



PARTNERING ON DESIGN AND CONSTRUCTION

CENTRAL-WEST ORANA RENEWABLE ENERGY ZONE

**UPPER HUNTER LOCAL
GOVERNMENT AREA TRANSPORT
STRATEGY – PRIORITY 4A**

CWO-PRO-050-ENV-STR-000024 REV 0

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Document Control

This Upper Hunter Shire LGA Transport Strategy (the Strategy) is a controlled document, approved by the ACJV D&C Project Director. The Project Wide Lead is responsible for ensuring this plan is kept up to date for the Project, Project risks, activities and legislative requirements.

PROJECT AUTHORISATION

Authorisation			
Document Title	CENTRAL-WEST ORANA RENEWABLE ENERGY ZONE - UPPER HUNTER SHIRE TRANSPORT STRATEGY		
Revision Number	REV 0		
Document Number	CWO-PRO-050-ENV-STR-000024		
Discipline/Department	Project Wide Construction		
Originator	Acciona Construction Australia		
Review	Name	Position	Signature
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Approval	Tung Pham	Project Wide Director	<i>Tung Pham</i>

DOCUMENT STATUS

Revision	Date	Pages	Revised by	Description
Rev A	12/08/2025	All	Erran Woodward Kirk Martinez	Split from Transport Strategy 3A (as per DPHI approved Staging Request) For consultation
Rev B	10/11/2025	All	Erran Woodward	To respond to client comments For consultation
Rev C	5/12/2025	All	Erran Woodward	To respond to client and Council comments For ER review
Rev D	30/01/2026	All	Katie Baxter	For ER review
Rev E	06/02/2026	App C	Katie Baxter	For consultation
	10/02/2026	All	Katie Baxter	For ER endorsement
Rev 0	20/02/2026	All	Katie Baxter	For DPHI approval

CONTROL AND RECORDS

The approved Transport Strategy will be signed, and a PDF version will be uploaded and stored on the Project's document management system in accordance with CWO-PRO-050-DOC-PLN-000001 the Central-West Orana Document and Records Management Plan.

UNCONTROLLED COPIES

Any uncontrolled hard copy documents are up to date at issue and are only issued to outside organisations, customers, etc., upon request and approval by a Workplace Manager. Such uncontrolled documents will be clearly marked "Uncontrolled Copy When Printed or Downloaded" and will not be subject to an update.

REVIEW

This document is a dynamic document that will be reviewed, amended, and updated throughout the duration of the Project, to support continuous improvement, emerging opportunities and new elements of the Project's works.

DISTRIBUTION

The distribution of this document is overseen by the Traffic Manager. The official version of this document will be securely stored on the Project's document management system.

The Integrated Management System – Systems Representative on the Project is responsible for the controlled internal distribution of this document and changes. Personnel have access to the latest revision of the Plan through RIBCX.

The execution of the Upper Hunter LGA Transport Strategy falls under the purview of ACJV Project Director. All personnel engaged in the Project will perform their responsibilities in accordance with the requirements of this document, as well as in alignment with supporting management plans and associated procedures.

GOVERNANCE AND AUTHORISATION

The Upper Hunter LGA Transport Strategy intends to provide the framework and guidelines, to operate within the Central-West Orana REZ, to ensure integrity, coherence, and effective stakeholder interface management and required reporting as defined in the ACJV D&C Policies and Code of Conduct.

The Traffic Manager together with the Project Wide Director is responsible for implementing this Strategy and ensures that the processes and associated documentation is applicable to the Project works undertaken and that it complies with the D&C Deed, Policies, code of conduct and legislative requirements. The Upper Hunter Shire LGA Transport Strategy is approved by the Project Director, who has overall accountability for the Project control function.

RELATED DOCUMENTS

Traffic and Transport Management Plan (TTMP).

Terms and Abbreviations

Acronym	Definition
AADT	Average Annual Daily Traffic
ACJV D&C	A design and construct unincorporated joint venture of ACCIONA and COBRA
Approved Projects	Renewable Energy Zone (REZ) Projects with Infrastructure Approval under Section 5.19 of the <i>Environmental Planning and Assessment Act 1979</i>
AUL	Auxiliary Left Turn
BAL	Basic Left Turn
BAR	Basic Right Turn
CHR	Channelised Right Turn
CWO	Central-West Orana
DPHI	Department of Planning, Housing and Infrastructure
EIS	The Environmental Impact Statement titled Environmental Impact Statement – Central-West Orana REZ Transmission Project, prepared by WSP, dated February 2023, including the Proponent's: • Amendment Report, dated March 2024 • Submissions Report, dated March 2024 • Biodiversity Development Assessment Report • Additional information dated 14 June 2024 • Central-West Orana REZ Transmission Project Modification 1 - Request for minor modifications to the condition of approvals, dated September 2024 • Additional information dated 11 October 2024 • Central-West Orana REZ Transmission Project Modification 2 – Mudgee maintenance facility, dated October 2025 • Central-West Orana REZ Transmission Project Modification 3 – Strategic offset delivery agreement, dated August 2025 • Central-West Orana REZ Transmission Project Modification 4 – Minor change to clearing limits, dated 2 December 2025
HV	Heavy vehicles, as defined by as defined by the Heavy Vehicle National Regulator under the Heavy Vehicle National Law
LV	Light vehicles
MCoA	Minister's Conditions of Approval, which form part of the Project Approval (refer to definition herein).
NML	Noise Management Level
NSW	New South Wales
OSOM	Oversize Overmass
Project	Program of works including pre-construction minor works, road upgrades, construction, operation, upgrading, and decommissioning the high-voltage electricity transmission infrastructure required to connect energy generation and storage projects within the Central-West Orana REZ to the existing electricity network

Acronym	Definition
Project Approval	The Infrastructure Approval under Section 5.19 of the <i>Environmental Planning and Assessment Act 1979</i> by the Minister for Planning and Public Spaces in June 2024.
REZ(s)	Renewable Energy Zone(s)
RNI	REZ Network Infrastructure
Roadmap	NSW Government's Electricity Strategy
SISD	Safe Intersection Site Distance
TfNSW	Transport for New South Wales
TWA	Turn Warrant Assessment
TTMP	Traffic and Transport Management Plan
Vehicle Movement	A vehicle movement is defined as a vehicle on a single inbound or outbound journey (definition taken from Section 17.4.1 of the EIS, paragraph 1)
WAD	Works Authorisation Deed

1 Introduction

1.1 BACKGROUND

The NSW Government's Electricity Infrastructure Roadmap is designed to deliver a reliable, affordable and sustainable electricity future that supports a growing economy. Key to this vision is a series of Renewable Energy Zones (REZs) that will invest in new generation to replace coal-fired power stations with low-cost, low-carbon energy sources like wind and solar supported by storage solutions such as batteries and pumped hydro.

The Central-West Orana REZ is the first project in this strategy and is expected to be operational by 2028. It will initially unlock up to 4.5 gigawatts (GW) of new network capacity – equivalent to powering 2 million homes.

The Central-West Orana REZ is approximately 20,000 square kilometres in size, centred by Dubbo and Dunedoo, on the traditional land of the Wiradjuri, Wailwan and Kamilaroi people.

1.2 PURPOSE

This Upper Hunter Shire Local Government Area (LGA) Transport Strategy (this Strategy) has been developed specifically for the Central-West Orana REZ as part of scheduled documents required by the Minister's Condition of Approval (MCoA (NSW)) B31. The full list of the MCoA (NSW) requirements and how and where these are addressed within the Strategy is outlined in Table 1-1.

This Strategy assesses road upgrades within the Upper Hunter Shire LGA.

In addition, this Strategy should be read in conjunction with the Traffic and Transport Management Plan (TTMP). The TTMP describes how ACJV D&C proposes to manage potential traffic impacts during the construction of the Project and methods for traffic management.

TABLE 1-1 COMPLIANCE MATRIX

MCoA (NSW)	Requirement	How addressed	Where
B31	Prior to commencing road upgrades specified in Appendix 4 as requiring inclusion in the Transport Strategy, the Proponent must prepare a Transport Strategy in consultation with Transport for NSW (TfNSW) and relevant Councils, to the satisfaction of the Planning Secretary, which:		
	a) Identifies the location and type of any necessary road upgrades (including roads, intersections, crossing points, bridges and access points), including consideration of relevant amenity impacts	A description is provided in Appendix A as a regional overview, and specifically in the appendices for each individual item.	Appendix A (overview) Appendix B Appendix C Appendix D
	b) Ensures the road upgrades comply with the <i>Austroads Guide to Road Design</i> (as amended by TfNSW supplements), unless the relevant road authority agrees otherwise	Design criteria for the various upgrades is referenced in Section 2.1 and will be used unless agreed with relevant road authority, in which case it will be described in the appendices for	Section 2.1 Appendix B Appendix C Appendix D

MCoA (NSW)	Requirement	How addressed	Where
		each individual upgrade. Where a road upgrade is not proposed, a strategic concept design is not provided.	
	c) Includes strategic concept designs prepared in accordance with <i>Austroads Guide to Road Design</i> (as amended by TfNSW supplements)	Concept plans are included in the appendices for each individual upgrade. Where a road upgrade is not proposed, a strategic concept design is not provided.	Appendix B Appendix C Appendix D
	d) Includes a detailed assessment of potential impacts of any necessary road upgrades (such as heritage and biodiversity impacts) and appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects	A summary of the identified biodiversity and heritage impacts is included in the appendices for each individual upgrade.	Appendix B Appendix C Appendix D
	e) Include a schedule for the commencement and completion of all necessary road upgrades	The appendices for each individual road upgrade includes an expected program for that road upgrade described.	Appendix A Appendix B Appendix C Appendix D
	f) Includes strategic concept designs for transmission lines crossing state roads and any structures required to facilitate stringing	To be addressed in the Stringing Transport Strategy	
	g) Details the methods for installing transmission lines across State roads, ensuring the number and length of delays is minimised and avoids peak traffic hours for Golden and Castlereagh Highways		
	h) Identifies whether intersections, crossing points and access points would be permanent or temporary	The appendices for each individual road upgrade include if this is proposed to be permanent or temporary.	Appendix B Appendix C Appendix D

1.3 STAGING

Due to the extensive scope of the Project works, the design development program and other constraints, the submission and approval of the Transport Strategy is being staged. These stages, as shown in Table 1-2, were described in a staging strategy letter, approved on 19 August 2025 by the Department of Planning, Housing and Infrastructure (DPHI) (DPHI reference: SSI-48323210-PA-54) in accordance with MCoA (NSW) C3.

This Strategy addresses the local roads and access points within Upper Hunter Shire Council LGA, as indicated in bold text in Table 1-2.

The full scope of proposed upgrades in each LGA is being progressively developed due to planning to support the staggered construction program, extensive concurrent design and review processes, consideration of consultation outcomes, and environmental and physical constraints. As a result, the full detail of all required and proposed road upgrades and usage is subject to ongoing development. This document has been structured to allow for regular, progressive updates as additional scope is confirmed.

TABLE 1-2 TRANSPORT STRATEGIES

Stage	Content
Merotherie Transport Strategy	Road upgrades associated with the construction of the Merotherie Energy hub, Merotherie construction compound and Merotherie accommodation camp.
Wollar Transport Strategy	Road upgrades required for commencement of site establishment at the Barigan Creek Switching Station (referred to as the New Wollar Switching Station in the Central-West Orana REZ Environmental Impact Statement (EIS)), which are within the Mid-Western Regional local government area.
Elong Elong Transport Strategy	Road upgrades required for commencement of site establishment at the Elong Elong Energy Hub, which are within the Warrumbungle Shire local government area.
Mid-Western Regional LGA Transport Strategy	All remaining road upgrades and usage necessary for construction within the Mid-Western Regional LGA.
Warrumbungle Shire LGA Transport Strategy	All remaining road upgrades and usage necessary for construction within the Warrumbungle Shire LGA.
Upper Hunter Shire LGA Transport Strategy (this Strategy)	All remaining upgrades and usage necessary for construction within the Upper Hunter Shire LGA.
Stringing Transport Strategy	Details and assessment of methods for the installation of transmission lines (stringing) over State roads.

1.4 SCOPE OF THIS STRATEGY

This Strategy identifies the known road upgrades that will be used to support construction of the Project across the Upper Hunter Shire LGA (refer to Appendix A). The specific roads, intersections and access points that are required to be addressed in a Transport Strategy are defined by the Project Approval Appendix 4, Table 5, which has been included within Appendix A with a cross-reference to where each item is addressed in this Strategy.

As noted in Section 1.3, the full detail of all required and proposed road upgrades and usage is subject to ongoing development. This document has been structured to allow for regular, progressive updates as additional scope is confirmed.

The details and assessment of each upgrade is provided in:

- Appendix B: Road upgrades which are specifically prescribed in Appendix 4, Table 5 of the Project Approval
- Appendix C: Local roads which are identified in Figure 4.1 to Figure 4.4 of the Project Approval (or otherwise approved by the Planning Secretary under MCoA (NSW) B30) and will be used for construction site access
- Appendix D: Project constructed or modified minor access/crossing points which are used for construction site access

Within each Appendix are separate item-specific reports for each individual upgrade. As additional upgrades are identified, they will be added to Appendix B, Appendix C or Appendix D with no changes made to the main document. The new item-specific reports would be provided to stakeholders, reviewers and approvers, allowing them to focus only on the new or revised content (refer to Section 1.5 for further details on consultation).

The content required to be addressed in a Transport Strategy is defined by the Planning Approval Appendix 4, Table 5. In noting the staging of Transport Strategies (as described in Section 1.3), and to provide clarity on the scope and content of this document, the applicable items for this Strategy from Planning Approval Appendix 4, Table 5 have been replicated in Appendix A.

1.5 CONSULTATION

In accordance with MCoA (NSW) B31, consultation on this Strategy and each Appendix has been undertaken with the applicable asset owner, being Transport for NSW and/or Upper Hunter Shire Council.

Where new access/crossing points are required, consultation with the relevant roads authority will be carried out in accordance with MCoA (NSW) B31.

In accordance with MCoA (NSW) A7, a record of consultation has been prepared and issued to the Planning Secretary along with this document, and a summary included in each item specific Appendix, which includes details of the consultation undertaken including the outcome of that consultation, matters resolved and unresolved, and details of any disagreement remaining, and how these have been addressed.

2 Typical Design, Assessment and Upgrades

2.1 DESIGN CRITERIA

MCoA (NSW) B31 requires Project road upgrades to comply with the *Austroads Guide to Road Design* (as amended by TfNSW supplements), unless the relevant road authority agrees otherwise; and that this Strategy includes strategic concept designs prepared in accordance with *Austroads Guide to Road Design* (as amended by TfNSW supplements).

Transport for NSW has prepared a *Supplement to Austroads Guide to Road Design* (20 December 2023) (the TfNSW Supplement), which has been used in the preparation of the strategic concept designs (as required under MCoA (NSW) B31(c)).

In some instances, Council specifications may be adopted for council access point arrangements, as agreed with the Upper Hunter Shire Council, acting as the road authority.

2.2 TURN WARRANT ASSESSMENT

A Turn Warrant Assessment (TWA), described in *Austroads Guide to Traffic Management Part 6: Intersections Interchanges and Crossings Management*, will be conducted when preparing road upgrade designs for consultation and agreement with the relevant road authority.

The *Austroads Guide to Traffic Management* provides the process for assessing an intersection for the appropriate configuration to ensure safe operation. It considers the volume of through traffic, turning traffic, cumulative traffic from approved projects, design speed and identifies if/what further road alterations are required, including Basic Right Turn (BAR) and Basic Left Turn (BAL) (localised widening of shoulders to improve safety of turning), or channelised turn lanes dedicated for turning traffic.

Figure 2-1 provides the assessment graphs of calculated turning movements, the result of which determines the appropriate road alterations for the anticipated turning and through traffic of the intersection.

The outcome of the TWA will be used in the design of the necessary road upgrade in accordance with *Austroads Guide to Traffic Management Part 6: Intersections Interchanges and Crossings Management*, for consultation and agreement with the relevant road authority.

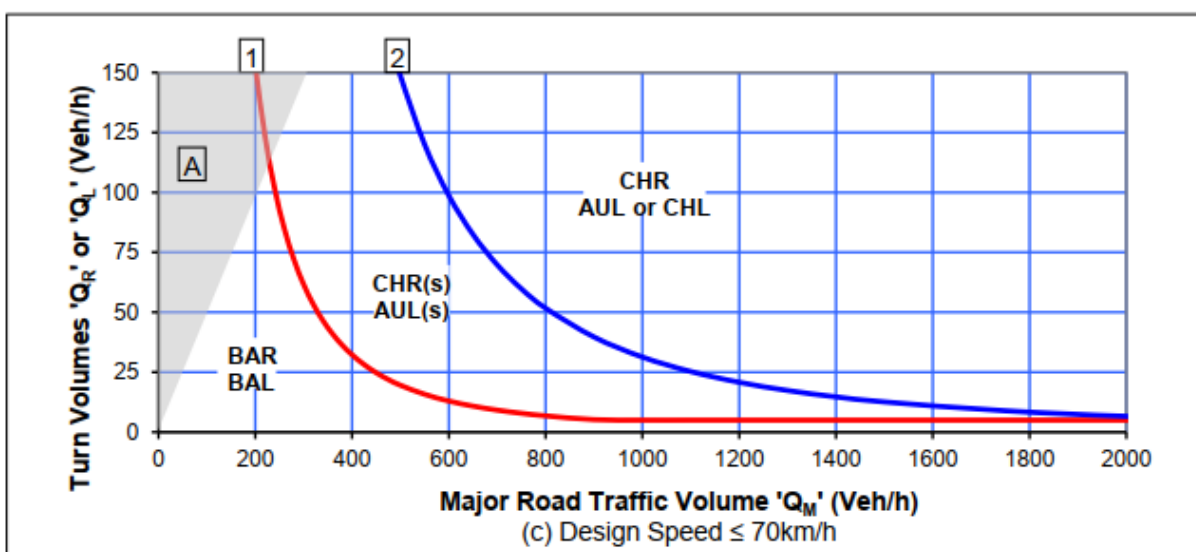
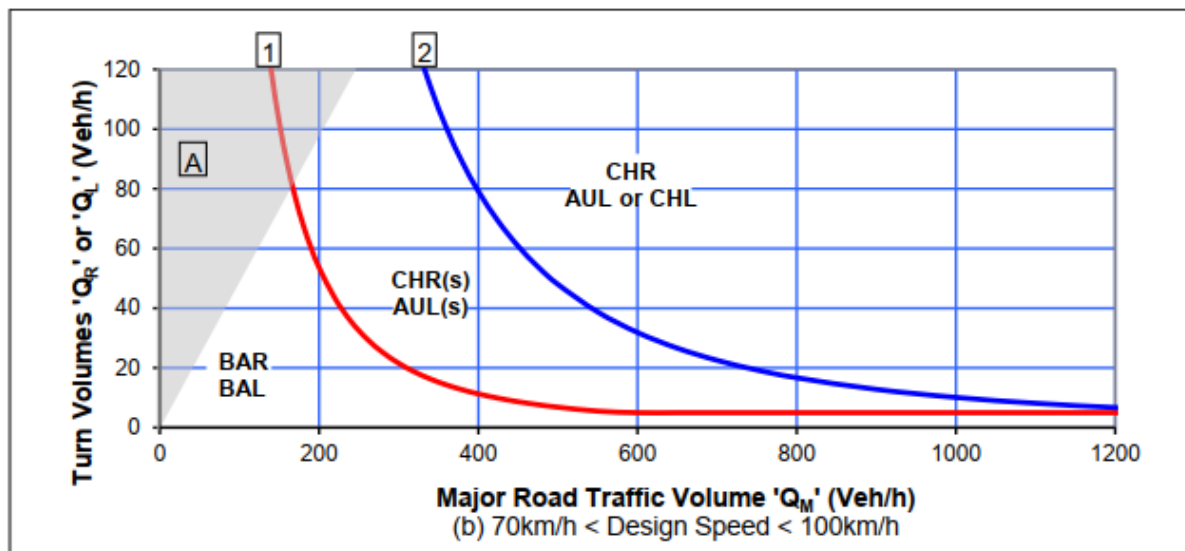
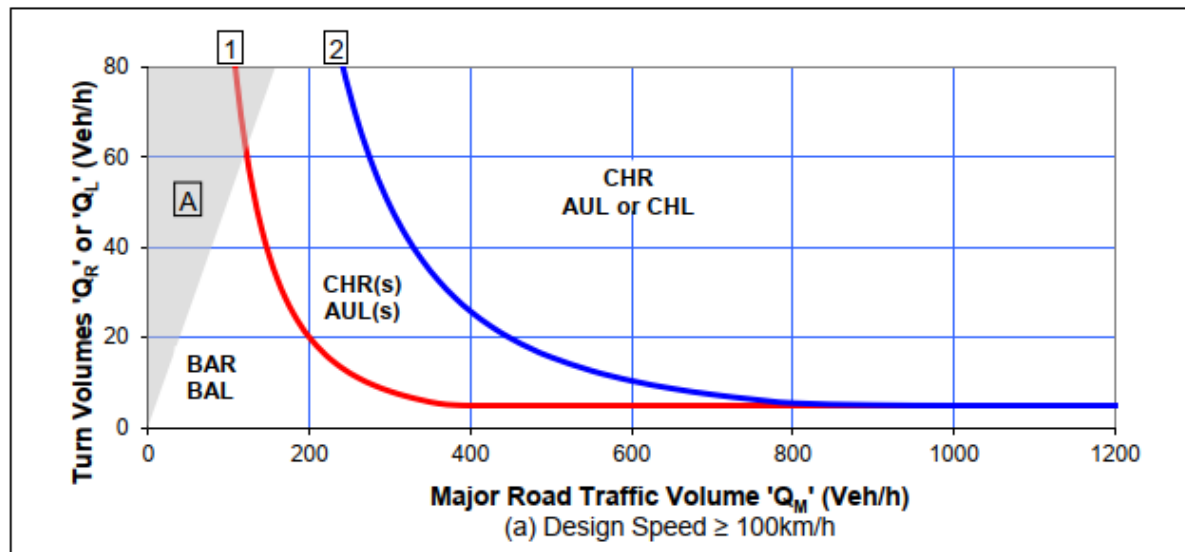


FIGURE 2-1 WARRANTS FOR TURN UPGRADES ON MAJOR ROADS AT UNSIGNALISED INTERSECTIONS (SOURCE: AUSTRROADS GUIDE TO TRAFFIC MANAGEMENT PART 6: INTERSECTIONS INTERCHANGES AND CROSSINGS MANAGEMENT FIGURE 3.25)

2.3 SAFE INTERSECTION SIGHT DISTANCE

A Safe Intersection Site Distance (SISA), described in *Austroads Guide to Traffic Management Part 4A: Unsignalised and Signalised Intersections* will be conducted when preparing the road upgrade designs for consultation and agreement with the relevant road authority.

The SISD check will be checked against the posted speed of the through road +10km/h, but otherwise where this is not achieved the intersection will be checked against the posted speed itself. This will determine if there is sufficient visibility for traffic turning out of the side road, onto the public roadway. In some instances, a deficiency in sight distance may occur as a result of vegetation, and as such will be notified to the relevant road authority for appropriate management noting that ACJV D&C has no planning approval authority to remove vegetation outside the approved construction boundary.

