support habitat for grey falcon. However, the Project is unlikely to result in invasive species harmful to the grey falcon becoming established.
Criterion	h) introduce disease that may cause the species to decline
Response	The Project is unlikely to result in the introduction of disease that may cause the grey falcon to decline.
Criterion	i) interfere substantially with the recovery of the species
Response	The Project is unlikely to interfere substantially with the recovery of grey falcon given the information presented above in 'Criterion a'.
Conclusion	**The Project is considered unlikely to have a significant impact on the grey falcon.**

2.4 Spotted-tailed quoll (*Dasyurus maculatus maculatus*)

Please provide the following additional information:

- *Further details of the survey effort for this species, including methods used, duration and locations of surveys, with reference to the Spotted-tailed Quoll chapter (p. 237) of the Survey guidelines for Australia's threatened mammals: Guidelines for detecting mammals listed as threatened under the EPBC Act.*
- *An assessment of the habitat in the project area for the species, including the type of habitat (e.g. breeding/foraging), condition and connectivity to other areas of habitat.*
- *An assessment of the likelihood of significant impact from the proposed action.*
- *If necessary, proposed avoidance, mitigation and/or offset measures.*

Extensive and numerous survey programs have been undertaken for the Project, including those completed as part of the original approval by NGH Environmental (2014 and 2016) as well as by Umwelt (2020a) as part of the Modification. No spotted-tailed quolls were recorded from this program.

The spotted-tailed quoll was not previously assessed as part of the original approval by NGH Environmental (2014 and 2016). This was not the sole basis for the biodiversity assessment completed by Umwelt; however, it was considered. A leading factor into Umwelt not undertaking an assessment of significance of the spotted-tailed quoll in the Biodiversity Assessment was the absence of species records within 10 km of the Project. That is based on the search of BioNet Atlas of NSW Wildlife within 10 km of the Project. This search was completed during the preparation of the detailed assessment of the Project. However, based on an updated search of the BioNet Atlas of NSW Wildlife, it is acknowledged the closest record of the species, from 2004, to the proposed action area is approximately 10 km to the south of the Project (BCD 2021a). The next closest records are approximately 22 km to the north west from 2004 and approximately 30 km to the north from 2004 (BCD 2021a). Based on records of the species across NSW, it is acknowledged that the proposed action area occurs within the broad distribution for the spotted-tailed quoll, however the core distribution for the species is east of the Great Dividing Range (BCD 2021a).

The spotted-tailed quoll habitat is broad-ranging, including rainforest, open forest, woodland, coastal heath and inland riparian forest (BCD 2021b, Department of Sustainability, Environment, Water, Population and Communities 2011). However, the species is documented to commonly associate with gullies, rocky escarpments and outcrops all of which are absent from the proposed action area (Department of Sustainability, Environment, Water, Population and Communities 2011). The TBDC profile adds the species uses hollow-bearing trees, fallen logs, other animal burrows, small caves and rock outcrops as den sites, while the species uses flat rocks among boulder fields, rocky cliff-faces and rocky stream beds or banks as communal 'latrine sites'. While the proposed action area broadly supports vast areas of open forests and woodlands which contain hollow-bearing trees, animal burrows and fallen logs; other potential habitat for the species is considered to be absent including caves, rock outcrops, cliff-faces and even rocky stream beds are considered to be absent.

The locality of the proposed action area is not identified in the Conservation Advice and National Recovery Plan for the species as an important population to its survival (Department of Environment, Land, Water and Planning 2016 and Threatened Species Scientific Committee 2020).

As part of the Biodiversity Assessment (2020a) for the Project a number of targeted and non-targeted field surveys have been completed for the spotted-tailed quoll that are considered to be in general accordance with the EPBC Act Survey guidelines for Australia's threatened mammals (Department of Sustainability, Environment, Water, Population and Communities 2011). Surveys included extensive diurnal and nocturnal surveys in October and November 2011; April 2012; July, November and December 2013; March and October 2014; June 2015; September 2016; September, October and December 2017; January, February, March, October and November 2018; January, February, March, April, July, August, September, November, December 2019; January, February and July 2020 (NGH Environmental 2014, 2016 and Umwelt 2020).

Applicable surveys include diurnal (daytime) searches of potential suitable habitat resources, opportunistic daytime searches of potential latrine sites along riparian corridors, and an extensive remote survey camera program (2020a). No spotted-tailed quolls were recorded as a result of this program. Additionally, there are no closely located regional records of the species from the years of applicable surveys completed for the Project (BCD 2021a)

While it is acknowledged that the spotted-tailed quoll has the potential to occur in the proposed action area, given the extensive survey effort across several years, including multiple survey programs per year, the proposed action area is not considered to support a resident population of the species. Instead, the species may occur in the proposed action area as it traverses the landscape.

Despite the information provided above, as requested, an assessment of significance for spotted-tailed quoll has been prepared and is presented below in **Table 2.2.**

Table 2.2 Assessment of Significance of spotted-tailed quoll

	An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:
Criterion	a) lead to a long-term decrease of a population
Response	While it is acknowledged that the spotted-tailed quoll has the potential to occur in the proposed action area, given the species was not recorded during extensive survey effort across several years (discussed above), including multiple survey programs per year, the proposed action area is not considered to support a resident population of the species. Instead, the species may occur in the proposed action area as it traverses the landscape. Therefore, the Project is considered to support a total of 106.29 hectares of suitable habitat that could be used by the spotted-tailed quoll in the form of remnant forests and woodlands, being Vegetation Zones 1, 3, 5 and 9. The Project is unlikely to lead to a long-term decrease in the spotted-tailed quoll population size.
Criterion	b) reduce the area of occupancy of a population
Response	The Project is considered to support a total of 106.29 hectares of suitable habitat that could be used by the spotted-tailed quoll in the form of remnant forests and woodlands, being Vegetation Zones 1, 3, 5 and 9. However, based on the absence of particular habitat components, extensive survey programs without record and the lack of recent regional records and absence of regional records within the timeframe of completed surveys, the Project is not considered to support a resident population of the spotted-tailed quoll. Therefore, the Project is not considered to reduce the area of occupancy of a population.
Criterion	c) fragment an existing population into two or more populations
Response	Based on the information provided above 'Criterion a' and 'Criterion b', the Project is not considered to support a resident population of the spotted-tailed quoll.
Criterion	d) adversely affect habitat critical to the survival of a species
Response	Based on the information provided above 'Criterion a', the Project is considered to support a total of 106.29 hectares of suitable habitat that could be used by the spotted-tailed quoll. However, a resident population of the species is not considered to be present. The locality of the Project is not recognised to support an important population for the survival of the species (Department of Environment, Land, Water and Planning 2016 and Threatened Species Scientific Committee 2020). Therefore, the Project is not considered to adversely affect habitat critical to the survival of a species.
Criterion	e) disrupt the breeding cycle of a population
Response	Based on the information provided above 'Criterion a' and 'Criterion b', the Project is not considered to support a resident population of the spotted-tailed quoll. Therefore, the Project is unlikely to disrupt the breeding cycle of a spotted-tailed quoll population.
Criterion	f) modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline

	An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:
Response	Based on the information provided above 'Criterion a', the Project is considered to support a total of 106.29 hectares of suitable habitat that could be used by the spotted-tailed quoll. However, a resident population of the species is not considered to be present. The locality of the Project is not recognised to support an important population for the survival of the species (Department of Environment, Land, Water and Planning 2016 and Threatened Species Scientific Committee 2020). Therefore, the Project is not considered likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the spotted-tailed quoll is likely to decline.
Criterion	g) result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat
Response	The Project is unlikely to result in invasive species that are harmful to spotted-tailed quoll becoming established in the 106.29 hectares of suitable habitat that could be used by the spotted-tailed quoll.
Criterion	h) introduce disease that may cause the species to decline
Response	The Project is unlikely to result in the introduction of disease that may cause the spotted-tailed quoll to decline.
Criterion	i) interfere substantially with the recovery of the species
Response	Based on the information provided above 'Criterion a', the Project is considered to support a total of 106.29 hectares of suitable habitat that could be used by the spotted-tailed quoll. However, a resident population of the species is not considered to be present. The locality of the Project is not recognised to support an important population for the survival of the species (Department of Environment, Land, Water and Planning 2016 and Threatened Species Scientific Committee 2020). Therefore, the Project is not considered likely to interfere substantially with the recovery of the species
Conclusion	**The Project is considered unlikely to have a significant impact on the spotted-tailed quoll.**

3.0 2020/8837 Rye Park Proposal – Additional Information on EPBC Offsets (29 January 2021)

3.1 White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC Credit Requirement

As per the Rye Park Wind Farm – Biodiversity Assessment Re-referral Appendix N (Umwelt 2020c), a total of 37.60 ha of PCT 350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion was identified within the Indicative Development Footprints.

Through detailed analysis of this vegetation community, a total of 35.73 ha was found to conform with *White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC*.

As documented in the revised impact assessment addendum (Umwelt 2020b), a total of 883 ecosystem credits were calculated to be required for impacts to PCT 350. **Table 3.1** details the extent of impact and credits required for PCT 350, separating Vegetation Zone 3 (Moderate to Good) and Vegetation Zone 4 (Derived Native Grassland). In addition, **Table 3.1** also presents the extent and proportion of each vegetation zone that was found to conform with the CEEC.

The proportion of each vegetation zone that conforms with the CEEC was used to calculate the number of credits generated by the CEEC. This is presented below in **Table 3.1**. This analysis found that the Project requires 843 CEEC credits.

Umwelt notes that the number of credits generated by the CEEC was not identified through the online BAM – Credit Calculator as the original BAM (2017) was applied for the Project. This original online BAM – Credit Calculator does not allow for distinction to be made on the extent of a PCT that aligns with a Threatened Ecological Community (TEC) and that which does not align. Therefore, the calculator assessment was completed by indicating all of PCT 350 aligned with the CEEC.

Table 3.1 White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC Credits

	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion	
	Vegetation Zone 3 *Moderate to Good*	Vegetation Zone 4 *Derived Native Grassland*
Total Area of Vegetation Zone (ha)	20.08	17.52
Total Credits	579	304
Total Area of CEEC (ha)	19.38	16.35
Proportion of CEEC	96.51 %	93.32 %
Proportional Number of CEEC Credits per Vegetation Zone[1]	559	284
Total Proportional Number of CEEC Credits [1]	**843**	

[1] Rounded to the nearest whole number.

3.2 Clarification of Impact Areas

In the request for additional information, reference is made to Table 6.1. Umwelt believes that DAWE are referring to the BDAR submitted for the Project (Umwelt 2020a), however a revised impact assessment addendum was prepared and submitted for the Project (Umwelt 2020b) and should be used when assessing the project. The addendum is the impact assessment that fed into the referral and preliminary documentation submitted to DAWE, and is provided below in **Appendix 1**.

The revised impact summary for the Project is presented below in **Table 3.2** as documented in the revised impact assessment addendum (Umwelt 2020b). Results are presented for the NSW – South Western Slopes IBRA Region and South Eastern Highlands IBRA Region separately. Similarly, ecosystem and species-credit credit requirements are presented separately.

Table 3.2 Updated ecosystem and species-credit credit requirement for the Project

Veg Zone	PCT/Species-credit	Area (ha)	Credits Required
Ecosystem Credits			
NSW – South Western Slopes IBRA Bioregion			
1	289 Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	0.78	**26**
2	335 Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	4.77	**114**

Veg Zone	PCT/Species-credit	Area (ha)	Credits Required
3	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Moderate to Good*	9.93	**308**
4	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Derived Native Grassland*	11.89	**204**
5	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Moderate to Good*	53.56	**1,758**
6	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Derived Native Grassland*	128.70	**1,137**
7	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Acacia Shrubland*	2.98	**61**
8	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Sifton Bush Shrubland*	66.15	**678**
9	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Argyle Apple Forest*	0.62	**19**
10	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Non-native Vegetation*	70.56	**0**
South Eastern Highlands IBRA Bioregion			
1	289 Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	-	**-**
2	335 Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	0.73	**11**
3	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Moderate to Good*	10.15	**271**
4	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Derived Native Grassland*	5.63	**100**

Veg Zone	PCT/Species-credit	Area (ha)	Credits Required
5	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Moderate to Good*	31.25	**976**
6	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Derived Native Grassland*	45.29	**436**
7	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Acacia Shrubland*	5.55	**89**
8	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Sifton Bush Shrubland*	18.03	**199**
9	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Argyle Apple Forest*	-	**-**
10	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Non-native Vegetation*	34.62	**0**
Species Credits			
NSW – South Western Slopes IBRA Bioregion			
-	striped legless lizard (*Delma impar*)	43.29	**328**
-	southern myotis (*Myotis macropus*)	0.03	**1**
-	squirrel glider (*Petaurus norfolcensis*)	62.17	**2,270**
-	superb parrot (breeding habitat) (*Polytelis swainsonii*)	9.93	**308**
-	golden sun moth (*Synemon plana*)	57.99	**900**
South Eastern Highlands IBRA Bioregion			
-	squirrel glider (*Petaurus norfolcensis*)	40.80	**1,365**
-	superb parrot (breeding habitat) (*Polytelis swainsonii*)	10.15	**271**
-	golden sun moth (*Synemon plana*)	27.29	**484**

3.3 Bird and Bat Adaptive Management Plan Triggers

The BBAMP is currently being prepared for the Project. This document is shortly due to be provided to BCD and the Commonwealth Minister for the Environment for their consideration.

Noting that this document is currently in preparation, below is a summary of 'Triggers' being considered for the Project.

- *Impact trigger thresholds will be employed for threatened species* – impacts will be classed as the detection of one carcass, injured individual or featherspot under or near a turbine. Where a threatened species impact is triggered, reporting will be required to the RPWF representative within two business days (to allow for detailed identification, if required), from which point the RPWF representative must

then notify BCD of the event within two working days. After which an investigation into the incident to determine the cause and likelihood of recurrence of impact and determine if further action is required. The reporting and decision-making framework is still being resolved through the BBAMP preparation.

- *Impact trigger thresholds will be employed for non-threatened species* – there will be separate impact thresholds for wedge-tailed eagles, other non-threatened species, and introduced or unprotected native species (being sulphur-crested cockatoo, galah, little raven and Australian raven). Where a non-threatened species impact is triggered, reporting will be required to the RPWF representative within two business days (to allow for detailed identification, if required), from which point the RPWF representative must then notify BCD of the event within two working days. After which an investigation into the incident to determine the cause and likelihood of recurrence of impact and determine if further action is required. The reporting and decision-making framework is still being resolved through the BBAMP preparation.

In addition to impact 'Triggers' a suite of mitigation measures is also being prepared in the BBAMP, including Carrion Removal Program, Pest Animal Control and Lighting.

3.4 Offset Strategy

The Proponent is committed to delivering a biodiversity offset strategy that appropriately compensates for the unavoidable loss of ecological values as a result of the Project.

The offset strategy will be implemented in accordance with the NSW Biodiversity Conservation Regulation 2017 and the Commonwealth-NSW EPBC Bilateral Agreement, and the final details of the offset strategy may evolve as the Project progresses. The strategy could change as the Development Footprint is finalised and as such credit requirement is finalised, extent of credit yield from potential Biodiversity Stewardship Sites and public credit registers are investigated further. As per Condition 21 of the existing state Development Consent (SSD 6693), the Proponent must retire the required biodiversity credits for the Project.

The biodiversity offset strategy being finalised is proposing to utilise up to three offset options available under the BC Act and BC Regulation including:

- Land based offsets through the establishment of new Biodiversity Stewardship Sites (and subsequent retirement of credits). The Proponent would retire the required number and class of credits determined in accordance with the BDAR and the offset rules in the BC Regulation.
- Securing (purchasing) credits through the open credit market, and/or
- Paying into to the Biodiversity Conservation Fund (BCF).

The Proponent intends to satisfy as much as possible of their credit liability for the Project through land-based Biodiversity Stewardship Sites. There are currently four sites being considered that are relatively close to the Project, while other sites are being considered further afield from the Project but are expected to satisfy the like-for-like offsetting rules. **Table 3.3.3** summarises the preliminary offset credit calculations for MNES, based on the four candidate sites.

Table 3.3 Current Biodiversity Offset Status for MNES

	Total Credits Required	Preliminary Total of Offset Credits Provided by Candidate Sites	Overall Status
PCT 350 - Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion ***Aligning with CEEC***	843	1,075	+232
golden sun moth ***Synemon plana***	1,384	654	-730
striped legless lizard ***Delma impar***	328	0	-328
superb parrot ***Polytelis swainsonii***	579	207	-372

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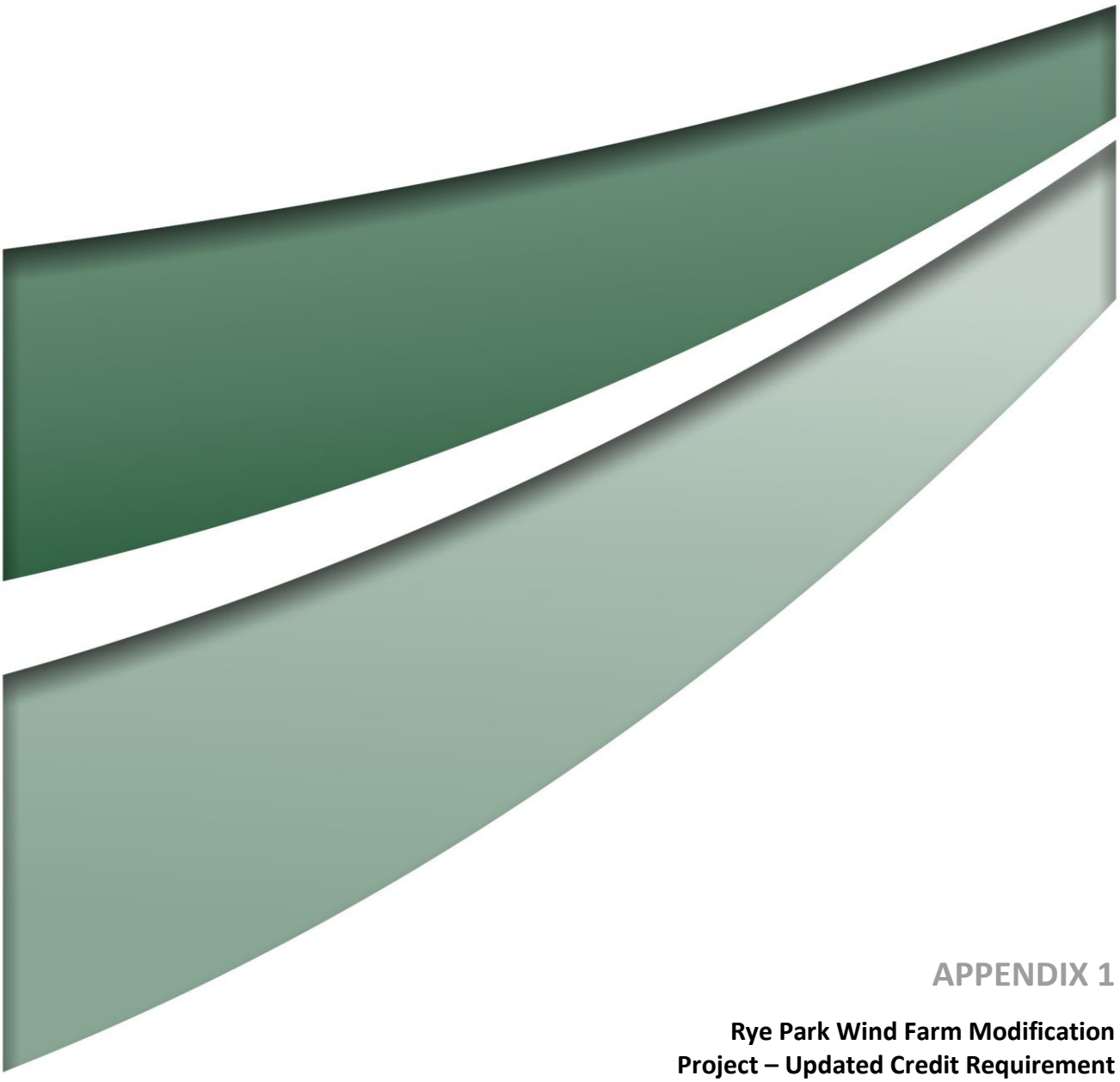

APPENDIX 1

Rye Park Wind Farm Modification Project – Updated Credit Requirement and Prescribed Impact Assessment

umwelt
Environmental & Social Consultants

Inspired People
Dedicated Team
Quality Outcomes

Brief Report

To: Marita Giles
cc: Cara Layton
From: Bill Wallach
Author: Bill Wallach
Date: 16 November 2020
Subject: Rye Park Wind Farm Modification Project – Updated Credit Requirement and Prescribed Impact Assessment

Purpose

This letter provides the updated credit requirements for the Rye Park Wind Farm Modification project (the Project) following amendments to the analysis, mapping and assessment of golden sun moth (*Synemon plana*) and striped legless lizard (*Delma impar*) species polygons. Assessments for both species were finalised following extensive consultation between Umwelt, Tilt Renewables, the Department of Planning, Industry and Environment (DPIE), Biodiversity Conservation Division (BCD) and the Department of Agriculture, Water and Environment (DAWE).

Outcomes

The ecosystem credits required for the Project and presented in **Section 4.0** are consistent with those in the current BDAR (Umwelt 2020). The re-selection of two ecosystem species, speckled warbler and brown treecreeper, in relation to Vegetation Zones 4 (PCT 350 – Derived Native Grasslands) and Vegetation Zones 6 (PCT 351 – Derived Native Grasslands) did not result in a change to the ecosystem credit requirement.

The species-credit credit requirement for superb parrot (*Polytelis swainsonii*), southern myotis (*Myotis macropus*) and squirrel glider (*Petaurus norfolcensis*) remain consistent with those in the current BDAR (Umwelt 2020).

The credit liability for striped legless lizard increased from 27 credits in the current BDAR (Umwelt 2020) to 328 credits (301 credits higher). The credit liability for golden sun moth increased from 716 credits in the current BDAR (Umwelt 2020) to 1,384 credits (668 credits higher).

Recommendations

This brief report describes the final credit requirements (ecosystem and species credits) for the Project based on the current Indicative Development Footprints. This includes the Indicative Development Footprint – Wind Farm, Indicative Development Footprint – Permanent Met Masts and Indicative Development Footprint – External Roads. A final Development Footprint is expected for the Project in early 2021 following appointment of civil contractors, turbine suppliers and finalisation of the site layout. Following finalisation of the Development Footprint, the final credit requirements for the Project will be determined and communicated with DPIE, BCD and DAWE.

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Appendices

1.0 Introduction

Rye Park Renewable Energy (RPRE) proposes to construct the Rye Park Wind Farm Project (the Project) in southern NSW broadly between Yass and Boorowa. Umwelt has undertaken the biodiversity assessment for the Project as part of its Modification.

This report provides an update to the credit requirement for the Project following the outcome of critical steps for the project. This includes exhibition, response to submission, requests for information and consultation with the Department of Planning, Industry and Environment (DPIE) and Biodiversity Conservation Division (BCD) relating to the Biodiversity Development Assessment Report (BDAR) prepared as required by the *Biodiversity Conservation Act 2016* (BC Act). Additionally, this brief report captures relevant work completed as part of the Project's re-referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 1999).

In order to update the credit requirement for the project, Umwelt revised the Biodiversity Assessment Method (BAM) – Credit Calculator to address two amended species polygon assessments, being golden sun moth (*Synemon plana*) and striped legless lizard (*Delma impar*). The Prescribed Impact assessment for the removal of non-native vegetation supporting golden sun moth has also been updated. Lastly, this updated also includes the re-selection of two ecosystem species within the BAM – Credit Calculator for Vegetation Zone 4 (PCT 350 – Derived Native Grassland) and Vegetation Zone 6 (PCT 351 – Derived Native Grassland).

A new version of the BAM released in 2020, however it is important to note that the project, including this update to credit requirements, has been assessed in full through the application of the BAM2017 (OEH 2017).

2.0 Methods

The sections below describe the work undertaken as part of updating the credit requirement for the Project.

2.1 Assessment of Species Polygons for Species-credit Species

2.1.1 Golden Sun Moth

Following extensive consultation with DPIE and BCD, it was agreed that a revised assessment process would be employed to define the impact assessment for golden sun moth. It was acknowledged through the consultation process that this species' habitat is difficult to assess, and this is further complicated for a Project of this scale, and over a long project timeframe and approval history.

Umwelt developed two methods to map golden sun moth species polygons, depending on whether sightings had been recorded in particular locations, or whether surveys had recorded an absence of the species. Each method comprised particular attributes that led to areas of grassland habitat being excluded or included for consideration as the species polygon across all grassland habitats, including derived native grasslands (Vegetation Zone 4 [PCT 350 – DNG] and Vegetation Zone 6 [PCT 351 – DNG], as well as non-native vegetation (Vegetation Zone 10). Attributes considered included relevant vegetation zones, wallaby grass cover categories, golden sun moth records (and 200 metre buffers thereof), shading effects, soil moisture, vegetative barriers, slope and aspect.

The first method applies to the process undertaken to determine golden sun moth habitat within the Development Corridors that do not support existing golden sun moth records. The second method applies to the process undertaken to determine habitat for the species where the species has been recorded. The second method is important as it recognises the species has been recorded potentially outside of ideal habitat requirements, i.e. the species has been recorded in grassland habitat that perhaps does not support suitable cover of wallaby grass. The two methods are described below in **Table 1** and **Table 2**, while further detail on each attribute is provided following these tables.

Table 1 Method 1 – Species polygon assessment in the absence of golden sun moth records

Habitat Parameter	Exclusion	Inclusion
Vegetation Zones	• Remnant forest and woodlands of PCTs 289, 350 and 351 have been excluded (Vegetation Zones 1, 3, 5 and 9) • Shrublands of PCT 351 have been excluded (Vegetation Zones 7 and 8) • Drainage line vegetation of PCT 335 have been excluded (Vegetation Zone 2) *These vegetation zones have been excluded as they are widely not recognised to provide habitat for the species, due to their canopy cover, shrub cover, shading effects and/or soil moisture...etc.*	• Derived native grasslands of PCTs 350 and 351 have been included (Vegetation Zones 4 and 6) • Non-native grasslands (Vegetation Zone 10).
Wallaby Grass Cover Categories – Consistent with NGH (Epuron 2017) [1] **Categories are defined by NGH (Epuron 2017), classification of categories has been updated where relevant based on more recent Umwelt survey results (Umwelt 2020)**	• Not Present (0%) • Low Cover (1 – 25%) *It is acknowledged that there are records within Not Present and Low Cover categories. Habitat within 200m of records has been assessed, an approach consistent with NGH (2017), see table below.*	• Moderate Cover (26 – 50%) • Good Cover (51 – 75%) • Excellent Cover (76 – 100%)
Absence of records despite survey – Scenario 1 (BCD and DPIE Approved 25/9/2020)	• Scenario 1: areas where surveys have been completed in correct GSM season, but not detected. • Extent of survey limit is determined by 100 m either side for transects or otherwise the boundary of areas surveyed.	• Areas not surveyed.
Extent of impact analysis	• Outside of Development Corridors.	• Within the Development Corridors and Indicative Development Footprints
Shading	• 10m buffer of all excluded tree-dominated remnant vegetation into DNG (Vegetation Zones 1, 3, 5, 9) due to shading and soil moisture affects. • Restricted to vegetation zones with a canopy height of at least 10 m.	• Shrubland Vegetation Zones (7 and 8) have not been buffered as their shading factor is considered limited due to their maximum height typically being less than 3 m.

Habitat Parameter	Exclusion	Inclusion
Soil Moisture	• Vegetation Zone 2 as it is mapped along drainage lines. • Deeper soils, waterlogged soils, dominance of tall sedges, rushes, couch and scattered occurrences of tussock grass (Umwelt 2020). • Soil and vegetative structure described above is unsuitable for GSM.	• Not applicable.
Vegetative barriers of at least 200 m and areas historically unlikely to have supported habitat. **Only applied in isolated grassland habitat near proposed Turbine 64.**	• Derived native grasslands that are enclosed by remnant vegetation at least 200 m in width. Vegetative barriers include patches of remnant forests, woodlands and shrublands. • The influence of vegetative barriers that exist beyond the extent of the Development Corridors is also considered.	• If a grassland patch is currently enclosed by remnant forests, woodlands or shrublands, but the location will have historically been connected to surrounding grasslands previously. • Derived native grasslands that historically would have supported suitable habitat for GSM (e.g. grasslands / open grassy woodlands).
Slope (GIS Digital elevation model)	• >13 degrees • The species is documented as using slopes less than 3 degrees (DEWHA 2009b), but site data suggests 1.7% (3 of 179 records) of records occur on slopes greater than 13 degrees.	• ≤13 degrees • Site data suggests 98.3% (176 of 179 records) of records occur on slopes 13 degrees or less.
Aspect (GIS Digital elevation model)	• Aspects between east-southeast (112.5°) and south-southwest (202.5°) aspects. • Site data suggest just 7.2% (13 of 179 records) of records occur on south-east and southerly aspects.	• All others • The species is documented to favour northly aspects (DEWHA 2009b).

[1] Completed at a wide scale e.g. paddock level. Completed across the project but only completed within Derived native grasslands of PCTs 350 and 351 (Vegetation Zones 4 and 6) and non-native grasslands (Vegetation Zone 10).

Table 2 Method 2 – Species polygon assessment where golden sun moths were recorded

Habitat Parameter	Exclusion	Inclusion
Vegetation Zones	• Remnant forest and woodlands of PCTs 289, 350 and 351 have been excluded (Vegetation Zones 1, 3, 5 and 9) • Shrublands of PCT 351 have been excluded (Vegetation Zones 7 and 8) • Drainage line vegetation of PCT 335 have been excluded (Vegetation Zone 2) *These vegetation zones have been excluded as they are widely not recognised to provide habitat for the species, due to their canopy cover, shrub cover, shading effects and/or soil moisture...etc.*	• Derived native grasslands of PCTs 350 and 351 have been included (Vegetation Zones 4 and 6) • Non-native grasslands (Vegetation Zone 10).
Wallaby Grass Cover Categories – Consistent with NGH (Epuron 2017) [1] ***Categories are defined by NGH (Epuron 2017), classification of categories has been updated where relevant based on more recent Umwelt survey results (Umwelt 2020).***	• Not applicable	• Not Present (0%) • Low Cover (1 – 25%) • Moderate Cover (26 – 50%) • Good Cover (51 – 75%) • Excellent Cover (76 – 100%) *It is acknowledged that there are records within all categories. Habitat within 200m of records has been assessed, an approach consistent with NGH (2017).*
GSM Records - 200m buffers	• Remnant forest, woodlands and shrublands (Vegetation Zones 1, 2, 3, 5, 7, 8 and 9) within the 200m record buffers.	• Derived Native Grasslands (Vegetation Zones 4 and 6) within the 200m buffers from records. • Non-native grasslands (Vegetation Zone 10) within 200m buffers from records have been included for the assessment of Prescribed Impact Assessment.

Habitat Parameter	Exclusion	Inclusion
Extent of habitat category classification	• Not applicable	• Completed at a wide scale e.g. paddock level. • Completed across the project but only completed within Derived native grasslands of PCTs 350 and 351 (Vegetation Zones 4 and 6) and non-native grasslands (Vegetation Zone 10).
Extent of impact analysis	• Outside of Development Corridors.	• Within the Development Corridors and Indicative Development Footprints
Shading	• 10m buffer of all excluded tree-dominated remnant vegetation into DNG (Vegetation Zones 1, 3, 5, 9) due to shading and soil moisture affects. • Restricted to vegetation zones with a canopy height of at least 10m.	• Shrubland Vegetation Zones (7 and 8) have not been buffered as their shading factor is considered limited due to their maximum height typically being less than 3m.
Soil Moisture	• Vegetation Zone 2 as it is mapped along drainage lines. • Deeper soils, waterlogged soils, dominance of tall sedges, rushes, couch and scattered occurrences of tussock grass (Umwelt 2020). • Soil and vegetative structure described above is unsuitable for GSM.	• Not applicable.

[1] Completed at a wide scale e.g. paddock level. Completed across the project but only completed within Derived native grasslands of PCTs 350 and 351 (Vegetation Zones 4 and 6) and non-native grasslands (Vegetation Zone 10).

Wallaby Grass Cover Category

The use of Wallaby Grass Cover Categories (being: not present; low cover; moderate cover; good cover; and excellent cover) is consistent with the categories defined by NGH in the EPBC Preliminary Documentation (Epuron 2017), as described above. The classification of these categories however has been updated based on additional and more recent Umwelt survey results (Umwelt 2020). It is noted however that Umwelt's floristic and golden sun moth habitat data generally supported the NGH habitat classification. Where inconsistent, cover categories were updated.

The revised habitat assessment for golden sun moth included a review of all Umwelt plots undertaken within Vegetation Zones 4, 6 and 10, Umwelt golden sun moth habitat transects and NGH GSM Habitat Transects. The percentage cover of wallaby grass (*Rytidosperma* spp.) was determined from each of these survey components. Analysis was then undertaken to determine the percentage cover of wallaby grass that was recorded in all of the beforementioned survey components, using the closest survey component in consistent habitat. This analysis determined that on average, golden sun moth records for the Project occurred where there was at least 30.13% of wallaby grass.

However in recognition of variability of habitat across the Project and to remain consistent with the previous EPBC Preliminary Documentation (Epuron 2017), a conservative approach was taken to use 25% cover of wallaby grass as the measure to consider overarching habitat for golden sun moth.

Extent of Survey

During consultation with DPIE and BCD, a scenario was approved whereby areas of the Project that had been surveyed within the golden sun moth survey season but at which the species had not been detected, grassland habitat in these locations could be excluded from consideration. The application of this scenario required development of the extent to which it was to be applied.

Through this revised assessment of the species, a 100 metre buffer of tracks surveyed by Umwelt within golden sun moth season was applied, while no buffer was applied to the survey areas defined by NGH in the previous EPBC Preliminary Documentation (Epuron 2017). The latter were not buffered as their extent of survey extent is already determined.

Shading

Shading on grassland habitat is known to be negatively associated with suitable golden sun moth habitat (DEWHA 2009b) and the species is known to be particularly vulnerable to shading affects (DEWHA 2009a). The negative association is in regard to soil temperatures, soil moisture and plant characteristics.

All tree-dominated remnant vegetation identified for the Project was buffered by 10 metres, this included Vegetation Zones 1, 3, 5 and 9. All these vegetation zones support intact canopies greater than 10 metres of height (Umwelt 2020). Where these 10 metre buffers intersected with grassland habitats (being Vegetation Zones 4, 6 and 10), this intersected grassland was excluded from consideration of the revised golden sun moth habitat assessment due to the negative association with shading.

Shrubland vegetation (Vegetation Zones 7 and 8) were not buffered as they support vegetation that is typically less than three metres in height.

Soil Moisture

Soil moisture can determine suitability of grassland habitat for golden sun moth. Soil that maintains high moisture levels is not considered to support suitable golden sun moth habitat (DEWHA 2009a and 2009b).

Vegetation Zone 2 was identified within the Project along drainage lines and is therefore associated with consistently high soil moisture. Furthermore, this vegetation zone is characterised by deeper soils, waterlogged soils, dominance of tall sedges, rushes, couch and scattered occurrences of tussock grass (Umwelt 2020). The mixture of these characteristics is not considered suitable habitat for the golden sun moth and was therefore excluded from the revised golden sun moth habitat assessment.

Vegetative Barriers of at least 200 metres wide

The species is recognised to have limited capability to cope with significant barriers between suitable habitat, with mobile males unlikely to fly more than 100 metres away from suitable habitat (DEWHA 2009a and 2009b). As a result, suitable habitat that is separated by a barrier of greater than 200 metres is considered isolated (DEWHA 2009a and 2009b).

Consequently, patches of derived native grasslands within the Project that were enclosed by remnant vegetation at least 200 m in width were excluded from consideration from the revised golden sun moth habitat assessment. Vegetative barriers included continuous patches of remnant forests, woodlands and shrublands.

Importantly, this attribute was not employed where the derived native grasslands would have historically been connected to surrounding grasslands previously. This is in recognition of the species being able to persist in an isolated patch of derived native grassland if it had previously been connected to additional habitat.

Slope

The golden sun moth is recognised to prefer grassland habitats on slopes of less than 3 degrees (DEWHA 2009b). However, a GIS Digital Elevation Model that was prepared as part of the revised golden sun moth habitat assessment found that 1.7% (3) of all golden sun moth records (179) from the Project occur on slopes greater than 13 degrees. Alternatively, 98.3% (176) of all golden sun moth records (179) from the Project occur on slopes 13 degrees or less.

Consequently, patches of derived native grasslands within the Project that had a slope of greater than 13 degrees were excluded from consideration from the revised golden sun moth habitat assessment.

Aspect

The golden sun moth is recognised to prefer grassland habitats with a northerly aspect (DEWHA 2009b).

However, a GIS Digital Elevation Model that was prepared as part of the revised golden sun moth habitat assessment found that just 7.2% (13) of all golden sun moth records of (179) records from the Project occur on south-east and southerly aspects.

Consequently, patches of derived native grasslands within the Project that occurred on aspects between east-southeast (112.5°) and south-southwest (202.5°) were excluded from consideration from the revised golden sun moth habitat assessment.

The outcome of the application of each method is provided below in **Table 3.** The table displays the results of each method for the three vegetation zones being assessed and clearly defines the area which has been excluded or included as part of the golden sun moth species polygon. Outcomes of the revised golden sun moth habitat assessment are presented in **Appendix A.**

The results are divided into the two Development Corridors (Development Corridor – Wind Farm and Development Corridor – Permanent Met Masts) and three Indicative Development Footprints (Indicative Development Footprints – Wind Farm, Indicative Development Footprints – Permanent Met Masts and

Indicative Development Footprints – External Roads). All definitions of the development corridors and development footprints is as per the current BDAR (Umwelt 2020b).

Development Corridors

The revised analysis mapped a total of 224.21 hectares of golden sun moth species polygon within the Development Corridors, comprising 9.92 hectares of Vegetation Zone 4 (PCT 350 – DNG) and 214.29 hectares of Vegetation Zone 6 (PCT 351 – DNG). A further 276.17 hectares of grassland habitat was excluded from the golden sun moth species polygon, comprising 22.79 hectares of Vegetation Zone 4 (PCT 350 – DNG) and 253.38 hectares of Vegetation Zone 6 (PCT 351 – DNG).

An additional 59.26 hectares of Vegetation Zone 10 (Non-native Vegetation) occurs in the Development Corridors. The extent of this vegetation zone within the project will be assessed as part of the Prescribed Impact Assessment of the BDAR. A further 174.50 hectares of Vegetation Zone 10 (Non-native Vegetation) was excluded from the golden sun moth species polygon.

Indicative Development Footprints

The revised analysis mapped a total of 85.28 hectares of golden sun moth species polygon that could be impacted by the Project within the Indicative Development Footprints, comprising 5.42 hectares of Vegetation Zone 4 (PCT 350 – DNG) and 79.86 hectares of Vegetation Zone 6 (PCT 351 – DNG). A further 106.21 hectares of grassland habitat was excluded from the golden sun moth species polygon, comprising 12.10 hectares of Vegetation Zone 4 (PCT 350 – DNG) and 94.11 hectares of Vegetation Zone 6 (PCT 351 – DNG).

An additional 25.53 hectares of Vegetation Zone 10 (Non-native Vegetation) occurs in the Development Corridors. The extent of this vegetation zone within the project will be assessed as part of the Prescribed Impact Assessment of the BDAR. A further 79.64 hectares of Vegetation Zone 10 (Non-native Vegetation) was excluded from the golden sun moth species polygon.

The previous golden sun moth species polygon for the project totalled 43.20 hectares (Umwelt 2020). The revised assessment totalling 85.28 hectares presents an increase of 42.08 hectares.

Table 3 Summary of species polygon analysis for golden sun moth

	Assessment Outcome	Development Corridors							Indicative Development Footprints								
		Development Corridor - Wind Farm (ha)		Development Corridor - Permanent Met Masts (ha)		Total (ha)			Indicative Development Footprint - Wind Farm (ha)		Indicative Development Footprint - Permanent Met Masts (ha)		Indicative Development Footprint - External Roads (ha)		Total (ha)		
		SWS	SEH	SWS	SEH	SWS	SEH	Total	SWS	SEH	SWS	SEH	SWS	SEH	SWS	SEH	Total
Method 1 - No Records																	
Vegetation Zone 4 (PCT 350-DNG)	Habitat Exclusion	18.15	4.14	0.00	0.00	18.15	4.14	22.29	9.14	2.22	0.00	0.00	0.67	0.00	9.81	2.22	12.03
	GSM Habitat Inclusion	**2.85**	**1.98**	**0.00**	**0.00**	**2.85**	**1.98**	**4.83**	**1.44**	**0.87**	**0.00**	**0.00**	**0.00**	**0.00**	**1.44**	**0.87**	**2.31**
Vegetation Zone 6 (PCT 351-DNG)	Habitat Exclusion	177.31	65.52	5.09	0.55	182.40	66.07	248.47	70.44	20.17	1.33	0.10	0.14	0.00	71.91	20.27	92.18
	GSM Habitat Inclusion	**97.18**	**26.45**	**9.67**	**2.51**	**106.85**	**28.96**	**135.81**	**39.76**	**9.06**	**1.65**	**0.84**	**0.00**	**0.00**	**41.41**	**9.90**	**51.31**
Vegetation Zone 10 (Non-native)	Habitat Exclusion	113.43	57.77	0.00	2.53	113.43	60.30	173.73	44.22	20.61	0.40	0.47	13.60	0.00	58.22	21.08	79.30
	GSM Habitat Inclusion	**17.42**	**10.63**	**0.00**	**0.00**	**17.42**	**10.63**	**28.05**	**7.16**	**4.06**	**0.00**	**0.00**	**0.00**	**0.00**	**7.16**	**4.06**	**11.22**
Method 2 - Records																	
Vegetation Zone 4 (PCT 350-DNG)	Habitat Exclusion	0.00	0.50	0.00	0.00	0.00	0.50	0.50	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.07	0.07
	GSM Habitat Inclusion	**1.36**	**3.73**	**0.00**	**0.00**	**1.36**	**3.73**	**5.09**	**0.65**	**2.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.65**	**2.46**	**3.11**
Vegetation Zone 6 (PCT 351-DNG)	Habitat Exclusion	2.54	2.36	0.01	0.00	2.55	2.36	4.91	0.86	1.03	0.02	0.02	0.00	0.00	0.88	1.05	1.93
	GSM Habitat Inclusion	**38.00**	**40.39**	**0.00**	**0.09**	**38.00**	**40.48**	**78.48**	**14.33**	**13.42**	**0.16**	**0.64**	**0.00**	**0.00**	**14.49**	**14.06**	**28.55**
Vegetation Zone 10 (Non-native)	Habitat Exclusion	0.55	0.17	0.05	0.00	0.60	0.17	0.77	0.18	0.11	0.05	0.00	0.00	0.00	0.23	0.11	0.34
	GSM Habitat Inclusion	**10.45**	**19.29**	**0.31**	**1.16**	**10.76**	**20.45**	**31.21**	**4.66**	**9.22**	**0.28**	**0.15**	**0.00**	**0.00**	**4.94**	**9.37**	**14.31**

2.1.2 Striped Legless Lizard

During the re-referral process for the Project under the EPBC Act, Umwelt and Tilt Renewables consulted with DAWE to discuss draft versions of the re-referral. Much of this consultation focussed on the habitat and impact assessment of the Project on striped legless lizard. Following the last meeting, DAWE requested that further consideration and analysis against the Preliminary Documentation (Epuron 2017) that was prepared as part of the existing Federal Approval for the Project. The information provided below was prepared in response to this consultation.

There is a large amount of documentation regarding survey effort, habitat assessment and impact consideration for the striped legless lizard through the Biodiversity Assessment (NGH 2014), Biodiversity Assessment Addendum (NGH 2016) and the Preliminary Documentation (Epuron 2017). Furthermore, there is a degree of inconsistency between these documents, some which may be the result of alterations of Project design and some which are likely a result of inconsistent reporting. It is not possible to directly compare the original biodiversity assessment and referral with that of the re-referral due to the substantial refinement to the baseline vegetation and key habitat mapping in the Development Corridor that has occurred through the modification. Similarly, a comparison cannot be made with the habitat identified as part of the Project Area assessed as part of the Preliminary Documentation (Epuron 2017) as this same extent was not considered as part of the modified project assessment.

Umwelt used the original mapping of known striped legless lizard habitat, i.e. 512 hectares in the Project Area assessed as part of the Preliminary Documentation (Epuron 2017), to determine impacts on known habitat. Of the 512 hectares of known habitat for striped legless lizard identified within the Project Area assessed as part of the Preliminary Documentation (Epuron 2017), 126.11 hectares occur within the Development Corridors assessed as part of the modification project. This comprises 125.45 hectares within the Development Corridor – Wind Farm and 0.66 hectares within the Development Corridor Permanent Masts.

Of the extent within the Development Corridors, 43.29 hectares occur within the Indicative Development Footprints assessed as part of the modification project, comprising 42.72 hectares within the Indicative Development Footprint – Wind Farm and 0.57 hectares within the Indicative Development Footprint – Permanent Met Masts. The entire 43.29 hectares of revised species polygon within the Indicative Development Footprint occurs within the South Western Slopes IBRA Region. It is noted that the impacts identified for the species in relation to the permanent met masts occurs at the boundary edge of the habitat for the species. While it presents an impact to the species it will not further fragment or isolate the remaining habitat.

The identification of 2,411 hectares of likely / potential habitat considered as part of the Preliminary Documentation (Epuron 2017) is not supported by the results of the ecological surveys or consistent with the referral guidelines for striped legless lizard (DSEWPC 2011). Targeted surveys for the striped legless lizard occurred throughout the Project Area assessed as part of the Preliminary Documentation (Epuron 2017). These targeted surveys considered the Guidelines for Australia Threatened Reptiles: Guidelines for detecting reptiles listed as threatened under the EPBC Act 1999 (SEWPAC 2011), NSW Guidelines for Threatened Species (DEC 2004), and the project specific Director-General Requirements (DGRs) issued by NSW Office of Environment and Heritage (OEH). Furthermore, these surveys were completed in accordance with the referral guidelines for striped legless lizard (DSEWPC 2011), comprising artificial tile grids, active searching, funnel traps with use of drift line (replicating pit-fall trapping) and supported by habitat assessments.

