

**RYE PARK WIND FARM –
MODIFICATION 2 (WITH
COOKS HILL ROAD)**

Confirmation of Credit Liabilities

REVISED FINAL

September 2022

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Confirmation of Credit Liabilities

REVISED FINAL

Prepared by
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on behalf of
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1.0 Executive Summary

This report provides the updated biodiversity credit requirement for the Rye Park Wind Farm project (the Development) by Rye Park Renewable Energy Pty Ltd (RPRE) in accordance with Schedule 3 Condition 20 of the NSW Approval (SSD 6693-Mod1) detailed in **Section 2.0**. Furthermore, these calculations will form an attachment to the Offset Strategy prepared to meet the requirements of Condition 14 of EPBC 2020/8837, detailed in **Section 2.0**.

The updated calculations have been prepared following the progression of the Development's detailed design. This includes consideration and assessment of minor works proposed along Cooks Hill Road as required by Upper Lachlan Shire Council as part of the road upgrades of the Development. The total extent of impact area proposed along Cooks Hill Road is 0.12 hectares.

The updated biodiversity credit requirements outlined in this report has been prepared using the same methodology employed in the updated biodiversity credit requirements report prepared in October 2021 for MOD 1 (Umwelt 2021a). This revised design of the Development for MOD 2 is hereafter referred to as the 'revised pre-construction final development footprint'. This is a revised Mod 2 Confirmation of Credit Liability report (R19 dated 6 September 2022) that was submitted with the Mod2 application in September 2022 (Umwelt 2022).

The pre-construction final development footprint is shown on the final layout plans prepared in accordance with Schedule 2 Condition 10 of the Development Consent and Condition 12 of EPBC 2020/8837.

Umwelt has completed a detailed review of the pre-construction development footprint including GIS analysis to ensure the Project is in accordance with impact thresholds identified in Condition 18 of the NSW Approval (SSD 6693-Mod1) and Condition 3 of EPBC 2020/8837.

This review has confirmed that the revised pre-construction final development footprint has reduced impacts on the BC Act and EPBC Act CEECs and four species-credit species (striped legless lizard, squirrel glider, superb parrot and golden sun moth) when compared against the MOD 1 Impact Assessment Addendum (Umwelt 2021b).

When compared against the MOD 1 confirmation of credit liabilities (Umwelt 2021a) the striped legless lizard remains unchanged, superb parrot has increased by 0.11 hectares, golden sun moth has decreased by 0.24 hectares and squirrel glider has increased by 2.53 hectares. Impacts for the southern myotis remains unchanged (Umwelt 2020b). A summary of the comparison of impacts is provided below:

- Striped legless lizard:
 - 41.00 hectares of impact proposed in the revised pre-construction final development footprint, remaining unchanged with the Confirmation of Credit Liabilities (Umwelt 2021a)
 - 43.07 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 2.07 hectares.**
- Superb parrot:
 - 19.34 hectares of impact proposed in the revised pre-construction final development footprint, an increase of 0.11 hectares compared with the Confirmation of Credit Liabilities (Umwelt 2021a)
 - 19.92 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 0.58 hectares.**

- Golden sun moth:
 - 76.32 hectares of impact proposed in the revised pre-construction final development footprint, a decrease of 0.24 hectares compared with the Confirmation of Credit Liabilities (Umwelt 2021a)
 - 85.22 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 8.9 hectares.**
- Squirrel glider:
 - 84.59 hectares of impact proposed in the revised pre-construction final development footprint, an increase of 2.43 hectares compared with the Confirmation of Credit Liabilities (Umwelt 2021a).
 - 103.23 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 18.64 hectares.**

Three of the four PCTs recorded for the Project have reduced impacts and PCT 335 has an increased impact (0.03 hectares). The latter is not a threatened ecological community and does not provide habitat for any threatened species.

The additional Biodiversity Assessment undertaken for MOD2 within the revised pre-construction final development footprint did not identify new Matters of National Environmental Significance (MNES) applicable to the Project. In summary, MOD2 proposes to impact the same MNES identified, assessed and approved through MOD1 (EPBC 2020/8837).

Based on the following information presented in this report, it is considered MOD 2 is categorised as a '*Modification involving minimal environmental impact*' under Section 4.55(1A) of the EP&A Act as the proposed changes will have a 'like-for-like' environmental impact to what has been approved as part of SSD 6693-MOD 1.

Furthermore, Umwelt consider MOD 2 does not result in an increased impact on the biodiversity values of the Project area. Therefore MOD 2 is in line with Part 7, Division 4, Section 7.17(2c) of the BC Act. We seek consideration of this from DPE and confirmation that a BDAR is not required for MOD 2. Rather, it is proposed that this report, in combination with the MOD 2 report prepared by Tilt Renewables to support assessment and approval MOD 2.

It is understood that the developed layout will continue to be refined through the detailed design / construction stages. It is noted that micro-siting of infrastructure is permitted under Schedule 2 Condition 8 of the Development Consent and the conditions of the EPBC 2020/8837. Further detail on micro-siting is provided in **Section 7.0**.

Prior to the commencement of operations (or following any upgrades of any wind turbines or ancillary infrastructure), executed plans showing the comparison to the revised pre-construction final development footprint will be prepared in accordance with Schedule 5 Condition 6 of the Development Consent and Condition 15 of the EPBC 2020/8837, and will be submitted to the relevant departments. Similarly, the offset strategy for the project will be prepared and submitted to DAWE for approval by the Minister, in accordance with Condition 14 of EPBC 2020/8837. If the executed plans (completed layout) show increased impacts to protected matters, a revised Offset Strategy will be submitted for approval by the Minister, that compensates for those increased impacts, in accordance with Condition 15 of EPBC 2020/8837.

2.0 Introduction

Rye Park Renewable Energy Pty Ltd (RPRE) is developing the Rye Park Wind Farm Project (the Development) in southern NSW broadly between Yass and Boorowa (**Figure 2.1**).

The Project was granted a Development Consent (SSD 6693) (the Development Consent) by the NSW Planning Assessment Commission (PAC, now known as the Independent Planning Commission), subject to conditions, under the *Environmental Planning & Assessment Act 1979* (EP&A Act) on 22 May 2017, and a modification (MOD 1) approved 15 April 2021.

The Commonwealth approved the Development (EPBC 2020/8837) under the *Environment, Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 1 June 2021¹, subject to conditions, following assessment by preliminary documentation under Section 87 of the EPBC Act.

This report been prepared to support the Modification Application 2 Report being prepared by Tilt Renewables to request to modify Development Consent State Significant Development (SSD) 6693 – Modification 1 (Development Consent, or SSD 6693-MOD 1) under the *Environment Planning and Assessment Act 1979* (EP&A Act).

As part of the progression of the Project's design and ongoing discussions with stakeholders, MOD 2 involves updates to the Development Corridor – Wind Farm to facilitate optimisations to several sections of access track and increase efficiencies in the overall Project layout. It also considers ongoing consultation with landholders relating to progression of the detailed design of the Project. Further to MOD 2, this assessment also considers additional public road upgrades, being the assessment of minor works proposed along Cooks Hill Road as required to meet the design specification requested by Upper Lachlan Shire Council. The total extent of impact area proposed along Cooks Hill Road is 0.12 hectares, which is in addition to the previously assessed public road upgrade disturbance as part of the Development

This report provides an update to the areas of impact and credit requirements for the Development using the Biodiversity Assessment Method – Credit calculator (BAM CC) following progression of detailed design of the Development and reflects the revised pre-construction final development footprint. This will be made available on www.ryeparkwf.com.au. The information provided in this report relates to the detailed assessment completed for the Project in accordance with the Biodiversity Assessment Method (2017), specifically the Biodiversity Development Assessment Report (BDAR) exhibited in August 2020 (Umwelt 2020a), the Impact Assessment Addendum lodged in November 2020 (Umwelt 2020b) and the previous MOD 1 Confirmation of Credit Liabilities report (Umwelt 2021a) and the MOD 2 Confirmation of Credit Liabilities report (Umwelt 2022).

This report has been prepared in accordance with the requirements of Schedule 3 Condition 20 of the NSW Approval (SSD 6693-Mod1) which requires:

20. Prior to the commencement of construction, unless the Planning Secretary agrees otherwise, the Applicant must:

- a) update the baseline mapping of the vegetation and key habitat within the final disturbance area; and*

¹ Note. the Rye Park Wind Farm was originally granted approval (EPBC 2014/7163) on 6 December 2017, however due to a number of proposed modifications to the action a new referral was made in 2020.

- b) *calculate the biodiversity offset credit liabilities for the development in accordance with the Biodiversity Assessment Method under the NSW Biodiversity Offsets Scheme,*

in consultation with BCS, and to the satisfaction of the Department.

Furthermore, these calculations will form an attachment to the Offset Strategy prepared to meet the requirements of Condition 14 of EPBC 2020/8837, specifically to address Condition 14(b):

14. The Offset Strategy must be prepared by a suitably qualified expert(s), and must:

- b) *based on the areas of habitat for protected matters, including HBTs, to be impacted in the final layout, propose offsets to compensate for impacts to:*

- i. *Box Gum Woodland;*

- ii. *Superb Parrot habitat, including HBTs;*

- iii. *Golden Sun Moth habitat; and*

- iv. *Striped Legless Lizard habitat*

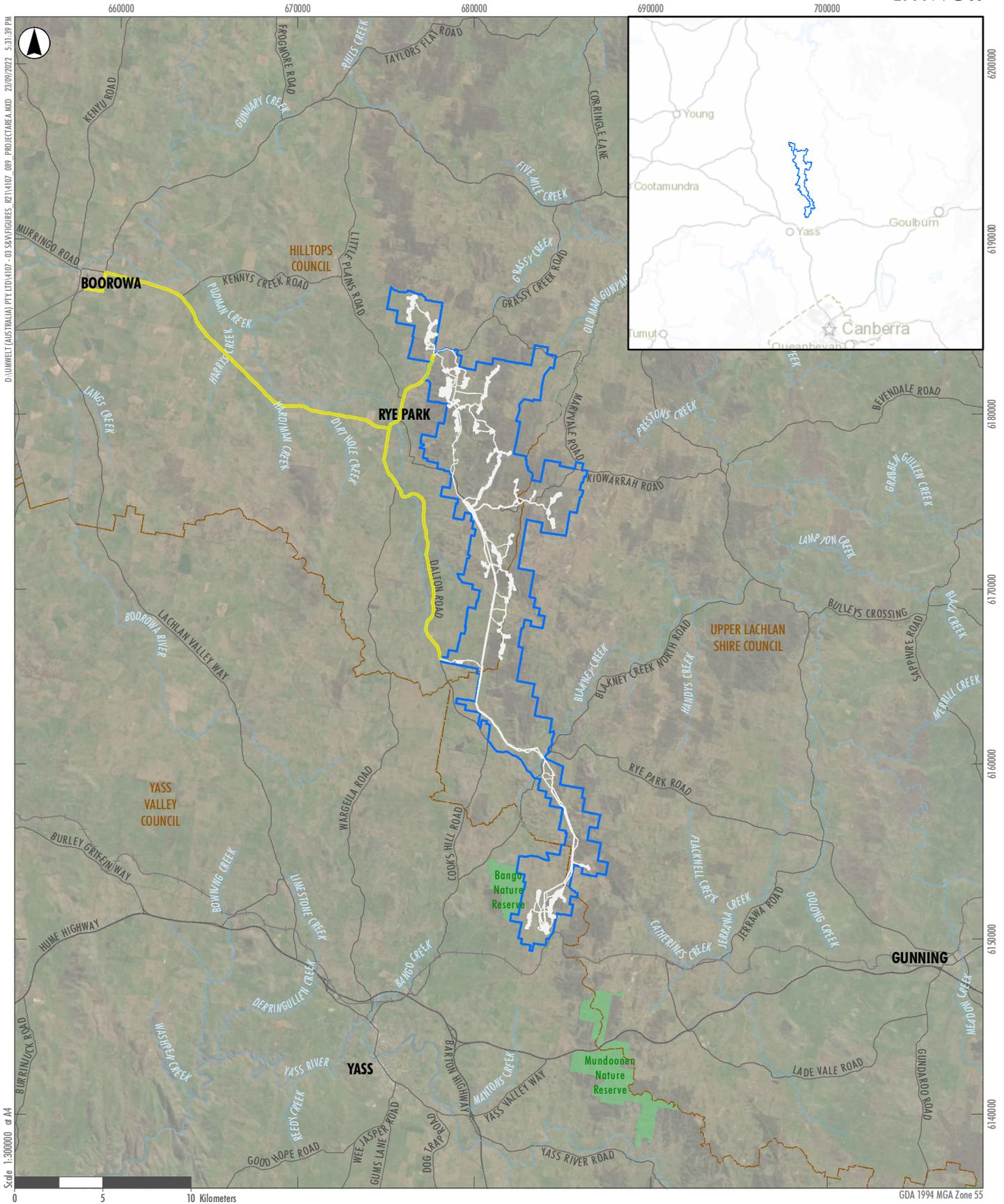
in accordance with clauses 6.2 and 6.6A of the Biodiversity Conservation Regulation 2017 (NSW); and

- c) *provide the Biodiversity Assessment Method credit calculations used to determine the required number of like-for-like biodiversity credits to be retired to compensate for impacts to protected matters.*

It is considered MOD 2 is categorised as a ‘*Modification involving minimal environmental impact*’ under Section 4.55(1A) of the EP&A Act as the proposed changes will have a ‘like-for-like’ environmental impact to what has been approved as part of SSD 6693-MOD 1.

Furthermore, Part 7, Division 4, Section 7.17(2c) of the *Biodiversity Conservation Act 2016* (BC Act), states that an application for the modification of a development consent (SSD 6693-MOD 1) does not require a Biodiversity Development Assessment Report (BDAR) if “*the authority or person determining the application for modification (or determining the environmental assessment requirements for the application) is satisfied that the modification will not increase the impact on biodiversity values*”.

This report aims to provide the necessary information to support statements from Section 4.55(1A) of the EP&A Act and Part 7, Division 4, Section 7.17(2c) of the BC Act.



- Legend**
- Rye Park Wind Farm Project Area
 - Rye Park Wind Farm Development Corridor
 - Transport Route (Boorowa to Wind Farm Site)
 - Local Government Area (LGA)
 - Road
 - Railway
 - Watercourses

FIGURE 2.1

**Rye Park Wind Farm
Pre-Construction
Development Footprint**

2.1 The Final Development

Since the Development Consent was granted and EPBC 2020/8837 obtained, the Development has undergone further optimisations as part of the progression of the Development's detailed design, and to ensure the Development complies with the conditions of consent/approval and other key requirements.

The main components of the final Development are as follows:

- 66 wind turbines (Vestas V162), each with:
 - a capacity to generate up to approximately 6 MW
 - three blades mounted on a tubular steel tower, with a combined height of blade and tower limited to a maximum tip height of 200 m
 - crane hardstand area, and related turbine lay down area
- a new 33 kV wind farm collection substation in the northern section of the Development site
- a new 330 kV wind farm connection substation located adjacent to the existing TransGrid 330 kV transmission line in the southern section of the Development site
- a temporary construction compound at the northern section of the Development site
- a temporary construction compound to facilitate the upgrades on the TransGrid owned existing 330kV Transmission Line at the southern section of the Development site
- a new overhead powerline approximately 30km in length, rated at up to 330 kV (nominal) capacity, running north-south along the length of the wind farm between the two substations. The powerline would be mounted on a single pole type structure and will either be single-circuit or double-circuit as required.
- underground and overhead 33 kV electrical cabling linking the wind turbines to the on-site collection substations and connection substation
- operation and maintenance facility incorporating a control room and equipment storage at the northern section of the Development site
- temporary concrete batching plants and construction facilities
- access tracks required for each wind turbine and the related ancillary facilities above
- minor upgrades to local roads, as required for the delivery of the wind turbines
- three temporary meteorological masts and two permanent monitoring masts for wind speed verification, weather and general monitoring purposes. The permanent monitoring masts may be either static guyed or un-guyed structures and will be to a minimum height of the wind turbine hubs (119 m).
- reduction to the number of wind turbines proposed, from 77 to 66
- identification of the extent of vegetation removal required for electrical clearance along both the 330kV and 33kV overhead transmission lines, e.g., where the vegetation is or has the potential to grow to a height four metres or higher
- reduction to the number of permanent meteorological masts proposed, from 6 to 2

- optimisation of cabling and access tracks within the Development Corridor

The revised pre-construction final development footprint is shown on the final layout plans prepared in accordance with Schedule 2 Condition 10 of the Development Consent and Condition 12 of EPBC 2020/8837.

The key revisions to the Development that have occurred relating to MOD 2 and the biodiversity calculations are:

- alternate internal access track design to access the transmission line north of High Rock Road to utilise an existing farm access track and avoid multiple waterway crossings
- alternate internal access track design to utilise an existing farm access track in the far northeast of the Project, east of High Rock Road
- alternate internal access track design to optimise transmission line access north of Flakney Creek Road
- alternate internal access track design to access the transmission line north and south of Blakney Creek Road South
- alternate internal access track design to access the transmission line north of Coolalie Road
- optimisation of internal access tracks.

Further efficiencies in the Development layout have been considered to ensure that the requirements of the development consent were met in relation to biodiversity, including the consideration of the public road upgrades as part of this report.

It is understood that the developed layout will continue to be refined through the detailed design / construction stages. It is noted that micro-siting of infrastructure is permitted under Schedule 2 Condition 8 of the Development Consent and the conditions of the EPBC 2020/8837. Further detail on micro-siting is provided in **Section 7.0**.

Prior to the commencement of operations (or following any upgrades of any wind turbines or ancillary infrastructure), executed plans showing the comparison to the revised pre-construction final development footprint will be prepared in accordance with Schedule 5 Condition 6 of the Development Consent and Condition 5 of the EPBC 2020/8837, will be submitted to the relevant departments.

3.0 Methods

The sections below describe the work undertaken to determine the impact and credit calculations.

3.1 Previous Assessments

All biodiversity values assessed have been identified and described in full as part of the extensive reports prepared, submitted and exhibited for the Development Modification (SSD 6693 Mod-1). This includes:

- Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a)
- Rye Park Wind Farm – Biodiversity Attachment, Environment Protection and Biodiversity Conservation Act 1999 Referral (November 2020) (Umwelt 2020b)
- Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b)
- Rye Park Wind Farm – Confirmation of Credit Liabilities (October 2021) (Umwelt 2021a)
- Rye Park Wind Farm – MOD 2 Confirmation of Credit Liabilities (September 2022) (Umwelt 2022).

The most recent impact assessment which impact thresholds are compared to throughout this document is the Rye Park Wind Farm – MOD 2 Confirmation of Credit Liabilities (September 2022) (Umwelt 2022).

All necessary surveys, analyses and descriptions are provided within these reports. Biodiversity values considered as part of this final assessment include Plant Community Types (PCTs), vegetation zones, Threatened Ecological Communities (TECs) and species-credit species. A summary of work completed is however provided below.

3.1.1 Previous Ecological Surveys

Extensive ecological surveys have been completed for the Project across multiple years between 2011 and 2021. This included surveys that were completed as part of the original approval (SSD 6693), that occurred in October and November 2011, April and November 2012, July, November and December 2013, March and October 2014, June 2015 and September 2016. These surveys including vegetation community identification and mapping, TEC analysis, habitat surveys, Bird and Bat Utilisation Surveys (BBUS) and threatened flora and fauna surveys. They were not completed in accordance with BAM (2017).

Since 2017, Umwelt completed all surveys on the Project in accordance with BAM (2017). Surveys were completed in September, October and December 2017, January, February, March, October and November 2018, January, February, March, April, July, August, September, November and December 2019, January, February and July 2020. Surveys have included vegetation community identification and mapping, TEC analysis, habitat surveys, Bird and Bat Utilisation Surveys (BBUS) and threatened flora and fauna surveys.

Full detail and dates of surveys completed for the Project which has facilitated the process of determining the impact and credit calculations is provided in Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a).

3.1.2 GIS Mapping

The identification, classification, assessment and subsequent GIS mapping of vegetation (including TEC) and threatened species was completed in accordance with BAM (2017). Full detail of the work completed is presented in the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a). The Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b) presents the updated assessments for two threatened species, being Golden Sun Moth (*Synemon plana*) and striped legless lizard (*Delma impar*).

The Rye Park Wind Farm – Confirmation of Credit Liabilities (Umwelt 2021a) used the previously prepared GIS mapping to assess the impacts of the pre-construction final development footprint.

3.1.3 Prescribed Impact Assessments

In accordance with Section 9.3.3 of BAM (2017) a number of prescribed impacts were considered for the Project, being impacts of threatened microbat species associated with caves, impacts from risk of vehicle strike, impacts of turbine strikes, removal of non-native vegetation supporting threatened species and the interruption and fragmentation to connectivity of native vegetation and associated habitat corridors.

Full detail of the prescribed impact assessments completed is presented in the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a). The Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b) presents an updated assessment relating to the removal of non-native vegetation supporting golden sun moth.

The Rye Park Wind Farm – Confirmation of Credit Liabilities (Umwelt 2021a) documented the final analysis relating to the removal of non-native vegetation supporting golden sun moth within the pre-construction final development footprint.

3.1.4 Direct Partial Impacts

The finalisation of the Development's design has confirmed the extent of impact associated with the transmission line for the Development, including 132 kV and 33 kV. Specifically, the pre-construction final development footprint confirmed where the proposed transmission line easement would impact on vegetation identified for the Project due to electrical clearance. This was presented in the Rye Park Wind Farm – Confirmation of Credit Liability (Umwelt 2021a). Impacts were identified in vegetation that is currently or can grow equal to or greater than four metres tall. Vegetation zones 1, 3, 5, 7 and 9 were considered to meet these characteristics. Where these vegetation zones occur within the proposed transmission line easement electrical clearance, direct partial impacts were assessed for the Project.

In our assessment of partial impacts for the Project, a proportion of biodiversity values is considered likely to remain within these areas. The BAM – CC was operated to manually edit the future integrity scores for the Composition, Structure and Function components of the applicable Vegetation Zones.

Canopy species, understorey and ground stratum flora species will persist and also provide substantial cover. Section 5.1.1.2 of the BDAR exhibited for the Development (Umwelt 2020a) details the process of considering, assessing and calculating impacts associated with direct partial impacts. Specifically, Table 5.4 of this BDAR presents the values of reduction assessed for each of the Composition, Structure and Function components (Umwelt 2020a).

3.2 Additional Assessment

3.2.1 Additional Ecological Surveys

Umwelt have undertaken an additional ecological survey for MOD 2 focussing entirely on components of the revised pre-construction final development footprint that are located beyond the approved Modified Development Corridor.

The additional survey was undertaken in accordance with BAM (2020) for ecosystem credits. However, targeted species credit surveys were not undertaken in accordance with BAM (2020) in that multiple seasonal survey programs were not undertaken specifically for MOD 2. Rather the approach applied for MOD 2 is to utilise the previous extensive survey effort completed as part of the approved MOD 1.

The additional ecological survey in the internal wind farm components of MOD 2 were undertaken across four days, 5 – 8 October 2021, by two Umwelt Accredited BAM Assessor ecologists, Bill Wallach and Travis Peake.

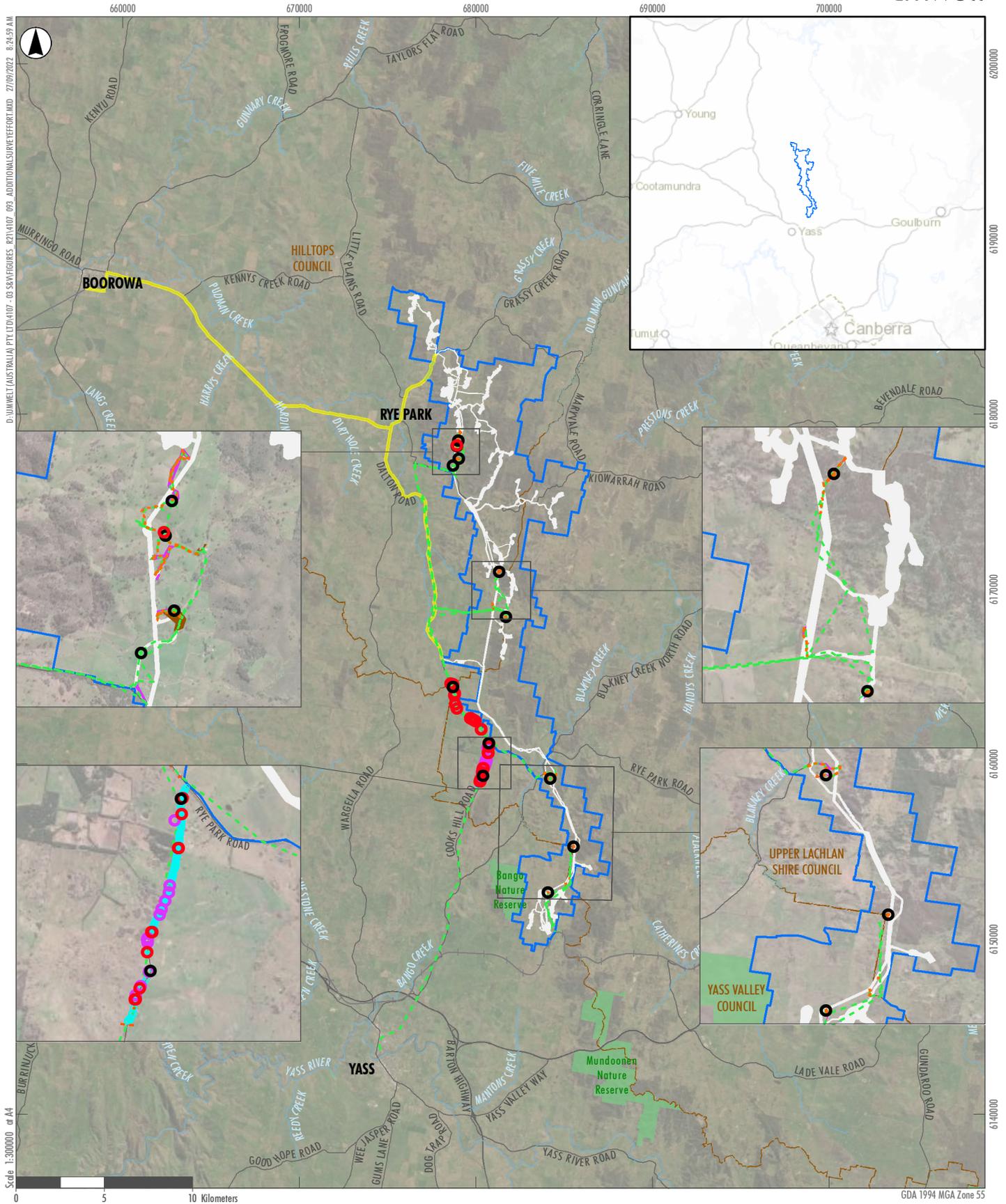
The methodology of the additional ecological survey included:

- 9 BAM Vegetation Integrity Plots,
- walked parallel transects for threatened flora species,
- rapid vegetation assessments and
- habitat assessments for threatened flora and fauna species.

Additional ecological surveys specifically along Cooks Hill Road were undertaken on 12 and 13 January 2022 by two Umwelt ecologists: then 5 and 6 April 2022, 2 – 4 May 2022 by one Umwelt ecologist. The methodology of the additional ecological surveys along this aspect of the proposed public road upgrades included:

- rapid vegetation assessments,
- walked parallel transects for threatened flora species,
- habitat assessments for threatened flora and fauna species, and
- tree assessments.

The additional ecological survey undertaken within the revised pre-construction final development footprint which occurred beyond the approved Modified Development Corridor are presented in **Figure 3.1**.



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Legend

- ▭ Rye Park Wind Farm Project Area
- ▭ Rye Park Wind Farm Development Corridor
- ▭ Transport Route (Boorowa to Wind Farm Site)
- Local Government Area (LGA)
- Road
- + Railway
- Watercourses
- Habitat Assessments
- BAM - Vegetation Integrity Plots
- Rapid Vegetation Assessments
- Tree Assessments
- - - Walked parallel threatened flora transects
- - - General Transects
- ▭ Habitat Assessments
- ▭ Rapid Vegetation Assessment Polygons

FIGURE 3.1

Additional ecological surveys within the revised pre-construction final development footprint

3.2.2 Additional GIS Mapping

The identification, classification, assessment and subsequent GIS mapping of vegetation (including TEC) and threatened species was completed in accordance with BAM (2020). Importantly however, all GIS mapping completed for the revised pre-construction final development footprint was done consistently with the approaches taken in the previous biodiversity assessments for the Development (Umwelt 2020, 2021a and 2021b). This approach was carefully considered and deemed to be accurate and appropriate given the small nature of the changes extending beyond the Approved Development Corridor.

3.2.3 Prescribed Impact Assessments

As the MOD 2 revised pre-construction final development footprint does not involve any modification to the Developments wind turbines, being number of, location or extent of footprint, there has been no revision to the Prescribed Impact Assessment relating to impacts of turbine strike. Therefore, the prescribed impact assessment relating to turbine strike is within the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a), Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b).

An updated assessment relating to the removal of non-native vegetation supporting golden sun moth has been completed for the revised pre-construction final development footprint. This assessment is consistent with the methodology described in the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a), Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b) and Rye Park Wind Farm – Confirmation of Credit Liability (Umwelt 2021a). A summary of the methodology is also presented above in **Section 3.1.3**.

The MOD 2 revised pre-construction final development footprint does not involve any modification to the Development that would interact with other Prescribed Impacts considered under BAM (DPE 2020). Therefore, all other prescribed impact assessments are presented within the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a), Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b).