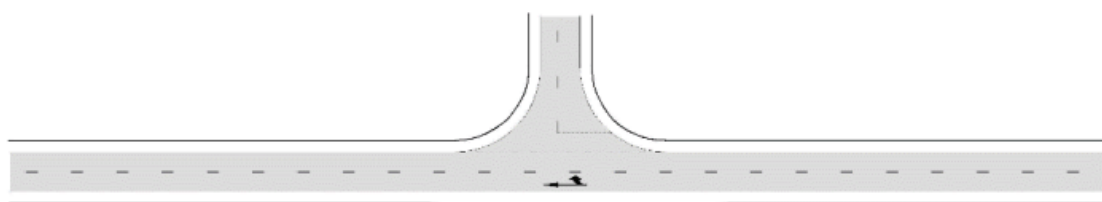
The SISD checks will occur prior to the use of the relevant upgrades listed in Appendix A, Appendix B, Appendix C and/or Appendix D of this Strategy.

The outcome of the SISD will be used in the design of the necessary road upgrade in accordance with *Austroads Guide to Traffic Management Part 4A: Unsignalised and Signalised Intersections*, for consultation and agreement with the relevant road authority.

2.4 ACCESS TYPES

Where access point/crossing point road upgrades are required, these will typically be in accordance with one of the options detailed below, as determined by the assessment matrix outlined in Section 2.4.1, subject to consultation with the applicable road authority.

Figure 2-2 presents the standard BAR and BAL upgrades for rural roads when turning off a major road into a minor road (or in this instance, a construction access point) under the *Austroads Guide to Road Design Part 4A Unsignalised and Signalised Intersections* (2023). These designs are typically applied to a public road junction or intersection and not necessarily required for private access points.



**Basic Right Turn (BAR)
on the Major Road (Two-Lane, Two-Way Road)**

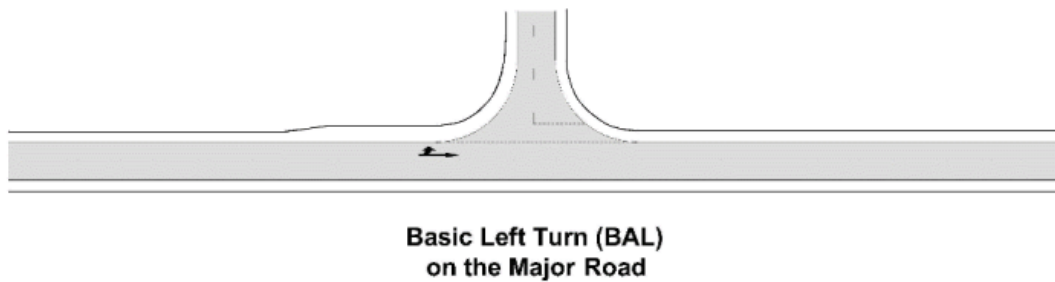
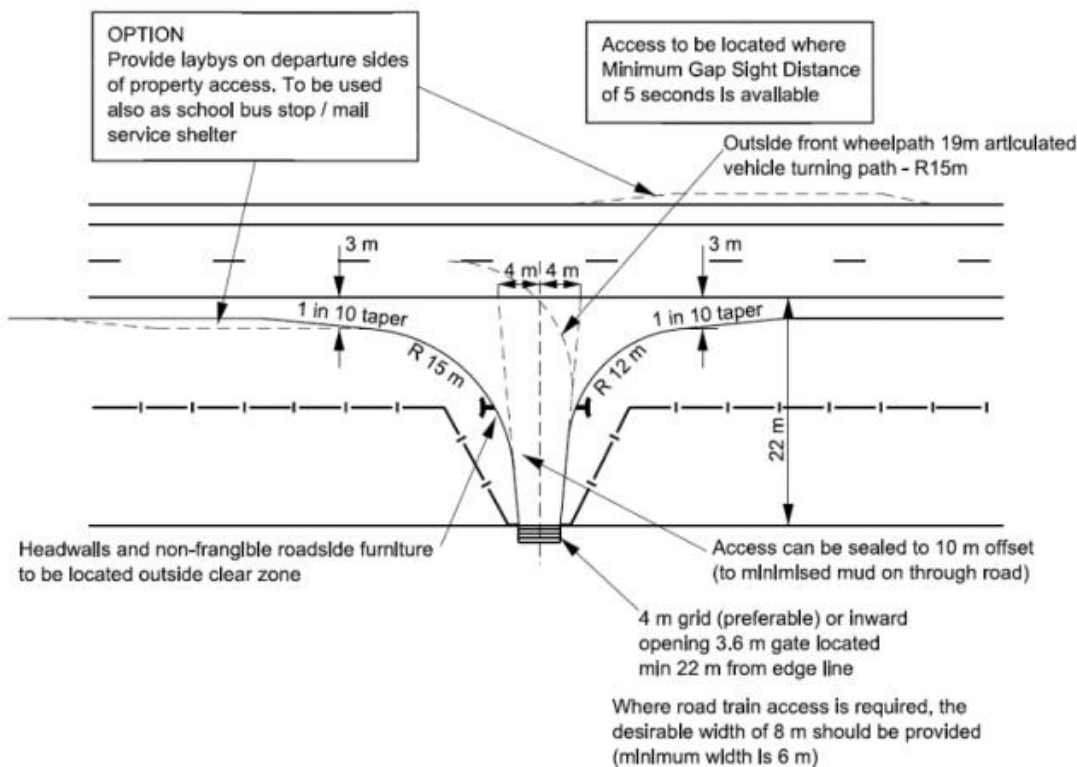


FIGURE 2-2 BAR AND BAL (ACCESS POINTS)

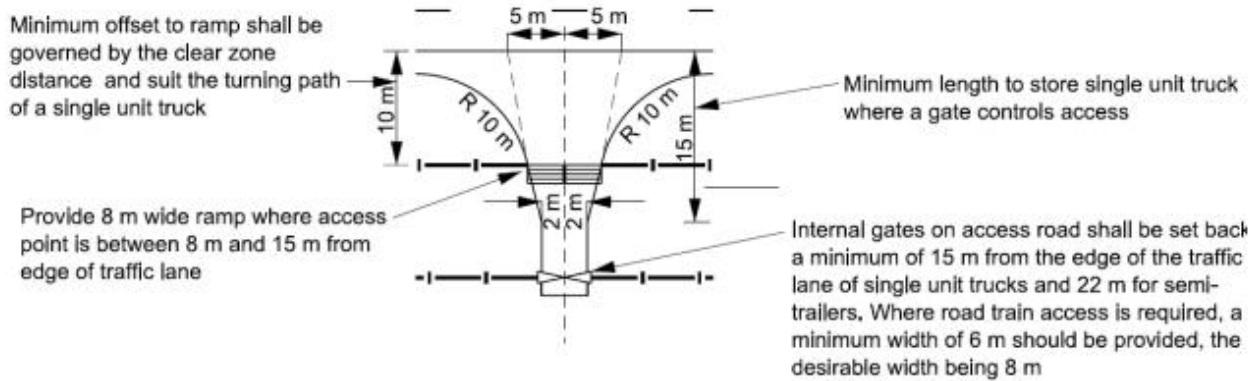
The *Austrroads Guide to Road Design Part 4: Intersections and Crossings* outlines road designs for light and heavy vehicle movements for rural access points. Figure 2-3 illustrates the recommended road designs for rural property access where entry is required for semi-trailers or articulated vehicles. These designs will be adopted in accordance with the assessment matrix (Section 2.4.1) and are expected on lower volume Local Roads.



Note: Minimum requirement for a single carriageway with design AADT < 2000 or minimum requirement for dual carriageway left-in-left-out access for single unit truck. Where AADT > 1000 and access is required for a semi-trailer then use the layout.

FIGURE 2-3 RURAL ACCESS FOR ARTICULATED VEHICLES (AUSTRROADS GUIDE TO ROAD DESIGN PART 4: INTERSECTIONS AND CROSSINGS)

The alternative upgrade in Figure 2-4 would be reserved for light vehicle access only and is appropriate on lower volume Local Roads where Average Annual Daily Traffic (AADT) is below 2000. This design can apply to both access points and crossing points.



Option without indented access

Note: This rural property access treatment may be used where articulated vehicles:

- do not use the driveway on single and dual carriageway roads
- infrequently use the driveway on two-lane two-way roads that have an AADT < 2000.

FIGURE 2-4 LIGHT VEHICLE ACCESS (AUSTROADS GUIDE TO ROAD DESIGN PART 4: INTERSECTIONS AND CROSSINGS)

2.4.1 Access Upgrades Assessment Matrix

The appropriate option for access points and crossing points required for construction use will need to be determined in consideration of design criteria, adjacent environment (including sensitivities such as heritage and biodiversity impacts), existing configurations, existing (public) use and proposed construction use (including number of movements and duration of the use of the access point).

In order to guide decision-making in consideration of these factors, an Access Point Options Matrix has been established, as shown in Table 2-1.

TABLE 2-1 ACCESS POINTS OPTIONS MATRIX

Scenario	Option
Access points with prescribed upgrades in the Project Approval	Road alterations will be implemented as prescribed in the Minister's Conditions of Approval, unless otherwise approved by a Transport Strategy or agreed by the Planning Secretary
Access points without prescribed upgrades in the Project Approval	Road alterations will be assessed using TWA as outlined in Section 2.2, in consideration of construction delivery and access requirements
State Road / Highway	Road alterations will include BAR/BAL unless assessment and agreement for alternative upgrade can be reached with TfNSW
(Regional Road or Local Road) and >2000 AADT and >20 average daily HV movements	Rural access for articulated vehicles (minimum), however, may warrant BAR/BAL (subject to consultation with TfNSW or relevant roads authority)
(Regional Road or Local Road) and >2000 AADT but <21 average daily HV movements	Rural access for articulated vehicles (minimum)

Scenario	Option
Local Road and < 2000 AADT and requires >20 average daily HV movements	Rural access for articulated vehicles
Local Road with limited HV	Light vehicle access
Permanent driveway locations	Light vehicle access

2.5 CONSTRUCTION TRAFFIC DEMANDS

The EIS included indicative construction-related traffic volumes for the purpose of assessing the impacts of the construction of the Project (refer to Table 2-2 – identified as the maximum movements per day).

The current projected construction-related vehicle movements remain consistent with those assessed in the EIS, and as such, the outcomes of this assessment can be reliably referenced in consideration of Project related vehicle and traffic impacts. Unless explicitly stated otherwise, the road upgrades provided in the Appendices to this document are based on the maximum vehicle movements as described in the EIS. ACJV D&C is not proposing to exceed the Project-related vehicle volumes contemplated and assessed in the EIS.

TABLE 2-2 CONSTRUCTION TRAFFIC DEMANDS PER SITE (EIS)

Site	Maximum Movements Per Hour			Maximum Movements Per Day		
	Light Vehicle	Heavy Vehicle	Total	Light Vehicle	Heavy Vehicle	Total
Barigan Creek Switching Station*	4	20	24	44	198	242
Merotherie Energy Hub* and workforce accommodation camp	44	33	77	376	431	808
Neeleys Lane workforce accommodation camp	32	24	56	296	70	366
Elong Elong Energy Hub*	4	20	24	44	198	242
330kV Switching Station (typical)	12	1	13	34	38	72
Access gate (typical) (along transmission line)	12	20	32	148	194	342

Note: * Denotes locations that would include main construction compounds

2.6 CUMULATIVE TRAFFIC

A review of approved projects with the Central-West Orana REZ has been undertaken, including the minor additional traffic movements that are associated with each project. These projects have been sourced from Appendix L (Updated Cumulative Impact Assessment) of the REZ Amendment Report and are specific to the Upper Hunter Shire Council LGA.

2.6.1 Liverpool Range Wind Farm

Liverpool Range Wind Farm identifies routes to and from the site from locations primarily north and east of the scope of this Strategy. The movements originating for the Project to the west, along the Golden Highway are proposed to only make up approximately 5 per cent of vehicle movements for the Project and would result in a daily movement of around 10 vehicles. The EIS Response to Submissions report for Liverpool Range reflects the assessment undertaken for the Central-West Orana REZ Transmission Project, and does not propose or identify any additional upgrades required to accommodate their works.

3 Road Upgrades

This Strategy addresses the items specified in Appendix 4, Table 5 of the Project Approval as requiring inclusion in a Transport Strategy. These items are divided into three categories, which are addressed in separate Appendices as follows:

- Appendix B: Road upgrades which are specifically prescribed in Appendix 4, Table 5 of the Project Approval
- Appendix C: Local roads which are identified in Figure 4.1 to Figure 4.4 of the Project Approval (or otherwise approved by the Planning Secretary under MCoA (NSW) B30) and will be used for construction site access and have been identified as being necessary for upgrading
- Appendix D: Project constructed or modified minor access points which are used for construction site access

Each of the above categories will have a separate item-specific report in the applicable appendix, with a summary of all items relevant to this Strategy provided in Appendix A.

The relevant requirements of MCoA (NSW) B31 are addressed for each item in the relevant Appendix.

As noted in Section 1.4, the full scope of proposed upgrades in each LGA is being progressively developed due to planning to support the staggered construction program, extensive concurrent design and review processes, consideration of consultation outcomes, and environmental and physical constraints. As a result, the full detail of all required and proposed road upgrades and usage is subject to ongoing development. This document has been structured to allow for regular, progressive updates as and when additional scope is confirmed.

4 Environmental Assessment and Mitigation

The road upgrades in this Strategy were included within the EIS. The EIS was prepared to address the requirements of both the State and Commonwealth as set out in the Secretary's Environmental Assessment Requirements issued by DPHI, including with regard to the *State significant infrastructure guidelines* (DPE, 2022a) (in particular *State significant infrastructure guidelines – preparing an environmental impact statement*).

The assessments that were undertaken and documented in the EIS and technical papers were prepared in accordance with accepted scientific and assessment methodologies and considered relevant statutory and agency requirements and guidelines. These assessments were also prepared, reviewed, and validated by specialists in their field and, where relevant, were based on data gathered from field investigations during the EIS preparation. Locally based specialists (such as an agricultural specialist) and those with local knowledge were also engaged where available.

As a result of design refinements and a better understanding of ground conditions following finalisation of the EIS, the area required to construct some upgrades extend beyond the EIS construction area and assessment areas. Where this occurs, these upgrades are required to be assessed in accordance with MCoA (NSW) B31(d). The outcomes of this additional assessment are included in detail for each item within Appendix B, Appendix C and Appendix D.

The staging strategy letter, approved on 19 August 2025 by the Department of Planning, Housing and Infrastructure (DPHI) (DPHI reference: SSI-48323210-PA-54) in accordance with MCoA (NSW) C3 was conditional and required the following within each strategy:

In relation to MCoA (NSW) B31(d), where the proposed upgrade and associated disturbance footprint has been described and assessed in the EIS and associated environmental assessment documentation, the Transport Strategy will reference and summarise the existing assessment and outcomes. This must include confirmation that the assessment of the disturbance footprint aligns with the footprint of the proposed upgrade and includes appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects.

This Strategy references and summarises the existing assessment and outcomes in accordance with this requirement.

Appendix A Upgrades within this Strategy

THIS STRATEGY IDENTIFIES AND DETAILS THE CURRENTLY KNOWN ROAD UPGRADES WHICH WILL BE IMPLEMENTED BY THE PROJECT WITHIN THE UPPER HUNTER SHIRE LGA. THESE UPGRADES ARE SUMMARISED IN

Table A-1, along with a cross reference to where further detail is provided within Appendix B, Appendix C and Appendix D.

Figure A-1 also shows the location of each upgrade.

TABLE A-1 ROAD UPGRADES RELEVANT TO THE UPPER HUNTER SHIRE TRANSPORT STRATEGY

Upgrades	Details Provided In	Status	Indicative Schedule Commencement	Indicative Schedule Completion
Specific Items in Appendix 4, Table 5				
Intersection of Cassilis Road and Golden Highway	Appendix B1	No longer required	N/A	N/A
Intersection of Ulan Road and Golden Highway intersection	Appendix B2	No longer required	N/A	N/A
Access Points / Crossing Points				
SP5-E1/E2 (Ulan Road)	Appendix D1	Included	Q1 2026	Q2 2026
SP5-H1/H2 (Coolah Road)	Appendix D2	Included	Q1 2026	Q2 2026
SP5-I1/I2 (Rotherwood Road)	Appendix D3	Included	Q1 2026	Q2 2026
SP5-F2 (Summer Hill Road)	Appendix D4	Not yet included	Q2 2026	Q3 2026
SP5-G (Cassilis Rest Area)	Appendix D5	Not yet included	Q2 2026	Q3 2026

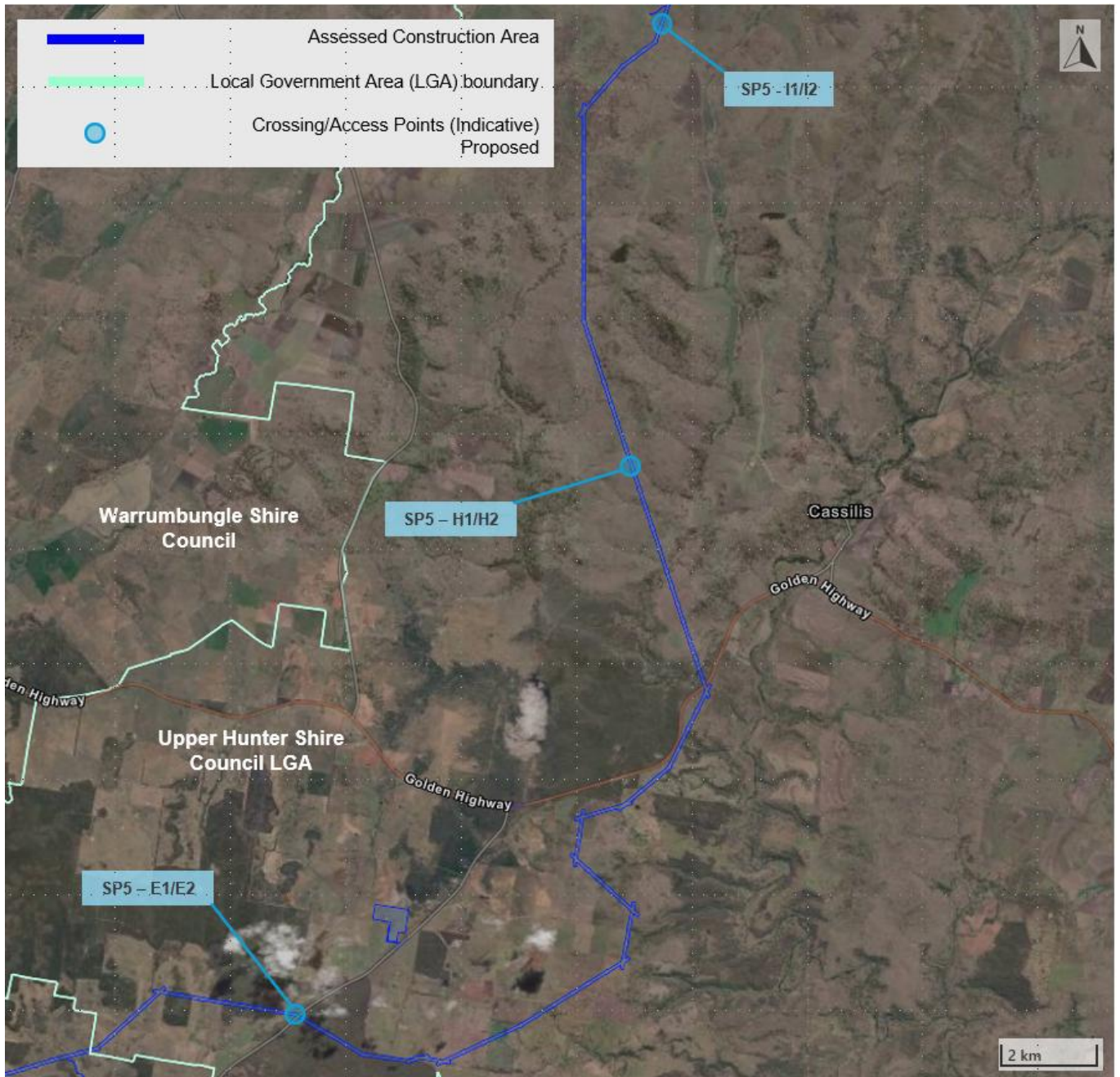


FIGURE A-1 INDICATIVE LOCATIONS OF ACCESS POINTS SUBJECT TO THIS STRATEGY

Appendix B Specific Items in Appendix 4, Table 5

The specific roads, intersections and access points that are required to be addressed in a Transport Strategy are defined by the Project Approval Appendix 4, Table 5.

MCoA (NSW) B31 specifies one intersection within the Upper Hunter Shire LGA which is to be upgraded with the commencement of development related to construction traffic and needs to be included in a Transport Strategy:

- Intersection of Cassilis Road and Golden Highway – Appendix B1 - No longer required (constructed by other project)

APPENDIX B1 INTERSECTION OF CASSILIS ROAD AND GOLDEN HIGHWAY – NO LONGER REQUIRED

Appendix C Local Road Upgrades

Appendix 4, Table 5 of the Project Approval states that 'other Local Roads' as identified in Figure 4-1 to Figure 4-4 of Appendix 4 must be upgraded as necessary as per the Transport Strategy under MCoA (NSW) B31. This must occur prior to commencing the use of that Local Road for any HV traffic associated with construction.

For clarity, 'other local roads' are taken to mean:

- Those that are not already addressed as specific items listed in Planning Approval Appendix 4, Table 5
- Are identified in Figure 4-1 to Figure 4-4 of the Project Approval
- Are not specifically excluded from being used by the Project, as described in the TTMP

At present, no Local Road upgrades have been determined as required within the Upper Hunter LGA. Should this change, this Transport Strategy in accordance with MCoA (NSW) B31.

Appendix D Minor Access Points and Crossing Points

Planning Approval Appendix 4 Table 5 lists requires items for upgrade and includes that “Minor Access Points intersections (any Access Point associated with minor access tracks off public road network)” require an “upgrade as necessary as per the Transport Strategy under condition B31”.