The one record of the species occurred in a single continuous patch of grassland habitat, which subsequently formed the identification of the 512 hectares of known habitat for the species within the Project Area assessed as part of the Preliminary Documentation (Epuron 2017). While the location of the record occurs within predominant agricultural land use (cattle grazing, and occasionally sheep grazing), it is within an area that has been less intensively grazed than other

similar areas throughout the Development Corridors. Therefore the extrapolation of this known habitat to other areas that are regarded as likely / potential habitat as part of the Preliminary Documentation (Epuron 2017), but are more intensively grazed, is not appropriate.

There were no striped legless lizards recorded in the remaining grassland habitats of the Project Area assessed as part of the Preliminary Documentation (Epuron 2017). Therefore while 2,411 hectares of likely / potential habitat for the species was identified within the Preliminary Documentation (Epuron 2017), based on habitat condition and survey results, it is not appropriate for these areas to be assessed as generating impacts for the species in the modification project. Properties within the Development Corridors to the north and south of the known record are considered to support more intensive agricultural land uses, whether that constitutes sheep grazing as the primary or sole stock, higher stocking rates or also includes soil disturbing activities such as ploughing or tilling. While the 2,411 hectares of likely / potential habitat for the species was identified within the Preliminary Documentation (Epuron 2017) as potentially suitable for the striped legless lizard, the absence of records of the species and observations of more intensive agricultural land uses strongly indicates the species is not utilising this broader area.

Based on the original NGH mapping of known habitat within the Preliminary Documentation (Epuron 2017), there would be impacts of 43.29 hectares of striped legless lizard habitat within the Indicative Development Footprints, 6.21 hectares less than the current impact threshold for the species as part of the existing federal approval (EPBC 2014/7163) of 49.5 hectares. Outcomes of the revised striped legless lizard assessment are presented in **Appendix A.**

Due to the different treatment of potential habitat in this assessment in the EPBC Act re-referral, as justified by survey results, no areas of potential habitat would be impacted. This updated impact assessment for the striped legless lizard has been used to update to the credit calculations.

Umwelt has considered the assessment approach described above with direct regard for the Referral Guidelines for the striped legless lizard (DSEWPC, 2011) for the Department's consideration:

- The single record of the striped legless lizard indicates an 'important population' of the species.
- The definition and assessment of 512 hectares of 'known habitat' within a single continuous patch of grassland habitat within the north of the Project meets the threshold for medium to long-term habitat and population viability, being greater than 0.5 hectares.
- Umwelt considers the exclusion of the 'likely / potential habitat' for the species identified within the Preliminary Documentation (Epuron 2017) to be consistent with the Referral Guidelines for the striped legless lizard (DSEWPC, 2011). Justification being that this exclusion is based on the results of 9 artificial tile grid arrays and funnel traps in combination with habitat assessment, which did not record striped legless lizard. While the Preliminary Documentation reported 2,411 hectares of likely / potential habitat for the species (Epuron 2017), with artificial tile grid arrays and funnel trap lines completed throughout this habitat in accordance with the Referral Guidelines for the striped legless lizard (DSEWPC, 2011) it is believed no important population occurs within the remainder of the Project.

2.2 Prescribed Impact Assessment from the Removal of Non-native Vegetation Supporting Golden Sun Moth

Non-native Vegetation makes up 105.18 hectares within the Indicative Development Footprints and is described in Section 3.2.2 of the current version of the BDAR (Umwelt 2020). An assessment of prescribed impacts has been conducted for the removal of non-native vegetation within the Indicative Development Footprints with potential to support the golden sun moth (*Synemon plana*). Umwelt have completed a careful and detailed analysis in assigning the GSM species polygon described above in **Section 2.1.1**.

Following the amended habitat assessment for golden sun moth, a total of 25.53 hectares of Vegetation Zone 10 (Non-native Vegetation) within the Indicative Development Footprints occur within the golden sun moth species polygon. A further 79.64 hectares of Vegetation Zone 10 (Non-native Vegetation) was excluded from the golden sun moth species polygon.

A total of 59.26 hectares of Vegetation Zone 10 (Non-native Vegetation) within the Development Corridors occur within the golden sun moth species polygon. A further 174.50 hectares of Vegetation Zone 10 (Non-native Vegetation) was excluded from the golden sun moth species polygon.

The prescribed impact assessment is presented below in **Table 4**. This assessment has been undertaken in accordance with Section 9.2.1.4 of the BAM 2017 (OEH 2017).

Table 4 Prescribed Impact Assessment of Non-native Vegetation Supporting Golden Sun Moth

Criteria	Response
The assessment of the impacts of development on the habitat of threatened species or ecological communities associated with non-native vegetation must:	
a) identify the species and ecological communities likely to use the habitat	The golden sun moth has been recorded at several locations within the Indicative Development Footprints during surveys conducted by NGH and Umwelt. Consistent with the impact assessment for this species in the Biodiversity Assessment and Biodiversity Assessment Addendum (NGH Environmental 2014 and 2016), species habitat polygons were developed based on the extent of Vegetation Zones 4 and 6 (i.e. recorded DNGs) that intersect with 200 m buffers of known records for the species. As a result, 25.53 hectares of non-native vegetation fall within the species polygon for the species. This non-native vegetation comprises grassland areas have been extensively cleared of native flora species through intensive and historic agricultural land use. They predominantly support exotic grasses and herbs, the most abundant including squirrel tail fescue (*Vulpia bromoides*), soft brome (*Bromus hordeaceus*), silvery hairgrass (*Aira cupaniana*), prairie grass (*Bromus catharticus*), red brome (*Bromus rubens*) and paspalum (*Paspalum dilatatum*). A full description of this mapping unit is provided in Section 3.2.2 of the current BDAR (Umwelt 2020). While these areas occur within the habitat buffers for the golden sun moth, it is noted that the presence of native grass species utilised by the golden sun moth (i.e. *Rytidosperma* spp. and *Austrostipa* spp.) in these areas generally occur in close proximity to the mapped PCT 350 and PCT 351 DNGs. As distances from these PCTs increase, it is likely that so do occurrences of exotic pasture weeds that do not facilitate foraging or breeding for the species. Currently, the species is only known to occur in degraded grasslands when they are dominated by the exotic Chilean needlegrass (*Nassella nessiana*) (DEWHA 2009a), which has not been recorded within any of the areas of Non-native Vegetation occurring in the Indicative Development Footprints. Therefore, while this assessment includes the total 25.53 hectares of Non-native Vegetation which occurs within the golden sun moth habitat buffers, it is likely that the area of Non-native Vegetation with potential to be utilised by the species is considerably lower. Those areas of Non-native Vegetation used by the species would be based on the sporadic presence of native grass species, and are considered sub-optimal habitat.
b) describe the nature, extent and duration of short and long-term impacts	The Project will result in direct and indirect impacts, which are described in full in Section 5.1 of the current BDAR (Umwelt 2020). Short-term indirect impacts will include Non-native Vegetation within and surrounding golden sun moth habitat buffers being subject to potential increase in erosion, dust pollution, noise and vibration during construction works. These will occur across the Indicative Development Footprints for

Criteria	Response
	approximately two years. Much of the Development Corridor is exposed to historical and ongoing disturbances from grazing and other agricultural pressures. The extent and risk of indirect impacts from construction activities associated with the Project is considered to be consistent with those presented, discussed and assessed as part of the original approval, including Biodiversity Assessment (NGH Environmental 2014) and Biodiversity Assessment Addendum (NGH Environmental 2016). Long-term impacts will include the removal of up to 25.53 hectares of Non-native Vegetation which occurs in areas where the Indicative Development Footprints intersect with golden sun moth habitat buffers. This may result in initial species decline due to mortality of adults and larvae during the clearing process. The removal of vegetation may also lead to (additional) feral weed encroachment to adjacent areas over time. Given the occurrence of existing weeds in habitat areas, the Project is unlikely to introduce invasive species such as weeds that are harmful to the golden sun moth or its habitat. Despite the Project undergoing a modification, the components of indirect and peripheral impacts remain unchanged in nature and extent.
c) describe, with reference to relevant literature and other reliable published sources of information, the importance within the bioregion of the habitat to these species or ecological communities	The Saving Our Species (SOS) report for the golden sun moth (OEH 2020) identifies two key management sites for the species: Site 1 – Upper Lachlan and Site 2 – Gundaroo/Queanbeyan. Areas within the Development Corridor occur in the Upper Lachlan Management Site, which encompasses Rye Park, the town of Kangiara and stretches across to Blakney Creek in the east. This covers a total area of approximately 140, 664 hectares where objectives for minimising the impacts of commercial activities and maintaining low weed densities are in place. The areas of Non-native Vegetation forming potential golden sun moth habitat which will be removed by the Project comprise sub-optimal habitat which is not currently being managed in a way that is consistent with the SOS management objectives (i.e. reducing and maintaining weed densities through active weed control at priority sites). Therefore, although some patches of the Development Corridor fall within the Upper Lachlan Priority Site, it is considered unlikely that the removal of Non-native Vegetation within these areas will significantly affect the SOS objective to secure the species in the long term within this region. The *Significant Impact Guidelines for the Critically Endangered Golden Sun Moth (Synemon plana)* (DEWHA 2009a) specify that the species is only known to occur in degraded grasslands when they are dominated by the exotic Chilean needlegrass (*Nassella nessiana*). This species was not recorded within any of the Non-native Vegetation areas to be cleared during surveys, and it is likely that these areas would only be used by the species based on the sporadic presence of native grasses. Furthermore, this species has not been recorded through any ecological surveys completed for the Project. There are extensive areas (i.e. several thousand hectares) of suitable habitat for the golden sun moth mapped as Yellow Box-Apple Box Grassy Woodlands in the NSW – South Western Slopes and South Eastern Highlands IBRA bioregions (Gellie 2005). These have groundcovers dominated by the species' preferred native grasses, including wallaby grass (*Rytidosperma racemosum* var. *racemosum*), kangaroo grass (*Themeda australis*), weeping grass (*Microlaena stipoides* var. *stipoides*) and speargrass (*Austrostipa scabra*), and are likely to be similar to golden sun moth habitat areas found in the Development Corridor. These grasses are essential in the maintenance of important life cycle processes for the species, as golden sun moth larvae feed exclusively on the roots of wallaby grasses (DPIE 2019). With this abundance of higher quality foraging and breeding habitat for the species in the wider region, areas of Non-native Vegetation would likely be utilised only by very small proportion of the species within the local area, and thus a negligible proportion of the species within the wider region.

Criteria	Response
	Additionally, there are several areas where the species is found or considered likely to occur within the relevant bioregions which are protected. These include Goorooyarroo Nature Reserve, Bango Nature Reserve, McLeod's Creek Nature Reserve, Oakdale Nature Reserve (OEH 2015) and the Yass River Gorge Council reserve (Yass Valley Council 2017). Taking into account the above information, it is considered that the Non-native Vegetation to be impacted by the Project may potentially be utilised by local populations of the golden sun moth, but is unlikely to constitute important habitat for the species within the relevant bioregions.
d) predict the consequences of the impacts for the local and bioregional persistence of the suite of threatened species and communities likely to use these areas as habitat, with reference to relevant literature and other published sources of information	The removal of 25.53 ha of Non-native Vegetation will potentially have impacts on local populations occurring in these areas due to their limited dispersal ability. Clearing works may lead to mortality of both adults and larvae utilising sporadic native grasses within Non-native Vegetation, as females of the species are generally reluctant to fly and males will not fly greater than 100 m (DPIE 2019). However, the number of individuals utilising Non-native Vegetation is expected to be a small proportion of the local population due to the species' preference for intact native grasslands (Kutt *et.al.* 2014; DEWHA 2009). Currently, the species is only known to occur in degraded grasslands when they are dominated by the exotic Chilean needlegrass (*Nassella nessiana*) (DEWHA 2009a), which has not been recorded within any of the areas of Non-native Vegetation occurring in the Indicative Development Footprints or the Project as a whole. It is recognised that one of the major threats to the golden sun moth is the loss of their preferred habitat by vigorous exotic pasture grasses introduced for livestock grazing, nutrient enrichment and pasture cultivation (O'Dwyer & Attiwill 2000; DEWHA 2009a). As such, the Non-native Vegetation to be removed provides sub-optimal habitat for the species, and the impacts are not expected to affect the persistence of the golden sun moth in the local area. With regards to the wider ACT/NSW population, the areas of Non-native Vegetation are surrounded by vast amounts of higher quality native grassland habitat in the NSW – South Western Slopes, and South Eastern Highlands IBRA bioregions (Gellie 2005). These areas have groundcovers dominated by native grasses which are essential in the maintenance of important life cycle processes for the species, as golden sun moth larvae feed exclusively on the roots of wallaby grasses (DPIE 2019b). Therefore these areas would constitute habitat important to the persistence of the species, and are likely the ones where minimising impacts and actively managing weeds would be of the most value. Additionally, the area of Non-native Vegetation to be removed is negligible when viewed in the regional context. Generally larger areas of connected habitat are considered the priority for protection of golden sun moth over the long-term (DEHWA 2009a). As populations separated by distances of greater than 200 m can be considered effectively isolated (DPIE 2019a and 2019b), regional populations are not expected to be affected by the Project. It is not considered likely that the removal of Non-native Vegetation occurring in golden sun moth habitat buffers will affect any populations in such a way that they will become extinct or have their movement restricted so that existing dispersal patterns are significantly affected. Consequences of the removal of 25.53 hectares of Non-native Vegetation are considered to be minor on both a local and regional scale.

2.3 Ecosystem Credit Species Re-selection

Following the response to submission phase of the Project, a request for information was lodged by DPIE regarding the 'removal of speckled warbler and brown treecreeper' from the BAM-C assessment for the Project with the additional information below.

> *Biodiversity Assessment Method Calculator (BAMC) – deselection of ecosystem credit species*
>
> *BCD does not agree with the deselection of the following species:*
>
> • *Speckled Warbler –the description in the TBDC states that typical habitat includes scattered native tussock grasses, a sparse shrub layer, some eucalypt regrowth and an open canopy. Isolated paddock trees found in DNG can be important for this species as they can link remnant foraging habitat. Most foraging takes place on the ground around tussocks and under bushes and trees.*
>
> • *Brown Treecreeper – the comments in the TBDC (above the habitat constraints) state that suitable foraging habitat includes areas within 100 m of moderate to good condition vegetation of suitable type. Therefore, any DNG within 100 m suitable of suitable foraging habitat should be included within the ecosystem credit calculation.*
>
> *Deselection of both species is significant because they have a high sensitivity to potential gain and, therefore, disproportionality impact the ecosystem credit output.*

The information referenced by BCD from the Threatened Biodiversity Data Collection (TBDC) (BioNet 2020) is relevant, however, there is also other key information listed in the 'Habitat and Ecology' information tab of the TBDC – Descriptive Text for speckled warbler and brown treecreeper that support the justification for their deselection.

It is important to note that these two species were not deselected entirely from the online BAM-C assessment for the Project. They remained selected in relation to the Vegetation Zones (being 1, 2, 3, 5, 6 – 9) recorded for the Project that support habitat for both the species. These habitats include the remnant woodlands and forests as well as the two shrubland variants.

The 'Habitat and Ecology' information tab of the TBDC – Descriptive Text has been reviewed which states "The Speckled Warbler lives in a wide range of Eucalyptus dominated communities that have a grassy understorey, often on rocky ridges or in gullies" (BioNet 2020); and the brown treecreeper is "Found in eucalypt woodlands (including Box-Gum Woodland) and dry open forest…" (BioNet 2020).

While it is not suggested that these species would never use derived native grasslands, based on the whole profile of these species within the TBDC (BioNet 2020), we do not believe Vegetation Zone 4 (PCT 350 – Derived Native Grassland) and Vegetation Zone 6 (PCT 351 – Derived Native Grasslands) vegetation zones would not form 'regular habitat' for the species'.

BCD correctly pointed out that both of these species are classed as 'High Sensitivity to Gain' species; however it is contended that the deselection of these species will not disproportionally impact the ecosystem credit for the Project.

The calculation of ecosystem credits within BAM 2017 is determined based on the highest sensitivity to gain class for the PCT (OEH 2017). Umwelt have reviewed the BAM-C, through the assessment process, and there are at least two other species that are in the same 'High Sensitivity to Gain' class, being the spotted-tailed quoll and the yellow-bellied sheathtail bat. Both species are selected as applicable for the derived native grasslands (Vegetation Zones 4 and 6) which have been deselected for brown treecreeper and speckled warbler.

As there are species with a higher sensitivity to gain class than brown treecreeper and speckled warbler selected as applicable for Vegetation Zones 4 and 6, we disagree that the ecosystem credit generation would have been 'disproportionally impacted' by the deselection. In fact, the ecosystem

credit generation is unlikely to be affected at all by their selection or deselection. This was not the intention in their deselection, they were deselected as we believed this was a more accurate application of the BAM – Credit Calculator.

The text in the BAM 2017 that supports the position above is in Sections 6.6.1.4 and 11.2.3.3 as well as Equation 1 (OEH 2017).

Irrespective of this position, and to ensure no confusion, the BAM – Credit Calculator has been updated to select brown treecreeper and speckled warbler for Vegetation Zones 4 and 6 for the Project.

3.0 Results

The revised credit requirements for the Project are presented below in **Table 5** following updating the BAM – Credit Calculator to capture the changes described above in **Section 2.0**. Results are presented for the NSW – South Western Slopes IBRA Region and South Eastern Highlands IBRA Region separately. Similarly, ecosystem and species-credit credit requirements are presented separately.

The BAM – Credit Calculator that was operated to update the credit requirements, has been assessed in full through the application of the BAM2017 (OEH 2017).

The ecosystem credits required for the Project and presented in **Table 5** are consistent with those in the current BDAR (Umwelt 2020). The re-selection of two ecosystem species, speckled warbler and brown treecreeper, in relation to Vegetation Zones 4 (PCT 350 – Derived Native Grasslands) and Vegetation Zones 6 (PCT 351 – Derived Native Grasslands) as described above in **Section 2.3** did not result in a change to the ecosystem credit requirement.

Similarly, the species-credit credit requirement for superb parrot, southern myotis and squirrel glider remain consistent with those in the current BDAR (Umwelt 2020).

The credit liability for striped legless lizard increased from 27 credits in the current BDAR (Umwelt 2020) to 328 credits (301 credits higher). The credit liability for golden sun moth increased from 716 credits in the current BDAR (Umwelt 2020) to 1,384 credits (668 credits higher).

Table 5 Updated ecosystem and species-credit credit requirement for the Project

Veg Zone	PCT/Species-credit	Area (ha)	Credits Required
Ecosystem Credits			
NSW – South Western Slopes IBRA Bioregion			
1	289 Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	0.78	**26**
2	335 Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	4.77	**114**
3	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Moderate to Good*	9.93	**308**

Veg Zone	PCT/Species-credit	Area (ha)	Credits Required
4	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Derived Native Grassland*	11.89	**204**
5	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Moderate to Good*	53.56	**1,758**
6	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Derived Native Grassland*	128.70	**1,137**
7	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Acacia Shrubland*	2.98	**61**
8	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Sifton Bush Shrubland*	66.15	**678**
9	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Argyle Apple Forest*	0.62	**19**
10	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Non-native Vegetation*	70.56	**0**
South Eastern Highlands IBRA Bioregion			
1	289 Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	-	**-**
2	335 Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion *Moderate to Good*	0.73	**11**
3	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Moderate to Good*	10.15	**271**
4	350 Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion *Derived Native Grassland*	5.63	**100**

Veg Zone	PCT/Species-credit	Area (ha)	Credits Required
5	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Moderate to Good*	31.25	**976**
6	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Derived Native Grassland*	45.29	**436**
7	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Acacia Shrubland*	5.55	**89**
8	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Sifton Bush Shrubland*	18.03	**199**
9	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Argyle Apple Forest*	-	**-**
10	351 Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion *Non-native Vegetation*	34.62	**0**
Species Credits			
NSW – South Western Slopes IBRA Bioregion			
-	striped legless lizard (*Delma impar*)	43.29	**328**
-	southern myotis (*Myotis macropus*)	0.03	**1**
-	squirrel glider (*Petaurus norfolcensis*)	62.17	**2,270**
-	superb parrot (breeding habitat) (*Polytelis swainsonii*)	9.93	**308**
-	golden sun moth (*Synemon plana*)	57.99	**900**
South Eastern Highlands IBRA Bioregion			
-	squirrel glider (*Petaurus norfolcensis*)	40.80	**1,365**
-	superb parrot (breeding habitat) (*Polytelis swainsonii*)	10.15	**271**
-	golden sun moth (*Synemon plana*)	27.29	**484**

4.0 Credit Summary

The biodiversity credit reports for both BAM – Credit Calculator assessments submitted for the project are provided in **Appendix B** and **Appendix C**. Both appendices include the like-for-like and variation biodiversity credit reports.

The BAM – Credit Calculator that was operated to update the credit requirements, has been assessed in full through the application of the BAM 2017 (OEH 2017).

Table 6 Ecosystem and Species-credit Credit Classes

	Area (ha)	HBT[1] Credits	No HBT[1] Credits	Total Credits
SWS IBRA Region				
Ecosystem Credits				
289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion	0.78	26	0	26
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	4.77	0	114	114
350- Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion	21.82	n/a	n/a	512
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	322.57	2,975	678	3,653
Species-credit Credits				
striped legless lizard (*Delma impar*)	43.29	n/a	n/a	328
southern myotis (*Myotis macropus*)	0.03	n/a	n/a	1
squirrel glider (*Petaurus norfolcensis*)	62.17	n/a	n/a	2,270
superb parrot (breeding habitat) (*Polytelis swainsonii*)	9.93	n/a	n/a	308
golden sun moth (*Synemon plana*)	57.99	n/a	n/a	900
SEH IBRA Region				
Ecosystem Credits				
289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion	-	-	-	-
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	0.73	0	11	11
350- Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion	15.78	n/a	n/a	371
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	134.74	1,501	199	1,700

	Area (ha)	HBT[1] Credits	No HBT[1] Credits	Total Credits
Species-credit Credits				
striped legless lizard (*Delma impar*)	-	n/a	n/a	-
southern myotis (*Myotis macropus*)	-	n/a	n/a	-
squirrel glider (*Petaurus norfolcensis*)	40.80	n/a	n/a	1,365
superb parrot (breeding habitat) (*Polytelis swainsonii*)	10.15	n/a	n/a	271
golden sun moth (*Synemon plana*)	27.29	n/a	n/a	484

[1] Hollow Bearing Tree

5.0 Offset Strategy

RPRE is committed to delivering a biodiversity offset strategy that appropriately compensates for the unavoidable loss of ecological values as a result of the Project.

As discussed in Section 4.0 of the current BDAR (Umwelt 2020), RPRE has, where possible, optimised the Project (including the Development Corridors and Indicative Development Footprints) to avoid and minimise ecological impacts in the Project planning stage.

Additionally, the Indicative Development Footprints will be finalised once turbine and contractor(s) are selected by RPRE. In doing so, RPRE will seek to further minimise impacts to biodiversity values. This is expected to occur in early 2021 and credit requirements will also be finalised at this point in time.

A range of impact mitigation strategies are proposed through the future Biodiversity Management Plan to mitigate the impact on ecological values prior to the consideration of offsetting requirements. The offset requirements for the Project, as calculated in accordance with the BAM 2017 are identified in **Section 4.0**.

The offset strategy will be implemented in consideration of the process outlined in the BC Act and the final composition of the offset strategy may evolve as the Project progresses.

The biodiversity offset strategy will be developed during the assessment process in consultation with the BCD and DPIE and based on the credits required to be retired to offset the impacts of the Project as specified in **Section 4.0** and the offset options available under the BC Act and BC Regulation including:

- Land based offsets through the establishment of new Stewardship Sites (and subsequent retirement of credits) or by retiring credits from existing Stewardship Sites. RPRE would retire the required number and class of credits determined in accordance with the BDAR and the offset rules in the BC Regulation.

- Securing (purchasing) credits through the open credit market, and/or

- Paying into to the Biodiversity Conservation Fund (BCF).

RPRE intend to satisfy as much as possible of their credit liability for the Project through land based Stewardship Sites. There are currently four sites being considered that are in the area local to the Project, while another two are being considered further afield from the Project but are expected to both meet the like-for-like rules in relation to their distance.

The cost to offset the updated credit liability for the Project through payment into the BCF in full is presented below in **Table 7**. It is noted that these costs can fluctuate, however monitoring by Umwelt indicates that the ecosystem credit costs have generally remained very high over the last 18 months. Because of this, the ability to use the BCF will be limited, as the ecosystem credit and golden sun moth costs are exceptional and do not provide a viable offsetting pathway for this project.

Table 7 Cost to pay directly into the BCF

	Credits	Price Per Credit	Cost (ex. GST)
SWS IBRA Region			
289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion	26	$3,046.53	$79,209.66
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	114	$13,533.90	$1,542,865.11
350-Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion	512	$8,034.69	$4,113,760.36
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	3,653	$4,969.29	$18,152,800.38
Ecosystem Credit Sub-total (ex. GST)			**$23,888,635.51**
GST (10%)			**$2,388,863.55**
Ecosystem Credit Total			**$26,277,499.06**
striped legless lizard (*Delma impar*)	328	$495.24	$222,287.29
southern myotis (*Myotis macropus*)	1	$741.31	$974.69
squirrel glider (*Petaurus norfolcensis*)	2,270	$495.24	$1,538,390.70
superb parrot (breeding habitat) (*Polytelis swainsonii*)	308	$741.31	$300,203.61
golden sun moth (*Synemon plana*)	900	$5,974.37	$6,704,497.76
Species-credit Sub-total (ex. GST)			**$8,766,354.05**
GST (10%)			**$876,635.40**
Species-credit Total			**$9,642,989.46**
SWS IBRA Region Total			**$35,920,488.52**
SEH IBRA Region			
289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion	-	-	-
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	11	$13,533.90	$148,872.95
350-Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion	371	$8,034.69	$2,980,869.32

	Credits	Price Per Credit	Cost (ex. GST)
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	1,700	$4,969.29	$8,447,785.56
Ecosystem Credit Sub-total (ex. GST)			**$11,577,527.83**
GST (10%)			**$1,157,752.78**
Ecosystem Credit Total			**$12,735,280.61**
striped legless lizard (*Delma impar*)	-	-	-
southern myotis (*Myotis macropus*)	-	-	-
squirrel glider (*Petaurus norfolcensis*)	1,365	$495.24	$925,067.54
superb parrot (breeding habitat) (*Polytelis swainsonii*)	271	$741.31	$264,140.19
golden sun moth (*Synemon plana*)	484	$5,974.37	$3,605,529.91
Species-credit Sub-total (ex. GST)			**$4,794,737.64**
GST (10%)			**$479,473.76**
Species-credit Total			**$5,274,211.40**
SEH IBRA Region Total			**$18,009,492.01**
Project Total			**$53,929,980.53**

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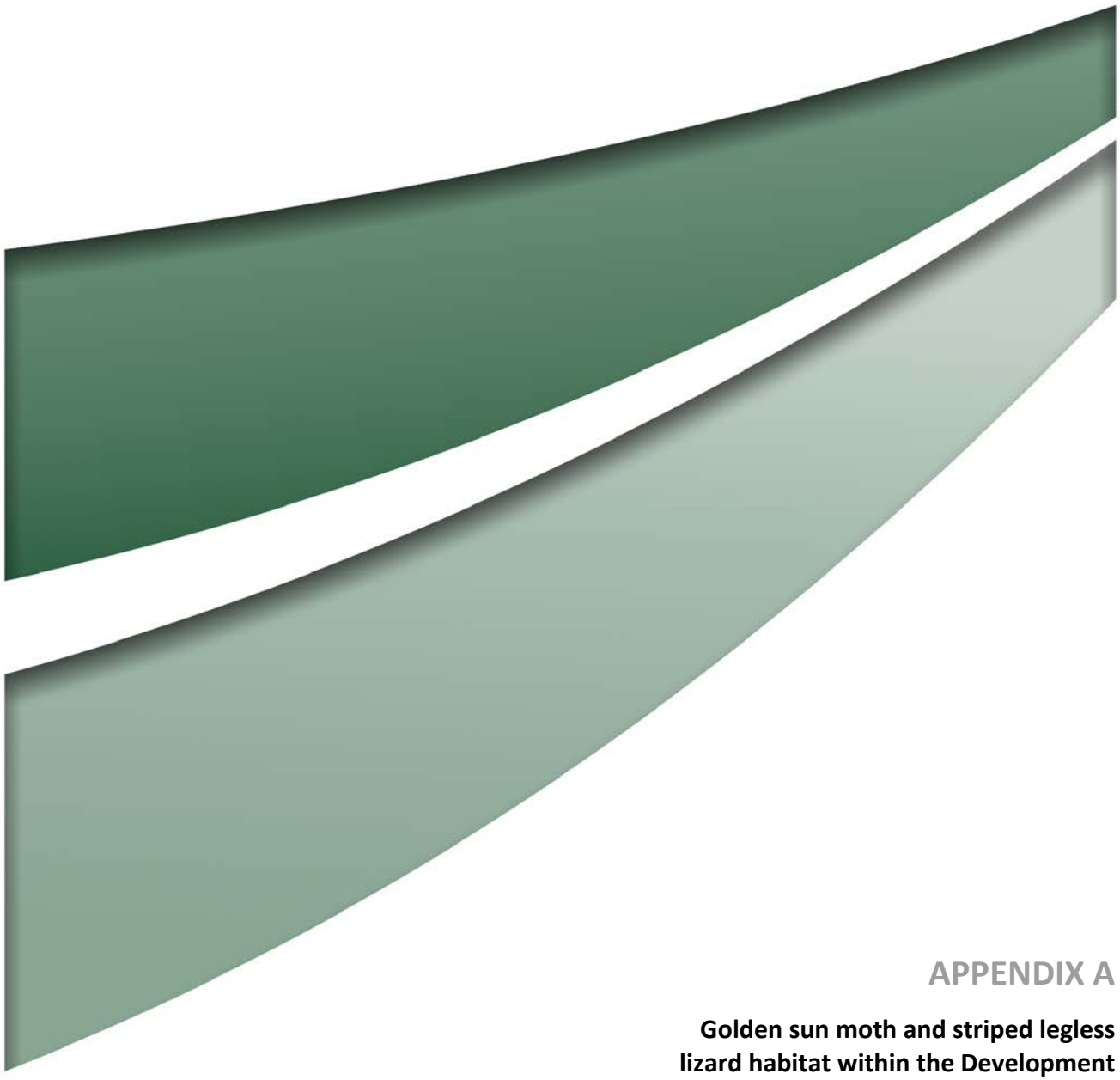
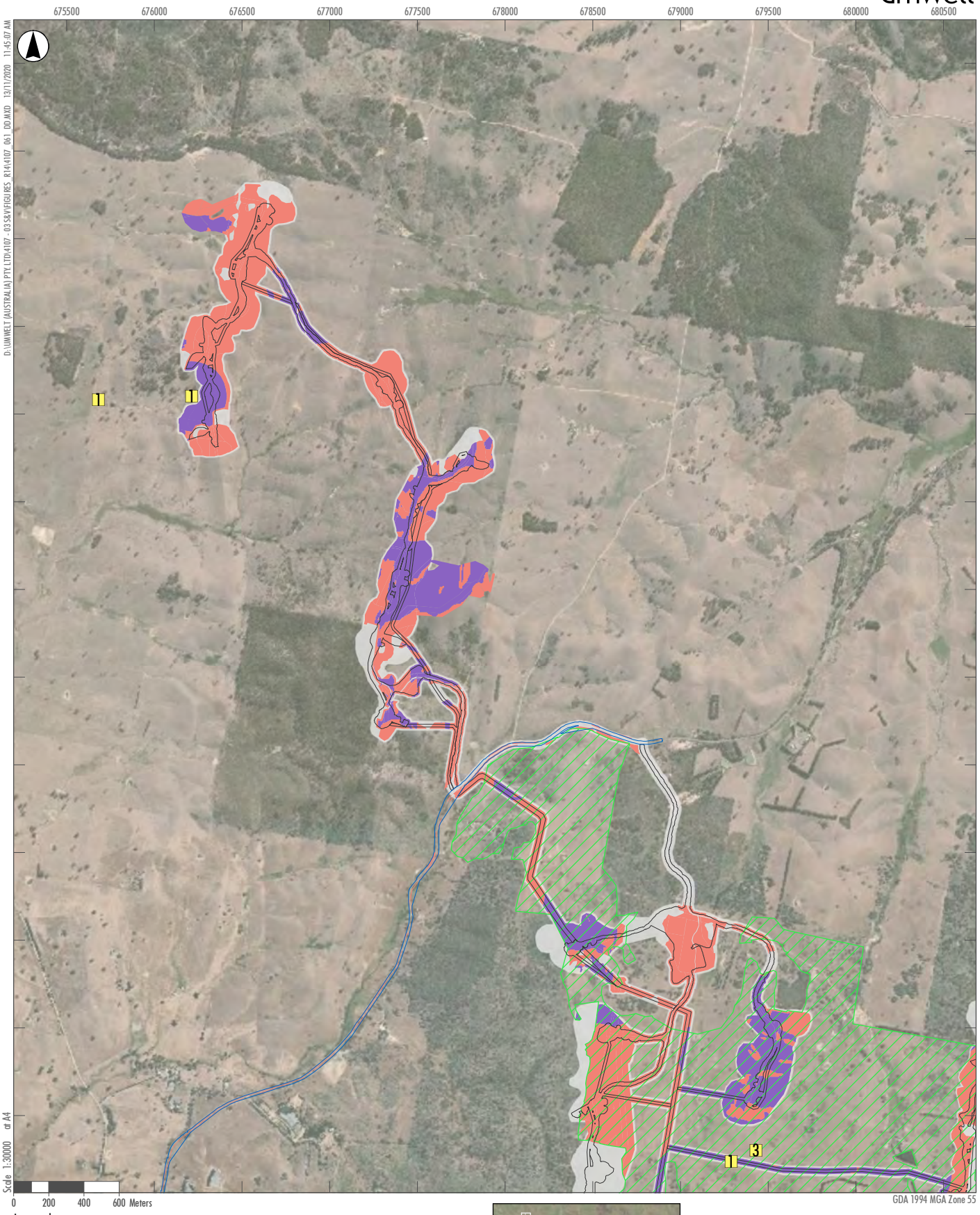


APPENDIX A

Golden sun moth and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints



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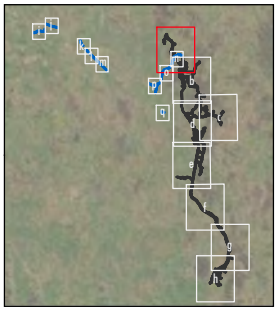
Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – External Roads
- Rye Park Wind Farm Modified Indicative Development Footprint – Wind Farm
- Rye Park Wind Farm Modified Development Corridor
- Striped Legless Lizard - Known Habitat
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon

Threatened Species Records

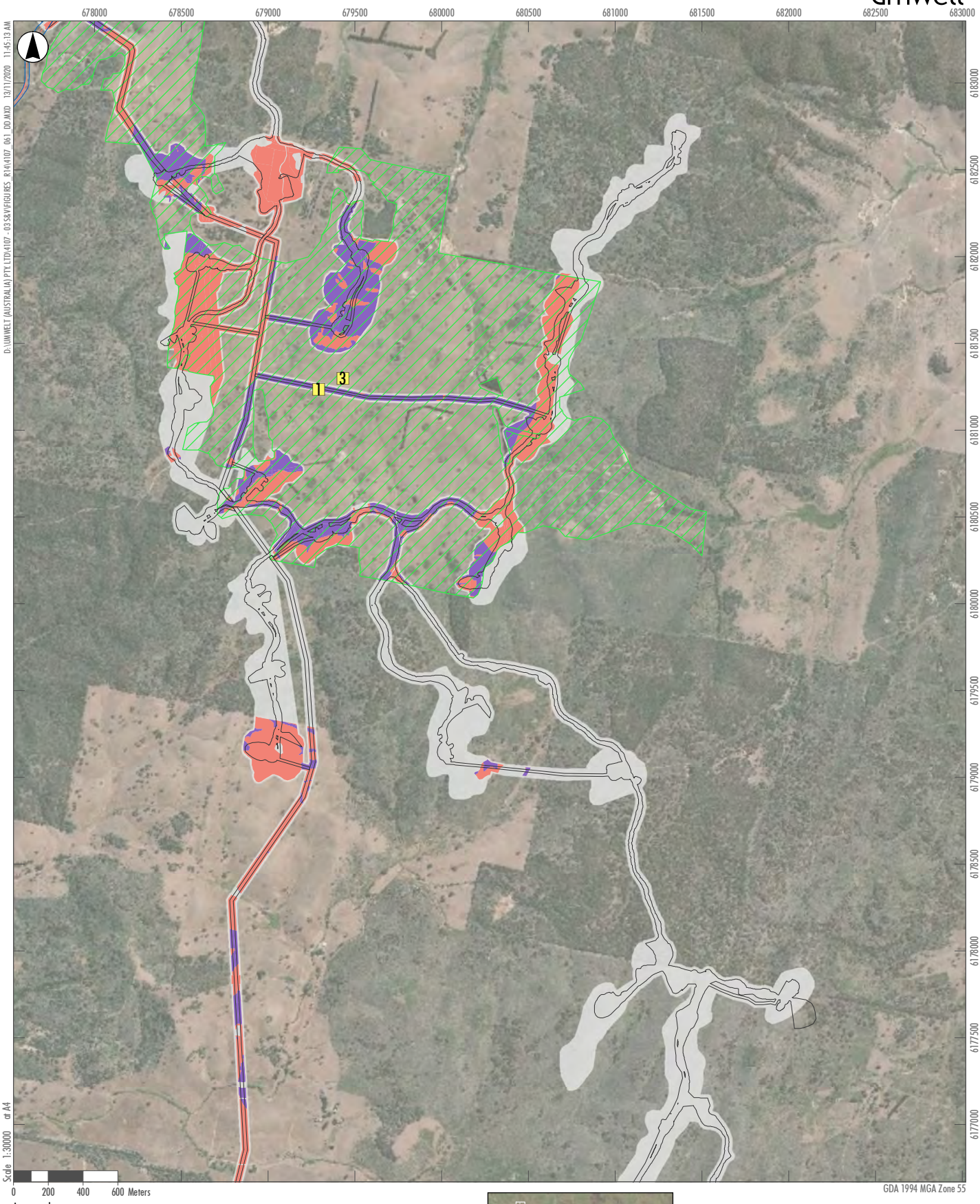
- 1 Golden Sun Moth
- 3 Striped Legless Lizard



APPENDIX Aa

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



Legend

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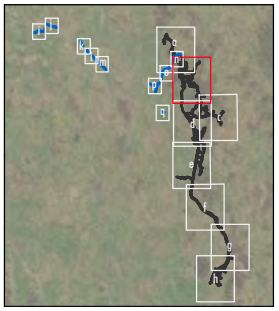
- Rye Park Wind Farm Modified Indicative Development Footprint – Wind Farm
- Rye Park Wind Farm Modified Development Corridor
- Striped Legless Lizard - Known Habitat
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon

Threatened Species Records

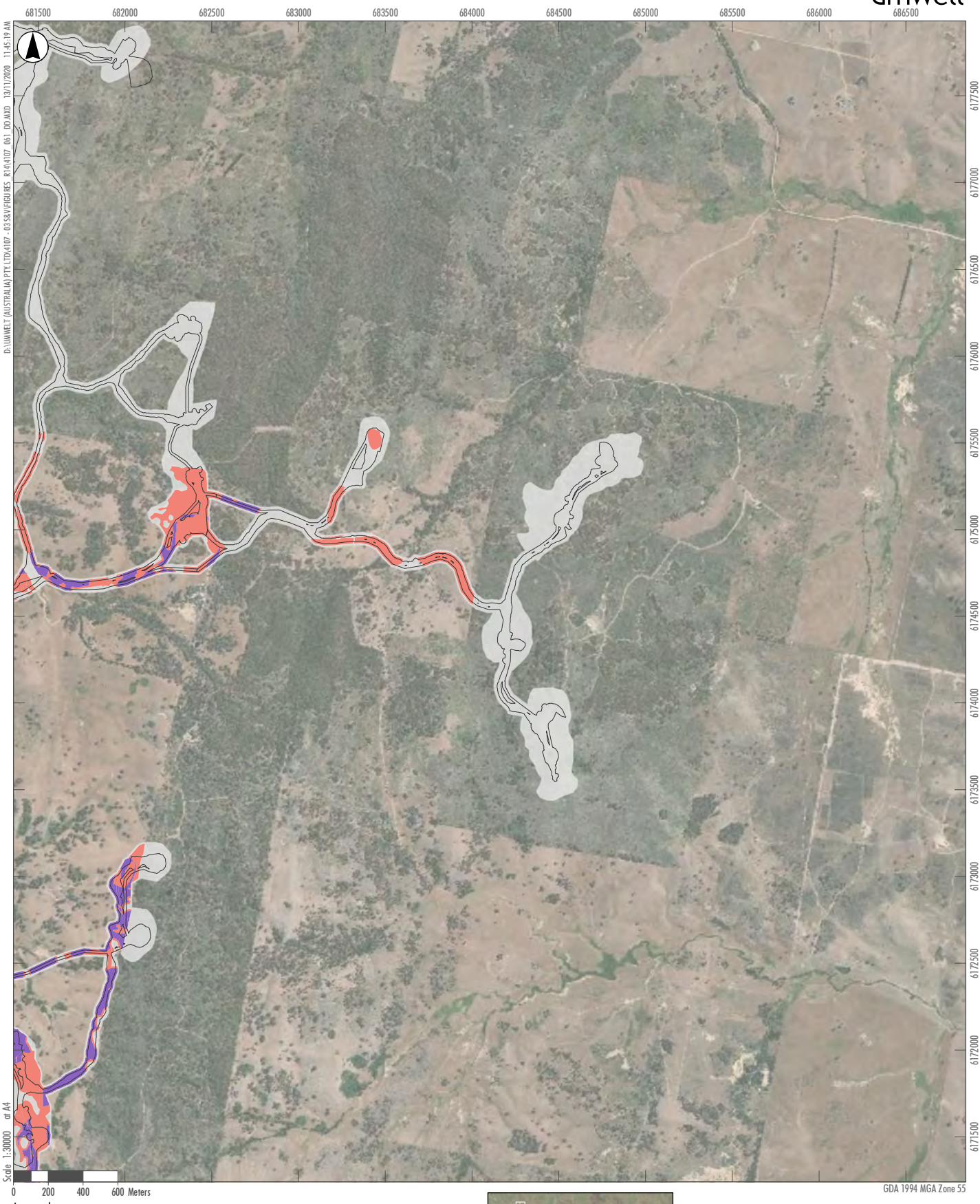
- 1 Golden Sun Moth
- 3 Striped Legless Lizard



APPENDIX Ab

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



Legend

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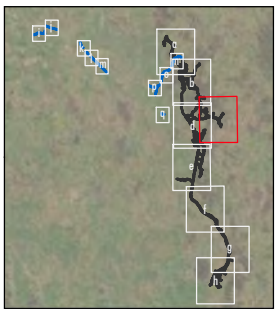
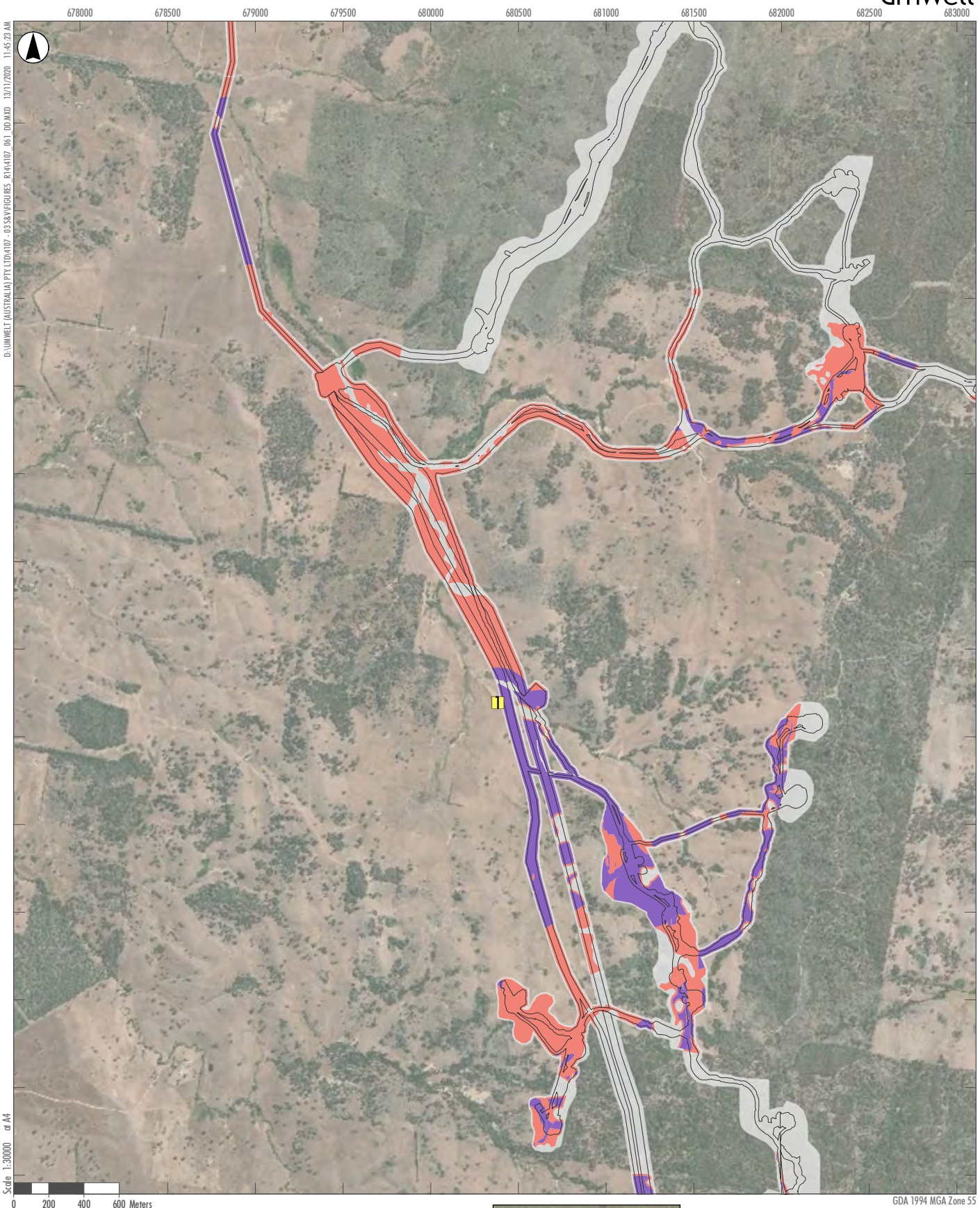
- Rye Park Wind Farm Modified Development Corridor
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon



APPENDIX Ac

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



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Legend

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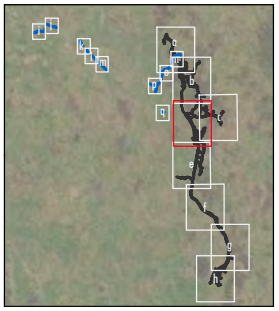
- Rye Park Wind Farm Modified Development Corridor
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon

Threatened Species Records

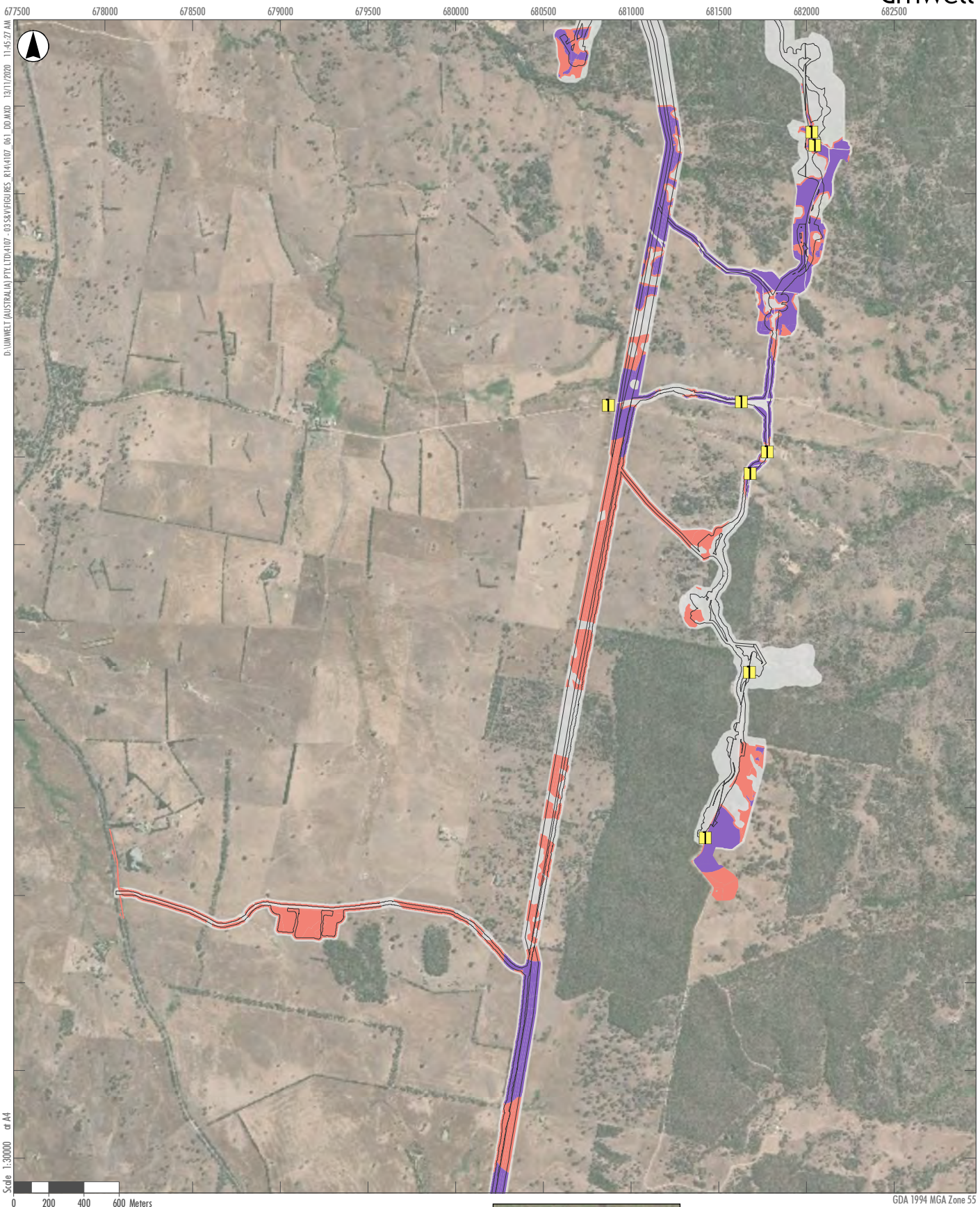
- Golden Sun Moth



APPENDIX Ad

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

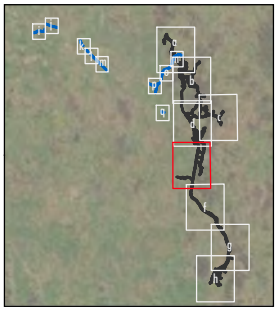


Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – Wind Farm
- Rye Park Wind Farm Modified Development Corridor
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon

Threatened Species Records

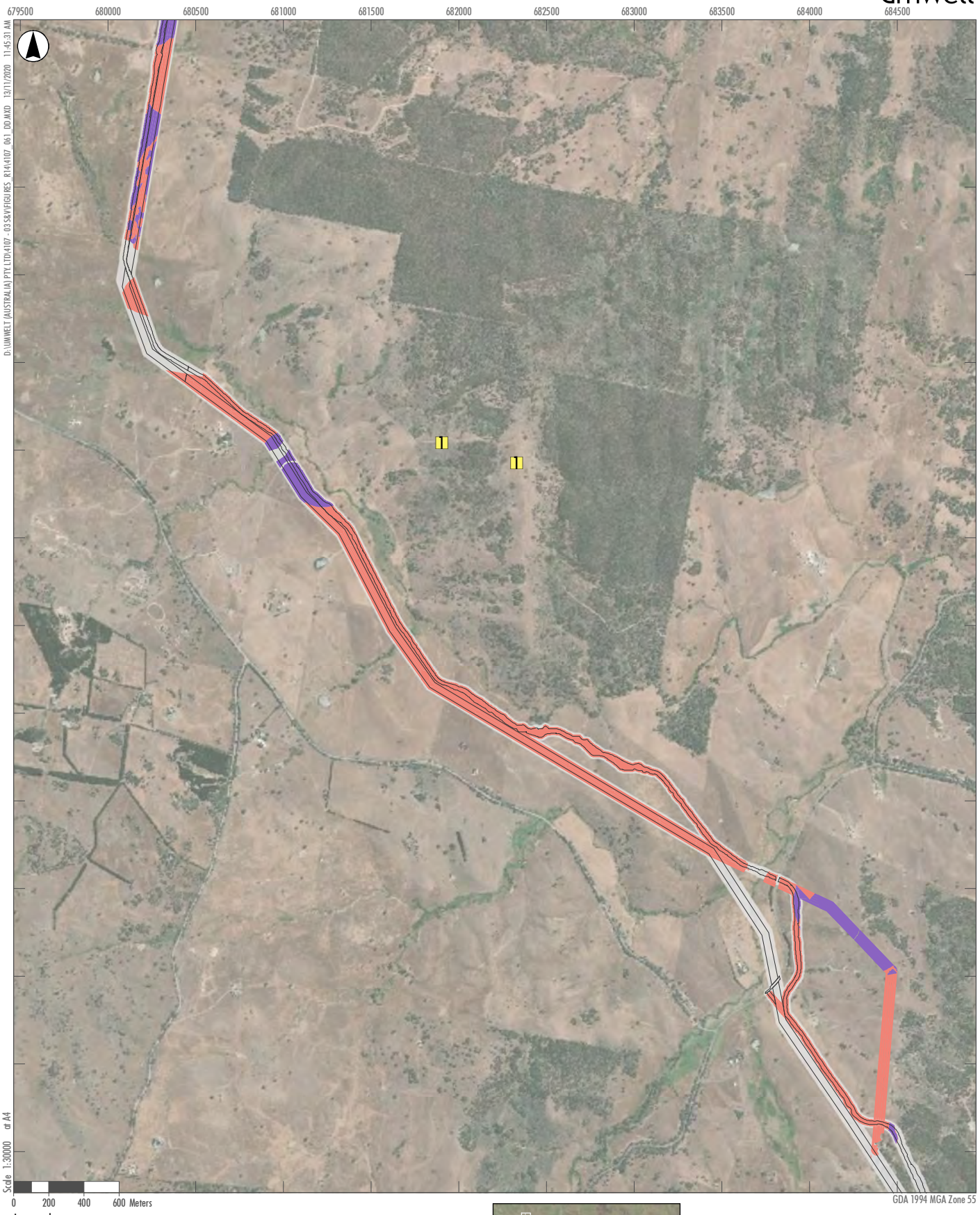
- Golden Sun Moth



APPENDIX Ae

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



Legend

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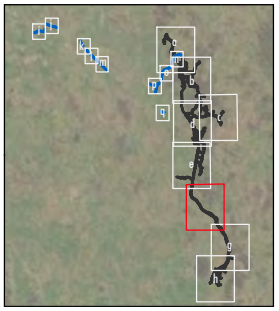
- Rye Park Wind Farm Modified Development Corridor
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon

Threatened Species Records

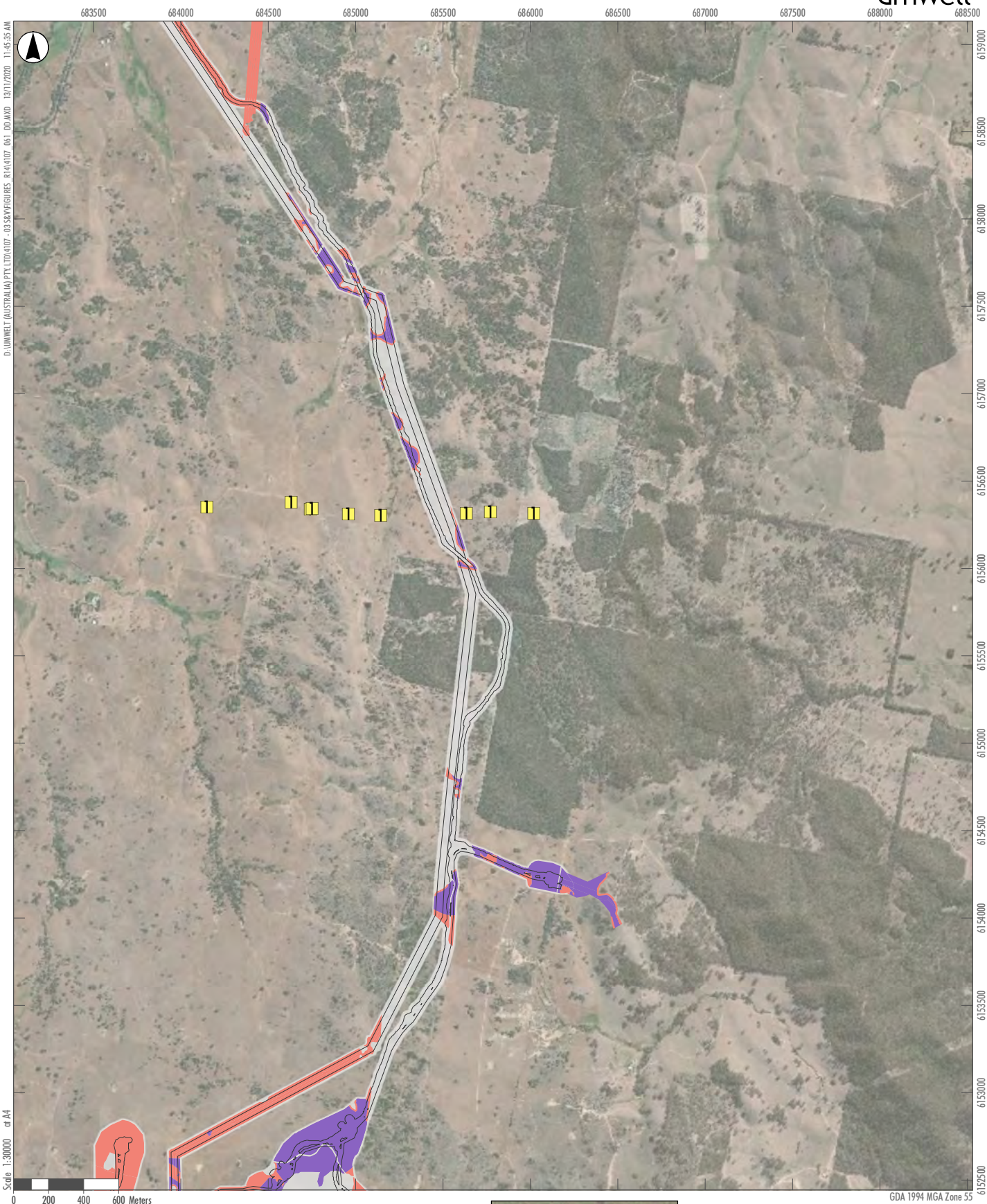
- Golden Sun Moth



APPENDIX Af

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



Legend

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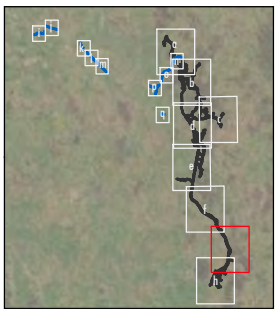
- Golden Sun Moth Species Polygon

Threatened Species Records

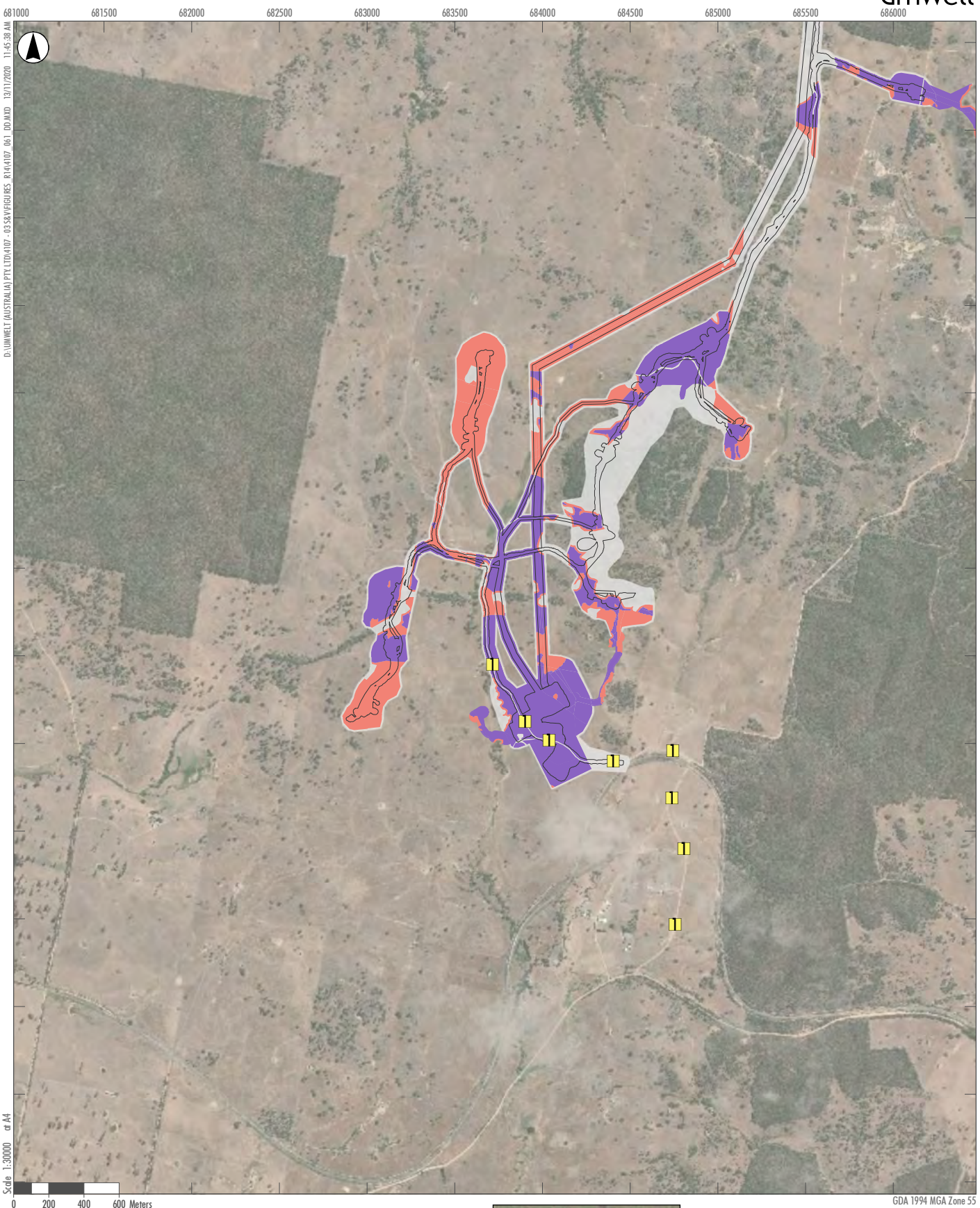
- Golden Sun Moth



APPENDIX Ag

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

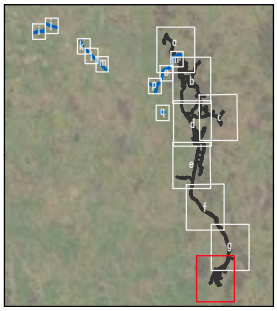


Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – Wind Farm
- Rye Park Wind Farm Modified Development Corridor
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon

Threatened Species Records

- Golden Sun Moth



APPENDIX Ah

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

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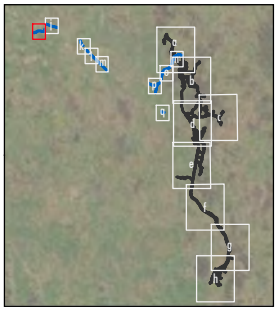


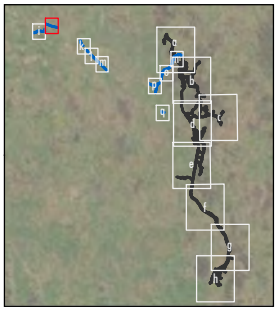
APPENDIX Ai

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – External Roads
- Golden Sun Moth Non-habitat



APPENDIX Aj

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

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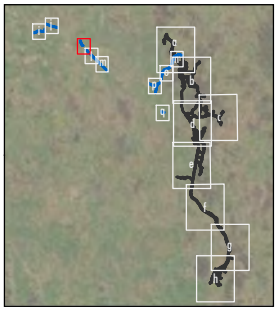
- Golden Sun Moth Non-habitat



APPENDIX Ak

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

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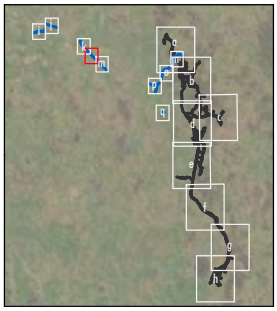
- Golden Sun Moth Non-habitat



APPENDIX AI

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

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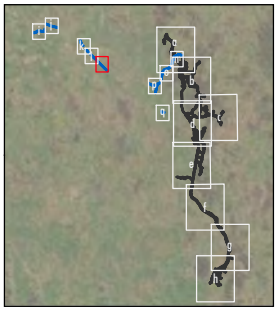
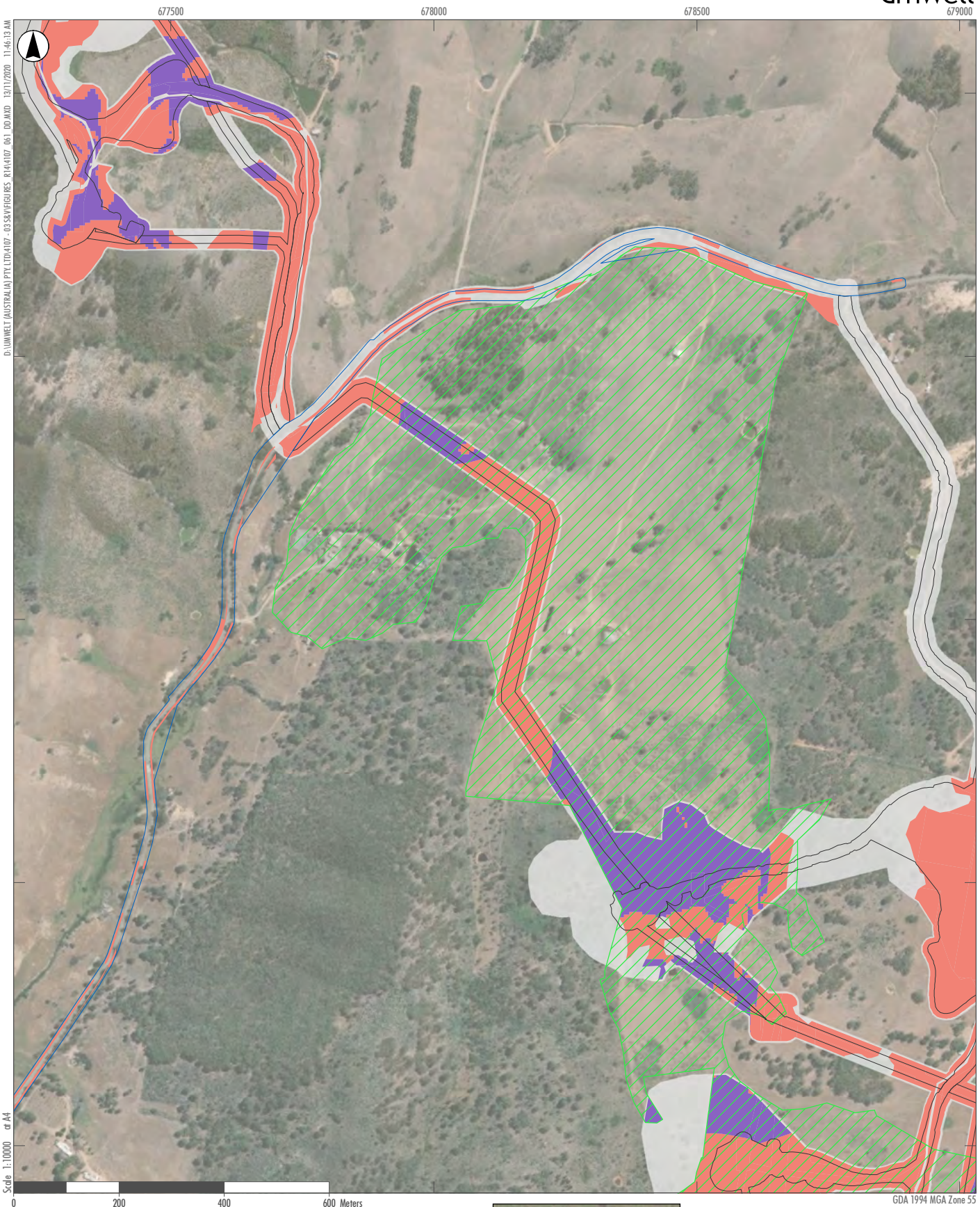
- Golden Sun Moth Non-habitat



APPENDIX Am

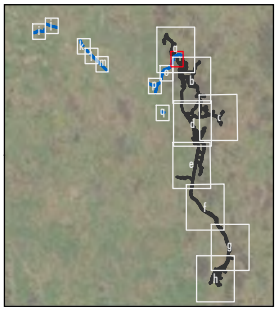
Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – External Roads
- Rye Park Wind Farm Modified Indicative Development Footprint – Wind Farm
- Rye Park Wind Farm Modified Development Corridor
- Striped Legless Lizard - Known Habitat
- Golden Sun Moth Non-habitat
- Golden Sun Moth Species Polygon



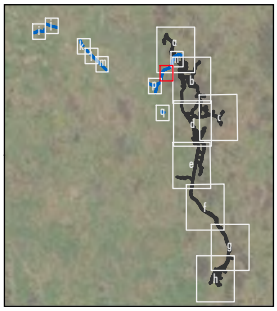
APPENDIX An

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – External Roads
- Golden Sun Moth Non-habitat



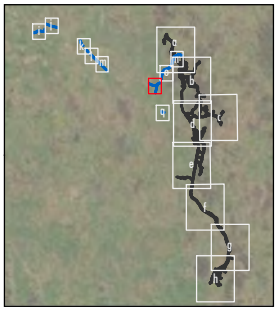
APPENDIX Ao

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

- Rye Park Wind Farm Modified Indicative Development Footprint – External Roads
- Golden Sun Moth Non-habitat



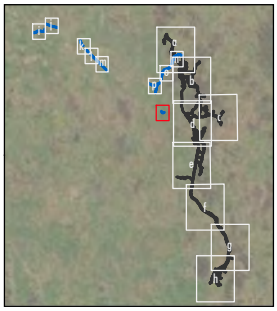
APPENDIX Ap

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)

Legend

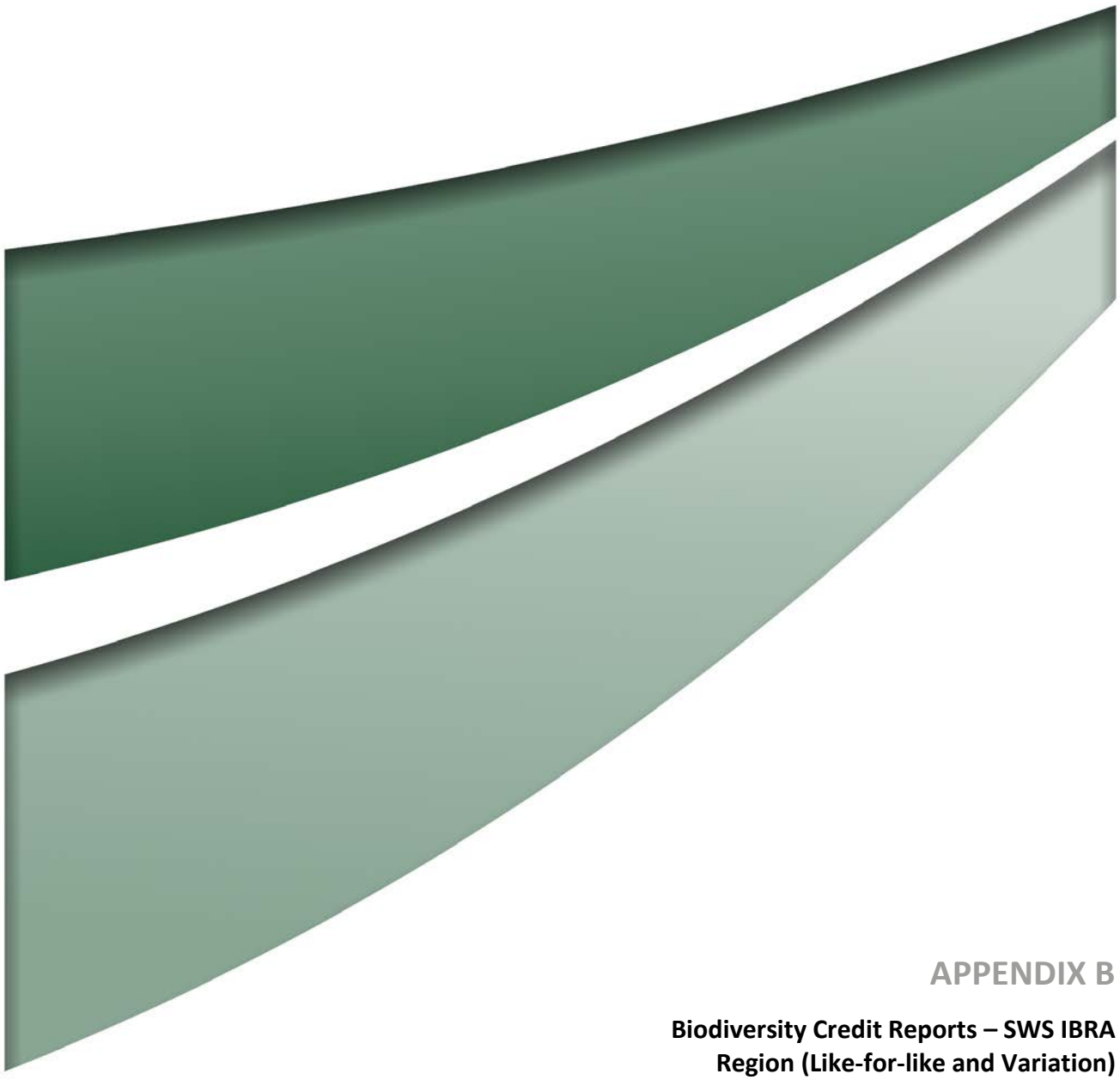
- Rye Park Wind Farm Modified Indicative Development Footprint – External Roads
- Golden Sun Moth Non-habitat



APPENDIX Aq

Golden sun moth (inclusion and exclusion) habitat and striped legless lizard habitat within the Development Corridor and Indicative Development Footprints

Image Source: ESRI Basemap (2020) Data source: Geoscience Australia; Umwelt (2020); Rye Park Renewable Energy Pty Ltd (2020), NGH Environmental (2018)



APPENDIX B

Biodiversity Credit Reports – SWS IBRA Region (Like-for-like and Variation)

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id
00010359/BAAS17068/18/00012902

Proposal Name
Rye Park SWS IBRA

BAM data last updated *
21/10/2020

Assessor Name
Bill Wallach

Assessor Number
BAAS17068

BAM Data version *
31

Proponent Names
Tilt Renewables

Report Created
11/11/2020

BAM Case Status
Open

Assessment Revision
7

Assessment Type
Major Projects

Date Finalised
To be finalised

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

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
White Box Yellow Box Blakely's Red Gum Woodland	Endangered Ecological Community	350-Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion

Species
Synemon plana / Golden Sun Moth

BAM Biodiversity Credit Report (Like for like)

Additional Information for Approval

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

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

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Not a TEC	0.8	26	0	26
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Not a TEC	4.8	0	114	114
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	Not a TEC	322.6	2975	678	3653

289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region
Upper Riverina Dry Sclerophyll Forests This includes PCT's: 269, 285, 289, 290, 298, 302, 304, 314, 338, 340, 342, 353, 1088, 1094, 1095	Upper Riverina Dry Sclerophyll Forests >=50% and <70%	289_Moderate Good	Yes	26	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region

	Inland Floodplain Swamps This includes PCT's: 66, 204, 205, 335, 360, 447, 465, 1291	Inland Floodplain Swamps >=70% and <90%	335_Moderate Good	No	114	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	**Like-for-like credit retirement options**					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Moderate Good_Remnant	Yes	1758	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	1137	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Moderate Good_Acacia	Yes	61	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Sifton	No	678	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Argyle	Yes	19	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Exotic	No	0	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Delma impar / Striped Legless Lizard	**351_DNG**	43.3	328.00
Myotis macropus / Southern Myotis	**350_Moderate**	0.0	1.00
Petaurus norfolcensis / Squirrel Glider	**351_ModerateGood_Remnant, 289_ModerateGood, 350_Moderate**	62.2	2270.00
Polytelis swainsonii / Superb Parrot	**350_Moderate**	9.9	308.00
Synemon plana / Golden Sun Moth	**350_DNG, 351_DNG**	58.0	900.00

Credit Retirement Options

Like-for-like credit retirement options

Delma impar / Striped Legless Lizard	Spp	IBRA subregion
	Delma impar / Striped Legless Lizard	Any in NSW
Myotis macropus / Southern Myotis	Spp	IBRA subregion
	Myotis macropus / Southern Myotis	Any in NSW
Petaurus norfolcensis / Squirrel Glider	Spp	IBRA subregion
	Petaurus norfolcensis / Squirrel Glider	Any in NSW
Polytelis swainsonii / Superb Parrot	Spp	IBRA subregion
	Polytelis swainsonii / Superb Parrot	Any in NSW
Synemon plana / Golden Sun Moth	Spp	IBRA subregion
	Synemon plana / Golden Sun Moth	Any in NSW

BAM Biodiversity Credit Report (Variations)

Proposal Details

Assessment Id
00010359/BAAS17068/18/00012902

Proposal Name
Rye Park SWS IBRA

BAM data last updated *
21/10/2020

Assessor Name
Bill Wallach

Assessor Number
BAAS17068

BAM Data version *
31

Proponent Name(s)
Tilt Renewables

Report Created
11/11/2020

BAM Case Status
Open

Assessment Revision
7

Assessment Type
Major Projects

Date Finalised
To be finalised

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

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
White Box Yellow Box Blakely's Red Gum Woodland	Endangered Ecological Community	350-Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion

Species
Synemon plana / Golden Sun Moth

Additional Information for Approval

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

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

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Not a TEC	0.8	26	0	26.00
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Not a TEC	4.8	0	114	114.00
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	Not a TEC	322.6	2975	678	3653.00

289-Mugga Ironbark - Inland Scribbly Gum - Red Box shrub/grass open forest on hills in the upper slopes sub-region of the NSW South Western Slopes Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region

	Upper Riverina Dry Sclerophyll Forests This includes PCT's: 269, 285, 289, 290, 298, 302, 304, 314, 338, 340, 342, 353, 1088, 1094, 1095	Upper Riverina Dry Sclerophyll Forests >=50% and <70%	289_ModerateGood	Yes	26	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Variation options					
	Formation	Trading group	Zone	HBT	Credits	IBRA region
	Dry Sclerophyll Forests (Shrub/grass sub-formation)	Tier 3 or higher threat status	289_ModerateGood	Yes (including artificial)	26	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	**Like-for-like credit retirement options**					
	Class	Trading group	Zone	HBT	Credits	IBRA region

	Inland Floodplain Swamps This includes PCT's: 66, 204, 205, 335, 360, 447, 465, 1291	Inland Floodplain Swamps >=70% and <90%	335_ModerateGood	No	114	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Variation options					
	Formation	Trading group	Zone	HBT	Credits	IBRA region
	Freshwater Wetlands	Tier 2 or higher threat status	335_ModerateGood	No	114	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	**Like-for-like credit retirement options**					
	Class	Trading group	Zone	HBT	Credits	IBRA region

Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_ModerateGood_Remnant	Yes	1758	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	1137	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_ModerateGood_Acacia	Yes	61	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Sifton	No	678	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Argyle	Yes	19	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Exotic	No	0	Inland Slopes,Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Variation options

Formation	Trading group	Zone	HBT	Credits	IBRA region
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_ModerateGood_Remnant	Yes (including artificial)	1758	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_DNG	Yes (including artificial)	1137	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_ModerateGood_Acacia	Yes (including artificial)	61	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_Sifton	No	678	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_Argyle	Yes (including artificial)	19	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_Exotic	No	0	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Delma impar / Striped Legless Lizard	**351_DNG**	43.3	328.00
Myotis macropus / Southern Myotis	**350_Moderate**	0.0	1.00
Petaurus norfolcensis / Squirrel Glider	**351_ModerateGood_Remnant, 289_ModerateGood, 350_Moderate**	62.2	2270.00
Polytelis swainsonii / Superb Parrot	**350_Moderate**	9.9	308.00
Synemon plana / Golden Sun Moth	**350_DNG, 351_DNG**	58.0	900.00

Credit Retirement Options

Like-for-like options

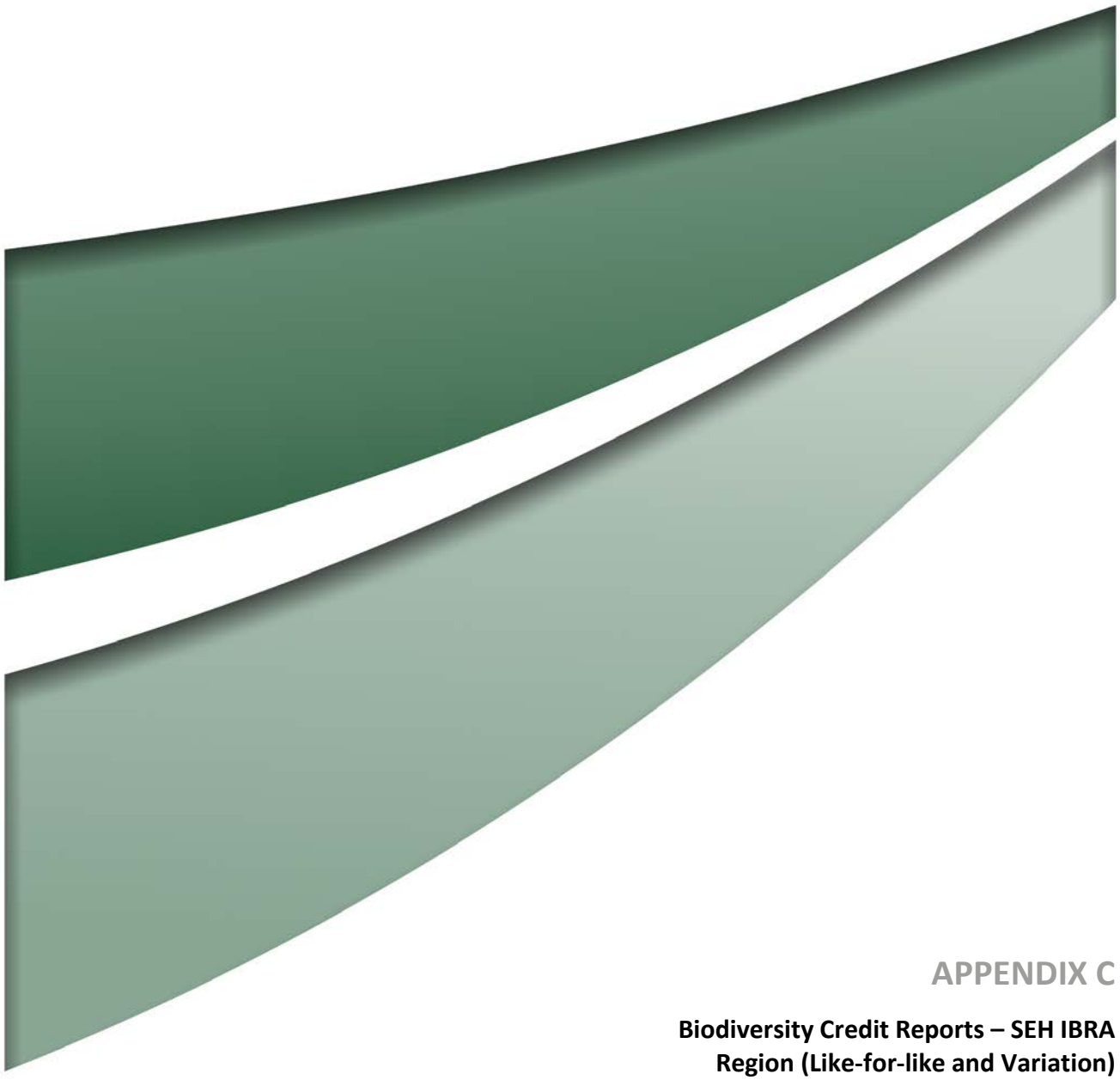
	Spp	IBRA region
Delma impar/ Striped Legless Lizard	**Delma impar**/Striped Legless Lizard	Any in NSW

Delma impar/ Striped Legless Lizard	**Variation options**		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Vulnerable	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Myotis macropus/ Southern Myotis	Spp	IBRA region	
	Myotis macropus/Southern Myotis	Any in NSW	
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region

	Fauna	Vulnerable	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Petaurus norfolcensis/ Squirrel Glider	Spp	IBRA region	
	Petaurus norfolcensis/Squirrel Glider	Any in NSW	
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Vulnerable	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Polytelis swainsonii/ Superb Parrot	Spp		IBRA region
	Polytelis swainsonii/Superb Parrot		Any in NSW
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Vulnerable	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Synemon plana/ Golden Sun Moth	Spp		IBRA region
	Synemon plana/Golden Sun Moth		Any in NSW
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region

	Fauna	Endangered	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.