3.2.4 Direct Partial Impacts

An updated assessment relating to the direct partial impacts within the transmission line of the revised pre-construction final development footprint has been completed. This assessment has been done consistent with the methodology described in the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a), Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b) and Rye Park Wind Farm – Confirmation of Credit Liability (Umwelt 2021a). A summary of the methodology is also presented above in **Section 3.1.4**.

3.3 Revised Pre-Construction Final Development Footprint

The calculations are based on the MOD 2 revised pre-construction final development footprint which includes both permanent (areas disturbed and required for ongoing operation of the wind farm) and temporary disturbance (areas disturbed to enable the construction of the wind farm), including:

- Temporary disturbance: temporary construction compounds, batch plant hardstands, temporary laydown hardstands, stockpile locations, cable routes, and disturbance along the edge of permanent disturbance areas.

- Permanent disturbance: sealed access tracks and turbine hardstands, sealed access tracks and turbine hardstands/engineered batters, clearance to maintain electrical safety, operations and maintenance facility, substations, sealed temporary construction pounds/hardstands which the landowner wishes to keep for their existing agricultural practices, and minor works associated with areas of public road upgrade.

Importantly, all disturbance has been calculated as full loss of biodiversity using the BAM (including the resulting biodiversity offset credits), except for areas where the disturbance is associated with clearance of overstorey vegetation within the transmission line easement only. **Section 3.1.4** sets out the details of the methodology used to calculate this partial loss which will be verified in accordance with the process set out in **Section 7.0**.

3.4 BAM – Credit Calculator

In order to update the credit requirement for the Development, Umwelt revised the Biodiversity Assessment Method (BAM) – Credit Calculator to capture the impacts associated with the revised pre-construction final development footprint (the Development Footprints that pertains to the BAM). These revisions were made using the current BAM – Credit Calculator version, V54, that was updated on 16 June 2022. The BAM – Credit Calculator assessments have been re-submitted for agency review. Communication with the Biodiversity and Conservation Division (BCD) of Department of Planning, Industry and Environment (DPIE) confirmed this is the suitable approach for the credit finalisation. Specifically, this correspondence was received on 12 May 2022.

In August 2022, the two BAM-CC assessments for Mod 2 were revised to address several revisions and ‘glitches’ identified in the BAM-CC at the direction of BCD. These revisions included:

- removal and replacement of multiple vegetation zones,
- replacement of vegetation integrity data for multiple vegetation zones,
- removal and replacement of all partial direct impacts, and
- consideration of a new candidate species-credit species.

The update, finalisation and submission of the BAM – Credit Calculator was undertaken by Principal Ecologist and Accredited BAM Assessor, Bill Wallach (BAAS17068).

As described in **Section 7.0**, the development layout will continue to be refined through the detailed design/construction stages. It is noted that micro-siting of the wind turbines is permitted under Schedule 2 Condition 8 of the Development Consent and the conditions of the EPBC 2020/8837.

The process of micro-siting and confirming impacts will be undertaken sequentially across the construction of the Development, spanning approximately two years. As the Development Consent relates to the entire Development, in the event that any further impact credit updates are required as part of the detailed design, this will be undertaken using the current BAM Credit Calculator Version at the time (see **Section 7.0**).

In doing so, this will avoid scenarios whereby credit liabilities increase despite reductions in the area of impact through micro-siting efforts. It gives consistency to the credit generation and allows the Proponent to adequately finalise their offsetting strategy. In the absence of this approach, any update to the BAM – Credit Calculator could result in perverse outcomes.

3.5 Prescribed Impact Assessment for the Removal of Non-Native Vegetation Supporting Golden Sun Moth

As described above in **Section 3.1.3**, a number of prescribed impacts were considered for the Development, including the removal of non-native vegetation supporting threatened species. This assessment was completed in accordance with Section 9.2.1.4 of the BAM 2017 (OEH 2017). We note that the prescribed impact assessment criteria for removal of non-native vegetation supporting threatened species is revised within the BAM 2020 (DPIE 2020). Umwelt carefully reviewed the differences in the criteria of the assessment and conclude the changes are marginal and non-consequential for the outcome of the assessment.

Furthermore, due to the extent and nature of the changes of the revised pre-construction final development footprint which extends outside of the Approved Development Corridor, Umwelt believe the approved methodology employed through the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a), Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b) and Rye Park Wind Farm – Confirmation of Credit Liability (Umwelt 2021a) is appropriate.

As per the Rye Park Wind Farm – Confirmation of Credit Liability (Umwelt 2021a), full detail of this prescribed impact assessment is presented in the Rye Park Wind Farm – Biodiversity Development Assessment Report, Final (August 2020) (Umwelt 2020a) and the Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b).

4.0 Results

The sections below present the outcomes of the methods undertaken for the revised assessment of the revised pre-construction final development footprint.

4.1 Plant Community Types and Vegetation Zones

The additional detailed ecological surveys that were undertaken in the MOD 2 revised pre-construction final development footprint confirmed that Plant Community Types (PCTs) and Vegetation Zones were consistent with those that were identified for MOD 1, assessed and described in the Biodiversity Development Assessment Report (Umwelt 2020a) and the Impact Assessment Addendum (Umwelt 2021b). The particular PCTs and Vegetation Zones identified specifically in the revised pre-construction final development footprint are listed below:

- PCT 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 (Vegetation Zone 2)
- 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
 - Moderate to Good (Vegetation Zone 3)
- PCT 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 (Vegetation Zone 5)
 - Derived Native Grassland (Vegetation Zone 6)
 - Acacia Shrubland (Vegetation Zone 7)
 - Sifton Bush Shrubland (Vegetation Zone 8)
 - Non-Native Vegetation (Vegetation Zone 10).

Vegetation zones that occur along the Cooks Hills Road component of the public road upgrades include:

- 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
 - Moderate to Good (Vegetation Zone 3)
 - Derived Native Grassland (Vegetation Zone 4)
- PCT 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 (Vegetation Zone 7)
 - Non-Native Vegetation (Vegetation Zone 10).

Full description and detail on these vegetation zones is provided in Biodiversity Development Assessment Report (Umwelt 2020a).

A summary of impacts to all PCTs and vegetation zones within the revised pre-construction final development footprint is provided in **Section 4.6**.

The extent of PCT and vegetation zones is presented in the **Appendix A** figure set.

Species polygons for the five species-credit species is presented in the **Appendix B** figure set.

The extent of threatened ecological communities is presented in the **Appendix C** figure set.

4.2 BAM – Credit Calculator

The final impact areas and credit requirements for the Development are presented below in **Table 4.1**. Results are presented separately for the NSW – South Western Slopes and South Eastern Highlands IBRA Regions. Similarly, ecosystem-credit and species-credit requirements are presented separately. A comparison is made between the impact areas and credit liabilities of MOD 1, from the Rye Park Wind Farm – Impact Assessment Addendum (March 2021) (Umwelt 2021b), Rye Park Wind Farm – Confirmation of Credit Liability (Umwelt 2021a) and the revised pre-construction final development footprint.

The revised vegetation integrity data from all BAM – Vegetation Integrity Plots completed for the Project is provided in **Appendix D**. This package of data includes the original BAM – Vegetation Integrity plots undertaken as part of the Modified Project Approval, as well as the 9 additional BAM – Vegetation Integrity plots completed within revised pre-construction final development footprint.

Table 4.1 Final ecosystem and species-credit credit requirement for the Development (Revised Pre-construction)

Veg Zone	PCT/Species-credit	Indicative Area (SSD6693-Mod1) (ha) ¹	Indicative Credits	Pre-construction Final Area (ha) ²	Change (ha)	Pre-construction Credits Required	Revised Pre-construction Final Area (ha)	Change (ha)	Revised Pre-construction 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 <i>Moderate to Good</i>	0.77	25	0.73	-0.04	24	0.73	-0.04	24
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 <i>Moderate to Good</i>	4.88	117	4.22	-0.66	101	4.19	-0.69	110
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 <i>Moderate to Good</i>	9.76	305	8.11	-1.65	338	8.13	-1.63	341
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 <i>Derived Native Grassland</i>	11.90	204	10.55	-1.35	226	10.42	-1.48	223
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 <i>Moderate to Good</i>	49.70	1,620	36.48	-13.22	1,241	35.67	-14.03	1,230
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 <i>Derived Native Grassland</i>	128.49	1,135	111.47	-17.02	985	112.4	-16.09	908
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 <i>Acacia Shrubland</i>	2.98	61	3.51	0.53	72	4.15	+1.17	97
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 <i>Sifton Bush Shrubland</i>	62.55	641	49.36	-13.19	506	49.37	-13.18	506
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 <i>Argyle Apple Forest</i>	0.93	28	1.28	0.35	38	1.29	+0.36	39
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 <i>Non-native Vegetation</i>	76.73	0	71.72	-5.01	0	73.01	-3.72	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 <i>Moderate to Good</i>	-	-	-	-	-	-	-	-
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 <i>Moderate to Good</i>	0.84	13	1.62	0.78	25	1.56	+0.72	27

Veg Zone	PCT/Species-credit	Indicative Area (SSD6693-Mod1) (ha) ¹	Indicative Credits	Pre-construction Final Area (ha) ²	Change (ha)	Pre-construction Credits Required	Revised Pre-construction Final Area (ha)	Change (ha)	Revised Pre-construction 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 <i>Moderate to Good</i>	10.16	271	11.12	0.96	386	11.22	+1.06	398
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 <i>Derived Native Grassland</i>	5.63	100	3.34	-2.29	74	3.34	-2.29	74
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 <i>Moderate to Good</i>	33.13	1,025	29.29	-3.84	967	29.18	-3.95	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 <i>Derived Native Grassland</i>	46.43	447	45.86	-0.57	441	45.73	-0.7	403
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 <i>Acacia Shrubland</i>	5.71	91	5.31	-0.40	90	5.56	-0.15	106
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 <i>Sifton Bush Shrubland</i>	18.02	199	14.72	-3.30	163	14.72	-3.3	163
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 <i>Argyle Apple Forest</i>	-	-	-	-	-	-	-	-
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 <i>Non-native Vegetation</i>	34.35	0	39.56	5.21	0	40.82	+6.47	0
Species Credits									
NSW – South Western Slopes IBRA Bioregion									
-	striped legless lizard (<i>Delma impar</i>)	43.07	326	41.00	-2.07	310	41.00	-2.07	284
-	southern myotis (<i>Myotis macropus</i>)	<0.01	1	<0.01	-	1	<0.01	-	1
-	squirrel glider (<i>Petaurus norfolcensis</i>)	60.19	2,073	42.47	-17.72	1,607	44.45	-15.74	1,702
-	superb parrot (breeding habitat) (<i>Polytelis swainsonii</i>)	9.76	305	8.11	-1.65	270	8.12	-1.64	273
-	golden sun moth (<i>Synemon plana</i>)	57.66	895	50.73	-6.93	791	49.38	-8.28	702
South Eastern Highlands IBRA Bioregion									
-	squirrel glider (<i>Petaurus norfolcensis</i>)	43.04	1,434	39.69	-3.35	1,386	40.24	-2.8	1,429
-	superb parrot (breeding habitat) (<i>Polytelis swainsonii</i>)	10.16	271	11.12	0.96	309	11.22	+1.06	319
-	golden sun moth (<i>Synemon plana</i>)	27.56	489	25.83	-1.73	440	26.94	-0.62	423

¹ Impact Assessment Addendum (Umwelt 2021b); ² Confirmation of Credit Liability (Umwelt 2021a)

4.3 Partial Impacts

Consistent in its application with the approved Development and as described above in **Section 3.1.4** and **Section 3.2.4**, Umwelt has operated the BAM-CC to apply a partial impact for vegetation zones 1, 3, 5, 7 and 9. This analysis is provided in **Table 4.2**. For areas identified as complete impact, the future vegetation integrity score is reduced to the default score of 0. For areas identified as Direct Partial Impact, the Composition, Structure and Function scores have been manually edited in accordance with BAM (2017) to capture the biodiversity values that are assessed as persisting.

Table 4.2 Direct Partial Impacts of the Development

Vegetation Zone	PCT and Condition Zone	Complete Impact (ha)	Direct Partial Impact (ha)	Total Impact (ha)
NSW – South Western Slopes IBRA Bioregion				
Vegetation Zone 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 <i>Moderate to Good</i>	5.76	2.37	8.13
Vegetation Zone 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 <i>Moderate to Good</i>	31.83	3.84	35.67
South Eastern Highlands IBRA Bioregion				
Vegetation Zone 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 <i>Moderate to Good</i>	7.01	4.21	11.22
Vegetation Zone 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 <i>Moderate to Good</i>	25.30	3.88	29.18
Vegetation Zone 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 <i>Acacia Shrubland</i>	3.27	2.29	5.56

4.4 Impacts on Threatened Ecological Communities

The Development will impact a total of 33.00 hectares of *White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions* (referred to hereafter as 'White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland') CEEC under the BC Act within vegetation zones 3 (19.34 hectares) and 4 (13.66 hectares) (**Appendix C**).

The Development will impact a total of 31.21 hectares of White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC under the EPBC Act within vegetation zones 3 (18.64 hectares) and 4 (12.57 hectares).

There is a difference of 1.79 hectares between the impacts of White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland' CEEC under the BC Act (33.00 hectares), compared to White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC under the EPBC Act (31.21 hectares). This discrepancy relates to a small number of patches of PCT 350 Vegetation Zone 3 and Vegetation Zone 4 not meeting the condition thresholds for the EPBC Act listed community.

Impact to the CEEC under the BC Act is **4.34 hectares less** than the area presented in the Development Impact Assessment Addendum, being 37.34 hectares (Umwelt 2021). Furthermore, impacts to the CEEC under the BC Act has been reduced by **0.02 hectares** based on the 33.00 hectares assessed as part of the revised pre-construction final development footprint compared with the 33.02 hectares assessed in the pre-construction final development footprint in the confirmation of credit liabilities (Umwelt 2021).

Impacts to White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC under the EPBC Act is **4.33 hectares less** than the area presented in the Development Impact Assessment Addendum, being 35.54 hectares for this TEC (Umwelt 2021). Furthermore, impacts to the CEEC under the EPBC Act has been reduced by **0.02 hectares** based on the 31.21 hectares assessed as part of the revised pre-construction final development footprint compared with the 31.23 hectares assessed in the pre-construction final development footprint in the confirmation of credit liabilities (Umwelt 2021).

Table 4.3 presents a summary of credits generated that align with the BC Act and EPBC Act listed CEECs, as the CEEC boundaries are not entirely consistent with the vegetation zones. Within the BAM – Credit Calculator, it is not possible to differentiate between the extent of vegetation zones which are identified as the BC Act listed CEEC and EPBC Act listed CEEC, or vice versa. In fact, the BAM – Credit Calculator only allows for the BC Act listed CEEC to be selected. In which case, the BAM – Credit Calculator assessment has been finalised and submitted identifying Vegetation Zones 3 and 4 as being the BC Act listed CEEC. Umwelt has then used these vegetation zones as proxies to determine the credit requirement specifically relating to the EPBC Act listed CEEC. Specifically, we used the area of impact and credit requirement to determine a ratio of credits per hectare, which we then applied to the area of impact identified for the EPBC Act listed CEEC to identify its specific credit requirement (**Table 4.3**).

It is important to note that the total proportional number of CEEC credits under the BC Act and/or EPBC Act are not in addition to those credits identified in Section 4.1. Of the total number of credits required for impact to Vegetation Zone 3 and Vegetation Zone 4, **Table 4.3** presents the amount which need to align with the BC Act and EPBC Act listed CEECs.

The extent of White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC listed under the BC Act and White box - yellow box - Blakely's red gum grassy woodlands and derived native grasslands CEEC listed under the EPBC Act associated with the Development is presented in the **Appendix C** figure set.

Table 4.3 Credit Generation from the BC Act and EPBC Listed CEECs

	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)		White box - yellow box - Blakely's red gum grassy woodlands and derived native grasslands CEEC (EPBC Act)	
	Vegetation Zone 3 <i>Moderate to Good</i>	Vegetation Zone 4 <i>Derived Native Grassland</i>	Vegetation Zone 3 <i>Moderate to Good</i>	Vegetation Zone 4 <i>Derived Native Grassland</i>
Total Area of Vegetation Zone (ha)	19.35	13.76	19.35	13.76
Total Credits	739	297	739	297
Total Area of CEEC (ha)	19.34	13.66	18.64	12.57
Proportion of Vegetation Zone that is CEEC	99.9 %	99.3 %	96.3 %	91.3 %
Proportional Number of CEEC Credits per Vegetation Zone¹	739	295	712	271
Total Proportional Number of CEEC Credits¹	1,035		983	

¹ Rounded to the nearest whole number.

4.5 Prescribed Impacts Assessment – Non-Native Vegetation Supporting Golden Sun Moth Habitat

Based on the revised analysis of golden sun moth habitat within the revised pre-construction final development footprint, a total of 26.17 hectares of vegetation zone 10 (Non-native Vegetation) occur within the golden sun moth species polygon (**Appendix B**). This impact on golden sun moth represents a **1.01-hectare increase** compared to that assessed and presented in the Impact Assessment Addendum (Umwelt 2021), being 25.16 hectares. The combined impact on golden sun moth, being native vegetation assessed as the species polygon addressed (**Section 4.1**) and non-native vegetation assessed in this Section is 102.49 hectares. That represents a combined decrease of 7.89 hectares compared with the Impact Assessment Addendum (Umwelt 2021), being 110.38 hectares.

As described above in **Section 3.1.3**, the prescribed impact assessment has been updated for the impacts of the Development on non-native vegetation that supports golden sun moth. This updated assessment is presented below in **Table 4.4**. This assessment has been undertaken in accordance with Section 9.2.1.4 of the BAM 2017 (OEH 2017).

Table 4.4 Prescribed Impact Assessment of Non-Native Vegetation Supporting Golden Sun Moth

Criteria	Response
<p>The assessment of the impacts of development on the habitat of threatened species or ecological communities associated with non-native vegetation must:</p>	
<p>a) identify the species and ecological communities likely to use the habitat</p>	<p>The golden sun moth has been recorded at several locations within the 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, 26.17 hectares of non-native vegetation fall within the species polygon for the species.</p> <p>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 (<i>Vulpia bromoides</i>), soft brome (<i>Bromus hordeaceus</i>), silvery hairgrass (<i>Aira cupaniana</i>), prairie grass (<i>Bromus catharticus</i>), red brome (<i>Bromus rubens</i>) and paspalum (<i>Paspalum dilatatum</i>). A full description of this mapping unit is provided in Section 3.2.2 of the current BDAR (Umwelt 2020).</p> <p>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., <i>Rytidosperma</i> spp. and <i>Austrostipa</i> 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 (<i>Nassella nessiana</i>) (DEWHA 2009a), which has not been recorded within any of the areas of Non-native Vegetation occurring in the Development Footprints.</p> <p>Therefore, while this assessment includes the total 26.17 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.</p>
<p>b) describe the nature, extent and duration of short and long-term impacts</p>	<p>The Development will result in direct and indirect impacts, which are described in full in Section 5.1 of the current BDAR (Umwelt 2020).</p> <p>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 Development Footprints for 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 Development 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).</p> <p>Long-term impacts will include the removal of up to 26.17 hectares of non-native vegetation which occurs in areas where the 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</p>

Criteria	Response
	<p>Development is unlikely to introduce invasive species such as weeds that are harmful to the golden sun moth or its habitat.</p> <p>Despite the Development undergoing a modification, the components of indirect and peripheral impacts remain unchanged in nature and extent.</p>
<p>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</p>	<p>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 Development 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.</p> <p>The <i>Significant Impact Guidelines for the Critically Endangered Golden Sun Moth (Synemon plana)</i> (DEWHA 2009a) specify that the species is only known to occur in degraded grasslands when they are dominated by the exotic Chilean needlegrass (<i>Nassella nessiana</i>). 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 Development. 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 (<i>Rytidosperma racemosum</i> var. <i>racemosum</i>), kangaroo grass (<i>Themeda australis</i>), weeping grass (<i>Microlaena stipoides</i> var. <i>stipoides</i>) and speargrass (<i>Austrostipa scabra</i>), 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.</p> <p>Additionally, there are several areas where the species is found or considered likely to occur within the relevant bioregions which are protected. These include Goorooyaroo 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).</p> <p>Taking into account the above information, it is considered that the non-native vegetation to be impacted by the Development 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.</p>
<p>d) predict the consequences of the impacts for the local and</p>	<p>The removal of 26.17 hectares 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</p>

Criteria	Response
<p>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</p>	<p>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 (DEWHA 2009). Currently, the species is only known to occur in degraded grasslands when they are dominated by the exotic Chilean needlegrass (<i>Nassella nessiana</i>) (DEWHA 2009a), which has not been recorded within any of the areas of non-native vegetation occurring in the Development Footprints or the Development 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.</p> <p>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 2019). 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 (DEWHA 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 Development.</p> <p>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 26.17 hectares of non-native vegetation are considered to be minor on both a local and regional scale.</p>

4.6 Result Summary

The tables provided in this section summarise the impacts of the revised pre-construction final against the previous designs as clearly as possible. **Table 4.5** initially summarises the impacts of the Development per Vegetation Zone, **Table 4.6** then summarises the same impacts but for consolidated PCTs. Lastly, **Table 4.7** summarises the impacts for the Development per species-credit species.

Table 4.8 presents the revised pre-construction final impacts of the Development, including a comparison of impacts between the Development approved biodiversity assessments (Umwelt 2020a and Umwelt 2021) and the revised assessment prepared to determine the final credit requirements based on the detailed design.

The revised pre-construction final development footprint has reduced impacts on the BC Act and EPBC Act CEECs and four species-credit species (striped legless lizard, squirrel glider, superb parrot and golden sun moth) of MOD 1. Impacts for the southern myotis remains unchanged (Umwelt 2021). When the revised pre-construction final development footprint impacts are compared against the MOD 1 pre-construction final development footprint in the confirmation of credit liabilities (Umwelt 2021a), the striped legless lizard remains unchanged, superb parrot has increased by 0.11 hectares, golden sun moth has decreased by 0.24 hectares and squirrel glider has increased by 2.53 hectares.

A summary of the comparison of impacts is provided below:

- Striped legless lizard:
 - 41.00 hectares of impact proposed in the revised pre-construction final development footprint, remaining unchanged with the Confirmation of Credit Liabilities (Umwelt 2021a)
 - 43.07 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 2.07 hectares.**
- Superb parrot:
 - 19.34 hectares of impact proposed in the revised pre-construction final development footprint, an increase of 0.11 hectares compared with the Confirmation of Credit Liabilities (Umwelt 2021a), being 19.23 hectares
 - 19.92 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 0.58 hectares.**
- Golden sun moth:
 - 76.32 hectares of impact proposed in the revised pre-construction final development footprint, a decrease of 0.24 hectares compared with the Confirmation of Credit Liabilities (Umwelt 2021a)
 - 85.22 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 8.9 hectares.**
- Squirrel glider:
 - 84.69 hectares of impact proposed in the revised pre-construction final development footprint, an increase of 2.53 hectares compared with the Confirmation of Credit Liabilities (Umwelt 2021a), being 82.16
 - 103.23 hectares of impact proposed in the MOD 1 Impact Assessment Addendum (Umwelt 2021b), **reduction of 18.54 hectares.**

Table 4.5 Summary of Impacts per Vegetation Zone

Veg Zone	PCT/Species-credit	Indicative Area (SSD6693-Mod1) (ha) ¹	Indicative Credits	Pre-construction Final Area (ha) ²	Pre-construction Change (ha)	Mod 2 Area (ha)	Mod 2 Change (ha)
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	0.77	25	0.73	-0.04	0.73	-0.04
	<i>Moderate to Good</i>						
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	5.72	130	5.84	0.12	5.75	0.03
	<i>Moderate to Good</i>						
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	19.92	576	19.23	-0.69	19.35	-0.57
	<i>Moderate to Good</i>						
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	17.53	304	13.89	-3.64	13.76	-3.77
	<i>Derived Native Grassland</i>						
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	82.83	2,645	65.77	-17.06	64.85	-17.98
	<i>Moderate to Good</i>						
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	174.92	1,582	157.33	-17.59	158.13	-16.79
	<i>Derived Native Grassland</i>						
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	8.69	152	8.82	0.13	9.71	1.02
	<i>Acacia Shrubland</i>						
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	80.57	840	64.08	-16.49	64.09	-16.48
	<i>Sifton Bush Shrubland</i>						
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	0.93	28	1.28	0.35	1.29	0.36
	<i>Argyle Apple Forest</i>						
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	111.08	0	111.28	0.2	113.83	2.75
	<i>Non-native Vegetation</i>						

¹ Impact Assessment Addendum (Umwelt 2021b); ² Confirmation of Credit Liabilities (Umwelt 2021a)

Table 4.6 Summary of Impacts per PCT

	Indicative Impacts (SSD6693-Mod1) ¹	Pre-construction Final Impacts ²	Revised Pre-construction Final Impacts ²	Comparison of Mod1 / Revised Pre-Construction Final
	Area (ha)	Area (ha)	Area (ha)	Area (ha)
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	0.77	0.73	0.73	-0.04
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	5.72	5.84	5.75	0.03
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	37.45	33.12	33.11	-4.34
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	459.02	408.56	411.90	-47.12

¹ Impact Assessment Addendum (Umwelt 2021b); ² Confirmation of Credit Liabilities (Umwelt 2021a)

Table 4.7 Summary of Impacts per Species-credit Species

	Indicative Impacts (SSD6693-Mod1)	Pre-construction Final Impacts	Revised Pre-construction Final Impacts	Comparison of Mod1 / Revised Pre-Construction Final
	Area (ha)	Area (ha)	Area (ha)	Area (ha)
Striped legless lizard	43.07	41.00	41.00	-2.07
Superb parrot	19.92	19.23	19.34	-0.58
Golden sun moth	85.22	76.56	76.32	-8.90
Squirrel glider	103.23	82.16	84.69	-18.54
Southern myotis	<0.01	<0.01	<0.01	-

Table 4.8 Comparison of the indicative and revised pre-construction impact analysis

	Indicative Areas (SSD 6693-Mod1) (ha) ³	Indicative Credits	Pre-construction Final Areas (ha) ⁶	Pre-construction Credits	Area Change (ha)	Credit Change	Revised Pre-construction Final Areas (ha)	Revised Area Change (ha)	Revised Credit Liability (ha)
Non-listed									
PCT 289 (Vegetation Zone 1)	0.77	25	0.73	24	-0.04	-1	0.73	-0.04	24
PCT 335 (Vegetation Zone 2)	5.72	130	5.84	126	0.12	-4	5.75	0.03	137
PCT 351 – Native (Vegetation Zones 5 - 9)	347.94	5,247	297.28	4,503	-50.66	-744	298.07	-49.87	4,428
PCT 351 – Non-native (Vegetation Zone 10)	111.08	0	111.28	0	0.20	0	113.83	2.75	0
BC Act and EPBC Act Listed									
Striped Legless Lizard	43.07	326	41.00	310	-2.07	-16	41.00	-2.07	284
Superb Parrot	19.92	576	19.23	579	-0.69	3	19.34	-0.58	592
Golden Sun Moth	85.22	1,384	76.56	1,231	-8.66	-153	76.32	-8.92	1,125
BC Act Listed									
Box Gum Woodland CEEC (BC Act) ¹	37.34	878	33.02	1,022	-4.32	144	33.00	-4.34	1,035
Squirrel Glider	103.23	3,507	82.16	2,993	-21.07	-514	84.69	-18.54	3,131
Southern Myotis	<0.01	1	<0.01	1	-	-	<0.01	-	1
EPBC Act Listed									
Box Gum Woodland (EPBC Act) ²	35.54	Not calculated at the time ⁴	31.23	972	-4.31	Not Possible ⁵	31.21	4.33	983

¹ White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)

² White box - yellow box - Blakely's red gum grassy woodlands and derived native grasslands CEEC (EPBC Act)

³ Impact Assessment Addendum (Umwelt 2021b)

⁴ The area of impact on the EPBC Act listed CEEC was assessed and presented within the Impact Assessment Addendum (Umwelt 2021b), however the proportion of credits was not calculated at that time.

⁵ In the absence of the previous calculation being completed, there is no ability to compare the credit requirements.

⁶ Confirmation of Credit Liabilities (Umwelt 2021a)

5.0 Matters of National Environmental Significance

The additional Biodiversity Assessment undertaken for MOD2 within the revised pre-construction final development footprint did not identify new Matters of National Environmental Significance (MNES) applicable to the Project. In summary, MOD2 proposes to impact the same MNES identified, assessed and approved through MOD1 (EPBC 2020/8837). The MNES proposed to be impacted are listed below:

- White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC under the EPBC Act: 31.21 hectares proposed to be impacted within the revised pre-construction final development footprint MOD 2, a reduction of 4.33 hectares compared with the Development Impact Assessment Addendum (Umwelt 2021).
- Striped legless lizard (V – EPBC Act): 41.00 hectares proposed to be impacted within the revised pre-construction final development footprint MOD 2, a reduction of 2.07 hectares compared with the Development Impact Assessment Addendum (Umwelt 2021).
- Superb parrot (V – EPBC Act): 19.34 hectares proposed to be impacted within the revised pre-construction final development footprint MOD 2, a reduction of 0.58 hectares compared with the Development Impact Assessment Addendum (Umwelt 2021).
- Golden sun moth (V – EPBC Act): 76.32 hectares proposed to be impacted within the revised pre-construction final development footprint MOD 2, a reduction of 8.90 hectares compared with the Development Impact Assessment Addendum (Umwelt 2021).