The minor access points and crossing points applicable to this Strategy are:

- SP5-E1/E2 (Ulan Road) - Appendix D1 - Included
- SP5-H1/H2 (Coolah Road) - Appendix D2 - Included
- SP5-I1/I2 (Rotherwood Road) - Appendix D3 – Included
- SP5-F2 (Summer Hill Road) – Appendix D4 – Not yet included
- SP5-G (Cassilis Rest Area) – Appendix D5 – Not yet included

APPENDIX D1 SP5-E1/E2 (ULAN ROAD) ACCESS POINTS - INCLUDED

Location

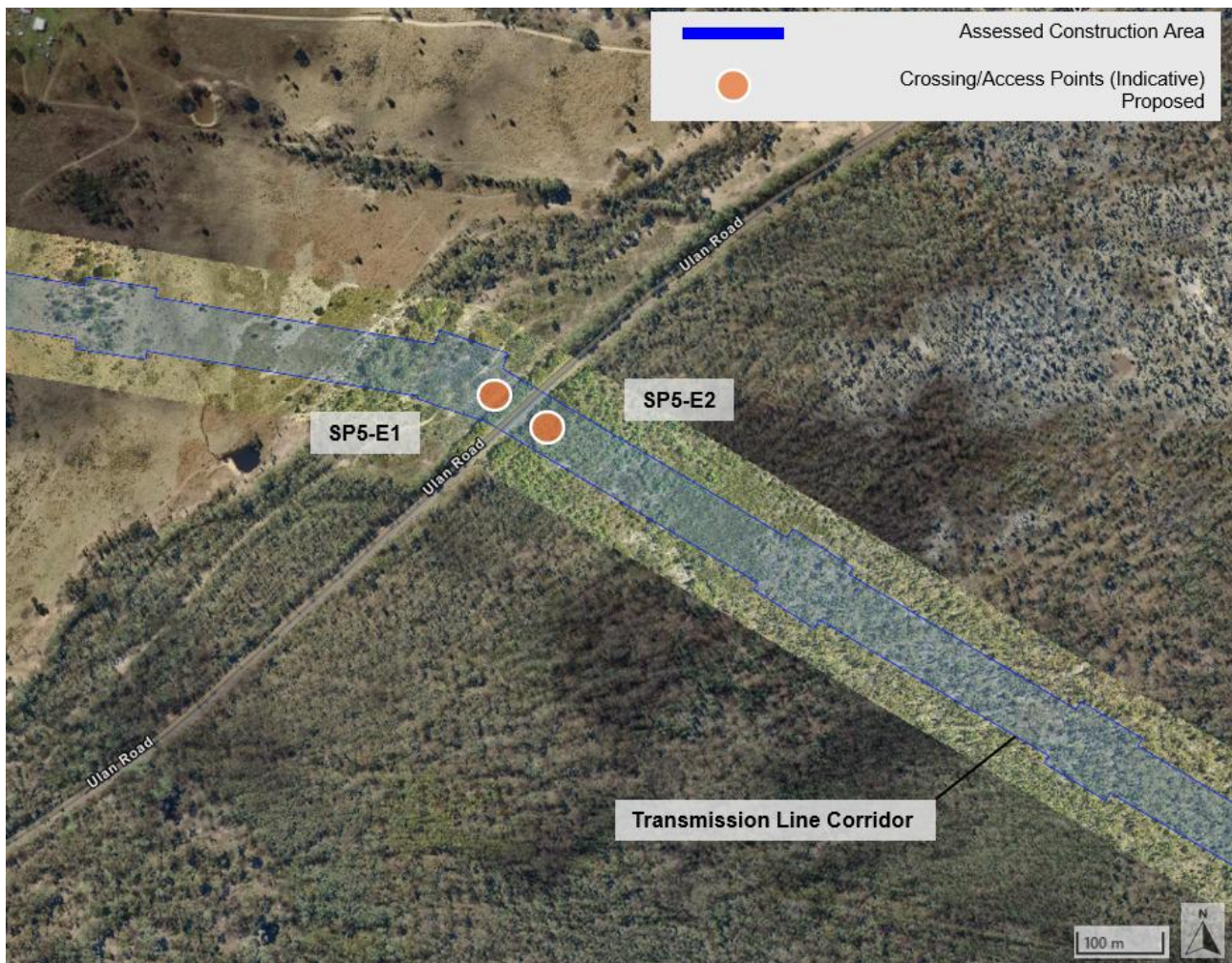


FIGURE D1- 1 LOCATION OF ACCESS POINTS SP5-E1/E2 ON ULAN ROAD



FIGURE D1- 2 CONFIRMATION OF THE DISTURBANCE FOOTPRINT (SP5-E1/E2)

Description

The Access Points SP5-E1/E2 will be used to access the construction area from Ulan Road. Further details are provided within the table below.

TABLE D1- 1 ACCESS POINTS UPGRADE AND USE (SP5-E1/E2)

Entry Point ID	SP5-E1/E2
EIS Access Point (if applicable)	L2.26 / L2.27
Road	Ulan Road
Location	https://maps.app.goo.gl/coQ2B64PmE61gPJW7
Type	BAR/BAL
Scope of work	- Construction of new access driveway - Installation of fence, gate and signage - Installation of drainage pipe and headwalls (if required) - Installation of livestock grid (if required) Determination of the requirement to install a drainage pipe and headwall and/or livestock grid will be made on site, based on consultation with the landowner and/or the relevant Council. Livestock grids may be necessary for properties where there is a risk of livestock escaping. Drainage pipe requirements will depend on the existing provision for drains at the edge of the existing road formation.
Amenity impacts MCoA B31(a)	The works would result in some localised traffic control requirements both during construction and prior to operation. Overall, the impact to amenity is expected to be negligible given the access points' location and small physical footprint when compared to the overall Project.
Design criteria MCoA B31(b)	The access points will be designed in accordance with the design documentation and in accordance with Section 2.1 of this Strategy, above.
Strategic concept design MCoA B31(c)	The Strategic Concept Design are included in the section below.
Assessment of potential impacts MCoA B31 (d)	Refer to section below
Schedule MCoA B31(e)	Proposed commencement in Q1 2026 and completion in Q2 2026.
Permanent or Temporary MCoA B31(h)	The access points will be temporary but may be replaced in time with a permanent access (subject to further design and assessment).

Summary of Existing EIS Assessment and Outcomes

The access points were included within the EIS. As a result of design refinements and a better understanding of ground conditions following finalisation of the EIS and MCoAs (NSW), the location of the access points and their construction area has been refined and is:

- Partially within the Project construction area (the disturbance footprint)

- Within the Aboriginal Heritage survey area
- Partially within the Biodiversity study area

As such, the access points have been predominantly assessed within the EIS, albeit not at the exact same location. The general area was assessed in the EIS as being subject to activities associated with the construction of the transmission line.

Where the access points have extended beyond the EIS construction area, biodiversity study area or Aboriginal heritage survey area they are required to be assessed in accordance with MCoA (NSW) B31(d) (refer to the next section).

The staging strategy letter, approved on 19 August 2025 by the Department of Planning, Housing and Infrastructure (DPHI) (DPHI reference: SSI-48323210-PA-54) in accordance with MCoA (NSW) C3 was conditional and required the following to be addressed within each strategy:

In relation to Condition B31(d), where the proposed upgrade and associated disturbance footprint has been described and assessed in the EIS and associated environmental assessment documentation, the Transport Strategy will reference and summarise the existing assessment and outcomes. This must include confirmation that the assessment of the disturbance footprint aligns with the footprint of the proposed upgrade and includes appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects.

The table below summarises the most relevant existing EIS assessment and outcomes where an unmitigated impact rating of ‘medium’ or ‘high’ was allocated in Chapter 22 of the EIS (Environmental Risk Analysis). The relevant aspects of the assessment have been determined by considering the nature of the construction works associated with the establishment and use of the access points. It is noted that the access points in the EIS are assessed as part of a wider construction impact (i.e. they are not assessed as a standalone activity). In addition, given the minor nature of these access points, some environmental aspects in the table below have been combined (e.g. land use and property and agriculture, Aboriginal heritage and non-Aboriginal heritage) to avoid unnecessary repetition of similar information.

Figure D1-1 identifies the actual disturbance footprint of the access points in comparison to what was assessed within the EIS. Other supporting figures are contained in Appendix D5.

TABLE D1- 2 EIS ASSESSMENT AND OUTCOMES SUMMARY (SP5-E1/E2)

EIS Assessment and Outcomes Summary	EIS Assessment References
Land Use, Property and Agriculture <i>Study Area and Existing Environment</i> The land use study area the EIS comprised a four-kilometre buffer either side from the construction area, to understand the context of the areas immediately surrounding the project. Where relevant to do so, the broader region was also considered in the assessment by Local Government Area (LGA), however the assessment of property impacts was generally limited to the construction and operational areas (i.e. the land directly impacted by the Project). This study area is also consistent with the agriculture study area.	Section 7.2.1 of the EIS (Chapter 7 (Land Use and Property)) Section 8.2.1 of the EIS (Chapter 8 (Agriculture)) Figure 7-1 of the EIS (Chapter 7 (Land Use and Property))

EIS Assessment and Outcomes Summary	EIS Assessment References
The existing environment around the access points is characterised by primary production land zoning (RU1). To the south of the access points there is large lot residential land zoning (R5) and to the north there is heavy industrial land zoning (IN3). The land use is nominated in the EIS as grazing native pasture/vegetation (agricultural land use). This means that the land is classified as having moderate to low capability (Class 5), which largely restricts agricultural land use to grazing, and some horticultural activities.	Figure 7-2 of the EIS (Chapter 7 (Land Use and Property)) Section 8.3.6 of the EIS (Chapter 8 (Agriculture))
<i>Relevant Environmental Risks</i> - Temporary restrictions to land use due to the leasing and use of land for the construction area, access and ancillary facilities - Effects on access to properties and adjustments to infrastructure (fences/gates) as a result of changes to private access roads and internal access arrangements	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS assessed that the Project would require the use of land (including land currently used for agricultural purposes) temporarily for construction and permanently for operation (where permanent infrastructure is to be located). The residual risk rating for this impact was noted as 'low' for effects on access to properties in the EIS. For estimating total impacts to agricultural land use during construction, the EIS conservatively assumed that the entire construction area (including the transmission line easement) (consisting of around 3,660 ha of agricultural land use) would be unavailable for agricultural activities and use. The EIS noted that the level of impact on agricultural activities would vary, depending on the scale and intensity of construction activities. The EIS assessed that in areas where a higher intensity of construction activities is required, such as the location of energy hubs, switching stations, worker accommodation camps and construction compounds, the Project would result in direct impacts to agricultural land use, with land permanently acquired and removed from agricultural production. The access points would only temporarily remove the agricultural land and restrict movement of the landowners. The EIS noted that the residual risk rating for general impacts to agricultural productivity as 'medium'. Given the minor and temporal nature of these access points, it can be reasonably concluded that their actual impacts would be much lower.	Section 7.4.1 of the EIS (Chapter 7 (Land Use and Property)) Section 8.4 of the EIS (Chapter 8 (Agriculture))
Landscape Character and Visual Amenity	
<i>Study Area and Existing Environment</i> The EIS study area comprised a four-kilometre-wide corridor centred on the construction area. This study area extent was selected on the basis it included all areas where there is the potential for landscape character and visual impacts from the Project to be experienced. The access points are located within the 'forested hills' landscape character zone (FH-02 - Durridgere, Goulburn River and Munghorn Gap forested hills). FH-02 has a moderate landscape sensitivity and comprises historical mining activities, existing transmission lines and forested areas.	Figure 9-1 of the EIS (Chapter 9 (Landscape Character and Visual Amenity)) Figure 9-8 of the EIS (Chapter 9 (Landscape Character and Visual Amenity))
<i>Relevant Environmental Risks</i> Adverse impacts on landscape character and visual amenity from private/public places due to construction activities (e.g. vegetation clearing and earthworks), and construction traffic	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS assessed that construction of the Project would result in temporary changes to the landscape character and visual amenity of the study area, which would impact residents, tourists, and road users. It also noted that construction of the Project would potentially	Section 9.4 of the EIS (Chapter 9 (Landscape Character and Visual Amenity))

EIS Assessment and Outcomes Summary	EIS Assessment References
result in landscape character and visual impacts as a result of ground disturbance, vegetation clearance, the use of large-scale equipment and supporting infrastructure, the establishment and use of workforce accommodation camps and night-time lighting. The EIS assessed that the magnitude of the Project's change to FH-02 during construction would result in an overall moderate landscape impact and a residual risk rating of 'medium'. Given the minor and temporal nature of these access points, it can be reasonably concluded that their actual impacts would be much lower.	
Biodiversity	
<i>Study Area and Existing Environment</i> The biodiversity study area in the EIS includes the construction area and surrounding areas that have the potential to be directly and indirectly impacted by the Project. In accordance with the BAM, Technical paper 4 of the EIS (Biodiversity) refers to: • The construction area as the subject land, which includes all areas that would be directly impacted by construction and operation of the Project • The study area, which includes all areas within 220 metres if the centreline of the transmission line. It includes the subject land as is within the assessment area. • The assessment area, which includes all areas within 500 metres of the centreline of the transmission line, extending up to 1,500 metres from the edge of the construction area at energy hubs and switching stations • The locality, being the area within 10 kilometres of the subject land (or construction area), within which database searches and broader vegetation mapping to inform the assessment was based The access points are located within the biodiversity study area. The BDAR partially assessed the footprint for the access points. The BDAR identified vegetation within the footprint of the access point as consisting of Plant Community Type (PCT) 481 Rough-barked Apple- Blakely's Red Gum-Narrow-leaved Stringybark +/- Grey Gum and PCT 0 miscellaneous ecosystem. PCT 481 is not a listed threatened ecological community under either the BC Act or EPBC Act and there is no clearing limit associated with this PCT listed in the Project Planning Approval.	Section 10.2.1 of the EIS (Chapter 10 (Biodiversity)) Biodiversity Development Assessment Report of the EIS (Technical Paper 4) Revised Biodiversity Development Assessment Report of the EIS (Technical Paper 4)
<i>Relevant Environmental Risks</i> • Clearing of native vegetation resulting in loss of fauna habitat, habitat fragmentation and loss of connectivity • Impacts on listed threatened fauna, threatened flora species and endangered terrestrial ecological populations and communities	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> Vegetation within the assessed area was identified as PCT 481 Rough-barked Apple- Blakely's Red Gum-Narrow-leaved Stringybark +/- Grey Gum and PCT 0 miscellaneous ecosystem. PCT 481 is not a listed threatened ecological community under either the BC Act or EPBC Act and there is no clearing limits associated with this PCT listed in the Project Planning Approval. The BDAR undertaken by ECE Ecology identified the presence of PCT 481 within the access point footprint. A total of four threatened fauna species were identified within the BAM-C as having potential to occur within the assessment area. Desktop assessment and field surveys were undertaken for habitat constraints and geographic restrictions to assess each species. Three threatened flora species were identified within the BAM-C as having potential to occur within the assessment area. Desktop assessment and field surveys were undertaken for habitat constraints and geographic restrictions to assess each species. Targeted surveys were completed for the threatened flora species and none of the three	Section 10.4 of the EIS (Chapter 10 (Biodiversity)) Table 10-3 of the EIS (Chapter 10 (Biodiversity)) Table 10-4 of the EIS (Chapter 10 (Biodiversity)) Table 10-5 of the EIS (Chapter 10 (Biodiversity)) Biodiversity Development Assessment Report of

EIS Assessment and Outcomes Summary	EIS Assessment References
species were identified within the assessment area, including the extent that sits outside the disturbance footprint. No additional impact to the habitat for threatened species compared to what was assessed in the EIS / Amendment Report will result from the refinement and no increase to clearing limits will be required as a result of the refinement.	the EIS (Technical Paper 4) Revised Biodiversity Development Assessment Report of the EIS (Technical Paper 4)
Aboriginal Heritage and non-Aboriginal Heritage	
<i>Study Area and Existing Environment</i> The Aboriginal heritage study area comprises the construction area, and where relevant incorporates the broader areas of the Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter Local Government Areas (LGAs) to capture the broader cultural and historical context of the region. The access points are located within the study area. The Historical Heritage and Aboriginal Cultural Heritage Assessment Report included the construction area required to establish the access points SP5-E1/E2. The nearest recorded site (SNI-AS74) is located approximately 510m to the southwest of SP5-E1 and was recorded as part of the EIS / Amendment Report. No other areas, sites, items or places of Non-Aboriginal or Aboriginal Cultural Heritage significance are recorded in the vicinity of SP5-E1. The nearest recorded site (SNI-AS74) is located approximately 530m to the southwest of SP5-E2 and was recorded as part of the EIS / Amendment Report. No other areas, sites, items or places of Non-Aboriginal or Aboriginal Cultural Heritage significance are recorded in the vicinity of SP5-E2.	Section 11.2.1 of the EIS (Chapter 11 (Aboriginal heritage)) Technical Paper 6 of the EIS (Non-Aboriginal Heritage Assessment) Technical Paper 5 of the EIS (Aboriginal Cultural Heritage) Appendix E of the Addendum Aboriginal Cultural Heritage Assessment Report (Appendix H of the Amendment Report)
<i>Relevant Environmental Risks</i> - Impacts on unidentified Aboriginal heritage sites or areas of archaeological sensitivity of cultural value - Impacts on unknown/unlisted heritage items and areas of archaeological potential	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> No heritage items or sites have been identified within the access point construction area and so potential impacts are expected to be negligible. The EIS identifies that impacts on unknown/unlisted heritage items and areas of archaeological potential are likely without adequate mitigation measures in place.	Figure 11-1 of the EIS (Chapter 11 (Aboriginal heritage)) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Noise and Vibration	
<i>Study Area and Existing Environment</i> The noise and vibration study area in the EIS consisted of the construction area of the Project and areas within three kilometres of the construction area. The nearest sensitive receiver to access point, SP5-E1, is residential receiver 1091 located approximately 670m northwest. The nearest sensitive receiver to access point, SP5-E2, is residential receiver 1091 located approximately 700m northwest.	Section 15.2.1 of the EIS (Chapter 15 (Noise and Vibration)) Figure 15-2 of the EIS (Chapter 15 (Noise and Vibration)) Figure 4-1 of the project's approved Noise and Vibration Management Plan (CWO-PRO-050-ENV-PLN-000002))

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Relevant Environmental Risks</i> Potential exceedances of noise management levels (NMLs) from activities within and outside standard construction hours, including activities at construction compounds and workforce accommodation camps.	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The results of the noise and vibration assessment undertaken as part of the EIS and Amendment Report show construction noise impacts associated with road upgrades would generally be minor, temporary, and of short duration.	Section 15.5 of the EIS (Chapter 15 (Noise and Vibration))
Traffic and Transport	
<i>Study Area and Existing Environment</i> The traffic and transport study area comprises the transport networks that may be impacted by construction movements to and from the energy hubs, switching stations, access gates, construction compounds and workforce accommodation camps, or by the operation of the Project (staff and maintenance movements). It includes the roads that provide access to the construction area back to the nearest highway. Ulan Road is a main road in the study area. It is noted in the EIS as being approximately 72 kilometres long road providing a north-south connection between Golden Highway in the north and Mudgee town centre. It is a sealed pavement and is a bidirectional two-lane road (one lane in each direction). The posted speed limit is 100 km/h. The relevant section of Ulan Road to the access points is the portion south of Ulan-Wollar Road.	Figure 17-1 of the EIS (Chapter 17 (Traffic and Transport)) Table 17-3 of the EIS (Chapter 17 (Traffic and Transport))
<i>Relevant Environmental Risks</i> - Impacts to condition of roads due to increased vehicular traffic - Impacts on access to and within properties	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> Based on the survey results collected, the highest traffic volumes are observed on highways (State roads), which reflects the function of these roads. Roads that also experience higher traffic volumes include Ulan Road (approximately 9,000 vehicles per day) on weekdays. All of the roads assessed in the study area perform at Level of Service A, with the exception of the following which operate at a Level of Service B: - The south bound/east bound direction of Ulan-Wollar Road during the AM peak on Ulan-Wollar Road - All directions on Ulan Road (north-east of Lue Road during the PM peak) perform at Level of Service B Ulan Road and Ulan-Wollar Road have been approved for RAV (up to 25/26 metres B-double) and has previously been used by other projects (e.g. Wollar Solar Farm) to access the site for construction. All residual risk ratings for traffic and transport in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower. Additionally, the purpose of the road upgrades is to facilitate safe and efficient access and egress for Project related construction traffic required to access the transmission line easement whilst minimising impacts to public motorists. The minor refinements to the disturbance footprints are necessary for the road upgrade designs to meet AustRoads Guide to Road Design requirements and would not alter the traffic impacts substantially compared to the Project described and assessed in the EIS.	Section 17.3.2 of the EIS (Chapter 17 (Traffic and Transport)) Section 5.2.3 of EIS Technical Paper 13 (Traffic and Transport)
Waste Management	

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Study Area and Existing Environment</i> Existing waste sources in the Mid-Western Regional LGA primarily includes waste from agricultural, mining and forestry operations and domestic waste. A number of waste management and waste transfer facilities operated by local councils are located near the Project and accept a wide range of wastes, including construction and demolition waste, domestic waste and recyclable materials.	Section 18.3 of Chapter 18 of the EIS (Waste Management)
Relevant Environmental Risks Impacts on local and regional waste management facilities due to increased demand from overall Project generated construction wastes	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> Like most other environmental aspects, there is no singular assessment for access points. The most relevant construction waste stream volumes for the Project are included below. It is considered that the establishment and use of access points would represent a very minor portion of these indicative volumes. Possible impacts during construction as a result of the improper management of construction waste includes those on local and regional waste management facilities. The EIS identified that this could be due to increased demand from overall project generated construction wastes. Other impacts, if not managed appropriately, could include dust, odour, erosion and sedimentation, human health risks, and mud tracking. The EIS noted that the residual risk rating would be 'medium'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Chapter 18 of the EIS (Waste Management) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Hydrology, Flooding and Water Quality	
<i>Study Area and Existing Environment</i> The hydrology, flooding and water quality study area consists of the Macquarie River and Hunter River catchments, and sub-catchments. A catchment is the area that drains directly to a stream or body of water and includes areas upstream and downstream of the project. The Project is located across the Macquarie River and Hunter River catchments. Numerous natural watercourses intersect the study area, including perennial and ephemeral watercourses and unnamed drainage lines. A number of constructed dams are also located within the study area, including Burrendong Dam and Windamere Dam, to provide water supply for towns, industry, irrigators, stock and domestic users, as well as flood mitigation and recreation.	Section 19.1.2 of Chapter 19 (Hydrology, Flooding and Water Quality)
Relevant Environmental Risks - Surface water quality impacts due to erosion and sedimentation, contamination, leaks and spills - Impact to regional or local water supply due to construction water demands	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The access points are anticipated to cause minor disturbance to the local soil profile due to earthworks required during the installation period. The construction of the proposed refinement is not proposed to interact with any watercourses and the risk to water quality impacts due to the construction of the proposed refinement is considered very low. The potential for the proposed refinements to result in soil and water impacts remains the same as assessed in the EIS and is consistent with the approved Project.	Section 19.2.4 of the EIS (Chapter 19 (Hydrology, Flooding and Water Quality)) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

EIS Assessment and Outcomes Summary		EIS Assessment References
All residual risk ratings for hydrology, flooding and water quality in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be negligible.		
Climate Change and Greenhouse Gas		
Relevant Environmental Risks		Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Emissions of greenhouse gases during construction from embodied energy in materials, or emissions from construction plant and vehicles.		
<i>Assessment and Outcomes Summary</i>		Table 19-34 of Chapter 19 of the EIS (Climate Change and Greenhouse Gas)
The estimated GHG emissions from the Scope 1, Scope 2 and Scope 3 emissions during construction of the Project are estimated to be a total of 611,607 tCO ₂ -e, as shown in Table 19-34. Scope 3 emissions are estimated to be the largest contributor (approximately 94 per cent) to GHG emissions during construction, primarily due to the embodied emissions within materials that would be produced for the Project. Scope 1 emissions would account for approximately 5.7 per cent and Scope 2 emissions would account for approximately 0.03 per cent of the total GHG emissions during construction.		Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
All residual risk ratings for climate change and greenhouse gas in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be negligible.		
Cumulative Impacts		
Relevant Environmental Risks		Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Numerous projects have the potential to be under construction at the same time as the Project, leading to potential cumulative impacts including biodiversity, visual, noise and traffic.		
<i>Assessment and Outcomes Summary</i>		Section 20.2 of Chapter 20 of the EIS (Cumulative Impacts)
The EIS identified that these impacts are not likely to be major, generally due to these projects being located across a large geographic area (resulting in dispersal of cumulative impacts). There may be additional cumulative impacts on resources including water and local waste management capacity.		Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
The EIS noted that the residual risk rating for this impact would be 'medium'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.		