APPENDIX C

Biodiversity Credit Reports – SEH IBRA Region (Like-for-like and Variation)

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00010359/BAAS17068/18/00012903	Rye Park Development SEH IBRA	21/10/2020
Assessor Name	Assessor Number	BAM Data version *
Bill Wallach	BAAS17068	31
Proponent Names	Report Created	BAM Case Status
Tilt Renewables	11/11/2020	Open
Assessment Revision	Assessment Type	Date Finalised
7	Major Projects	To be finalised

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

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
White Box Yellow Box Blakely's Red Gum Woodland	Endangered Ecological Community	350-Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion

Species
Synemon plana / Golden Sun Moth

Additional Information for Approval

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

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

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Not a TEC	0.7	0	11	11
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	Not a TEC	134.7	1501	199	1700

BAM Biodiversity Credit Report (Like for like)

335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region
Inland Floodplain Swamps This includes PCT's: 66, 204, 205, 335, 360, 447, 465, 1291	Inland Floodplain Swamps >=70% and <90%	335_Moderate Good	No	11	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region
Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Moderate Good_Remnant	Yes	976	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	436	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Moderate Good_Acacia	Yes	89	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Sifton	No	199	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Exotic	No	0	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Petaurus norfolcensis / Squirrel Glider	**351_ModerateGood_Remnant , 350_Moderate**	40.8	1365.00
Polytelis swainsonii / Superb Parrot	**350_Moderate**	10.2	271.00
Synemon plana / Golden Sun Moth	**350_DNG, 351_DNG**	27.3	484.00

Credit Retirement Options

Like-for-like credit retirement options

	Spp	IBRA subregion
Petaurus norfolcensis / Squirrel Glider	**Petaurus norfolcensis /** Squirrel Glider	Any in NSW

Polytelis swainsonii / Superb Parrot	Spp	IBRA subregion
	Polytelis swainsonii / Superb Parrot	Any in NSW
Synemon plana / Golden Sun Moth	Spp	IBRA subregion
	Synemon plana / Golden Sun Moth	Any in NSW

BAM Biodiversity Credit Report (Variations)

Proposal Details

Assessment Id
00010359/BAAS17068/18/00012903

Proposal Name
Rye Park Development SEH IBRA

BAM data last updated *
21/10/2020

Assessor Name
Bill Wallach

Assessor Number
BAAS17068

BAM Data version *
31

Proponent Name(s)
Tilt Renewables

Report Created
11/11/2020

BAM Case Status
Open

Assessment Revision
7

Assessment Type
Major Projects

Date Finalised
To be finalised

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

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
White Box Yellow Box Blakely's Red Gum Woodland	Endangered Ecological Community	350-Candlebark - Blakely's Red Gum - Long-leaved Box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes Bioregion and South Eastern Highland Bioregion

Species
Synemon plana / Golden Sun Moth

Additional Information for Approval

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

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

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion	Not a TEC	0.7	0	11	11.00
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	Not a TEC	134.7	1501	199	1700.00

335-Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region
Inland Floodplain Swamps This includes PCT's: 66, 204, 205, 335, 360, 447, 465, 1291	Inland Floodplain Swamps >=70% and <90%	335_ModerateGood	No	11	Murrumbateman,Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Variation options

Formation	Trading group	Zone	HBT	Credits	IBRA region

	Freshwater Wetlands	Tier 2 or higher threat status	335_ModerateGood	No	11	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	**Like-for-like credit retirement options**					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_ModerateGood_Remnant	Yes	976	Murrumbateman,Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	436	Murrumbateman,Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_ModerateGood_Acacia	Yes	89	Murrumbateman,Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Sifton	No	199	Murrumbateman,Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Exotic	No	0	Murrumbateman,Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Variation options

Formation	Trading group	Zone	HBT	Credits	IBRA region
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_ModerateGood_Remnant	Yes (including artificial)	976	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_DNG	Yes (including artificial)	436	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_ModerateGood_Acacia	Yes (including artificial)	89	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_Sifton	No	199	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_Exotic	No	0	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Petaurus norfolcensis / Squirrel Glider	**351_ModerateGood_Remnant, 350_Moderate**	40.8	1365.00
Polytelis swainsonii / Superb Parrot	**350_Moderate**	10.2	271.00
Synemon plana / Golden Sun Moth	**350_DNG, 351_DNG**	27.3	484.00

Credit Retirement Options

Like-for-like options

Petaurus norfolcensis/ Squirrel Glider	Spp	IBRA region
	Petaurus norfolcensis/Squirrel Glider	Any in NSW
	Variation options	

	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Vulnerable	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Polytelis swainsonii/ Superb Parrot	Spp	IBRA region	
	Polytelis swainsonii/Superb Parrot	Any in NSW	
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Vulnerable	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Synemon plana/ Golden Sun Moth	Spp	IBRA region	

	Synemon plana/Golden Sun Moth		Any in NSW
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Endangered	Murrumbateman, Bondo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

umwelt
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APPENDIX C

Rye Park Wind Farm: Response to Submissions Report (Development Consent State Significant Development 6693)

RYE PARK WIND FARM

Response to Submissions Report

(Development Consent State Significant Development: 6693)

August 2020

Rye Park Renewable Energy Pty Ltd

Rye Park Wind Farm

Document Title:	Response to Submissions Report
Revision:	Final
Date:	18 August 2020

Rye Park Renewable Energy Pty Ltd
ACN 601 541 931

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Contents

Acronyms and Abbreviations

AA	Airservices Australia
ACHA	Aboriginal Cultural Heritage Assessment
ACH	Aboriginal and Cultural Heritage
ACHA RTSR	Response to Submissions Report – Cultural Heritage (NGH Pty Ltd, July 2020)
Addendum to the ACHA	Addendum to the Aboriginal Cultural Heritage Assessment (NGH Pty Ltd, July 2020) (assessing the Final Modified Project)
AEMO	Australian Energy Market Operator
AFT	Artefact scatters
AGL	Above Ground Level
AHIMS	Aboriginal heritage information management system
AHMP	Aboriginal Heritage Management Plan
AIA	Aeronautical Impact Assessment
AIWTAG	Australian Industrial Wind Turbine Awareness Group
APA	APA Group
the Applicant	Rye Park Renewable Energy Pty Ltd
the Approved Project	The Project as currently approved by the Development Consent, described in Section 3.1 of the Modification Application Report
ARDG	Australian Resource Development Group
AWA	Australian Wind Alliance
BAM	Biodiversity Assessment Method
BAMCC	BAM Credit Calculator
BBAMP	Bird and Bat Adaptive Management Plan
BBSRA	Bird and Bat Strike Risk Assessment
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BCD	Biodiversity Conservation Division (NSW)
BDAR	Biodiversity Development Assessment Report
Biodiversity RTSR	Response to Submissions Report – Biodiversity (Umwelt (Australia) Pty Ltd, July 2020)
BMP	Biodiversity Management Plan
BMRG	Brown Mountain Residents Group
BMS	Biodiversity Mitigation Strategy
CASA	Civil Aviation Safety Authority (Cwth)
CCC	Community Consultative Committee

CEEC	Critically Endangered Ecological Community
CEMP	Construction Environmental Management Plan
CMA	Catchment Management Authority
CNMP	Construction Noise Management Plan
CO2e	Carbon dioxide equivalent
Covid-19	The Covid-19 Virus (or Corona Virus)
Conditions of Consent	Conditions of the Development Consent which authorise and regulate the Project.
Cwth	Commonwealth
DAWE	Department of Agriculture, Water and the Environment
dB(A)	Decibel
DCP	Development Control Plans
Development Consent	Development Consent SSD 6693 granted under the EP&A Act
Development Corridor – Permanent Met Masts	This area includes the Indicative Development Footprint – Permanent Met Masts in its entirety as well as areas of adjoining land that may be required for micro siting when the wind farm layout is finalised.
Development Corridor – Wind Farm	This area includes the Indicative Development Footprint – Wind Farm in its entirety as well as areas of adjoining land that may be required for micro-siting when the wind farm layout is finalised. It does not include the Indicative Development Footprint –External Roads.
Development Footprint	The estimated ground disturbance required for construction of the wind farm. Referred to as the Indicative Development Footprint in this Modification Application and includes Indicative Development Footprint – Wind Farm, Indicative Development Footprint – External Roads and Indicative Development Footprint – Permanent Met Masts
Development Layout	The wind farm layout including turbines and associated infrastructure
DGRs	Director General's Requirements
DNG	Derived Native Grassland
DoD	Department of Defence (Cwth)
DoEE	Department of Environment and Energy (now known as DAWE) (Cwth)
DPE	Department of Planning and Environment (now DPIE, or the Department) (NSW)
DPI	Department of Primary Industries (NSW)
DPIE	Department of Planning, Industry and Environment (NSW)
DTV	Digital Television
EEC	Endangered Ecological Community
EIA	A report entitled *"Tilt Renewables - Rye Park Wind Farm - 386 MW Option - Economic Impact Assessment Update"* prepared by Hudson Howells dated May 2020

EIS	Environmental Impact Statement
EMI	electromagnetic interference
EMIA	Electromagnetic Interference Assessment
ENA	Environmental Noise Assessment
EPA	Environment Protection Authority (NSW)
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwth)
EPBC Approval	Approval EPBC 2014/7163 granted for the Project under the EPBC Act
EPL	Environmental Protection Licence
FAA	Federal Aviation Administration
FAQs	Frequently Asked Questions
FBE	Focus Bridge Engineering
Final Modified Project	The Modified Project as revised during the RTS phase of the Project as further clarified in the Amendment Report
FM Act	*Fisheries Management Act 1994*
GBD	Green Bean Design
GRP	Gross Regional Product
GSM	Golden Sun Moth
GSNSW	Geological Survey of NSW
GSP	Gross state (and territory) product
GWh	Gigawatt hour
ha	hectares
HBT	Hollow Bearing Tree
HHA	Historic (European) Heritage Assessment
HMP	Heritage Management Plan
ICN Guideline	*Interim Construction Noise Guideline* (DECC, 2009)
IF	Isolated finds
IPC	Independent Planning Commission (formally PAC)
IPCC	Intergovernmental Panel on Climate Change
ISEPP	*State Environmental Planning Policy (Infrastructure) 2007* (NSW)
Km	kilometres
kV	kilvolts
KWh	Kilowatt hour
LALC	Local Aboriginal Land Council

LEP	Local Environment Plan
LGA	Local Government Area
LSAT	Lowest Safe Altitude
LVIA	Landscape and Visual Impact Assessment (Green Bean Design, April 2016) (assessing the Original RTS Project)
m	Metres
MEG	Mining, Exploration and Geoscience (NSW)
Met Masts	Meteorological Masts
MNES	Matters of National Environmental Significance
Modification ACHA	Rye Park Wind Farm Modification Aboriginal Cultural Heritage Assessment (NGH Pty Ltd, April 2020) (assessing the Modified Project)
Modification Application	Application SSD-6693-Mod-1 to modify the Development Consent under the Development Consent
Modification Application Report	Rye Park Wind Farm - Modification Application Report (RPRE, April 2020)
Modification BDAR	Rye Park Wind Farm Biodiversity Development Assessment Report (Umwelt (Australia) Pty Ltd, May 2020) (assessing the Modified Project)
Modification Noise Assessment	Rye Park Wind Farm Modification Environmental Noise Assessment (Sonus, March 2020) (assessing the Modified Project)
Modification VIA	Rye Park Wind Farm Modification 1 Visual Impact Assessment (Green Bean Design, March 2020) (assessing the Modified Project)
Modified Project	The Approved Project as revised by the Proposed Modifications as stated in the Modification Application lodged in April 2020
MW	megawatts
NEM	National Electricity Market
NHMRC	National Health and Medical Research Centre
Noise RTSR	Response to Submissions Report – Noise (Sonus, July 2020)
NSW	New South Wales
The Noise Bulletin	the Wind Energy: Noise Assessment Bulletin
OEH	Office of Environment and Heritage (now BCD)
Original EIS	Environmental Impact Statement for the Rye Park Wind Farm (Epuron Pty Ltd, 2014)
Original RTS	Response to Submissions (Rye Park Renewable Energy Pty Ltd, 2016)
OSOM	Oversize and/or overmass vehicles and loads
Over-dimensional	Over-dimensional vehicles (now OSOM vehicles)
PAC	NSW Planning Assessment Commission (now known as IPC)
PAD	Potential Archaeological Deposit
PCTs	Plant Community Types

PIAs	Prescribed Impact Assessments
PAC	Planning Assessment Commission
the Project	the Rye Park Wind Farm
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Preferred Transport Route	Selection of a preferred transport route, from a number of approved options, that is currently being considered.
Proposed Modifications	The changes to the Approved Project as described in Section 4.0 of the Modification Application Report and as further clarified in the Amendment Report
PIA	Prescribed Impact Assessment
PSA	Primary Surveillance Radar
QARA	Qualitative Aviation Risk Assessment
RA Act	*Roads Act 1993*
RAPs	Registered Aboriginal Parties
Revised BDAR	Rye Park Wind Farm Biodiversity Development Assessment Report (Umwelt (Australia) Pty Ltd, August 2020) (assessing the Final Modified Project)
Revised ENA	Rye Park Wind Farm Modification Environmental Noise Assessment (Sonus, July 2020) (assessing the Final Modified Project)
Revised VIA	Rye Park Wind Farm Visual Impact Assessment Addendum A (Green Bean Design, August 2020) (assessing the Final Modified Project)
RFI	Radio Frequency Interference
RFS	Rural Fire Service (NSW)
RMS	Roads and Maritime Services (NSW) (now TfNSW)
RNP	Road Noise Policy (DECCW, 2011)
RPAG	Rye Park Action Group
RPPA	Rye Park Progress Association
RPWF	Rye Park Wind Farm (or the Project)
RSA	Rotor Swept Area
RTCC	Radar Terrain Clearance Charts
RTS	Response to Submissions
the RTS Guideline	*Responding to Submissions – Draft Environmental Impact Assessment Guidance Series 2017*
RVMP	Roadside Vegetation Management Plan
SA EPA Guidelines	*Wind farms environmental noise guidelines* (SA EPA, 2009)
SAII	Serious Irreversible Impact Assessment
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy

SFA	Shadow Flicker Assessment
SMP	Safety Management Plan
SMS	Safety Management System
SoCs	Statement of Commitments
SOHI	Statement of Heritage Impact
SSD	State Significant Development
SSR	Secondary Surveillance Radar
TBDC	Threatened Biodiversity Data Collection
TEC	Threatened Ecological Communities
TfNSW	Transport for New South Wales
TIA	Traffic Impact Assessment
Tilt Renewables	Tilt Renewables Limited
TMP	Traffic Management Plan
TNSP	Transmission Network Service Provider
VIA	Visual Impact Assessment
Visual Impact RTSR	Response to Submissions Report – Visual Impact (Green Bean Design, August 2020)
the Visual Bulletin	Visual Assessment Bulletin (DPE, 2016b)
VPA	Voluntary Planning Agreement
the Wind Guideline	*Wind Energy Guideline, For State significant wind energy development* (DPE 2016a)
WTG	Wind Turbine Generator
YLG	Yass Landscape Guardians
YVC	Yass Valley Council

Executive Summary

This Response to Submissions Report (RTS) has been prepared by Rye Park Renewable Energy Pty Ltd (RPRE, the Applicant) in response to submissions received during the public exhibition period of Application SSD-6693-Mod-1 (Modification Application) which seeks approval for modifications to the approved Rye Park Wind Farm Project (RPWF or the Project).

The Project was authorised by State significant development consent SSD-6693 (Development Consent) granted under the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

The Project as authorised by the Development Consent is the construction, operation and decommissioning of up to 92 wind turbines with a maximum tip height of 157 meters and associated infrastructure (Approved Project).

The Modification Application was lodged under section 4.55(2) of the EP&A Act and seeks approval to several modifications (collectively, the Proposed Modification[1] or the Modified Project) to the Approved Project including:

- removal of 12 wind turbines to reduce the Project to a maximum of 80 wind turbines;
- increase to the wind turbine envelope to a maximum tip height of 200 m to enable the use of newer and more efficient wind turbine models;
- revisions to the Development Corridor – Wind Farm to accommodate revised indicative development footprints including the reduced wind turbine numbers, optimised design assumptions including changes to the wind turbine foundations and hardstands, internal access tracks, 33 kV connection infrastructure, collector substations, transmission line and connection in infrastructure, and supporting infrastructure. Optimisation of other infrastructure, including operation and maintenance facilities, construction compounds, and temporary concrete batch plants; and
- selection of the preferred transport routes for heavy and over-dimensional vehicles to enable the consideration of ground disturbance and associated vegetation removal which will be required to accommodate the proposed upgrades of the local Council roads. Several options for the Preferred Transport Route for heavy and over-dimensional vehicles from port facilities remain under consideration,

The Rye Park Wind Farm - Modification Application Report (Rye Park Renewable Energy, April 2020) (Modification Application Report) was prepared to outline and assess the impacts of the Proposed Modification. The Modification Application Report was placed on public exhibition from 13 May 2020 until 3 June 2020. Submissions from governmental agencies, organisation and the public were received during the public exhibition of the Modification Application Report.

During the public exhibition period, the Department of Planning, Industry and Environment (DPIE) received a total of 151 submissions, as summarised in Table 1.

Table 1: Submissions received

Category	Position			Total Number of Submissions Received
	Support	Comment	Object	
Governmental Agency Comments and Submissions	-	17	-	17
Organisation Submissions	2	1	4	7
Public Submissions	20	-	107	127
Public Submission Duplicates	-	-	22	22

[1] The Proposed Modification refers to the changes to the Approved Project and as further clarified in the Amendment Report

Category	Position			Total Number of Submissions Received
	Support	Comment	Object	
TOTAL	**22**	**18**	**89**	**129**

Whilst 127 Public Submissions were received, 22 of these submissions were duplications (resulting from multiple submissions being lodged by the same person). Accordingly, the total number of Public Submissions was 105, with 85 of these being made by people who objected to the Project and 20 being made by people who supported the Project.

This RTS documents how the issues raised in submissions have been considered and responded to by the Applicant.

The further clarifications to the Proposed Modifications are outlined and assessed in detail in the Amendment Report which should be read in conjunction with the RTS. These clarifications have been made in response to:

- submissions made during the public exhibition period;
- ongoing consultation with technical and non-technical stakeholders; and
- progression of the Project's detailed design.

Specific feedback from DPIE on visual impact and community perception around the Rye Park village has been addressed through the removal of a further three turbines within close proximity of Rye Park village. The Applicant believes that the removal of the additional three turbines will address community concern related to the visual impact of wind turbines on Rye Park village. Through the removal of the wind turbines closest to Rye Park village, the Applicant has demonstrated commitment to responding to community concerns.

As detailed in the Amendment Report, clarifications to the Modified Project include:

- refinement of the Project infrastructure including:
    - removal of an additional three wind turbines within close proximity of Rye Park village (as stated above);
    - adjustment of 2.3 km of Transmission Line (up to 330kV);
    - clarification of the approved, permanent meteorological masts (met masts) so as to allow for the Development Corridor – Permanent Met Masts that includes the Indicative Development Footprint – Permanent Met Masts in its entirety;
    - refinement of the Development Corridor – External Roads;
    - additional ground disturbance for pole locations and associated track to enable the Project to connect to the TransGrid Transmission Line; and
    - inclusion of an additional temporary construction compound to facilitate upgrades on the TransGrid owned existing 330kV Transmission Line at the southern section of the Project site.
- further Modifications to the Development Consent including:
    - Condition 11 of Schedule 3 (Operational Noise Criteria – Wind Turbines) so the table of criterion be replaced with more general criteria (in accordance with the Noise Bulletin and as discussed with the Environment Protection Authority (EPA)) which will remain valid for any hub height;
    - Condition 8(d) of Schedule 2 (Micro-siting Restrictions) to enable application of the new Biodiversity Assessment Method (BAM) definition of hollow-bearing trees so the original intent of Condition 8(d) of Schedule 2 can be fully exercised; and

- sequencing of Preliminary Site Works and Local Road Upgrades.

Collectively, the Final Modified Project.

A revised Biodiversity Development Assessment Report (Revised BDAR) and Aboriginal Cultural Heritage Assessment (Addendum to the ACHA) have been undertaken to assess the refinement to the Project infrastructure. The assessments found that the proposed refinements will not substantially change the level of impacts associated with the Modified Project. The Amendment Report confirms that these clarifications will further reduce the overall impacts of the Proposed Modification.

The Applicant is currently in the tendering phase of the Project, with construction on track to commence as soon as practical in 2021 (subject to approval of the Modification Application).

The further assessment carried out has found that the overall public benefits of the Proposed Modification significantly outweigh any additional impacts resulting from the Proposed Modification and, in light of this, there are no impacts or issues raised in submissions which could be said to reasonably justify a refusal of the Proposed Modification.

1.0 Introduction

1.1 Purpose and Structure of this Report

This RTS has been prepared by the Applicant in response to submissions received during the public exhibition of the Modification Application. The Modification Application seeks approval under section 4.55(2) of the EP&A Act for the Proposed Modifications to the Approved Project authorised by the Development Consent.

The purpose of this RTS is to document how the issues raised in submissions have been considered and responded to by the Applicant and provide further clarifications to the Project.

This RTS has been prepared in accordance with the requirements of the EP&A Act and the *Responding to Submissions – Draft Environmental Impact Assessment Guidance Series 2017* (the RTS Guideline).

The Amendment Report outlines and assesses further minor clarifications proposed to the Modified Project in response to the submissions received, consultation with host landholders and the progression of the ongoing detailed design of the Project since the Modification Application Report was prepared. The Amendment Report has been prepared as a standalone document.

Table 2 outlines the purpose of each section of this report.

Table 2: Report Structure and Content

Section	Purpose / Content
Section 1.0 Introduction	• This section provides an overview of this RTS and its structure
Section 2.0 Overview of the Proposed Modification	• Provides an overview of the Proposed Modifications including the further clarifications assessed in detail in the Amendment Report
Section 3.0 Consultation	• Provides an overview of the consultation carried out with the community in the lead up to the Modification Application, during and after the public exhibition period and the further consultation which has been carried out since the public exhibition period ended • Provides an overview of the consultation with government agencies either to discuss matters raised in their submissions on the Proposed Modification and/or the progression of the Project during ongoing detailed design
Section 4.0 Response to Submissions	• Provides an overview of the submissions reviewed and how the Applicant has analysed and responded to submissions • Provides an overview of the key issues raised in the submissions • Details submissions received from government agencies and organisations and outlines Applicant's response to these submissions • Categorises the submissions received from Community members who object to the Proposed Modification into overarching themes and topics and outlines the Applicant's response to these submissions • Outlines the submissions received from Community members who support the Proposed Modification, providing an overview of the key themes
Section 5.0 Conclusion	• Provides the overall conclusions to this report

1.2 Project Status

A summary of the different Project iterations is provided below:

- *Original EIS* – A 126 wind turbine project, with a 157 m tip height as described in the Rye Park Wind Farm Environmental Assessment (Epuron, January 2014);
- *Original RTS* – A 109 wind turbine project, with a 157 m tip height as described in the Rye Park Wind Farm Response to Submissions (Epuron, May 2016);
- *Approved Project* – A 92 wind turbine project, with a 157 m tip height;

- *Modified Project* – A 80 wind turbine project, with a 200 m tip height as described in the Modification Application Report (RPRE, April 2020); and
- *Final Modified Project* – A 77 wind turbine project, with a 200 m tip height as described in the Amendment Report (RPRE, August 2020).

The Modification Application Report was lodged on 23 April 2020 and placed on public exhibition from 13 May 2020 until 3 June 2020. During this time, DPIE received a total of 130 submissions relating to the Modification Application including 17 from government agencies, seven from organisations and 127[2] from the public (given the some people made multiple submissions, a total of 105 community members made submissions in relation to the Proposed Modification).

On 6 June 2020, DPIE formally requested the Applicant to submit a report responding to the matters and recommendations raised in the submissions received.

In parallel to the Modification Application, the Applicant has continued to progress the detailed design of the Project and consult with government agencies as well as the community (discussed further in Sections 2.0 and 3.0 of this report).

The Applicant is currently in the tendering process with multiple turbine suppliers and construction contractors. The preferred suppliers for the engineering, procurement, construction and commissioning of the wind farm will be selected in the next few months and these preferred suppliers will work with the Applicant to further finalise the details of Project in accordance with the Development Consent. Pending assessment and determination of the Modification Application, the Project is on track to commence construction as soon as practical in 2021.

In addition, the Applicant proposes to re-refer the Final Modified Project under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The referral to the Department of Agriculture, Water and the Environment (DAWE) is currently being finalised following a review of the draft referral by DAWE. The referral will assess the impacts of the Project, including as a result of the Proposed Modification, on all matters protected by the EPBC Act, including listed threatened species and communities protected by the EPBC Act.

[2] Of the 127 public submissions, the Applicant noted 22 duplicates. Section 4.1.1 provides an analysis of the submissions received.

2.0 Overview of the Modification

2.1 Approved Project

The approved Rye Park Wind Farm constitutes a direct investment of over $700 million and is located to the east of Rye Park, to the north of Yass and south-east of Boorowa, in New South Wales (NSW).

The Approved Project is located within three Local Government Areas (LGAs) being Hilltops Council[3], Upper Lachlan Shire Council and Yass Valley Council. The location of the approved Project, and its general proximity to other wind farms under development or currently operating is shown in Figure 1.

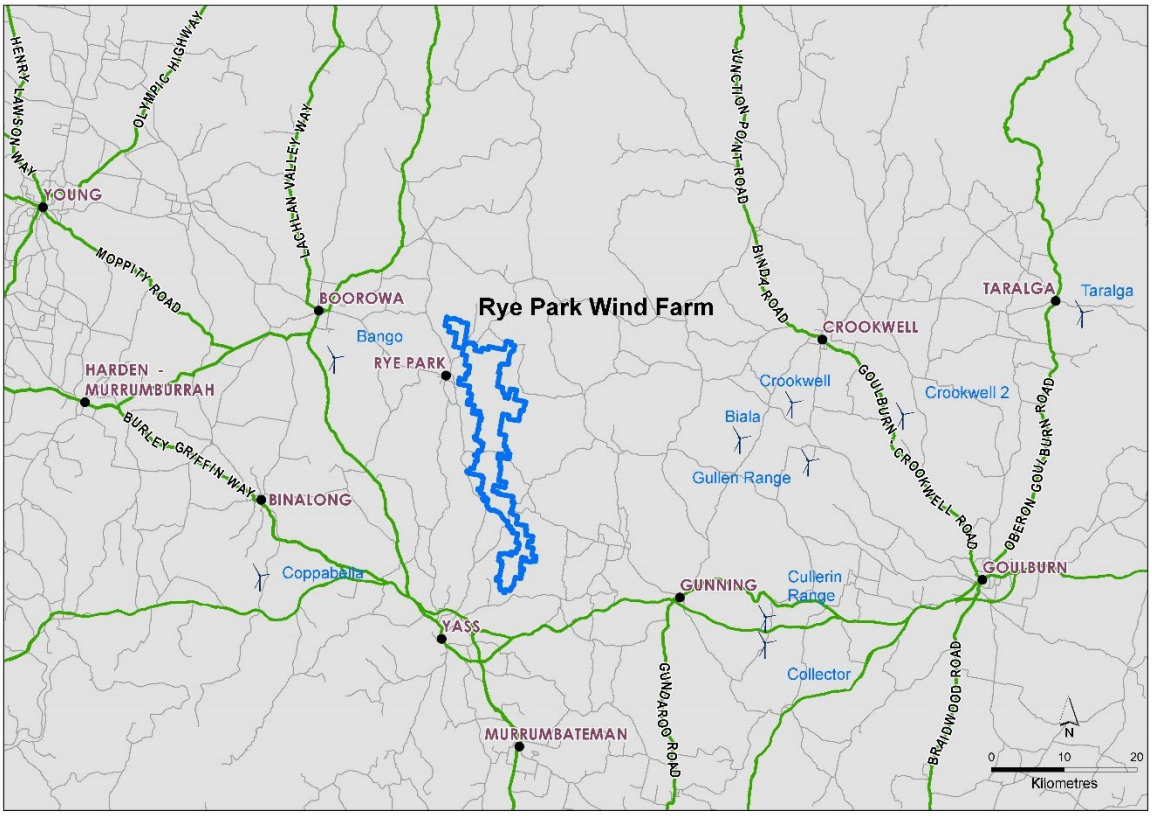

Figure 1: Project Location

Since the original Development Consent was granted, there have been significant advances in wind turbine technology. The applicant has lodged the Modification Application to incorporate these technological advances into the Project and reflect the outcomes of ongoing detailed design as the Project proceeds towards construction.

2.2 Proposed Modifications

The Proposed Modifications sought to the Approved Project include:

- removal of 12 wind turbines to reduce the Project to a maximum of 80 wind turbines;
- increase to the wind turbine envelope to a maximum tip height of 200m to enable the use of newer and more efficient wind turbine models;

[3] Boorowa Council was amalgamated with Harden Shire and Young Shire to form Hilltops Council in May 2016

- revisions to the Development Corridor to accommodate revised Indicative Development Footprints including the reduced wind turbine numbers, optimised design assumptions including changes to the wind turbine foundations and hardstands, internal access tracks, 33 kV connection infrastructure, collector substations, transmission line and connection in infrastructure, and supporting infrastructure;
- optimisation of other infrastructure, including operation and maintenance facilities, construction compounds, and temporary concrete batch plants; and
- selection of the Preferred Transport Route for heavy and over-dimensional vehicles to enable the consideration of ground disturbance and associated vegetation removal which will be required to accommodate the proposed upgrades of the local Council roads. Several options for the transportation of heavy and over-dimensional vehicles from port facilities are under consideration.

The Proposed Modifications were outlined and assessed in detail in the Modification Application Report.

Since the Modification Application Report was prepared, some further minor clarifications to the Proposed Modification have been made in response to:

- submissions made during the public exhibition period;
- ongoing consultation with technical and non-technical stakeholders; and
- progression of the Project's detailed design.

Specific feedback from the DPIE on visual impact and community perception around the Rye Park village has been addressed through the removal of a further three turbines within close proximity of Rye Park village. The Applicant believes that the removal of the additional three turbines will significantly address community concern related to the visual impact of turbines on Rye Park village. Through the removal of the turbines closest Rye Park village, the Applicant has demonstrated commitment to responding to community concerns.

Clarifications to the Modified Project includes:

- refinement of the Project infrastructure including:
    - removal of an additional three wind turbines within close proximity of Rye Park village (as stated above;
    - adjustment of 2.3 km of Transmission Line (up to 330kV);
    - clarification of the approved, permanent meteorological masts (met masts) so to allow for the Development Corridor – Permanent Met Masts that includes the Indicative Development Footprint – Permanent Met Masts in its entirety;
    - refinement of the Development Corridor – External Roads;
    - additional ground disturbance for poles locations and associated track to enable the Project to connect to the TransGrid Transmission Line; and
    - inclusion of an additional temporary construction compound to facilitate the upgrades on the TransGrid owned existing 330kV Transmission Line at the southern section of the Project site.
- further Modifications to the Development Consent including:
    - Condition 11 of Schedule 3 (Operational Noise Criteria – Wind Turbines) so the table of criterion be replaced with more general criteria (in accordance with the Noise Bulletin and as discussed with the Environment Protection Authority (EPA)) which will remain valid for any hub height;
    - Condition 8(d) of Schedule 2 (Micro-siting Restrictions) to enable application of the new Biodiversity Assessment Method (BAM) definition of hollow-bearing trees so the original intent of Condition 8(d) of Schedule 2 can be fully exercised; and

- sequencing of Preliminary Site Works and Local Road Upgrades.

The Amendment Report outlines and assesses the minor clarifications in detail and confirms that they will further reduce the overall impacts of the Proposed Modification. Given the Final Modified Project proposes an additional reduction of three wind turbines, the proposed impacts will be further reduced.

2.3 Clarifications

The Applicant further seeks to make some minor clarifications to the information contained within the Modification Application Report as follows:

- clarification to a typographical error the introductory paragraph of the Modification Application Report. The wording states the Project is to the west of Rye Park village when it is actually to the east.
- clarification to Appendix C.2 (Updated Development Layout) and Appendix C.4 (Aboriginal Heritage Items and Map) of the Modification Application Report which did not fully represent the underground cabling. These maps have been updated and are contained at Appendix A and Appendix F of the Amendment Report. It should be noted that the absence of the underground cabling did not affect the outcome of any environmental assessments as the disturbance areas was captured with in the Indicative Development Footprint – Wind Farm.
- clarification to the supporting infrastructure presented in the Modification Application Report. The report and maps show two Operation and Maintenance facilities (O&M facilities). However, whilst both are presented to provide optionality, only one will be selected and constructed as part of the ongoing detailed design of the Project.
- clarification to the Swept Path Analysis contained in the Traffic Impact Assessment (TIA) contained at Appendix G.7 and Appendix F (Indicative Development Footprint – External Roads) of the Modification Application Report. The maps show the property on the corner of Dillion and Long Street in Boorowa being included in the Indicative Development Footprint – External Roads. These maps were included by error and the updated map of the Indicative Development Footprint – External Roads is contained at Appendix D of the Amendment Report.
- clarification that Dwelling R192 is a non-associated residence. Dwelling R192 was listed as an associated residence within the Modification Application Report. However, the detailed discussions with the landowner at the time of submission of the Modification Application did not result in an executed agreement with the landowner of Dwelling R192 and accordingly the residence is now listed as non-associated with the Project.

2.4 Project Justification

2.4.1 Increased energy generation

The proposed increase to the wind turbine envelope to a maximum tip height of 200 m will enable the use of newer and more efficient wind turbine technology. While a final wind turbine model has not yet been selected for the Project, the newer turbine models currently under consideration for the Project have the potential to generate up to approximately 6 MW per wind turbine, as compared to the older wind turbine models ranging between 1.5 and 3.5 MW previously considered for the Approved Project.

By using the newer more efficient wind turbine technology proposed as part of the Proposed Modification, the Final Modified Project consisting of 77 wind turbines will generate approximately 1,314 GWh of renewable electricity per year. This represents a 28% increase in renewable energy when compared to the Approved Project.

As described in Section 7.4 of the Modification Application Report, a noise curtailment strategy will be

implemented for wind speeds of 8m/s and above and therefore the noise level from the Final Modified Project is predicted to achieve the noise criteria at all nearby residences. Based on estimates of the noisiest wind turbines the energy reduction due to noise curtailment would be approximately 1.4%. Therefore, the total generation capacity of the Final Modified Project is expected to be more than 26% greater than the Approved Project.

The increase in energy capacity of 26% can be achieved while using 16% fewer wind turbines than the Approved Project. Accordingly, the Final Modified Project will generate enough electricity to power 220,000 average Australian homes, approximately 50,000 more homes than the Approved Project.

The increased renewable, zero emissions and low-cost electricity being fed into the NSW grid from the Final Modified Project will result in:

- greater downward pressure on wholesale electricity costs. In particular, new renewable power generation projects (including wind farms) are now cheaper than coal-fired plants and have been clearly demonstrated to be the lowest cost form of new generation available. An increase in the amount of low marginal cost energy in NSW has clear benefits for end users and consumers of energy; and
- greater substitution of electricity generated from thermal sources (including coal), resulting in decreased greenhouse gas emissions. Refer to Section 2.4.2 below for further details.

2.4.2 Climate change impacts

Australia has one of the highest per capita emissions of carbon dioxide in the world. When emissions from Australia's current coal, oil and gas exports (3.6% of global total) are added to domestic emissions (1.4% of global total), Australia's contribution to the global climate pollution footprint is around 5%[4]. This is significant given that:

- the Australian population represents only around 0.3% of the world's population; and
- Australia is also one of the countries most exposed to climate change, as evident by the unprecedented bushfires that occurred over 2019/20.

A March 2018 Report by HSBC Global Research titled '*Fragile Planet - Scoring Climate Risks Around the World*' found that Australia has one of the largest percentage rise in deaths attributable to climate change in the developed world. Israel and the USA were the only developed countries with a bigger share of the population impacted by climate change-related events such as floods, storms, cyclones, and bushfires.

The Intergovernmental Panel on Climate Change (IPCC) special report *'Global Warming of 1.5C',* prepared following the landmark 2015 Paris Climate Agreement, notes that *"ambitious mitigation actions are indispensable to limit warming to 1.5°C while achieving sustainable development and poverty eradication"*.

The electricity generation sector is currently the largest contributor to the emission of greenhouse gases across NSW. The Grattan Institute published a report titled '*Australia's energy transition: a blueprint for success*' in September 2019. This report recognises that:

> *Australia has been an energy superpower for much of the past century, with its abundance of coal, oil, gas, and uranium. But our fossil fuel advantage is at risk, because carbon emissions here and overseas should and will decline to near zero in coming decades. This is our challenge.*
>
> *Australia could also be an energy superpower in the next century, with its vast solar and wind energy resources, possibly supplemented by new uses of fossil energy with carbon storage. This is our opportunity.*

Renewable energy projects, including the approved Rye Park Wind Farm, will play a key role in reducing

[4] See https://climateanalytics.org/publications/2019/evaluating-the-significance-of-australias-global-fossil-fuel-carbon-footprint/

carbon emissions and human induced climate change as part of the necessary and inevitable clean energy transition occurs in Australia.

The emissions factor for all electricity currently generated in NSW according to the National Greenhouse Account Factors is 0.81 kg CO2-e/KWh while the commonly accepted life cycle basis emission factor for electricity generated from wind turbines is 0.11 kg CO2-e/KWh[5]. Accordingly, the Project will generate less than 15% greenhouse gases per kilowatt-hour of electricity generated compared to the average kilowatt-hour of electricity purchased in NSW (noting that the average figure includes a proportion of renewables as well).

While 15 turbines are proposed to be deleted as a result of the Proposed Modification, the Final Modified Project seeks to enable the use of modern highly efficient wind turbine technology by increasing the wind turbine envelope from the currently approved maximum tip height of 157 m to a maximum tip height of 200 m. This will enable the Project, if the Proposed Modification is approved, to:

- generate approximately 1,314 GWh per annum, enough to power around 220,000 homes per year;
- offset more than one million tonnes of carbon emissions per annum – equivalent to removing 330,000 cars from the roads each year; and
- offset construction and manufacturing carbon emissions well within the first year of operation.

In economic terms, the Economic Impact Assessment Update prepared by Hudson Howells in relation to the Proposed Modification (contained in Appendix A) confirms that the carbon emissions savings associated with the Final Modified Project are as follows.

> *At a conservative carbon price of $15.75 per tonne, the value of carbon emission savings associated with the Rye Park Wind Farm is estimated to be $17.0 million per annum or a present value of $165 million over a 20 year period (discount rate of 6%). At price more aligned with the Stern review of A$30.00 per tonne, the value of carbon emission savings associated with the Rye Park Wind Farm is estimated to be $32.5 million per annum or a present value of $372 million over a 20 year period (discount rate of 6%).*

The Proposed Modification will also enable the Project to further support NSW and Commonwealth climate change mitigation strategies by:

- assisting in replacing the 1000 MW shortfall identified by the Australian Energy Market Operator as being required for the lost generation capacity which will result from the planned closure of the Liddell Power Station in April 2023;
- contributing to the NSW Government's targets set out in the '*Net Zero Plan'* to reduce greenhouse gas emissions by 35% by 2030 (from a 2005 baseline) and the complementary goal of reducing greenhouse gas emissions by 60% by the year 2050; and
- contributing to the Commonwealth Government's National Determined Contribution under the Paris Climate Agreement to reduce Australia's greenhouse gas emissions by 26-28% by 2030 (on a 2005 baseline).

It is clear that the climate change benefits of the Proposed Modification are very significant.

2.4.3 Greater efficiency and optimised design

The Proposed Modification additionally optimises the design of the Approved Project, including to increase constructability and increase the efficiency of the Project by minimising electrical losses and maximising the generation capacity of the Project.

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[5] (NREL, 2012), https://doi.org/10.1111/j.1530-9290.2012.00464.x

Accordingly, the Proposed Modification will result in:

- increased generation capacity and annual projected generation;
- reduction in transmission losses through optimised design;
- reduced resource use and waste generation (achieved particularly through the deletion of 15 wind turbines);
- reduced project cost and timelines; and
- reduced haulage requirements, minimising traffic impacts.

The ongoing detailed engineering design has been undertaken for the Project to increase the constructability of the Project while minimising ground disturbance and vegetation clearing as far as practicable. This has, for example, included moving access tracks and the transmission line off ridgelines where practicable to reduce the cut and fill requirements and reduce ground disturbance during construction. The final modified indicative development layout (contained at Appendix A of the Amendment Report) remains subject to further detailed design work as permitted under the Development Consent which will continue up to the construction phase of the Project. Any further detailed design changes made to the Project will remain within the micro-siting limits authorised under the Development Consent.

The changes to the 33 kV connection infrastructure and optimisation of the (up to) 330 kV transmission line will reduce the electrical transmission losses by reducing the overall length of the connection infrastructure, improving the efficiency of the Project. This will ensure that the Project is able to maximise the amount of renewable energy exported to the National Electricity Grid.

As part of the Final Modified Project, the Preferred Transport Route has been progressed to provide greater understanding of the upgrades required, the associated ground disturbance and assessment of vegetation clearing along the local road network as detailed in the Revised BDAR contained at Appendix B. Progression of the Preferred Transport Route which forms part of the Final Modified Project was carried out in consultation with the relevant councils and the Biodiversity Conservation Division of the DPIE (BCD). All feedback provided to the Applicant has been incorporated into the preliminary design of the road upgrades.

2.4.4 Jobs and Economic Benefits to the Community

The Final Modified Project will create significant economic stimulus and employment in the local area and throughout the region.

The Final Modified Project represents a direct investment of over $700 million.

In terms of direct employment, the Final Modified Project will provide full time employment for up to 250 staff during construction and up to 10 ongoing regional jobs during its operational life providing increased employment opportunities, including for local workers.

The Project will result in a direct injection of approximately $2-$3 million per annum to the local community through payments to landholders, permanent staff and benefit sharing plan contributions providing better diversification of income and a drought proof and post retirement income for farmers and the community.

In particular:

- the Applicant has a Voluntary Planning Agreement (VPA) in place with local councils to provide $2,500 per constructed wind turbine per year towards a Community Enhancement Fund. The Proposed Modification will reduce the number of turbines but not the level of financial support for the community, which will remain committed on the basis of the currently approved 92 wind turbines. Funding for any unbuilt wind turbines may be added to the council administered community fund or directed toward other local initiatives;
- the Rye Park Wind Farm voluntary Neighbour Agreement program remains open enables eligible

landholders in the vicinity of the Project to directly share in the economic benefits of the Final Modified Project even though they will not be hosting any Project infrastructure; and

- a Benefit Sharing Plan is currently being prepared in consultation with the Rye Park community which will provide further opportunities for the local community to ensure the economic benefits of the Final Modified Project are directly shared with the community as whole.

In addition to these direct benefits there are broader economic benefits from the Final Modified Project. In particular, during the construction phase, broader economic benefits will be generated through requirements for accommodation, food, fuel and trade equipment and services. During the operation of the wind farm ongoing work, including monitoring, inspections, maintenance, repair and upgrade of infrastructure will be required - each bringing broader economic benefits.

The Economic Impact Assessment (contained at Appendix A) includes an assessment of the broader economic benefits which the Final Modified Project will bring to NSW, the ACT, the region and also the local community, and concludes that:

- during the construction phase, the Final Modified Project's broader contribution to the NSW and ACT Gross State (and territory) Product (GSP) will be approximately $228.9 million, and the broader benefits of the Final Modified Project will generate 482 jobs per year during construction;
- a significant portion of these construction related benefits will flow to the local community with the contribution to the Yass Valley, Hilltops and Upper Lachlan LGA Gross Regional Product (GRP) being approximately $26.6 million and resulting in the generation of 60 new jobs per year in the area during construction;
- during the operational phase, the Final Modified Project's contribution to the NSW and ACT GSP will be approximately $8.8 million per year, and the broader benefits of the Final Modified Project will result in 55 jobs per year; and
- again, a significant portion of these ongoing operational related benefits will flow to the local community with the Yass Valley, Hilltops and Upper Lachlan LGA GRP being approximately $4.4 million per year and will result in 29 jobs during the operations.

The economic modelling results from the Economic Impact Assessment (contained in Appendix A) are summarised further in Section 4.2.11.

3.0 Consultation

3.1 Overview of Consultation for the Proposed Modification

The Applicant has consulted with stakeholders and local communities in relation to the Proposed Modification since mid-2019.

A number of consultation and engagement strategies have been employed to ensure stakeholders and the community were:

- aware of the Proposed Modification;
- provided with information about the Proposed Modification, justification and the modification process;
- provided with opportunities to communicate any new or changed concerns or ideas; and
- provided with an opportunity to speak with the Applicant about the Project and the Proposed Modification.

These strategies were implemented throughout the three key stages of the modification consultation process where the Applicant engaged with stakeholders and the communities. These stages are outlined in Table 3.

Table 3: Stages of the modification consultation process

Date	Consultation Undertaken
Stage 1: Early Communications and Engagement Prior to Modification Application Lodgement	
February 2019	Meetings with host landowners. Community consultative committee (CCC) meeting (a tip height Modification Application to the approved Development Consent was raised).
February to May 2019	CCC meeting which provided a Project update as well as an overview of the key studies proposed to assess the Modification Application to increase the efficiency of the site by taking the maximum tip height of the wind turbines to 200 m.
July to August 2019	Project update meetings with council officers.
September 2019	CCC meeting which confirmed that the Applicant will seek a modification to the Development Consent for the Project. Meetings with host landowners and neighbours to discuss neighbour agreements.

November 2019	Community engagement by way of community drop-in sessions over three days to discuss the Project modification, understand the communities response to the proposal and confirm the Applicant's understanding of interests and issues:
	• drop-in information sessions were held in Rye Park, Yass and Boorowa during mid-November with an estimated 100 local residents in attendance over three days. Sessions were conducted from 1pm - 7pm on 12, 13 and 14 November 2019. These early engagement sessions focused on the Proposed Modifications and sought feedback from local residents;
	• handouts were also available for attendees to take away for further reading, which consisted of a project newsletter to present an overview of the Proposed Modifications, a fact sheet with information about location, status, benefits and next steps, a wind farm FAQs pamphlet and a Tilt Renewables company profile;
	• participants were asked to provide feedback using the following methods:
	  ○ feedback forms (hard copies received at the community sessions or e-forms online);
	  ○ verbally at a community drop-in session or by telephone; or
	  ○ written feedback via email or letter; and
	• further host landowner and neighbour meetings were also held.

November 2019 to January 2020	Meetings with DPIE and BCD to discuss the required road upgrades and assess ways to minimise vegetation removal.
January 2020	Councillor briefing session with Yass Valley Council (briefings were also offered to Upper Lachlan Shire Council (declined) and Hilltops Council (no response).

Date	Consultation Undertaken
Ongoing Pre-Lodgement Activities	• newsletters distributed communicating information and seeking feedback on the Proposed Modifications (October 2019, December 2019, May 2020) to residents by Australia Post mail drop and direct mail from subscriber database. Copies of the newsletters were also made available in council offices in Yass and Boorowa, and at the post office in Rye Park, as well as via the Project webpage; • approximately 130 letters were sent to host landowners, neighbours, prior submitters, councils, and local Members of Parliament; • four advertisements were placed in local newspapers including Boorowa News and Yass Tribune inviting people to 'drop in' to discuss the Proposed Modifications (discussed further below). • fact sheets, newsletters and up-to-date project information including an online feedback form, which was available from 1 November to 4 December 2019 was accessible via the Project website; • Hilltops Council's community Facebook page promoted the drop-in sessions and provided information on the Proposed Modification; and • information was also shared via the Rye Park community noticeboard.
Stage 2: Communications and Engagement Following Modification Application Lodgment	
24 April 2020	The Applicant advised involved stakeholders, including host landowners and Yass, Upper Lachlan Shire and Hilltops Councils, that the Modification Application had been submitted to DPIE and the public exhibition period would shortly follow.
6 May 2020	• DPIE advised the Applicant, Councils and the Rye Park Wind Farm CCC that the public exhibition period would take place from Wednesday 13 May 2020 until Wednesday 3 June 2020; • In addition to DPIE's notification, the Applicant notified involved stakeholders, councils and the Rye Park Wind Farm CCC of the public exhibition period and of the Inform Rye Park website (details provided below); and • USBs containing the Modification Application Report and appendices were sent to each council (Yass Valley, Upper Lachlan Shire and Hilltops Councils).
5 May to 7 May 2020	In accordance with clause 49 of the *Environmental Planning and Assessment Regulation 2000* (NSW), the Applicant advertised a Notification of Multiple Owners Designation in local newspapers (the *Hilltops Phoenix* and *Young Witness*) as well as the *Daily Telegraph*.
7 May 2020	DPIE advertised the public exhibition period and where to find further information on the Proposed Modification on the NSW Major Projects Portal via advertisements in NSW newspapers.

Ongoing Post Lodgment Activities	• inform Rye Park website:
	  ○ the Applicant developed and published a website (**https://informryeparkwf.com/**) with the primary purpose of assisting stakeholders and communities to understand and review the Modification Application. The website provides an in-depth analysis of the Modification Application Report, highlighting each environmental assessment, the Modified Project compared to the Approved Project, how the Modified Project complies with Development Consent (including any required mitigation strategies or management plans). Other elements made available included:
	  ○ an interactive project map was purpose-built to demonstrate Approved Project and Modified Project infrastructure changes;
	  ○ interactive photomontage displays of varying aspects of the Project are available as comparison views of the Modified Project against the Approved Project;
	  ○ for ease of sharing information amongst the community, including those without internet access or to other project stakeholders, the website includes a printable PDF (fact sheet) of each published page;
	  ○ each page on the website included a link to 'make a submission' via NSW Major Projects Portal until the public exhibition period ended; and
	  ○ a link remains on each page to jump to the full Modification Application Report and appendices on DPIE's website.
	• a May newsletter was distributed via post and electronically to the Project stakeholder database immediately following DPIE's notification of the public exhibition period commencing. The newsletter included notification of the public exhibition dates, the link to the Inform Rye Park website, the proposed changes, rationale, environmental assessments undertaken, a map of the Preferred Transport Route, and a map of the updated development layout;
	• upon request, hard copies of the Modification Application Report and appendices were sent to the Rye Park Post Office and community members; and
	• the 1800 WE TILT phone number and Project email address are monitored at all times and particular effort was made during public exhibition to ensure every query was responded to within 24 hours.

Date	Consultation Undertaken
Stage 3: Engagement Following Exhibition Period for Modification Application	
June 2020	The Inform Rye Park website was updated to reflect the status of the Modification Application assessment and to focus on benefit sharing opportunities and requests for innovative ideas from the local community to help guide the development of the Benefit Sharing Plan.
25 June 2020	A CCC meeting was held following the close of the public exhibition period. The forum was used to deliver a high-level presentation that outlined key observations of the submissions made, as well as provide further information on the approved Preferred Transport Route.
June 2020	Meetings were held with residents along the Preferred Transport Route to ensure the Applicant understood their concerns and provided more detailed information on the mitigation measures proposed.

3.2 Further Consultation with Government Agencies

During the RTS phase the Applicant has continued to consult with NSW State and local government agencies to address issues raised in the comments provided by each of the relevant agencies.

Targeted meetings were held with representatives from each relevant NSW State and local government agency as follows.

3.2.1 Department of Planning, Industry and Environment

Planning Division

The Applicant met with the Planning Division of the DPIE on 1 July 2020 to provide details on the key issues raised in the submissions, progress of the Project, the process for providing feedback to agencies, stakeholder engagement and compliance and the approach to visual impact.

A subsequent meeting was held with the Planning Division on 7 July 2020 to discuss the approach to the visual assessment. The Department's peer reviewer recommended further consideration of the requirements in the *NSW Wind Energy Visual Assessment Bulletin* of relevance to the Proposed Modification and further assessment of visual impact of specific wind turbines. A revised Visual Impact Assessment (Revised VIA) (contained at Appendix C) has been prepared to address the comments provided by the Planning Division of the DPIE and their peer reviewer. In response to specific comments from the Planning Division of the DPIE, the Applicant has removed three turbines from the layout within close proximity of Rye Park village. See Section 4.2.5 for further details.

Biodiversity Conservation Division

The Applicant met with the BCD of the DPIE on 23 June 2020. The meeting was also attended by Umwelt, the Applicant's biodiversity consultants. The comments provided by BCD on the Modification Application were discussed in detail and included consideration of the following matters:

- BAM plot location;
- species polygons for golden sun moth;
- species polygons for crimson spider orchid;
- squirrel glider habitat;
- partial direct impacts;
- BAM Credit Calculator (BAMCC) – hollow bearing trees; and
- prescribed impacts for wind turbine strikes.

Following this initial meeting, the Applicant undertook further ongoing engagement with the BCD as outlined in Table 4.