6.0 Credit Summary

A summary of the revised credit liability for the Development is provided below in **Table 6.1**, including a comparison against the previous assessment. This final confirmation of biodiversity offset credit requirement for the Development has been completed in accordance with Schedule 3 Condition 20 (SSD 6693). The final credit requirements specifically relating to the BC Act and EPBC Act listed CEECs is presented above in **Table 4.3**. Those credit requirements specifically relating to those CEECs relate to a proportion of the credits identified for PCT 350 in **Table 6.1** below i.e., the credits are not in addition to.

The biodiversity credit reports for both BAM – Credit Calculator assessments submitted for the Development are provided in **Appendix E** and **Appendix F**. Both appendices include the like-for-like and variation biodiversity credit reports, noting that the variation rules do not apply to those threatened species or ecological communities listed under the Commonwealth EPBC Act.

Table 6.1 Ecosystem and Species-credit Credit Classes

	Indicative Impacts (SSD6693-Mod1) ¹		Pre-construction Final Impacts ²		Revised Pre-construction Final Impacts ²	
	Area (ha)	Total Credits	Area (ha)	Total Credits	Area (ha)	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	0.77	25	0.73	24	0.73	24
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	4.88	117	4.22	101	4.19	110
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	21.66	509	18.66	564	18.55	564
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion (including Vegetation Zone 10 – Non-native Vegetation)	321.38	3,485	273.82	2,842	275.89	2,780
Species-credit Credits						
striped legless lizard (<i>Delma impar</i>)	43.07	326	41.00	310	41.00	284
southern myotis (<i>Myotis macropus</i>)	<0.01	1	<0.01	1	<0.01	1
squirrel glider (<i>Petaurus norfolcensis</i>)	60.19	2,073	42.47	1,607	44.45	1,702
superb parrot (breeding habitat) (<i>Polytelis swainsonii</i>)	9.76	305	8.11	270	8.12	273
golden sun moth (<i>Synemon plana</i>)	57.66	895	50.73	791	49.38	702
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	0.84	13	1.62	25	1.56	27
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	15.79	371	14.46	460	14.56	472
351-Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion	137.64	1,762	134.74	1,661	136.01	1,648
Species-credit Credits						
striped legless lizard (<i>Delma impar</i>)	-	-	-	-	-	-
southern myotis (<i>Myotis macropus</i>)	-	-	-	-	-	-
squirrel glider (<i>Petaurus norfolcensis</i>)	43.04	1,434	39.69	1,386	40.24	1,429
superb parrot (breeding habitat) (<i>Polytelis swainsonii</i>)	10.16	271	11.12	309	11.22	319
golden sun moth (<i>Synemon plana</i>)	27.56	489	25.83	440	26.94	423

¹ Impact Assessment Addendum (Umwelt 2021b); ² Confirmation of Credit Liabilities (Umwelt 2021a)

7.0 Micro-siting and Confirmation of Impacts

The developed layout will continue to be refined through the detailed design / construction stages. It is noted that micro-siting of the wind turbines is permitted under Schedule 2 Condition 8 of the Development Consent and the conditions of the EPBC 2020/8837.

The Biodiversity Management Plan for the Development sets out the micro-siting requirements for the Development. Relating to biodiversity this includes:

- The micro-sited location must **remain within the Development Corridor** as approved by the Development Consent and project area as approved by EPBC 2020/8837.
- **Compliance with the micro-siting restrictions** described in Schedule 2 Condition 8 of the Development Consent, being:
 - no more than 250 m from the approved location
 - turbine numbers A06, A05, D07, D09, E04, E05, G01, and D06 are micro-sited to minimise (and if possible, avoid) impacts on high conservation value vegetation, including HBTs2
 - the revised location of a wind turbine is at least 50 m from existing HBTs; or, where the approved turbine location is already within 50 m of existing HBTs, the revised location of the turbine is not moved any closer to the existing or nearest HBTs.
- **Avoidance and minimisation of native vegetation clearing**, taking particular consideration of minimising impacts to Box Gum Woodland CEEC (BC Act and EPBC Act), Superb Parrot habitat (BC Act and EPBC Act), Striped Legless Lizard habitat (BC Act and EPBC Act), GSM habitat (BC Act and EPBC Act), Squirrel Glider habitat (BC Act) and Southern Myotis habitat (BC Act). Micro-siting must ensure that the impact of the Development does not exceed the clearing and habitat limits set out in the Development Consent or EPBC 2020/8837.
- Micro-siting during construction process will incorporate an avoidance hierarchy, where micro-siting will firstly prioritise avoidance of threatened ecological communities or habitat of threatened species in order of most to least threatened, and then secondly avoidance of non-listed native vegetation.
- Further consultation with BCD will be completed to confirm that micro-sited impacts are generally in accordance with the EIS (in accordance with Schedule 2 Condition 1 of the Development Consent) if micro-siting results in a movement of disturbance from an area of lower biodiversity (e.g., non-native vegetation, non-threatened species habitat or non-threatened ecological community) to higher biodiversity value (e.g., woodland/forest, threatened species habitat or threatened ecological community) and results in a exceedance beyond the thresholds set out in **Table 5.1** of this document.
- The **location of termite mounds** and avoiding impacts on them.
- **Will not result in any non-compliance with the conditions of consent** and ensure the development remains generally in accordance with the EIS.

² Previously known (and as described within the Development Consent) as 11, 12, 80, 83, 84, 85, 125 and 150. Additionally, note that turbine locations 48 and 143 are not being utilised within the final layout.

Prior to the commencement of operations (or following any upgrades of any wind turbines or ancillary infrastructure), executed plans showing the comparison to the revised pre-construction final development footprint will be prepared in accordance with Schedule 5 Condition 6 of the Development Consent and Condition 15 of the EPBC 2020/8837, will be submitted to the relevant departments and will be available on the Development's website.

The Biodiversity Management Plan for the Development sets a post clearing process to confirm the final micro-sited impact of the Development.

It is understood that this process will include:

- Following civil disturbance (progressively), the final disturbance footprint will be confirmed by a surveyor.
- Following the disturbance activities associated with clearance of overstorey vegetation within the transmission line easement, a suitably qualified ecologist will undertake a post clearing assessment of this area to confirm the partial impact assumptions used to inform the revised pre-construction final biodiversity calculations (see **Section 3.1.4** and **Section 4.3**). This will include consideration of the Structure, Composition and Function attributes of the remaining vegetation in relation to BAM.

Once all disturbance has been undertaken (using the information captured from the above), a suitably qualified ecologist will calculate the final biodiversity impact of the confirmed final disturbance footprint and corresponding biodiversity offset credit liabilities for the Development in accordance with the BAM under the NSW Biodiversity Offset Scheme.

The final biodiversity calculations will be used to update the Offset Strategy in accordance with Condition 15 of the EPBC 2020/8837 and as evidence when retiring credits pursuant to Schedule 3 Condition 21 of the Development Consent.

8.0 References

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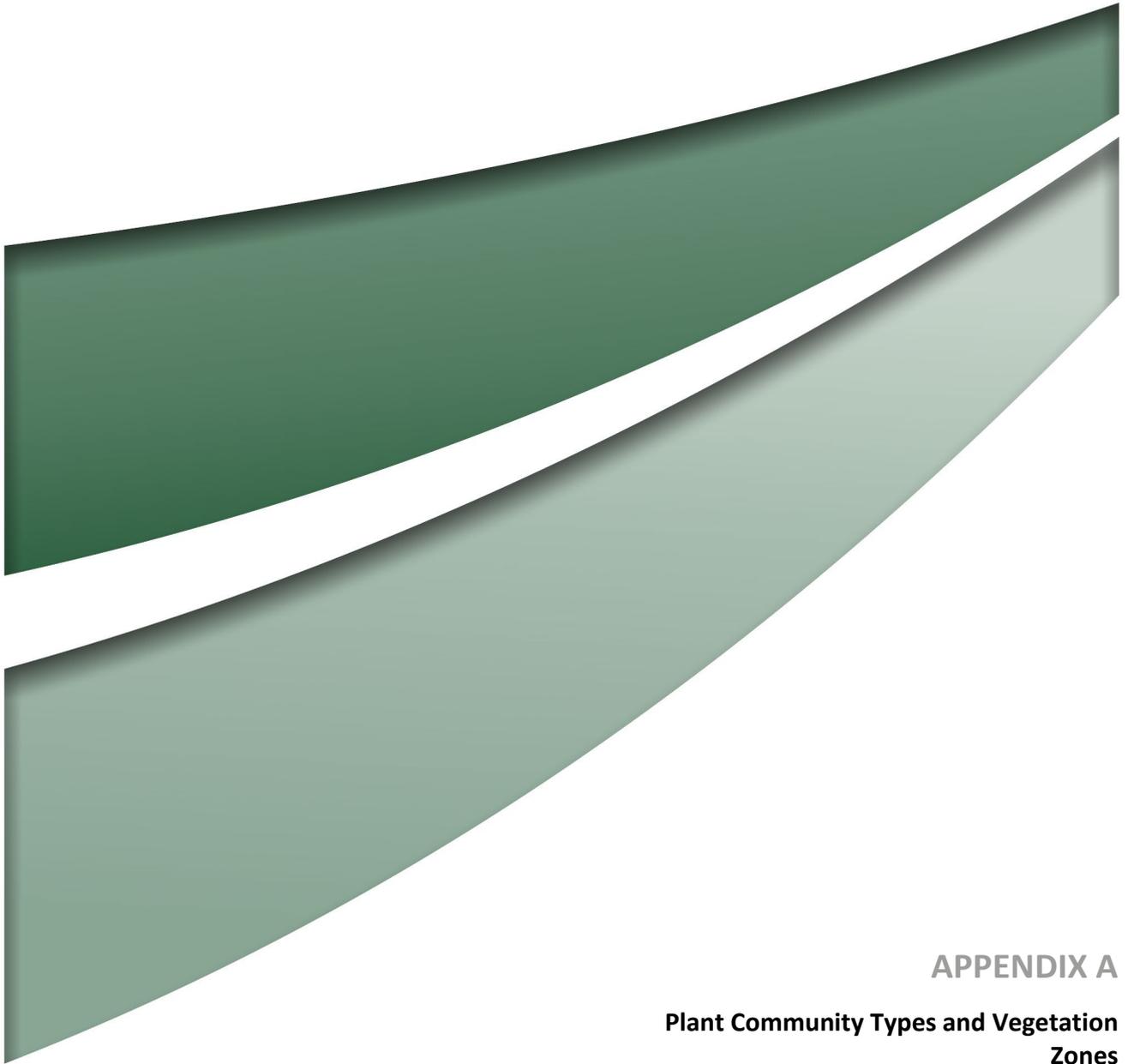
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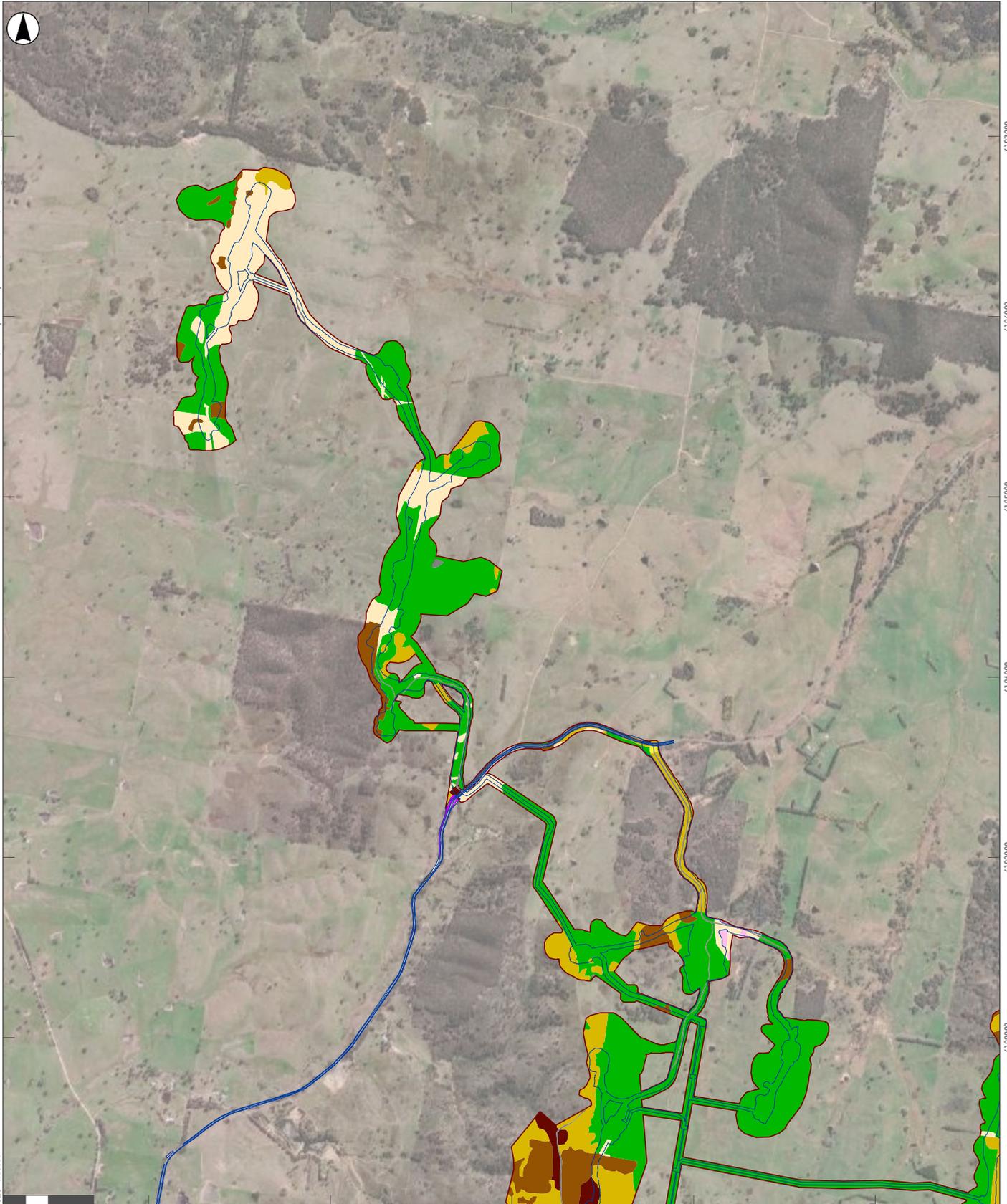


APPENDIX A

Plant Community Types and Vegetation Zones

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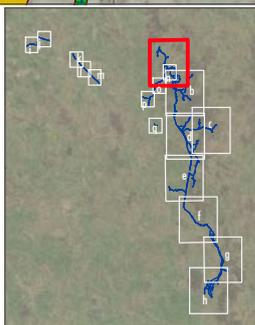


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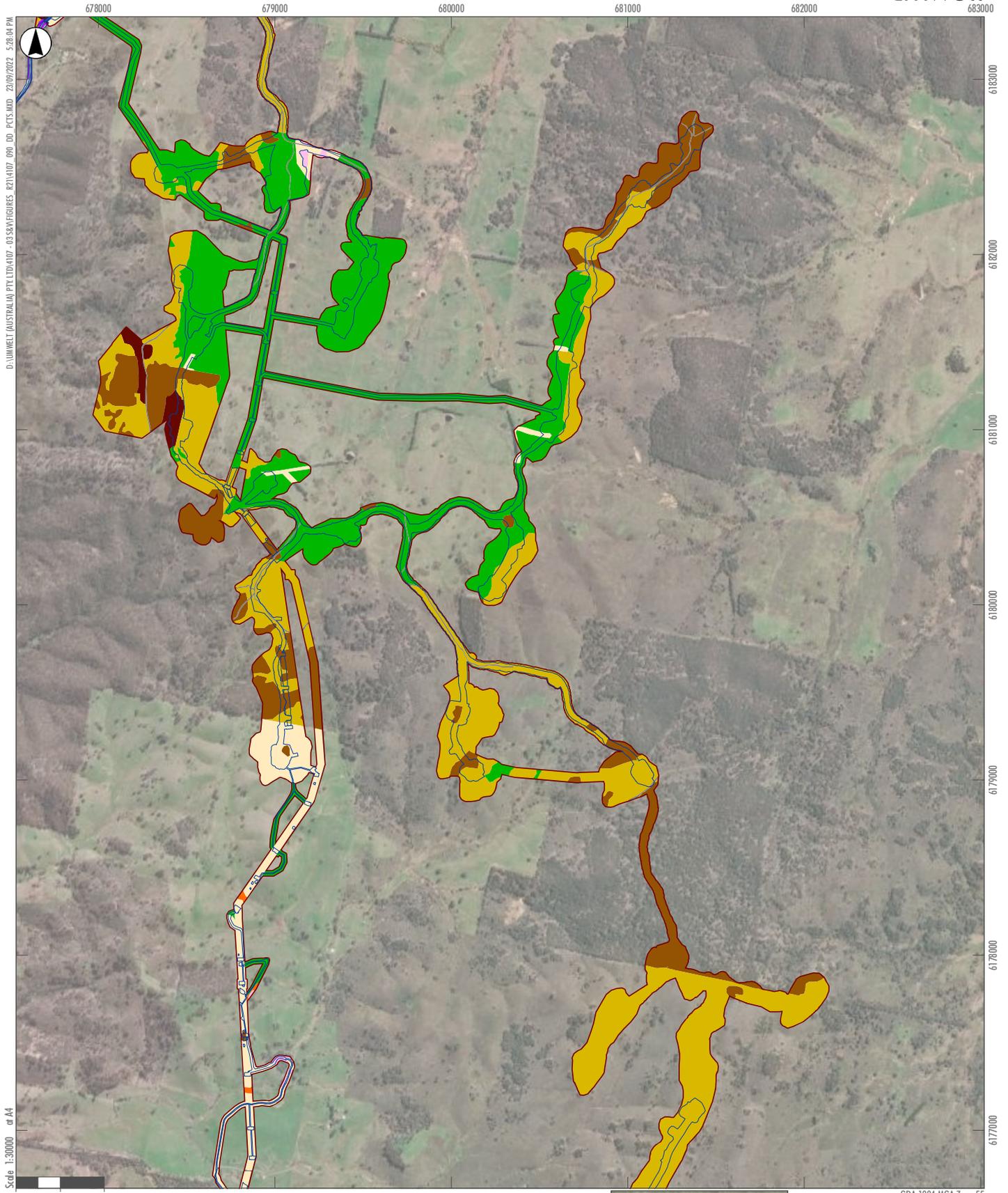
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GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
 - PCT, Condition in the Rye Park Wind Farm**
 - Zone 1 -289 - Moderate to Good
 - Zone 3 -350 - Moderate to Good
 - Zone 5 -351 - Moderate to Good
 - Zone 6 -351 - Moderate to Good - DNG
 - Zone 7 -351 - Moderate to Good - Acacia Shrubland
 - Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
 - Zone 9 -351 - Moderate to Good - Argyle Apple Forest
 - Zone 10 -Non-native Vegetation
 - Access Tracks/Roads



APPENDIX A.a
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint



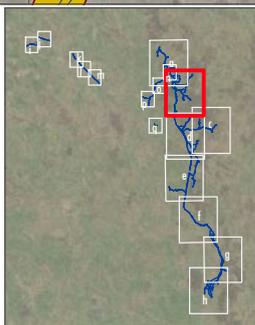
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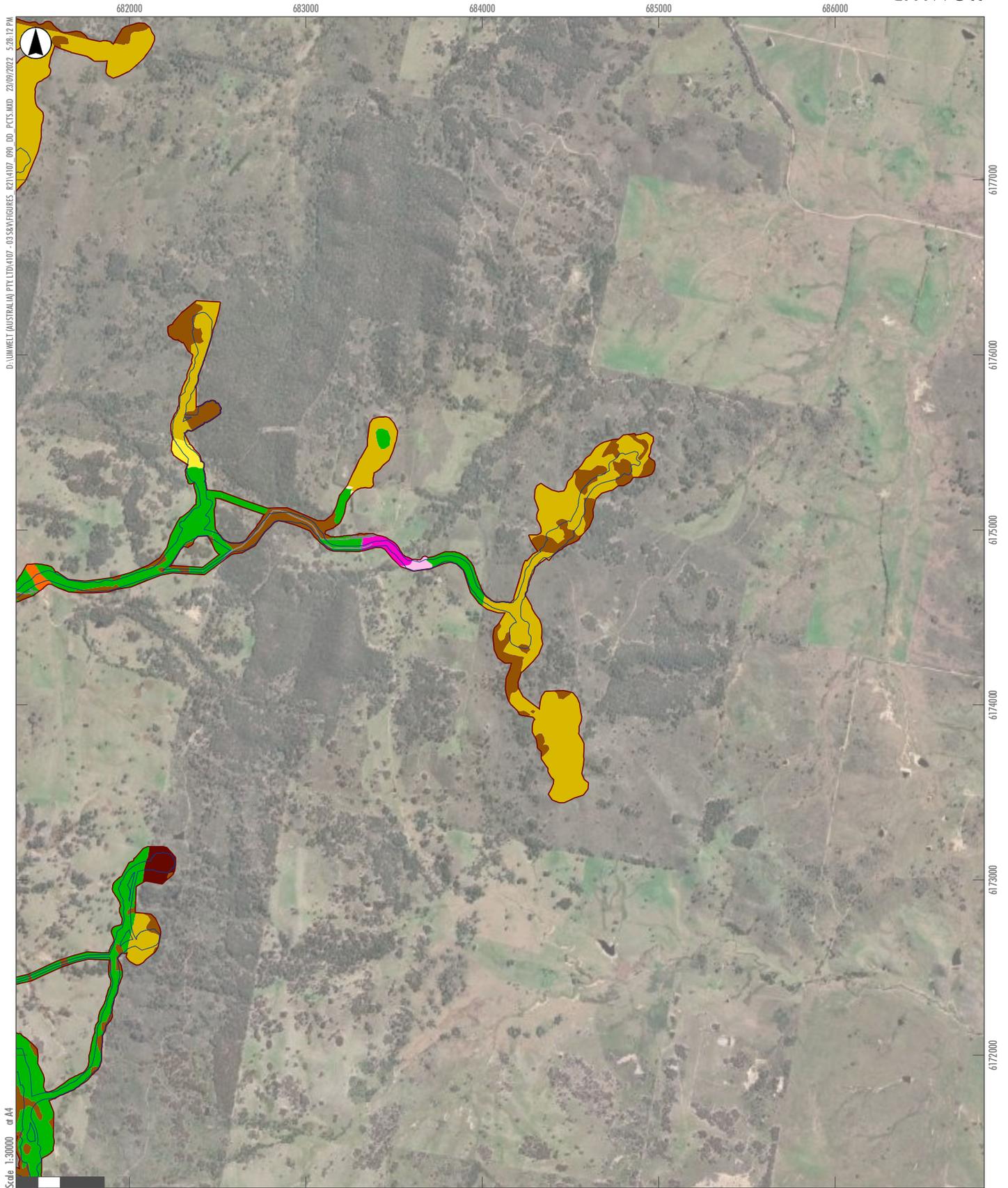
GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Zone 1 -289 - Moderate to Good
- Zone 2 -335 - Moderate to Good
- Zone 3 -350 - Moderate to Good
- Zone 5 -351 - Moderate to Good
- Zone 6 -351 - Moderate to Good - DNG
- Zone 7 -351 - Moderate to Good - Acacia Shrubland
- Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads

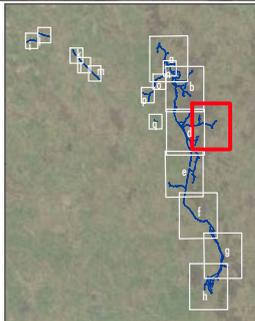


APPENDIX A.b
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint

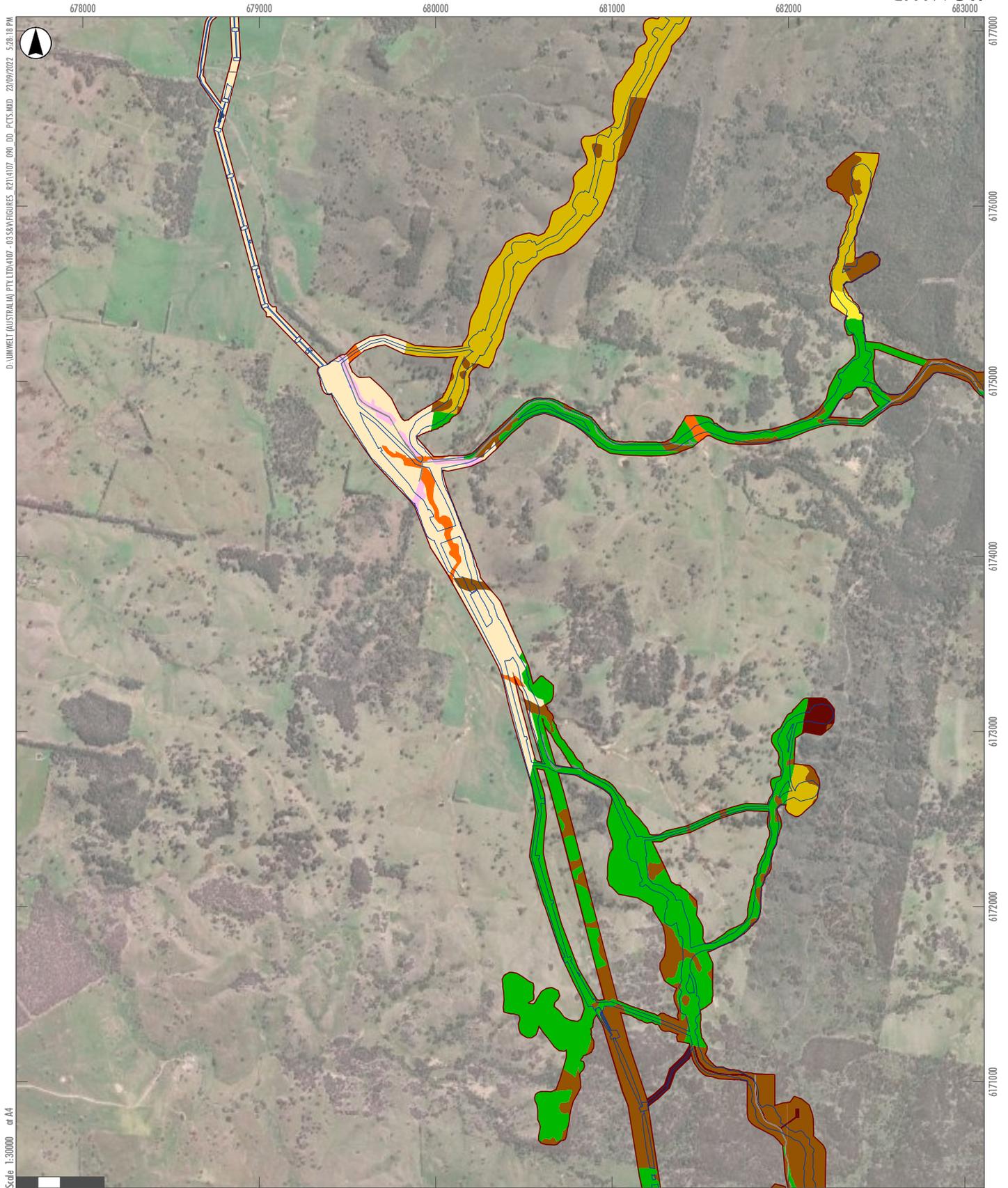


GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
 - PCT, Condition in the Rye Park Wind Farm**
 - Zone 2 -335 - Moderate to Good
 - Zone 3 -350 - Moderate to Good
 - Zone 4 -350 - Moderate to Good - DNG
 - Zone 5 -351 - Moderate to Good
 - Zone 6 -351 - Moderate to Good - DNG
 - Zone 7 -351 - Moderate to Good - Acacia Shrubland
 - Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
 - Zone 9 -351 - Moderate to Good - Argyle Apple Forest
 - Zone 10 -Non-native Vegetation
 - Access Tracks/Roads



APPENDIX A.c
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint



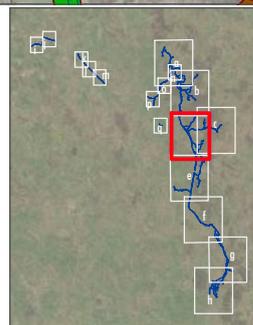
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Scale 1:30000 or A4