Assessment of Potential Impacts Outside the EIS Construction Area

Where the Access Points SP5-E1/E2 have extended beyond the EIS construction area, biodiversity study area or Aboriginal heritage survey area they are required to be assessed in accordance with MCoA (NSW) B31(d). The table below has been prepared to provide the outcomes of these additional assessments.

A supplementary biodiversity survey of the access points that were not fully covered within the BDAR assessment area was undertaken by East Coast Ecology (ECE) in November/December 2024 and January 2025. The supplementary biodiversity surveys focussed on areas of the road corridor where the ACJV D&C design extends beyond the area surveyed for the BDAR. The supplementary biodiversity survey report has been included in Appendix F.

TABLE D1- 3 ASSESSMENT OUTSIDE OF THE EIS CONSTRUCTION AREA (SP5-E1/E2)

Impacts Outside the EIS Construction Boundary

Biodiversity

Plant Community Types

Although the access points were included within the biodiversity survey area of the EIS, some areas were not included within the Project construction area (the disturbance footprint). A summary of the additional vegetated areas outside the Project construction area is summarised in the table below:

PCT Identified	PCT 481
TEC?	Not listed
Habitat for Threatened Species?	Yes
SAII?	No
Extent (Ha)	Total = 0.03 ha

Notes:

PCT 481 – Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest in the southern Brigalow Belt South Bioregion and Upper Hunter region

Vegetation within the assessed area was identified as PCT 481 Rough-barked Apple- Blakely's Red Gum-Narrow-leaved Stringybark +/- Grey Gum and PCT 0 miscellaneous ecosystem. PCT 481 is not a listed threatened ecological community under either the BC Act or EPBC Act and there is no clearing limits associated with this PCT listed in the Project Planning Approval.

The additional footprint of works would result in 0.03ha of clearing for this PCT.

Habitat for Threatened Fauna Species

Both the BDAR and the supplementary assessment undertaken by ECE Ecology identified the presence of PCT 481 within the access point footprint. A total of four threatened fauna species were identified within the BAM-C as having potential to occur within the assessment area. Desktop assessment and field surveys were undertaken for habitat constraints and geographic restrictions to assess each species. The supplementary assessment determined three of the four fauna species unlikely to occur within the assessment area. One fauna species, Eastern Pygmy Possum (*Cercartetus nanus*), has been assumed present within the footprint of SP5-E1/E2. It is therefore considered that PCT 481 is associated with habitat for the threatened fauna species listed above at SP5- E1/E2.

No additional impact to the habitat for threatened species compared to what was assessed in the EIS / Amendment Report will result from the refinement and no increase to clearing limits will be required as a result of the refinement.

Threatened Flora

Three threatened flora species were identified within the BAM-C as having potential to occur within the assessment area Desktop assessment and field surveys were undertaken for habitat constraints and geographic restrictions to assess each species. Targeted surveys were completed for two of the threatened flora species and one, Ausfeld's Wattle (*Acacia ausfeldii*), was assumed present within the access point assessment area. Based on the above, it is considered that PCT 481 is associated with habitat for Ausfeld's Wattle (*Acacia ausfeldii*).

Aboriginal Heritage and Non-Aboriginal Heritage

The Historical Heritage and Aboriginal Cultural Heritage Assessment Report included the construction area required to establish the access points SP5-E1/E2.

No heritage items or sites have been identified within the access point construction area.

Noise and Vibration

The use of the access points SP5-E1/E2 was assessed within the EIS, however the establishment of the access points partially extends beyond the Project construction area. For these establishment activities a construction noise assessment was undertaken. The assessment considered the equipment and plant that would be required to construct the access points and the offset distance from the access points to the nearest sensitive noise receiver identified in the EIS.

Impacts Outside the EIS Construction Boundary

The nearest sensitive receiver to the access points SP5-E1/E2 is 670m away. The access points' refinement is not expected to alter the outcomes of the noise and vibration assessment undertaken as part of the EIS and Amendment Report as the proposed refinement does not decrease the distance between the Construction Area and the nearest sensitive receiver.

Surface Water and Hydrology

The access points SP5-E1/E2 were assessed in the Amendment Report flooding assessment and therefore are not discussed further.

Erosion and Sedimentation

The construction of the proposed access points will require the temporary use of plant and equipment. There is the potential for minor hydrocarbon (fuels, diesel, oils) contamination of soil, surface water and groundwater arising from operation of plant and machinery. Spill volumes from such incidents would be expected to be minor.

Air Quality

The main air quality impact associated with the establishment of the access points is the potential for dust to be generated throughout road upgrade works. As the nearest sensitive receiver to the access points SP5-E1/E2 is greater than 500m away the potential for dust impacts is considered to be very low to negligible.

Mitigation Measures

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate for the management of all access points described in this Strategy. Where additional mitigations are identified, they have been detailed in the table below.

TABLE D1- 4 MITIGATION MEASURES SP5-E1/E2 ACCESS POINTS

Mitigation Measures

Biodiversity

The environmental mitigations described in the EIS (including the Amendment Report) are considered appropriate for the management of all access points described in this document.

The following additional mitigation measures will be implemented to manage biodiversity impacts associated with the installation of access points:

- Access points will be designed to minimise vegetation clearing wherever possible to facilitate compliance with MCoA (NSW) B21(b)
- Clearing will be completed in accordance with the Project's Pre-Clearing Protocol (Appendix C of the Environmental Management Strategy)
- The extent of clearing of native vegetation within the access point disturbance footprint will be recorded to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements
- Clearing of Threatened Ecological Communities (TEC), threatened flora species and habitat for threatened fauna species will be minimised as far as practicable
- Clearing extents will be monitored against the clearing limits defined in MCoA (NSW) Appendix 2 Table 2-1, Table 2-2 and Table 2-3 to ensure compliance with MCoA (NSW) B21(a)
- The additional clearing of 0.03 ha of PCT 481 at SP5-E1 and SP5-E2 will be tracked in the Project's clearing register
- Vegetation clearing or land disturbance outside of the assessed area will not be permitted

Mitigation Measures

- If any threatened species or threatened ecological communities are unexpectedly encountered during installation of the access points, the Biodiversity Unexpected Finds Protocol (Appendix A of the Environmental Management Strategy) will be implemented

Aboriginal Heritage and Non-Aboriginal Heritage

Whilst no heritage items or sites have been identified within the access point construction area, the following mitigation measures will be adopted throughout installation of the access points:

- If any potential heritage items or sites are encountered during installation of the access points, the Heritage Unexpected Finds Protocol (Appendix B of the Environmental Management Strategy) will be implemented
- No ground disturbance will be permitted outside of the assessed disturbance footprint

Noise and Vibration

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate.

Surface Water and Hydrology

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate.

Erosion and Sedimentation

Erosion and sedimentation related management measures to address impacts associated with the road upgrades include:

- Progressive Erosion and Sediment Control Plans (PESCPs) will be prepared and implemented for the installation of the access points and other road upgrades. The PESCPs will outline controls to be implemented to manage and aim to minimise soil erosion and movement of sediment and other pollutants to land and/or waters
- Weekly environmental inspections are to be undertaken, which includes inspection of any erosion and sediment controls present on-site, stockpiles and the access point(s)

Air Quality

Dust generation during site access installation anywhere near sensitive receivers would be monitored visually by site personnel during the work.

If required mitigation measures to minimise dust impacts to sensitive residential receivers will be implemented throughout the construction.

The following mitigation measures would be implemented, if required, to manage the air quality impacts as a result of the installation and use of the road upgrades:

- Where safe to do so, exposed and disturbed surfaces at the site access point installation location, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants. Any application of water or surfactants onto a public road would only be carried out in consultation with the relevant road authority
- Regularly conducting visual inspections of dust emissions and applying additional controls as required

Strategic Concept Design

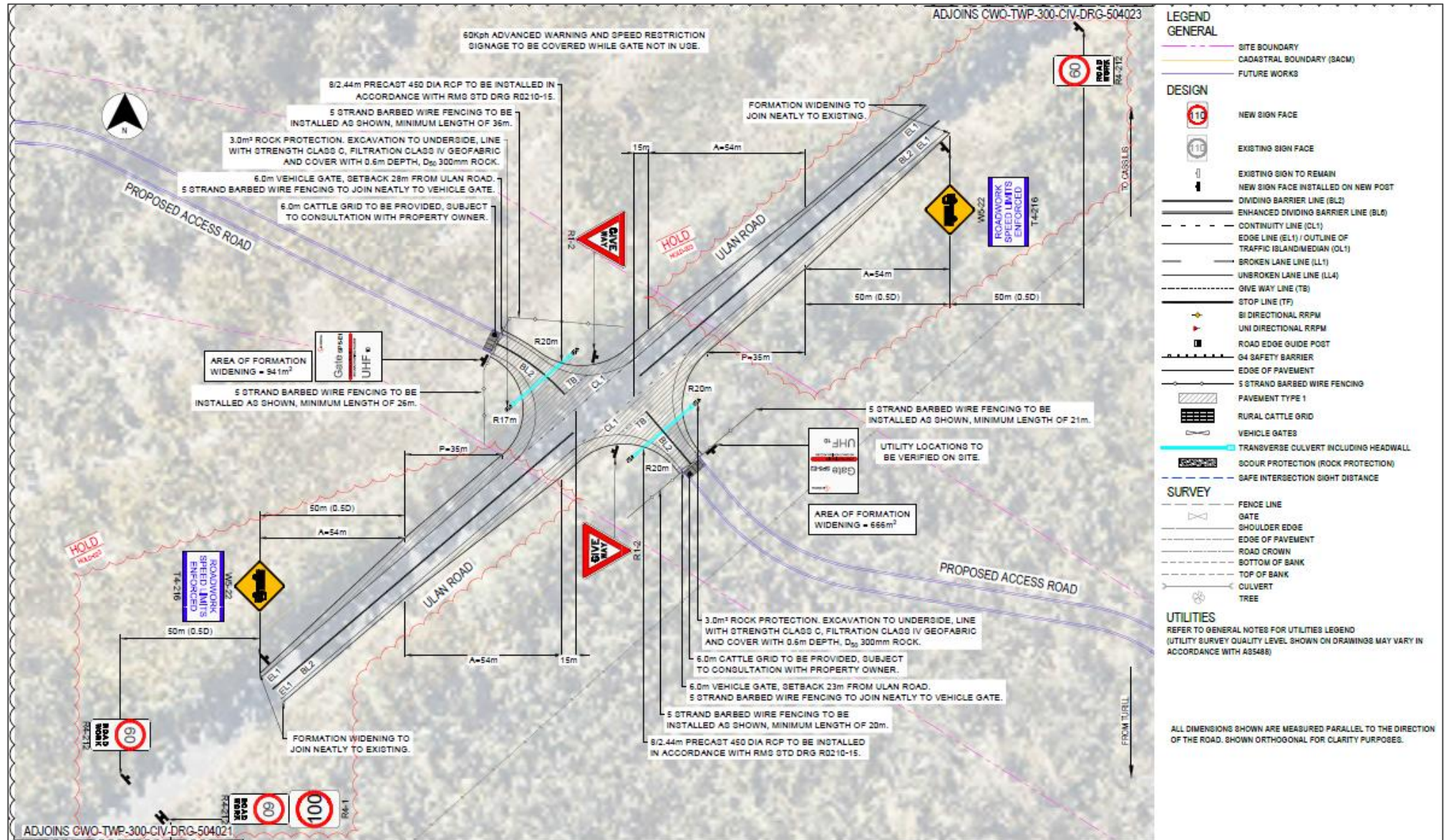
MCoA (NSW) B31(c) requires that the Transport Strategy "includes strategic concept designs prepared in accordance with Austroads Guide to Road Design (as amended by TfNSW supplements)".

In design terms, a Strategic Concept Design refers to a level of detail typically included at the first stage of a design drawing, and is generally followed by Preliminary Design, Detailed Design and Issued for Construction Design. It is noted that the Austroads Guide to Road Design does not provide

a description of what is required to be in a Strategic Concept Design, and TfNSW has prepared only one supplement to Austroads Guide to Road Design (20 December 2023), which does not provide description for what is required to be in a Strategic Concept Design.

As such, a Strategic Concept Design in typical detail format that reflects the current design phase has been included below and is supported by the figure depicting the location of the access points. This design will progress through further review and consultation with the applicable asset owner, outside the scope of this Transport Strategy.

Refer to the following Strategic Concept Design drawings.



APPENDIX D2 SP5-H1/H2 (COOLAH ROAD) ACCESS POINTS - INCLUDED

Location

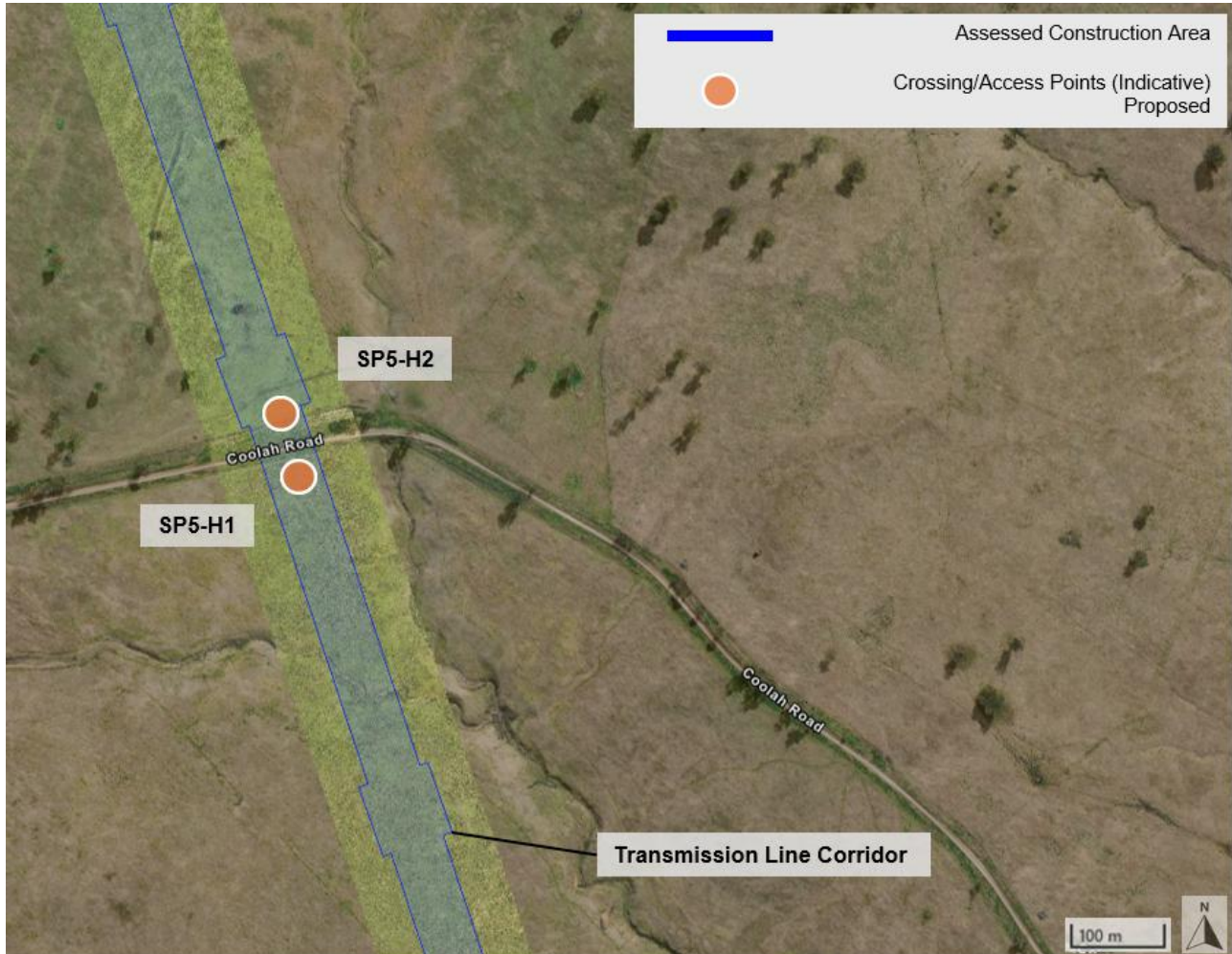


FIGURE D2- 1 LOCATION OF ACCESS POINTS SP5-H1/H2 ON COOLAH ROAD



FIGURE D2- 2 CONFIRMATION OF THE DISTURBANCE FOOTPRINT (SP5-H1/H2)

Description

The Access Points SP5-H1/H2 will be used to access the construction area from Coolah Road. Further details are provided within the table below.

TABLE D2- 1 ACCESS POINTS UPGRADE AND USE (SP5-H1/H2)

Entry Point ID	SP5-H1/H2
EIS Access Point (if applicable)	L2.34 / L2.35
Road	Coolah Road
Location	https://maps.app.goo.gl/byBuNbUudh1hRuu98
Type	STD
Scope of work	- Construction of new access driveway - Installation of fence, gate and signage - Installation of drainage pipe and headwalls (if required) - Installation of livestock grid (if required) Determination of the requirement to install a drainage pipe and headwall and/or livestock grid will be made on site, based on consultation with the landowner and/or the relevant Council. Livestock grids may be necessary for properties where there is a risk of livestock escaping. Drainage pipe requirements will depend on the existing provision for drains at the edge of the existing road formation.
Amenity impacts MCoA B31(a)	The works would result in some localised traffic control requirements both during construction and prior to operation. Overall, the impact to amenity is expected to be negligible given the access points' location and small physical footprint when compared to the overall Project.
Design criteria MCoA B31(b)	The access points will be designed in accordance with the design documentation and in accordance with Section 2.1 of this Strategy, above.
Strategic concept design MCoA B31(c)	The General Arrangement drawings are included in the section below
Assessment of potential impacts MCoA B31 (d)	Refer to section below
Schedule MCoA B31(e)	Proposed commencement in Q1 2026 and completion in Q2 2026.
Permanent or Temporary MCoA B31(h)	The access points will be temporary but may be replaced in time with a permanent access (subject to further design and assessment).

Summary of Existing EIS Assessment and Outcomes

The Access Points SP5-H1/H2 were included within the EIS prepared for the Central-West Orana REZ Transmission project. As a result of design refinements and a better understanding of ground conditions following finalisation of the EIS and MCoAs (NSW), the location of the access points and their construction area has been refined and is:

- Partially within the Project construction area (the disturbance footprint)

- Within the Aboriginal Heritage survey area
- Within the Biodiversity study area

As such, the access points have been predominantly assessed within the EIS.

Where the access points have extended beyond the EIS construction area, biodiversity study area or Aboriginal heritage survey area they are required to be assessed in accordance with MCoA (NSW) B31(d) (refer to the next section).

The staging strategy letter, approved on 19 August 2025 by the Department of Planning, Housing and Infrastructure (DPHI) (DPHI reference: SSI-48323210-PA-54) in accordance with MCoA (NSW) C3 was conditional and required the following to be addressed within each strategy:

In relation to Condition B31(d), where the proposed upgrade and associated disturbance footprint has been described and assessed in the EIS and associated environmental assessment documentation, the Transport Strategy will reference and summarise the existing assessment and outcomes. This must include confirmation that the assessment of the disturbance footprint aligns with the footprint of the proposed upgrade and includes appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects.

Table D2-2 summarises the most relevant existing EIS assessment and outcomes where an unmitigated impact rating of ‘medium’ or ‘high’ was allocated in Chapter 22 of the EIS (Environmental Risk Analysis). The relevant aspects of the assessment have been determined by considering the nature of the construction works associated with the establishment and use of the access points. It is noted that the access points in the EIS are assessed as part of a wider construction impact (i.e. they are not assessed as a standalone activity). In addition, given the minor nature of these access points, some environmental aspects in the table below have been combined (e.g. land use and property and agriculture, Aboriginal heritage and non-Aboriginal heritage) to avoid unnecessary repetition of similar information.

Figure D2-1 identifies the actual disturbance footprint of the access points in comparison to what was assessed within the EIS.