Table 4: Further engagement with BCD

Date	Engagement
3 July 2020	Umwelt arranged a teleconference with the BCD to discuss golden sun moth species polygons and understand the expectations and requirements of BCD on the Prescribed Impact Assessments (PIA). Key matters covered included clarification of species which BCD wanted further assessed, how some criteria should be addressed in light of research held by the BCD, and the concept of Umwelt providing a draft prescribed impact assessment on one species (white-fronted chat) to BCD to provide commentary on while Umwelt progressed the remaining species. This approach was supported by BCD.
7 July 2020	Umwelt had a phone meeting with BCD to obtain further feedback on golden sun moth species polygons. Key points of discussion were the application of advice from the Threatened Biodiversity Data Collection that the golden sun moth species polygons should be drawn on Derived Native Grassland within the development footprint. With a particular focus on Rytidosperma spp. (Wallaby grass) within the Derived Native Grassland. BCD committed to providing further clarity around how surveyed areas of Derived Native Grassland where golden sun moth was not detected should be dealt with in regard to species polygons, but also what constitutes wallaby grass dominance.
13 July 2020	BCD provided written acknowledgement of the draft prescribed impact assessment provided for the white-fronted chat. Some clarifications were raised by BCD that were subsequently considered in the completion of the remaining assessments. It is noted that at this point BCD sought the inclusion of additional species into the prescribed impact assessment. Umwelt have accommodated this request in the final prescribed impact assessment.
14 July 2020	BCD provided final written guidance on the matter of golden sun moth species polygons. Key points to be noted were that areas where Derived Native Grassland was surveyed, and golden sun moth was not detected, these patches can be excluded from species polygons. BCD clarified the suitable habitat to be considered by Umwelt was “Suitable habitat is ≥ 20% Stipa spp. OR Rytidosperma spp. cover”. Umwelt note, this was the first occasion that Stipa coverage had been raised. Following this, BCD noted that Threatened Biodiversity Data Collection did not mention Stipa dominance. Subsequently, BCD requested that the Threatened Biodiversity Data Collection be updated to include Stipa and that Umwelt should apply such consideration of habitat.

The Applicant’s response to BCD’s submission is discussed further in section 4.3.6.

Crown Lands

The Applicant has further consultation with the Crown Lands division within DPIE in relation to the comments provided by Crown Land on the Modification Application in relation to the licencing process for the use and occupation of Crown land and Crown roads under the *Crown Land Management Act 2016* (NSW) (Crown Lands Act).

A meeting was held with Crown Lands at the Goulburn Regional Office on 11 June 2020 (teleconference) to further clarify the process and timing of the licencing process under both the Crown Lands Act and the *Roads Act 1993* (NSW).

The Applicant’s response to the Crown Lands division’s submission is discussed further in section 4.3.3.

3.2.2 Transport for NSW

The Applicant met with Transport for NSW (TfNSW) on 10 July 2020 to discuss the comments provided by TfNSW on the Proposed Modification as well as the rationale for including three transport routes from Port Kembla or the Port of Newcastle, and likely types of transportation vehicles required. The Applicant agreed to undertake additional assessment on the three transportation routes that has been progressed since submitting the Modification Application.

A Transport Route Assessment Peer Review including additional information on the three transport routes is provided in Appendix D and discussed in further detail in section 4.2.

The Applicant’s response to the TfNSW submission is discussed further in section 4.3.13.

3.2.3 Hilltops Council

The Applicant met with Hilltops Council on 17 July 2020 to discuss the progression of the road upgrade concept designs and the issues raised in Hilltops Council's comments on the Modification Application. The Applicant's response to the Hilltops Council comments is discussed further in section 6.2.13.

3.2.4 Australian Resource Development Group

The Applicant has been approached by Australian Resource Development Group (ARDG), who are proposing potential opportunities for on-site quarries to supply the construction material requirements for the Project and further reduce the traffic impacts of the development.

If it is possible to source the required construction material on site then this would remove the equivalent of 50,000 truck movements from the local road network during the construction phase, significantly reducing the construction traffic related impacts of the Project. While this option is preferred by the Applicant and is being assessed and considered further, it does not form part of the Proposed Modification as the option for on-site quarrying remains in the initial investigation stage. Accordingly, the Final Modified Project assumes a worst case scenario, with the haulage of all source rock and road base materials required for the Project from off-site sources.

The initial investigation has identified that potential quarry site resources could meet the source rock required to produce the full requirements of the Project, with the potential exception of some specialty aggregate sealing materials required for the road upgrades prior to the construction of the Project.

The final locations and details of the potential quarries are currently being further investigated by ARDG in consultation with councils and involved landowners. If these investigations confirm that on-site quarries are viable then these will be separately assessed by ARDG via separate development applications lodged under the EP&A Act which will include consideration of measures to minimise any visual or noise impacts arising, including as a result of cumulative impacts associated with the Final Modified Project.

3.3 Further Public Consultation

The Applicant prides itself in fostering strong landowner and community relationships and is committed to an open and honest dialogue with all stakeholders, throughout all phases of the Project.

Further consultation planned in relation to the Modification Application, and the Project more generally, is set out in Table 5.

Table 5: Further planned consultation

Planned Consultation - Post Exhibition Period	

General	• the Applicant will:
	  ○ install a project information board in the Rye Park village;
	  ○ advertise the bi-monthly newsletter in the Yass Valley Times (a new publication); and
	  ○ distribute the bi-monthly newsletters to additional local outlets such as news agencies, cafes and libraries.
	• a July-August newsletter will be distributed to advise the community of the submission of this RTS and its availability on NSW Major Projects Portal. The newsletter will also include a high-level summary of the RTS, the key themes raised and addressed, the further clarifications made to the Proposed Modification and proposed upcoming consultation activities;
	• the Applicant will provide electronic or hard copies of the RTS report to those who request it.
	• an October CCC meeting has been scheduled; and
	• one-on-one consultation and engagement will continue to take place where required.

Additional Benefit Sharing	• the live page (https://informryeparkwf.com/benefit-sharing) enables the community to provide input on the kinds of additional benefit sharing programs they'd like to see delivered for the Rye Park community. Feedback from consultation with the community on additional opportunities for additional benefit sharing has so far indicated that road safety is a big concern. Other suggestions include

Planned Consultation - Post Exhibition Period	
	education scholarships, power supply for the village and improvements to local amenity such as a general store or recreation facilities; • the Applicant is regularly consulting with the Rye Park Progress Association (RPPA) and will continue, where relevant, to attend meetings to help shape the Benefit Sharing Plan; and • more detailed consultation to help inform the preparation of the Benefit Sharing Plan for the project (which may include information sessions, workshops and/or one on one engagement with potential benefit sharing partners) is planned for Q4 2020 / Q1 2021.
Post-Determination	• the Applicant has a live Goods and Services Register on the project webpage to build out a database of local and regional contractors interested in working on the Final Modified Project. In line with the Australian Industry Participation Plan prepared for the Project, the Applicant will provide the head contractor selected to construct the Project with access to this database and hold project information sessions for interested contractors to attend; • ongoing consultation will continue to be carried out with relevant community members located along the Preferred Transport Route; • stakeholders along the Preferred Transport Route will be included in construction updates and works alerts for major deliveries and disruptions, in accordance with the Traffic Management Plan (TMP). • leading up to and during construction, the Applicant will continue to keep the community informed of proposed construction schedules using a variety of channels including the project webpage, newsletters, notice boards, phone and direct mail as appropriate.

A detailed Delivery Plan of consultation activities leading up to project construction is outlined in the Stakeholder and Community Engagement Plan contained in Appendix I of the Modification Application Report.

4.0 Response to Submissions

4.1 Overview of Submissions Process

4.1.1 Submissions Received during Public Exhibition

During the public exhibition period, DPIE received a total of 151 submissions in response to the Project, as summarised in Table 6.

Table 6: Submissions received

Category	Position			Total Number of Submissions Received
	Support	Comment	Object	
Governmental Agency Comments and Submissions	-	17	-	17
Organisation Submissions	2	1	4	7
Public Submissions	20	-	107	127
Public Submission Duplicates	-	-	22	22
TOTAL	**22**	**18**	**89**	**129**

Whilst 127 submissions were received from members of the community (Public Submissions), 22 of these submissions were duplications (resulting from multiple submissions being lodged by the same person) (Public Submission Duplicates)[6]. Accordingly, the total number of Public Submissions was 105, with 85 of these being made by people who objected to the Proposed Modification and 20 being made by people who supported the Proposed Modification. Of the 85 objections, a significant number replicated statements made in other submissions without raising any additional topics as discussed further in Section 4.5.1. Figure 2 below shows the topics raised in the Public Submissions objecting to the Proposed Modification whilst Figure 3 shows the topics raised in the Public Submissions supporting the Proposed Modification. Figure 4 below demonstrates the percentage of topics raised in Public Submissions objecting which were made in relation to the Modified Project specifically compared with the Project more generally. Figure 5 illustrates the Public Submissions made by location[7].

[6] Whilst not counted within the total number of Public Submissions these submissions were reviewed and topics addressed within this RTS.

[7] Two submitters did not provide their residential suburb so have been excluded from Figure 5

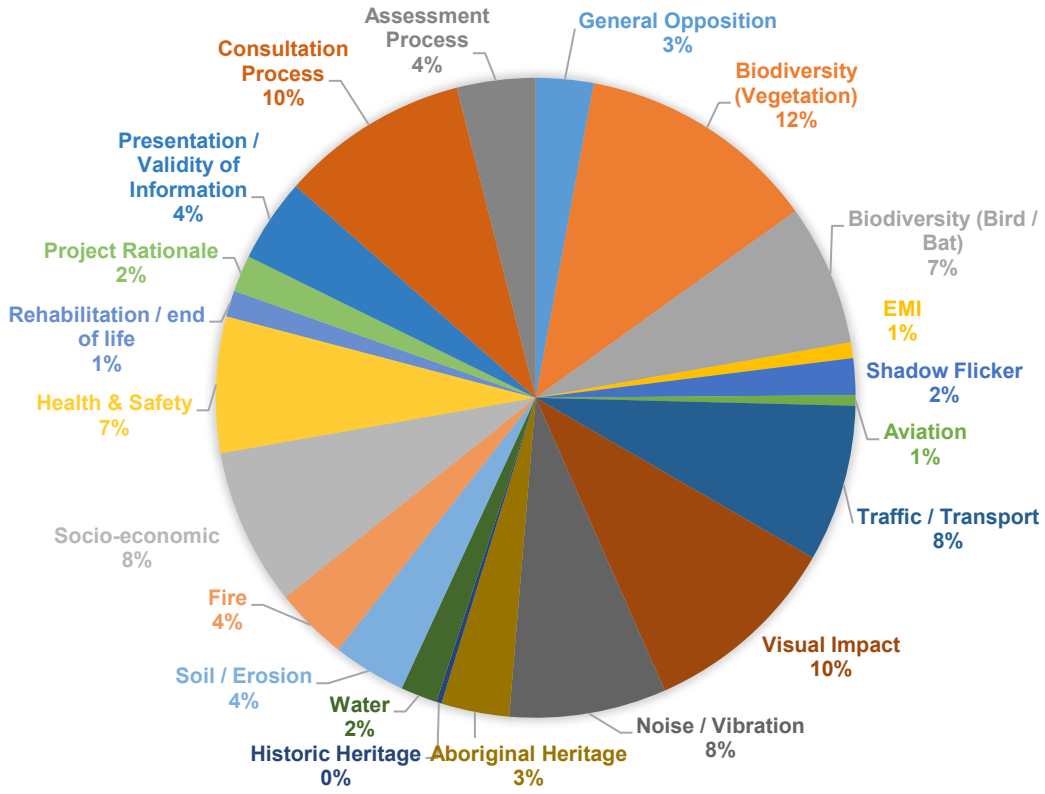

Figure 2: Topics raised in Public Submissions – Object

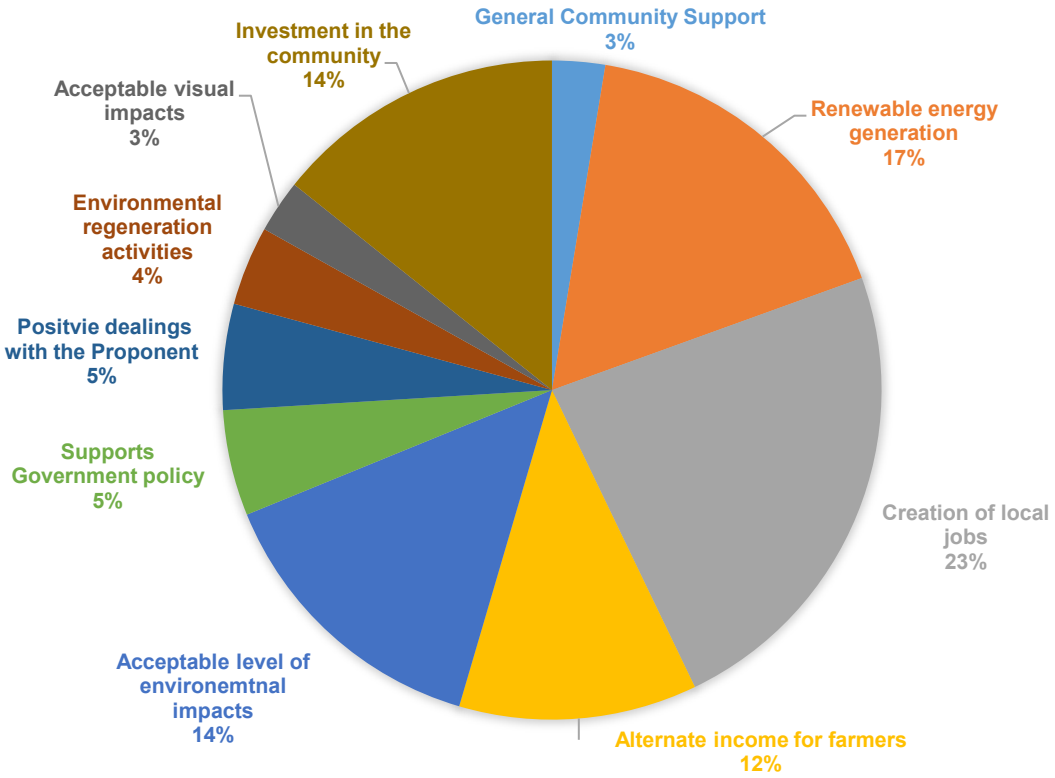

Figure 3 Topics raised in Public Submissions – Support

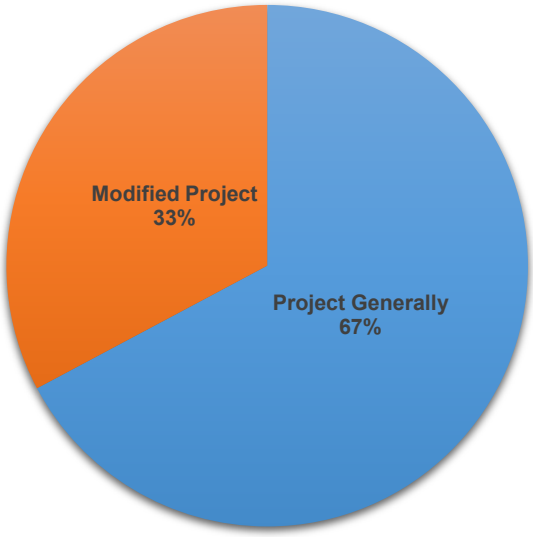

Figure 4: Topics raised in relation to the Modified Project vs the Project Generally

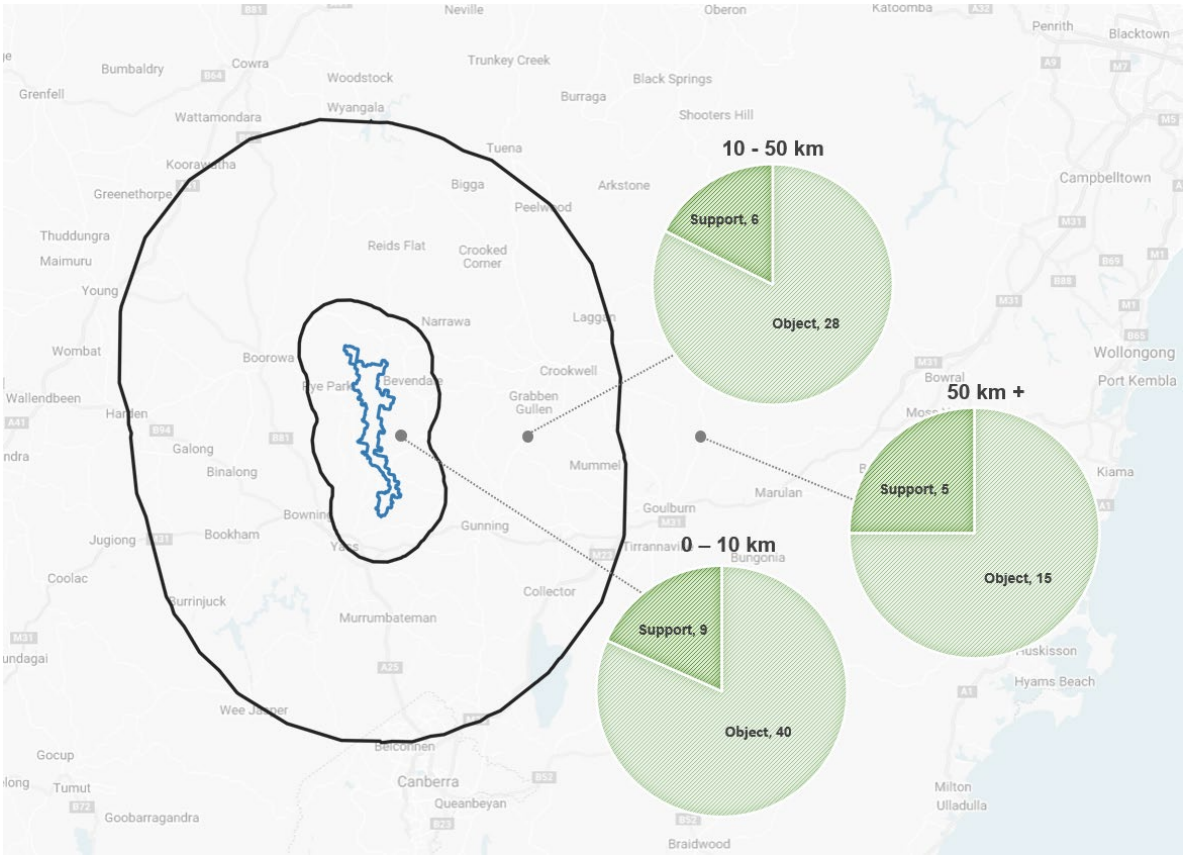

Figure 5: Summary of public submissions by location

4.1.2 Methodology of analysing and responding to submissions

The Applicant has responded to the submissions received in accordance with the *Responding to Submissions Draft Guidelines* (DPIE, June 2017) (RTS Guideline). Where topics are addressed in other sections of this RTS or in an appendix, this has been noted accordingly.

For the public's reference, Appendix E contains a comprehensive list of the names of all Public Submitters and their DPIE reference ID so people can see where topics they raised have been addressed.

Table 7 provides a brief overview of how the submissions received have been analysed and responded to.

Table 7: Methodology for analysing and responding to submissions

Submission Type	Response Approach
Government Agency and Organisations	Key topics raised have been summarised and responded to in detail in sections 4.3 and 4.4.
Public Submissions – Object	These submissions were analysed and grouped into key themes and topics and responded to in detail in section 4.5. Where an individual made several submissions, all topics raised were captured and considered as one submission per person. This was the case for S-126084, S-126124, S-126125, S-126126, S-126148, S-126179, S-126205, S-126224 and S-126267. Several people noted they support and adopted submissions made by other people. This has been recorded accordingly, however the topics raised have been responded to in the submission which set them out in detail.
Public Submissions – Support	Key topics raised by the people who made submissions supporting the Proposed Modification have been described in section 4.6.

4.2 Key Issues raised in the Submissions

The following section provides an overview of the key issues raised in the submissions received during the public exhibition period.

The specific issues raised from government agencies, organisations and the public are discussed and addressed further in Sections 4.5.1 to 4.5.21 of this report.

In some instances, submissions have resulted in further clarifications to the Modified Project which is discussed further in the Amendment Report.

4.2.1 Biodiversity (Vegetation)

Several Public Submissions expressed concerns about the potential impacts of the Project on biodiversity (vegetation).

A BDAR was prepared to support the Modification Application and assess the change in potential biodiversity impacts from the Approved Project resulting from the Modified Project (Modification BDAR) (contained at Appendix G.4 of the Modification Application Report). A Revised BDAR has been prepared to assess the further clarifications made to the Proposed Modifications in the Amendment Report (contained at Appendix B and discussed further in the Amendment Report).

The Revised BDAR confirmed that the Final Modified Project will require the removal of:

- 489 ha of ground disturbance from within the Development Footprint – Wind Farm (being 232.2 ha more than the Approved Project);
- 18.66 ha of ground disturbance within the Development Footprint – External Roads (this was not assessed as part of the Approved Project although road upgrades formed part of the Approved Project and were required by the Development Consent); and
- 9.17 ha of ground disturbance with the Development Footprint – Met Mats (the location of the met masts

has been clarified in the Final Modified Project).

Of this, 105.18 ha consists of non-native vegetation types, predominantly agricultural grasslands that support exotic grasses and herbs and 15.72 ha is not classified as vegetation (including roads, trucks and waterbodies).

The Revised BDAR provides specific details on impacts to listed plant community types (PCTs) and particular species habitat. Also, the ground disturbance estimates are based on the temporary disturbance required for construction however a significant amount of this area will be reinstated once construction is complete. For example, the temporary disturbance for the access track will be an average width of 30 m however the permanent average width for the access tracks will be 5.5 m once reinstatement and revegetation has been undertaken. Ground disturbance presented in the Revised BDAR includes allowance for the construction of the three turbines which have been proposed to be removed in response community and regulatory feedback (detailed in the Amendment Report). The Applicant anticipates that the ground disturbance will subsequently be further reduced following the removal of these turbines. Therefore, the ground disturbance presented provides a worst case scenario of temporary disturbance for all vegetation types including non-native vegetation.

Owing to changes made to the Approved Project to reduce key areas of significant vegetation, the Final Modified Project will have a reduced impact on:

- the White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland Critically Endangered Ecological Community (CEEC) (Box Gum CEEC, BC Act) listed under the Biodiversity Conservation Act 2016 (NSW) (BC Act); and
- habitat for striped legless lizard, superb parrot, and golden sun moth listed under the EPBC Act.

However, the Final Modified Project will have an increased impact on some matters protected under the EPBC Act including:

- White Box, Yellow Box, Blakely's Red Gum Woodland and Derived Native Grassland Critically Endangered Ecological Community (CEEC); and
- hollow bearing trees suitable for the superb parrot.

As outlined in the Modification Application Report, it is proposed to re-refer the Project under the EPBC Act independently to the current modification application which is being assessed under the EP&A Act.

A Response to Submissions Report (Biodiversity RTSR) has been prepared to address topics raised in relation to biodiversity in greater detail and is contained at Appendix F.

Section 4.5.2 outlines and responds to the biodiversity (vegetation) related issues raised in the Public Submissions. The following outlines the Applicant's response to key topics raised.

Increased Disturbance Area and Land Clearing

The infrastructure and construction activities that make up the Indicative Development Footprint – Wind Farm are consistent with the Approved Project however, the lengths of associated infrastructure including underground cabling, transmission lines and access tracks have generally decreased compared to the Approved Project. The decrease is a result of the re-design of the wind farm layout to ensure it is efficient, constructible and to avoid areas of difficult terrain and of significant biodiversity or heritage value, where possible.

However, the extent of ground disturbance has largely increased due to more accurately estimating the disturbance associated with the internal access tracks and cabling (including cut and fill requirements and separate cabling routes) in the Modified Indicative Footprint – Wind Farm compared to the Indicative Development Footprint – Wind Farm for the Approved Project. These changes reflect the progression of the design and the Applicant's greater experience and knowledge compared with the assumptions used in the

original assessment.

A comprehensive biodiversity mitigation strategy (BMS) to mitigate the unavoidable impacts of the Project will be prepared and implemented. These measures will be designed and described within the Biodiversity Management Plan (BMP) and Roadside Vegetation Management Plan (RVMP).

Habitat Destruction

Detailed assessment of habitat destruction has been undertaken in the Revised BDAR, specifically through direct impacts on species-credit species habitats. Of the five species-credit species identified, two were not assessed previously in the Biodiversity Assessment and Biodiversity Assessment Addendum (NGH Environmental 2014 and 2016) however direct impacts on the remaining three have all been reduced compared to the Approved Project.

Mitigation measures to address habitat loss as a result of the Final Modified Project were identified in the Revised BDAR and will be included within the BMP.

Impacts on the Golden Sun Moth

The Final Modified Project will impact 43.2 ha of golden sun moth (GSM) habitat. This presents an impact reduction of 23.74 ha for the GSM compared with the Approved Project. With 113.89 a of GSM habitat identified within the Development Corridor, 70.69 ha will persist beyond the extent of the Indicative Development Footprints.

The GSM requires offsetting in accordance with the BAM. Credits required to offset the impacts of the Project on this species were calculated as 335 in the NSW – South Western Slopes IBRA Bioregion and 343 in the South Eastern Highlands IBRA Bioregion.

As specified in BCDs submission, two additional detailed impact assessments for the GSM have been prepared since the exhibition of the Modification BDAR including:

- a Serious Irreversible Impact Assessment (SAII) that found the Project impacts are likely to lead to a decline in a small percentage (up to 2.9%) of the known population recorded in the surrounding region, associated with a direct loss of individuals and removal of habitat. Whilst areas of habitat within the Indicative Development Footprints will be fragmented during construction and operation, they are unlikely to cause large barriers or isolate populations.
- an assessment of prescribed impacts has been conducted for the removal of non-native vegetation within the Indicative Development Footprints with potential to support the GSM. 18.77 ha of non-native vegetation fall within the GSM habitat buffers. This non-native vegetation comprises grassland areas that have been extensively cleared of native flora species through intensive and historic agricultural land use. It is low likelihood that the area of non-native vegetation has a low potential to will be utilised by the GSM give the sporadic presence of native grass species that is considered and that non-native vegetation is considered to be a sub-optimal habitat for the species. Accordingly, it is not considered likely that the removal of non-native vegetation occurring in GSM habitat buffers will affect any populations in such a way that they will become extinct, or significantly affect their existing dispersal patterns.

The biodiversity impacts of the Final Modified Project will continue to be managed in accordance with the conditions of the Development Consent which include:

- Condition 19 of Schedule 3 which requires compliance with a threshold for clearing of Box Gum Woodland CEEC and minimising impacts to specific species;
- Condition 19 of Schedule 3 which requires that no more than 50.2 hectares of the Box Gum Woodland CEEC, including Box Gum Woodland derived grassland, is cleared for the development, impacts to the Crimson Spider Orchid and Southern Pygmy Perch are avoided and impacts on hallow-bearing trees, termite mounds, threatened bird and bat populations and key habitat within the disturbance areas is

minimised;

- Conditions 20 to 21 of Schedule 3 which requires that biodiversity offsets must be provided for all biodiversity offset credit liabilities; and
- Conditions 22 of Schedule 3 which requires that a detailed BMP be prepared and implemented to the satisfaction of the Secretary of DPIE.

It is noted that in relation to the State Approval Consent Conditions described above, since this decision was made, the conservation status listing of 'Box Gum Woodland EEC' was updated on 17 July 2020 to a CEEC. It is assumed that the reference to clearance thresholds to the 'Box Gum Woodland EEC' will apply to the updated CEEC.

4.2.2 Biodiversity (Birds and Bats)

A number of submissions raised concerns about the impacts of the Proposed Modification on birds and bats as a result of increase striking risk.

A Bird and Bat Strike Risk Assessment (BBSRA) was included in Appendix G.5 of the Modification Application Report and assessed the change in potential impacts of bird and bat strike from the Approved Project arising from the Modified Project.

The Revised BDAR (contained at Appendix B) includes an assessment for the impacts of wind turbine strikes on threatened species as requested by BCD in their submission. The preparation of the Prescribed Impact Assessments (PIAs) replaces the previous BBSRA as it includes more specific detail. The PIA is presented in Appendix E of the Revised BDAR. The PIA was undertaken against the 80 wind turbine layout and therefore represents a worst case scenario compared to the proposed 77 wind turbine layout.

The Biodiversity RTSR addresses topics raised in relation to biodiversity (birds and bats) in greater detail and is contained at Appendix F. Section 4.5.3 outlines and responds to the biodiversity (birds and bats) related issues raised in the Public Submissions. The following outlines the Applicant's response to key topics raised.

Prescribed Impacts from Turbine Strikes – Birds and Bats

In BCD's submission, it was noted that for both birds and bats, the Revised BDAR must include an assessment for the impacts of wind turbine strikes on threatened species.

Accordingly, the PIAs were prepared for nine threatened bird species, one non-threatened bird species and four threatened bat species. Species considered to be the most aerial threatened species and therefore the most likely to be impacted by the Project were selected for inclusion. The wedge-tailed eagle was also included due to its susceptibility to blade strike.

The Biodiversity RTSR details the how the risk matrix is defined based on the overall risk levels for the likelihood and consequence of collision to determine the level of 'concern' for each species. Of the 14 species assessed, five are considered a high risk, six are considered a moderate risk and three are considered a minor risk of being impacted by the Project as shown in Table 8.

Table 8: Risk Assessment Summary

Common Name	Likelihood	Consequence	Risk Rating
Little eagle	High	Moderate	High
Black falcon	High	Moderate	High
Wedge-tailed eagle	High	Low	Moderate
Superb parrot	High	Moderate	High
White-throated needletail	High	Moderate	High

Common Name	Likelihood	Consequence	Risk Rating
White-fronted chat	High	Low	Moderate
Brown treecreeper	Low	Moderate	Minor
Varied sittella	Moderate	Low	Minor
Painted honeyeater	Moderate	Moderate	Moderate
Dusky woodswallow	High	Low	Moderate
Large bent-winged bat	High	Moderate	High
Yellow-bellied sheathtail bat	Moderate	Moderate	Moderate
Southern myotis	Low	Moderate	Minor
Eastern false pipistrelle	Moderate	Moderate	Moderate

Impacts to this species will be monitored and mitigated through the Bird and Bat Adaptive Management Plan (BBAMP). Details of mitigation measures that will be included in the BBAMP are described in the Revised BDAR.

4.2.3 Aviation – Night Lighting

A number of Public Submissions expressed concerns about the impacts of aviation hazard night lighting as a source of light pollution. It is important to note that the Development Consent already authorises aviation hazard lighting if required by the Civil Aviation Safety Authority (CASA) and contains measures to ensure any impacts are mitigated.

Two other Public Submissions expressed concerns about risks to aviation generally, these concerns have been addressed in Section 4.5.6.

Section 12 of the Landscape and Visual Impact Assessment prepared in 2016 as part of the Original Response to Submissions (Original RTS) (LVIA) assessed the visual impacts of aviation hazard night lighting, assumed to be the standard red medium intensity aviation night lights, for the then proposed 109 wind turbine layout. The 2016 LVIA concluded that:

> *Although not currently proposed, night time obstacle lighting would have the potential to be visible from a number of surrounding receiver locations, as well as areas beyond the project 10 km viewshed. The level of visual impact would diminish when viewed from more distant receiver locations, with a greater probability of night time lighting being screened by landform and/or tree cover. It should also be noted that the night time lighting installed on the Cullerin wind farm (as illustrated in this LVIA) has been decommissioned by Origin Energy following a risk based aviation assessment. A number of recent wind farm developments in New South Wales have also been approved without a requirement for night time lighting, including the Gullen Range and Glen Innes wind farms. A number of other operational wind farm developments, including some in Victoria, have also had night lighting decommissioned.*
>
> *Although some mitigation measures are considered appropriate to minimise the visual effects for a number of the elements associated with the wind farm, it is acknowledged that the degree to which the wind turbines would be visually mitigated is limited by their scale and position within the landscape relative to surrounding receiver locations.*

In order to ensure the visual impacts of any aviation hazard night lighting are mitigated, the Applicant must comply with Condition 5 of Schedule 3 to the Development Consent the requires off-site lighting impacts to be minimised, ensure aviation hazard lighting complies with CASA's requirements and any aviation hazard lighting includes all reasonable and feasible measures to minimise visual impact.

The aviation hazard impacts of the revised turbine envelope the subject of the Proposed Modification were

assessed in the Aeronautical Impact Assessment (AIA) (contained at Appendix G.9 to the Modification Application Report). Based on the findings of this assessment, it is considered that the Final Modified Project will result in a negligible change in aviation related impacts when compared to the Approved Project.

Further, CASA was referred the Modification Application by DPIE and advised in their submission dated 14 May 2020 that *"CASA does not consider the Rye Park Wind Farm likely to be an aviation hazard"*. However, as a precaution, CASA has recommended that consideration be given to installing low intensity (200 candella) obstacle warning lights in lieu of the standard medium intensity (2,000 candella).

In light of CASA's recommendation set out above, further Qualitative Aviation Risk Assessment (QARA) has been carried out which confirms that night lighting is not considered to be necessary as:

> *It is unlikely that the 200 m turbines would create an adverse hazard to aviation activity in the area at night due to the highest risk value being determined as Low and therefore does not require lighting.*

The QARA is contained at Appendix G. Should CASA require that night lighting be installed in the future, the installation of such low intensity night lighting on the up to 80 wind turbines proposed as part of the Proposed Modification is not considered to give rise to any additional visual impacts when compared to the medium intensity night lighting already:

- assessed for the up to 109 wind turbine layout as contained in the 2016 LVIA; and
- approved for the up to 92 wind turbines forming the Approved Project.

The potential impacts of any aviation hazard night lighting, if required, will continue to be mitigated in accordance with Condition 5 of Schedule 3 to the Development Consent.

4.2.4 Traffic & Transport

A number of Public Submissions expressed concerns about the potential impacts of the traffic impacts on Boorowa as a result of the heavy and over-dimensional vehicles required to construct the Project.

The Preferred Transport Route for heavy and over-dimensional vehicles included in the Proposed Modification utilises the existing approved traffic route through the town of Boorowa. Accordingly, the Proposed Modification will not result in any heavy and over-dimensional vehicles using any roads through Boorowa which are not already authorised for use by the Development Consent granted for the Approved Project.

Condition 27 of Schedule 3 to the Development Consent granted for the Approved Project requires that:

> *The Applicant must implement the road upgrades identified in Appendix 6 in accordance with the relevant timing requirements, to the satisfaction of the relevant roads authority.*

The Approved transport route options identified in Appendix 6 to the Development Consent includes Trucking Yard Road, Dillon Street, and Long Street in Boorowa. These route options were originally developed in consultation with the former Boorowa Shire Council (amalgamated into Hilltops Council on 12 May 2016) to ensure that heavy and over-dimensional vehicles are not passing through the main streets of Boorowa. No change to this part of the heavy and over-dimensional vehicles transport route is proposed as part of the Preferred Transport Route which forms part of the Proposed Modification. Hilltops Council was further consulted with in relation to the Proposed Modification as outlined in section 6.3.3 of the Modification Application Report.

The TIA (contained at Appendix G.8 of the Modification Application Report) confirms that the Proposed Modification will result in a 0.1% reduction in heavy and over-dimensional vehicle movements when compared to the Approved Project. Accordingly, the use of the existing approved route through Trucking Yard Road, Dillon Street, and Long Street in Boorowa for the purpose of the Final Modified Project is not expected to result in any additional traffic impacts on Boorowa than the Approved Project.

Condition 27 of Schedule 3 to the Development Consent requires that the road upgrades identified in Appendix 6 to the Development Consent be implemented to the satisfaction of the relevant roads authority. Appendix 6 to the Development Consent outlines the approved road upgrades for the existing approved route through Trucking Yard Road, Dillon Street, and Long Street.

These required road upgrades remain unchanged by the Proposed Modification. However, as the ongoing detailed design of the Project has now progressed further, the required upgrades were specified and assessed in further detail in the Modification Application Report. These road upgrades will deliver benefits to the local community by increasing the safety of the local road network at no cost to Hilltops Council or local rate payers.

During the public exhibition period, several submissions raised the issue of using Meads Lane as an alternative to Trucking Yard Road. In response to these submissions, the Applicant undertook detailed review of the Meads Lane as a potential transportation option, including biodiversity assessment, engineering assessment and engagement with the relevant landowners. The biodiversity assessment undertaken by ecology consultants Umwelt found that the Meads Lane option would have considerably more impact on native vegetation. Further, the engineering review undertaken by Genium Civil Engineering found that it would be difficult to avoid significant biodiversity impacts if a safe and fit for purpose road was to be constructed. In addition, engagement with the relevant landowners has indicated that this option would not be acceptable to the owners of the land which would be required to be acquired in order to upgrade Meads Lane. Therefore, the Meads Lane option has not been considered further.

The TMP required by Condition 30 of Schedule 3 to the Development Consent will include detailed measures to minimise the traffic safety impacts of the development and disruptions to local road users during the construction and decommissioning of the development as is already currently required by the Development Consent.

As part of this RTS, an additional assessment of construction traffic noise has been undertaken. Further details are provided in Section 4.2.6.

4.2.5 Visual Impact

A number of Public submissions expressed concern over the visual impact of the Project, night lighting and cumulative impacts with Bango wind farm as well as specific concerns around visual impacts from specific dwellings. Whilst submitters raised concern over the increased visual impact of the Modified Project compared with the Approved Project, several expressed concerns about the visual impact of the Project generally unrelated to the Proposed Modification.

The Visual Impact Assessment (VIA) prepared by Green Bean Design (GBD) (Appendix G.1 to the Modification Application Report) (Modification VIA) states the following:

The Proposed Modifications is not considered to result in a magnitude of visual change that would significantly increase visual effects (and former visual impact ratings) associated with the Approved Project.

….

Given the Modified Project is not considered to result in any significant increase in magnitude of visual effect, and that the overall number of wind turbines has been reduced since the preparation of the Bango Wind Farm cumulative impact assessment, the VIA determined that the potential cumulative visual impact of the Modified Project will be no greater than the determination of cumulative visual impacts for the Approved Project.

….

The peer reviewer was satisfied with the methodology applied by GBD and stated the conclusions were well demonstrated and defended. It was concluded that the VIA reflected current best practice in visual

assessment and responded appropriately to the assessment guidelines defined in the Bulletin.

…..

Accordingly, the Modified Project will not impact with Conditions 2 – 4 of Schedule 3 of the Development Consent that relates to visual impact.

The assessment confirms the visual impacts of the Proposed Modification have been assessed in accordance with the Visual Assessment Bulletin, however following feedback from the community and DPIE, the VIA has been updated to further address the Bulletin (see Appendix C for the Revised VIA).

During the RTS phase, specific feedback from DPIE on visual impact and community perception around Rye Park village has been addressed through the removal of a further three turbines within close proximity to Rye Park village. The Applicant believes that the removal of the additional three turbines will address community concern related to the visual impact of turbines on Rye Park village.

For the Modified Project, the Applicant committed to reducing the number of wind turbines by 12. During the RTS phase, the Applicant has carefully considered the economies of scale for the Project and the need to ensure that the Project remains economically viable whilst appropriately addressing community and regulatory concern. By removing the additional three turbines, the Applicant has reduced the wind farm turbine numbers by another 4% which is a total reduction of 16% when compared to the Approved Project. The Applicant believes that this reduction shows considerable commitment to adequately address concerns of the community and regulators.

The updated version of Figures 1A and 2A included in the Revised VIA (contained in Appendix C) shows that:

- turbines which were assessed in the 2016 LVIA but removed by the Planning Assessment Commission (PAC) and so which do not form part of the Approved Project in Black;
- further turbines proposed for removal as part of the Modification Application in Orange; and
- further three turbines now proposed for removal as part of the Final Modified Project in Pink.

The additional wind turbines being removed during this RTS phase are T32, T34 and T37 as shown in Figure 1A and Figure 2A of the Revised VIA. Further, the Applicant proposes that T43 remain in its current layout and be excluded from being micro-sited (except for minor micro-siting if required due to ground conditions) and subsequently Condition 8 of Schedule 2 to the Development Consent. This will ensure this wind turbine will not be micro-sited any closer to Rye Park village.

Photomontages of the Project from Rye Park village showing the wind turbines to be deleted are contained within the Revised VIA. Turbines 32, 34 and 37 have been selected for removal as they are the most visually dominant turbines from the Rye Park village. A total of five turbines have been removed from the viewpoint from Rye Park village as T35 and T38 were also removed by the Applicant post-approval (during preparation of the Modification Application). Through the removal of these turbines, the visual impact is further minimsed due to the removal of visual clutter from the viewpoint of the Rye Park village.

The photomontage from Rye Park village shows that the view to T43 is screened by topography. Therefore, T43 has remained in the layout due to the reduced visual impact compared to T32, T34 and T37.

As stated in the Revised VIA in relation to the viewpoint from Rye Park village:

Whilst the proposed Mod 1 wind turbines are visibly taller than the approved wind turbines, there is a clear reduction in overall wind turbine visibility and an increased distance toward visible wind turbine).

As Chief Justice Preston recognised in *Taralga Landscape Guardians Inc v Minister for Planning and RES Southern Cross Pty Ltd* [2007] NSWLEC 59 when approving the Taralga Wind Farm:

> *The insertion of wind turbines into a non-industrial landscape is perceived by many as a radical change which confronts their present reality. However, those perceptions come in differing hues. To*

residents, .. the change is stark and negative. It would represent a blight and the confrontation is with their enjoyment of their rural setting.

To others, however, the change is positive. It would represent an opportunity to shift from societal dependence on high emission fossil fuels to renewable energy sources. For them, the confrontation is beneficial – being one much needed step in policy settings confronting carbon emissions and global warming.

Resolving this conundrum - the conflict between the geographically narrower concerns of the [residents] and the broader public good of increasing the supply of renewable energy - has not been easy. However, I have concluded that, on balance, the broader public good must prevail.

A Response to Submissions Report (Visual Impact RTSR) has also been prepared to address topics raised in relation to Visual Impact in greater detail and is contained at Appendix H.

Further, the Applicant will implement appropriate mitigation measures (such as landscaping and vegetation screening) in consultation with the eligible landowners as required by Condition 3 of Schedule 3 to the Development Consent to further reduce the visual impacts of the Project.

4.2.6 Noise

Operational Noise

A number of Public Submissions expressed concern about the operational noise impacts of the Project.

The Development Consent includes detailed conditions specifying the operational noise limits which apply to the Project and outlining the manner in which compliance with these limits is to be monitored and determined.

The Applicant will need to ensure full compliance with the operational noise limits applying under the Development Consent and the environment protection licence (EPL) required for the Project.

The Environmental Noise Assessment prepared by Sonus (Modification Noise Assessment) contained in Appendix G.3 to the Modification Application Report included conservative modelling, based on a wind turbine model which has one of the highest noise emissions of those currently on the market, and has been used to provide a conservative 'worst case' assessment. With the implementation of the curtailment strategy, noise level from the Modified Project was predicted to achieve the noise criteria at all nearby residences, consistent with the Approved Project.

The Environment Protection Authority (EPA) provided comments requesting further assessment of the Proposed Modification against the *Wind Energy: Noise Assessment Bulletin* (the Noise Bulletin). Specifically, the EPA noted:

The EPA recommends that the correlation between the modified hub height wind speed and background noise level at the receiver be re-examined. The EPA also recommends that the Department of Planning, Industry and Environment consider whether the Wind Energy: Noise Assessment Bulletin (NSW Planning and Environment, 2016) should be applied in full to the modification, or whether Condition 11 of SSD-6693 would require consideration of special noise characteristics as defined in the Bulletin.

As a result of the comments provided by the EPA, background noise levels have been re-correlated with wind speed, referenced to a hub height of 119 m. This hub height is likely to be close to the final selected hub height, however the final hub height will be dependent on the final turbine selection. In addition, further background noise monitoring has been conducted. The re-correlation analysis and the analysis of the additional monitoring has been summarised in a Background Noise Monitoring Report (contained at Appendix I). A revised Environmental Noise Assessment (Revised ENA) has also been prepared (contained at Appendix J) to ensure consistency with the Background Noise Monitoring Report.

A Response to Submissions Report (Noise RTSR) has also been prepared to address topics raised in relation

to Noise in greater detail and is contained at Appendix K.

In order to address the EPA's comments, the Applicant proposes that the noise limits contained in Condition 11 of Schedule 3 to the Development Consent be updated to reflect the results of the further noise assessments carried out in line with the Noise Bulletin. It is proposed the table to Condition 11 of Schedule 3 be replaced with more general criteria which will remain valid for any hub height. This is described further in the Amendment Report.

Construction Noise

A number of Public Submissions expressed concern about the construction noise impacts of the Project. In the Noise RTSR, Sonus has responded as follows to concerns that the increase in size of turbines will result in an increase in construction noise:

Sonus has conducted monitoring of construction noise for several wind farms with a range of turbine sizes. These measurements indicate that the noise levels are very similar and not dependent on the turbine size.

The Revised ENA concluded that:

- Wind turbine construction noise will be greater than 40 dB(A) at a distance of 1.2 km. This is significantly less than the 75 dB(A) limit provided in the *Interim Construction Noise Guideline 2009* (the ICN Guideline). Against the ICN Guideline, residences within this radius will be 'noise affected', meaning there may be some community reaction to noise; and
- Construction of the internal access tracks will be 61 dB(A) at 330 m from the closest non-associated residence. This is below the ICN Guideline.

This is discussed further in section 7.4 of the Modification Application Report.

The Applicant will apply all feasible and reasonable work practices and will inform residents of the proposed construction work where they are classified as 'noise affected'. Strategies to be incorporated into a Construction Noise Management Plan (CNMP) could include:

- scheduling construction work, including heavy vehicle movements, to between 7am and 6pm Monday to Friday, and between 8am and 1pm on Saturdays;
- locating fixed noise sources as far as reasonably practicable from residences;
- installing acoustic screens around fixed noise sources;
- enclosing generators and compressors;
- implementing alternative processes (where feasible and reasonable); and
- ensuring effective site, equipment and vehicle management and maintenance.

Construction Traffic Noise

A number of community submissions expressed concern about the impacts of construction traffic noise along the Preferred Transport Route, particularly around the townships of Boorowa and Rye Park. This topic was also raised by DPIE. It should be noted that the Final Modified Project will result in a slight reduction in overall over-dimensional and heavy vehicles required for construction when compared to the Approved Project (see section 7.9 of the Modification Application Report). Accordingly, concerns about construction traffic noise are not specific to the Proposed Modification.

Construction traffic noise is currently regulated by the conditions of the Development Consent which relevantly include:

- Condition 7 of Schedule 3 that requires the Applicant to:

(a) *minimise the construction or decommissioning noise of the development, including any associated traffic noise; and*

(b) *ensure that the noise generated by any construction or decommissioning activities is managed in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (DECC, 2009), or its latest version*

- Condition 30 of Schedule 3 which requires the development and implementation of a detailed TMP.