GDA 1994 MGA Zone 55

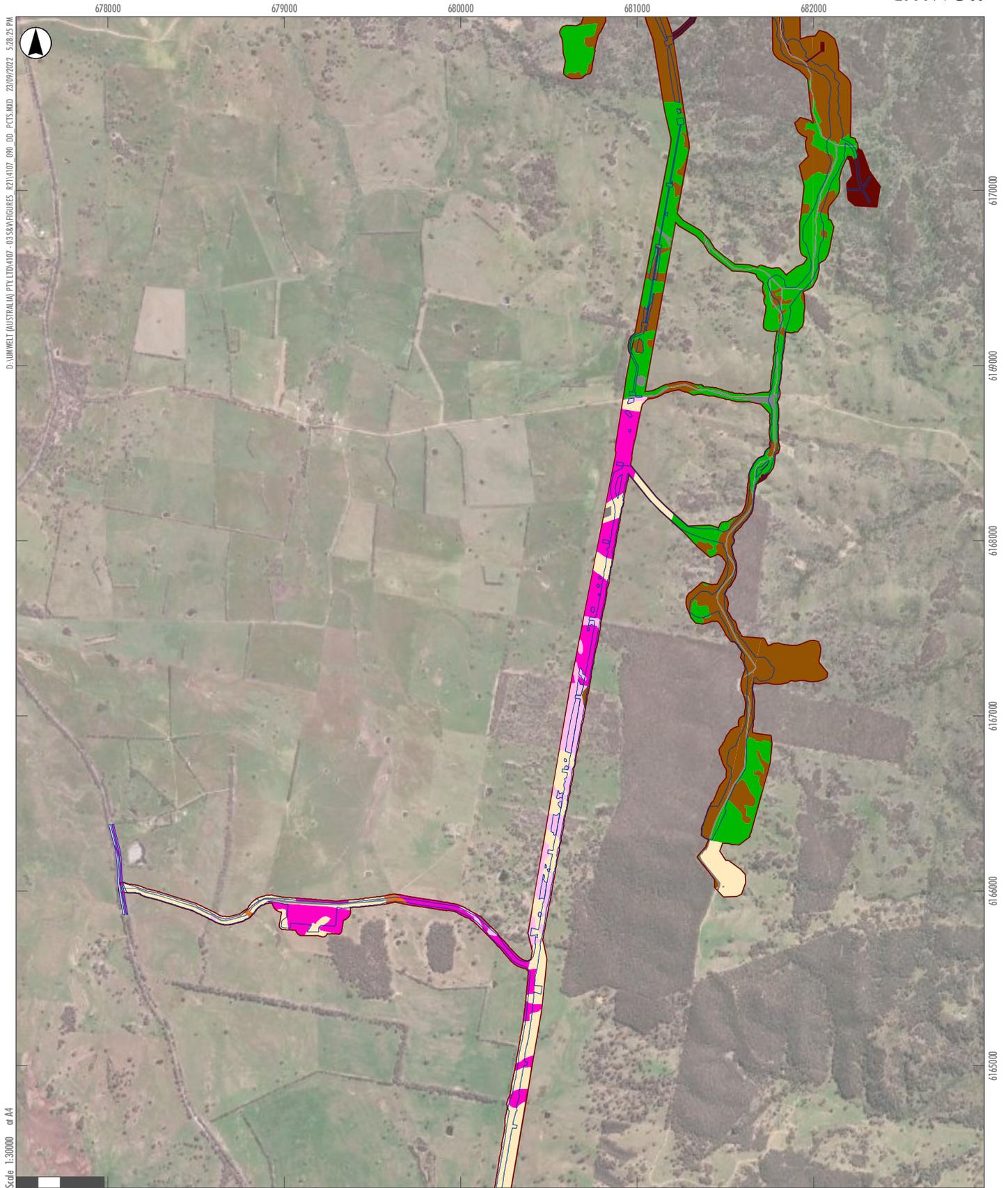
Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- PCT, Condition in the Rye Park Wind Farm
- Zone 2 -335 - Moderate to Good
- Zone 3 -350 - Moderate to Good
- Zone 5 -351 - Moderate to Good
- Zone 6 -351 - Moderate to Good - DNG
- Zone 7 -351 - Moderate to Good - Acacia Shrubland
- Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
- Zone 9 -351 - Moderate to Good - Argyle Apple Forest
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads



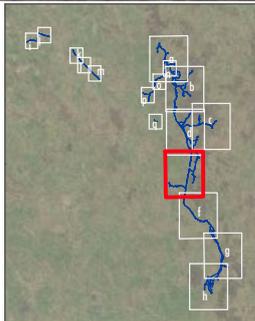
APPENDIX A.d

Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint

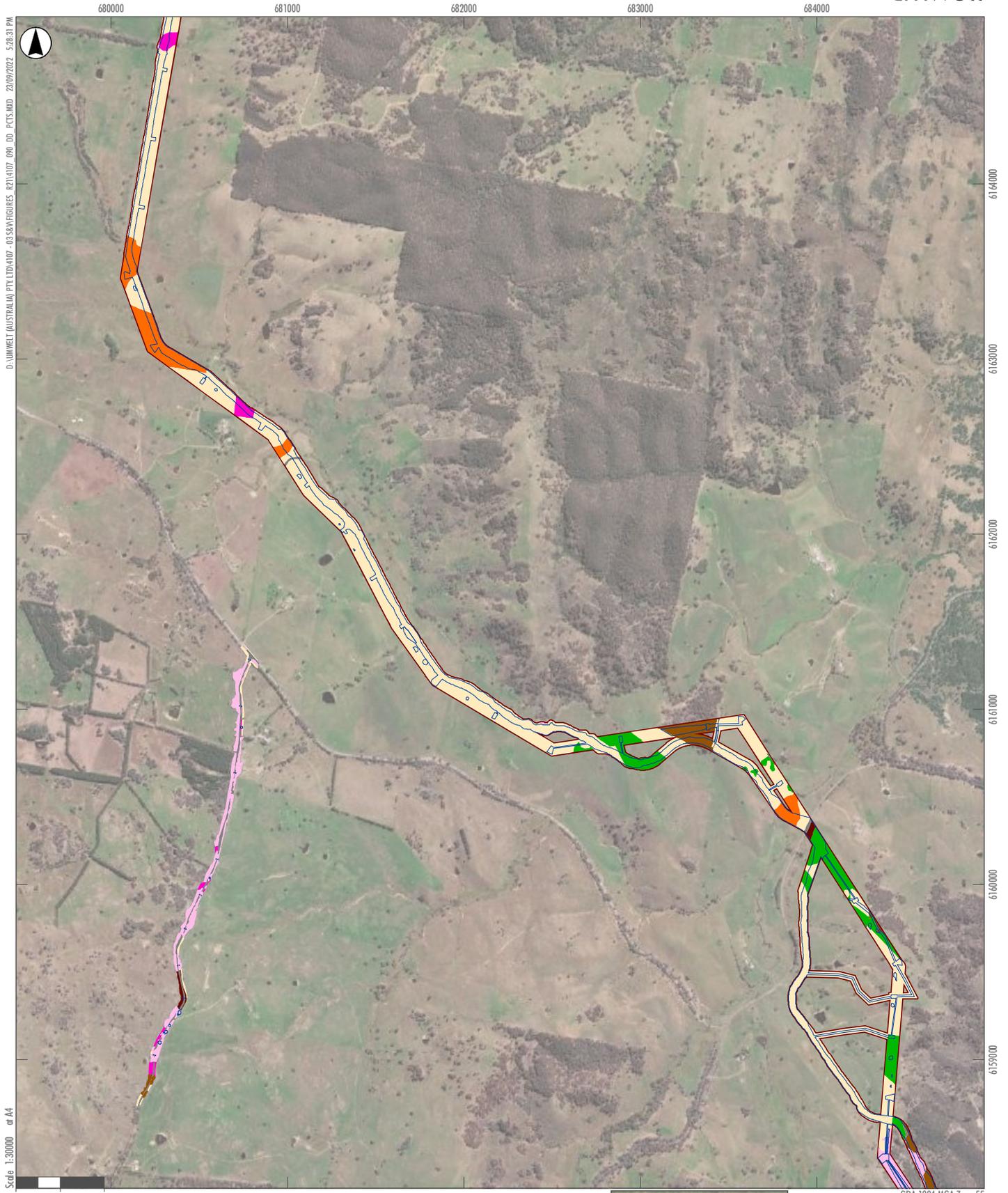


GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
 - Zone 2 -335 - Moderate to Good
 - Zone 3 -350 - Moderate to Good
 - Zone 4 -350 - Moderate to Good - DNG
 - Zone 5 -351 - Moderate to Good
 - Zone 6 -351 - Moderate to Good - DNG
 - Zone 7 -351 - Moderate to Good - Acacia Shrubland
 - Zone 10 - Non-native Vegetation
 - Access Tracks/Roads



APPENDIX A.e
Plant Community Types and
Vegetation Zones in the
Pre-Construction
Development Footprint

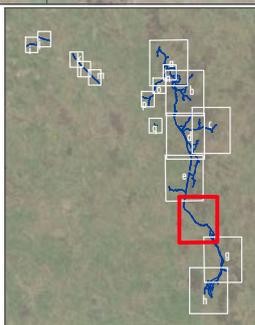


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GDA 1994 MGA Zone 55

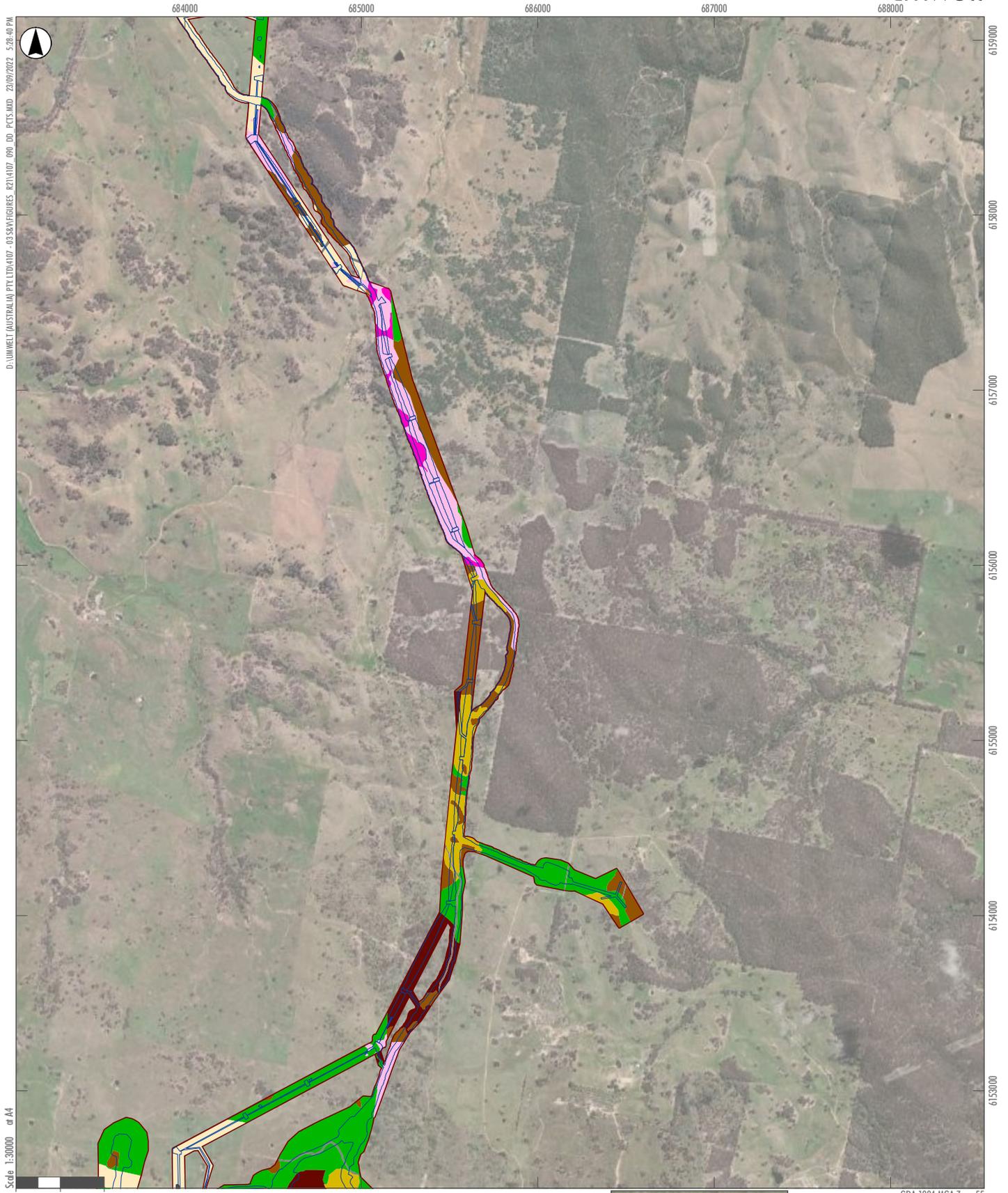
Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Zone 2 -335 - Moderate to Good
- Zone 3 -350 - Moderate to Good
- Zone 4 -350 - Moderate to Good - DNG
- Zone 5 -351 - Moderate to Good
- Zone 6 -351 - Moderate to Good - DNG
- Zone 7 -351 - Moderate to Good - Acacia Shrubland
- Zone 10 - Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.f

Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint



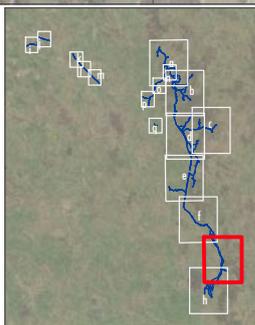
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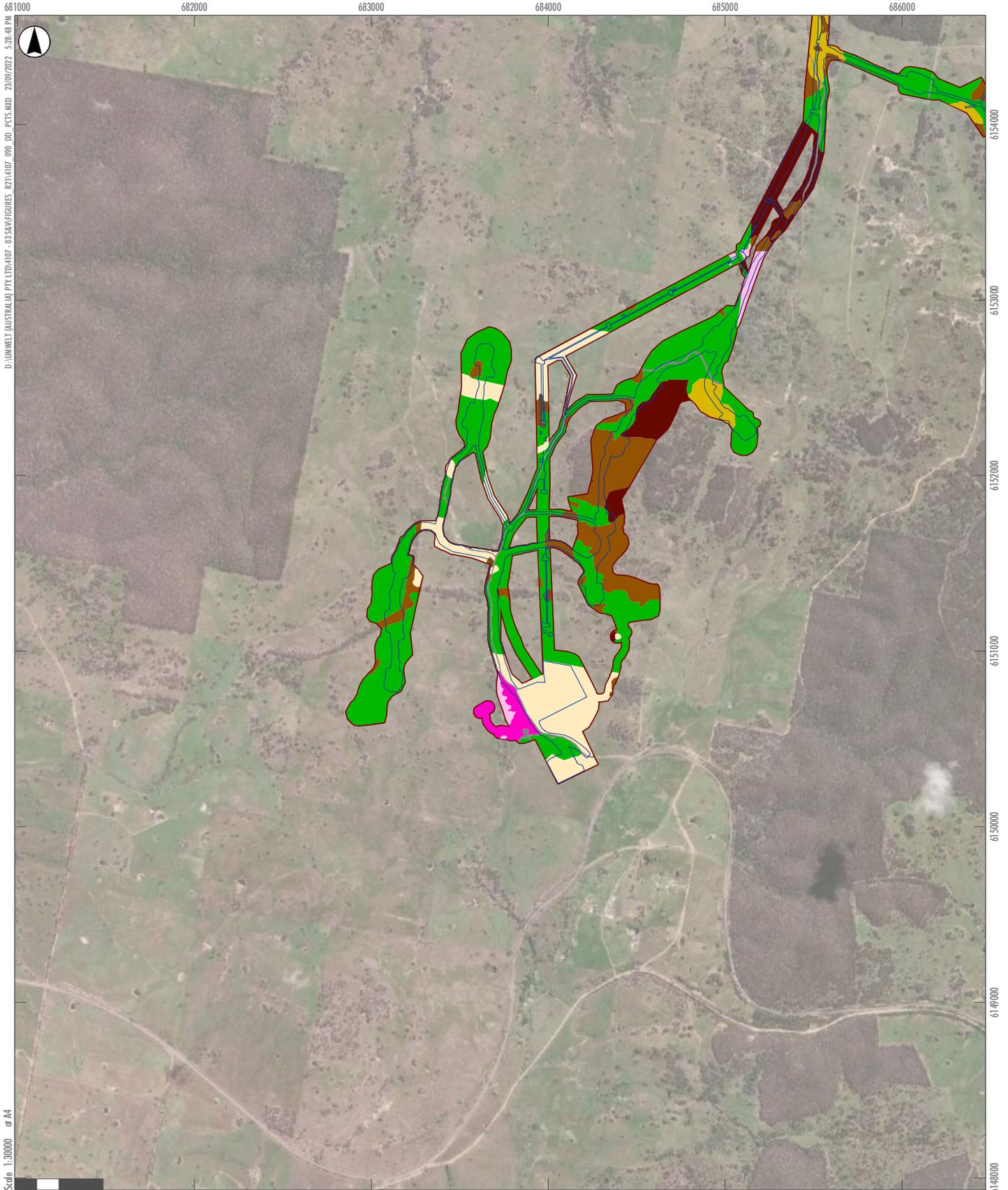
GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- PCT, Condition in the Rye Park Wind Farm
- Zone 2 -335 - Moderate to Good
- Zone 3 -350 - Moderate to Good
- Zone 4 -350 - Moderate to Good - DNG
- Zone 5 -351 - Moderate to Good
- Zone 6 -351 - Moderate to Good - DNG
- Zone 7 -351 - Moderate to Good - Acacia Shrubland
- Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.g
Plant Community Types and
Vegetation Zones in the
Pre-Construction
Development Footprint



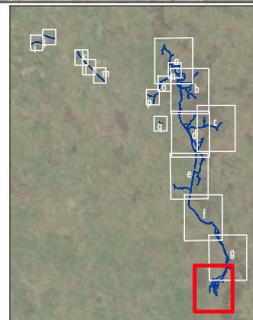
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Scale 1:30000 at A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Zone 10 - Non-native Vegetation
- Access Tracks/Roads
- Zone 3 -350 - Moderate to Good
- Zone 4 -350 - Moderate to Good - DNG
- Zone 5 -351 - Moderate to Good
- Zone 6 -351 - Moderate to Good - DNG
- Zone 7 -351 - Moderate to Good - Acacia Shrubland
- Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland



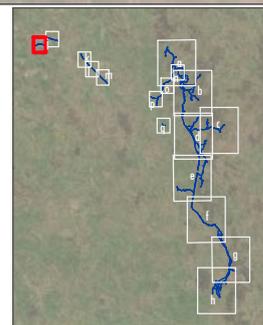
APPENDIX A.h

Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint



0 250 500 Meters

- Legend**
- Revised Pre-Construction Development Footprint
 - PCT, Condition in the Rye Park Wind Farm**
 - Zone 3 -350 - Moderate to Good
 - Zone 4 -350 - Moderate to Good - DNG
 - Zone 10 - Non-native Vegetation
 - Access Tracks/Roads



APPENDIX A.i
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint

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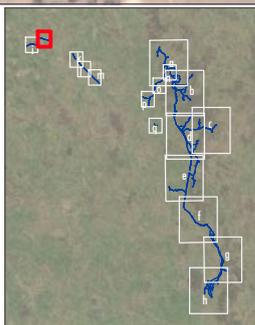


618000

6187000

GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - PCT, Condition in the Rye Park Wind Farm**
 - Zone 3 -350 - Moderate to Good
 - Zone 10 -Non-native Vegetation
 - Access Tracks/Roads



APPENDIX A.j
Plant Community Types and
Vegetation Zones in the
Pre-Construction
Development Footprint



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GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- PCT, Condition in the Rye Park Wind Farm**
- Zone 3 -350 - Moderate to Good
- Zone 4 -350 - Moderate to Good - DNG
- Zone 5 -351 - Moderate to Good
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.k
Plant Community Types and
Vegetation Zones in the
Pre-Construction
Development Footprint

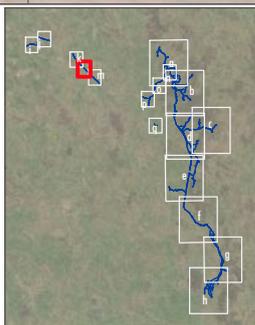


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Scale 1:10000 or A4

GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint PCT, Condition in the Rye Park Wind Farm
 - Zone 4 -350 - Moderate to Good - DNG
 - Zone 10 -Non-native Vegetation
 - Access Tracks/Roads



APPENDIX A.I
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint

667000

668000

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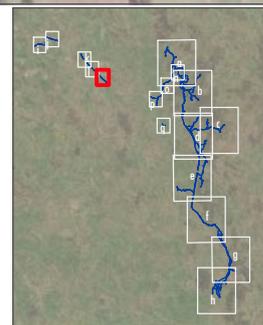
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6102020

GDA 1994 MGA Zone 55

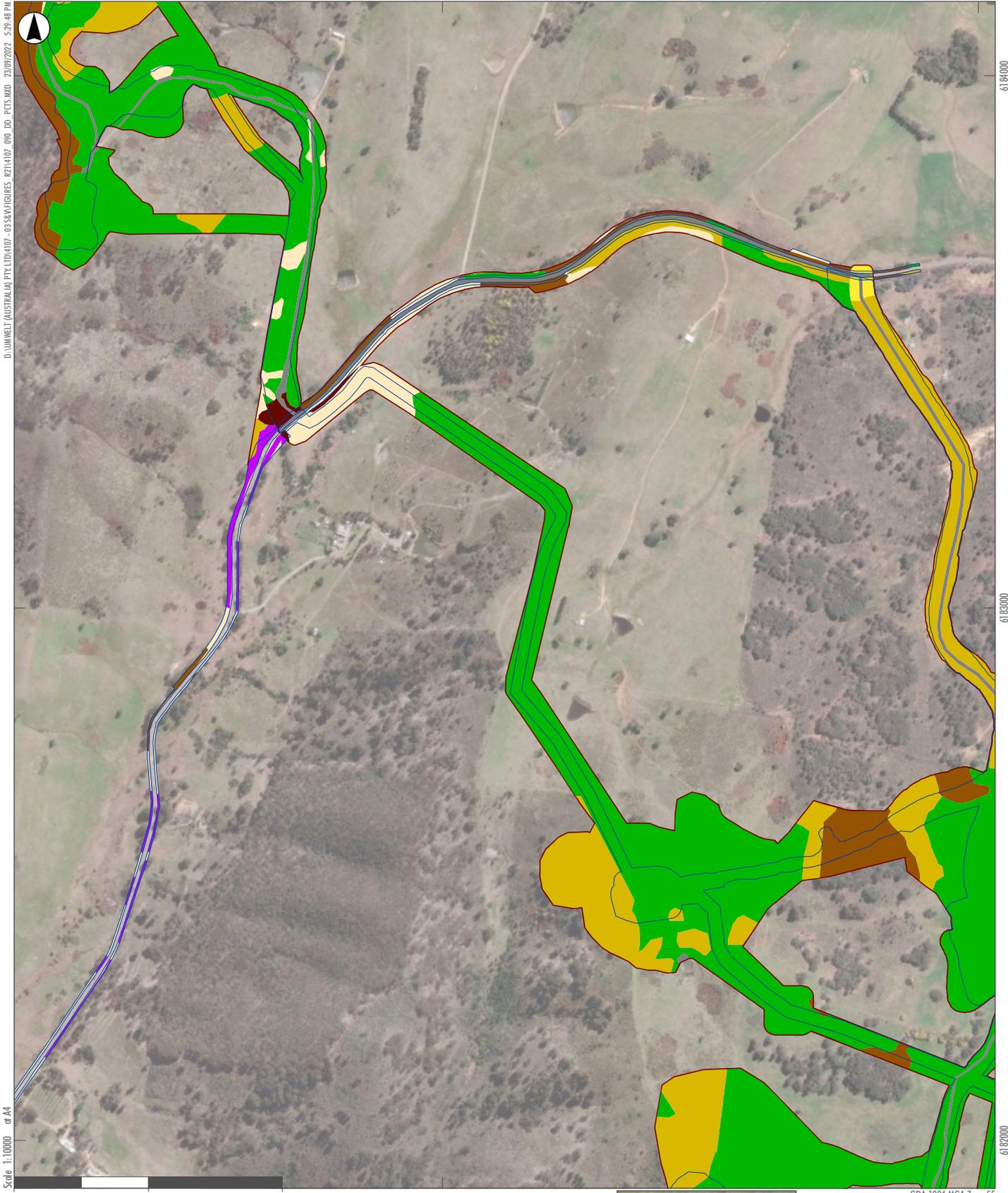
Legend

- Revised Pre-Construction Development Footprint
- PCT, Condition in the Rye Park Wind Farm**
- Zone 3 -350 - Moderate to Good
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.m

Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint



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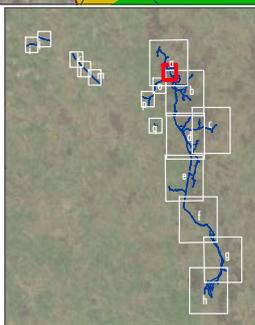
6182000

Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- PCT, Condition in the Rye Park Wind Farm**
- Zone 1 -289 - Moderate to Good
- Zone 5 -351 - Moderate to Good
- Zone 6 -351 - Moderate to Good - DNG
- Zone 7 -351 - Moderate to Good - Acacia Shrubland
- Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
- Zone 9 -351 - Moderate to Good - Argyle Apple Forest
- Zone 10 - Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.n
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint



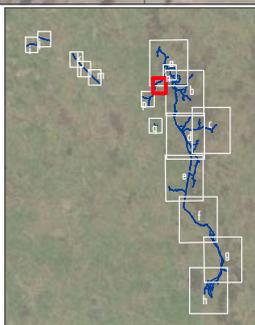
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GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- PCT, Condition in the Rye Park Wind Farm**
- Zone 1 -289 - Moderate to Good
- Zone 3 -350 - Moderate to Good
- Zone 8 -351 - Moderate to Good - Sifton Bush Shrubland
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.o
Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint

674000

675000

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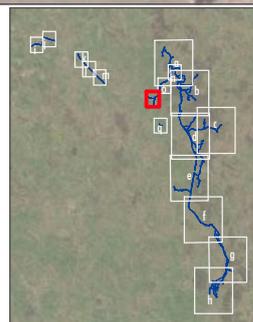
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0 250 500 Meters

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- PCT, Condition in the Rye Park Wind Farm**
- Zone 3 -350 - Moderate to Good
- Zone 4 -350 - Moderate to Good - DNG
- Zone 10 - Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.p

Plant Community Types and Vegetation Zones in the Pre-Construction Development Footprint

676000

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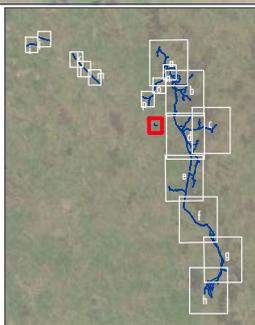
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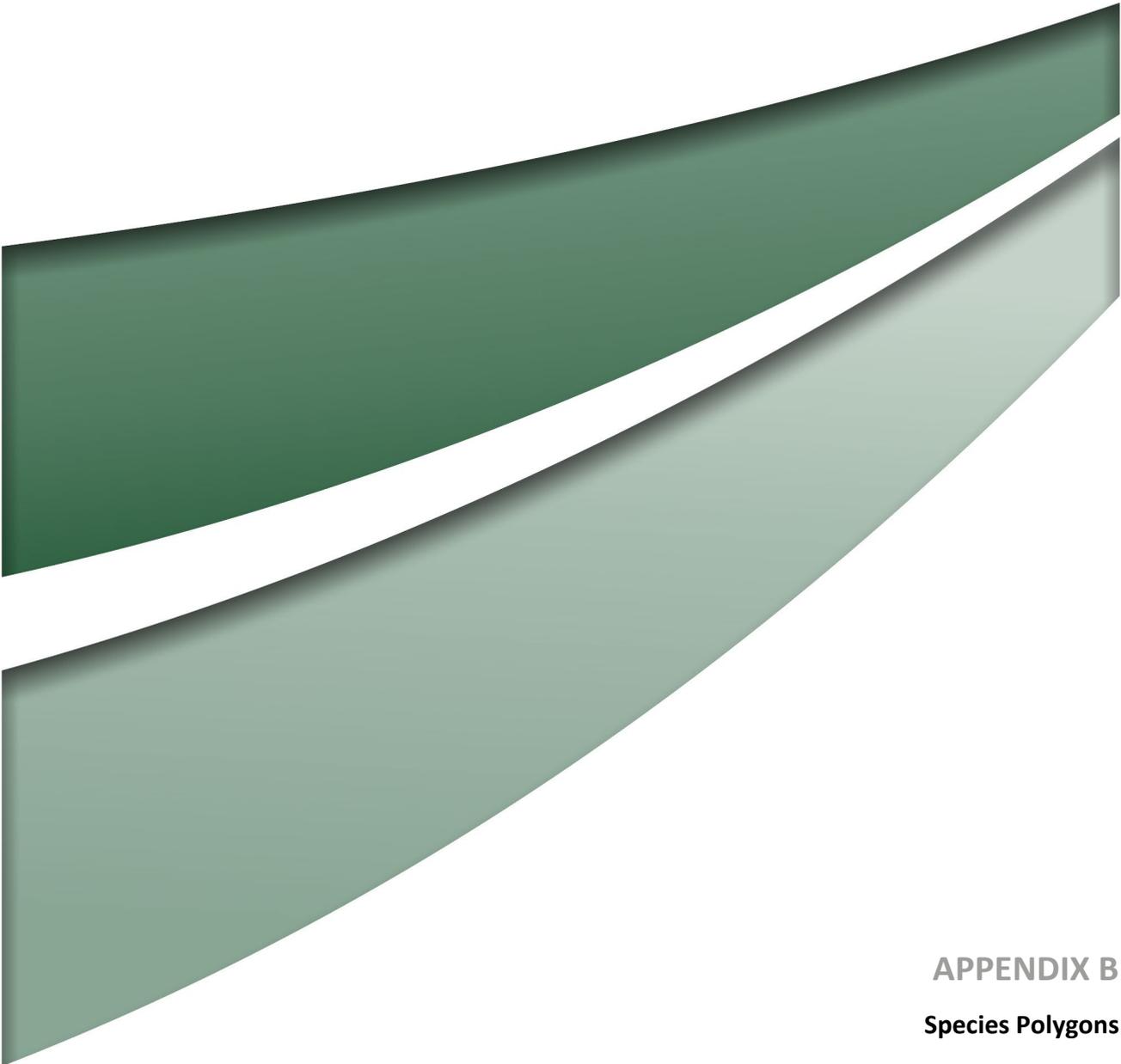
GDA 1994 MGA Zone 55