TABLE D2- 2 EIS ASSESSMENT AND OUTCOMES SUMMARY (SP5-H1/H2)

EIS Assessment and Outcomes Summary	EIS Assessment References
Land Use, Property and Agriculture <i>Study area and existing environment</i> The land use study area the EIS comprised a four-kilometre buffer either side from the construction area, to understand the context of the areas immediately surrounding the project. Where relevant to do so, the broader region was also considered in the assessment by Local Government Area (LGA), however the assessment of property impacts was generally limited to the construction and operational areas (i.e. the land directly impacted by the project). This study area is also consistent with the agriculture study area. The existing environment around the access points is characterised by primary production land zoning (RU1). The land use is nominated in the EIS as grazing modified pastures.	Section 7.2.1 of the EIS (Chapter 7 (Land Use and Property)) Section 8.2.1 of the EIS (Chapter 8 (Agriculture)) Figure 7-1 of the EIS (Chapter 7 (Land Use and Property)) Figure 7-2 of the EIS (Chapter 7 (Land Use and Property))

EIS Assessment and Outcomes Summary	EIS Assessment References
	Section 8.3.6 of the EIS (Chapter 8 (Agriculture))
<i>Relevant environmental risks</i> • Temporary restrictions to land use due to the leasing and use of land for the construction area, access and ancillary facilities • Effects on access to properties and adjustments to infrastructure (fences/gates) as a result of changes to private access roads and internal access arrangements	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and outcomes summary</i> The EIS assessed that the Project would require the use of land (including land currently used for agricultural purposes) temporarily for construction and permanently for operation (where permanent infrastructure is to be located). The residual risk rating for this impact was noted as 'low' for effects on access to properties in the EIS. For estimating total impacts to agricultural land use during construction, the EIS conservatively assumed that the entire construction area (including the transmission line easement) (consisting of around 3,660 ha of agricultural land use) would be unavailable for agricultural activities and use. The EIS noted that the level of impact on agricultural activities would vary, depending on the scale and intensity of construction activities. The EIS assessed that in areas where a higher intensity of construction activities is required, such as the location of energy hubs, switching stations, worker accommodation camps and construction compounds, the Project would result in direct impacts to agricultural land use, with land permanently acquired and removed from agricultural production. The access points would only temporarily remove the agricultural land and restrict movement of the landowners. The EIS noted that the residual risk rating for general impacts to agricultural productivity as 'medium'. Given the minor and temporal nature of these access points, it can be reasonably concluded that their actual impacts would be much lower.	Section 7.4.1 of the EIS (Chapter 7 (Land Use and Property)) Section 8.4 of the EIS (Chapter 8 (Agriculture))
Landscape Character and Visual Amenity	
<i>Study Area and Existing Environment</i> The EIS study area comprised a four-kilometre-wide corridor centred on the construction area. This study area extent was selected on the basis it included all areas where there is the potential for landscape character and visual impacts from the Project to be experienced. The access points are located within the 'Dapper and Elong undulating rural hills' landscape character zone (URH-05) and has a 'low' landscape sensitivity. The undulating rural hills landscape zone is located in the western section of the study area, this zone is characterised by remote, flat to undulating grazing and cropping areas along the Sandy and Spring creek valleys, containing few built features other than scattered rural dwellings, farm related structures and dams.	Figure 9-1 of the EIS (Chapter 9 (Landscape Character and Visual Amenity)) Figure 9-8 of the EIS (Chapter 9 (Landscape Character and Visual Amenity)) Table 9-4 of the EIS (Chapter 9 (Landscape Character and Visual Amenity))
<i>Relevant Environmental Risks</i> • Adverse impacts on landscape character and visual amenity from private/public places due to construction activities (e.g. vegetation clearing and earthworks), construction traffic, ancillary infrastructure and workforce accommodation camps	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS assessed that construction of the Project would result in temporary changes to the landscape character and visual amenity of the study area, which would impact	Section 9.4 of the EIS (Chapter 9 (Landscape

EIS Assessment and Outcomes Summary	EIS Assessment References
residents, tourists, and road users. It also noted that construction of the Project would potentially result in landscape character and visual impacts as a result of ground disturbance, vegetation clearance, the use of large-scale equipment and supporting infrastructure, the establishment and use of workforce accommodation camps and night-time lighting. The EIS assessed that the magnitude of the Project's change to URH-05 during construction would result in an overall moderate landscape impact and a residual risk rating of 'medium'. Given the minor and temporal nature of these access points, it can be reasonably concluded that their actual impacts would be much lower.	Character and Visual Amenity)
Biodiversity	
<i>Study Area and Existing Environment</i> The biodiversity study area in the EIS includes the construction area and surrounding areas that have the potential to be directly and indirectly impacted by the project. In accordance with the BAM, Technical paper 4 of the EIS (Biodiversity) refers to: • The construction area as the subject land, which includes all areas that would be directly impacted by construction and operation of the Project • The study area, which includes all areas within 220 metres of the centreline of the transmission line. It includes the subject land as is within the assessment area. • The assessment area, which includes all areas within 500 metres of the centreline of the transmission line, extending up to 1,500 metres from the edge of the construction area at energy hubs and switching stations • The locality, being the area within 10 kilometres of the subject land (or construction area), within which database searches and broader vegetation mapping to inform the assessment was based The access points are located within the biodiversity study area. Vegetation within the assessed area of SP5-H2 was identified as 483 Grey Box x White Box grassy open woodland threatened ecological community (TEC) and PCT 0 miscellaneous ecosystem. PCT 483 is part of the critically endangered TEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland under both the BC Act and EPBC Act. This TEC is also identified as a Serious and Irreversible Impact (SAIL) entity as impacts regarded as serious and irreversible may contribute to the risk of the TEC becoming extinct. Vegetation within the assessed area of SP5-H1 was identified as PCT483 TEC under the BC Act.	Section 10.2.1 of the EIS (Chapter 10 (Biodiversity)) Biodiversity Development Assessment Report of the EIS (Technical Paper 4) Revised Biodiversity Development Assessment Report of the EIS (Technical Paper 4)
<i>Relevant Environmental Risks</i> • Clearing of native vegetation resulting in loss of fauna habitat, habitat fragmentation and loss of connectivity • Impacts on listed threatened fauna, threatened flora species and endangered terrestrial ecological populations and communities	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The BDAR assessment identified the presence of PCT 483 within the access point footprint. One threatened fauna species, Striped Legless Lizard (<i>Delma impar</i>), were identified within the BAM-C as having potential to occur within the assessment area at SP5-H1. Desktop assessment and field surveys were undertaken for habitat constraints and geographic restrictions to assess each species. The BDAR assessment identified the species was unlikely to occur within the access point footprint. No threatened fauna species were identified within the BAM-C as having potential to occur within the assessment area at SP5-H1 or SP5-H2.	Section 10.4 of the EIS (Chapter 10 (Biodiversity)) Table 10-3 of the EIS (Chapter 10 (Biodiversity)) Table 10-4 of the EIS (Chapter 10 (Biodiversity)) Table 10-5 of the EIS (Chapter 10 (Biodiversity))

EIS Assessment and Outcomes Summary	EIS Assessment References
No threatened flora species were identified within the BAM-C as having potential to occur within the assessment area at SP5-H1 or SP5-H2.	
Aboriginal Heritage and Non-Aboriginal heritage	
<i>Study Area and Existing Environment</i> The Aboriginal heritage study area comprises the construction area, and where relevant incorporates the broader areas of the Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter Local Government Areas (LGAs) to capture the broader cultural and historical context of the region. The access points are located within the study area. The Historical Heritage and Aboriginal Cultural Heritage Assessment Report included the construction area required to establish the access points SP5-E1/E2. The nearest recorded site (SNI-CMT06) is located approximately 2km to the north of SP5-H1. No other areas, sites, items or places of Non-Aboriginal or Aboriginal Cultural Heritage significance are recorded in the vicinity of SP5-H1. The nearest recorded site (SNI-CMT06) is located approximately 2km to the north of SP5-H1. No other areas, sites, items or places of Non-Aboriginal or Aboriginal Cultural Heritage significance are recorded in the vicinity of SP5-H1.	Section 11.2.1 of the EIS (Chapter 11 (Aboriginal heritage)) Technical Paper 6 of the EIS (Non-Aboriginal Heritage Assessment) Technical Paper 5 of the EIS (Aboriginal Cultural Heritage) Appendix E of the Addendum Aboriginal Cultural Heritage Assessment Report (Appendix H of the Amendment Report)
<i>Relevant Environmental Risks</i> - Impacts on unidentified Aboriginal heritage sites or areas of archaeological sensitivity of cultural value - Impacts on unknown/unlisted heritage items and areas of archaeological potential	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> No heritage items or sites have been identified within the access point construction area. The EIS identifies that impacts on unknown/unlisted heritage items and areas of archaeological potential are likely without adequate mitigation measures in place. Relevant management and mitigation measures to be implemented are noted in the next section.	Figure 11-1 of the EIS (Chapter 11 (Aboriginal heritage)) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Noise and Vibration	
<i>Study Area and Existing Environment</i> The noise and vibration study area in the EIS consisted of the construction area of the Project and areas within three kilometres of the construction area. The nearest sensitive receiver to the access points SP5-H1/H2 is 1.7km away. At this distance construction noise would not exceed the identified NML and vibration impacts on both the construction and use of this location are considered negligible.	Section 15.2.1 of the EIS (Chapter 15 (Noise and Vibration)) Figure 15-2 of the EIS (Chapter 15 (Noise and Vibration)) Figure 4-1 of the project's approved Noise and Vibration Management Plan (CWO-PRO-050-ENV-PLN-000002))
<i>Relevant Environmental Risks</i> Potential exceedances of noise management levels (NMLs) from activities within and outside standard construction hours, including activities at construction compounds and workforce accommodation camps	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i>	Section 15.5 of the EIS (Chapter 15 (Noise and Vibration))

EIS Assessment and Outcomes Summary	EIS Assessment References
The results of the noise and vibration assessment undertaken as part of the EIS and Amendment Report show construction noise impacts associated with road upgrades would generally be minor, temporary, and of short duration.	
Traffic and Transport	
<i>Study Area and Existing Environment</i> The traffic and transport study area comprises the transport networks that may be impacted by construction movements to and from the energy hubs, switching stations, access gates, construction compounds and workforce accommodation camps, or by the operation of the Project (staff and maintenance movements). It includes the roads that provide access to the construction area back to the nearest highway. Ulan Road is a main road in the study area. It is noted in the EIS as being approximately 72 kilometres long road providing a north-south connection between Golden Highway in the north and Mudgee town centre. It is a sealed pavement and is a bidirectional two-lane road (one lane in each direction). The posted speed limit is 100 km/h. The relevant section of Ulan Road to the access points is the portion south of Ulan-Wollar Road.	Figure 17-1 of the EIS (Chapter 17 (Traffic and Transport)) Table 17-3 of the EIS (Chapter 17 (Traffic and Transport))
<i>Relevant Environmental Risks</i> - Impacts to condition of roads due to increased vehicular traffic - Impacts on access to and within properties	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> Based on the survey results collected, the highest traffic volumes are observed on highways (State roads), which reflects the function of these roads. Roads that also experience higher traffic volumes include Ulan Road (approximately 9,000 vehicles per day) on weekdays. All of the roads assessed in the study area perform at Level of Service A, with the exception of the following which operate at a Level of Service B: - The south bound/east bound direction of Ulan-Wollar Road during the AM peak on Ulan-Wollar Road - All directions on Ulan Road (north-east of Lue Road during the PM peak) perform at Level of Service B Ulan Road and Ulan-Wollar Road have been approved for RAV (up to 25/26 metres B-double) and has previously been used by other projects (e.g. Wollar Solar Farm) to access the site for construction. All residual risk ratings for traffic and transport in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Section 17.3.2 of the EIS (Chapter 17 (Traffic and Transport)) Section 5.2.3 of EIS Technical Paper 13 (Traffic and Transport)
Waste Management	
<i>Study Area and Existing Environment</i> Existing waste sources in the Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter LGAs primarily includes waste from agricultural, mining and forestry operations and domestic waste. A number of waste management and waste transfer facilities operated by local councils are located near the Project and accept a wide range of wastes, including construction and demolition waste, domestic waste and recyclable materials.	Section 18.3 of Chapter 18 of the EIS (Waste Management)
<i>Relevant Environmental Risks</i> Impacts on local and regional waste management facilities due to increased demand from overall project generated construction wastes	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Assessment and Outcomes Summary</i> Like most other environmental aspects, there is no singular assessment for access points. The most relevant construction waste stream volumes for the Project are included below. It is considered that the establishment and use of access points would represent a very minor portion of these indicative volumes. Possible impacts during construction as a result of the improper management of construction waste includes those on local and regional waste management facilities. The EIS identified that this could be due to increased demand from overall project generated construction wastes. Other impacts, if not managed appropriately, could include dust, odour, erosion and sedimentation, human health risks, and mud tracking. The EIS noted that the residual risk rating would be 'medium'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Chapter 18 of the EIS (Waste Management) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Hydrology, Flooding and Water Quality	
<i>Study Area and Existing Environment</i> The hydrology, flooding and water quality study area consists of the Macquarie River and Hunter River catchments, and sub-catchments. A catchment is the area that drains directly to a stream or body of water and includes areas upstream and downstream of the project. The Project is located across the Macquarie River and Hunter River catchments. Numerous natural watercourses intersect the study area, including perennial and ephemeral watercourses and unnamed drainage lines. A number of constructed dams are also located within the study area, including Burrendong Dam and Windamere Dam, to provide water supply for towns, industry, irrigators, stock and domestic users, as well as flood mitigation and recreation.	Section 19.1.2 of Chapter 19 (Hydrology, Flooding and Water Quality)
Relevant Environmental Risks • Surface water quality impacts due to erosion and sedimentation, contamination, leaks and spills • Impact to regional or local water supply due to construction water demands	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The access points are anticipated to cause minor disturbance to the local soil profile due to earthworks required during the installation period. The construction of the proposed refinement is not proposed to interact with any watercourses and the risk to water quality impacts due to the construction of the proposed refinement is considered very low. The potential for the proposed refinements to result in soil and water impacts remains the same as assessed in the EIS and is consistent with the approved Project. All residual risk ratings for hydrology, flooding and water quality in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be negligible.	Section 19.2.4 of the EIS (Chapter 19 (Hydrology, Flooding and Water Quality)) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Climate Change and Greenhouse Gas	
Relevant Environmental Risks • Emissions of greenhouse gases during construction from embodied energy in materials, or emissions from construction plant and vehicles	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Assessment and Outcomes Summary</i> The estimated GHG emissions from the Scope 1, Scope 2 and Scope 3 emissions during construction of the Project are estimated to be a total of 611,607 tCO₂-e, as shown in Table 19-34. Scope 3 emissions are estimated to be the largest contributor (approximately 94 per cent) to GHG emissions during construction, primarily due to the embodied emissions within materials that would be produced for the project. Scope 1 emissions would account for approximately 5.7 per cent and Scope 2 emissions would account for approximately 0.03 per cent of the total GHG emissions during construction. All residual risk ratings for climate change and greenhouse gas in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be negligible.	Table 19-34 of Chapter 19 of the EIS (Climate Change and Greenhouse Gas) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Cumulative Impacts	
Relevant Environmental Risks Numerous projects have the potential to be under construction at the same time as the Project, leading to potential cumulative impacts including biodiversity, visual, noise and traffic	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS identified that these impacts are not likely to be major, generally due to these projects being located across a large geographic area (resulting in dispersal of cumulative impacts). There may be additional cumulative impacts on resources including water and local waste management capacity. The EIS noted that the residual risk rating for this impact would be 'medium'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Section 20.2 of Chapter 20 of the EIS (Cumulative Impacts) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

Assessment of Potential Impacts Outside the EIS Construction Area

Where the Access Points SP5-H1/H2 have extended beyond the EIS construction area, biodiversity study area or Aboriginal heritage survey area they are required to be assessed in accordance with MCoA (NSW) B31(d). The table below has been prepared to provide the outcomes of these additional assessments.

TABLE D2- 3 EIS ASSESSMENT AND OUTCOMES SUMMARY (SP5-H1/H2 ACCESS POINTS)

Impacts	
Biodiversity	
Plant Community Types Although the access points were included within the biodiversity survey area of the EIS, some areas were not included within the Project construction area (the disturbance footprint). A summary of the additional vegetated areas outside the Project construction area is below:	
PCT Identified	PCT 483
TEC?	Yes
Habitat for Threatened Species?	No
SAII?	Yes
Extent (Ha)	Total = 0.09 ha

Impacts

Notes:

PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley

Vegetation within the assessed area of SP5-H2 was identified as 483 Grey Box x White Box grassy open woodland threatened ecological community (TEC) and PCT 0 miscellaneous ecosystem. PCT 483 is part of the critically endangered TEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland under both the BC Act and EPBC Act. This TEC is also identified as a Serious and Irreversible Impact (SII) entity as impacts regarded as serious and irreversible may contribute to the risk of the TEC becoming extinct. Vegetation within the assessed area of SP5-H1 was identified as PCT 483 TEC under the BC Act.

Clearing limits for this PCT are defined within the Project Planning Approval, with a revised clearing limit of 93.77 Ha (per DPHI correspondence ref SSI-48323210-PA-57) of PCT 483 applicable for the Project. The clearing of PCT 483 associated with the refinement will be accommodated within the clearing limits defined by the Project Planning Approval and no increase to clearing limits will be required as a result of the proposed refinement.

Habitat For Threatened Fauna Species

No threatened fauna species were identified within the BAM-C as having potential to occur within the assessment area at SP5-H1 or SP5-H2.

Threatened Flora

No threatened flora species were identified within the BAM-C as having potential to occur within the assessment area at SP5-H1 or SP5-H2.

Aboriginal Heritage and Non-Aboriginal Heritage

The Historical Heritage and Aboriginal Cultural Heritage Assessment Report included the construction area required to establish the access points SP5-H1/H2.

Noise and Vibration

The use of the access points SP5-H1/H2 was assessed within the EIS, however the establishment of the access points partially extends beyond the Project construction area. For these establishment activities a construction noise assessment was undertaken. The assessment considered the equipment and plant that would be required to construct the access points and the offset distance from the access points to the nearest sensitive noise receiver identified in the EIS.

Surface Water and Hydrology

The access points SP5-H1/H2 were assessed in the Amendment Report flooding assessment and therefore are not discussed further.

Erosion and Sedimentation

The construction of the proposed access points will require the temporary use of plant and equipment. There is the potential for minor hydrocarbon (fuels, diesel, oils) contamination of soil, surface water and groundwater arising from operation of plant and machinery. Spill volumes from such incidents would be expected to be minor.

Air Quality

The main air quality impact associated with the establishment of the access points is the potential for dust to be generated throughout road upgrade works. As the nearest sensitive receiver to the access points SP5-H1/H2 is greater than 500m away the potential for dust impacts is considered to be very low to negligible.

Mitigation Measures

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate for the management of all access points described in this Strategy. Where additional mitigations are identified, they have been detailed in the table below.

TABLE D2- 3 MITIGATION MEASURES SP5-H1/H2 ACCESS POINTS

Mitigation Measures
Biodiversity The environmental mitigations described in the EIS (including the Amendment Report) are considered appropriate for the management of all access points described in this document. The following additional mitigation measures will be implemented to manage biodiversity impacts associated with the installation of access points: - Access points will be designed to minimise vegetation clearing wherever possible to facilitate compliance with MCoA (NSW) B21(b) - Clearing will be completed in accordance with the Project's Pre-Clearing Protocol (Appendix C of the Environmental Management Strategy) - The extent of clearing of native vegetation within the access point disturbance footprint will be recorded to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements - Clearing of Threatened Ecological Communities (TEC), threatened flora species and habitat for threatened fauna species will be minimised as far as practicable - Clearing extents will be monitored against the clearing limits defined in MCoA (NSW) Appendix 2 Table 2-1, Table 2-2 and Table 2-3 to ensure compliance with MCoA (NSW) B21(a) - The additional clearing of 0.09 ha of PCT 483 at SP5-H1 and SP5-H2 will be tracked in the Project's clearing register - Vegetation clearing or land disturbance outside of the assessed area will not be permitted - If any threatened species or threatened ecological communities are unexpectedly encountered during installation of the access points, the Biodiversity Unexpected Finds Protocol (Appendix A of the Environmental Management Strategy) will be implemented
Heritage Whilst no heritage items or sites have been identified within the access point construction area, the following mitigation measures will be adopted throughout installation of the access points: - If any potential heritage items or sites are encountered during installation of the access points, the Heritage Unexpected Finds Protocol (Appendix B of the Environmental Management Strategy) will be implemented - No ground disturbance will be permitted outside of the assessed disturbance footprint
Noise and Vibration The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate.
Surface Water and Hydrology The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate.
Erosion and Sedimentation Erosion and sedimentation related management measures to address impacts associated with the road upgrades include: - Progressive Erosion and Sediment Control Plans (PESCPs) will be prepared and implemented for the installation of the access points and other road upgrades. The PESCPs will outline controls to be implemented to manage and aim to minimise soil erosion and movement of sediment and other pollutants to land and/or waters - Weekly environmental inspections are to be undertaken, which includes inspection of any erosion and sediment controls present on-site, stockpiles and the access point(s)
Air Quality

Mitigation Measures

Dust generation during site access installation anywhere near sensitive receivers would be monitored visually by site personnel during the work.

If required mitigation measures to minimise dust impacts to sensitive residential receivers will be implemented throughout the construction.

The following mitigation measures would be implemented, if required, to manage the air quality impacts as a result of the installation and use of the road upgrades (including the access points):

- Where safe to do so, exposed and disturbed surfaces at the site access point installation location, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants. Any application of water or surfactants onto a public road would only be carried out in consultation with the relevant road authority
- Regularly conducting visual inspections of dust emissions and applying additional controls as required

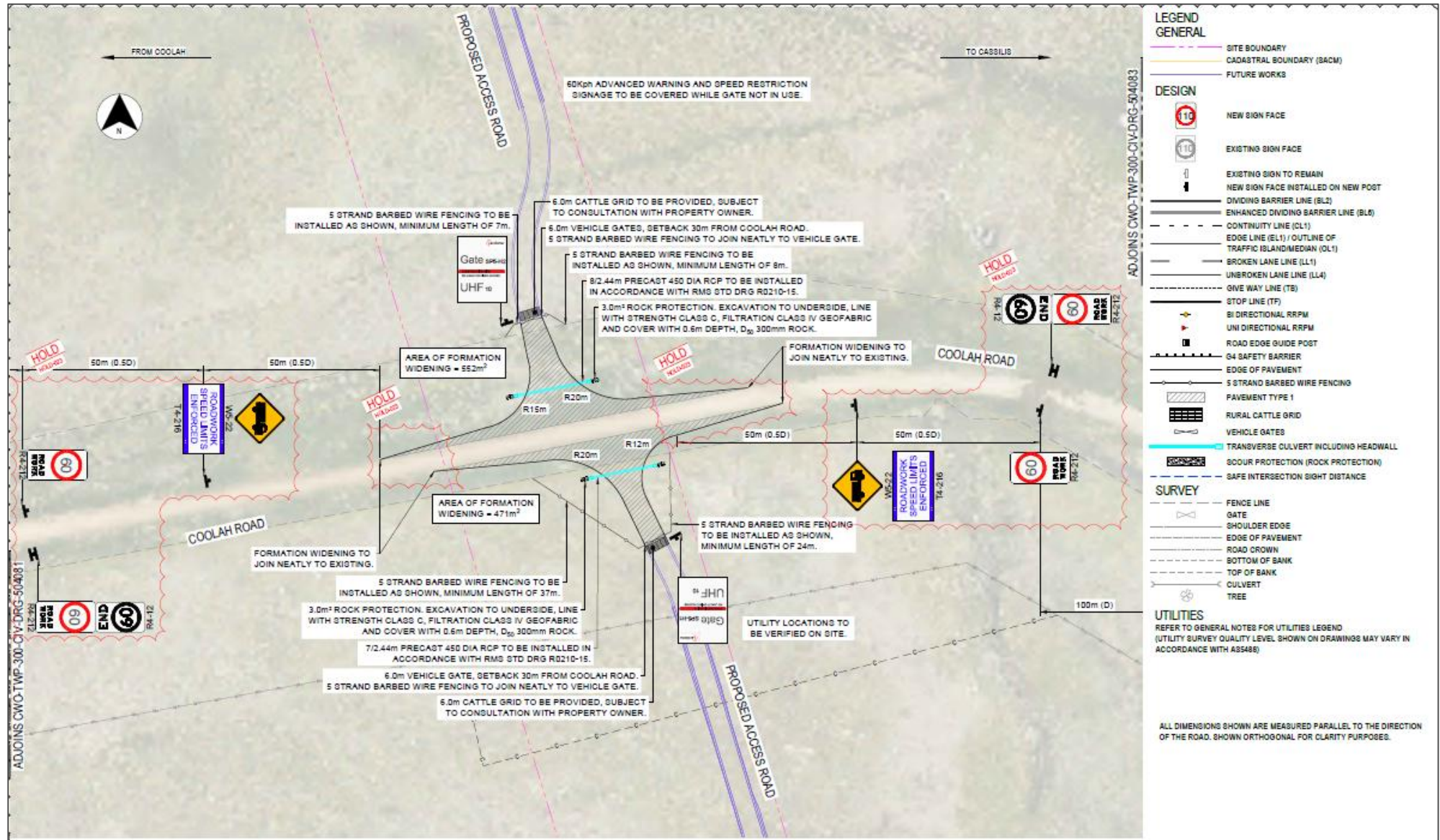
Strategic Concept Design

MCoA (NSW) B31(c) requires that the Transport Strategy "includes strategic concept designs prepared in accordance with Austroads Guide to Road Design (as amended by TfNSW supplements)".