However, the Revised ENA has further assessed the construction traffic noise impacts associated with the Final Modified Project. The assessment was based on construction traffic assumptions referred to in the TIA contained in Appendix G.8 to the Modification Application Report.

To provide a further objective assessment of construction traffic noise, reference is made to the *NSW Road Noise Policy* (DECCW, 2011, the RNP) in accordance with guidance from the EPA. It is noted that the comparison of the noise from a temporary source with criteria which are designed for permanent noise sources operating every day and night is a particularly conservative approach which is not aligned with the conditions of the Development Consent or the standard approach to assessing temporary construction noise. Therefore, any comparison should be used as an indication of the level of noise rather than being considered a determination of acceptability.

Rye Park Village is likely to be the area with the highest potential impact from road traffic associated with the construction of the Project, with residences on Yass Street within 10 m from the roadside. Outside of the township, the closest residence to the roadside is approximately 30 m.

Considering the projected number of heavy and light vehicles, a noise level of approximately 57 dB(A) is predicted at residences outside towns which are located 30 m from the roadside. This is 2dB(A) above the noise criterion specified in the conservatively applied RNP.

At the lowered travel speeds through the township of Rye Park, the noise level has been predicted at the closet resident at a distance of 10 m to be 56 dB(A). This is 1dB(A) above the noise criterion specified in the conservatively applied RNP.

2 dB(A) and 1 dB(A) is not considered to be either related to the Proposed Modification or to be a noticeable impact - further, it would only occur for a limited period of time during the construction period.

As the Final Modified Project is estimated to decrease heavy vehicle traffic generated during the construction phase of the project by 0.1% from the Approved Project, the change in construction traffic noise is expected to be negligible.

To mitigate against the impacts of construction traffic noise, the Revised ENA proposes the following mitigation strategies:

- communicate with the affected community;
- incorporate information regarding the route to all drivers prior to accessing the site and the need to minimise impacts through driver operation at certain locations; and
- schedule construction traffic deliveries such that it is as evenly dispersed as practicable.

4.2.7 Aboriginal Heritage

Several Public Submissions expressed concern regarding the potential impacts of the Project on Aboriginal Heritage.

A Response to Submissions Report (Aboriginal Heritage RTSR) has been prepared to address topics raised in relation to Aboriginal Heritage in greater detail and is contained at Appendix L.

An addendum to the ACHA has been prepared to assess the further clarifications to the Modified Project as

outlined in the Amendment Report (Addendum to the ACHA) (contained at Appendix M). Ground disturbance presented in the Addendum to the ACHA includes allowance for the construction of the three turbines which have been removed in response community and regulatory feedback. The Applicant anticipates that the ground disturbance will subsequently be reduced following the removal of these turbines.

The following outlines the Applicant's response to key topics raised in relation to Aboriginal Heritage.

Aboriginal Consultation

It was noted in the ACHA prepared by NGH (Modification ACHA) contained in Appendix G.6 to the Modification Application Report that Aboriginal consultation had not been completed and the report was submitted in draft form. At the time of submission, the report was with the Registered Aboriginal Parties (RAPs) awaiting comment. Due to the proposed clarifications to the Modified Project, the Addendum to the ACHA has been provided to the RAPs for review. The Applicant will provide DPIE with all finalised comments from the RAPs once the Addendum to the ACHA has been reviewed.

Several Public Submissions noted there was a lack of consultation with the RAPs. The Aboriginal Consultation program was undertaken in accordance with the requirements of the relevant guide *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* that outlines the specific steps required to comply with the relevant Secretary's Environmental Assessment Requirements (SEARs). Detail of the Aboriginal consultation undertaken is outlined in the Addendum to the ACHA.

Test Excavations

BCD noted that there were areas of Potential Archaeological Deposit (PAD) identified in the Modification survey. These included five sites with associated PADs and three PADs without associated cultural material. It was recommended in the report that these areas be subject to subsurface testing if they could not be avoided by the proposed development activity. The Applicant has committed to undertaking the required testing prior to construction and in the event that a significant archaeological site is identified, the Applicant will consult with the RAPs to identify the most appropriate management option.

Management options may include realignment of the relevant section of infrastructure, redesign to avoid parts of the sites or suitable mitigation measures in the form of salvage. However, the Addendum to the ACHA indicates that based on the evidence to date in the surveys, the likelihood of highly significant finds being found in these locations is relatively low.

Additional Survey

A small section of the proposed footprint that was unable to be surveyed prior to completion of the Modification ACHA. This was identified in the report with the recommendations that it be surveyed prior to the project proceeding.

Additional surveys were undertaken as part of the clarifications to the Modified Project and these areas assessed in the Addendum to the ACHA.

Management Measures

The Applicant will undertake further assessment where there are changes to the Project design that extends outside of areas that have not previously been surveyed.

BCD have commented that commitments be provided to alter the design if significant finds are encountered during survey or subsurface testing, however this would need to be assessed on a case by case basis. The testing that will be undertaken will provide detailed results that will assess the level of significance. If highly significant sites were to be found, the Applicant will make appropriate alterations to the design (if practical).

What is deemed of 'significance' would be defined as high archaeological/research significance at a regional to State level or high cultural significance if identified by an aboriginal party.

In the Development Consent, SU17/L1 (Quartz outcrop) was recommended to be avoided, however

progression of the Project's detailed design means the Project cannot avoid this site. Further, it is not possible for the cable to be installed used underground boring as it creates potential faults, affecting the transmission of electricity. Subsequently, the Applicant will pursue the alternate mitigation option to conduct subsurface testing, as per the original recommendations by NSW Archaeology, to determine if the site is an Aboriginal stone source. If it is, then management measures would need to be implemented based on the findings.

4.2.8 Water

Several Public Submissions expressed concern about the amount of water required for construction of the Project and where water would be sourced from.

It should be noted that the Final Modified Project has been confirmed as requiring less water during construction than the Approved Project as outlined in Section 4.3.6 to the Modification Application Report. The total water requirement for the two-year construction period is approximately 118 ML. Accordingly, these concerns are not related to the Proposed Modification. It is noted that no government agencies raised any concerns about the sourcing of water.

The Applicant has further progressed investigation of water sourcing as part of the ongoing detailed design of the Project.

Hydroilex Pty Ltd, geological consultants specialising in water supply, water management and groundwater resources, was engaged to complete a groundwater investigation for the Project. The assessment reviewed the hydrogeological setting and target locations for the supply of groundwater, with the conclusion that sufficient groundwater resource is available for the water supply for the Project without impact to any existing groundwater users.

Should the groundwater option be selected as the preferred water strategy, up to three bores may be installed to achieve the required water yield with these sites to be selected as part of the detailed design of the Project subject to obtaining all required licenses, approvals and entitlements under the *Water Management Act 2000* (NSW). The on-site sourcing of water would significantly reduce the 15,388[8] road trips that are associated with the delivery of water for construction purposes.

4.2.9 Soil & Erosion

A number of Public Submissions expressed concern about the potential for erosion as a result of the disturbance area and construction activities. The Project will be designed and constructed taking into consideration the unique soil and geological conditions of each project component, supported by geological surveys that will be completed prior to construction.

The Development Consent contains a number of conditions which require that the Applicant appropriately manage soil erosion risks as a part of the Project:

- Condition 18 of Schedule 3 to the Development Consent, requires that the Applicant ensure all infrastructure is designed to minimise soil erosion, including construction and decommissioning of the development;
- Condition 22 of Schedule 3 to the Development Consent requires that the Applicant "prepare a Biodiversity Management plan for the development to the satisfaction of the Secretary", which must be "prepared in consultation with the OEH" and "include … a description of the measures that would be implemented for … controlling erosion"
- Condition 38(c) of Schedule 3 to the Development Consent requires that the Applicant must "employ interim rehabilitation strategies to minimise soil erosion" on parts of the site that cannot yet be

[8] Rye Park Wind Farm TIA Update (SMEC, April 2020)

permanently rehabilitated.

4.2.10 Fire and Bushfire

A number of public submissions expressed concerns about the potential fire risks arising from the Project. The Applicant recognises that the summer of 2019-2020 was unprecedented in Australia for bushfires and that the community is understandably concerned about the need to ensure that the Final Modified Project will not result in any increased bush fire risk.

It is widely accepted in the scientific community that human induced climate change has increased bush fire risks. A recent study by World Weather Attribution confirmed that human-caused climate change made southeastern Australia's devastating wildfires during 2019–2020 at least 30% more likely to occur[9]. By providing renewable energy to replace carbon emitting conventional generation sources, such as coal fired power stations, the Project will assist in reducing human caused climate change. In particular, the Final Modified Project will:

- offset more than one million tonnes of carbon emissions per annum – equivalent to removing 330,000 cars from the roads each year; and
- offset construction and manufacturing carbon emissions well within the first year of operation.

The Final Modified Project includes no new or additional potential ignition sources which do not already form part of the Approved Project. A number of studies have confirmed that wind farms such as the Project present limited bushfire risks. Incorporating this widely accepted body of evidence, the 2018 *"Wind Farms and Bushfire Operations (AFAC Publication No. 2053)"* guideline prepared by the Australasian Fire and Emergency Service Authorities Council concludes that:

- *"Wind farms are not expected to adversely affect fire behaviour, nor create major ignitions risks";*
- *"it is possible that wind turbines may reduce the risk of bushfires caused by lightning, particularly if the turbines are located on a ridge";*
- *"if struck by lightning, turbine towers are generally not expected to start fires as they have built-in protection mechanisms";*
- *"wind farms do not pose a risk to aerial firefighting where turbine shutdown procedures are followed and meteorological masts and power lines are clearly marked"; and*
- *"Bushfire management issues are best treated at the planning stage of a wind farm project".*

Condition 34 of Schedule 3 to the Development Consent required the Applicant to:

1. *ensure that the development:*
    - *provides for asset protection in accordance with the RFS's Planning for Bushfire Protection 2006 (or equivalent); and*
    - *is suitably equipped to respond to any fires on site;*
2. *develop procedures to manage potential fires on site, in consultation with the RFS; and*
3. *assist the RFS and emergency services as much as possible if there is a fire in the vicinity of the site.*

In addition to these mitigation measures, the Project has also been designed to mitigate bush fire risks, including by:

[9] Published online on 4 March 2020 at https://www.worldweatherattribution.org/bushfires-in-australia-2019-2020/

- specifying permanent access tracks at 5.5 m wide within the site which will facilitate access to fire fighting vehicles and create fire breaks throughout the site; and
- installing automatic turbine shutdown mechanisms for the turbines and remote alarming.

The NSW Rural Fire Service (RFS) provided comments on the Proposed Modification and confirmed that it has no objection to the Final Modified Project.

The Applicant is committed to continue actively working with the RFS to manage bush fire risks, including during high temperature events or nearby bushfires.

4.2.11 Socio-economic

A number of Public Submissions raised issues related to the socio-economic impact of the Proposed Modification and the Project more generally.

As outlined in section 2.4.4 above, in addition to having direct socio-economic benefits, the Final Modified Project will create significant economic stimulus and employment delivering indirect socio-economic benefits in the local area and throughout the region. Table 9 summaries the broader economic benefits during both construction and the operation of the Project as assessed in the Economic Impact Assessment (contained at Appendix A).

Table 9: Broader Economic Benefits of the Project

Benefit	NSW	ACT	Regional[10]	Local[11]
Construction Benefits (over a three-year period)[12]				
Added Value	$186 million	$43 million	$67.6 million	$26.6 million
Jobs	1,204	242	494	179
Direct Jobs[13]	250			
Operation Benefits (Annually)				
Added Value	$8.3 million	$0.4 million	$14.1 million	$4.4 million
Jobs[14]	51	3	119	29
Direct Jobs	10			

In addition, electricity generated by wind turbines is substantially less greenhouse gas intensive when compared to electricity generated traditional non-renewable thermal electricity generation. The Final Modified Project's displacement of greenhouse gas intensive electricity causes greenhouse gas emissions abatement valued at $17 million per year based on the Project's total energy capacity of up to 386 MW[15].

Specific topics in relation to socio-economic matters that were raised in the Public Submissions are discussed further in Section 4.5.15.

Property Prices

[10] 'Regional' refers to the Goulburn-Yass South area of NSW

[11] 'Local' refers to the LGAs of Yass Valley, Upper Lachlan Shire and Hilltops Shire

[12] Allowing for lagged flow through effects from proposed 2-year construction period

[13] 'Direct Jobs' refers to direct employment on the Project

[14] Operational job numbers refer to sustained jobs rather year-on-year job creation

[15] Assumed energy capacity used for the purposes of the economic assessment

Some Public Submissions raised concerns about the impact of the Project on local property values. It is important to note that the Project is already approved, and the Proposed Modification only proposes modifications to the Approved Project which include an increase in the maximum wind turbine envelope and a reduction in the maximum number of turbines from 92 to 80 (now 77).

The most recent comprehensive study regarding the potential impacts of property values on wind farms is July 2016 report by Urbis Pty Ltd, a prominent valuations firm, commissioned by the NSW Office of Environment and Heritage entitled *'Review of the Impact of Wind Farms on Property Values'*. This concludes that:

> *The literature review of Australian and international studies on the impact of wind farms on property values revealed that the majority of published reports conclude that there is no impact or a limited definable impact of wind farms on property values.*

The Economic Impact Assessment includes extensive consideration of studies relating to potential impacts of wind farms on property values and concludes that:

> *Many studies by independent organisations around the world have failed to find any correlation between wind turbines and declining property values. Some studies found positive property value impacts associated with:*
>
> - *Improved regional amenities and infrastructure including local roads, firefighting access roads, etc.*
> - *Increased regional incomes, jobs and property demand (as assessed above).*
> - *Additional rental income from hosting towers.*
> - *Provision of a drought-proofing income streams.*
> - *Provision of post-retirement income for farmers.*
> - *Improved biodiversity via less intensive farm activity.*
> - *Prevention of land subdivision and slowing down the process of productive agricultural land changing to rural residential uses in the short to medium term with the shift caused by the additional income generated from the wind farm making agricultural use more viable.*
> - *Erosion control and passive wind protection for stock from sub stations and turbine tower structures.*
>
> *…*
>
> *For properties without wind turbines but in the line of sight of turbines, statistical evidence supports that property values do not perform worse than properties in comparable regions without wind turbines.*
>
> *…*
>
> *While the [relevant] studies and evidence support that wind farms have no long term detrimental impact on overall property values, it must be recognised that over time many other factors impact property values such as general market conditions, population trends and the local property supply/demand balance. Studies that indicate some impact generally conclude the impact is small.*
> *…*
>
> *…*
>
> *There will be localised positive and negative impacts associated with wind farms depending on individual property locations and characteristics. Some may appreciate faster than market trends due to improved farm incomes from hosting towers (offsetting the loss of productive land) and*

improved access to infrastructure. Some may fail to keep pace with market trends due to perceptions of visual and noise impacts. Potential disruption during tower assembly and infrastructure establishment is also noted. However, the evidence supports no overall long-term negative impact on property values associated with wind farm developments, and in general the outcomes can be managed by appropriate site selection and design.

Community Cohesion

Some Public Submissions raised concerns about the impact of the Project on the cohesion the local community. The Applicant acknowledges that divergent views are held in the community regarding the Project. This is the case for most wind farms and is not specific to the Proposed Modification as opposed to the Approved Project.

As part of the Modification Application process, the Applicant has sought to engage with, and listen to, the community in a variety of different ways. Section 3.0 details community consultation carried on for the Proposed Modification. The Applicant is committed to ongoing meaningful engagement and consultation with the local community to address any potential impacts on community cohesion and ensure all members of the community are given the opportunity to share in the benefits of the Project.

4.2.12 Health and Safety

Mental Health

Some Public Submissions raised concerns about the potential impacts of the Project on the mental health for the community. The Applicant recognises that some community members feel strongly about wind farms and the Project.

The 2014 Australian Medical Association Position Statement entitled *"Wind Farms and Health"* concludes that:

> *Individuals residing in the vicinity of wind farms who do experience adverse health or well-being, may do so as a consequence of their heightened anxiety or negative perceptions regarding wind farm developments in their area. Individuals who experience heightened anxiety or diminished health and well-being in the context of local wind farms should seek medical advice*.
>
> *…*
>
> *Electricity generation by wind turbines does not involve production of greenhouse gases, other pollutant emissions or waste, all of which can have significant direct and indirect health effects.*

While the peer reviewed Australian evidence concludes that wind farms do not have adverse impacts on human health, the Applicant recognises that change and development in the local area can affect different people in different ways. Accordingly, the Project may bring positive mental health benefits to:

- the host landholders and neighbours who have chosen to sign up to the voluntary neighbour agreements being offered by the Applicant, who will benefit from the additional income diversification that the Project will bring them; and
- other community members who see the Project as a positive step towards mitigating human induced climate change.

However, the Applicant recognises that those who continue to be opposed to the already approved Project may experience concerns which could cause them some anxiety. The Applicant is committed to continuing to work with the local community to mitigate any concerns and resulting anxieties to the greatest extent possible.

Human health implications including cumulative infrasound

Several Public Submissions raised concerns about the potential for cumulative infrasound resulting from the

Project. While these concerns do not appear to be specific to the Final Modified Project, it is important to note that there is no evidence that infrasound results in any adverse health impacts, including as a result of potential cumulative sources.

As noted in the Original RTS prepared in relation to the Project:

> *As with other sound, infrasound has a threshold of hearing. It is only above this level where the sound becomes audible. A large range of measurements from modern wind turbines indicates that at a distance of 200m, infrasound is in the order of 25dB which is below the recognised threshold of hearing of 85dB(G). The level of infrasound will further reduce with greater distance and be even further below hearing threshold at residences around the project. Additionally, infrasound levels measured around wind farms are no higher than other environments where people live, work and sleep and are of similar character to other infrasound noise sources such as industrial processes, vehicular movements, air conditioners, ventilation etc.*

The 2014 Australian Medical Association Position Statement entitled *"Wind Farms and Health"* concludes that:

> *...in rural residences both near to and far away from wind turbines, both indoor and outdoor infrasound levels are well below the perception threshold, and no greater than experienced in other rural and urban environments.*
>
> *…*
>
> *The available Australian and international evidence does not support the view that the infrasound or low frequency sound generated by wind farms, as they are currently regulated in Australia, causes adverse health effects on populations residing in their vicinity. The infrasound and low frequency sound generated by modern wind farms in Australia is well below the level where known health effects occur, and there is no accepted physiological mechanism where sub-audible infrasound could cause health effects*.

The Australian Medical Association's position is mirrored by that of the National Health and Medical Research Centre (NHMRC), Australia's leading expert body in health and medical research. In 2015, the NHMRC conducted an expert review of the evidence on wind farms and human health entitled *'Systematic review of the human health effects of wind farms'* which concluded that:

> *There is no consistent evidence that noise from wind turbines—whether estimated in models or using distance as a proxy—is associated with self-reported human health effects. Isolated associations may be due to confounding, bias or chance.*

Other potential impacts to human health, such as air emissions, dust, noise and vibration will be managed through the Construction Environmental Management Plan (CEMP) which will be prepared in accordance with the Conditions of the Development Consent.

4.2.13 Consultation Process

The Applicant has undertaken comprehensive consultation in relation to the Modification Application, as set out in Section 3.0 of this Report.

Key issues raised in submissions express general dissatisfaction with consultation efforts, indicating that community members feel like they were not listened to, followed up with or given enough opportunity to comment.

The Applicant acknowledges that a small number of submissions raise concerns about the level of individual consultation carried out, however consultation was in line with best practice guidelines as outlined in Section 3.1. Despite this, the Applicant remains strongly committed to ongoing consultation including as outlined at Section 3.3.

The Applicant made significant effort during the November consultation drop-in sessions to obtain feedback from the community by providing online and hard copy feedback forms, an online survey, open dialogue via the 1800 phone number and one-on-one appointments upon request. The Applicant summarised key issues raised and addressed during this process by means of a consultation report, published on the Project webpage (www.ryeparkwf.com.au).

When considering and reporting on feedback, the Applicant has been careful to separate the feedback in relation to the Modification Application and in relation to the Project more generally.

Some Public Submissions focus on elements of the Project generally, such as consultation along the Approved transport routes or the approved access points to the Project site. These aspects of the Project are already approved and do not form part of the Proposed Modification. However, the Applicant has commenced and committed to improved consultation efforts regarding the Preferred Transport Route for the Project. Stakeholders along the route will be included in newsletter communications, construction updates and works alerts for major deliveries and disruptions, in accordance with the TMP. Moreover, mitigation measures will be implemented in line with the recommendations in the TIA contained in Appendix G.7 of the Modification Application Report.

The timing of the public exhibition period and Covid-19 restrictions was raised as insufficient within a number of Public Submissions. While the Applicant does not determine the timing and process of formal public exhibition, the Applicant made significant efforts to make the public exhibition process accessible by creating a digestible summary of the Modification Application on the dedicated Inform Rye Park website. The Applicant informed the community of its availability via a project newsletter and directly via emails to the CCC members. The Applicant was also available for one-on-one phone discussions and following requests from individual community members, provided hard or electronic copies of documentation to individuals and a hard copy for the Rye Park Post Office at the request of a community member.

The Applicant acknowledges that the newsletters made of the Modification Application may not have been able to reach all members of the community, and is committed to working with local newsagents, libraries and/or cafes to host newsletters for future communications.

4.2.14 Level of Assessment

Some Public Submissions raised concerns about the level of assessment undertaken for the Proposed Modification and issues relating to already approved aspects of the Project.

The Modification Application was prepared in accordance with the requirements of section 4.55(2) the EP&A Act. All Modification Applications only assess the aspects of the project which are proposed to be modified and are not required to re-assess or consider aspects already approved.

The Modification Application Report contained a detailed assessment of the Proposed Modification in line with consultation carried out with DPIE. The detailed environmental assessment was undertaken by relevant experts in relation to the key aspects of the Modification Application including visual, shadow flicker and blade glint, noise, biodiversity (vegetation), biodiversity (birds and bats), aboriginal cultural heritage, historic (European) heritage, traffic and transport, electromagnetic interference and aviation. Several of these assessments have been further updated as part of the RTS and Amendment Report.

4.3 Government Agency Comments and Submissions

DPIE received a total of 17 submissions and comments from government agencies during the public exhibition period. Three government agencies formally made a submission, however noted they did not have any comment on the Modified Project. These include:

- Upper Lachlan Shire Council;
- Department of Primary Industry – Agriculture; and

- the Water and the Natural Resources Access Regulator within DPIE.

Accordingly, 14 submissions and comments from governmental agencies have been analysed and responded to. In addition to these responses, the Applicant will continue to work closely with the relevant government agencies to address any other issues, opportunities or concerns that arise.

4.3.1 Airservices Australia

Airservices Australia (AA) (DPIE Submitter ID S-126069) provided comment on the Proposed Modification and made recommendations as outlined and responded to in Table 10. Aviation night lighting is discussed more broadly in Section 4.2.3.

Table 10: Airservices Australia Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
WTGs affecting air routes and proposed mitigations	AA notes the Project will not affect any sector or circling altitude, nor any instrument or departure procedures at any airport, however will affect several air routes. AA notes several wind turbine generators (WTGs) that will affect air route W137 and one WTG that will affect air route W478. Accordingly, AA notes that the Lowest Safe Altitude (LSAT) to be raised to 4000ft.	Noted
Other considerations	AA further notes: • the wind farm will not affect the Canberra Radar Terrain Clearance Charts (RTCC). • this Project will not adversely impact the performance of Precision/Non-Precision Navigational Aids, HF/VHF Communications, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links • Air Traffic Control (ATC) has no objections to this development. Any AA work associated with amending the flight procedures will be undertaken on a commercial basis and require further consultation with AA.	Noted
Vertical Obstacle Notification	As soon as construction commences, the proponent must complete the Vertical Obstacle Notification Form for tall structures.	This will be completed by the Applicant.

4.3.2 Civil Aviation Safety Authority

The Civil Aviation Safety Authority (CASA) (DPIE Submitter ID S-126068) did not consider the Project likely to be an aviation hazard and provided comment on the Project as outlined and responded to in Table 11. Aviation hazard lighting is discussed more broadly in Section 4.2.3.

Table 11: CASA Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Location of turbines	CASA notes that the turbines at 200m high (660 ft) above ground level (AGL) are not located near any certified or registered aerodromes. Pilots are permitted to fly as low as 500ft AGL, thus the turbine blades will infringe navigable airspace by 160ft.	Air services Australia will increase the LSAT for air routes in the vicinity of the wind farm.
Risks Generally	CASA does not consider the Rye Park Wind Farm likely to be an aviation hazard.	This accords with the AIA and QARA carried out.
Obstacle lighting	Due to the modified tip height to 200m, CASA recommends that DPIE consider the installation of low intensity (200 candella) obstacle warning lights in lieu of the standard medium intensity (2,000 candella) lighting. CASA states any decision to provide lighting is at the discretion of DPIE.	See Section 4.2.3 and the QARA contained at Appendix G.
Airservices Australia and Vertical Obstacle Database	CASA notes that once the Project is granted approval, the wind turbine coordinates and survey heights of each wind turbine must be reported to the Airservices Australia (AA) Vertical Obstacle Database (VOD). Further, CASA notes that one month prior to works commencing, AA must be notified so that a NOTAM (Notice to Airmen) can be published. Upon completion of works, the VOD should be notified of the surveyed height and location of each wind	The Applicant will provide the required notifications to CASA, AA and RAAF in accordance with the conditions of the Development Consent and will complete a Vertical Obstacle Notification Form for tall

Topic	Response / Recommendation	Applicant Response
	turbine so the Project can be accurately recorded in the database.	structures in accordance with. Advisory Circular AC 139-08.

4.3.3 Department of Defence

The Department of Defence (DoD) (DPIE Submitter ID S-126078) noted they have no objections and provided comment on the Proposed Modification as outlined and responded to in Table 12.

Table 12: Department of Defence Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Aeronautical Risk Assessment	DoD note that the National Airports Safeguarding Framework Guideline D – Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind farms) /Wind Monitoring Towers recommends that where a wind turbine 150 metres or taller in height is proposed away from aerodromes, the proponent should conduct an aeronautical risk assessment and for this assessment to be submitted to CASA.	The AIA that supported the Modification Application and the QARA (Contained at Appendix G) will be referred to CASA following submission of the RTS to DPIE.
Obstruction lighting	If CASA determines LED obstruction lighting is to be provided, it should be compatible with persons using night vision devices and that the frequency range of the LED light emitted should be within the range of wavelengths 655 to 930 nanometers.	Noted.
Reporting of Tall Structures	As the structure meets the requirement for reporting of tall structures, Defence requests that the Applicant provide ASA 'as constructed' details for aeronautical charting.	This will be completed by the Applicant.

4.3.4 Heritage Council of NSW

The Heritage Council of NSW (DPIE Submitter ID S-126022) provided comment on the Proposed Modification, particularly around potential impacts to historical archaeological sites and made recommendations outlined and responded to in Table 13 below.

Table 13: Heritage Council of NSW Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Preparation of a Statement of Heritage Impact (SOHI)	A Statement of Heritage Impact (SOHI) should be prepared by a suitably qualified archaeologist in accordance with the guidelines in the NSW Heritage Manual. The SOHI is to address the impacts of the proposal on the heritage significance of the Project site and adjacent areas.	Detailed responses to these topics are provided in the Aboriginal Heritage RTSR contained at Appendix L.
If required, preparation of a historical archaeological assessment	If the SOHI identifies impact on a potential historical archaeology, a historical archaeological assessment should be prepared by a suitably qualified archaeologist.	Noted

4.3.5 Hilltops Council

Hilltops Council (DPIE Submitter ID S-126207) provided comment on the Proposed Modification as outlined and responded to in Table 14. Consultation with Hilltops Council is further discussed in Section 3.2.3.

Table 14: Hilltops Council Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Voluntary Planning Agreement – Contribution	Hilltops Council seeks to amend the developer contributions of the Voluntary Planning Agreement (VPA) in accordance with the increased generating capacity per turbine of the Project.	Community Enhancement Fund contributions of $2500 per built wind turbine is a requirement of the Development Consent and agreements with local councils have already been established

Topic	Response / Recommendation	Applicant Response
		based on this condition. The Applicant has committed to providing community funding equivalent to 92 wind turbines. The funding for any unbuilt turbines will either be directed to the Council administered Community Enhancement Fund or directed toward other local benefit sharing programs. The Applicant is currently seeking feedback from the community on programs that would benefit the local community.
Pavement details and road width	Hilltops Council provides further clarification on the expected pavement construction for the roads specified to be upgraded.	The Applicant met with Hilltops Council to discuss the pavement requirements that are in addition to the requirements previously specified by the Council. Hilltops Council is currently reviewing their revised requirements internally. The Applicant will continue to work with the Hilltops Council on this issue.
Upgrades of Bridges and Culverts	Hilltops Council identifies several bridges and culverts along the Preferred Transport Route that will require upgrading to allow OD vehicles to pass over. Hilltops Council further notes they would be required to approve any pre-strengthening works and remediation works prior to these works occurring.	The Applicant commissioned Focus Bridge Engineering (FBE) to undertake an Existing Road Structures Investigation to assess the condition and potential upgrades required to road structures along the Preferred Transport Route. The assessment found that the bridges and culverts vary in condition, with some requiring further load testing to determine the extent of upgrades required to ensure they can support OSOM vehicles during the construction phase of the Project. The Applicant will continue to progress the load testing and upgrades as required.
Route alternative, passing options, signage and travel times	Hilltops Council raises concerns over the Preferred Transport Route passing though the townships of Boorowa and Rye Park and suggests an alternate route via Meads Lane. To bypass Rye Park village, Hilltops Council further suggests the use of Dirt Hole Creek Road. Hilltops Council also suggests the Applicant identify pull over bays to allow local traffic to pass safely during peak times. The Applicant will also need to identify wayfinding signs and passing lanes.	See Section 4.2.4 on the consideration of Meads Lane as an alternative transport route. In preparation of the Original EIS RTS, the Applicant investigated alternative routes for OSOM vehicles to avoid passing through Rye Park village, including Dirthole Creek Road and Lagoon Creek Road. However, no suitable routes were identified that would not require significant roadside vegetation removal, road re-alignment and impact a number of non-associated residences.
Community consultation – land acquisition	Hilltops Council recommends that prior to the finalisation of the Preferred Transport Route, the Applicant conduct community consultation with the residents of Boorowa and Rye Park as well as identified landowners who are being impacted by the Preferred Transport Route.	See Section 3.3 on the further consultation proposed in this regard.

4.3.6 NSW Department of Planning, Industry and Environment – Biodiversity Conservation Division

DPIE – Biodiversity Conservation Division (BCD) (DPIE Submitter ID S-126130) provided comment on biodiversity (vegetation), biodiversity (birds and bats) and Aboriginal Heritage matters as outlined in Table 15. Biodiversity (vegetation) and biodiversity (birds and bats) is discussed more broadly in Section 4.2.1 and 4.2.2 respectively. Aboriginal heritage is discussed more broadly in Section 4.2.7.

The Biodiversity RTSR addresses the topics raised by BCD in response to the Modification BDAR and Operational Bird and Bat Assessment (contained at Appendix F). The Aboriginal Heritage RTSR addresses the topics raised by BCD in response to the Modification ACHA (contained at Appendix L).

Table 15: DPIE – Biodiversity Conservation Division Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Comments on the BDAR		
BAM Plot Location	BCD undertook analysis of the BAM plot placement in relation to the disturbance footprint (summarised in Table 1) and found that 65% of plots are situated outside of the disturbance footprint. ... The mean distance from the footprint is 301 m. Unless site visits demonstrate considerable homogeneity, BCD is of the view that this is too far from the development footprint to be representative of the impacted land. … the assessor has advised BCD that the vegetation condition in the area is fairly consistent. … BCD recommend that at a minimum additional BAM plots be undertaken within the development footprint for the higher value communities including Vegetation Zones 3, 4 and 5.	Detailed responses to these topics are provided in the Biodiversity RTSR.
Species Polygons for Golden Sun Moth and other Species Credit Species	BCD disagrees with the method of circumscribing the species polygon with a 200 m radius based on his knowledge of the species behaviour. Given the species' ability to disperse further than 200 m by wind, and the association between GSM and Derived Native Grassland (DNG), demonstrated clearly by the Umwelt's survey data, it is BCD's view that the polygon boundaries for this species should adhere to areas of DNG within the development footprint. Further, BCD notes there are substantial areas of DNG which were not surveyed and the 15 km habitat constraint is note listed in the Threatened Biodiversity Data Collection (TBDC) so it should not be used to limit survey. … an explanation is required as to why Little Eagle credits have not been calculated … additional targeted survey for Crimson Spider Orchid should occur in the coming flowering season to inform the Applicant's species credit obligation.	
Impacts on Squirrel Glider Habitat	BCD encourages micro-siting turbines out of remnant vegetation. Mitigation measures would include installing connectivity structures/ rehabilitation to connect areas of vegetation/ fence areas.	
Partial Direct Impact Calculations for the Transmission Line	BCD believes that its ecological function would be dramatically reduced because of the removal of hollows, coarse woody debris, litter and the predictable loss of native groundcover associated with the ongoing indirect impacts to easements from weed infestation. BCD's view is that the credit obligation should be re-calculated such that the future scores for structure and function are reduced to zero. This would reflect a near complete loss of ecological function from the direct and indirect impacts of the transmission line.	
Biodiversity Assessment Method Calculator	The plot data for non-native vegetation needs to be entered into the BAMC to allow confirmation that their VI score is below the offsetting threshold … The number of Hollow Bearing Trees (HBTs) entered into the BAM-C	

Topic	Response / Recommendation	Applicant Response
	for Zone 3 was based on the number observed during the BAM plot surveys. However, the targeted HBT survey in Zone 3 revealed a much higher number of HBTs in this zone – an estimated 893 in total and an average of 15.7 per hectare across 17 assessment sites. It is best practice to use the data from the most accurate and reliable method. In this instance, the results from the targeted HBT survey in Vegetation Zone 3 are the more representative of the actual number of HBTs to be removed. BCD therefore recommends updating the functional scores for HBTs in the BAM-C to reflect this. BCD is willing to engage with the Applicant about the most appropriate method – either using the mean or the actual number from proximal sites. … BCD notes that predicted threatened species (ecosystem credits) have been deselected in the habitat suitability tab of the credit calculator. It is permissible to remove species from the list of predicted threatened species, however deselection normally requires targeted survey, an assessment of any habitat constraints (if habitat constraints are listed in the TBDC), and, documented justification for their removal otherwise presence must be assumed. Adequate justification is important because removal of species has the potential to influence credit obligations, particularly those with a high-risk weighting.	
Serious and Irreversible Impact Assessment (SAII)	BCD recommends undertaking an SAII assessment for all potential SAII entities that were detected during the survey period and should consider prescribed impacts from turbine strikes where applicable.	
Comments on the Operational Bird and Bat Assessment		
Prescribed Impacts from Turbine Strikes – Birds and Bats	BCD believes that the increased impacts resulting from large increases in total Rotor Sweep Area (RSA) are not necessarily compensated for by the reduction in turbines. … BCD seeks clarification regarding the distance between the maximum canopy height and minimum rotor sweep height at all turbines which are to be located within intact woody native vegetation. … BCD are concerned about the impact of the modifications on the threatened taxa shown to fly within RSA such as White-throated Needletail, White-fronted chat, Superb Parrot, Dusky Wood swallow and raptors such as Black Falcon, Little Eagle, and the non-threatened Wedge-tailed Eagle. BCD disagree with the Test of Significance which states that the proposed modification is unlikely to increase the level of risk, as many of the conclusions are assumed and it is not clear what evidence the Applicant relied upon to draw the conclusions. … Due to the increased risk of turbine strike to several threatened bird species, the Applicant should commit to a very rigorous monitoring and mitigation protocol containing species-specific mitigation measures for each of the species identified to be at higher risk of turbine strike.	Detailed responses to these topics are provided in the Biodiversity RTSR.
Prescribed Impacts from Turbine Strikes – Microbats	…there are a large number of ‘possible’ Large Bent-winged Bat calls relative to the number of ‘definite’ and ‘probable’ calls. This triggers further investigation. It is recommended that the following information is provided: • description on the method used to classify calls into ‘definite’ ‘probably and ‘possible’ categories. • information on the temporal distribution of the possible calls in terms of mean number of calls per hour and per day including whether there any noticeable spikes in activity or were these calls a consistent ‘background’ noise. • information on whether there a similar level of uncertainty about the number of calls detected for Eastern False Pipistrelle, Yellow-bellied Sheathtail bat and Southern Myotis. … It is recommended that further data is collected for the Large-	

Topic	Response / Recommendation	Applicant Response
	Bentwing Bat migration in Spring 2020 and Autumn 2021, the survey period was too short. BCD recommends liaising with Dr Doug Mills about survey timing.	
Comments on the ACHA		
Aboriginal Consultation	BCD noted that at the time Aboriginal consultation had not been completed and the report submitted was in draft form.	See Section 4.2.7. Detailed responses to these topics are provided in the Biodiversity RTSR.
Test Excavations	BCD noted that there were areas of PAD identified in the Modification survey. It was recommended in the report that these areas be subject to subsurface testing if they could not be avoided by the proposed development activity.	
Additional Survey	BCD notes there are some areas that remain unsurveyed and recommends a commitment also be given for redesign if the results of the survey locate significant objects and values. The ACHA should further describe how the category of 'highly disturbed' was measured and whether there was any ground truthing to support the description.	
Management Measures	BCD recommends a commitment be given for redesign of the project footprint if the results of additional survey and test excavations locate significant objects and values. BCD requires further clarification as to why there is an updated recommendation for under-boring the site SU17/L1. BCD recommend that all Aboriginal sites to be avoided by the development should be included within the Aboriginal Heritage Items table and maps.	

4.3.7 NSW Department of Planning, Industry and Environment - Crown Lands

The NSW Department of Planning, Industry and Environment – Crown Lands (DPIE – Crown Lands) (DPIE Submitter ID S-125989) provided comment on the Project as outlined and responded to in Table 16. The Applicant's ongoing discussions with DPIE – Crown Lands is discussed in Section 3.2.1.

Table 16: DPIE - Crown Lands Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Tenure to authorise use of Crown Land	DPIE – Crown Lands notes that a tenure will be required to authorise transmission lines, underground cabling, access tracks and overhang of blades over Crown Land, roads and waterways.	All required Crown Land tenure will be obtained before carrying out any works on Crown Land. See Section 3.2.1 on consultation with DPIE – Crown Lands in this regard.
Minimise Impacts to Crown Lands	DPIE – Crown Lands requests that the final Project configuration be designed to minimise the impacts to Crown Lands.	
Consultation	DPIE – Crown Lands recommends the Applicant liaise with the district office prior to submitting a licence application.	

4.3.8 NSW Department of Primary Industry - Fisheries

The NSW Department of Primary Industry – Fisheries (DPI – Fisheries) (DPIE Submitter ID S-125380) provides comment on the Project as outlined and responded to in Table 17.

Table 17: DPI – Fisheries Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Waterway crossings	DPI – Fisheries notes that all crossings proposed to be constructed or upgraded within Key Fish Habitat as part of the development must comply with the requirements of the *Fisheries Management Act 1994* (FM Act), the *associated Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)* and *National Guidelines Why do fish need to cross the road? Fish passage requirements for waterway crossings (2003)*.	This will be done in accordance with Condition 18 of Schedule 3 to the Development Consent.
Installation of Safe Fish Passagewy	DPI – Fisheries comments on Table 4.2 Preliminary Mitigation Measures: Installation of Safe Fish Passageway of Appendix G.4 – Biodiversity Assessment, reiterating advice previously provided on 19 July 2016 that the Applicant must consult with DPI Fisheries in relation to the design of any proposed new or upgraded waterway crossing of Blakney Creek, its tributaries and Pudman Creek and its	This will be implemented as part of the BMP in accordance with Condition 22 of Schedule 3 to the Development Consent.

Topic	Response / Recommendation	Applicant Response
	tributaries to avoid impacts to the Southern Pygmy Perch.	
Existing waterway crossings	DPI – Fisheries comments on Attachment D – Detailed Structure Upgrade Schedule of Appendix H: Preliminary Road Investigation stating any existing waterway crossings to be upgrade or removed must meet the requirements of the responses provided above.	

4.3.9 NSW Environment Protection Authority

The NSW Environment Protection Authority (EPA) (DPIE Submitter ID S-125991) provided recommendations on the Project primarily concerning the correlation between the modified hub height wind speed and background noise level and application of the *Wind Energy: Noise Assessment Bulletin* (NSW Planning and Environment, 2016) (the Wind Bulletin) as outlined and responded to in Table 18. Operational noise is discussed more broadly in Section 4.2.6.

Table 18: EPA Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Development Consent Noise Criteria	The EPA notes that the proposed Modifications does not include changes to Table 4: Noise criteria of Condition 11 to the Development Consent and the ENA was assessed against this noise criteria. The EPA notes that a higher wind speed at hub height is correlated with a higher background noise level. As the noise criteria is derived based on this relationship, it is important the background noise level at the receiver is correlated to the correct hub height being 117m. The EPA recommends that the correlation between the modified hub height wind speed and background noise level at the receiver be re-examined and justified to confirm the appropriateness of the approved noise limits for the Modified Project. This should include a correlation between 80m and 117m hub height wind speeds.	See Section 4.2.6 on Noise and the Revisesd ENA and Background Noise Report contained at Appendix J and Appendix I respectively.
Wind Energy: Noise Assessment Bulletin	The EPA recommends that DPIE should consider whether the Wind Bulletin should be applied in full to the modification, or whether condition 11 would require consideration of special noise characteristics as defined in the Wind Energy: Noise Assessment Bulletin.	

4.3.10 NSW Department of Regional NSW – Mining, Exploration & Geoscience (MEG) – Geological Survey of NSW

The NSW Department of Regional NSW – Mining, Exploration & Geoscience (MEG) – Geological Survey of NSW (GSNSW) (DPIE Submitter ID S-125990) provided comment on the Modified Project, particularly around the existing exploration licenses within the Project site as outlined and responded to in Table 19.

Table 19: GSNSW Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Previous consultation with exploration licence holders	GSNSW notes that the Applicant has previously consulted with the mineral exploration title holders (EL6274, EL8313 and EL6873) overlaying the Project area as part of the EIS and EIS RTS phase of the Project. At the time, no issues or concerns were raised. GSNSW notes that EL6274 no longer overlaps the project footprint and is approximately 1.3 km to the west. EL8313 and EL6873 have expired and no longer exist.	Noted
New exploration licence holders	GSNSW notes that since the Applicant last consulted with the title holders, two new exploration titles now overlap the Project being: • EL8664 held by ACGH II Pty Ltd, overlaps the northern portion of the Project boundary.	The Applicant contacted Duke Exploration Pty Ltd and ACGH II Pty Ltd on 12 June 2020 regarding the proposed activities associated with the Project and potential impacts of

Topic	Response / Recommendation	Applicant Response
	• EL8568 held by Duke Exploration Pty Ltd, overlaps part of the western portion of the Project boundary. GSNSW requires that the Proponent consult with the above exploration licence title holders.	the wind farm upon access to land for mineral exploration. Duke Exploration Pty Ltd replied stating the wind farm is unlikely to be a concern and will work with the Applicant to ensure ongoing communication with landowners. The Applicant has received a response from ACGH II Pty Ltd stating a relinquishment notice for their tenement was submitted on 30 July 2020.
Biodiversity credit sites	GSNSW requests that MEG be consulted during preparation of the Biodiversity Management Plan to ensure highly prospective resource areas are not sterilised by the retirement of biodiversity credits.	The Applicant will continue to consult with GSNSW MEG on this matter.

4.3.11 NSW Rural Fire Service

The NSW Rural Fire Service (RFS) (DPIE Submitter ID S-126067) noted they raise no objections to the Proposed Modification. Notwithstanding, the RFS commented that any changes made to the proposed Bush Fire Management Plan and/or Plan of Operation for the site should be provided to the local NSW RFS District Office for comment. This request will be actioned by the Applicant who is committed to ongoing cooperation with the RFS to manage bush fire risks. Fire and Bushfire risks are is further discussed more broadly in Section 4.2.10.

4.3.12 TransGrid

TransGrid (DPIE Submitter ID S-126070) noted it has raised some issues regarding the Proposed Modification with the Applicant. The issues raised by TransGrid include:

- the HumeLink Project route corridor traverses the southern section of the Project site. Consultation on the HumeLink Project route corridor commenced during the same period as the public exhibition for the Modification Application, TransGrid has continued to consult with the Applicant since this time. Meetings have been held and information shared to ensure that the location of the HumeLink alignment within this area does not impact on the Approved Project, as well as looking at opportunities to repositioning the study corridor to outside of the Project Boundary. It is noted that the Proposed Modifications does not influence this matter, the Project is being considered as a constraint to the selection of the final HumeLink alignment like any other existing or approved development.
- allowance for setbacks between the location of approved turbine locations and the existing TransGrid 330 kV '3J' transmission line (Yass – Gullen Range) that traverses the southern section of the site (and where the Project will connect). The Applicant is continuing to consult with TransGrid to determine appropriate setbacks which respond to the location of the approved turbines, nature of the site (e.g. prevailing wind direction) and how this responds to proposed increase in turbine height. The Applicant is confident that the agreed setbacks will be able to be accommodated by the approved turbine locations (and micrositing allowance) authorised by the Development Consent.

4.3.13 Transport for NSW

Transport for NSW (TfNSW) (DPIE Submitter ID S-126673) provided comment on the Proposed Modification as outlined and responded to in Table 20. Consultation with TfNSW is discussed in Section 3.2.2.