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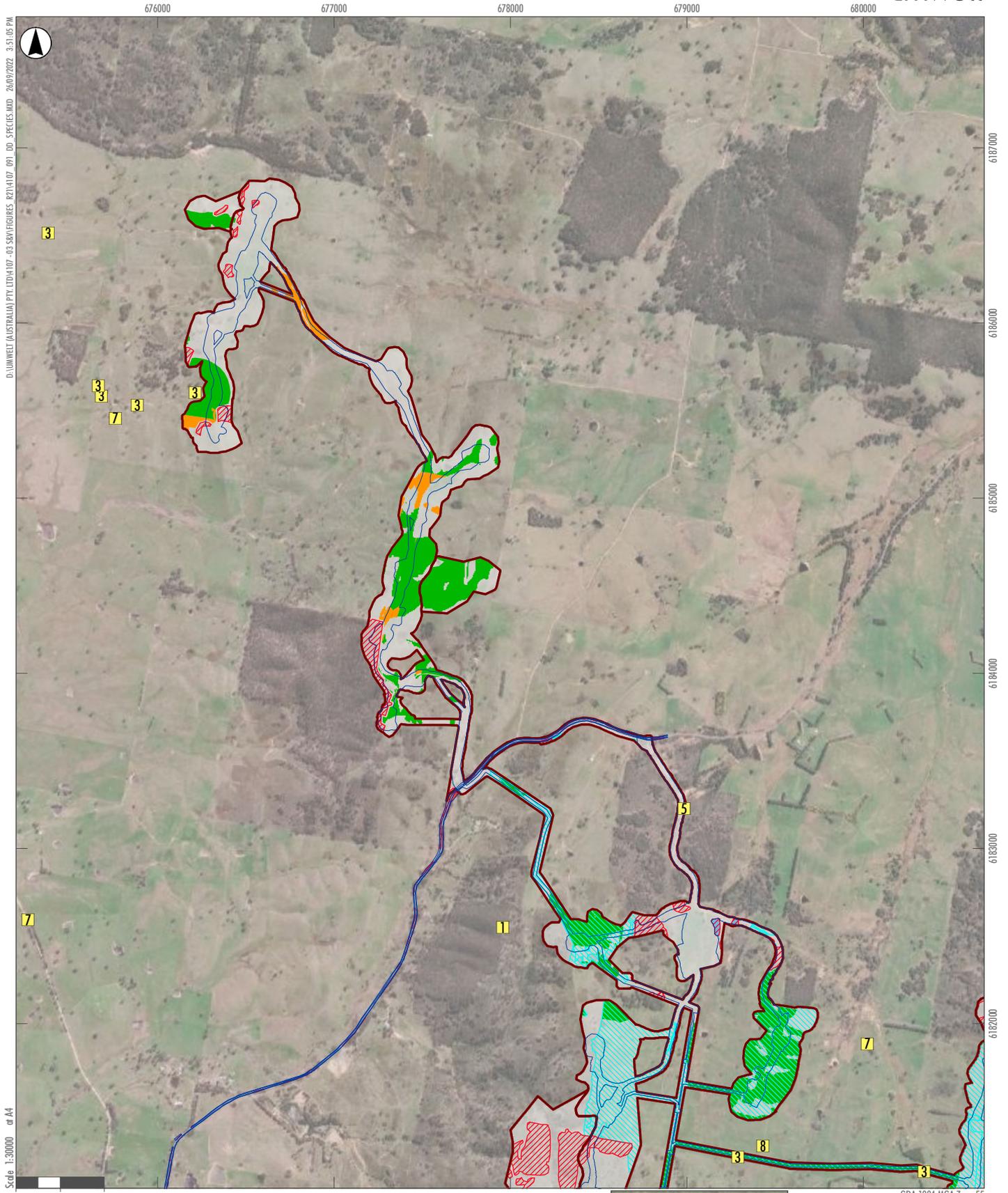
- Revised Pre-Construction Development Footprint
- PCT, Condition in the Rye Park Wind Farm**
- Zone 3 -350 - Moderate to Good
- Zone 10 -Non-native Vegetation
- Access Tracks/Roads



APPENDIX A.q
Plant Community Types and
Vegetation Zones in the
Pre-Construction
Development Footprint



APPENDIX B
Species Polygons

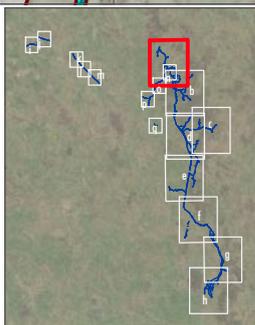


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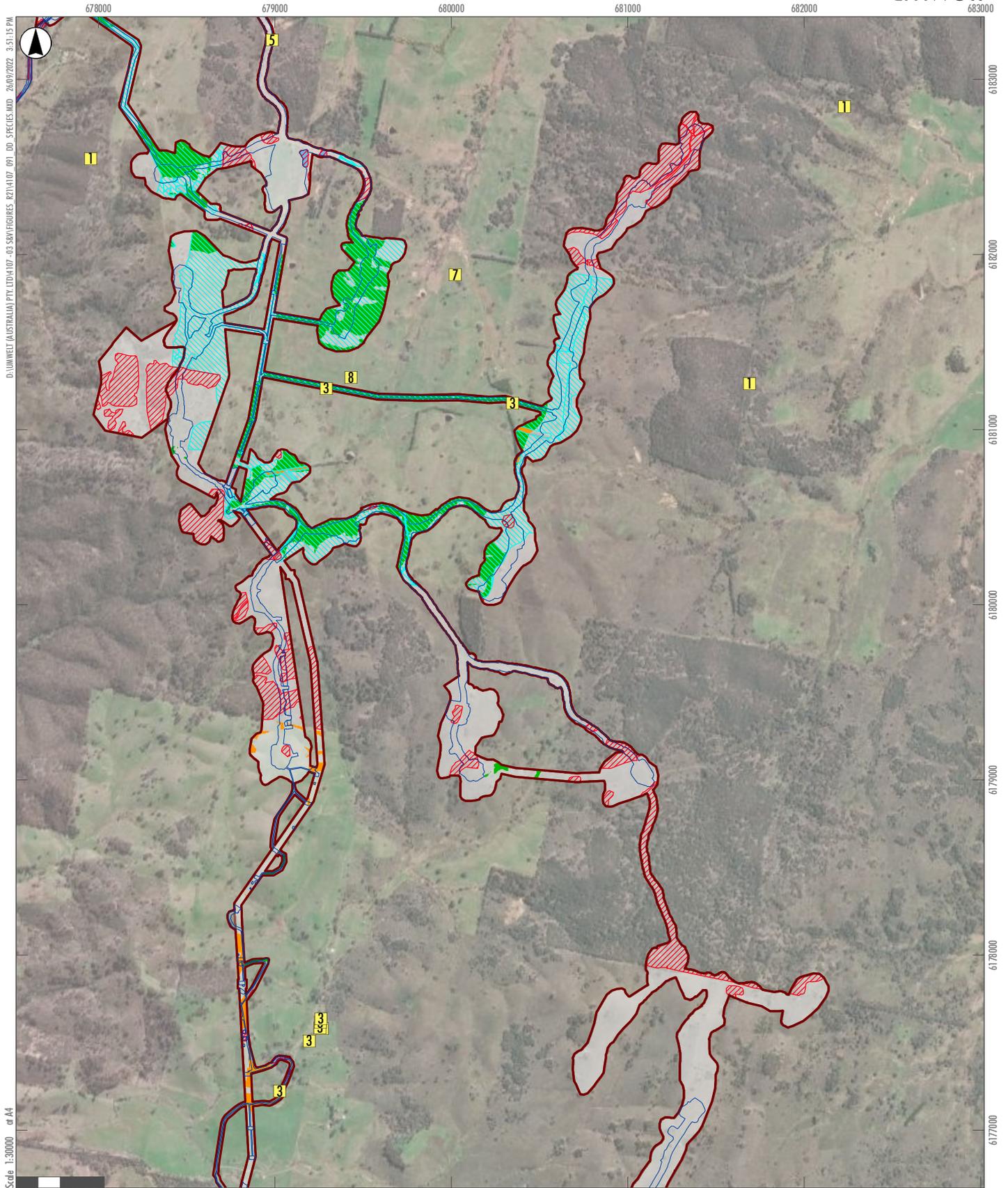
GDA 1994 MGA Zone 55

Legend

- | | |
|--|---|
| <ul style="list-style-type: none"> Revised Pre-Construction Development Footprint Rye Park Wind Farm Development Corridor | <p>Threatened Species Habitat</p> <ul style="list-style-type: none"> Southern Myotis Habitat Squirrel Glider Habitat Striped Legless Lizard Habitat GSM Habitat - Native (VZ 4 and VZ 6) GSM Habitat - Non-native Vegetation (VZ 10) Superb Parrot - Breeding Habitat |
| <p>Threatened Species Records</p> <ul style="list-style-type: none"> 1 Glider Sp. 3 Golden Sun Moth 5 Little Eagle 7 Superb Parrot 8 Striped Legless Lizard | |



APPENDIX B.a
Threatened Species Habitat & Records in the Pre-Construction Development Footprint



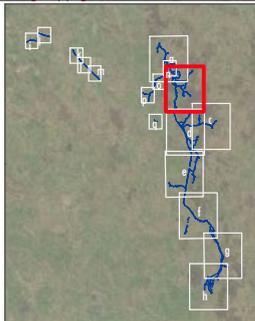
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Scale 1:30000 or A4

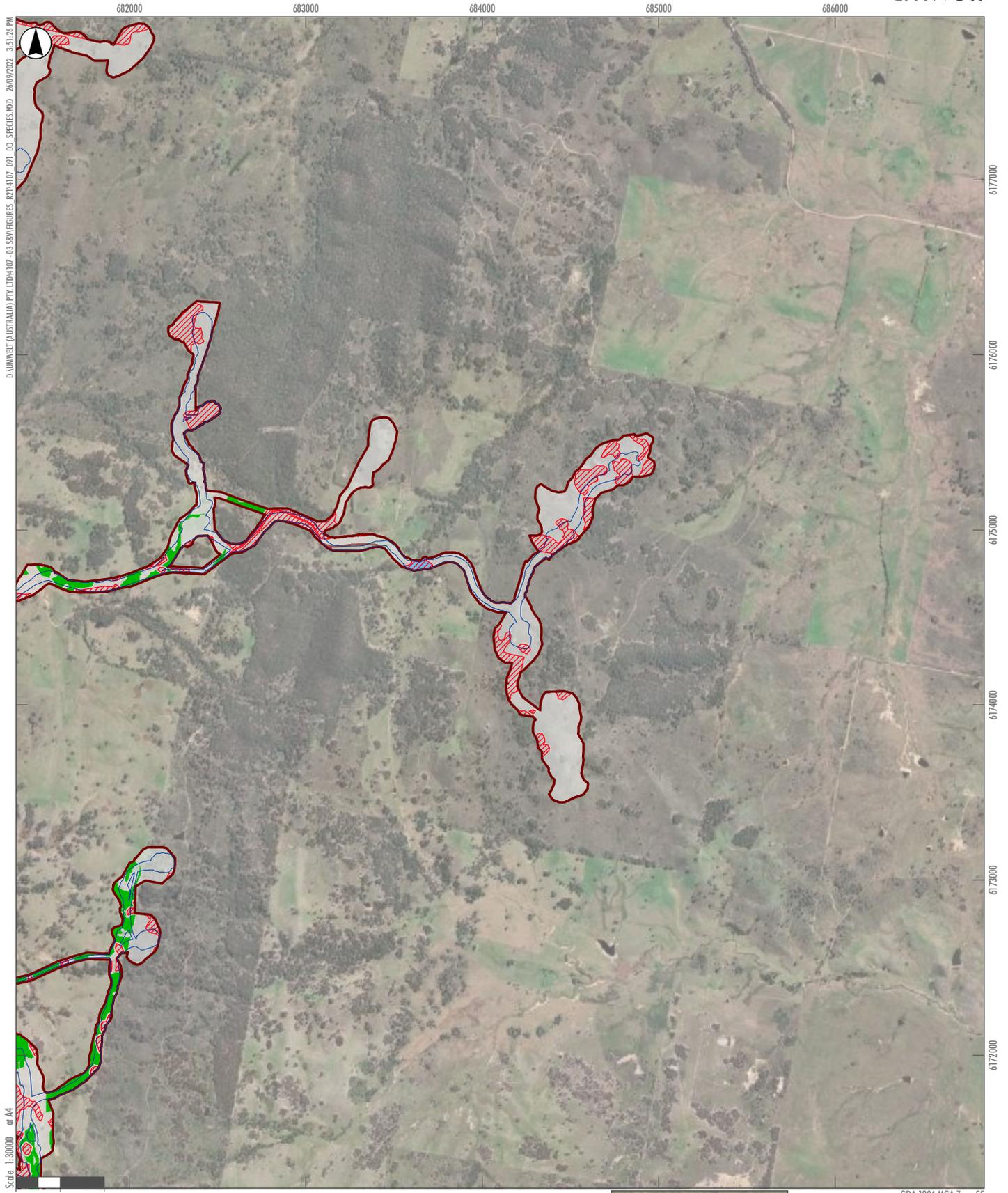
GDA 1994 MGA Zone 55

Legend

- | | |
|--|---|
| Revised Pre-Construction Development Footprint | Threatened Species Habitat |
| Rye Park Wind Farm Development Corridor | Southern Myotis Habitat |
| Threatened Species Records | Squirrel Glider Habitat |
| 1 Glider Sp. | Striped Legless Lizard Habitat |
| 3 Golden Sun Moth | GSM Habitat - Native (VZ 4 and VZ 6) |
| 5 Little Eagle | GSM Habitat - Non-native Vegetation (VZ 10) |
| 7 Superb Parrot | Superb Parrot - Breeding Habitat |
| 8 Striped Legless Lizard | |



APPENDIX B.b
Threatened Species Habitat & Records in the Pre-Construction Development Footprint

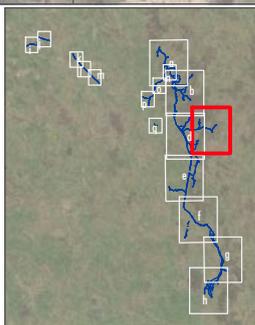


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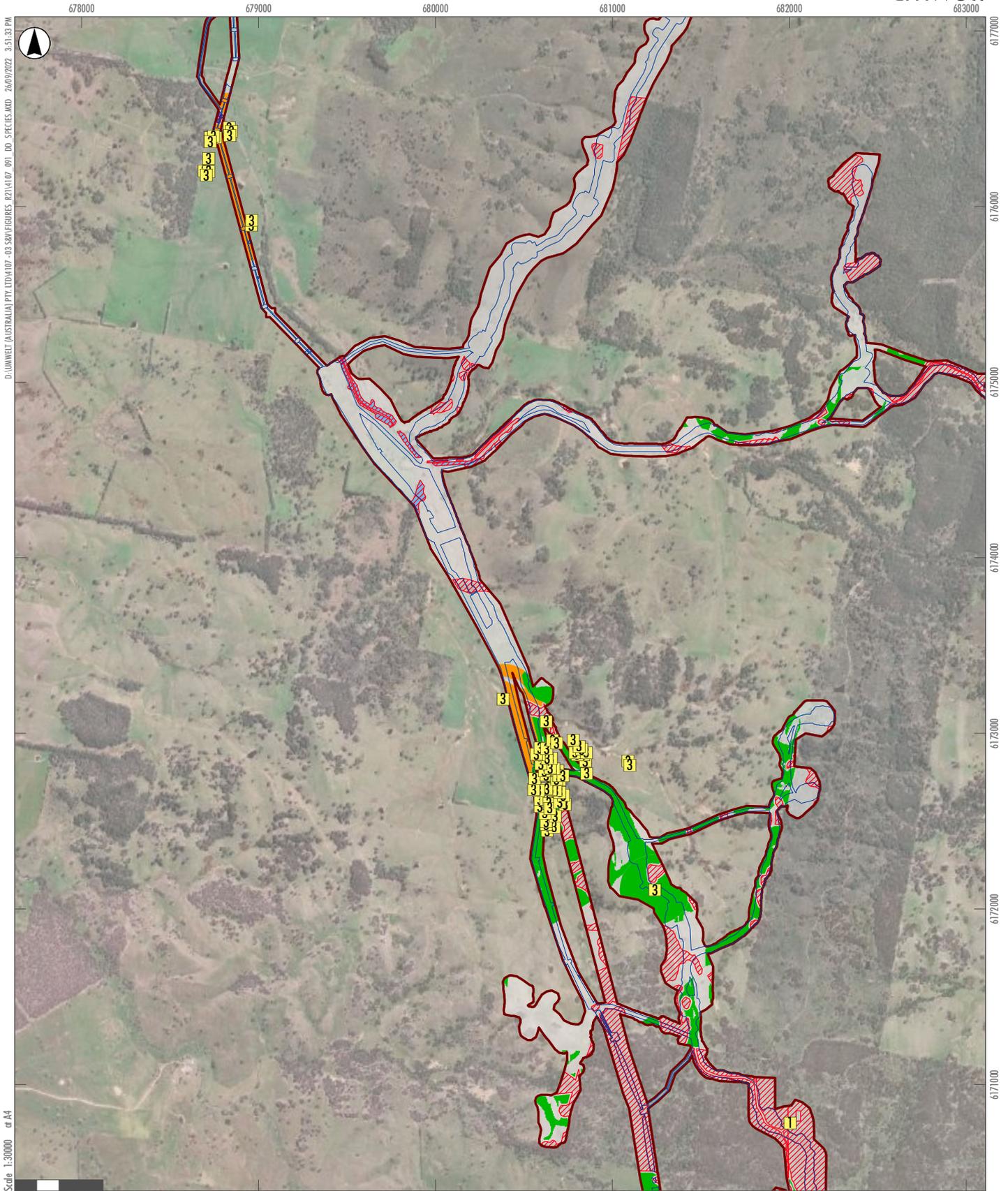
GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Species Habitat**
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Native (VZ 4 and VZ 6)
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat



APPENDIX B.c
Threatened Species Habitat
& Records in the
Pre-Construction
Development Footprint



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GDA 1994 MGA Zone 55

Legend

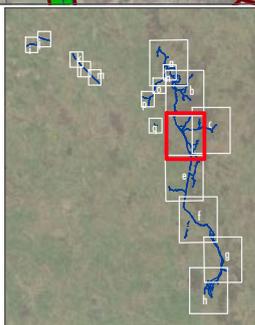
- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- GSM Habitat - Native (VZ 4 and VZ 6)
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat

Threatened Species Records

- 1 Glider Sp.
- 3 Golden Sun Moth

Threatened Species Habitat

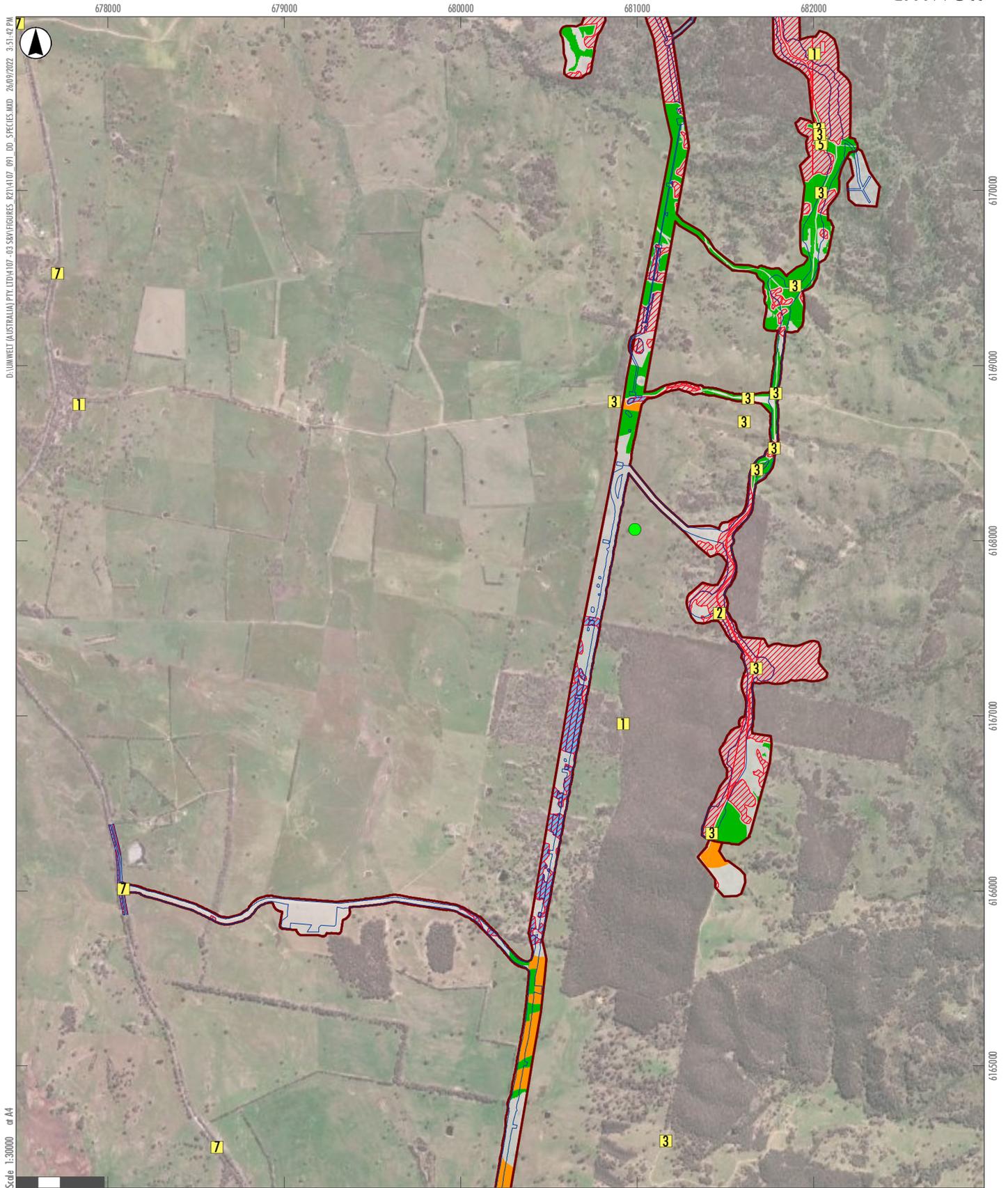
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat



APPENDIX B.d

Threatened Species Habitat & Records in the Pre-Construction Development Footprint

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

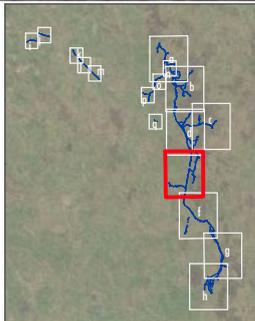


Scale 1:30000 at A4

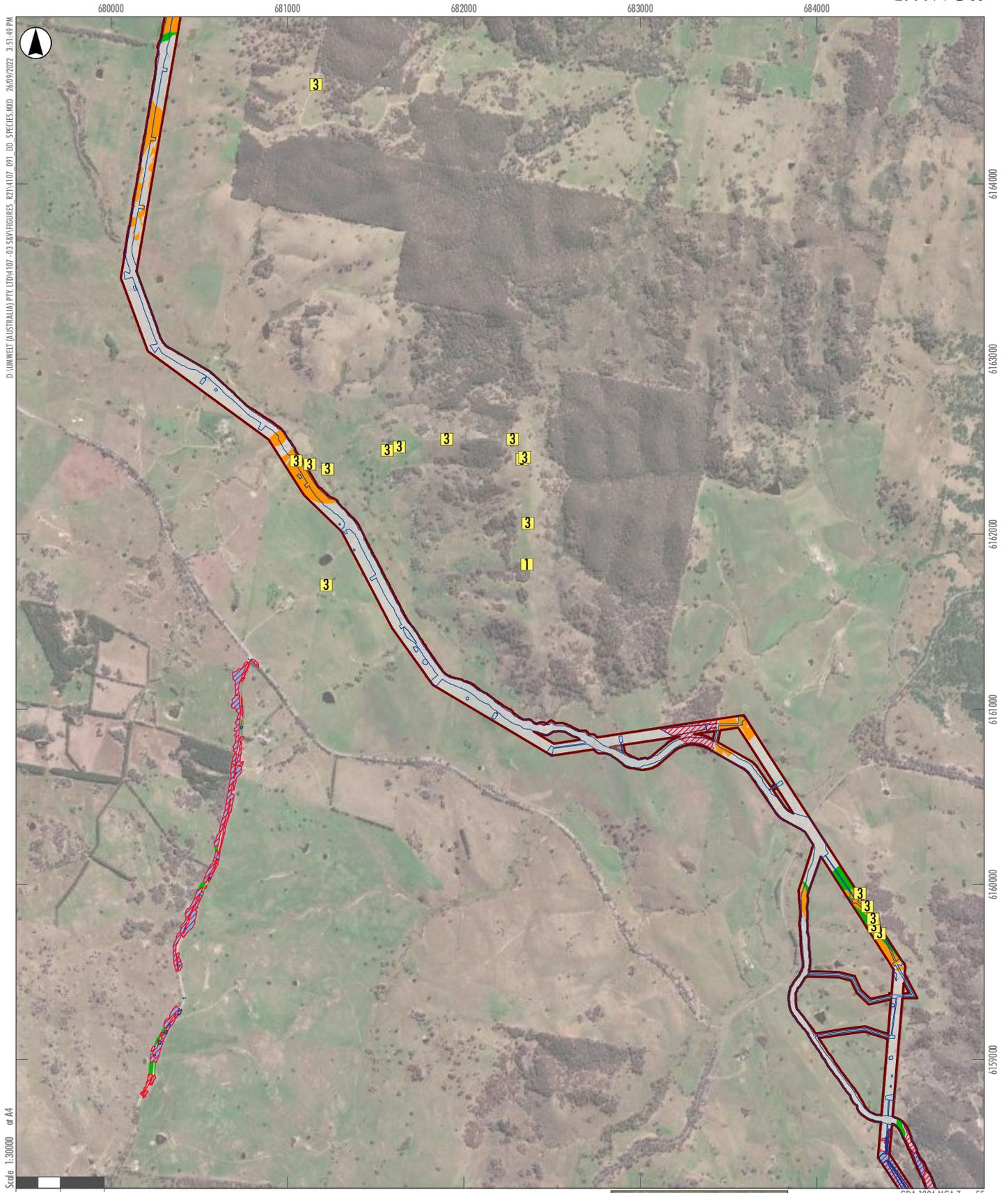
GDA 1994 MGA Zone 55

Legend

- | | |
|--|---|
| Revised Pre-Construction Development Footprint | Threatened Species Habitat |
| Rye Park Wind Farm Development Corridor | Southern Myotis Habitat |
| Threatened Species Records | Squirrel Glider Habitat |
| 1 Glider Sp. | Striped Legless Lizard Habitat |
| 2 Squirrel Glider | GSM Habitat - Native (VZ 4 and VZ 6) |
| 3 Golden Sun Moth | GSM Habitat - Non-native Vegetation (VZ 10) |
| 5 Little Eagle | Superb Parrot - Breeding Habitat |
| 7 Superb Parrot | |
| Superb Parrot Nest Tree | |



APPENDIX B.e
Threatened Species Habitat & Records in the Pre-Construction Development Footprint



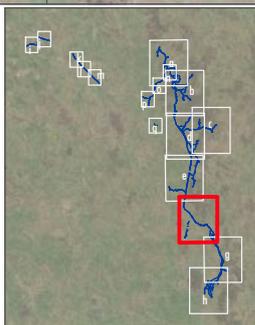
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GDA 1994 MGA Zone 55