In design terms, a Strategic Concept Design refers to a level of detail typically included at the first stage of a design drawing, and is generally followed by Preliminary Design, Detailed Design and Issued for Construction Design. It is noted that the Austroads Guide to Road Design does not provide a description of what is required to be in a Strategic Concept Design, and TfNSW has prepared only one supplement to Austroads Guide to Road Design (20 December 2023), which does not provide description for what is required to be in a Strategic Concept Design.

As such, a Strategic Concept Design in typical detail format that reflects the current design phase has been included below and is supported by the figure depicting the location of the access points. This design will progress through further review and consultation with the applicable asset owner, outside the scope of this Transport Strategy.

Refer to the following Strategic Concept Design drawings.



APPENDIX D3 SP5-I1/I2 (ROTHERWOOD ROAD) ACCESS POINTS - INCLUDED

Location

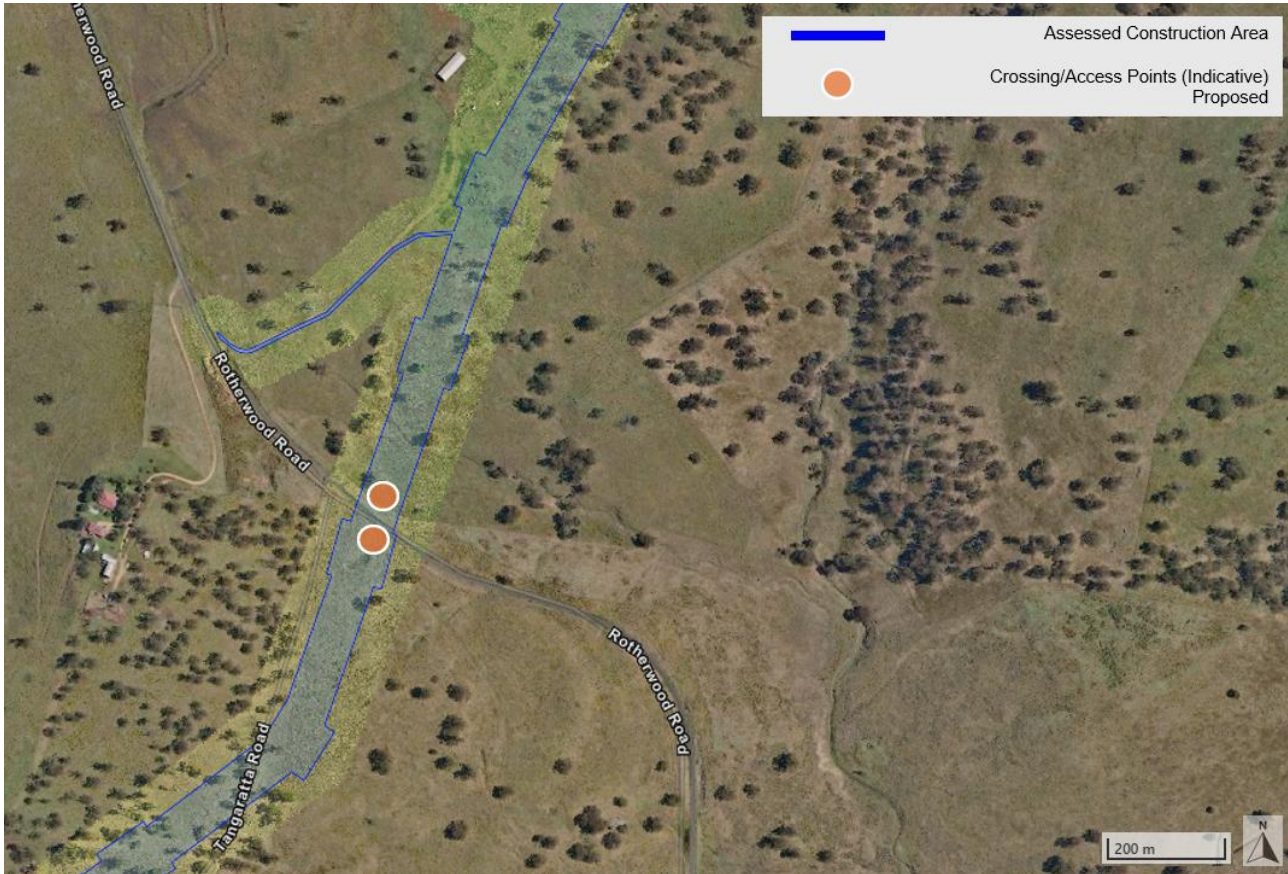


FIGURE D3- 1 LOCATION OF ACCESS POINTS SP5-I1/I2 ON ULAN ROAD



FIGURE D3- 2 CONFIRMATION OF THE DISTURBANCE FOOTPRINT (SP5-11/12)

Description

The Access Points SP5-I1/I2 will be used to access the construction area from Rotherwood Road. Further details are provided within the table below.

TABLE D3- 1 ACCESS POINTS UPGRADE AND USE (SP5-I1/I2)

Entry Point ID	SP5-I1/I2
EIS Access Point (if applicable)	L2.36 / L2.37
Road	Rotherwood Road
Location	https://maps.app.goo.gl/AH4av4wtmz86bxvX9
Type	STD
Scope of work	- Construction of new access driveway - Installation of fence, gate and signage - Installation of drainage pipe and headwalls (if required) - Installation of livestock grid (if required) Determination of the requirement to install a drainage pipe and headwall and/or livestock grid will be made on site, based on consultation with the landowner and/or the relevant Council. Livestock grids may be necessary for properties where there is a risk of livestock escaping. Drainage pipe requirements will depend on the existing provision for drains at the edge of the existing road formation.
Amenity impacts MCoA B31(a)	The works would result in some localised traffic control requirements both during construction and prior to operation. Once complete there will be a net overall improvement on access points.
Design criteria MCoA B31(b)	The access point will be designed in accordance with the design documentation and in accordance with Section 2.1 of this Strategy, above.
Strategic concept design MCoA B31(c)	The General Arrangement drawings are in the section below.
Assessment of potential impacts MCoA B31 (d)	Refer to section below.
Schedule MCoA B31(e)	Proposed commencement in Q1 2026 and completion in Q2 2026.
Permanent or Temporary MCoA B31(h)	The access points will be temporary but may be replaced in time with a permanent access (subject to further design and assessment).

Summary of Existing EIS Assessment and Outcomes

The Access Points SP5-I1/I2 were included within the EIS. As a result of design refinements and a better understanding of ground conditions following finalisation of the EIS and MCoAs (NSW), the location of and their construction area has been refined and is:

- Partially within the Project construction area (the disturbance footprint)
- Partially within the Aboriginal Heritage survey area (SP5-I1)

- Wholly within the Aboriginal Heritage survey area (SP5-I2)
- Within the Biodiversity study area

As such, the access points have been predominantly assessed within the EIS.

Where the access points have extended beyond the EIS construction area, biodiversity study area or Aboriginal heritage survey area they are required to be assessed in accordance with MCoA (NSW) B31(d) (refer to the next section).

The staging strategy letter, approved on 19 August 2025 by the Department of Planning, Housing and Infrastructure (DPHI) (DPHI reference: SSI-48323210-PA-54) in accordance with MCoA (NSW) C3 was conditional and required the following to be addressed within each strategy:

In relation to Condition B31(d), where the proposed upgrade and associated disturbance footprint has been described and assessed in the EIS and associated environmental assessment documentation, the Transport Strategy will reference and summarise the existing assessment and outcomes. This must include confirmation that the assessment of the disturbance footprint aligns with the footprint of the proposed upgrade and includes appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects.

The table below summarises the most relevant existing EIS assessment and outcomes where an unmitigated impact rating of 'medium' or 'high' was allocated in Chapter 22 of the EIS (Environmental Risk Analysis). The relevant aspects of the assessment have been determined by considering the nature of the construction works associated with the establishment and use of the access points. It is noted that the access points in the EIS are assessed as part of a wider construction impact (i.e. they are not assessed as a standalone activity). In addition, given the minor nature of these access points, some environmental aspects in the table below have been combined (e.g. land use and property and agriculture, Aboriginal heritage and non-Aboriginal heritage) to avoid unnecessary repetition of similar information.

Figure D3-1 identifies the actual disturbance footprint of the access points in comparison to what was assessed within the EIS.

TABLE D3- 2 EIS ASSESSMENT AND OUTCOMES SUMMARY (SP5-I1/I2)

EIS Assessment and Outcomes Summary	EIS Assessment References
Land Use, Property and Agriculture <i>Study Area and Existing Environment</i> The land use study area the EIS comprised a four-kilometre buffer either side from the construction area, to understand the context of the areas immediately surrounding the project. Where relevant to do so, the broader region was also considered in the assessment by Local Government Area (LGA), however the assessment of property impacts was generally limited to the construction and operational areas (i.e. the land directly impacted by the project). This study area is also consistent with the agriculture study area. The existing environment around the access points is characterised by primary production land zoning (RU1). The land use is nominated in the EIS as grazing modified pastures.	Section 7.2.1 of the EIS (Chapter 7 (Land Use and Property)) Section 8.2.1 of the EIS (Chapter 8 (Agriculture)) Figure 7-1 of the EIS (Chapter 7 (Land Use and Property)) Figure 7-2 of the EIS (Chapter 7 (Land Use and Property))

EIS Assessment and Outcomes Summary	EIS Assessment References
	Section 8.3.6 of the EIS (Chapter 8 (Agriculture))
<i>Relevant Environmental Risks</i> • Temporary restrictions to land use due to the leasing and use of land for the construction area, access and ancillary facilities • Effects on access to properties and adjustments to infrastructure (fences/gates) as a result of changes to private access roads and internal access arrangements	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS assessed that the Project would require the use of land (including land currently used for agricultural purposes) temporarily for construction and permanently for operation (where permanent infrastructure is to be located). The residual risk rating for this impact was noted as 'low' for effects on access to properties in the EIS. For estimating total impacts to agricultural land use during construction, the EIS conservatively assumed that the entire construction area (including the transmission line easement) (consisting of around 3,660 ha of agricultural land use) would be unavailable for agricultural activities and use. The EIS noted that the level of impact on agricultural activities would vary, depending on the scale and intensity of construction activities. The EIS assessed that in areas where a higher intensity of construction activities is required, such as the location of energy hubs, switching stations, worker accommodation camps and construction compounds, the Project would result in direct impacts to agricultural land use, with land permanently acquired and removed from agricultural production. The access points would only temporarily remove the agricultural land and restrict movement of the landowners. The EIS noted that the residual risk rating for general impacts to agricultural productivity as 'medium'.	Section 7.4.1 of the EIS (Chapter 7 (Land Use and Property)) Section 8.4 of the EIS (Chapter 8 (Agriculture))
Landscape Character and Visual Amenity	
<i>Study Area and Existing Environment</i> The EIS study area comprised a four-kilometre-wide corridor centred on the construction area. This study area extent was selected on the basis it included all areas where there is the potential for landscape character and visual impacts from the Project to be experienced. The access points are located within the 'Dapper and Elong undulating rural hills' landscape character zone (URH-05). The undulating rural hills landscape zone is located in the western section of the study area, this zone is characterised by remote, flat to undulating grazing and cropping areas along the Sandy and Spring creek valleys, containing few built features other than scattered rural dwellings, farm related structures and dams.	Figure 9-1 of the EIS (Chapter 9 (Landscape Character and Visual Amenity)) Figure 9-8 of the EIS (Chapter 9 (Landscape Character and Visual Amenity))
<i>Relevant Environmental Risks</i> • Adverse impacts on landscape character and visual amenity from private/public places due to construction activities (e.g. vegetation clearing and earthworks), construction traffic, ancillary infrastructure and workforce accommodation camps	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS assessed that construction of the Project would result in temporary changes to the landscape character and visual amenity of the study area, which would impact residents, tourists, and road users. It also noted that construction of the Project would potentially result in landscape character and visual impacts as a result of ground disturbance, vegetation clearance, the use of large-scale equipment and supporting	Section 9.4 of the EIS (Chapter 9 (Landscape Character and Visual Amenity))

EIS Assessment and Outcomes Summary	EIS Assessment References
infrastructure, the establishment and use of workforce accommodation camps and night-time lighting. The access points are not visible from viewpoint VP05. The EIS assessed that the magnitude of the Project's change to FH-02 during construction would result in an overall moderate landscape impact and a residual risk rating of 'medium'.	
Biodiversity	
<i>Study Area and Existing Environment</i> The biodiversity study area in the EIS includes the construction area and surrounding areas that have the potential to be directly and indirectly impacted by the project. In accordance with the BAM, Technical paper 4 of the EIS (Biodiversity) refers to: • The construction area as the subject land, which includes all areas that would be directly impacted by construction and operation of the project • The study area, which includes all areas within 220 metres of the centreline of the transmission line. It includes the subject land as is within the assessment area. • The assessment area, which includes all areas within 500 metres of the centreline of the transmission line, extending up to 1,500 metres from the edge of the construction area at energy hubs and switching stations • The locality, being the area within 10 kilometres of the subject land (or construction area), within which database searches and broader vegetation mapping to inform the assessment was based The access points are located within the biodiversity study area. Vegetation within the assessed area of SP5-I1 was identified as 483 Grey Box x White Box grassy open woodland threatened ecological community (TEC) and PCT 0 miscellaneous ecosystem. PCT 483 is part of the critically endangered TEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland under both the BC Act and EPBC Act. This TEC is also identified as a Serious and Irreversible Impact (SAIL) entity as impacts regarded as serious and irreversible may contribute to the risk of the TEC becoming extinct. Vegetation within the assessed area of SP5-I2 was identified as PCT483 TEC under the BC Act.	Section 10.2.1 of the EIS (Chapter 10 (Biodiversity)) Biodiversity Development Assessment Report of the EIS (Technical Paper 4) Revised Biodiversity Development Assessment Report of the EIS (Technical Paper 4)
<i>Relevant Environmental Risks</i> • Clearing of native vegetation resulting in loss of fauna habitat, habitat fragmentation and loss of connectivity • Impacts on listed threatened fauna, threatened flora species and endangered terrestrial ecological populations and communities	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The BAR assessment identified the presence of PCT 483 within the access points' footprint. One threatened fauna species, Pink-tailed Legless Lizard (<i>Aprasia parapulchella</i>), was identified within the BAM-C as having potential to occur within the assessment area at SP5-I1 but the BDAR assessment identified the species was unlikely to occur within the access point footprint. One threatened flora species, Bluegrass (<i>Dichanthium setosum</i>), was identified within the BAM-C as having potential to occur within the assessment area at SP5-I1. Desktop assessment was undertaken for habitat constraints and geographic restrictions to assess the species and it was assumed present within assessment area. Based on the above, it is considered that PCT 483 is associated with habitat for Bluegrass (<i>Dichanthium setosum</i>). One threatened fauna species –the Striped Legless Lizard (<i>Delma impar</i>) – was identified within the BAM-C as having potential to occur within the assessment area at	Section 10.4 of the EIS (Chapter 10 (Biodiversity)) Table 10-3 of the EIS (Chapter 10 (Biodiversity)) Table 10-4 of the EIS (Chapter 10 (Biodiversity)) Table 10-5 of the EIS (Chapter 10 (Biodiversity))

EIS Assessment and Outcomes Summary	EIS Assessment References
SP5-I2. Desktop assessment was undertaken for habitat constraints and geographic restrictions to assess the species and it was assumed present. It is therefore considered that PCT 483 is associated with habitat for the threatened fauna species listed above at SP5-I2.	
Aboriginal Heritage and non-Aboriginal heritage	
<i>Study Area and Existing Environment</i> The Aboriginal heritage study area comprises the construction area, and where relevant incorporates the broader areas of the Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter Local Government Areas (LGAs) to capture the broader cultural and historical context of the region. The access points are located within the study area. The nearest recorded site (28-6-0053) is located approximately 5.5km to the south of SP5-I1. No other areas, sites, items or places of Non-Aboriginal or Aboriginal Cultural Heritage significance are recorded in the vicinity of SP5-I1. The nearest recorded site (28-6-0053) is located approximately 5.5km to the south of SP5-I1. No other areas, sites, items or places of Non-Aboriginal or Aboriginal Cultural Heritage significance are recorded in the vicinity of SP5-I2.	Section 11.2.1 of the EIS (Chapter 11 (Aboriginal heritage)) Technical Paper 6 of the EIS (Non-Aboriginal Heritage Assessment) Technical Paper 5 of the EIS (Aboriginal Cultural Heritage) Appendix E of the Addendum Aboriginal Cultural Heritage Assessment Report (Appendix H of the Amendment Report)
<i>Relevant Environmental Risks</i> - Impacts on unidentified Aboriginal heritage sites or areas of archaeological sensitivity of cultural value - Impacts on unknown/unlisted heritage items and areas of archaeological potential	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> No heritage items or sites have been identified within the access point construction area. The EIS identifies that impacts on unknown/unlisted heritage items and areas of archaeological potential are likely without adequate mitigation measures in place.	Figure 11-1 of the EIS (Chapter 11 (Aboriginal heritage)) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Noise and Vibration	
<i>Study Area and Existing Environment</i> The noise and vibration study area in the EIS consisted of the construction area of the Project and areas within three kilometres of the construction area. The nearest sensitive receiver to access point, SP5-I1, is residential receiver 1351 located approximately 390m west. The nearest sensitive receiver to access point, SP5-I2, is residential receiver 1351 located approximately 385m west.	Section 15.2.1 of the EIS (Chapter 15 (Noise and Vibration)) Figure 15-2 of the EIS (Chapter 15 (Noise and Vibration)) Figure 4-1 of the project's approved Noise and Vibration Management Plan (CWO-PRO-050-ENV-PLN-000002))
<i>Relevant Environmental Risks</i> Potential exceedances of noise management levels (NMLs) from activities within and outside standard construction hours, including activities at construction compounds and workforce accommodation camps	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Assessment and Outcomes Summary</i> The results of the noise and vibration assessment undertaken as part of the EIS and Amendment Report show construction noise impacts associated with road upgrades would generally be minor, temporary, and of short duration.	Section 15.5 of the EIS (Chapter 15 (Noise and Vibration))
Traffic and Transport	
<i>Study Area and Existing Environment</i> The traffic and transport study area comprises the transport networks that may be impacted by construction movements to and from the energy hubs, switching stations, access gates, construction compounds and workforce accommodation camps, or by the operation of the Project (staff and maintenance movements). It includes the roads that provide access to the construction area back to the nearest highway. Ulan Road is a main road in the study area. It is noted in the EIS as being approximately 72 kilometres long road providing a north-south connection between Golden Highway in the north and Mudgee town centre. It is a sealed pavement and is a bidirectional two-lane road (one lane in each direction). The posted speed limit is 100 km/h. The relevant section of Ulan Road to the access points is the portion south of Ulan-Wollar Road.	Figure 17-1 of the EIS (Chapter 17 (Traffic and Transport)) Table 17-3 of the EIS (Chapter 17 (Traffic and Transport))
<i>Relevant Environmental Risks</i> - Impacts to condition of roads due to increased vehicular traffic - Impacts on access to and within properties	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> Based on the survey results collected, the highest traffic volumes are observed on highways (State roads), which reflects the function of these roads. Roads that also experience higher traffic volumes include Ulan Road (approximately 9,000 vehicles per day) on weekdays. All of the roads assessed in the study area perform at Level of Service A, with the exception of the following which operate at a Level of Service B: - The south bound/east bound direction of Ulan-Wollar Road during the AM peak on Ulan-Wollar Road - All directions on Ulan Road (north-east of Lue Road during the PM peak) perform at Level of Service B Ulan Road and Ulan-Wollar Road have been approved for RAV (up to 25/26 metres B-double) and has previously been used by other projects (e.g. Wollar Solar Farm) to access the site for construction. All residual risk ratings for traffic and transport in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Section 17.3.2 of the EIS (Chapter 17 (Traffic and Transport)) Section 5.2.3 of EIS Technical Paper 13 (Traffic and Transport)
Waste Management	
<i>Study Area and Existing Environment</i> Existing waste sources in the Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter LGAs primarily includes waste from agricultural, mining and forestry operations and domestic waste. A number of waste management and waste transfer facilities operated by local councils are located near the Project and accept a wide range of wastes, including construction and demolition waste, domestic waste and recyclable materials.	Section 18.3 of Chapter 18 of the EIS (Waste Management)
<i>Relevant Environmental Risks</i> Impacts on local and regional waste management facilities due to increased demand from overall project generated construction wastes	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Assessment and Outcomes Summary</i> Like most other environmental aspects, there is no singular assessment for access points. The most relevant construction waste stream volumes for the Project are included below. It is considered that the establishment and use of access points would represent a very minor portion of these indicative volumes. Possible impacts during construction as a result of the improper management of construction waste includes those on local and regional waste management facilities. The EIS identified that this could be due to increased demand from overall project generated construction wastes. Other impacts, if not managed appropriately, could include dust, odour, erosion and sedimentation, human health risks, and mud tracking. The EIS noted that the residual risk rating would be 'medium'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Chapter 18 of the EIS (Waste Management) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Hydrology, Flooding and Water Quality	
<i>Study Area and Existing Environment</i> The hydrology, flooding and water quality study area consists of the Macquarie River and Hunter River catchments, and sub-catchments. A catchment is the area that drains directly to a stream or body of water and includes areas upstream and downstream of the project. The Project is located across the Macquarie River and Hunter River catchments. Numerous natural watercourses intersect the study area, including perennial and ephemeral watercourses and unnamed drainage lines. A number of constructed dams are also located within the study area, including Burrendong Dam and Windamere Dam, to provide water supply for towns, industry, irrigators, stock and domestic users, as well as flood mitigation and recreation.	Section 19.1.2 of Chapter 19 (Hydrology, Flooding and Water Quality)
Relevant Environmental Risks • Surface water quality impacts due to erosion and sedimentation, contamination, leaks and spills • Impact to regional or local water supply due to construction water demands	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The access points are anticipated to cause minor disturbance to the local soil profile due to earthworks required during the installation period. The construction of the proposed refinement is not proposed to interact with any watercourses and the risk to water quality impacts due to the construction of the proposed refinement is considered very low. The potential for the proposed refinements to result in soil and water impacts remains the same as assessed in the EIS and is consistent with the approved Project. All residual risk ratings for hydrology, flooding and water quality in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be negligible.	Section 19.2.4 of the EIS (Chapter 19 (Hydrology, Flooding and Water Quality)) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Climate Change and Greenhouse Gas	
Relevant Environmental Risks • Emissions of greenhouse gases during construction from embodied energy in materials, or emissions from construction plant and vehicles	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

EIS Assessment and Outcomes Summary	EIS Assessment References
<i>Assessment and Outcomes Summary</i> The estimated GHG emissions from the Scope 1, Scope 2 and Scope 3 emissions during construction of the Project are estimated to be a total of 611,607 tCO₂-e, as shown in Table 19-34. Scope 3 emissions are estimated to be the largest contributor (approximately 94 per cent) to GHG emissions during construction, primarily due to the embodied emissions within materials that would be produced for the project. Scope 1 emissions would account for approximately 5.7 per cent and Scope 2 emissions would account for approximately 0.03 per cent of the total GHG emissions during construction. All residual risk ratings for climate change and greenhouse gas in the EIS were noted as being 'low'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be negligible.	Table 19-34 of Chapter 19 of the EIS (Climate Change and Greenhouse Gas) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
Cumulative Impacts	
Relevant Environmental Risks Numerous projects have the potential to be under construction at the same time as the Project, leading to potential cumulative impacts including biodiversity, visual, noise and traffic	Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)
<i>Assessment and Outcomes Summary</i> The EIS identified that these impacts are not likely to be major, generally due to these projects being located across a large geographic area (resulting in dispersal of cumulative impacts). There may be additional cumulative impacts on resources including water and local waste management capacity. The EIS noted that the residual risk rating for this impact would be 'medium'. Due to the minor nature of the establishment and use of access points, it is anticipated that the actual impact would be much lower.	Section 20.2 of Chapter 20 of the EIS (Cumulative Impacts) Table 22-4 of Chapter 22 of the EIS (Environmental Risk Analysis)

Assessment of Potential Impacts Outside the EIS Construction Area

Where the Access Points SP5-I1/I2 have extended beyond the EIS construction area, biodiversity study area or Aboriginal heritage survey area they are required to be assessed in accordance with MCoA (NSW) B31(d). The table below has been prepared to provide the outcomes of these additional assessments.