Table 20: DPIE – Transport for NSW Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Lack of	TfNSW notes the documentation does not include a full assessment	The Applicant met with TfNSW

Topic	Response / Recommendation	Applicant Response
documentation for the Preferred Transport Routes from Ports	of the impact of the transportation route along the classified road network, particularly the Lachlan Valley Way, to travel from the Ports to Boorowa.	and has provided update information on swept paths for the three route options from the Port of Newcastle and Port Kembla, details of potential transportation vehicles, components loads per wind turbine and journey times.
Lack of consultation with RMSD	TfNSW notes they have not been consulted with regarding the Preferred Transport Routes from the Port of Newcastle and Port Kembla. When the Preferred Route from the ports is finalised, further discussion with TfNSW will be required prior to allow for the full assessment of the adopted route and any works required to the classified road network. To allow for an informed assessment of the impact, particularly through the larger urbanised areas, a clear understanding of the final route, and the logistics and timing for the movement of the large components is required.	The Applicant has progressed investigations into the feasibility of each of the three Oversize and/or overmass (OSOM) routes from the Port of Newcastle and Port Kembla. A Transport Route Assessment Peer Review (contained at Appendix D) has been prepared by GTA Consultants to appraise the three OSOM transport routes from the Port of Newcastle and the Port of Kembla. The assessment found that all three options are still viable and will remain part of the Final Modified Project. The Applicant is continuing to discuss these options with the prospective tenderers for the Project.
Preparation of a TMP	TfNSW notes a TMP will need to be developed in consultation with and agreed to by, the relevant road authority. Any need for road works or alterations to the classified road network particularly intersections, will need consultation with TfNSW and addressed in the TMP.	A TMP will developed in consultation with TfNSW in line with condition 30 of Schedule 3 to the Development Consent.
Works Authorisation Deed	TfNSW notes any necessary works or alterations to the classified road network may require the preparation and signing of a Works Authorisation Deed between the developer and TfNSW for the works. Any works or alterations to the classified road network or any associated infrastructure shall be to the satisfaction of Transport for NSW.	Once the turbine supplier and civil construction contractor have been selected, they will obtain the Works Authorisation Deed which constitutes TfNSW's consent under section 138 of the *Roads Act 1993* (RA Act) (NSW).
Smaller Construction Vehicles	TfNSW notes the frequency and volumes of the smaller construction vehicles can represent significant issues for the road network and therefore need to be addressed. The source and transportation route for such materials has not been provided. These issues need to be finalised to allow for the proper assessment of the impacts on the road network. The supporting reports for the modification indicates that there is no on-site quarry and all that materials will be transported to the site. Further detail regarding this is required to be submitted for consideration.	The TIA (Contained at Appendix G.7 of the Modification Application) was prepared based on the worst-case scenario of no on-site quarry facilities. As described in Section 3.2.4 the Applicant has been working with ARDG to identify potential on-site quarries. The development of on-site quarries is the preferred scenario for obtaining aggregates for the Project but is subject to separately applying for and obtaining all necessary approvals for any on-site quarries. Accordingly, the Project retains the option to transport all aggregates required by road as is currently approved. Further, the TMP will assess the transportation of the selected quarry source prior to it's approval.
Addition of Development	TfNSW notes that based on the documentation provided and the lack of certainty in relation to the proposed transportation route and traffic	The Applicant will continue to consult with TfNSW on this

Topic	Response / Recommendation	Applicant Response
Consent Conditions	issues TfNSW cannot provide a detailed assessment of the impact of the proposed development on the classified road network. Notwithstanding this, in consideration of the previous application no objection was raised to the development proposal subject to suggested conditions.	matter.

4.3.14 Yass Valley Council

Yass Valley Council (YVC) (DPIE Submitter ID S-126080) provided comment on the Proposed Modification as outlined and responded to in Table 21.

Table 21: Yass Valley Council Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Visual Impact	YVC notes the increased turbine size does not significantly increase the visual impacts according to the expert consultants. However, YVW further notes any comments from neighbours needs to be carefully assessed to ensure these, and any other impacts, are appropriately mitigated.	Noted. See Section 3.0 and 4.2.5 on Community Consultation and Visual Impact respectively.
Preferred Transport Route	YVC notes that all OD size vehicles should be restricted to the Preferred Transport Route. However, if other roads remain an access route (such as Bushes Lane and Coolalie Road) and used by light vehicles the road upgrade works nominated in the current approval should remain in any modified consent.	The TMP will be prepared to address light vehicle traffic and the nominated roads for construction traffic. The Applicant will engage with YVC regarding preparation of the TMP.
Council Community Enhancement Fund Policy	YVC notes that the megawatt capacity of the turbines increase up to 6MW per turbine. Under Council Community Enhancement Fund Policy where there is an increase in turbine capacity the contributions rates need to be adjusted also. The contribution of $2,500 was set in 2009 based on the average megawatt capacity of 2.5MW per turbine. The approval issued in 2017 did not adjust the rate in accordance with CPI as requested. Accordingly, the contribution rate should be revised upwards and adjusted in line with CPI and Council policy. The draft VPA to establish the Community Enhancement Scheme will need to be adjusted. YVC further notes the Community Enhancement Fund contributions are separate from any payments made to host landowners and neighbouring property owners.	Community Enhancement Fund contributions of $2500 per built wind turbine is a requirement of the Development Consent and agreements with local councils have already been established based on this condition. The Applicant has committed to providing community funding equivalent to 92 wind turbines. The funding for any unbuilt turbines will either be directed to the Council administered Community Enhancement Fund or directed toward other local benefit sharing programs. The Applicant is currently seeking feedback from the community on programs that would benefit the local community.

4.4 Organisation Submissions

DPIE received a total of seven submissions from organisations during the public exhibition period. Two organisations supported the Proposed Modification, one provided comment on the Proposed Modification and four objected to the Proposed Modification.

4.4.1 APA Group

APA Group (APA) (DPIE Submitter ID S-126056) provides comment on the Project, particularly concerning two pipelines owned and operated by APA crossing the central/northern section of the Project site as outlined in Table 22.

Table 22 APA Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Response		
Proposal Plans	The APA notes they own and operate two pipelines located within an easement through the northern section of the Project Boundary being the: • Moomba to Wilton Natural Gas Pipeline, and • Moomba to Sydney Ethane Pipeline They note wind turbines 83 and 143 are located approximately 700-750 m away from the pipelines. The APA welcomes the relocation of the proposed Collector Substation, O&M building and Construction Compound in addition to the reduced number of electrical crossings of APA's pipelines as part of the Modified Project. The APA notes the updated development plans do not mark APA's pipeline easement being for high-pressure gas transmission pipelines.	Noted. No change is proposed to the approved locations of wind turbines 83 and 143.
Electrical Interference	APA notes that electrical works near the pipelines have the potential to impact on the pipelines safe operation and studies in accordance with AS4853 and AS2832 are necessary.	Necessary safety precautions will be observed.
Safety Management Study	APA notes that the proposed land use changes the current location class around the pipelines and accordingly a Safety Management Plan (SMP) is required. Outcomes of the SMP should inform the detailed design of the Project.	A SMP will be prepared.
Pipeline Crossings	APA notes that several electrical crossings (both 33kV and up to 330kV) run in parallel to APA's pipelines. APA requests that the Proponent minimises the number of crossings that are perpendicular to the pipeline if possible (including the co-location of road and services crossings). APA notes no work within the easement may occur without prior authorisation of the APA. Detailed design for crossing will need to be informed by field works to positively locate the pipeline. APA further notes that road crossings for heavy vehicles (particularly along Flakney Creek Road and Pudman Creek Road) will require a concrete slab crossing to dispense loads on the pipeline.	The Preferred Transport Route for OSOM traffic does not include Flakney Creek Road or Pudman Creek Road, however, two internal access tracks cross the pipeline easement. As required by APA, these will require a concrete slab crossing to dispense loads on the pipeline. The Applicant will consult with the APA regarding this requirement.
Recommendations		
General	APA notes they do not object to the Modified Project subject to these items being incorporated as conditions of the approval. APA notes these are standard conditions that will assist the detailed design stage of the Project.	The Approved Project is already located in proximity to APA's pipeline and the Proposed Modification will not result in any additional impacts on APA's pipelines. Accordingly, these conditions are not justified. However, the intent of these conditions can be captured in the Construction Management Plan required under the Development Consent. The Applicant will consult with APA when the detailed design is finalised, to ensure APA's requirements are addressed, as appropriate, in line with the conditions of APA's pipeline licences.
No improvements within easement without APA consent	APA requests that any development on or under the land within the gas transmission pipeline easement must not commence without prior consent in writing from APA. No structure or vegetation will be permitted on the easement that prohibits maintenance of line of sight along the pipeline easement.	
Conduct safety management study	APA requests that prior to the development commencing, a Safety Management Study must be conducted by the Applicant and its recommendations / actions be implemented to the satisfaction of APA.	
Conduct risk assessment	APA requests that an electrical hazard studies is conducted. Any requirements, recommendations and/or actions must be implemented to the satisfaction of APA.	
Electrical interference studies	APA requests that electrical interference studies are conducted once detailed design is complete.	
Amend design to comply with Australian standards	APA requests that the Project design so the electrical interference studies and electrical hazard studies which comply with the applicable Australian Standard and promptly provide a copy of the studies and reports to APA.	
High voltage powerlines	APA requests that the Applicant must make good hazards or risks to the APA's Moomba to Wilton Natural Gas Pipeline and APA's Moomba to Sydney Ethane Pipeline caused by any powerlines.	
Landscape plans	APA requests that prior to the development commencing, landscape plans depicting any planned landscaping within three m of the pipeline must be submitted to and approved by APA, in additional to	

Topic	Response / Recommendation	Applicant Response
	any approval required by the assessment manager.	
Construction management plan	APA requests that prior to the commencement of any works, within the easement or on land within 50 m of the pipeline easement, a Construction Management Plan (CMP) must be submitted to and approved by DPIE. The CMP must be reviewed and approved by the gas transmission pipeline licensee (East Australian Pipeline Pty Ltd and Gorodok Pty Ltd).	
Services	APA requests that the design of any infrastructure services shall minimise encroachment on the gas pipeline easement.	
Easement delineation on site	APA requests that during construction, the boundary of the easement must be clearly delineated on site by temporary fencing (or other means as agreed by APA), and marked as a hazardous work zone/ restricted area.	

4.4.2 Australian Industrial Wind Turbine Awareness Group

The Australian Industrial Wind Turbine Awareness Group (AIWTAG) (DPIE Submitter ID S-126272) objects to the Proposed Modification and raises topics as outlined and responded to in Table 23. Along with their written submission, the AIWTAG provided a research paper '*Confirming Tonality at Residences Influenced by Wind Turbines'* (William, 2020) for DPIE's consideration.

Table 23: Australian Industrial Wind Turbine Awareness Group Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Increased Impacts	The AIWTAG raises concerns over the increased visual, noise and biodiversity impacts of the Project.	See Section 4.2.5 on visual impact, Section 4.2.6 for noise and Section 4.2.1 on Biodiversity (Vegetation).
Legal Cases Against Developers	The AIWTAG notes there are increasing legal cases initiated by neighbouring properties to Wind Farms.	Noted. *The National Wind Farm Commissioner Annual Report 2018* states that Neighbours can be impacted by wind farms from visual amenity, noise, shadow flicker and economic loss – both the fear in anticipation of these impacts as well as actual impacts once the wind farm is operating. It should be noted that a majority of complaints are received during the development[16] phase of a Project compared to its operational phase.
Neighbour Agreements	The AIWTAG raises concern over the integrity over the 'Neighbour Agreements', believing they 'stop the neighbours from complaining.'	Neighbour Agreements are offered to eligible landholders to ensure the immediate community directly benefits from the presence of the Project. An update on the broader Benefit Sharing Plan also being developed is provided at Section 3.3. Neighbour Agreements also outline a process for resolving disputes directly with the Applicant, though do not prohibit people from submitting complaints about the Project to

[16] Development refers to proposed wind farms that are either in the planning stage, have been approved by a state planning authority or are under construction

Topic	Response / Recommendation	Applicant Response
		relevant authorities. Further, The Neighbour Agreements do not allow The Applicant to act in a way that is contrary to the requirements of the Development Consent.
Responsibility of Increased Impacts	The AIWTAG questions who would be liable for the consequences of adverse impacts arising from the construction and operation of the Project.	The Applicant will ensure the Project complies with the conditions of the Development Consent which is legally enforceable in accordance with the EP&A Act.

4.4.3 Australian Wind Alliance

The Australian Wind Alliance (AWA) (DPIE Submitter ID S-126630) supports the Modified Project and made the following comments:

- the increased tip height will allow for a total generation capacity of well over 300 MWs and an increase in generation output by a third on the approved project, whilst reducing the number of wind turbines. This will be a substantial contribution to NSW's clean energy supply and contribute to the first priority action in the NSW Net Zero Plan Stage 1: 2020–2030 - Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living;
- there is considerable community support for the Project in the surrounding community and among businesses in neighbouring Yass and Boorowa who anticipate the economic benefits the project will bring to the region. Benefits to the community remain substantial. Lease payments to a large group of landholders, financial agreements with neighboring property owners and a community fund of $230,000 per annum for the life of the project are all significant, long term contributions. 250 construction jobs and 10 ongoing jobs will also be a meaningful boost to the area;
- visual, noise and shadow flicker amenity impacts remain largely unchanged; and
- whilst the amount of native vegetation planned to be removed has increased, the limits for habitats subject to state instruments have been observed and in some instances improved.

4.4.4 Brown Mountain Residents Group

The Brown Mountain Residents Group (BMRG) (DPIE Submitter ID S-126197) objects to the Proposed Modification and notes they adopt the submission of Submitter S-126141 and their family. The Applicant notes that Brown Mountain is located some 88 km away from the Project but appreciates that the BMRG hold strong views about wind farms generally. A detailed response to the submission made by Submitter S-126141 is contained at Appendix N.

4.4.5 NSW Ports

NSW Ports (DPIE Submitter ID S-126108) supports the Modified Project and provided the following comments:

- NSW Ports in partnership with Wollongong City Council made physical changes to the intersection of Springhill Road and Tom Thumb Road in order to cater for larger turbines into the future, including the those proposed for Rye Park Wind Farm; and
- Port Kembla has become a key infrastructure asset for renewable energy projects and NSW Ports is proud to support both solar and wind projects throughout NSW.

4.4.6 Rye Park Action Group

The Rye Park Action Group (RPAG) (DPIE Submitter ID S-126190) objects to the Modified Project and raised several topics as outlined and responded to in Table 24.

Table 24: Rye Park Action Group Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Visual Impact	The RPAG raises concern over the increased visual impact of the Project and challenges the notion that the Applicant claims an overall reduction in the visual impact. The RPAG has additional concerns over the visual implications of the removal of vegetation on the Project site.	See Section 4.2.5 on Visual Impact.
Community Drop-in Sessions	The RPAG notes the Applicant was unable to provide 'straight answers' to members of the community during the drop-in sessions held in November 2019. Questions regarding the sourcing of water continue to be unanswered.	The Proposed Modification will reduce, not increase, the water requirements when compared to the Approved Project. See Section 3.1 on the consultation undertaken for the Modification Application, Section 4.2.13 for concerns raised regarding the consultation process and Section 0 on water sourcing.
CCC Issues	The RPAG notes the Applicant has been unable to answer questions in a timely manner and posted minutes on their website which have not been approved by the CCC.	See Section 3.1 on the consultation undertaken for the Modification Application, including via the CCC. The Applicant has responded to all questions raised in the CCC and provided these responses in a timely manner upon receiving the questions. Each set of questions ranged between 10 – 30 questions and the Applicant took four weeks to respond to all questions. These responses were shared with all members of the CCC. The Applicant has consistently provided feedback and gained approval of minutes before posting them on the Project website.
Rye Park Association Group Members	The RPAG notes those opposing the project are no longer represented on the Rye Park Progress Association as there are a greater proportion of hosts and supporters currently on the committee. The pressure to leave this group is directly related to conflicting beliefs and the private meetings arranged by the proponent with hosts.	The RPPA is independent of the Project. The Applicant will continue to seek to consult with the RPPA and other local community groups regarding the Benefit Sharing Plan the Project more generally. See more in Section 3.3.
Noise Impacts	The RPAG raises concern over the unknown extent of the increase of noise impacts given the preferred turbine model is unknown.	A conservative worst-case noise impact assessment has been undertaken and been presented in the Modification ENA. This is discussed further in Section 4.2.6. A Revised ENA is contained at Appendix J.
Health Concerns	The RPAG raises concerns of the health implications of the Project and references an investigation commissioned by South Gippsland Shire Council and conducted by James C. Smith and Associates, which found that the wind farm had caused "nuisance under Victoria's Public Health and Wellbeing Act".	See Section 4.2.12 on health implications. Concerns about other projects should not be directly correlated to this one.
Accessing the Modification Application Documentation	The RPAG would have preferred if hard copies of the submission were provided to the community, noting not all residents have internet access and there should have been more time allowed to review the documentation.	The public exhibition period is determined by the DPIE in line with standard assessment processes. See Section 4.2.14.
Approached to	The RPAG raised concerns that several members of the community	The Applicant has been

Topic	Response / Recommendation	Applicant Response
sell properties	have been repeatedly approached to sell their properties and properties marked on the maps are being shown as part of the development when no agreement has been entered into.	consulting with landowners and specific property owners along the Preferred Transport Route. As noted in Section 2.3, this unintended error has been clarified and the Applicant has formally contacted these residents to apologise for and rectify this miscommunication.
Increasing in Disturbance Footprint for Access Tracks	The RPAG raises concern the internal access tracks are being widened from 12 m to 30 m, noting the initial assessment of clearing was inadequate.	The increase width in access tracks is a result of the design progression and the impacts are assessed in the Revised BDAR contained at Appendix B.
Impacts on Rye Park Public School	The RPAG raises concern over the potential impacts on Rye Park Public School, noting a recent drop in students may be due to the Project. Specific issues of concern include noise, traffic movements, general disruption to learning and cumulative impacts with Bango Wind Farm.	This concern related to the Project generally. The TMP will specifically address school drop off/ pick up times and ensure interaction is minimised. See Section 4.2.6 on Noise, Section 4.2.4 on traffic and transport. Cumulative impacts of the Project with Bango Wind Farm are addressed by specific topics in Section 4.5.
Consultation with Hilltops Council	The RPAG several members of Hilltops Council have not heard of the Modified Project.	The Applicant has met with Hilltops Council regarding the proposed modification and road upgrades as described in Section 6.3.3 of the Modification Application Report. Further consultation with Hilltops Council is discussed in Section 3.2.3.
Change in Developers	The RPAG raises frustration with the change in Project developers and length of time taken to determine the future of the Project, causing mental health issues for some.	The Applicant acquired the Project in 2014 and notes the original request for the Director General Requirements (DRGs) for the Project were submitted in 2011. The Applicant acknowledges that whilst the development phase of the Project has gone on for some time, this is predominantly due to the change of Applicants and time taken to conduct the original Environmental Impact Statements (EIS) and current Modification Application. To address any uncertainty, the Applicant has and will continue to consult with the community and provide regular updates regarding progression of the Project. See Section 4.2.12 on mental health and section 4.2.14 on the assessment process.

4.4.7 Yass Landscape Guardians

The Yass Landscape Guardians (YLG) (DPIE Submitter ID S-126218) objects to the Proposed Modification and raises topics as outlined and responded to in Table 25.

Table 25: The Yass Landscape Guardians Response to the Project and Applicant Response

Topic	Response / Recommendation	Applicant Response
Visual Impact	The YLG raises concern over the increased visual impact of the Project.	See Section 4.2.5 on Visual Impact.
Doubling of disturbance footprint	The YLG raises concern about the doubling of the disturbance footprint and associated destruction of native bush land and wildlife, particularly after the recent summer bushfires.	See Section 4.2.1 on Biodiversity (Vegetation)
Lack of consultation	The YLG notes the extent of community objection to the Project and impacted residents / landowners are not consulted or supported.	See Section 4.2.13 on the consultation process
Division within the Community	The YLG raises concern over the mental fatigue cause by the division within the communities.	See Section 4.2.12 on health and safety and Section 3.3 on the benefit sharing plan to address potential division within the community

4.5 Public Submissions – Objections

DPIE received a total of 85[17] Public Submissions from members of the public who objected to the Modified Project during the public exhibition period. As many of the topics raised were similar in nature, they have been grouped and responded to accordingly.

Some submitters raised topics that were general in nature and unrelated to the Proposed Modification whilst others raised topics that were specific to the Proposed Modification. These submissions have been categorised accordingly

The sections below describe the key topics raised including the Applicant's response to these topics.

4.5.1 General

General Objection

DPIE received three Public Submissions that expressed opposition to the Project, however, did not raise a specific topic as to why, nor link their objection to a change in impact arising from the Proposed Modifications.

Nine submitters stated they were concerned with the cumulative impacts with Bango Wind Farm and/or other wind farms generally. Potential for cumulative impacts from Bango Wind Farm and/or other wind farms are addressed in the following sections:

- Cumulative impacts on bird and bat strikes – Section 4.5.3
- Cumulative visual impacts - Section 4.2.5
- Cumulative noise impacts – Section 4.5.7
- Cumulative health impacts – Section 4.2.12

Additionally, 17 submitters stated they supported DPIE Submitter ID S-126141 and adopt their submission as their own. A detailed response to the submission made by DPIE Submitter ID S-126141 is contained at Appendix N. Of these submissions, eight submitters replicated the following statement without raising any additional topics. This statement was:

> *"I object to the Rye Park Wind Farm modification application and adopt the submission of [submitter S-126141][18] and their family dated June 2020."*

[17] Discounting duplicates as shown in Table 6

[18] The submitter's name has not been used in this report.

These included DPIE Submitter ID's:

S-126199, S-126201, S-126205, S-126222, S-126257, S-126258, S-126275 and S-126281.

General Construction

Where general construction topics have been raised and are not specifically related to topics in the sections below, they have been outlined and addressed in Table 26.

Table 26: Response to General Construction Topics

Topic	Response
Construction works days and hours	• General – One submitted raised this topic: S-126120 Condition 7 of Schedule 3 to the Development Consent contains detailed provisions regulating the hours during which construction or decommissioning activities may be undertaken.
Quantity of materials, concrete pours and subsequent need for night works	• General – One submitted raised this topic: S-126208 The Applicant will undertake construction activities in accordance with Condition 7 of Schedule 3 to the Development Consent. Given these restrictions, construction activities have been factored into the Applicant's construction schedule.

4.5.2 Biodiversity (Vegetation)

Biodiversity (Vegetation) is discussed more broadly in Section 4.2.1. Table 27 outlines the Applicant's response to the issues raised in relation to Biodiversity (Vegetation).

Table 27: Response to Biodiversity (Vegetation) Topics

Topic	Response
Doubling disturbance footprint causing impact to flora / fauna	• Modified Project – 16 submitters raised this topic: S-126065, S-126084, S-126114, S-126115, S-126116, S-126150, S-126170, S-126179, S-126185, S-126195, S-126216, S-126259, S-126265, S-126267, S-126279 and S-126282 See Section 4.2.1 and a detailed response to this topic provided in the Biodiversity RTSR contained at Appendix F.
Concern over biosecurity and weeds	• General – Three submitters raised this topic: S-126071, S-126208 and S-126622 A detailed response to this topic is provided in the Biodiversity RTSR contained at Appendix F.
General concern over loss of environment / land clearing	• Modified Project – Nine submitters raised this topic: S-126112, S-126125, S-126216, S-126227 S-126261, S-126263, S-126274, S-126276 and S-126674 • General – Seven submitters raised this topic: S-126139, S-126184, S-126229, S-126274, S-126276, S-126277 and S-126631 See Section 4.2.1 and a detailed response to this topic provided in the Biodiversity RTSR contained at Appendix F.
Concern over impacts to the environment along the Preferred Transport Route	• Modified Project – 12 submitters raised this topic: S-126064, S-126084, S-126139, S-126150, S-126192, S-126208, S-126229, S-126261, S-126263, S-126271, S-126277 and S-126279 The Indicative Development Footprint – External Roads (total ground disturbance) as part of the Final Modified Project is 18.66 ha. Of this, only three native PCTs are to be impacted, totalling 3.93 ha. A comprehensive BMS to mitigate the unavoidable impacts of the Project will be prepared and implemented, including a RVMP.

Topic	Response
Concern over habitat destruction	• Modified Project – Eight submitters raised this topic: S-126085, S-126107, S-126112, S-126113, S-126177, S-126192, S-126228 and S-126259 • General – 11 submitters raised this topic: S-126064, S-126115, S-126116, S-126118, S-126132, S-126151, S-126169, S-126183, S-126184, S-126194 and S-126208 See Section 4.2.1 and Section 4.2.2 and a detailed response to this topic provided in the Biodiversity RTSR contained at Appendix F.
Concern over impact to the environment given recent bushfires and drought	• General – Three submitters raised this topic: S-126151, S-126177 andS-126179 A detailed response to this topic is provided in the Biodiversity RTSR contained at Appendix F.
Impact to aquatic wildlife	• General – One submitted raised this topic: S-126094 A detailed response to this topic is provided in the Biodiversity RTSR contained at Appendix F.
Impact to Golden Sun Moth	• General – Two submitters raised this topic: S-126115 and S-126116. See Section 4.5.2 and a detailed response to this topic provided in the Biodiversity RTSR contained at Appendix F.
Query if lost vegetation will be offset	• General – One submitted raised this topic: S-126120 A detailed response to this topic is provided in the Biodiversity RTSR contained at Appendix F.
Disagrees with Department's statement the Project won't have a significant impact on EECs	• General – One submitted raised this topic: S-126139 The Department's assessment of the Original RTS was that despite the proposed ground disturbance, the Project would not result in any significant impacts on threatened species or EECs. As part of the assessment process, the Department will assess Final Modified Project's impact on EECs.
Increase impact on HBTs and squirrel glider habitat not addressed in BDAR	• General – One submitted raised this topic: S-126195 HBTs and squirrel glider habitat are assessed in Section 5.1.1.1 and Section 3.3.2 of the Revised BDAR respectively.
Concern about impacts from waste and hazardous substances	• General – One submitter raised this topic: S-126208 Condition 18 of Schedule 3 to the Development Consent requires the Applicant to store and handle all dangerous or hazardous materials on site and minimise any spills of hazardous material or hydrocarbons including cleaning up spills as soon as they occur. Further, the Applicant is required to prepare a Safety Management System (SMS) in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'* as required by Condition 35 to Schedule 3 to the Development Consent.
Concern about impact to local waterways (Urumwalla Creek, Blakney Creek and Pudman Creek) and the: • platypus pygmy perch • stripped legless lizards • corroboree frogs and • Yellow Spotted Bell Frog	• General – Three submitters raised this topic: S-126265, S-126277 and S-126622 Prior to the commencement of construction, a CEMP will be prepared that will address erosion and sediment control. The CEMP will also outline ways to minimise land disturbance and prevent sediment contaminated water from leaving site. Further, the Applicant will install a 'Safe Fish Passageway' to avoid impacts to the Southern Pygmy Perch. The Project is anticipated to impact on 3.58 ha of habitat for the stripped legless lizard, representing a 45.92 ha decrease from the Approved Project.

Topic	Response
	the corroboree frog was not assessed as part of the Revised BDAR as it was not required in accordance with the BAM methodology. Impacts to aquatic wildlife are outlined in the Biodiversity RTSR contained at Appendix F.
Concern over destruction of habitat near northern most WTG, they are currently trying to restore the remnant vegetation to act as "corridors for wildlife birds" and have a large number of parrots at nesting time.	• General – One submitter raised this topic: S-126112 A comprehensive BMS to mitigate the unavoidable impacts of the Project will be prepared and implemented. These measures will be designed and described within the BMP and RVMP.

4.5.3 Biodiversity (Birds and Bats)

Biodiversity (Bids and Bats) is discussed more broadly in Section 4.2.2. Table 28 outlines the Applicant's response to the issues raised in relation to Biodiversity (Birds and Bats).

Table 28: Response to Biodiversity (Birds and Bats) Topics

Topic	Response
Risk of blade strike generally	• Modified Project – 11 submitters raised this topic: S-126071, S-126124, S-126125, S-126150, S-126229, S-126259, S-126261, S-126271, S-126274, S-126276 and S-126279 • General – Five submitters raised this topic: S-126194, S-126277, S-126674, S-12662 and S-126126. See Section 4.2.2.
Potential impacts to Wedged-Tailed Eagles	• Modified Project – Three submitters raised this topic: S-126094, S-126155 and S-125882. • General – Three submitters raised this topic: S-126115, S-126116 and S-126126. See Section 4.2.2. and a detailed response to this topic provided in the Biodiversity RTSR contained at Appendix F.
Potential impacts to Superb Parrots	• Modified Project – Six submitters raised this topic: S-126085, S-126094, S-126155, S-126228, S-126261 and S-126282 • General – Four submitters raised this topic: S-126115, S-126116, S-126265 and S-126622 See Section 4.2.2. and a detailed response to this topic provided in the Biodiversity RTSR contained at Appendix F.
Potential cumulative impacts with Bango Wind Farm	• General – One submitter raised this topic: S-126151 At present there are a total of 122 operational turbines in the region with a further 131 under construction and 75 approved. The installation of 77 wind turbines at RPWF will result in a 32% increase in the number of turbines in the region (assuming prior completion of the three wind farms currently under construction). It is noted that the impact of each turbine on the species assessed here would not be equal across the region considering variability in abundance and site occupancy at multiple spatial scales (i.e. landscape scale, within wind farm scale) and variability in turbine specifications would influence the likelihood of collisions.
Believes Wedge-tailed eagles are a protected species and $8000 fine under Wildlife Act for killing them.	• General – One submitter raised this topic: S-126155 Wedge-tailed eagles in New South Wales are not listed as a threatened species under NSW State or Federal legislation.
Will RPWF be prosecuted over the deaths of protected bird species in the same way individuals will be?	• General – One submitter raised this topic: S-126228 The BC&A Act contains provisions which create offences for harming protected species

Topic	Response
	and contain limited exemptions where the action is "necessary for the carrying out of … development in accordance with a development consent". Any impacts to protected bird species will be minimised to the greatest extent possible through the BAMP, which will involve: • comprehensive and ongoing monitoring of any impacts to birds and bats (including protected bird species); and • timely mitigation actions (if required) to manage bird and bat blade strike risks. The BAMP incorporates an adaptive management approach, ensuring management measures can be amended in response to the comprehensive monitoring.
Seeks more clarity around monitoring of bird fatalities Operational bird fatality monitoring	• General – One submitter raised this topic: S-126259 The BAMP broadly requires: • at least 12 months' worth of baseline data on threatened and 'at risk' bird and bat species and populations in the locality that could be affected by the development; • a detailed description of the measures that would be implemented on site for minimising bird and bat strike during operation of the development • trigger levels for further investigation of the potential impacts of the project on particular bird or bat species or populations • an adaptive management program that would be implemented if the development is having an adverse impact on a particular threatened or 'at risk' bird and/or bat species or populations, and • a detailed program to monitor and report on the effectiveness of these measures, and any bird and bat strikes on site.
Impact to Diamond Fire-Tail	• General – One submitter raised this topic: S-126622 A detailed response to this topic is provided in the Biodiversity RTSR contained at Appendix F.

4.5.4 Aviation Impacts

Aviation is discussed more broadly in Section 4.2.3. Table 29 outlines the Applicant's response to issues raised in relation to Aviation impacts.

Table 29: Response to Aviation Topics

Topic	Response
Concern about potential increase impacts to aviation	• Modified Project – One submitter raised this topic: S-126150 The CASA submission (Section 4.3.2) and the AIA/QARA (see Section 4.2.3) confirm that the 200 m AGL wind turbines will not have an adverse impact upon flight safety.
Submitter S-126126 review of the AIA.	• General – One submitter raised this topic: S-126126 The submission suggests that the General Aviation and Recreational Aircraft & Helicopter including Medical Flights operating below 5000 ft is not addressed in the report. Section 4 of the AIA provides details of the impact of this type of aviation activity, including low level flight operations. Flight types that are capable of operating beneath the IFR minimum altitudes must be conducted in weather conditions that allow the VFR aircraft to remain clear of cloud and have a minimum flight visibility of at least 5000 m. In such conditions the wind turbines would be clearly visible, and all pilots will be able to avoid the wind turbines comfortably. If obstacle lighting is required, it would not increase the visibility of the wind turbines. At night, minimum altitudes are higher and the aircraft would be well above the wind turbines. The AIA is clear that the 200m AGL wind turbines will not have an adverse impact upon flight safety. The submission also suggests that the impact to ATC communications, surveillance or navigation systems is unknown. The AIA refers to Airservices Australia's submission in relation to the Modification Application, which concludes that "ATC has no objections to this development":

Topic	Response
	The wind farm will not affect the Canberra Radar Terrain Clearance Charts (RTCC). This wind farm, to a maximum height of 971m (3185ft) AHD, will not adversely impact the performance of Precision/Non-Precision Navigational Aids, HF/VHF Communications, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. ATC has no objections to this development. The submission makes reference to USA Federal Aviation Administration (FAA) guidance relating to obstacle lighting. Australian aviation guidance in relation to wind farms is not related to FAA guidance. CASA does not mandate obstacle lighting on wind farms rather, DPIE is the responsible authority and takes into account the amenity of the local community in relation to potential light nuisances.

4.5.5 Traffic & Transport

Traffic and transport are discussed more broadly in Section 4.2.4. Table 30 outlines the Applicant's response to topics raised in relation to Traffic and Transport.

Table 30: Response to Traffic and Transport Topics

Topic	Response
Construction traffic related impacts including: • Use of Rye-Park Road impacting local traffic • impacting stock movements • General traffic disruptions during construction • impacts to children/ school bus stops / school • impacts on the corner of Long St and Rye Park Rd, Boorowa • Impacts on Long St which is the only access to the local cemetery and rubbish dump	• Modified Project – Two submitters raised this topic: S-126065 and S-126219 • General – 19 submitters raised this topic: S-126064, S-126071, S-126084, S-126085, S-126112, S-126120, S-126125, S-126169, S-126183, S-126208, S-126212, S-126213, S-126262, S-126274, S-126276, S-126277, S-126623, S-126631 and S-126674 The TMP required by Condition 30 of Schedule 3 to the Development Consent will include detailed measures to minimise the traffic safety impacts of the development and disruptions to local road users (including school children) during the construction and decommissioning of the development as is already currently required by the Development Consent.
Local road upgrades related impacts including: • Local roads requiring upgrades for OD vehicles • Damage to local roads due to construction traffic • Local road infrastructure cannot support/cope with level of construction traffic • Impacts to existing infrastructure	• General – 16 submitters raised this topic: S-126064, S-126071, S-126084, S-126094, S-126160, S-126212, S-126213, S-126219, S-126261, S-126263, S-126271, S-126274, S-126276, S-126277, S-126622 and S-126623 A Preliminary Road Assessment (contained at Appendix H of the Modification Application Report) identified the appropriate transport route for OSOM vehicles, including an assessment of associated road upgraded required for the Final Modified Project. The road upgrades will ensure the Preferred Transport Route is fully prepared and capable of handling OSOM vehicles over the Project's construction period. Dilapidation surveys required by Condition 28 of Schedule 3 to the Development Consent will require the Applicant to 'make good' any development-related damage, including local roads. Detailed designs of the road upgrades will be prepared in consideration of existing infrastructure along the preferred transport route include bores, underground services and overhead lines.
Concern over left / right hand turn for OD vehicles at Yass Street, Rye Park	• General – One submitter raised this topic: S-126071 As part of ongoing discussions with landowners and progression of the detailed design, the Development Footprint – External Roads has been refined to adequately allow OSOM vehicles to site (contained at Appendix D of the Amendment Report). This includes refinement of the area on the north corner of Rye Park Rd and Grassy Creek Rd to enable OSOD vehicles to turn north up Grassy Creek Rd and south onto Yass St. This is discussed further in the Amendment Report.

Topic	Response
• Topics regarding construction traffic vibrations including: • Damage to dwellings along transport route • Damage to historic buildings including Rye Park Burial Grounds	• General – Five submitters raised this topic: S-126084, S-126094, S-126120, S-126160 and S-126213 There are no conditions requiring dilapidation surveys of dwellings or buildings along the Preferred Transport Route in the existing Development Consent. The risk of damage to these buildings has not changed from the Approved Project.
Concern about using Main St, Rye Park for preferred transport route	• Modified Project – Three submitters raised this topic: S-126085, S-126125 and S-126136. The Preferred Transport Route for heavy and over-dimensional vehicles included in the Proposed Modification utilises the existing approved traffic route through the town of Rye Park. Accordingly, the Proposed Modification will not result in any heavy and over-dimensional vehicles using any roads through Rye Park which are not already authorised for use by the Development Consent granted for the Approved Project. Measures to minimise the traffic impacts of the development and disruptions to local road users during the construction and decommissioning of the development will be detailed in the TMP.
Construction transport air pollution	• General – Three submitters raised this topic: S-126064, S-126115 and S-126116 Construction traffic will be carried out using modern transport equipment meeting Australian emissions standards. Construction traffic is a temporary impact and any associated greenhouse emissions will be offset by the renewable energy being produced by the Project.
Believes the road upgrade standards specified for Upper Lachlan Shire Council should be applied to Hilltops Council	• General – One submitter raised this topic: S-126125 Development of the required road upgrades is in accordance with the specifications outlined in the Development Consent and in consultation with Hilltops Council. This is discussed further in Section 4.3.5 in response to Hilltops Council submission.
Safety concern about 60 km road standard along Grassy Creek Rd	• General – One submitter raised this topic: S-126125 The Applicant has consulted with Hilltops Council regarding progression of a concept design for road upgrades required along Grassy Creek Road. The Applicant is currently progressing a road safety audit against this concept design, to be reviewed by Hilltops Council to confirm they are satisfied with the 60 km road standard.
Preliminary Road Upgrade Investigation does not cover road works required for High Rock Road where a transmission line is planned	• General – One submitter raised this topic: S-126126 The Preliminary Road Upgrade Report only considered external roads along the Preferred Transport Route. High Rock Road is contained within the wind farm site boundary.
Concern about impacts to historical bridges	• General – One submitter raised this topic: S-126139 An Existing Road Structures Site Inspection and Project Scoping Report was undertaken to assess the condition and potential upgrades required to historic bridges along the Preferred Transport Route. The high level assessment found that the bridges are in relatively good condition, however further load testing is required to determine the extent of upgrades necessary (if required) to ensure they can support OSOM vehicles during the construction phase of the Project.
Concerns around Preferred Transport Route going through Trucking Yard Rd / Dillion St / Boorowa Township	• General – One submitter raised this topic: S-126178 The Preferred Transport Route for heavy and over-dimensional vehicles included in the Proposed Modification utilises the existing approved traffic route through the town of Boorowa. This is discussed further in Section 4.2.4.
Questioning light mitigation strategies from construction traffic	• General – One submitter raised this topic: S-126064

Topic	Response
	In accordance with Condition 5 to Schedule 3 to the Development Consent, the Applicant must minimise the off-site lighting impacts of the Project. Further, lighting requirements for construction traffic will be outlined in the TMP as appropriate.
Concern over widening of Trucking Yard Road, Long and Dillion Streets (believing they will be 30 m wide)	• General – One submitter raised this topic: S-126064 Upgrades required for the external roads will differ in widths, responding to the local geography / condition of the road. The 30 m widths are for temporary access tracks within the wind farm boundary. These will them be reduced (and disturbance areas rehabilitated) down to 12 m when the wind farm commences operation.
Will the developer cover costs if cars are damaged along Preferred Transport Route	• General – One submitter raised this topic: S-126623 Disruption to local traffic will minimised as far as practicable and mitigation measures will be outlined in the TMP. Any damages as a result of construction traffic movements will be covered under the insurance policy of the responsible haulage contractor. In accordance with the Development Consent, the Applicant will prepare a dilapdation survey of the designated over-dimensional and heavy vehicle route and rehabilitate any development-related damage.
What is the alternate transport route if the developer can't secure land along the Preferred Transport Route	• General – One submitter raised this topic: S-126623 The Applicant currently anticipates that it will be possible to secure land along the Preferred Transport Route. However, if issues arise in securing agreements for land use the Applicant will re-assess the transport route in accordance with Condition 26 of Schedule 3 to the Development Consent.

4.5.6 Visual Impact

Visual Impact is discussed more broadly in Section 4.2.5. Table 31 outlines the Applicant's response to topics raised in relation to visual impact.

Table 31: Response to Visual Impact Topics

Topic	Response
Concern over visual impact of the Project / believe the wind turbines will be an eyesore.	• Modified Project – 22 submitters raised this topic: S-126064, S-126065, S-126085, S-126114, S-126139, S-126148, S-126150, S-126159, S-126170, S-126176, S-126181, S-126184, S-126195, S-126196, S-126208, S-126228, S-126229, S-126259, S-126265, S-126267, S-126271 and S-126282. • General – 11 submitters raised this topic: S-126084, S-126107, S-126125, S-126136, S-126227, S-126263, S-126274, S-126276, S-126277, S-126279 and S-126631. See Section 4.2.5 on Visual Impact, Revised VIA in Appendix C and Visual Impact RTSR in Appendix H.
Concern about visual impact from R11	• Modified Project – One submitter raised this topic: S-126071 Figure 58 of the Revised VIA illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines within 4km (up to the blue line threshold in accordance with the Visual Bulletin) would include 1 additional hub and 1 additional tip. As stated in the Revised VIA, a total of 15 consented wind turbines are located within 2.7km (below the black line) with a further 5 wind turbines between the 2.7km and 4km (between the black and the blue lines). An increase to hub and blade height would be noticeable from the dwelling and curtilage; however, screening through existing trees extends around the dwelling. Wind turbines beyond 4km would be partially screened or restricted by tree cover.

Topic	Response
	The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project. The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent. The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Visual Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm. Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions. See the Revised VIA (Appendix C) for further details.
Night lighting on wind turbines	• Modified Project – Two submitters raised this topic S-126195 and S-126208. See Section 4.2.3 on night lighting.
Cumulative visual impact with Bango Wind Farm	• General – One submitter raised this topic: S-126623 The Modification VIA determined that potential cumulative visual impacts (originally assessed in the Bango Wind Farm LVIA 2016) between the Modified Project and the consented Bango Wind Farm would not increase, largely due to the removal of wind turbines within the Bango Wind Farm (Mount Buffalo cluster) and the Rye Park Wind Farm.
Concern about visual impact of wind turbines closest to Rye Park Village	• Modified Project – One submitter raised this topic: S-126125 In response to specific feedback from DPIE and the community concerns around the visual impacts of the Project, the Applicant has removed a further three wind turbines within close proximity to Rye Park village, resulting in a total of 77 wind turbines. The Applicant believes that the removal of the additional three wind turbines will address community concerns related to the visual impact on Rye Park village. The wind turbines being removed are T32, T34 and T37. Further, the Applicant proposes that T43 remain in its current layout and be excluded from being micro-sited (except for minor micro-siting if required due to ground conditions) and subsequently Condition 8 of Schedule 2 to the Development Consent. This will ensure this wind turbine will not be micro-sited any closer to Rye Park village. Turbines 32, 34 and 37 have been selected for removal as they are the most visually dominant turbines from the Rye Park village. The visual impact is further minimsed due to the removal of visual clutter from the viewpoint of the Rye Park village.
Submitter S-126148 application of the Visual Bulletin for the Modified Project	• General – One submitter raised this topic: S-126148 A detailed response to this submission is provided in the Visual Impact RTSR contained at Appendix H.
Colour and reflectivity of wind turbines	• General – One submitter raised this topic: S-126208 Condition 4 of Schedule 3 to the Development Consent, requires that: *"wind turbines … are painted off white/grey … and finished with a surface treatment which minimises the potential for glare and reflections".*
Visual impact of transmission lines and internal access tracks	• General – One submitter raised this topic: S-126208 In accordance with Condition 4(c) of Schedule 3 to the Development Consent, the Applicant must: *"ensure the visual appearance of all ancillary infrastructure (including paint colours),*

Topic	Response
	blends in as far as possible with the surrounding landscape." The VIA determined the proposed changes to ancillary infrastructure associated with the Modified Project would not result in any additional visual impacts to those associated with the Approved Project.
Visual impact due to vegetation removal along ridge lines	• General – One submitter raised this topic: S-126208 In accordance with the applicable guidelines, assessment of the visual impacts of the removal of vegetation is not required to be assessed. However, several infrastructure components will be rehabilitated after construction has been completed. This includes the 30 m widths for the access tracks within the wind farm boundary that will be reduced to 5.5m for the permanent tracks and the 12 m disturbed areas for the underground cabling that will be fully rehabilitated. Other infrastructure components such as the construction compounds and batching plants will also be fully rehabilitated after construction has been completed.
Believes visual mitigation by tree plantings is ineffective	• General – Two submitters raised this topic: S-126208 and S-126622 Visual Impact Mitigation required by Condition 3 of Schedule 3 to the Development Consent requires the Applicant to implement appropriate mitigation measures (such as landscaping and vegetation screening) in consultation with the eligible landowners.
Visual impacts at R121	• General – One submitter raised this topic: • S-126228 As stated in the Modification VIA (Appendix G.1 of the Modification Application Report), the visual effect would remain unchanged from the consented RPWF assessment of visual effects. The magnitude of visual change would be partially limited by distance and some tree planting between the dwelling and closest consented RPWF wind turbine. There would be a limited change in the composition or contrast between the consented RPWF and proposed Mod 1 wind turbines. The delta between the consented RPWF wind turbines and the proposed Mod 1 wind turbines would be a decrease in 2 hubs and increase in 2 blade tips. Figure 26 of the Modification VIA provides a wireframe from dwelling R121. See Modification VIA (Appendix G.1 of the Modification Application Report) for further details.
Visual impacts at R130	• General – One submitter raised this topic: S-126112 As stated in the Modification VIA (Appendix G.1 of the Modification Application Report), the visual effect would remain unchanged from the consented RPWF assessment of visual effects. The magnitude of visual change would be partially limited by distance and some tree planting between the dwelling and closest consented RPWF wind turbine. There would be a limited change in the composition or contrast between the consented RPWF and proposed Mod 1 wind turbines. The delta between the consented RPWF wind turbines and the proposed Mod 1 wind turbines would be a decrease in 8 hubs and decrease in 10 blade tips. Figure 27 of the Modification VIA provides a wireframe from dwelling R125 which is in close proximity to R130. See Modification VIA (Appendix G.1 of the Modification Application Report) for further details.
Visual impacts at R82	• General – One submitter raised this topic S-126276: As stated in the Modification VIA (Appendix G.1 of the Modification Application Report), the magnitude of visual change would be partially limited by distance between the dwelling and closest consented RPWF wind turbine as well as tree planting and beyond the dwelling. There would be a limited change in the composition or contrast between the consented RPWF and proposed Mod 1 wind turbines. The delta between the consented RPWF wind turbines and the proposed Mod 1 wind turbines would include a decrease in 9 hubs and a decrease in 7 blade tips. Figure 17 of the Modification VIA provides a wireframe from dwelling R081 which is in close proximity to R082. See Modification VIA (Appendix G.1 of the Modification Application Report) for further details.
Concern wind turbines will be distraction to drivers	• General – Two submitters raised this topic:

Topic	Response
	S-126276 The Proposed Modifications will not affect the level of potential distraction the WTGs may cause to any road users.
Photomontages are inadequate	• General – One submitter raised this topic: S-126259 The wireframes and photomontages presented in the Modification VIA have been prepared in accordance with industry standards. The methodology used to generate the wireframes and photomontages is set out in Sections 9 and 10 of the Modification VIA.