Legend

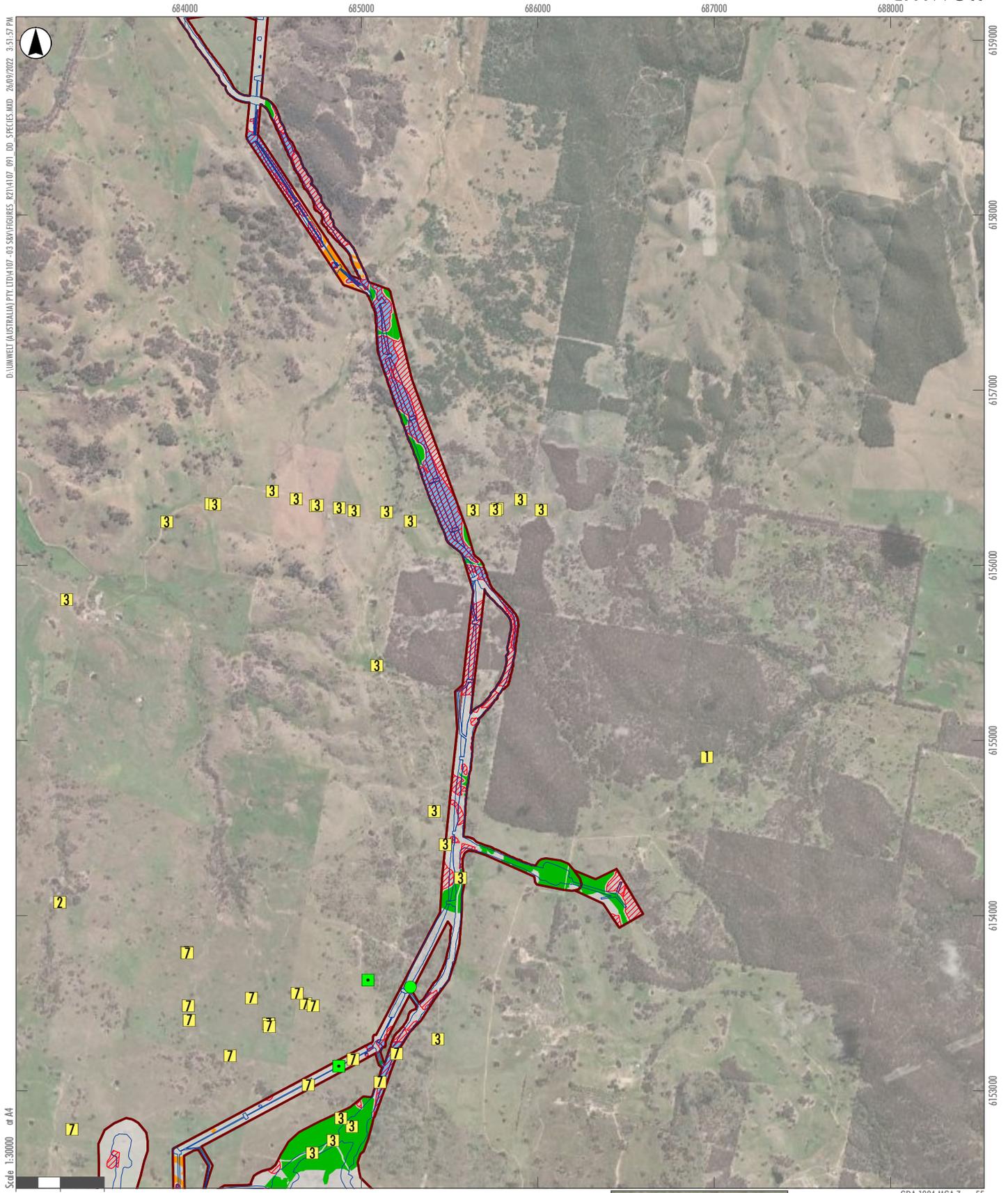
- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- GSM Habitat - Native (VZ 4 and VZ 6)
- GSM Habitat - Non-native Vegetation (VZ 10)
- Threatened Species Records
- Superb Parrot - Breeding Habitat

- 11 Glider Sp.
- 3 Golden Sun Moth
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat



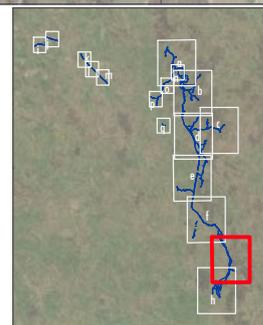
APPENDIX B.f
Threatened Species Habitat & Records in the Pre-Construction Development Footprint

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

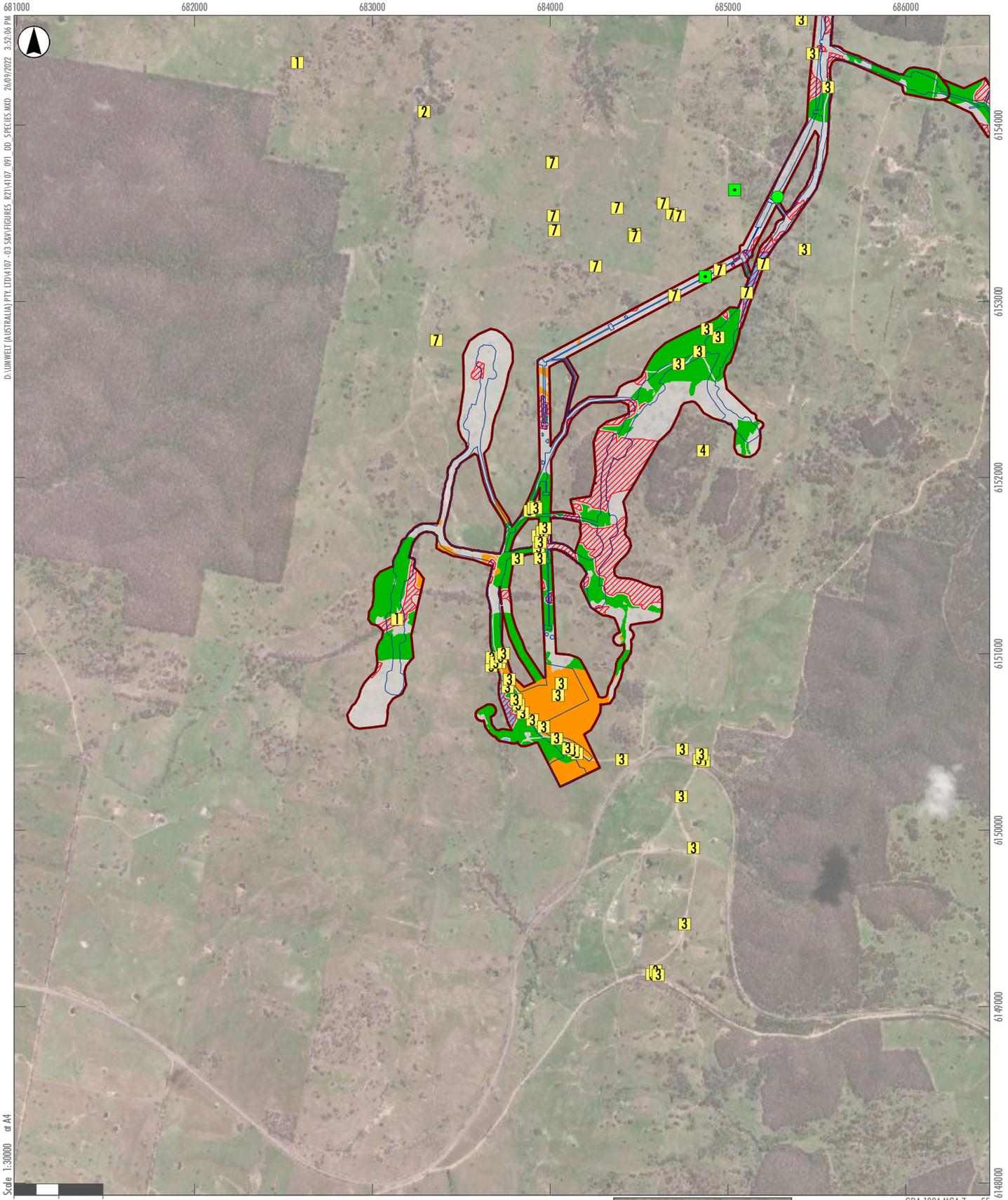


- Scale 1:30000 at A4
- 0 250 500 Meters
- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
- Threatened Species Records**
- Glider Sp.
 - Squirrel Glider
 - Golden Sun Moth
 - Superb Parrot
 - Potential Superb Parrot Nest Tree
 - Superb Parrot Nest Tree

- Threatened Species Habitat**
- Southern Myotis Habitat
 - Squirrel Glider Habitat
 - Striped Legless Lizard Habitat
 - GSM Habitat - Native (VZ 4 and VZ 6)
 - GSM Habitat - Non-native Vegetation (VZ 10)
 - Superb Parrot - Breeding Habitat



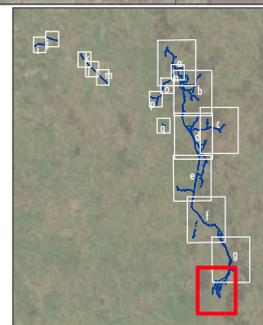
APPENDIX B.g
Threatened Species Habitat & Records in the Pre-Construction Development Footprint



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 Scale 1:30000 or A4

GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
 - Threatened Species Records**
 - 1 Glider Sp.
 - 2 Squirrel Glider
 - 3 Golden Sun Moth
 - 4 Large bent-winged bat
 - 7 Superb Parrot
 - Potential Superb Parrot Nest Tree
 - Superb Parrot Nest Tree
 - Threatened Species Habitat**
 - Southern Myotis Habitat
 - Squirrel Glider Habitat
 - Striped Legless Lizard Habitat
 - GSM Habitat - Native (VZ 4 and VZ 6)
 - GSM Habitat - Non-native Vegetation (VZ 10)
 - Superb Parrot - Breeding Habitat



APPENDIX B.h
Threatened Species Habitat & Records in the Pre-Construction Development Footprint



6180000

6180200

6180400

GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Threatened Species Habitat**
 - Southern Myotis Habitat
 - Squirrel Glider Habitat
 - Striped Legless Lizard Habitat
 - GSM Habitat - Non-native Vegetation (VZ 10)
 - Superb Parrot - Breeding Habitat



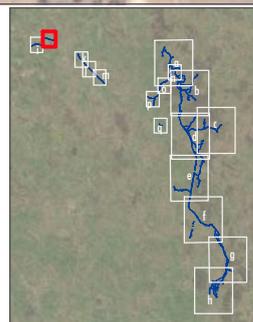
APPENDIX B.i
Threatened Species Habitat & Records in the Pre-Construction Development Footprint



GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Species Habitat**
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat



APPENDIX B.j
Threatened Species Habitat & Records in the Pre-Construction Development Footprint

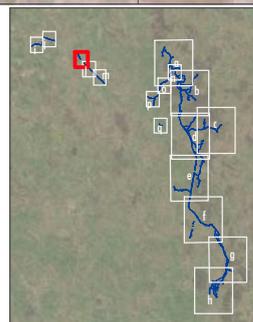


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 Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Species Habitat**
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat



APPENDIX B.k
Threatened Species Habitat
& Records in the
Pre-Construction
Development Footprint



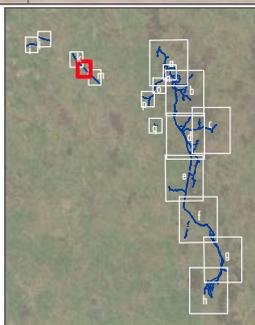
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Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Species Habitat**
- Southern Myotis Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Non-native Vegetation (VZ 10)



APPENDIX B.I
Threatened Species Habitat & Records in the Pre-Construction Development Footprint

667000

668000

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6103019

6102019

Scale 1:10000 at A4

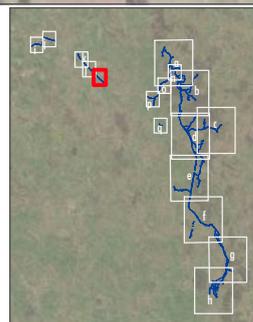


0 250 500 Meters

GDA 1994 MGA Zone 55

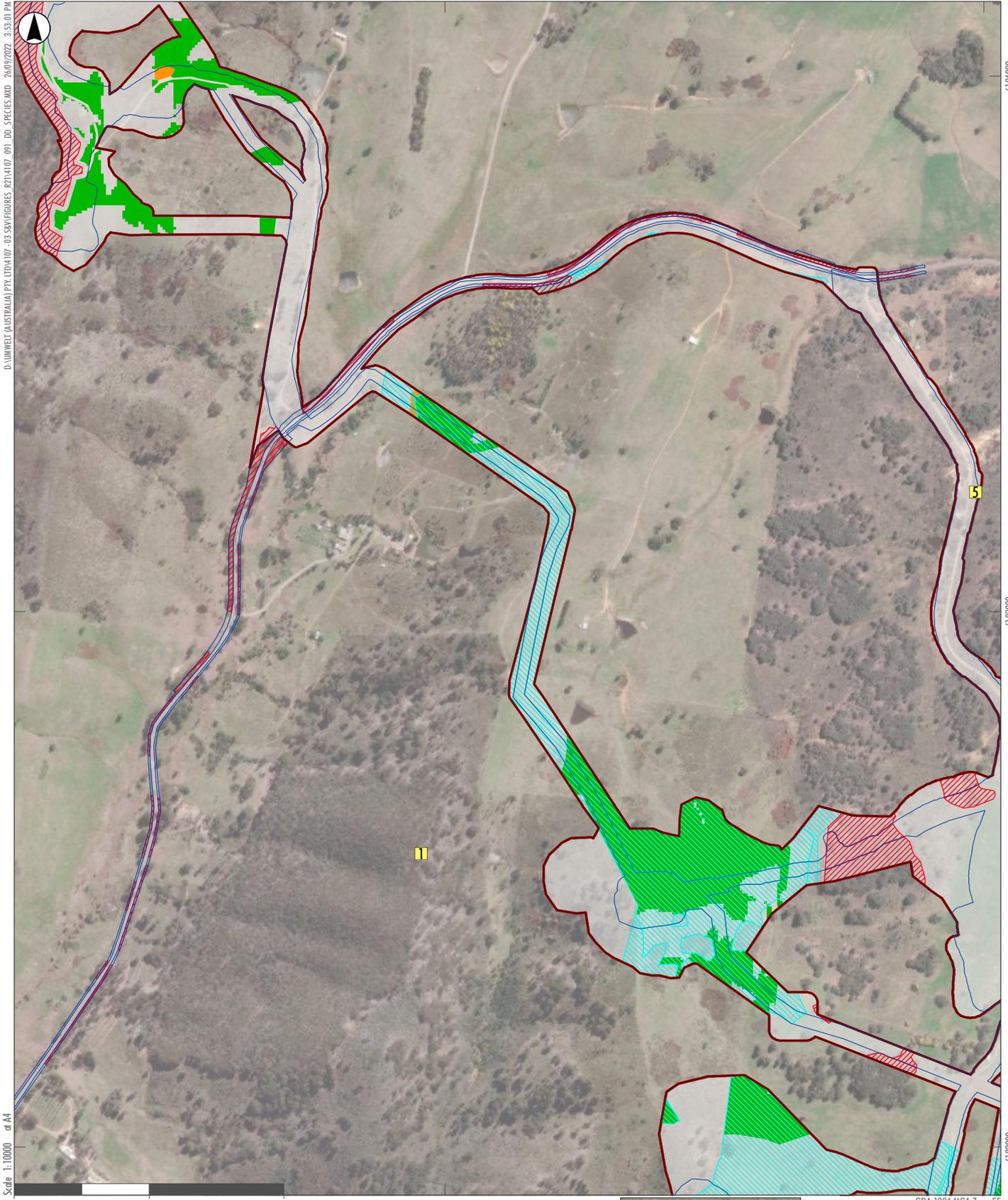
Legend

- Revised Pre-Construction Development Footprint
- Threatened Species Habitat**
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat



APPENDIX B.m

Threatened Species Habitat & Records in the Pre-Construction Development Footprint



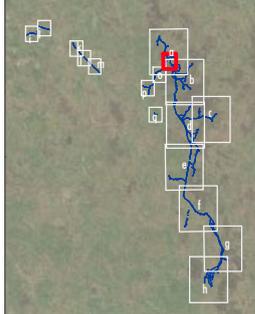
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618000
6183000
6182000

Scale 1:10000 or A4
0 250 500 Meters

GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
 - GSM Habitat - Native (VZ 4 and VZ 6)
 - GSM Habitat - Non-native Vegetation (VZ 10)
- Threatened Species Records**
- Glider Sp.
 - Little Eagle
- Threatened Species Habitat**
- Southern Myotis Habitat
 - Squirrel Glider Habitat
 - Striped Legless Lizard Habitat



APPENDIX B.n
Threatened Species Habitat & Records in the Pre-Construction Development Footprint

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



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 Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Species Habitat**
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat



APPENDIX B.o
Threatened Species Habitat & Records in the Pre-Construction Development Footprint

674000

675000

D:\UMWELT (AUSTRALIA) PVT.LTD\4107_03 SRM\FIGURES R21\4107_091_DOI_SPECIES.MXD 26/09/2022 3:53:20 PM



6180000

6179000

Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

Revised Pre-Construction Development Footprint

Threatened Species Records

Southern Myotis

Threatened Species Habitat

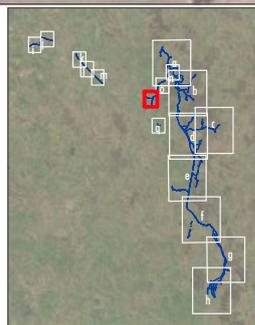
Southern Myotis Habitat

Squirrel Glider Habitat

Striped Legless Lizard Habitat

GSM Habitat - Non-native Vegetation (VZ 10)

Superb Parrot - Breeding Habitat



APPENDIX B.p

Threatened Species Habitat & Records in the Pre-Construction Development Footprint

676000

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Scale 1:10000 or A4



6176000

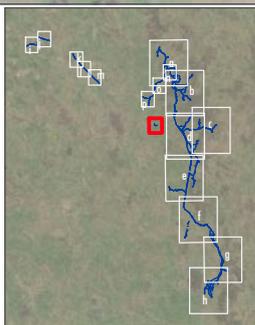
6175000

0 250 500 Meters

GDA 1994 MGA Zone 55

Legend

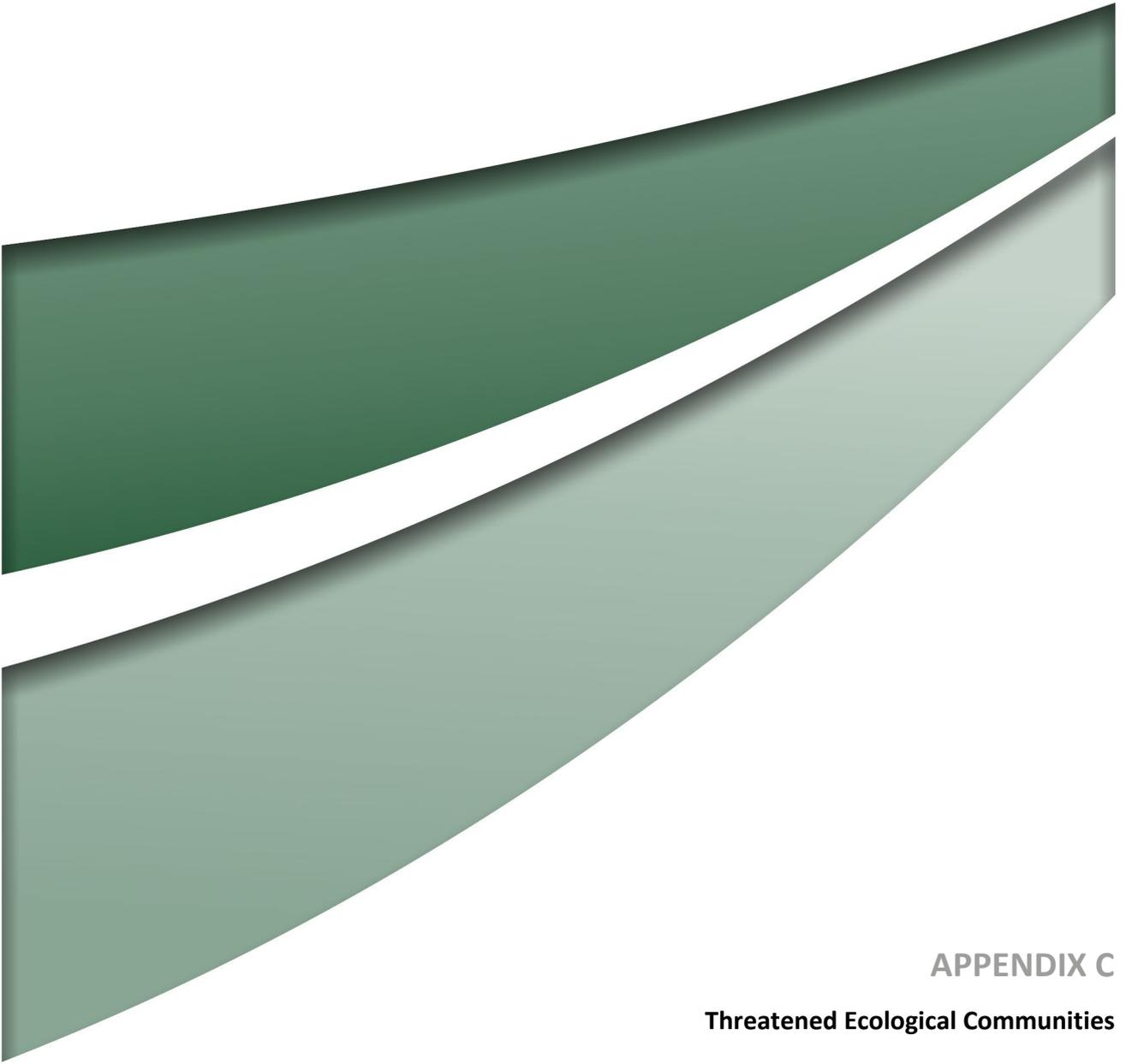
- Revised Pre-Construction Development Footprint
- Threatened Species Records**
- Superb Parrot
- Threatened Species Habitat**
- Southern Myotis Habitat
- Squirrel Glider Habitat
- Striped Legless Lizard Habitat
- GSM Habitat - Non-native Vegetation (VZ 10)
- Superb Parrot - Breeding Habitat



APPENDIX B.q

Threatened Species Habitat & Records in the Pre-Construction Development Footprint

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

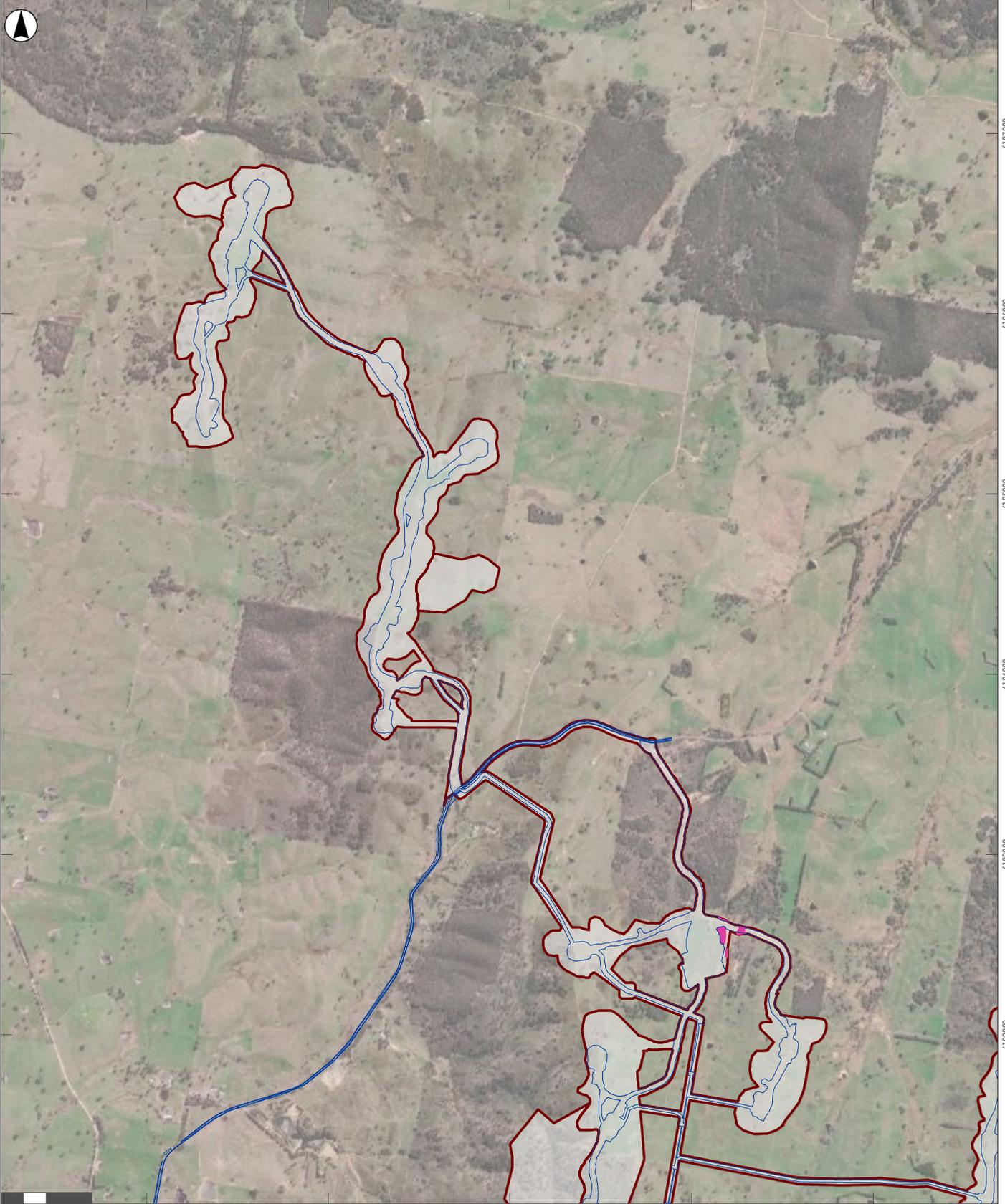


APPENDIX C

Threatened Ecological Communities

676000 677000 678000 679000 680000

D:\UMWELT (AUSTRALIA) PVT.LTD\14107_03 SWM\FIGURES 102\14107_092_DO_TECs.MXD 23/09/2022 5:55:56 PM



Scale 1:30000 at A4

0 250 500 Meters

GDA 1994 MGA Zone 55

Legend

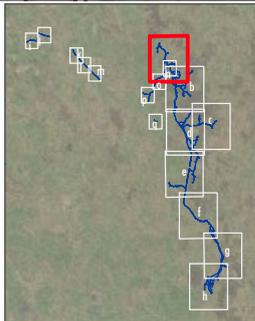
- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor

Threatened Ecological Communities (BC Act)

- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)

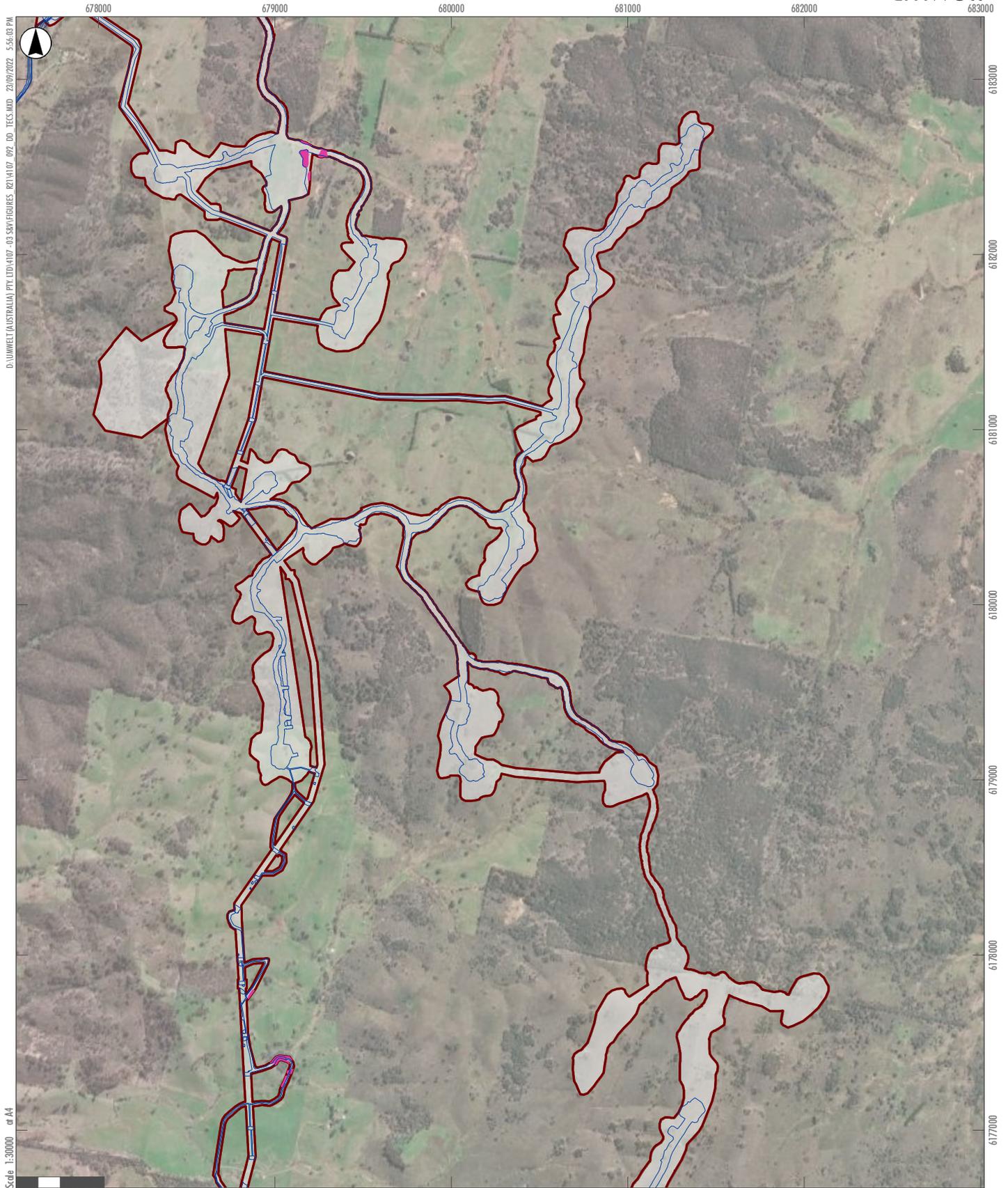
Threatened Ecological Communities (BC Act & EPBC Act)

- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) /
- White Box - Yellow Box - Blakely's Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.a