TABLE D3- 3 ASSESSMENT OUTSIDE OF THE EIS CONSTRUCTION AREA (SP5-I1/I2)

Impacts	
Biodiversity	
Although the access points were included within the biodiversity survey area of the EIS, some areas were not included within the Project construction area (the disturbance footprint). A summary of the additional vegetated areas outside the Project construction area is summarised in the table below:	
PCT Identified	PCT 483
TEC?	Yes
Habitat for Threatened Species?	Yes
SAII?	No
Extent (Ha)	Total = 0.1 ha
Notes: PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	

Impacts

Plant Community Types

Vegetation within the assessed area was identified as 483 Grey Box x White Box grassy open woodland threatened ecological community (TEC) and PCT 0 miscellaneous ecosystem. PCT 483 is part of the critically endangered TEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland under both the BC Act and EPBC Act.

Habitat for Threatened Fauna Species

The BDAR assessment identified the presence of PCT 483 within the access points' footprint. One threatened fauna species, Pink-tailed Legless Lizard (*Aprasia parapulchella*), was identified within the BAM-C as having potential to occur within the assessment area at SP5-I1 but the BDAR assessment identified the species was unlikely to occur within the access point footprint.

A total of two threatened fauna species, Pink-tailed Legless Lizard (*Aprasia parapulchella*) and Striped Legless Lizard (*Delma impar*), were identified within the BAM-C as having potential to occur within the assessment area. Desktop assessment was undertaken for habitat constraints and geographic restrictions to assess each species and the Striped Legless Lizard was assumed present. It is therefore considered that PCT 483 is associated with habitat for the threatened fauna species, Striped Legless Lizard, at SP5-I2.

Threatened Flora

One threatened flora species, Bluegrass (*Dichanthium setosum*), was identified within the BAM-C as having potential to occur within the assessment area at SP5-I1 and SP5-I2. Desktop assessment was undertaken for habitat constraints and geographic restrictions to assess each species. Targeted surveys were completed for the species, and it was assumed present within assessment area at SP5-I1 and SP5-I2. Based on the above, it is considered that PCT 483 is associated with habitat for Bluegrass (*Dichanthium setosum*).

Aboriginal Heritage and Non-Aboriginal Heritage

The Historical Heritage and Aboriginal Cultural Heritage Assessment Report partially included the construction area required to establish the access points SP5-I1/I2.

The portion of the access point SP5-I1/I2 which was not surveyed as part of the EIS, is covered by EnergyCo's Aboriginal Cultural Heritage Assessment Report. In addition, ACJV D&C undertook additional targeted assessments of the unsurveyed areas, in accordance with the Code of Due Diligence. No items or areas of Aboriginal Cultural, Archaeological, or historical heritage value were identified.

Noise and Vibration

The use of the access points SP5-I1/I2 was assessed within the EIS, however the establishment of the access points partially extends beyond the Project construction area. For these establishment activities a construction noise assessment was undertaken. The assessment considered the equipment and plant that would be required to construct the access points and the offset distance from the access points to the nearest sensitive noise receiver identified in the EIS.

The nearest sensitive receiver to the access points SP5-I1/I2 is 310 m away (refer to Appendix E. The construction noise assessment determined that this receiver would likely be exposed to noise levels up to 46 dBA (LAeq(15mins)), which would be approximately 1 dBA above the daytime Noise Management Level (NML). It is worth noting that this estimated construction noise level is conservative and models all items of plant operating concurrently on site for a full fifteen-minute period (which is unlikely to be the case).

Although this receiver would likely experience noticeable construction noise from the establishment of the access point, the impact would not be intrusive and would also be, temporary, of a short duration.

Surface Water and Hydrology

The access points SP5-I1/I2 were assessed in the Amendment Report flooding assessment and therefore are not discussed further.

Erosion and Sedimentation

Impacts

The construction of the proposed access points will require the temporary use of plant and equipment. There is the potential for minor hydrocarbon (fuels, diesel, oils) contamination of soil, surface water and groundwater arising from operation of plant and machinery. Spill volumes from such incidents would be expected to be minor.

Air Quality

The main air quality impact associated with the establishment of the access points is the potential for dust to be generated throughout road upgrade works. One residential sensitive receiver is located approximately 310m to the west from proposed access point SP5-I1/I2.

The potential for dust impacts at any nearby sensitive receivers due to installation and use of these access points will depend on the separation distances and the atmospheric conditions (for example wind direction and speed) at the time. Any dust generation during establishment of the access point would be temporary and for a relatively short duration (i.e. while the works are occurring). Considering the separation distance to the nearest sensitive receivers, the potential for dust impacts is considered to be very low to negligible.

Mitigation Measures

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate for the management of all access points described in this Strategy. Where additional mitigations are identified, they have been detailed in the table below.

TABLE D3- 4 MITIGATION MEASURES SP5-I1/I2 ACCESS POINTS

Mitigation Measures

Biodiversity

The environmental mitigations described in the EIS (including the Amendment Report) are considered appropriate for the management of all access points described in this document.

The following additional mitigation measures will be implemented to manage biodiversity impacts associated with the installation of access points:

- Access points will be designed to minimise vegetation clearing wherever possible to facilitate compliance with MCoA (NSW) B21(b)
- Clearing will be completed in accordance with the Project's Pre-Clearing Protocol (Appendix C of the Environmental Management Strategy)
- The extent of clearing of native vegetation within the access point disturbance footprint will be recorded to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements
- Clearing of Threatened Ecological Communities (TEC), threatened flora species and habitat for threatened fauna species will be minimised as far as practicable
- Clearing extents will be monitored against the clearing limits defined in MCoA (NSW) Appendix 2 Table 2-1, Table 2-2 and Table 2-3 to ensure compliance with MCoA (NSW) B21(a)
- The additional clearing of 0.1 ha of PCT 483 at SP5-I1 and SP5-I2 will be tracked in the Project's clearing register
- Vegetation clearing or land disturbance outside of the assessed area will not be permitted
- If any threatened species or threatened ecological communities are unexpectedly encountered during installation of the access points, the Biodiversity Unexpected Finds Protocol (Appendix A of the Environmental Management Strategy) will be implemented

Aboriginal Heritage and Non-Aboriginal Heritage

Whilst no heritage items or sites have been identified within the access point construction area, the following mitigation measures will be adopted throughout installation of the access points:

Mitigation Measures

- If any potential heritage items or sites are encountered during installation of the access points, the Heritage Unexpected Finds Protocol (Appendix B of the Environmental Management Strategy) will be implemented
- No ground disturbance will be permitted outside of the assessed disturbance footprint

Noise and Vibration

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate.

Surface Water and Hydrology

The environmental mitigations described in the EIS (including the Amendment Report) and incorporated into the Project Approval are considered appropriate.

Erosion and Sedimentation

Erosion and sedimentation related management measures to address impacts associated with the road upgrades include:

- Progressive Erosion and Sediment Control Plans (PESCPs) will be prepared and implemented for the installation of the access points and other road upgrades. The PESCPs will outline controls to be implemented to manage and aim to minimise soil erosion and movement of sediment and other pollutants to land and/or waters
- Weekly environmental inspections are to be undertaken, which includes inspection of any erosion and sediment controls present on-site, stockpiles and the access point(s)

Air Quality

Dust generation during site access installation anywhere near sensitive receivers would be monitored visually by site personnel during the work.

If required mitigation measures to minimise dust impacts to sensitive residential receivers will be implemented throughout the construction.

The following mitigation measures would be implemented, if required, to manage the air quality impacts as a result of the installation and use of the road upgrades (including the access points):

- Where safe to do so, exposed and disturbed surfaces at the site access point installation location, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants. Any application of water or surfactants onto a public road would only be carried out in consultation with the relevant road authority
- Regularly conducting visual inspections of dust emissions and applying additional controls as required

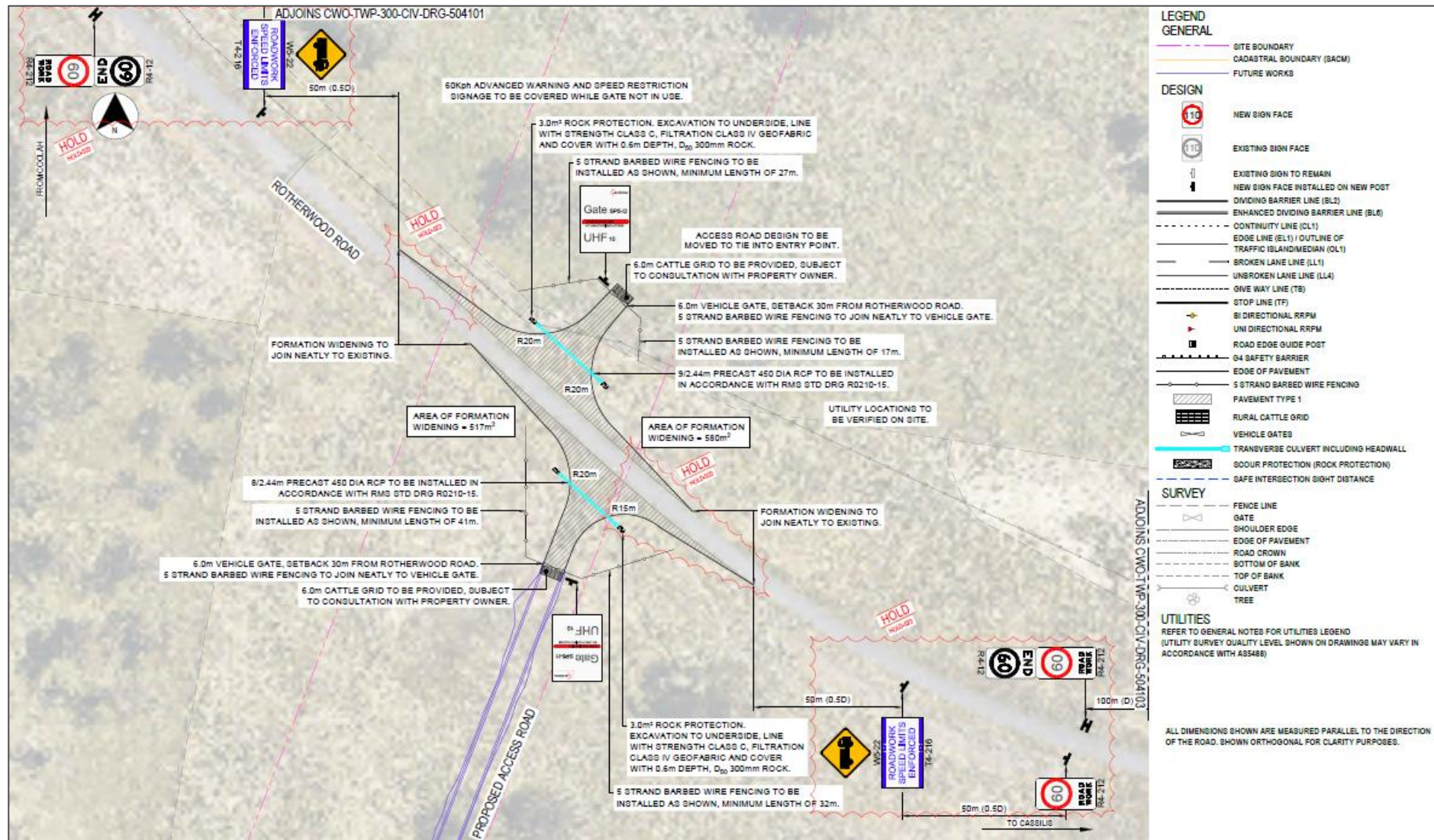
Strategic Concept Design

MCoA (NSW) B31(c) requires that the Transport Strategy "includes strategic concept designs prepared in accordance with Austroads Guide to Road Design (as amended by TfNSW supplements)".

In design terms, a Strategic Concept Design refers to a level of detail typically included at the first stage of a design drawing, and is generally followed by Preliminary Design, Detailed Design and Issued for Construction Design. It is noted that the Austroads Guide to Road Design does not provide a description of what is required to be in a Strategic Concept Design, and TfNSW has prepared only one supplement to Austroads Guide to Road Design (20 December 2023), which does not provide description for what is required to be in a Strategic Concept Design.

As such, a Strategic Concept Design in typical detail format that reflects the current design phase has been included below and is supported by the figure depicting the location of the access points. This design will progress through further review and consultation with the applicable asset owner, outside the scope of this Transport Strategy.

Refer to the following Strategic Concept Design drawings.

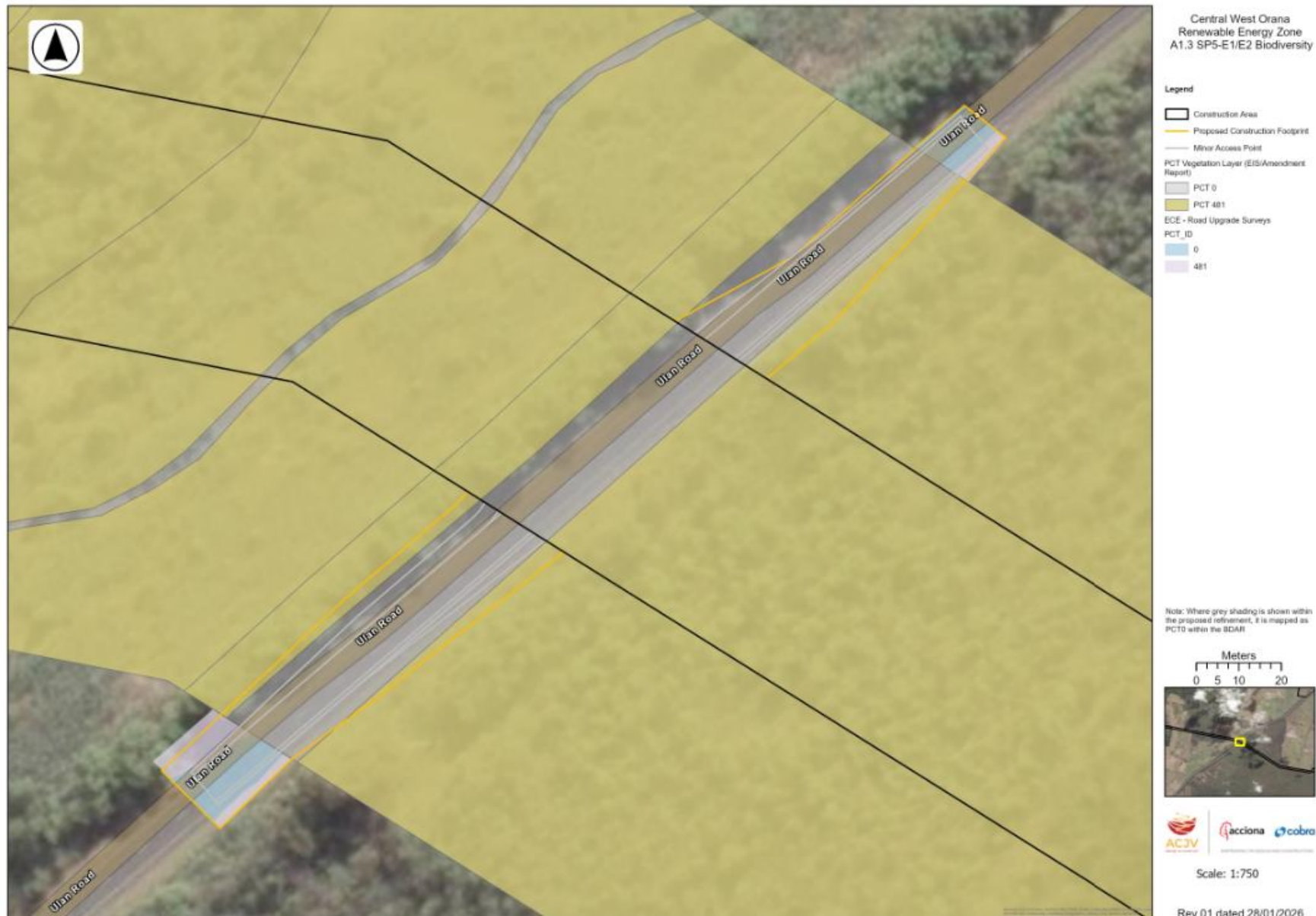


APPENDIX D4 SP5-F2 (SUMMER HILL ROAD) – NOT YET INCLUDED

APPENDIX D5 SP5-G (CASSILIS REST AREA) – NOT YET INCLUDED

Appendix E Additional Environmental Figures

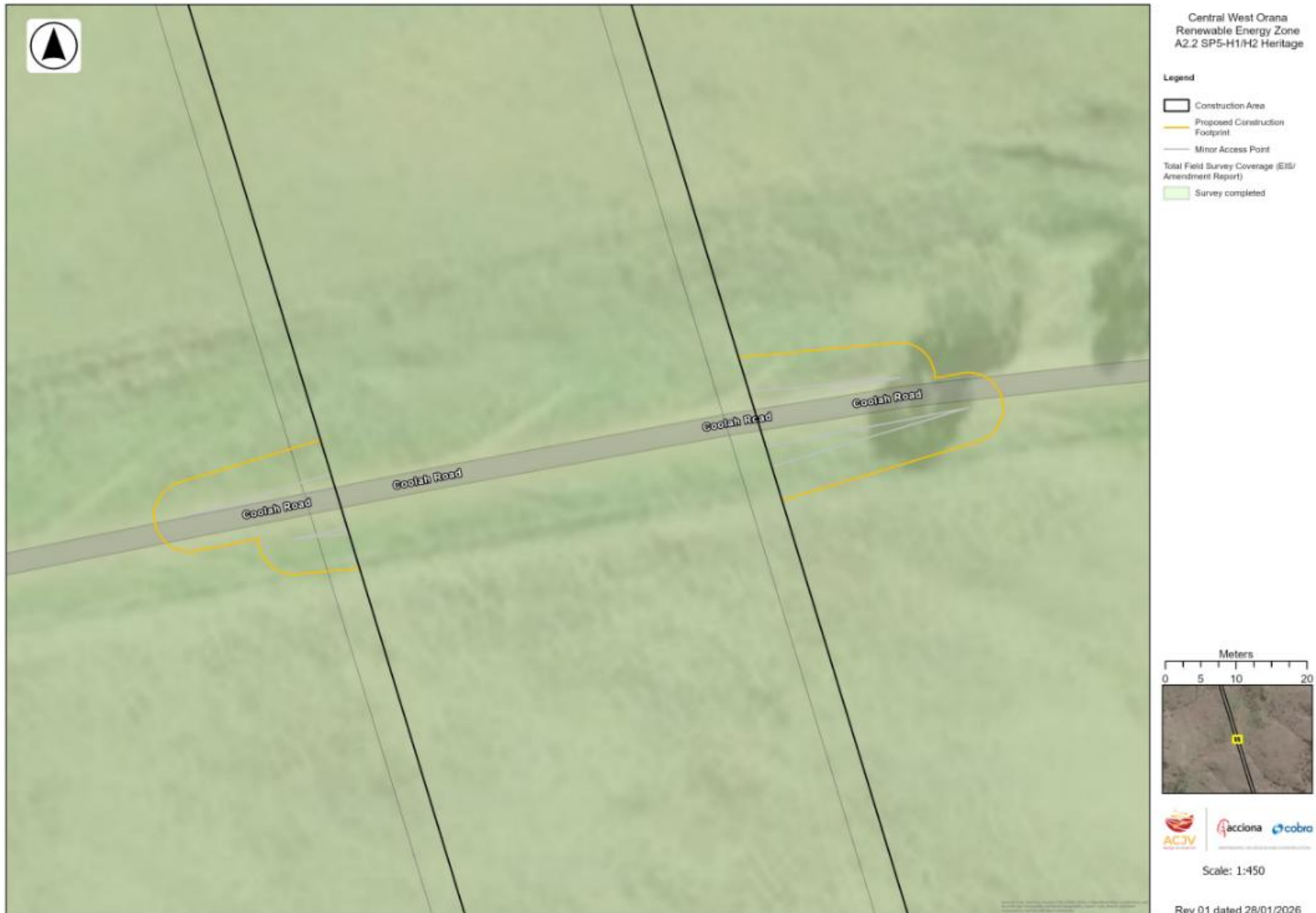
SP5-E1/E2





SP5-H1/H2





SP5-I1/I2







LOCATION OF NEAREST SENSITIVE RECEIVER (BLUE DOT) TO ACCESS POINT CONSTRUCTION AREA (BLUE SHADED)

Appendix F Supplementary Environmental Assessments

A supplementary biodiversity survey of the access points in this Strategy that were not fully covered within the BDAR assessment area was undertaken by East Coast Ecology (ECE) in November/December 2024 and January 2025.

The supplementary biodiversity surveys focusses on areas of the road corridor where the ACJV D&C design extends beyond the area surveyed for the BDAR.

The supplementary biodiversity survey was undertaken by a suitably qualified person(s) in accordance with the relevant industry standards and guidelines.



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acciona



PARTNERING ON DESIGN AND CONSTRUCTION

Central-West Orana Renewable Energy Zone Transmission Project (SSI-48323210) Pre-Works Heritage Clearance Memo

Date	23 January 2026	Memorandum ID	2402_1 Rev C
Areas Assessed	75 individual locations across 37 areas for proposed road or access works - Refer Figure 1 showing 37 areas assessed		

1 Project Background

Acciona Construction Australia Pty Ltd and Cobra Asia Pacific Pty Ltd (together referred to as ACJV D&C) are undertaking works related to the construction of an electric power transmission network in the Central-West Orana Renewable Energy Zone (CWO REZ) in central western NSW (the Project). The Project comprises the construction and operation of new electricity transmission infrastructure, new energy hubs and switching stations and ancillary works required to connect new renewable energy generation and storage projects within the CWO REZ to the NSW transmission network.