4.5.7 Noise & Vibration

Noise is discussed more broadly in Section 4.2.6. Table 32 outlines the Applicant's response to topics raised in relation to noise impacts.

Table 32: Response to Noise and Vibration Topics

Topic	Response
Operational noise	• Modified Project – Nine submitters raised this topic: S-126113, S-126114, S-126159, S-126185, S-126195, S-126208, S-126227, S-126267 and S-126279 • General – Seven submitters raised this topic: S-126084, S-126107, S-126118, S-126167, S-126169, S-126229 and S-126277. See Section 4.2.6 and the Revised ENA contained at Appendix J.
Construction traffic noise	• Modified Project – Three submitters raised this topic: S-126084, S-126125 and S-126674 • General – Two submitters raised this topic: S-126262 and S-126276 See Section 4.2.6 and the Revised ENA contained at Appendix J.
Reference to L Huson noise report	• Modified Project – Three submitters reference this report: S-126126, S-126141 and S-126265 A detailed response to address noise related issues raised by DPIE Submitter ID S-126141 and the report by L Huson is provided in the Nosie RTSR contained at Appendix K.
Construction noise	• General – Four submitters raised this topic: S-126112, S-126120, S-126126 and S-126262 See Section 4.2.6 and the Revised ENA contained at Appendix J.
Cumulative impact noise with Bango Wind Farm	• General – Three submitters raised this topic: S-126125, S-126136 and S-126262 The cumulative noise from both wind farms will not increase overall noise levels above the individual criteria applicable to both wind farms. See Noise RTSR contained at Appendix K for further details.
Submitter S-126125 submission on noise at their property.	• General – One submitter raised this topic: Submitter S-126125. The closest residence where background noise has been conducted is Dwelling R36. The results of this monitoring and other locations around the wind farm have been used in developing the compliance curves and predictive noise modelling for the wind farm. The Applicant has confidence in the predicted noise levels identified through this process, noting that conservative assumptions have been used in the modelling. The noise levels at the submitter's property are expected to be well below the limits set out in the Development Consent. This is based on highly conservative modelling using the noise profile of one of the noisiest turbines on the market. Turbine suppliers for the Final Modified Project will be contractually bound to ensure the

Topic	Response
	noise limits contained within the Development Consent are met. In the highly unlikely event of any exceedance of the noise levels set out in the Development Consent during post-construction testing the Applicant will implement measures to ensure the Final Modified Project remains compliant with the Development Consent at all times by implementing a noise curtailment strategy. In light of the extensive noise monitoring and modelling already carried out, the Applicant does not propose to conduct additional background noise monitoring prior to construction.
Corona and Aeolian noise impacts at Dwelling R38	• General – One submitter raised this topic: S-126126 Corona and aeolian noise are not considered an issue for dwellings with separation distances greater than 50-100m from the transmission lines. As no dwellings are within this separation distance, no adverse impacts from corona and aeolian noise are expected.
Noise impacts of batch plant in relation to their property	• General – One submitter raised this topic: S-126167 The closest non-associated dwelling to a proposed batching plant is approximately 1100 m away. Noise from typical batching plant machinery is predicted to be 34 dB(A) at 1100 m.
Requests post-construction noise compliance monitoring	• General – One submitter raised this topic: S-126208 Operational noise monitoring is required by Condition 13 of Schedule 3 to the Development Consent to determine whether the development is complying with the relevant noise criteria: *Within 6 months of the commencement of operations, the Applicant must:* *(a) undertake noise monitoring to determine whether the development is complying with the relevant conditions of this consent; and* *(b) submit a copy of the monitoring results to the Department and the EPA.*
Additional dwelling on the property of Dwelling R121 has never been considered and general concern about noise impacts at Dwelling R121	• General – One submitter raised this topic: S-126228 The Applicant has endeavoured to identify all relevant receptors and do so in consultation with the community members. Considering the unidentified dwelling is in the same complex as Dwelling R121 (150 m separation) it is considered that the dwelling would have the same impacts from the wind farm as Dwelling R121. The Revised ENA confirms Dwelling R121 is unlikely to exceed the environmental noise criteria.
Noise impacts at Dwelling R271	• General – One submitter raised this topic: S-126259 The Revised ENA states Dwelling R271 is unlikely to exceed the environmental noise criteria.
Construction noise mitigation strategies	• General – One submitter raised this topic: S-126674 The Revised ENA suggests mitigation strategies to be incorporated into a CNMP, which could include: • scheduling construction work, including heavy vehicle movements to between 7am and 6pm Monday to Friday, and between 8am and 1pmn on Saturdays (per the requirements of Condition 8 of Schedule 3 to the Development Consent). • locating fixed noise sources as far as reasonably practicable from residences. • installing acoustic screens around fixed noise sources. • enclosing generators and compressors. • implementing alternative processes (where feasible and reasonable). • ensuring effective site, equipment and vehicle management.
References 'Wauba experience' where people's homes were acquired because planning was flawed.	• General – One submitter raised this topic: S-126159 It is unclear in the submission how the Waubra Wind Farm relates to the Proposed Modification. The Development Consent contains stringent mitigation measures which will

Topic	Response
	continue to be complied with for the Final Modified Project.
Noise report and modelling is inadequate	• General – One submitter raised this topic: S-126282 The Revised ENA has been prepared in accordance with the Nosie Bulletin. This is discussed further in Section 4.2.6.

4.5.8 Aboriginal Heritage

Aboriginal Heritage is discussed more broadly in Section 4.2.7. Table 33 outlines the Applicant's response to the issues raised in relation to Aboriginal heritage.

Table 33: Response to Aboriginal Heritage Topics

Topic	Response
Impacts to Aboriginal heritage items including: • proximity of T1, T2, T3 and T4 to SU27/L1 • general impacts to Aboriginal heritage items	• Modified Project – Three submitters raised this topic: S-126112, S-126150 and S-126151. • General – Two submitters raised this topic: S-126192 and S-126228. The Modification ACHA found that: • The Modified Project would result in a similar to moderately increased level of harm in comparison to the Approved Project. Note this level of harm is referring to the potential destruction of the archaeological context and not the Aboriginal objects themselves. • The Modified Project has the potential to impact on 42 sites, 10 more than the Approved Project. The Addendum to the ACHA (contained at Appendix M) found the proposed refinements made to the Modified Project will not materially change the level of Aboriginal heritage impacts associated with the Final Modified Project. A Heritage Management Plan (HMP) will be prepared and implemented for the Project as required by Condition 25 of Schedule 3 to the Development Consent. The HMP will include details of the measures that will be implemented for protecting Aboriginal heritage items outside of the project disturbance area. See Section 4.2.7 and a detailed response regarding SU27/L1 is provided in the Aboriginal Heritage RTSR contained at Appendix L.
Concern that field surveys were not adequate enough to capture all important artefacts	• Modified Project – Two submitters raised this topic: S-126112 and S-126210 • General – One submitter raised this topic: S-126228 The surveys conducted for the Modified Project covered 414 ha (including the Indicative Development Footprint – External Roads). This is compared to the 303 ha surveyed as part of the Approved Project. The surveys that were done as part of the Modification Application covered areas of the proposed development footprint that have not previously been subject to heritage assessment. This survey was targeted to these sections in accordance with the requirements of the Development Consent. The survey strategy (as outlined in the Addendum to the ACHA contained at Appendix M) was the most effective way to identify the presence of Aboriginal heritage objects and sites. Discussions were held in the field between the archaeologists and the Aboriginal community representatives from the Onerwal LALC and Buru Ngunawal Aboriginal Corporation, to ensure all were satisfied and agreed with the spacing, coverage and methodology.
Lack of consultation with local aboriginal people and users of aboriginal sites	• Modified Project – Two submitters raised this topic: S-126112 and S-126265 • General – Four submitters raised this topic: S-126118, S-126210, S-126259 and S-126623 See Section 4.2.7 and a detailed response to this topic is provided in the Aboriginal

Topic	Response
	Heritage RTSR contained at Appendix L.
No Native Title has been obtained for the Project	• General – One submitter raised this topic: S-126115 Native Title does not typically exist on freehold land. A search of the Native Title Tribunal website determined there were no granted Native Title determinations over the investigation area.
Impact on the old burial site	• General – One submitter raised this topic: S-126151 No burial site was identified within the extensive areas investigated as part of the Final Modified Project.
Burial ground for family has not been recognised	• General – One submitter raised this topic: S-126210 A detailed response to this topic is provided in the Aboriginal Heritage RTSR contained at Appendix L.
Blakney Creek was an Aboriginal meeting place, difficult to believe no artefacts found	• General – One submitter raised this topic: S-126210 An Aboriginal Heritage site was found near Blakney Creek, however this site will not be impacted by the Project.

4.5.9 Historic Heritage

Table 34 outlines the Applicant's response to topics raised in relation to historic heritage.

Table 34: Response to Historic Heritage Topics

Topic	Response
Concern about 20m buffer not being large enough from archaeological sites	• General – One submitter raised this topic: S-126139 The Modification ACHA specifies that a 20 m buffer is adequate to ensure there are no potential impacts to archaeological sites within the Final Modified Project site. Further detail on the required mitigation measures for potential impacts on historic heritage will be detailed in a Heritage Management Plan in accordance with Condition 25 of Schedule 3 to the Development Consent.

4.5.10 Water

Water is discussed more broadly in Section 4.2.8. Table 35 outlines the Applicant's response to topics raised in relation to water.

Table 35: Response to Water Topics

Topic	Response
Impact to main water supply for stock and village	• General – Four submitters raised this topic: S-126124, S-126125, S-126274 and S-126276 The Applicant's preferred water sourcing strategy is to source water for the Final Modified Project from groundwater resources within the Final Modified Project site. In doing so, the Final Modified Project will not impact on surrounding water sources within the local community, as discussed further in Section 4.2.8.
Water contamination and impacts to local water sources including: • backfilling of gullies	• General – Three Submitters raised this topic: S-126094, S-126184 and S-126277 In accordance with Condition 17 of Schedule 3 to the Development Consent, the Applicant

Topic	Response
causing diversion of natural water courses • Pudman Creek and surrounding water catchments	must comply with section 120 of the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act) that makes it an offence to pollute any waters. Prior to the commencement of construction, a CEMP will be prepared that will address erosion and sediment control. The CEMP will also outline ways to minimise land disturbance and prevent sediment contaminated water from leaving site.
Where will the Applicant water from for Project?	• General – Six submitters raised this topic: S-126064, S-126094, S-126151, S-126259, S-126282 and S-126622 The Applicant's preferred water sourcing strategy is to source water for the Project from groundwater resources within the Project site, as discussed further in Section 4.2.8.
Drainage around turbine footings needs to be considered	• General – One submitter raised this topic: S-126208 The final Project design will be done considering the unique soil and geological conditions of each wind turbine foundation, including drainage conditions. Accordingly, geological surveys will be completed prior to construction to inform the final design of the wind farm.
Tapping underground water supply will require further approvals	• General – One submitter raised this topic: S-126259 In accordance with Condition 16 of Schedule 3 to the Development Consent, the Applicant must obtain the necessary water licences under the *Water Act 1912* (NSW) and/or the *Water Management Act 2000* (NSW) for the development. This is discussed further in section 2.4.8.
How were construction water amounts calculated?	• General – One submitter raised this topic: S-126622 During the construction phase, an estimated 118.4 ML of water will be required for the Project. This is primarily for wind turbine foundations, substations, internal overhead lines and general construction activities (including dust settling and road construction). Water calculations are based on the Applicant's recent experience and actual water amounts constructing the Dundonnell Wind Farm, taking into account the differing geological conditions at the Project site and consultation with wind farm design and construction contractors.

4.5.11 Soil & Erosion

Soil and erosion is discussed more broadly in section 4.2.9. Table 36 outlines the Applicant's response to topics raised in relation to soil and erosion.

Table 36: Response to Soil and Erosion Topics

Topic	Response
Erosion causing contamination of local water sources	• Modified Project – Two submitters raised this topic: S-126071 and S-126124 • General Project – Four submitters raised this topic: S-126208, S-126227, S-126274 and S-126276 In accordance with Condition 17 of Schedule 3 to the Development Consent, the Applicant must comply with section 120 of the POEO Act that makes it an offence to pollute any waters.
General topics about erosion including: • vegetation removal causing erosion • earthworks causing damage to the land • increased erosion and impacts to soil generally • impacts to soils due to excavations on ridge	• Modified Project – Four submitters raised this topic: S-126094, S-126177, S-126263 and S-126279 • General Project – Eight submitters raised this topic: S-126071, S-126084, S-126085, S-126124, S-126136, S-126195, S-126208, S-126229 and S-126622 See Section 4.2.9 on soil and erosion. Prior to the commencement of construction, a CEMP will be prepared that will address erosion and sediment control. The CEMP will also outline ways to minimise land disturbance and prevent sediment contaminated water from leaving site.

Topic	Response
locations with weaker soils.	

4.5.12 Fire and Bushfire

Fire and Bushfire is discussed more broadly in Section 4.2.10. Table 37 outlines the Applicant's response to topics raised in relation to fire.

Table 37: Response to Fire and Bushfire Topics

Topic	Response
Concern the Project will prevent firefighters from combating bush fires (from aircraft/helicopters and on land)	• Modified Project – One submitter raised this topic: S-126150 • General – 10 submitters raised this topic: S-126115, S-126116, S-126118, S-126125, S-126177, S-126229, S-126263, S-126274, S-126276 and S-126279 See Section 4.2.10 on fire and bushfire.
Concern that the Project will cause fires	• General – Three submitters raised this topic: S-126177, S-126208 and S-126261 The Final Modified Project includes no new or additional potential ignition sources which do not already form part of the Approved Project. A number of studies have confirmed that wind farms such as the Project present limited bushfire risks, as discussed further in Section 4.2.10.

4.5.13 Electromagnetic Interference

Table 38 outlines the Applicant's response to topics raised in relation to Electromagnetic Interference.

Table 38: Response to Electromagnetic Interference Topics

Topic	Response
Impacts on telecommunications	• Modified Project – One submitter raised this topic: S-126150 • General – One submitter raised this topic: S-126194 All television broadcasts in Australia are now digital broadcasts. Digital television (DTV) signals are typically more robust in the presence of interference than analogue television signals and are generally unaffected by interference from wind turbines. DTV signals can pass through a wind farm to dwellings that are ordinarily able to receive DTV reception in an area of adequate signal strength.
Implication of ancillary infrastructure on EMI.	• General – One submitter raised this topic: S-126126 The submitter raised concerns regarding electromagnetic interference (EMI) arising from wind farm infrastructure such as workshops, tracks, and transmission lines, as well as radio frequency interference (RFI) effects. EMI associated with these components of a wind farm is generally not a significant issue, and the risks of such interference is expected to be low. EMI associated with workshops and tracks There is no mechanism by which civil infrastructure such as workshop buildings and tracks can cause noticeable EMI. It is expected that this equipment used within the wind farm would be compliant with the appropriate standards and requirements for electromagnetic compatibility, therefore unlikely to impact on other systems. EMI associated with transmission lines Transmission lines can potentially cause EMI through physical obstruction and diffraction of signals, reflection or scattering of signals, or electromagnetic noise generated by the transmission line.

Topic	Response
	Diffraction or reflection of signals may be an issue for fixed point-to-point style radiocommunications, if the transmission towers or lines are located within, or close to, the radiocommunication signal paths. However, the necessary clearance zones for transmission towers and lines to avoid EMI from diffraction or reflection of signals are typically smaller than for wind turbines. This significantly reduces the risk that the infrastructure will be located in the clearance zones and therefore have the potential to cause EMI. Other types of radiocommunications, such as radio and television broadcasting, may also be affected by signal diffraction and reflection from transmission infrastructure, depending on the relative locations of the broadcast tower, transmission line, and receiving antenna. However, physical interference for these point-to-area type services is only likely to be an issue for receivers located within several hundred metres of the transmission infrastructure.[19] EMI associated with RFI RFI refers to EMI caused by electromagnetic radiation emitted by devices in the same frequency spectrum as the affected signal. Wind farms do not have an adverse effect on radiocommunication services in the surrounding area. Wind turbine and wind farm design means that any electromagnetic emissions are likely to be counteracted, shielded, or damped within the infrastructure itself. Emissions associated with operating wind farms are typically indistinguishable from background levels at a short distance from wind turbines.
Impact of EMI at Dwelling R38	• General – One submitter raised this topic: S-126126 The EMI Assessment (contained at Appendix G.8 of the Modification Application) found that there will be no impacts to satellite internet signals intended for Australia for any dwellings in the vicinity of the Rye Park Wind Farm. Dwelling R38 is located in the potential interference zones for DTV signals from the Canberra broadcast tower and the Central Tablelands broadcast tower. However, Dwelling R38 is outside the official coverage areas for both of these towers and is most likely to be receiving signals from the SW Slopes/E Riverina tower, which are less likely to be affected by interference from the turbines at this location.

4.5.14 Shadow Flicker

Table 39 outlines the Applicant's response to topics raised in relation to shadow flicker.

Table 39: Response to Shadow Flicker Topics

Topic	Response
Potential increase of impacts from Shadow Flicker	• Modified Project – Five submitters raised this topic: S-126071, S-126084, S-126139, S-126150 and S-126208 • General – One submitter raised this topic: S-126277 The Shadow Flicker Assessment (contained at Appendix G.2 of the Modification Application) (SFA) found that the level of expected Shadow Flicker will meet the relevant shadow flicker guidelines: • *Draft National Wind Farm Development Guidelines (EPHC, 2010)* - Recommends a limit of 30 hours per year on the theoretical shadow flicker duration, and 10 hours per years on the actual shadow flicker duration. • *NSW Wind Energy Visual Assessment Bulletin (DPE, 2016b)* - Recommends a shadow flicker limit of 30 hours per year at residences in the vicinity of a wind farm. Overall, the SFA found the Modified Project will have no increased shadow flicker impacts at any non-associated residences, and the Modified Project will remain compliant with Condition 6 of Schedule 3 to the Development Consent, which requires that "shadow flicker from operational wind turbines does not exceed 30 hours per year at any non-associated residence": *The Applicant must ensure that shadow flicker from operational wind turbines does not exceed 30 hours per year at any non-associated residence.* Any residual shadow flicker can be further reduced through additional mitigation measures

[19] The nearest non-associated dwelling is located 350m from the 132kV Transmission Line

Topic	Response
	including the installation of screening structures or planting of vegetation.
How Shadow flicker guidelines have been applied to project	• General – Two submitters raised this topic: S-126112 and S-126262 The SFA assessed the Modified Project in accordance with the applicable guidelines: • Draft National Wind Farm Development Guidelines (EPHC, 2010), and • NSW Wind Energy Visual Assessment Bulletin (DPE, 2016b) The methodology used in the SFA was informed by these guidelines and standard industry practises based on guidelines adopted in the UK which is common practice in NSW.
Shadow flicker impacts at Dwelling R38	• General – One submitter raised this topic: S-126126 Dwelling R38 is situated on the west side of the Project site. Dwelling R38 does not have any predicted theoretical shadow flicker within 50 m of a dwelling as outlined in the SFA.
Shadow flicker from moon disrupting sleep at Dwelling R38	• General – One submitter raised this topic: S-126126 The SFA has assessed the expected annual shadow flicker durations for the Project in accordance with the requirements of the Development Consent, NSW Wind Energy Visual Assessment Bulletin (NSW Visual Assessment Bulletin), and Draft National Wind Farm Development Guidelines (Draft National Guidelines), none of which require the assessment of shadow flicker from moon light.
Concern regarding the geometrical model within the DNV GL WindFarmer Analyst software	• General – One submitter raised this topic: S-126126 The WindFarmer model has been validated against shadow flicker measurements for a wind turbine operating under clear-sky conditions and was found to predict the occurrence and duration of shadow flicker at the measurement locations with appropriate accuracy. Further, the SFA has been completed in accordance with the requirements of the Development Consent, the NSW Visual Bulletin and the Draft National Guidelines.
Concern taller turbines will cause blade glint	• Modified Project – One submitter raised this topic: S-126208 The SFA found that blade glint is not typically an issue for modern wind turbines, provided blades are coated with a non-reflective finish, in line with the requirements of Condition 4 of Schedule 3 to the Development Consent. The wind turbines being considered for the Project will comply with this requirement.
Shadow flicker and blade glint impacts at Dwelling R130	• General – One submitter raised this topic: S-126112 Dwelling R130 is situated to the north-west of the Project site. The SFA states that no predicted theoretical shadow flicker within 50 m of Dwelling R130 will occur. As set out above, the Development Consent contains conditions to mitigate blade glint in accordance with industry best practice.

4.5.15 Socio-economic Impacts

Socio-economic impacts are discussed more broadly in Section 4.2.11. Table 40 outlines the Applicant's response to topics raised in relation to socio-economic impacts.

Table 40: Response to Socio-Economic Topics

Topic	Response
Concern about loss of tenants due to increased operational noise at Dwelling R11	• General – One submitter raised this topic: S-126071 As outlined in the Revised ENA in Appendix J, with the curtailment strategy implemented for wind speeds of 8m/s and above, the noise level from the wind farm is predicted to achieve the noise criteria required by the Development Consent at all residences in the

Topic	Response
	vicinity, including Dwelling R11.
Concern about loss of peaceful and rural lifestyle, community feel and the Project causing community division	• General – 15 submitters raised this topic: S-126084, S-126112, S-126118, S-126151, S-126170, S-126192, S-126196, S-126208, S-126212, S-126229, S-126277, S-126622, S-126623, S-126631 and S-126674 See Section 4.2.11 on socio-economic impacts.
Concern about reduced property values	• General – 16 submitters raised this topic: S-126094, S-126098, S-126112, S-126150, S-126181, S-126169, S-126177, S-126183, S-126196, S-126216, S-126228, S-126229, S-126261, S-126262, S-126277 and S-126623. See Section 4.2.11 on socio-economic impacts.
Concern over 'incentives' being provided to non-host landowners, believe the Applicant is 'bribing' people	• General – Three submitters raised this topic: S-126115, S-126116 and S-126228 The Benefit Sharing Plan includes neighbour agreements, to ensure the immediate community directly benefits from the presence of the Project. An update on the Benefit Sharing Program is provided at Section 3.3.
Believes many of the landowners who will benefit from the Project don't live locally	• General – One submitter raised this topic: S-126125 Whilst some of the landowners who will benefit from being host landowners do not live locally, the Benefit Sharing Plan is designed to: • Ensure that the community directly benefits from the Project. • Contribute towards broader public benefits and economic development that address the needs of the region throughout the lifecycle of the Project. • Build on strategic opportunities to drive local innovation. An update on the Benefit Sharing Program is provided at Section 3.3.
Not informed about Project when they purchased property	• General – Two submitters raised this topic: S-126112 and S-126136 Information regarding proposed development adjacent to properties is available (depending on the type of assessment required): • local council websites; or • the NSW Major Projects Portal. The Project and the subsequent Modification Application were exhibited on the NSW Major Projects Portal. The Applicant has previously and will continue to consult with potential purchasers of land regarding the location and potential impacts of the wind farm development where the transfer is notified to the company.
Believes the Project is not within the public's interest	• General – One submitted raised this topic: S-126150 Justification for the Project, including its wider community benefits is discussed in Section 2.4.
Potential for conflict of interest with landowners having positions with local landcare group	• General – One submitted raised this topic: S-126228 The Applicant has consulted with members of the Boorowa Landcare Group to initiate early stage consultation on biodiversity offset sites, land management and rehabilitation opportunities. Preliminary conversations were initiated to ascertain interest and to explore more opportunities to support local organisations and businesses. The Applicant does not believe there would be a potential for conflict of interest for landowners involved with the Boorowa Landcare Group. The Applicant encourages local businesses and organisations to register their interest in providing goods and services for the Project, with a goods and services register available on the Applicant's website.
Concern about lack of consultation with Principal of	• General – One submitted raised this topic:

Topic	Response
Rye Park Public School and school's proximity to (RPWF and Bango) and "impacts" to students.	S-126265 The Applicant has consulted with Rye Park Public School on several occasions and will continue to do so. The school, led by the Principal, attended the Rye Park community drop-in information session in November, initiating conversations on opportunities to support school projects, education, and funding. Concerns relating to impacts on Rye Park Public School are further discussed in Section 4.5.5
Dwelling R130 wants to seek compensation for any damage to their property	• General – One submitted raised this topic: S-126112 Dwelling R130 is located to the north-west of the Project site, approximately 3 km away from the closest turbine. It is highly unlikely the construction or operation of the Final Modified Project will cause any damage to Dwelling R130. Potential impacts associated with construction, such as dust and noise will be managed through the CEMP.

4.5.16 Health and Safety

Health and safety are discussed more broadly in Section 4.2.12. Table 41 outlines the Applicant's response to topics raised in relation to health and safety.

Table 41: Response to Health and Safety Topics

Topic	Response
Potential for infrasound and cumulative infrasound health impacts	• General – 11 submitters raised this topic: S-126112, S-126113, S-126115, S-126116, S-126125, S-126139, S-126183, S-126194, S-126196, S-126263 and S-125703 There is no evidence that infrasound results in any adverse health impacts, including as a result of potential cumulative sources as discussed further in section 4.2.12.
Mental health implications of project	• General – Nine submitters raised this topic: S-126084, S-126118, S-126151, S-126170, S-126216, S-126265, S-126279, S-126623 and S-126674 This is discussed further in Section 4.2.12.
Safety around transportation during construction	• General – Seven submitters raised this topic: S-126064, S-126112, S-126125, S-126160, S-126229, S-126274 and S-126276 The TMP required by Condition 30 of Schedule 3 to the Development Consent will include detailed measures to minimise the traffic safety impacts of the development during the construction and decommissioning of the development.

4.5.17 Rehabilitation & Project End of Life

Table 42 outlines the Applicant's response to topics raised in relation to rehabilitation and Project end of life.

Table 42: Response to Rehabilitation and Project End of Life Topics

Topic	Response
Concern the Applicant may not exist in the future to rehabilitate the Project site	• General – One submitted raised this topic: S-126181 Whilst at this present time, the Applicant is committed to being the owner and operator of the Project through its construction, operation and decommissioning phases, any future owner or operator of the Project must comply with the decommissioning requirements of the Development Consent, as development consents run with the land.
Need to rehabilitate the Project to original use / dilapidation reports	• General – One submitted raised this topic: S-126208

Topic	Response
	In accordance with Condition 37 and 38 of Schedule 3 to the Development Consent, the Applicant will meet all decommissioning objectives and progressive rehabilitation activities.
Concern project will never be decommissioned	• General – One submitted raised this topic: S-126622 The Final Modified Project is expected to be operational for approximately 30 years. Condition 39 of Schedule 3 to the Development Consent requires that: *Any individual wind turbines which cease operating for more than 12 consecutive months must be dismantled within 18 months after that 12-month period, unless the Secretary agrees otherwise.*
Concern about amount of concrete required for wind turbine foundations and it's use after operation ceases	• General – Two submitters raised this topic: S-126150 and S-126184. In accordance with Condition 37 of Schedule 3 to the Development Consent, the Applicant is required to meet several rehabilitation objectives including covering the wind turbine pads with soil and/or rock for revegetation once the wind farm ceases operation.
Concern about whether the Applicant will sell the Project	• General – Two submitters raised this topic: S-126125 and S-126622 At the present time, the Applicant intends to be the owner and operator of the Project through construction, operation and decommissioning.

4.5.18 Project Rationale

Justification for the Project is discussed in Section 2.4. Table 43 outlines the Applicant's response to topics raised in relation to Project rationale.

Table 43: Response to Project Rationale Topics

Topic	Response
Concern over quantity of existing windfarms in region	• General – One submitted raised this topic: S-126229 Despite the number of existing wind farms in the region, the Project will play a significant role in meeting renewable energy generation and climate change targets are discussed in Section 2.4.2.
Believes alternative renewable energy sources are better	• General – Two submitters raised this topic: S-126139 and S-126229 Whilst alternate renewable energy sources have various merits, the Project site was identified as an optimal wind resource due to its elevated ridgelines and strong prevailing winds that will, optimising its energy generating capacity. Renewable electricity generated from wind farms has been consistently identified (along with solar farms) as an environmentally friendly and cost-effective technology.
Does not believe in economic rationale for project	• General – One submitter raised this topic: S-126113 See Section 4.2.11 on the economic benefits of the Final Modified Project.
Believes wind farms don't help climate change / are intermittent energy generation sources	• General – Three submitters raised this topic: S-126139, S-126622 and S-126631 The Project's contribution to meeting renewable energy generation and climate change targets are discussed in Section 2.4.2.
Rationale of project considering extent of environmental impacts	• General – Four submitters raised this topic: S-126151, S-126622, S-126282 and S-126674. See Section 2.4.2 on climate change impacts.
Where will the energy go once generated	• General – One submitter raised this topic:

Topic	Response
	S-126151 The Applicant will either enter into a long-term contracts to sell renewable energy at agreed volumes and prices or sell the electricity into the wholesale National Electricity Market through the spot market. The spot market is the mechanism that Australian Energy Market Operator (AEMO) uses to match the supply of electricity from power generators with real time consumption by households and businesses. The electricity generated from the Final Modified Project will power homes and businesses throughout NSW and other states connected to the National Energy Market.
Concern about foreign company as developing the Project	• General – One submitter raised this topic: S-126194 Tilt Renewables is a dual New Zealand and Australian listed owner, operator and developer of established wind farms. Tilt Renewables has had a strong track record developing wind assets in Australia and New Zealand, developing and operating Australian projects across Queensland, New South Wales, Victoria, South Australia and Western Australia. Tilt Renewables aims to operate in a manner that maximises potential positive environmental effects, while minimising the incidence and source of any adverse environmental effects which may arise from the Final Modified Project.
Questions the impact that the project (and other wind farm projects generally) will have on power mix	• General – One submitter raised this topic: S-126282 The electricity generated by wind farms is a reliable source of power generation which complements other generation and storage capabilities connected to the National Electricity Grid to ensure there is an ongoing ability to meet electricity demand and ensure security of electricity supply. Australia's energy transition towards renewable generation sources is now well advanced and the AEMO ensures that intermittent renewables are accounted for in the National Electricity Market (NEM). Accordingly, the NEM is being actively positioned by AEMO to ensure that it remains able to accept and manage intermittent renewable electricity generation (including wind and solar) and the intermittency of the electricity generated by the Project is accounted for, and indeed expected, by AEMO. AEMO's efforts to rapidly incorporate renewables as a part of Australia's transition to a low-carbon economy is complemented by the NSW Government's 'NSW Electricity Strategy' released on 22 November 2019 which confirms that renewable electricity generation is a crucial component of NSW's energy mix.

4.5.19 Presentation and Validity of Information

Table 44 outlines the Applicant's response to issues raised in relation to the presentation and validity of the information contained in the Modification Application Report.

Table 44: Response to Presentation and Validity of Information Topics

Topic	Response
Difficulty Interpreting Maps	• General – Four submitters raised this topic: S-126063, S-126071, S-126112 and S-126139 Several submitters stated they had difficulty interpreting information on the maps that supported the Modification Application. Where clarifications to maps have been requested, these have been amended and appended to this report. Clarifications to the Modification Application are discussed further in Section 2.3.
Incorrect location of Rye Park described as to the West of the Project Boundary	• General – Six submitters raised this topic: S-126063, S-126064, S-126085, S-126179, S-126259 and S-126265 As part of this report, the Applicant seeks to correct minor errors made in the Modification Application, including wording that states the Project is to the west of Rye Park village. This is discussed further in Section 2.3.
Independent assessors should assess impacts	• General – One submitter raised this topic: S-126071

Topic	Response
	The Applicant has used market leading, independent consultants to prepare the technical assessments that have supported the assessment of the Project. The Applicant engaging independent consultants is the prevailing standard for the assessment of development such as the Final Modified Project in NSW.
Suggests information is inaccurate	• General – Four submitters raised this topic: S-126114, S-126126, S-126265 and S-126279 The Applicant has engaged market leading, independent consultants to prepare the technical assessments that have supported the assessment of the Proposed Modification. Each of these technical assessments have been done in accordance with the applicable guidelines. Our independent consultants are bound by the professional standards applicable to their professions.
Issue downloading documentation due to file size / lack of internet	• General – Five submitters raised this topic: S-126124, S-126125, S-126259, S-126274 and S-126276 Accessing the information associated with the Modification Application is discussed further in Section 4.2.13.
Additional dwelling at R121 not shown on maps	• General – One submitter raised this topic: S-126228 The submitter has indicated there are two dwellings located at R121, one of which is not shown on the maps. This is discussed in Section 4.5.7.
Property depicted as 'yellow' in maps. What does this mean?	• General – One submitter raised this topic: S-126224 The submitter has not provided an address, name, nor specific map they are referring to. Accordingly, the Applicant cannot respond adequately to this submission.
Maps show development footprint encroaching on private land the Applicant doesn't have agreements for, particularly around intersections	• General – One submitter raised this topic: S-126228 The Applicant acknowledges an unintended error in two maps submitted as part of the Modification Application that showed the Indicative Development Footprint – External Roads encroaching onto land at the intersection of Dillion and Long Streets in Boorowa. This is discussed further in Section 2.3 and has been clarified in that section.

4.5.20 Consultation Process

The consultation process is discussed more broadly in Section 4.2.13. Table 45 outlines the Applicant's response to the issues raised in relation to the consultation process.

Table 45: Response to Consultation Process Topics

Topic	Response
General lack of consultation	• General – 21 submitters raised this topic: S-126084, S-126085, S-126112, S-126115, S-126116, S-126125, S-126136, S-126139, S-126160, S-126176, S-126185, S-126210, S-126216, S-126219, S-126224, S-126228, S-126262, S-126265, S-126277, S-126622 and S-126623 Consultation that has been done to date for the Modification Application is discussed further in Section 3.0.
Timing of public exhibition process	• General – 11 submitters raised this topic: S-126064, S-126125, S-126132, S-126150, S-126155, S-126181, S-126265, S-126274, S-126276, S-126279 and S-126623 See Section 4.2.13 on the consultation process and Section 4.2.14 on the assessment process.
People feeling they're not being listened to	• General – Five submitters raised this topic: S-126125, S-126151, S-126167, S-126169 and S-126259

Topic	Response
	See Section 4.2.13 on the consultation process.
The Applicant not following up on conversations/promises made at public consultations	• General – Three submitters raised this topic: S-126259, S-126265 and S-126282 The consultation that has been done to date for the Modification Application is discussed further in Section 3.0. The Applicant has responded to all logged consultation requests.
General disappointment with the consultation that has been undertaken	• General – Three submitters raised this topic: S-126228, S-126279 and S-126282 The consultation that has been done to date for the Modification Application is discussed further in Section 3.0. The Applicant's approach to community and stakeholder engagement is detailed in the Stakeholder and Community Engagement Plan contained at Appendix I of the Modification Application Report.
Misinformation from Epuron / Tilt about the tip height not increasing	• General – One submitter raised this topic: S-126098 This information was correct when it was provided. Turbine technology has since developed and the Proposed Modification seeks to utilise the newer more efficient turbines to maximise the renewable energy benefits of the Project.
Believes there is a significant lack of community support for the Project	• General – Three submitters raised this topic: S-126115, S-126116 and S-126125. See Section 4.2.13 on the consultation process.
Chosen papers to advertise in were not appropriate given people most affected do not live in Sydney and due to Corona Virus	• General – Two submitters raised this topic: S-126274 and S-126276 See Section 4.2.13 on the consultation process.
The Applicant stated modification to the Development Consent will only be for tip height increase	• General – One submitter raised this topic: S-126125 See Section 4.2.13 on the consultation process.
Lack of consultation with landowners along Preferred Transport Route	• General – Four submitters raised this topic: S-126064, S-126124, S-126213 and S-126265 See Section 4.2.13 on the consultation process.
Lack of community consultation with non-neighbours / non- host landowners	• General – One submitter raised this topic: S-126622 See Section 4.2.13 on the consultation process.
Tilt only presenting positives of the project at community engagement sessions in November	• General – One submitter raised this topic: S-126622 See Section 4.2.13 on the consultation process.
Suggests letter box drop would have been more effective communicating the Modification Application	• General – One submitter raised this topic: S-126623 See Section 4.2.13 on the consultation process.
The Applicant 'pestering' couple on Yass St to sell property.	• General – One submitter raised this topic: S-126085 No landholders have been 'pestered' and landholder's decisions are always fully respected.
Lack of consultation regarding the location of access points, batch plans and site offices	• General – Two submitters raised this topic: S-126274 and S-126276 Access points are not changing as part of the Proposed Modification. Access points have been selected based on the Preferred Transport Route in accordance with Appendix 7 to the Development Consent. See Section 4.2.13 on the consultation process in relation to

Topic	Response
	the other aspects.

4.5.21 Assessment Process

The assessment process is discussed more broadly in Section 4.2.14. Table 46 outlines the Applicant's response to topics raised in relation to the assessment process.

Table 46: Response to Assessment Process Topics

Topic	Response
No Environmental Impact Assessment in the modification process	• General – Five submitters raised this topic: S-126065, S-126071, S-126084, S-126115 and S-126116 The Proposed Modification has been robustly assessed in accordance with the requirements of the EP&A Act
Department previous recommendation to remove 16 turbines near Rye Park village, however IPC reinstated 8. Now they're increasing in height.	• General – Three submitters raised this: S-126071, S-126084 and S-126124 The Final Modified Project has a reduction of 15 turbines compared to the Approved Project. Three of these turbines have been removed during the RTS phase in response to community and regulatory feedback. See Section 4.2.5 for further details on visual impact.
Concern that changes are so great it should be classified as a new project	• General – One submitter raised this topic: S-126255 The Proposed Modification remains substantially the same development as the development authorised by the Development Consent and section 4.55(2) of the EP&A Act is the correct assessment pathway for the Proposed Modification.
Lack of transparency / governance / due process	• General – Seven submitters raised this topic: S-126169, S-126195, S-126196, S-126228, S-126259, S-126279 and S-126622. The Modification Application has been assessed in accordance with the EP&A Act.
DPIE allegedly assured residents the Preferred Transport Route would not go through Rye Park Village	• General – One submitter raised this topic: S-126125 The Applicant has sought to minimise any potential impacts caused by the Preferred Transport Route and will continue to do so through the preparation of a TMP as required by Condition 30 of Schedule 3 to the Development Consent. See Section 4.2.4 for further details on the transport route.
Concern about false and misleading submissions	• General – One submitter raised this topic: S-126148 This concern appears to relate to the submissions provided by the public in relation to the Proposed Modification. The Applicant has reviewed all the public submissions and provided appropriate responses.
Modification Process favours Applicants over community	• General – One submitter raised this topic: S-126282 The Modification Application has been assessed in accordance with the assessment process which applies to all modification applications under section 4.55(2) of the EP&A Act.

4.6 Public Submissions – Supports

DPIE received a total of 20 Public Submissions that in support of the Project during the public exhibition period. Figure 4 illustrates the key supportive topics. Of the submissions received within 10km of the Project site, 18% of these submissions were supportive of the Project. Table 47 outlines the Applicant's response to topics raised in support of the Project.

Table 47 Summary of Supportive Submissions

Topic	Summary
Renewable energy generation	• General – 13 submitters raised this topic: S-125635, S-126093, S-126153, S-126154, S-126156, S-126157, S-126163, S-126165, S-126174, S-126200, S-126264, S-126270 and S-126273 The Final Modified Project will increase the potential energy generation from the site with a decrease in the number of turbines. See Section 2.4.1 for further details on the increased energy generation.
Creation of local jobs	• General – 18 submitters raised this topic: S-125635, S-126079, S-126093, S-126095, S-126110, S-126131, S-126153, S-126154, S-126156, S-126157, S-126158, S-126165, S-126174, S-126187, S-126200, S-126264, S-126270 and S-126273 The Final Modified Project will create local jobs during the construction and operation phases and will have wider economic benefits for the area. See Section 2.4.4 for further details on jobs and economic benefits for the community.
Alternate income for farmers.	• General – Nine submitters raised this topic: S-126081, S-126093, S-126095, S-126110, S-126131, S-126187, S-126200, S-126270 and S-126273 The Final Modified Project will provide a drought proof and post-retirement income for farmers. See Section 2.4.4 for further details on jobs and economic benefits for the community.
Acceptable level of environmental impacts.	• General – 11 submitters raised this topic: S-126079, S-126095, S-126110, S-126154, S-126156, S-126157, S-126165, S-126174, S-126200, S-126270 and S-126273 The Modification Application Report contained a detailed assessment of the environmental impacts of the Proposed Modification in line with consultation carried out with DPIE. See Section 4.2.14 for further details on the assessment undertaken.
Supportive of Government Policy	• General – Four submitters raised this topic: S-126095, S-126154, S-126187 and S-126270 The Proposed Modification will enable the Project to further support NSW and Commonwealth climate change mitigation strategies including the NSW Government's "Net Zero Plan" and the Commonwealth Government's National Determined Contribution under the Paris Climate Agreement. See Section 2.4.2 for further details. Section 5.3 of the Modification Application provides additional details on Government Policy
Positive dealings with the Applicant	• General – Four submitters raised this topic: S-126131, S-126200, S-126270 and S-126273 The Applicant has endeavoured to engage positively with all members of the community. See Section 3.0 for a summary of community consultation undertaken for the Project.
Opportunity for environmental regeneration activities	• General – Three submitters raised this topic: S-126187, S-126200 and S-126273 The Applicant is currently progressing options for biodiversity offsets including working with local environmental groups where possible. The Biodiversity Offset Strategy is included in Section 8 of the Revised BDAR
Acceptable visual impacts	• General – Two submitters raised this topic: S-126095 and S-126187 The VIA undertaken for the Modification Application concluded that *The Proposed Modifications is not considered to result in a magnitude of visual change that would significantly increase visual effects (and former visual impact ratings) associated with the Approved Project.* The VIA has been updated as part of the RTS. See Section 4.2.5 for further details on visual impact.
Investment in the local	• General – 11 submitters raised this topic:

Topic	Summary
community	S-126079, S-126081, S-126093, S-126095, S-126110, S-126158, S-126187, S-126200, S-126264, S-126270 and S-126273 The Final Modified Project will provide investment in the community through the Benefit Sharing Plan (as described in Section 3.3) and through wider economic benefits generated by the Project (as described in Section 2.4.4).

5.0 Conclusion

The Proposed Modifications are required to enable the Project to utilise improvements in wind energy technology to enable significantly more renewable energy production to be achieved with fewer, larger wind turbines and to reflect the outcomes of ongoing design optimisation and assessment as the Project progresses towards construction.

The overall public interest benefits clearly and strongly favor approval of the Proposed Modification. These can be summarised as follows:

- the Final Modified Project will generate approximately 1,314 GWh of renewable electricity per year. This represents a 26% increase in renewable energy when compared to the Approved Project and can be achieved with 16% less turbines than the Approved Project. Accordingly, the Final Modified Project will generate enough electricity to power 220,000 average Australian homes, approximately 50,000 more homes than the Approved Project.
- the increased renewable energy from the Final Modified Project will assist in replacing the 1000 megawatt shortfall identified by the Australian Energy Market Operator as being required for the lost generation capacity which will result from the planned closure of the Liddell Power Station in April 2023, helping to ensure ongoing security of supply. Further such shortfalls are likely to occur as NSW's coal fired power stations continue to be retired in coming years unless there is ongoing sustained investment in new generation capacity from projects such as Rye Park Wind Farm.
- the increased renewable energy from the Project will resulting in a lower cost of energy from than available from the Approved Project, with clear benefits to the end user and energy consumer.
- the 26% increase in emissions free, renewable energy will help NSW with its necessary and inevitable transition away from its current reliance on fossil fuels which are continuing to contribute to climate change impacts and risks. This is particularly important for NSW and Australia given:
    - Australia has one of the highest per capita emissions of carbon dioxide in the world and is also one of the countries most exposed to human induced climate change, as evidenced by the unprecedented bushfires which occurred over 2019/20.
    - the Final Modified Project will offset more than one million tonnes of carbon emissions per annum – equivalent to removing 330,000 cars from the roads each year. This will ensure that the Final Modified Project is able to fully offset its construction and manufacturing carbon emissions well within the first year of operation.
    - the NSW Government's targets set out in the "Net Zero Plan" to reduce greenhouse gas emissions by 35% by 2030 (from a 2005 baseline) and the complementary goal of reducing greenhouse gas emissions by 60% by the year 2050.
    - the Commonwealth Government's National Determined Contribution under the Paris Climate Agreement to reduce Australia's greenhouse gas emissions by 26-28% by 2030 (on a 2005 baseline).
- these benefits will be further realised as a result of the greater efficiency which the Proposed Modification enables by optimising cabling and transmission line infrastructure to minimise electrical losses and maximise the generation capacity of the Project. Subsequent benefits as a result of this include:
    - reduction of transmission losses
    - minimisation of resource use and waste generation
    - reduced project cost and timelines, and
    - reduced haulage requirements.

- the Project will have significant economic and job creation benefits on a local and regional scale, helping to assist the economic recovery from the Covid-19 Pandemic. The Final Modified Project represents a direct investment of over $700 million. In terms of direct employment, the Final Modified Project will provide full time employment for up to 250 staff during construction and up to 10 ongoing regional jobs during its operational life providing increased employment opportunities, including for local workers.
- the Project will also result in a direct injection of approximately $2-$3 million per annum to the local community through payments to landholders, permanent staff and benefit sharing plan contributions providing better diversification of income and a drought proof and post retirement income for farmers and shared benefits.

The additional information provided in this RTS Report:

- provides responses to government agency submissions and recommendations;
- provides response to special interest organisations;
- provides responses to public submissions; and
- further assesses the Proposed Modification to reflect the matters raised in submissions, including by providing additional assessments from the appropriate technical specialist including biodiversity, heritage, visual, aviation and noise.

The impacts of the Proposed Modification have been fully assessed in the Modification Assessment Report and further assessed in this RTS Report. It is acknowledged that the Proposed Modification will have some increased visual impacts as a result of the increased turbine envelope and some increased biodiversity impacts as a result of the further clearing required. These impacts will be mitigated or offset in accordance with the mitigation measures proposed and the conditions of the Development Consent.

The further assessment carried out has found that the overall public benefits of the Proposed Modification significantly outweigh any additional impacts resulting from the Proposed Modification and, in light of this, there are no impacts or issues raised in submissions which could be said to reasonably justify a refusal of the Proposed Modification.

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