Threatened Vegetation Communities in the Pre-Construction Development Footprint

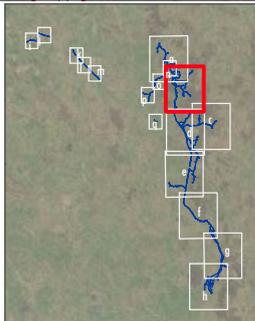


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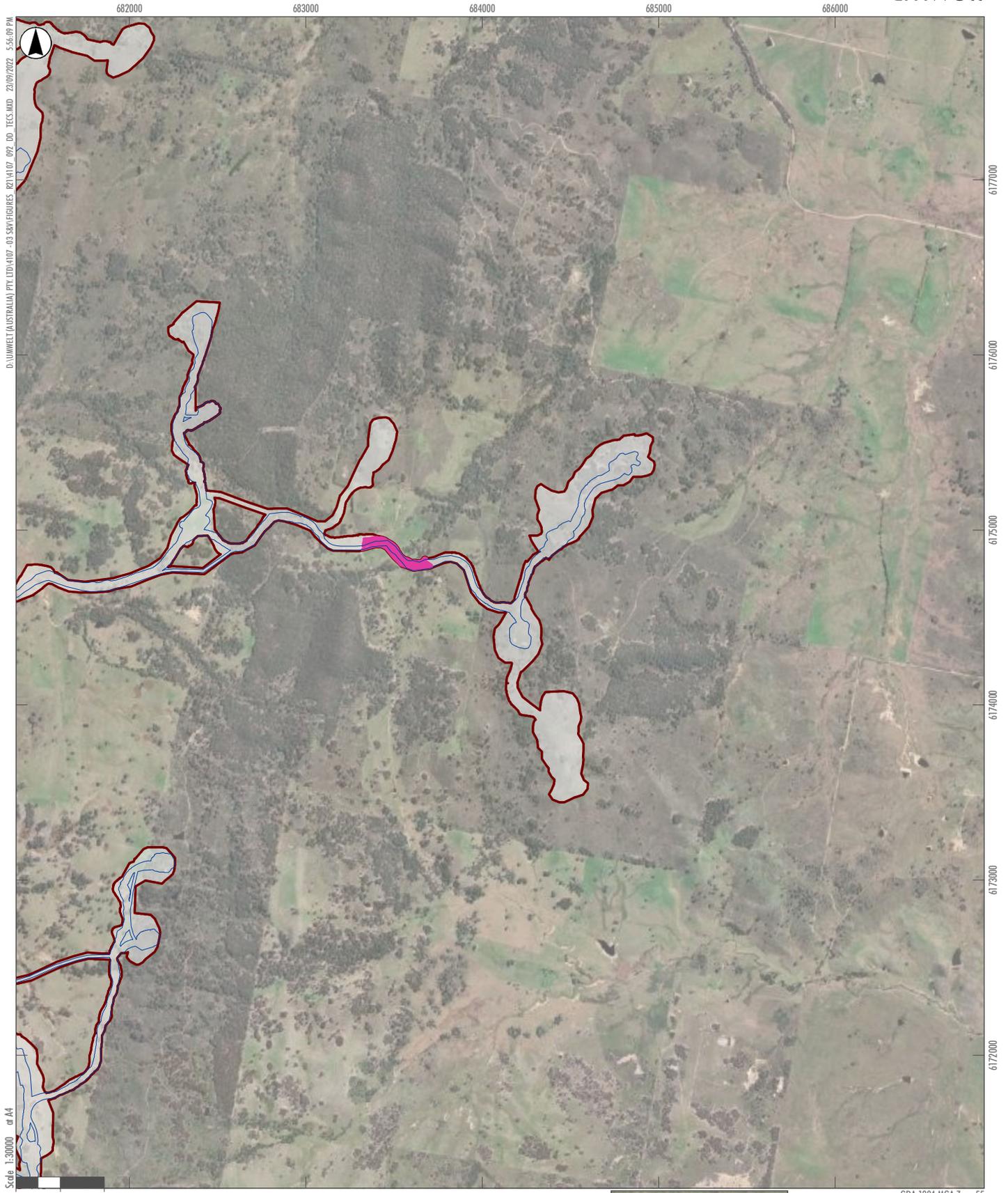
GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Ecological Communities (BC Act & EPBC Act)**
 - White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) /
 - White Box - Yellow Box - Blakely's Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.b
Threatened Vegetation Communities in the Pre-Construction Development Footprint

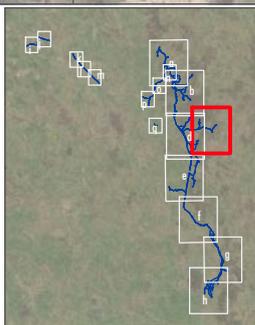


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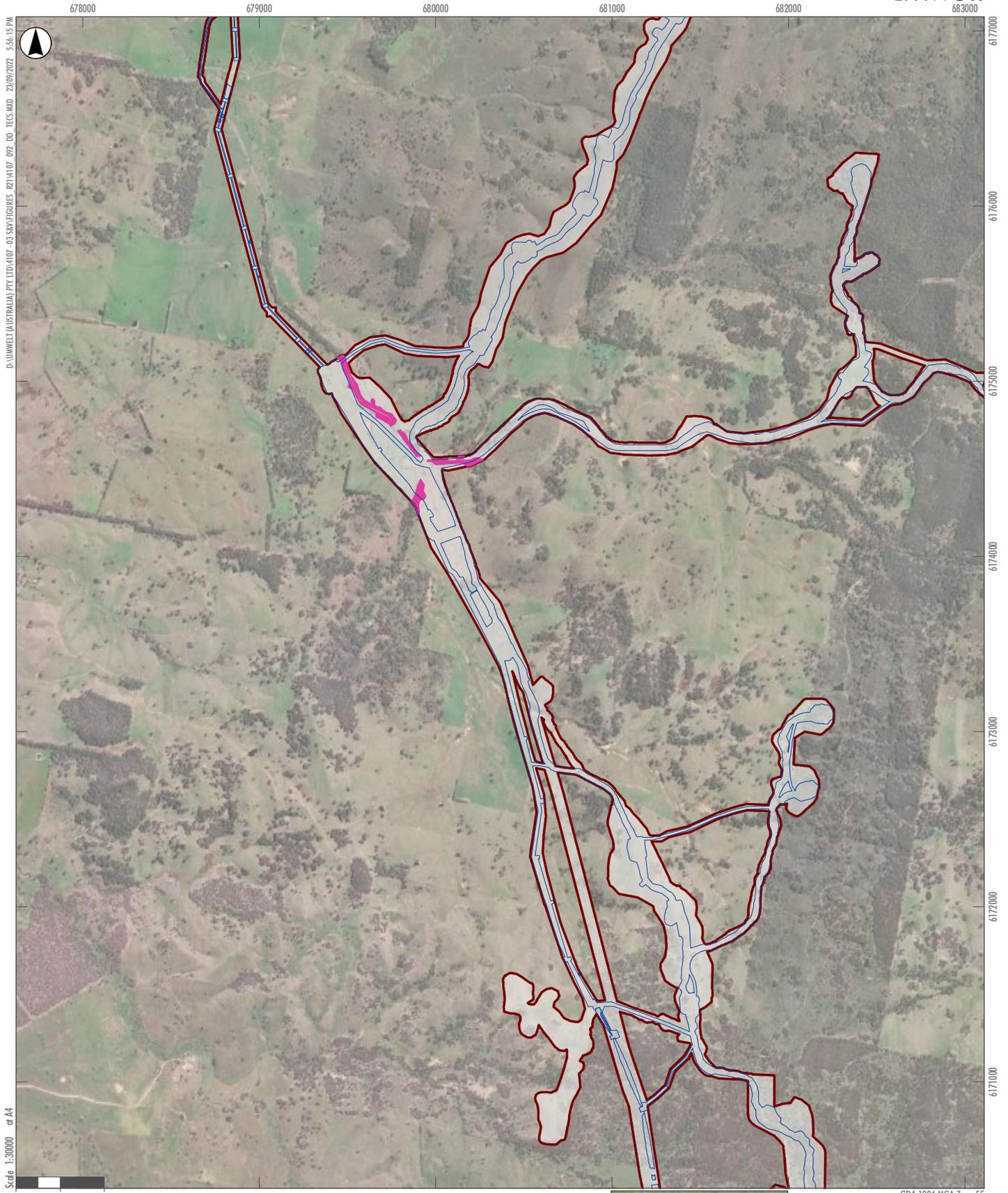
GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.c
Threatened Vegetation Communities in the Pre-Construction Development Footprint



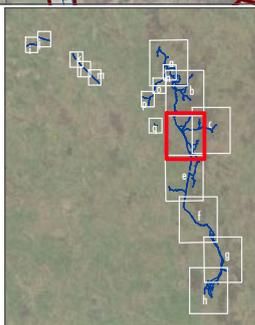
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Scale 1:30000 at A4

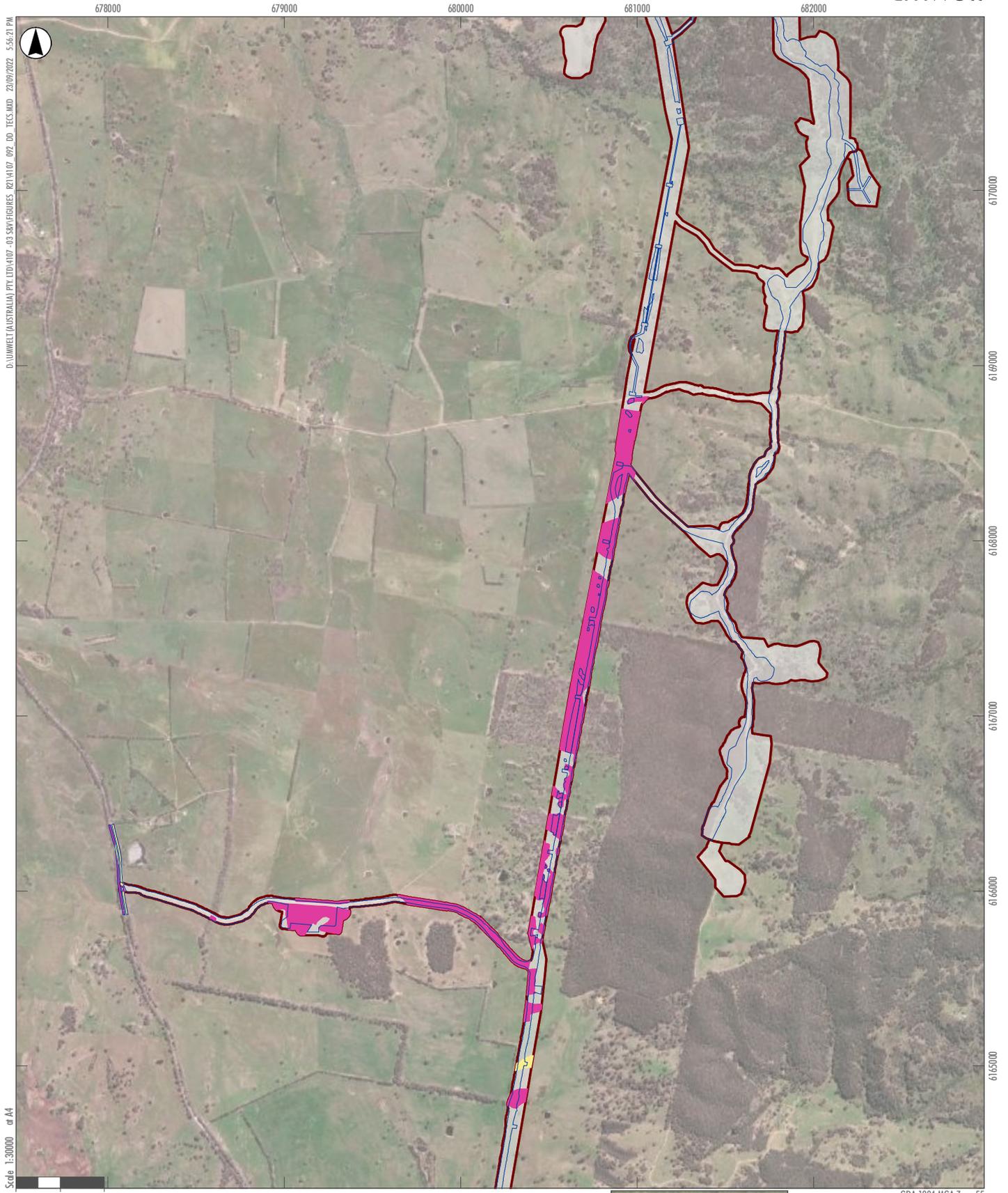
GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.d
Threatened Vegetation Communities in the Pre-Construction Development Footprint



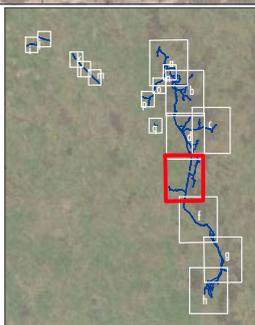
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GDA 1994 MGA Zone 55

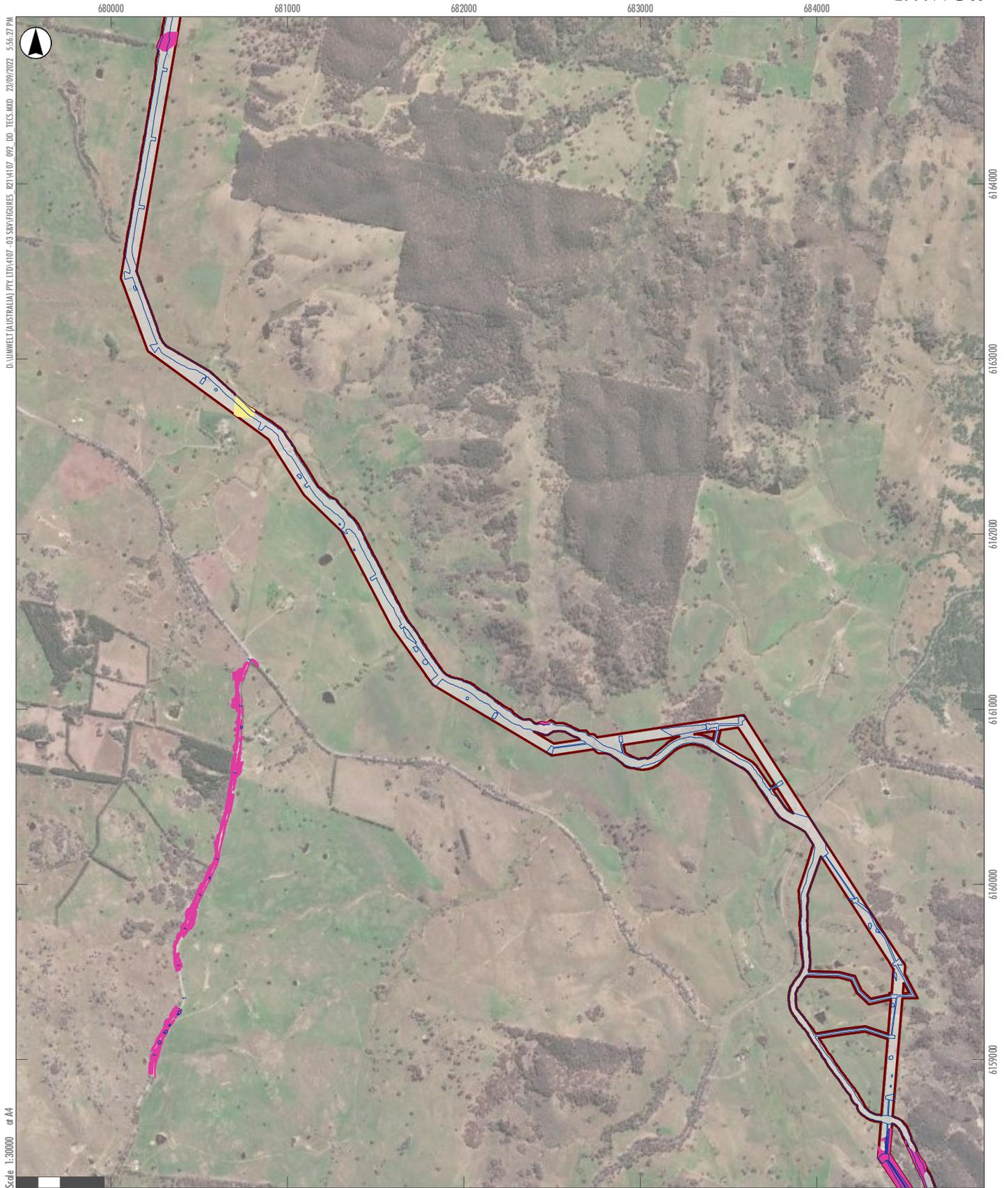
Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Ecological Communities (BC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)

- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.e
Threatened Vegetation Communities in the Pre-Construction Development Footprint



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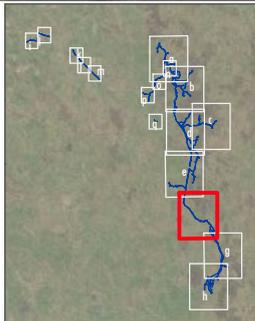
Scale 1:30000 at A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Ecological Communities (BC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)
- White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)

- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.f
Threatened Vegetation Communities in the Pre-Construction Development Footprint



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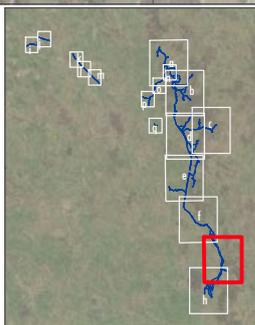
Scale 1:30000 at A4

GDA 1994 MGA Zone 55

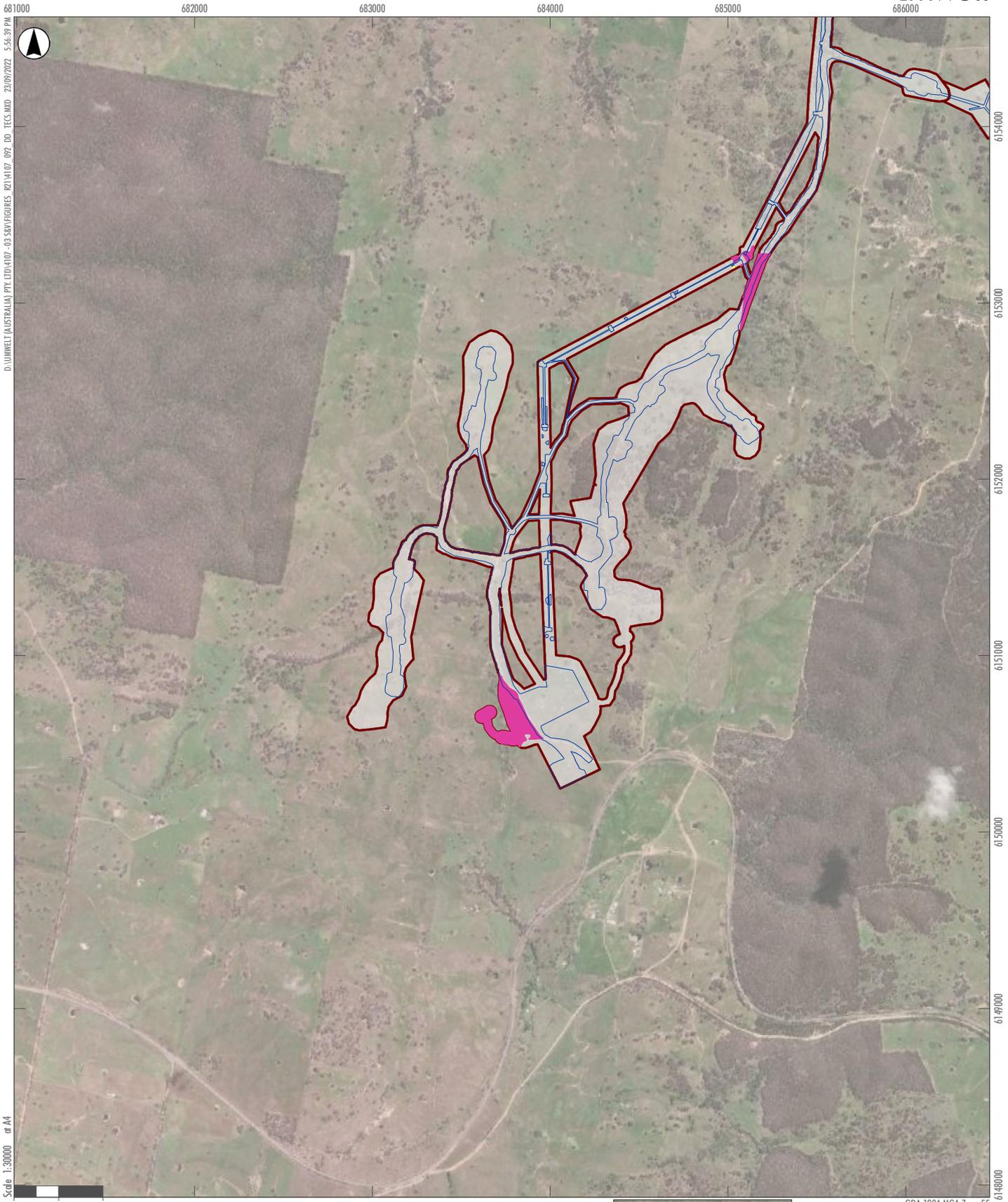
Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor
- Threatened Ecological Communities (BC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)

- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) /
- White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.g
Threatened Vegetation Communities in the Pre-Construction Development Footprint

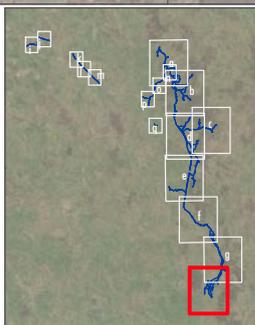


Scale 1:30000 at A4

GDA 1994 MGA Zone 55

- Legend**
- Revised Pre-Construction Development Footprint
 - Rye Park Wind Farm Development Corridor
 - Threatened Ecological Communities (BC Act)**
 - White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)

- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



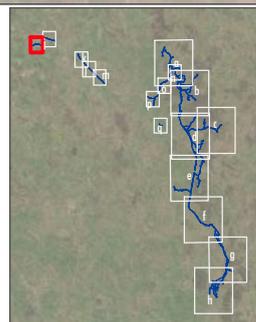
APPENDIX C.h
Threatened Vegetation Communities in the Pre-Construction Development Footprint



0 250 500 Meters

Legend

- Revised Pre-Construction Development Footprint
- Threatened Ecological Communities (BC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)



APPENDIX C.i
Threatened Vegetation Communities in the Pre-Construction Development Footprint



Scale 1:10000 or A4

6188000

6187000

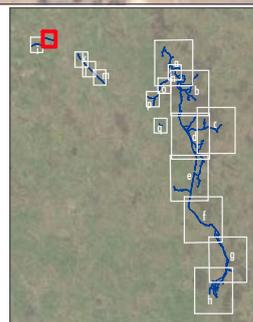
GDA 1994 MGA Zone 55

Legend

Revised Pre-Construction Development Footprint

Threatened Ecological Communities (BC Act)

White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)



APPENDIX C.j

Threatened Vegetation Communities in the Pre-Construction Development Footprint



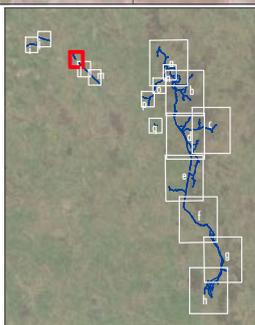
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Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Ecological Communities (BC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)
- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.k
Threatened Vegetation Communities in the Pre-Construction Development Footprint



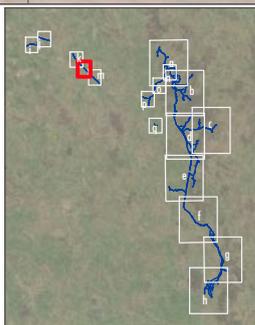
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Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) /
- White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.I
Threatened Vegetation Communities in the Pre-Construction Development Footprint

667000

668000

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6103000

6102000

Scale 1:10000 or A4

0 250 500 Meters

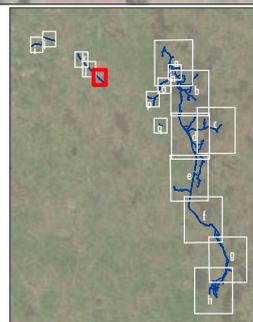
GDA 1994 MGA Zone 55

Legend

Revised Pre-Construction Development Footprint

Threatened Ecological Communities (BC Act)

White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)



APPENDIX C.m

Threatened Vegetation Communities in the Pre-Construction Development Footprint

678000

D:\UMWELT (AUSTRALIA) PTY LTD\1107 - 03 SW\FIGURES 102\1107_092_DO_TECs.MXD 23/09/2022 5:57:14 PM



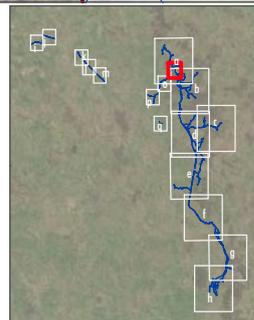
Scale 1:10000 or A4

0 250 500 Meters

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Rye Park Wind Farm Development Corridor



APPENDIX C.n
Threatened Vegetation Communities in the Pre-Construction Development Footprint



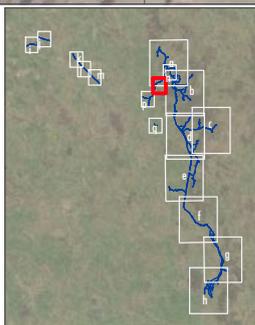
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Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

- Revised Pre-Construction Development Footprint
- Threatened Ecological Communities (BC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)
- Threatened Ecological Communities (BC Act & EPBC Act)**
- White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.o
Threatened Vegetation Communities in the Pre-Construction Development Footprint

674000

675000

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6180000

6179000

Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

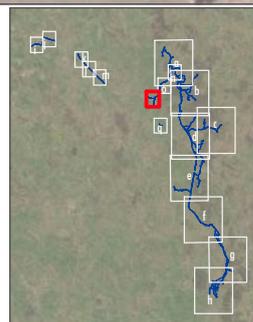
Revised Pre-Construction Development Footprint

Threatened Ecological Communities (BC Act)

White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)

Threatened Ecological Communities (BC Act & EPBC Act)

White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act) / White Box - Yellow Box - Blakely’s Red Gum Grassy Woodlands and Derived Native Grasslands CEEC (EPBC Act)



APPENDIX C.p

Threatened Vegetation Communities in the Pre-Construction Development Footprint

676000

D:\UMWELT (AUSTRALIA) PVT.LTD\1107 - 03 SW\FIGURES 121\1107_092_DO_TEC5.MXD 23/09/2022 5:57:33 PM



6176000

6175000

Scale 1:10000 or A4

GDA 1994 MGA Zone 55

Legend

Revised Pre-Construction Development Footprint

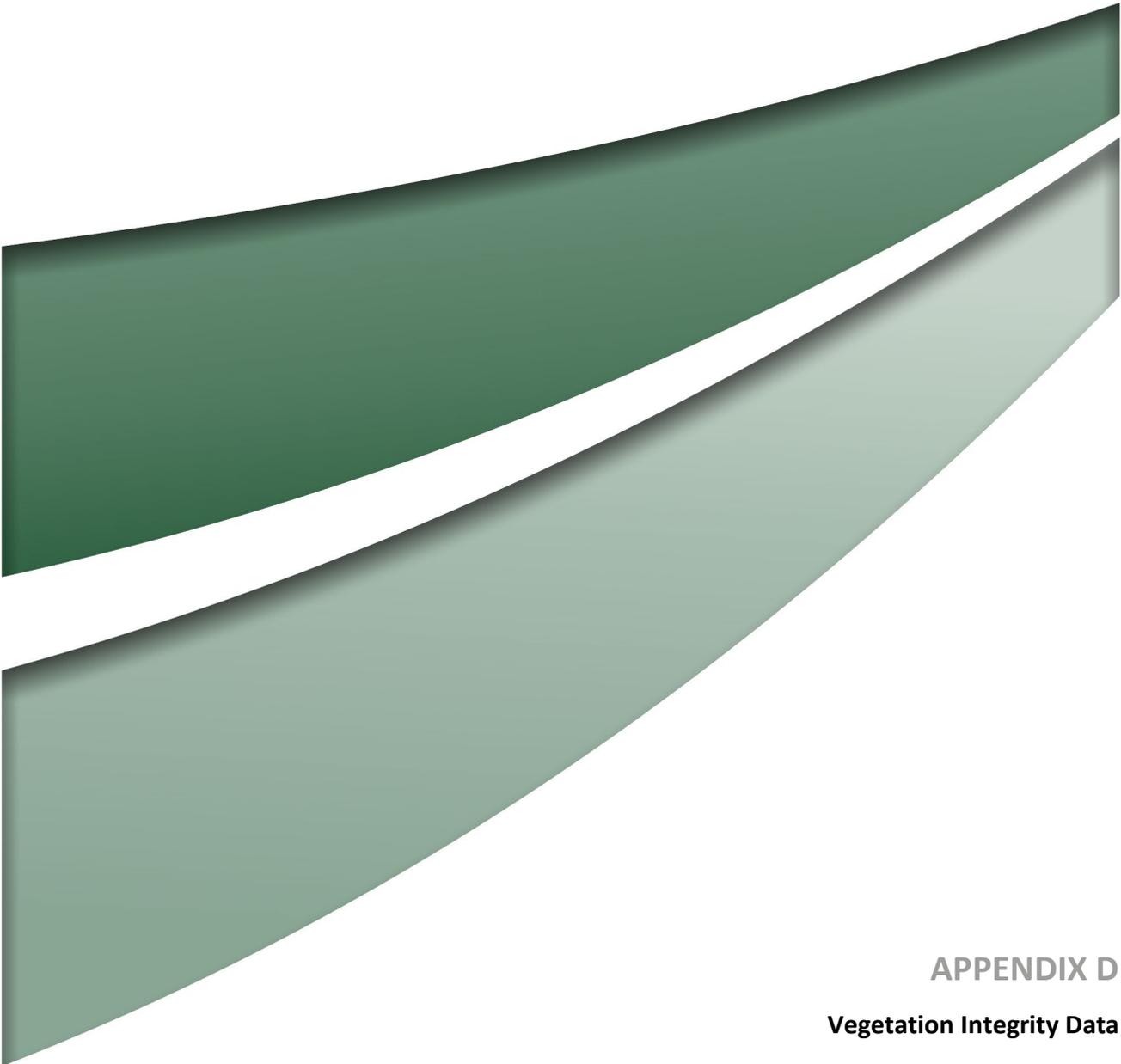
Threatened Ecological Communities (BC Act)

White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (BC Act)



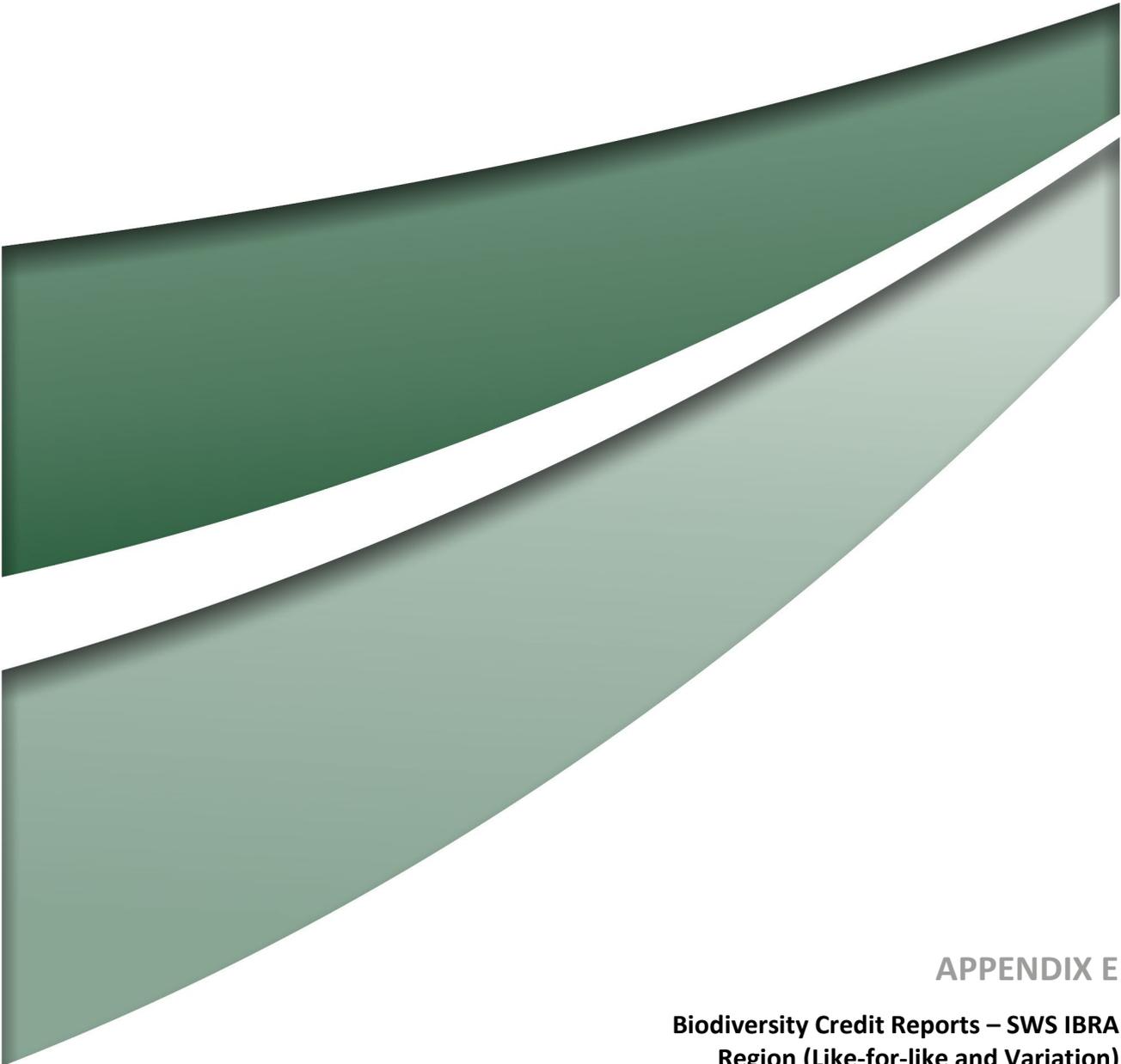
APPENDIX C.q

Threatened Vegetation Communities in the Pre-Construction Development Footprint



APPENDIX D
Vegetation Integrity Data

SWS IBRA																															
plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShru	compGras	compForb	compFern	compOthe	strucTree	strucShrub	strucGrass	strucForb	strucFern	strucOther	funLargeT	funHollow	funLitterC	funLenFall	funTreeSt	funTreeSt	funTreeSt	funTreeSt	funTreeRe	funHighThreatExotic	
4107Jan03	289	0.73	101	ModerateGood	55	677337	6182259	20	4	5	5	1	0	2	45.5	21	33	0	0	1.5	6	1	80.6	59	1	1	1	1	1	0	
33	335	4.19	101	ModerateGood	55	676511	6185146	180	0	0	8	2	0	0	0	0	48.6	1	0	0	0	0	78	8	0	0	0	0	0	5.7	
35	335	4.19	101	ModerateGood	55	680413	6173303	300	0	0	4	0	0	0	0	0	90.4	0	0	0	0	0	40	0	0	0	0	0	0	1.4	
4107Feb02	335	4.19	101	ModerateGood	55	680381	6162996	280	0	0	8	0	0	0	0	0	16.5	0	0	0	0	0	97	1	0	0	0	0	0	1.7	
Mod2_P2	335	4.19	101	ModerateGood	55	678950	6178149	157	0	0	5	2	0	0	0	0	83.7	0.9	0	0	0	0	5	38	0	0	0	0	0	7	
1	350	8.13	101	Moderate	55	685138	6153110	190	2	5	8	12	0	0	15	35	79	13	0	0	1	1	9	26	1	1	0	1	1	2	
15	350	8.13	101	Moderate	55	685682	6157941	180	2	1	5	3	0	1	30	1	9	1.2	0	5	1	1	82	144	1	1	1	1	1	0	
6	350	8.13	101	Moderate	55	680523	6166010	195	3	0	4	1	0	0	30.1	0	10.7	0.2	0	0	1	0	48	10	0	1	1	1	1	5	
31	350	8.13	101	Moderate	55	681050	6168809	250	3	0	13	0	0	0	32	0	88.2	0	0	0	3	4	42	48	0	0	0	1	1	0.4	
43	350	8.13	101	Moderate	55	680670	6166008	45	3	0	7	3	0	1	45	0	12.5	0.3	0	1	2	3	74	70	1	1	1	0	1	1	
DMRP1	350	8.13	101	Moderate	55	685426	6156413	160	1	1	9	9	0	0	65	0.8	5.7	1.8	0	0	4	4	88	33	1	1	1	1	1	0.3	
P03	350	8.13	101	Moderate	55	675609	6175903	130	3	0	2	0	0	1	30	0	2	0	0	1	2	0	70.8	6	1	1	1	1	1	3	
Mod2_P3	350	8.13	101	Moderate	55	679030	6177443	120	3	3	6	3	1	1	30.1	2.1	22	3.6	0.6	5	6	1	17	57	1	1	1	1	1	1.5	
11	350	10.42	101	DNG	55	683860	6150622	180	0	0	10	4	0	0	0	0	49	5.2	0	0	0	0	23	0	0	0	0	0	0	4.4	
32	350	10.42	101	DNG	55	679998	6168665	260	0	0	7	1	0	0	0	0	71	1	0	0	0	0	93.8	0	0	0	0	0	0	10.4	
DMRP3	350	10.42	101	DNG	55	680787	6163358	180	1	2	8	9	0	2	0.1	0.4	72.4	1	0	0.2	0	0	2.6	0	0	0	0	0	0	0.2	
4107Jan02	350	10.42	101	DNG	55	665473	6183884	300	1	0	7	3	1	3	1	0	44.9	3.3	1	0.03	0	0	3.4	1	0	0	1	0	0	5.01	
4107Feb03	350	10.42	101	DNG	55	679126	6165854	109	0	0	5	0	0	0	0	0	5.5	0	0	0	0	0	73.6	0	0	0	0	0	0	0.1	
16	351	35.67	101	ModerateGood Remnant	55	684963	6158479	180	5	7	7	3	0	1	34.5	11.2	31.2	5.6	0	2	0	0	58	119	1	1	1	1	0	0	
20	351	35.67	101	ModerateGood Remnant	55	682300	6162751	180	4	5	5	7	0	2	55.4	35.8	10.4	5	0	3	0	3	25	246	1	1	1	1	0	0	
23	351	35.67	101	ModerateGood Remnant	55	681953	6170713	225	5	3	3	2	0	1	50.4	6	45	3.4	0	0.4	0	10	80.4	207	1	1	1	1	0	0	
26	351	35.67	101	ModerateGood Remnant	55	381032	6178037	190	2	8	5	5	0	0	60	11.3	27.6	3.2	0	0	0	3	78	29.5	1	1	1	1	0	0	
8	351	35.67	101	ModerateGood Remnant	55	676372	6185514	190	4	0	6	1	0	0	30	0	26.3	0.1	0	0	4	8	41	154	0	0	1	1	1	0.5	
13	351	35.67	101	ModerateGood Remnant	55	684405	6151972	180	4	5	7	8	0	1	42	12.4	33.4	10.3	0	5	8	2	24	49	1	1	1	1	1	0	
42	351	35.67	101	ModerateGood Remnant	55	680742	6167093	130	2	2	5	2	0	0	40	0.7	5.1	0.2	0	0	2	2	87	54	1	1	1	1	0	0	
J3	351	35.67	101	ModerateGood Remnant	55	678106	6181384	13	1	7	12	8	1	1	35	38.5	23.5	1.2	0.5	0.1	1	1	39	147	0	1	0	1	1	0	
Mod2_P9	351	35.67	101	ModerateGood Remnant	55	685555	6155291	48	4	3	7	6	0	1	38	1.3	38.1	3.7	0	0.3	6	5	48	134	1	1	1	1	1	0	0.5
21	351	112.4	101	DNG	55	681742	6166819	180	1	0	4	1	0	0	0.5	0	31.4	1	0	0	0	0	84	92	0	0	0	0	0	1	10
30	351	112.4	101	DNG	55	682001	6169793	320	0	1	6	2	0	0	0	1	36.8	0.8	0	0	0	0	2	0	0	0	0	0	0	1	0
12	351	112.4	101	DNG	55	684413	6151319	180	0	1	9	4	0	0	0	0.8	54.8	10.1	0	0	0	0	14.6	0	0	0	0	0	0	1	1
14	351	112.4	101	DNG	55	683582	6152388	180	0	0	6	4	0	0	0	0	50	1.6	0	0	0	1	29	73	0	0	0	0	0	1	25.4
DMRP2	351	112.4	101	DNG	55	683270	6160479	180	0	1	10	1	0	0	0	0.6	61	0.3	0	0	0	0	6	0	0	0	0	0	0	1	0.2
4107Feb04	351	112.4	101	DNG	55	681419	6174987	333	0	0	11	2	0	0	0	0	48.5	0.2	0	0	0	0	85	2	0	0	0	0	0	1	0
J1	351	112.4	101	DNG	55	676329	6186659	340	0	0	8	1	1	1	0	0	77.6	0.5	0.1	0.1	0	0	1	0	0	0	0	0	0	0	0.2
J2	351	112.4	101	DNG	55	677818	6184525	202	0	1	8	2	1	0	0	0.3	62.4	0.2	1	0	0	0	0	0	0	0	0	0	0	0	1
J7	351	112.4	101	DNG	55	684124	6159902	136	0	1	9	1	0	0	0	0.2	90.1	0.1	0	0	0	0	0	2.4	0	0	0	0	0	0	0.6
J8	351	112.4	101	DNG	55	686441	6154120	270	0	2	8	4	0	0	0	0	56.3	0.7	0	0	0	0	2	0	0	0	0	0	0	0	0.2
Mod2_P1	351	112.4	101	DNG	55	679007	6178474	17	0	4	5	3	1	0	0	1.4	41.5	1.9	0.5	0	0	0	8	0	0	0	0	0	0	0	15.2
Mod2_P5	351	112.4	101	DNG	55	681723	6168408	117	0	0	3	1	0	0	0	0	60	0.4	0	0	0	0	3	0	0	0	1	0	0	0	7
10	351	4.15	101	ModerateGood Acacia	55	682222	6173120	225	1	6	7	8	1	1	20	16.1	80.8	1.3	0.3	0.1	0	0	14.4	21	0	0	0	0	0	1	0
24	351	4.15	101	ModerateGood Acacia	55	681468	6171179	180	1	6	8	4	1	1	25	18.3	40.4	2.2	0.4	0.5	1	3	35	45	1	1	1	1	1	0	
36	351	4.15	101	ModerateGood Acacia	55	685218	6153457	180	1	2	4	0	1	0	45	10.4	35	0	0.4	0	0	0	48.2	8	1	1	1	0	0	1	0
J4	351	4.15	101	ModerateGood Acacia	55	682252	6170078	330	1	4	7	4	1	1	6	7.5	76.8	0.6	0.2	0.3	0	0	25	0	1	1	1	0	0	1	0.2
Mod2_P7	351	4.15	101	ModerateGood Acacia	55	681323	6170998	205	3	4	6	7	1	1	14.1	1.1	70.4	16.5	0.1	0.5	0	0	18.6	175	1	1	1	1	0	0	
18	351	49.37	101	Sifton	55	686146	6156121	355	1	1	4	0	0	0	1	30	21.4	0	0	0	0	0	15.8	37	0	0	0	0	0	0	2.4
28	351	49.37	101	Sifton	55	678940	6180213	175	2	4	6	3	0	0	11	69	4.3	0.3	0	0	0	0	41	0.5	0	0	0	0	0	0	0
29																															



APPENDIX E

**Biodiversity Credit Reports – SWS 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/BAAS17068/18/00012902	Rye Park SWS IBRA - Mod 2 Sept 2022 - Cooks Hill Road Inclusion	16/06/2022
Assessor Name	Assessor Number	BAM Data version *
Bill Wallach	BAAS17068	54
Proponent Names	Report Created	BAM Case Status
Tilt Renewables	26/09/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
16	Major Projects	26/09/2022

* 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 Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Critically 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



BAM Biodiversity Credit Report (Like for like)

Species

Synemon plana / Golden Sun Moth

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

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

Assessment Id

00010359/BAAS17068/18/00012902

Proposal Name

Rye Park SWS IBRA - Mod 2 Sept 2022 - Cooks Hill Road

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BAM Biodiversity Credit Report (Like for like)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
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	0.7	24	0	24
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	4.2	0	110	110
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	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	18.6	341	223	564
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	275.9	2274	506	2780

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



BAM Biodiversity Credit Report (Like for like)

	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	24 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																	
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Class</th> <th style="width: 25%;">Trading group</th> <th style="width: 15%;">Zone</th> <th style="width: 10%;">HBT</th> <th style="width: 10%;">Credits</th> <th style="width: 20%;">IBRA region</th> </tr> </thead> <tbody> <tr> <td data-bbox="546 930 848 1292"> Inland Floodplain Swamps This includes PCT's: 66, 204, 205, 335, 360, 447, 465, 1291 </td> <td data-bbox="848 930 1126 1292"> Inland Floodplain Swamps >=70% and <90% </td> <td data-bbox="1126 930 1319 1292"> 335_Moderate Good </td> <td data-bbox="1319 930 1462 1292"> No </td> <td data-bbox="1462 930 2051 1292"> 110 </td> <td data-bbox="546 930 2051 1292"> 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. </td> </tr> </tbody> </table>	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	110	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.
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	110	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.												



BAM Biodiversity Credit Report (Like for like)

<p>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</p>						
<p>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</p>	<p>Like-for-like credit retirement options</p>					
	Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	-	350_DNG	No	223	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.
	This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347,					



BAM Biodiversity Credit Report (Like for like)

	<p>350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>				
	<p>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla</p>	-	350_Moderate	Yes	<p>341 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.</p>



BAM Biodiversity Credit Report (Like for like)

	<p>This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>					
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BAM Biodiversity Credit Report (Like for like)

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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	908	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, 344, 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	97	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.	



BAM Biodiversity Credit Report (Like for like)

	<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	351_Sifton	No	506	<p>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.</p>
	<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	351_Argyle	Yes	39	<p>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.</p>

BAM Biodiversity Credit Report (Like for like)

	<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	351_Exotic	No	0	<p>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.</p>
	<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	351_Moderate Good_Remnant	Yes	1230	<p>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.</p>

Species Credit Summary

BAM Biodiversity Credit Report (Like for like)

Species	Vegetation Zone/s	Area / Count	Credits
Delma impar / Striped Legless Lizard	351_DNG	41.0	284.00
Myotis macropus / Southern Myotis	350_Moderate	0.0	1.00
Petaurus norfolcensis / Squirrel Glider	351_ModerateGood_Remnant, 289_ModerateGood, 350_Moderate	44.4	1702.00
Polytelis swainsonii / Superb Parrot	350_Moderate	8.1	273.00
Synemon plana / Golden Sun Moth	350_DNG, 351_DNG	49.4	702.00

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



BAM Biodiversity Credit Report (Like for like)

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

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00010359/BAAS17068/18/00012902	Rye Park SWS IBRA - Mod 2 Sept 2022 - Cooks Hill Road Inclusion	16/06/2022
Assessor Name	Assessor Number	BAM Data version *
Bill Wallach	BAAS17068	54
Proponent Name(s)	Report Created	BAM Case Status
Tilt Renewables	26/09/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
16	Major Projects	26/09/2022

* 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 Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Critically 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

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

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

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
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	0.7	24	0	24.00
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	4.2	0	110	110.00
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	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	18.6	341	223	564.00
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	275.9	2274	506	2780.00

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	24	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)	24	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Variations)

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	110	Inland Slopes, Bogan-Macquarie, Bongo, 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	110	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	
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	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Variations)

	<p>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla</p> <p>This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>	-	350_DNG	No	223	<p>Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi.</p> <p style="text-align: center;">or</p> <p>Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
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BAM Biodiversity Credit Report (Variations)

	<p>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla</p> <p>This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>	-	350_Moderate	Yes	341	<p>Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi.</p> <p style="text-align: center;">or</p> <p>Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
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BAM Biodiversity Credit Report (Variations)

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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests $\geq 50\%$ and $< 70\%$	351_DNG	Yes	908	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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests $\geq 50\%$ and $< 70\%$	351_ModerateGood_Acacia	Yes	97	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.	

BAM Biodiversity Credit Report (Variations)

<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests $\geq 50\%$ and $< 70\%$</p>	<p>351_Sifton</p>	<p>No</p>	<p>506 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.</p>
<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests $\geq 50\%$ and $< 70\%$</p>	<p>351_Argyle</p>	<p>Yes</p>	<p>39 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.</p>
<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests $\geq 50\%$ and $< 70\%$</p>	<p>351_Exotic</p>	<p>No</p>	<p>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.</p>

BAM Biodiversity Credit Report (Variations)

Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_ModerateGood_Remnant	Yes	1230	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_DNG	Yes (including artificial)	908	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)	97	IBRA Region: NSW South Western Slopes, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Variations)

Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_Sifton	No	506	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)	39	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.
Dry Sclerophyll Forests (Shrubby sub-formation)	Tier 3 or higher threat status	351_ModerateGood_Remnant	Yes (including artificial)	1230	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	41.0	284.00
Myotis macropus / Southern Myotis	350_Moderate	0.0	1.00

BAM Biodiversity Credit Report (Variations)

Petaurus norfolcensis / Squirrel Glider	351_ModerateGood_Remnant, 289_ModerateGood, 350_Moderate	44.4	1702.00
Polytelis swainsonii / Superb Parrot	350_Moderate	8.1	273.00
Synemon plana / Golden Sun Moth	350_DNG, 351_DNG	49.4	702.00

Credit Retirement Options Like-for-like options

Delma impar / Striped Legless Lizard	Spp		IBRA region
	Delma impar /Striped Legless Lizard		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.	
Myotis macropus / Southern Myotis	Spp		IBRA region

BAM Biodiversity Credit Report (Variations)

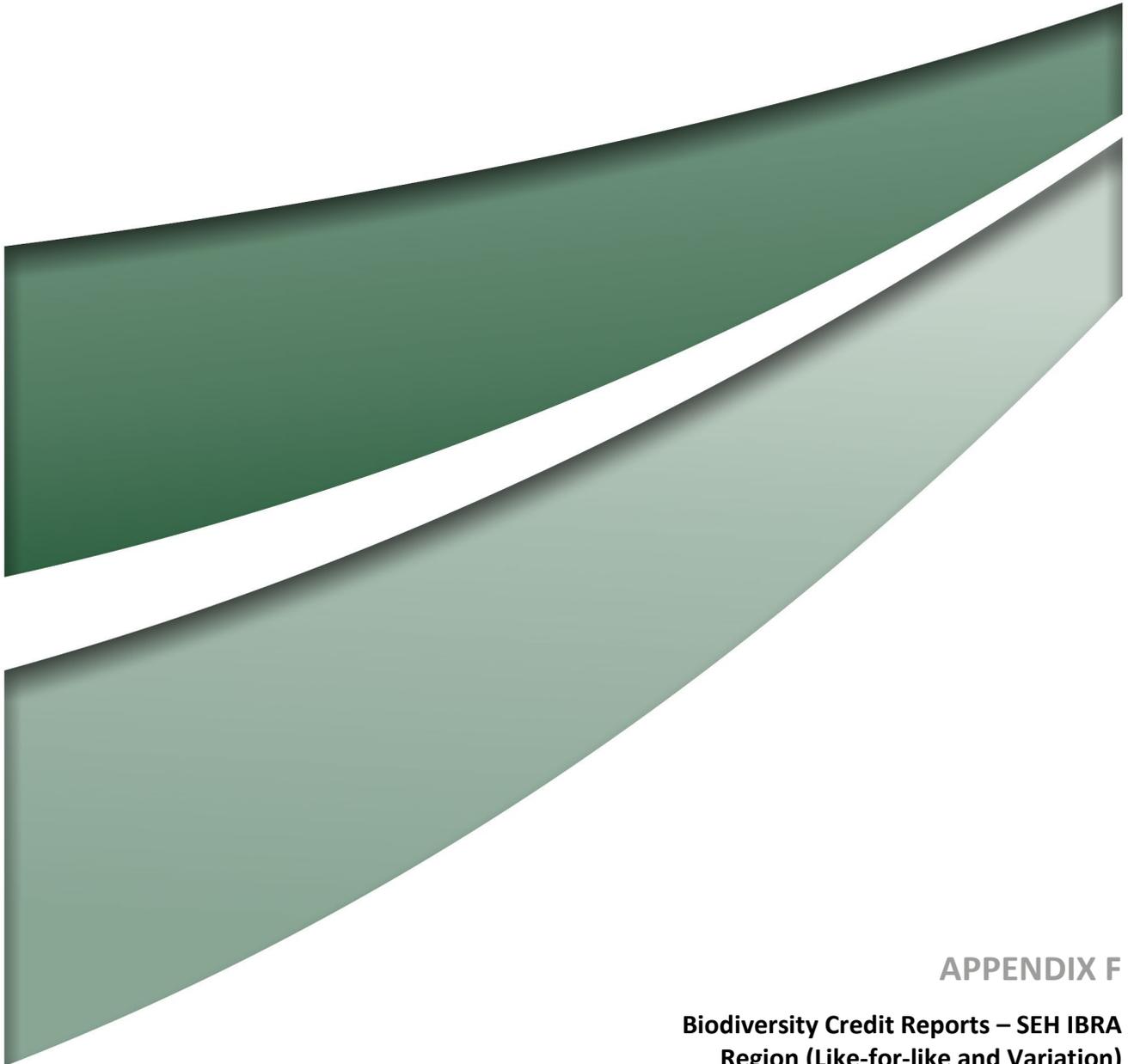
	Myotis macropus /Southern Myotis	Any in NSW
	Variation options	
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below
	Fauna	Vulnerable
		IBRA region Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, 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

BAM Biodiversity Credit Report (Variations)

	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.

BAM Biodiversity Credit Report (Variations)

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 F

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 - Mod 2 Sept 2022 Cooks Hills Road Inclusion	16/06/2022
Assessor Name	Assessor Number	BAM Data version *
Bill Wallach	BAAS17068	54
Proponent Names	Report Created	BAM Case Status
Tilt Renewables	26/09/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
15	Major Projects	26/09/2022

* 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 Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Critically 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



BAM Biodiversity Credit Report (Like for like)

Species

Synemon plana / Golden Sun Moth

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

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



BAM Biodiversity Credit Report (Like for like)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
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	1.6	0	27	27
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	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	14.6	398	74	472
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	136.0	1485	163	1648

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	27	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.



BAM Biodiversity Credit Report (Like for like)

<p>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</p>						
<p>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</p>	Like-for-like credit retirement options					
	Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	-	350_DNG	No	74	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.
	This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347,					

BAM Biodiversity Credit Report (Like for like)

	<p>350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>				
	<p>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla</p>	-	350_Moderate	Yes	<p>398 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.</p>

BAM Biodiversity Credit Report (Like for like)

	<p>This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>					
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BAM Biodiversity Credit Report (Like for like)

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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	403	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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Sifton	No	163	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.	

BAM Biodiversity Credit Report (Like for like)

<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	<p>351_Exotic</p>	<p>No</p>	<p>0</p>	<p>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.</p>
<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	<p>351_Moderate Good_Remnant</p>	<p>Yes</p>	<p>976</p>	<p>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.</p>
<p>Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177</p>	<p>Southern Tableland Dry Sclerophyll Forests >=50% and <70%</p>	<p>351_Moderate Good_Acacia</p>	<p>Yes</p>	<p>106</p>	<p>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.</p>

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Petaurus norfolcensis / Squirrel Glider	351_ModerateGood_Remnant, 350_Moderate	40.3	1429.00
Polytelis swainsonii / Superb Parrot	350_Moderate	11.2	319.00
Synemon plana / Golden Sun Moth	350_DNG, 351_DNG	26.9	423.00

Credit Retirement Options

Like-for-like credit retirement options

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

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00010359/BAAS17068/18/00012903	Rye Park Development SEH IBRA - Mod 2 Sept 2022 Cooks Hills Road Inclusion	16/06/2022
Assessor Name	Assessor Number	BAM Data version *
Bill Wallach	BAAS17068	54
Proponent Name(s)	Report Created	BAM Case Status
Tilt Renewables	26/09/2022	Finalised
Assessment Revision	Assessment Type	Date Finalised
15	Major Projects	26/09/2022

* 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 Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Critically 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

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT

No Changes

Predicted Threatened Species Not On Site

Name

No Changes

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

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
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	1.6	0	27	27.00
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	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	14.6	398	74	472.00
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	136.0	1485	163	1648.00

BAM Biodiversity Credit Report (Variations)

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	27	Murrumbateman, Bongo, 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	27	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	
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	Like-for-like credit retirement options					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Variations)

	<p>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla</p> <p>This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>	-	350_DNG	No	74	<p>Murrumbateman, Bongo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains.</p> <p style="text-align: center;">or</p> <p>Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
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BAM Biodiversity Credit Report (Variations)

	<p>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla</p> <p>This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 840, 847, 851, 921, 1099, 1103, 1303, 1304, 1307, 1324, 1329, 1330, 1331, 1332, 1333, 1334, 1383, 1401, 1512, 1606, 1608, 1611, 1691, 1693, 1695, 1698</p>	-	350_Moderate	Yes	398	<p>Murrumbateman, Bongo, Crookwell, Inland Slopes, Monaro, Murrumbateman and Snowy Mountains.</p> <p>or</p> <p>Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.</p>
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BAM Biodiversity Credit Report (Variations)

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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_DNG	Yes	403	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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_Sifton	No	163	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, 344, 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.

BAM Biodiversity Credit Report (Variations)

Southern Tableland Dry Sclerophyll Forests This includes PCT's: 299, 344, 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, Bongo, 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, 344, 349, 351, 352, 653, 701, 727, 728, 730, 888, 957, 1093, 1177	Southern Tableland Dry Sclerophyll Forests >=50% and <70%	351_ModerateGood_Acacia	Yes	106	Murrumbateman, Bongo, 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_DNG	Yes (including artificial)	403	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	163	IBRA Region: South Eastern Highlands, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Variations)

	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.
	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_ModerateGood_Acacia	Yes (including artificial)	106	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	40.3	1429.00
Polytelis swainsonii / Superb Parrot	350_Moderate	11.2	319.00
Synemon plana / Golden Sun Moth	350_DNG, 351_DNG	26.9	423.00

Credit Retirement Options Like-for-like options

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

BAM Biodiversity Credit Report (Variations)

	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	

BAM Biodiversity Credit Report (Variations)

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.