The Project was declared Critical State Significant Infrastructure (CSSI) by the NSW Minister for Planning and Public Spaces (the Minister) on 23 November 2020 (amended in February 2023) in accordance with Section 5.13 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Section 23 in Schedule 5 of the *State Environmental Planning Policy (Planning Systems) 2021*. The Project was also deemed a Controlled Action and required a separate approval from the Commonwealth Minister (or its delegate) for the Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The Project Environmental Impact Statement (EIS) was prepared to assess the impacts of construction and operation of the Project. As part of the EIS development, an Aboriginal Cultural Heritage Assessment Report (ACHAR) (Technical Paper 5 – Aboriginal Cultural Heritage Assessment Report) was prepared to assess and address matters concerning Aboriginal heritage. A Non-Aboriginal Heritage Assessment (NHA) (Technical Paper 6 - Non-Aboriginal Heritage) was also prepared to assess and address matters concerning non-Aboriginal heritage. The findings of the heritage assessments were summarised in Chapter 11 (Aboriginal Heritage) and Chapter 12 (Non-Aboriginal Heritage), respectively, of the EIS.

A Response to Submissions (RtS) was prepared in response to submissions received on the EIS. The RtS included clarifications as well as further detail relating to Aboriginal and non-Aboriginal (hereafter historical) heritage management issues of the Project. An Amendment Report (AR) and an Aboriginal Cultural Heritage Assessment Report Addendum (ACHAR-A) were subsequently prepared to address Project changes resulting from the submissions and design progress. The AR was accepted on 11 March 2024.

The Project was approved by the Minister on 26 June 2024. This approval was updated to accommodate Modification 1 (MOD 1) on 14 October 2024. Approval for the Project under the EPBC Act was granted by the Branch Head of Environmental Assessments NSW and ACT of the DCCEEW on 8 August 2024 (EPBC 2022/09353).

ACJV D&C engaged Kelleher Nightingale Consulting Pty Ltd (KNC) to provide professional services related to Aboriginal and historical heritage for the construction phase of the Project, including preparation of a Heritage Management Plan (HMP) in accordance with the recommendations of the EIS, AR and the Project's Conditions of Approval.

ACJV D&C must carry out construction activities for the CSSI in accordance with the conditions of approval and the following environmental assessment documentation:

- Central-West Orana Renewable Energy Zone Transmission Project: Environmental Impact Statement
- Central-West Orana Renewable Energy Zone Transmission Project: Submissions Report
- Central-West Orana Renewable Energy Zone Transmission Project: Amendment Report

Project documentation specific to Aboriginal and historical cultural heritage includes:

- EMM Consulting Pty Ltd ('EMM'), 2023a. Central West Orana Renewable Energy Zone Transmission Project: Environmental Impact Statement Technical Paper 5 - Aboriginal cultural heritage assessment. Report to WSP on behalf of EnergyCo.
- EMM, 2023b. Central West Orana Renewable Energy Zone transmission project: Environmental Impact Statement Technical Paper 6 - Non- Aboriginal heritage assessment. Report to WSP on behalf of EnergyCo.

- EMM, 2024. Central West Orana Renewable Energy Zone Transmission Project: Amendment Report Appendix H - Aboriginal cultural heritage assessment addendum. Report to WSP on behalf of EnergyCo.
- KNC, 2025. Central-West Orana Renewable Energy Zone Transmission Project: Heritage Management Plan. Prepared for Acciona Construction Australia.

2 Current Assessment

Since the development of the Project environmental assessment documentation described above, additional minor amendments to the approved Construction Area have been identified. These are required to enable required road upgrades and access points for construction. These additional areas required for access works are located outside the approved Construction Area across 37 areas and comprise 75 individual locations. Figure 1 shows the 37 general areas where the access works are proposed (referred to as the 'proposed work areas' for this memo).

KNC were engaged to review the proposed changes in terms of impacts to historical and Aboriginal heritage matters and identify if they are consistent with the Approved Project or if additional or reduced impacts are predicted.

3 Proposed Activities

Within the 37 identified areas, proposed activities include the use or construction of or adjustments to access points and/or access routes which will be required to undertake construction of the Project. This includes road upgrades at certain intersections on the Golden Highway. Proposed activities will disturb the ground surface and have the potential to disturb any historical heritage items or Aboriginal objects which may be present.

4 Assessment Process

4.1 Aboriginal Heritage

Existing Project Documentation

Aboriginal heritage was assessed for the EIS and AR in the *Central West Orana Renewable Energy Zone Transmission Project: Environmental Impact Statement Technical Paper 5 - Aboriginal cultural heritage assessment* and *Central West Orana Renewable Energy Zone Transmission Project: Amendment Report Appendix H - Aboriginal cultural heritage assessment addendum*.

The proposed work areas all fall within the wider 'study area' previously assessed for Aboriginal cultural heritage during preparation of the EIS and AR. The wider 'study area' is defined in the ACHAR-A as "a general region extending beyond the construction area, [...] but in general captures an area from Dubbo and Gilgandra in the west, Mudgee in the south, Bylong in the east, and Coolah in the north" (EMM 2024:5). The majority of the proposed work areas directly adjoin the approved Construction Area. The ACHAR and ACHAR-A were reviewed to assess the presence of previously recorded Aboriginal archaeological sites or potential Aboriginal heritage constraints to the proposed works.

Review of existing project documentation indicated the presence of potential Aboriginal heritage constraints at the following areas:

- SP1-N (Area of sensitivity along Wilpinjong Creek)
- SP1-O (Area of sensitivity along Wilpinjong Creek)
- SP1-P (Area of sensitivity along Wilpinjong Creek)
- SP1-Q (Area of sensitivity along Wilpinjong Creek, previously recorded sites 36-3-0686 and 36-3-0687)
- SP1-R (Area of sensitivity along Wilpinjong Creek, previously recorded sites 36-3-0681 and 36-3-3188)
- SP1-S (Previously recorded site 36-3-3157)
- SP1-T (Area of sensitivity along Wilpinjong Creek)
- SP1-U (Previously recorded site 36-3-2664)
- SP1-Wilp (Area of sensitivity along Wilpinjong Creek, Area of sensitivity along Cumbo Creek, previously recorded site 36-3-3347)
- SP1-C (Previously recorded site 36-3-4088)

The 'Areas of sensitivity' referred to above are defined in the ACHAR-A (EMM 2024:157) as a zone extending c.150 metres either side of certain creeks intersected by the project, including Wilpinjong Creek and Cumbo Creek, within which higher densities of stone artefacts and/or other areas of past foci may be expected to be present. REMM AH10 requires archaeological excavation where ground disturbance activities cannot be avoided within Areas of Sensitivity. The ACHAR and ACHAR-A assessments did not identify any previously unrecorded Aboriginal objects, archaeological sites, or any specific constraints associated with the Areas of Sensitivity near the proposed work areas.

AHIMS Searches

The current assessment undertook updated searches of the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) database to confirm the location and status of Aboriginal archaeological sites.

The search areas encompassed the proposed work areas. Results are attached as Appendix A. The AHIMS search results were generally consistent with the existing findings of the EIS and AR.

The AHIMS search results confirmed the location of the eight previously recorded sites listed above and identified in the existing project documentation, with the addition of one site (36-3-4279) within SP1-Q; this site was registered subsequent to preparation of the EIS. AHIMS site status was confirmed as “Destroyed” for three sites: 36-3-4279 at SP1-Q, 36-3-3188 at SP1-R, and 36-3-3347 at SP1-Wilp. These three sites are no longer extant and do not pose a constraint to the proposed access works at the indicated locations.

The remaining previously recorded sites at the proposed work areas were confirmed as “Valid” extant site recordings:

- SP1-Q (36-3-0686 and 36-3-0687)
- SP1-R (36-3-0681)
- SP1-S (36-3-3157)
- SP1-U (36-3-2664)
- SP1-C (36-3-4088)

Relevant AHIMS site locations are included on Figures 2-6.

4.2 Historical Heritage

Existing Project Documentation

Historical heritage was assessed for the EIS in the *Central West Orana Renewable Energy Zone transmission project: Environmental Impact Statement Technical Paper 6 - Non- Aboriginal heritage assessment* and in an updated assessment contained within Section 5.7 of the AR.

The proposed work areas fall within the ‘study area’ previously assessed for historical heritage during preparation of the EIS and AR. The ‘study area’ is defined in the NHA as the construction area plus a one kilometre buffer (EMM 2023b:11) and in the AR as the amended construction area of the Project with a one kilometre buffer.

The majority of the proposed work areas directly adjoin the approved Construction Area. The NHA and AR were reviewed to assess the presence of previously recorded historical heritage items or potential historical heritage constraints to the proposed works.

Review of existing project documentation indicated the presence of a potential historical heritage constraint at the following area:

- SP1-Q (CWO-22-HH017: Mittaville Archaeological Site)

The NHA describes CWO-22-HH017 as a potential heritage item, identified from review of historical (1960s) aerial photography. The item description is as follows (EMM 2023b:A.62):

The Mittaville Archaeological Site is thought to have been built in the early 20th century but is known to have been historically heavily modified by later work. A more modern house was built in 1981. Demolished prior to construction of current electrical transmission line easement.

CWO-22-HH017 was assessed as displaying a low cultural heritage sensitivity (if archaeological deposits were present) at a local level of significance. Impact assessment for the Project identified potential partial disturbance of the item. It was noted that the assessed area of CWO-22-HH017 had likely already been significantly impacted through past demolition and construction of the existing electrical transmission line easement. No mitigation was recommended for potential impacts from the Project.

The relevant item location is included on Figure 6.

Heritage Register Searches

The current assessment undertook updated searches of heritage registers and databases to confirm the findings of the NHA and AR for the proposed work areas. Consistent with the NHA and AR, these included:

- Mid-Western Regional Local Environmental Plan 2012
- Warrumbungle Local Environmental Plan 2013
- Upper Hunter Local Environmental Plan 2013
- State Heritage Register
- State Heritage Inventory
- NSW Government Agency Section 170 Heritage and Conservation Registers
- Commonwealth Heritage List
- National Heritage List
- Register of the National Estate (non-statutory archive).
- Australian Heritage Places Database and Australian Heritage Places Inventory.

- The updated register search results confirmed that CWO-22-HH017 is unlisted, as identified in the existing Project documentation.
- No items of historical heritage were listed or registered on these databases within or near the proposed work areas, consistent with the existing findings of the NHA and AR.

4.3 Field Inspection

Field inspection was undertaken for the 37 areas required for access works outside the Construction Area. Inspections were undertaken by KNC in November–December 2024, February 2025 and September 2025. Field inspection included pedestrian survey/visual inspection of the proposed work areas, assessment of disturbance and Aboriginal or historical archaeological potential, and identification and recording of potential heritage constraints to the proposed works. The field inspection identified potential heritage constraints at four areas: SP1-N, SP1-O, SP1-Q and SP1-T.

SP1-Q

An Aboriginal archaeological site (surface artefact scatter) was recorded within SP1-Q (refer Figure 6). The site was located on a raised gently sloping spur positioned on the south-western side of Wilpinjong Creek and overlooking the confluence with Planters Creek. The site extended from near the railway crossing in the south-west down the spur towards the overhead powerlines in the north-east. Artefacts recorded included one quartz flake, one chert flake and one chert proximal flake fragment.

All artefacts were found in a disturbed context within track exposures cut and eroded down to a gravelly A2 horizon. Other parts of the site extent may display more limited disturbance. The site identified during the field inspection is considered to form part of existing (valid) AHIMS site recording 36-3-0687.

Outside of the identified site location, no Aboriginal archaeological heritage constraints associated with the Wilpinjong Creek Area of Sensitivity were identified at SP1-Q. The field assessment confirmed that the Area of Sensitivity does not extend into the remainder of the proposed work area and further investigation (archaeological excavation under REMM AH10) is not required. The confirmed Area of Sensitivity associated with the identified site location may require further investigation under REMM AH10 if impact cannot be avoided.

One historical heritage item was previously recorded at SP1-Q, comprising item CWO-22-HH017 (Mittaville Archaeological Site) identified during the NHA prepared as part of the EIS (refer Figure 6). The item comprised a potential archaeological site, based on review of a mid-1960s aerial photograph. The NHA noted that the assessed extent of the item had been subject to high levels of existing disturbance.

The current field inspection confirmed that the area of CWO-22-HH017 which overlaps SP1-Q is positioned along the existing access track and transmission corridor. The area was confirmed as highly disturbed and was considered to display low to no historical archaeological potential in this area. No historical heritage materials or indications of subsurface archaeological material were identified.

SP1-N

An Aboriginal archaeological site (surface artefact scatter) was recorded within SP1-N on the western side of Wilpinjong Creek (refer Figure 7). Landform comprised a moderately-raised terrace situated directly alongside the western bank. The Redhills Trail followed the western side of the terrace while side tracks crossed at the northern and southern ends. The ground surface along the terrace had extensive areas of exposed ground which appeared loose and disturbed by machinery.

Previous disturbance has included vegetation clearance, use as pasture, ripping/ploughing, trail/access construction and tree planting. Recorded artefacts included a chert flake, two quartz flakes and a chert core. The site is not associated with any existing AHIMS site recordings.

Outside of the identified site location, no Aboriginal archaeological heritage constraints associated with the Wilpinjong Creek Area of Sensitivity were identified at SP1-N. The field assessment confirmed that the Area of Sensitivity does not extend into the remainder of the proposed work area and further investigation (archaeological excavation under REMM AH10) is not required. The confirmed Area of Sensitivity associated with the identified site location may require further investigation under REMM AH10 if impact cannot be avoided.

SP1-O

Three Aboriginal archaeological sites were recorded within SP1-O (refer Figures 8-9). The first comprised an isolated find of a quartz flake south of Wilpinjong Creek, on the southern side of the Wilpinjong Creek trail crossing and on the opposite bank to a second site recorded in this area. The second site comprised a low density surface artefact scatter on a moderately prominent rise on the northern bank of the creek, including the up- and down-slope of a side gully. Artefacts recorded included a chert core and a mudstone flake. The third recorded site was approximately 935 metres to the south east. This comprised a surface artefact scatter on a rise along the south-western side of Wilpinjong Creek and on the upstream side of a gully confluence. Artefacts recorded included a silcrete proximal flake fragment and a quartz flake.

All artefacts appeared in a disturbed context due to the impacts of machinery at the north-western sites and cattle grazing and/or trail construction at the south-eastern site. Apart from the track and machinery scraped areas the north-western site appeared relatively intact. None of these sites are not associated with any existing AHIMS site recordings.

Outside of the identified site locations, no Aboriginal archaeological heritage constraints associated with the Wilpinjong Creek Area of Sensitivity were identified at SP1-O. The field assessment confirmed that the Area of Sensitivity does not extend into the remainder of the proposed work area and further investigation (archaeological excavation under REMM AH10) is not required. The confirmed Area of Sensitivity associated with the identified site locations may require further investigation under REMM AH10 if impact cannot be avoided.

SP1-T

An Aboriginal archaeological site (surface artefact scatter) was recorded across a well-defined and moderately raised landform located on the southern bank of Bens Creek, approximately 800 metres upstream from the confluence with Wilpinjong Creek (refer Figure 10). The site extended from the railway crossing in the south up to the edge of the creek bank in the north and west. The channel of Bens Creek formed a moderately deep gully below the site.

Artefacts recorded included one silcrete flake, one chert flake and one quartz flake, with numerous (>10) other artefacts noted at this location along the edge of the landscaped (cut) gully. The archaeological material was disturbed at the artefact findspots, with the remainder of the site area displaying variable but generally lower levels of disturbance. The site is not associated with any existing AHIMS site recordings.

Outside of the identified site location, no Aboriginal archaeological heritage constraints associated with the Wilpinjong Creek Area of Sensitivity were identified at SP1-T. The field assessment confirmed that the Area of Sensitivity does not extend into the remainder of the proposed work area and further investigation (archaeological excavation under REMM AH10) is not required. The confirmed Area of Sensitivity associated with the identified site locations may require further investigation under REMM AH10 if impact cannot be avoided.

SP1-P, SP1-R and SP1-Wilp

Background information review indicated that these proposed access work areas fell within Areas of Sensitivity associated with Wilpinjong and/or Cumbo Creeks. No Aboriginal objects, archaeological sites or areas of Aboriginal archaeological potential were identified at these locations. No Aboriginal heritage constraints associated with the Areas of Sensitivity were identified and the field assessment confirmed that the Areas of Sensitivity do not extend into the proposed work areas. Therefore further investigation (archaeological excavation under REMM AH10) is not required at these areas.

5 Impact & Consistency Assessment

Review of background Aboriginal heritage information including updated AHIMS database searches identified six valid (extant) AHIMS site recordings within the proposed work areas at SP1-Q, SP1-R, SP1-S, SP1-U and SP1-C. Field inspection identified Aboriginal archaeological sites within the proposed work areas at SP1-N, SP1-O, SP1-Q and SP1-T. Outside of the identified site locations, no specific constraints associated with the Aboriginal Areas of sensitivity along Wilpinjong Creek and Cumbo Creek were identified for work areas which overlap these zones. Therefore further investigation (archaeological excavation under REMM AH10) of these areas is not required.

Review of background historical heritage information including updated historical heritage register searches identified one unlisted historical heritage item within the proposed work area at SP1-Q (CWO-22-HH017). Field inspection confirmed the portion of this item which overlaps the proposed work area is highly disturbed with low to no historical archaeological potential.

There are therefore heritage considerations for the proposed works within the following eight areas:

- SP1-Q (36-3-0686 and 36-3-0687, CWO-22-HH017, Wilpinjong Creek Area of Sensitivity)
- SP1-R (36-3-0681)
- SP1-S (36-3-3157)
- SP1-U (36-3-2664)
- SP1-C (36-3-4088)
- SP1-N (Aboriginal site identified during field inspection, Wilpinjong Creek Area of Sensitivity)
- SP1-O (Aboriginal sites identified during field inspection, Wilpinjong Creek Area of Sensitivity)
- SP1-T (Aboriginal site identified during field inspection, Wilpinjong Creek Area of Sensitivity)

Aboriginal heritage impacts

The sites listed above are located outside of the approved Construction Area and were not considered for impact in the EIS/AR. Impact to these sites is not included under the Project Approval or existing project documentation. Any impact to these sites would not be considered consistent with the Project Approval. Management measures should be employed for access works in proximity to the identified sites to ensure no impact (discussed in Section 6 below).

If impact to the Wilpinjong Creek Area of Sensitivity within the identified site locations at SP1-Q, SP1-N, SP1-O and SP1-T cannot be avoided, further investigation (archaeological test excavation under REMM AH10) may be required.

Historical heritage impacts

CWO-22-HH017 is partially located within the approved Construction Area and was assessed for partial impact in the EIS/AR. The item exhibits low cultural heritage sensitivity (if archaeological deposits are present) at a local level of significance. No mitigation activities were required for partial impact to the item as a result of the Project, beyond the implementation of the Project's Unexpected Finds Protocol if required. Partial impact to the item as a result of the current proposed works at SP1-Q is therefore not inconsistent with the findings of the EIS/AR or the Project Approval. Management measures should be employed for access works in proximity to the item to ensure consistency (discussed in Section 6 below).

No identified heritage impacts

No Aboriginal or historical heritage constraints or impacts were identified within the following 29 proposed work areas:

- SP1-H1 and H2
- SP1-I
- SP1-J1 and J2
- SP1-G
- SP1-P
- SP1-Wilp
- SP6-E1
- SP6-C
- SP6-F1
- SP5-A
- SP6-B1
- SP6-X1 and X2
- SP5-D
- SP3-E
- SP6-Y1 (WAD 3)
- SP6-H (WAD 3)
- SP5-F1
- SP3-A
- SP2-I
- ARMSTRONG
- SP5-G
- SP2-F
- SP2-D
- SP5-I1
- Blue Springs Road (WAD 2A)
- Ulan Road (WAD 2B)
- SP6-Z1 and Z2 (WAD 3)
- SP2-H1 and H2 (WAD 4)
- SP5-E1

The proposed works at these 29 locations would be consistent with the Project Approval (resulting in no change to Aboriginal or historical archaeological heritage impacts).

Specifically, CoA B27(a) states that

The proponent must:

ensure the development does not cause any harm to any Aboriginal heritage objects/sites or historic heritage items located outside the approved construction area (see Table 3-1 and Table 3-3 of Appendix 3)

No Aboriginal heritage objects/sites or historic heritage items have been identified within or near the proposed work areas listed above outside the approved Construction Area. The proposed works would not cause harm to any identified Aboriginal heritage objects/sites or historic heritage items outside the approved Construction Area, including those listed in Table 3-1 and Table 3-3 of CoA Appendix 3. The proposed works are therefore consistent with the requirements of CoA B27a.

6 Result and Recommendations

The proposed access works outside the project boundary may proceed with caution at the 29 areas listed above where no Aboriginal or historical heritage constraints were identified. At the eight areas with identified constraints, the following management measures should be implemented.

Aboriginal heritage

Impacts must be avoided to the AHIMS site recordings and Aboriginal archaeological sites identified during the field inspection. No ground disturbance or impacts are to occur at the Aboriginal site locations or areas as shown on Figures 2-10. Sites must be avoided and should be identified within the relevant activities' Construction Environmental Management Plan (CEMP) and workers/contractors inducted regarding the protection of Aboriginal heritage. Temporary fencing may be appropriate along the site boundaries in proximity to the proposed work areas.

If ground disturbance within the Aboriginal archaeological site locations and areas indicated in Figures 2-10 is avoided, the proposed access works at these locations would be consistent with the Project Approval (resulting in no change to Aboriginal heritage impacts) and may proceed with caution. If site impacts cannot be avoided, this would be inconsistent with the Project Approval and further assessment or approvals may be required. The Wilpinjong Creek Area of Sensitivity associated with the identified site locations at SP1-Q, SP1-N, SP1-O and SP1-T may require further investigation under REMM AH10 if impact cannot be avoided.

Historical heritage

Proposed access works at SP1-Q partially overlap the extent of historical heritage item CWO-22-HH017 (Figure 6). Field inspection confirmed the portion of this item which overlaps the proposed work area is highly disturbed with low to no historical archaeological potential, consistent with the findings of the EIS/AR. Partial impact to the item was included in the EIS/AR.

Partial impact to the item as a result of the current proposed works at SP1-Q is therefore not inconsistent with the findings of the EIS/AR or the Project Approval (resulting in no change to existing historical heritage impacts) and can proceed with caution. The Project's Unexpected Finds Protocol must be implemented in the event of a potential heritage find within CWO-22-HH017 during the proposed works, consistent with the recommendations of the EIS/AR.

If you have any questions, please do not hesitate to contact me on 9232 5373 or at matthew.kelleher@knconsult.com.au

Yours sincerely,



Dr Matthew Kelleher
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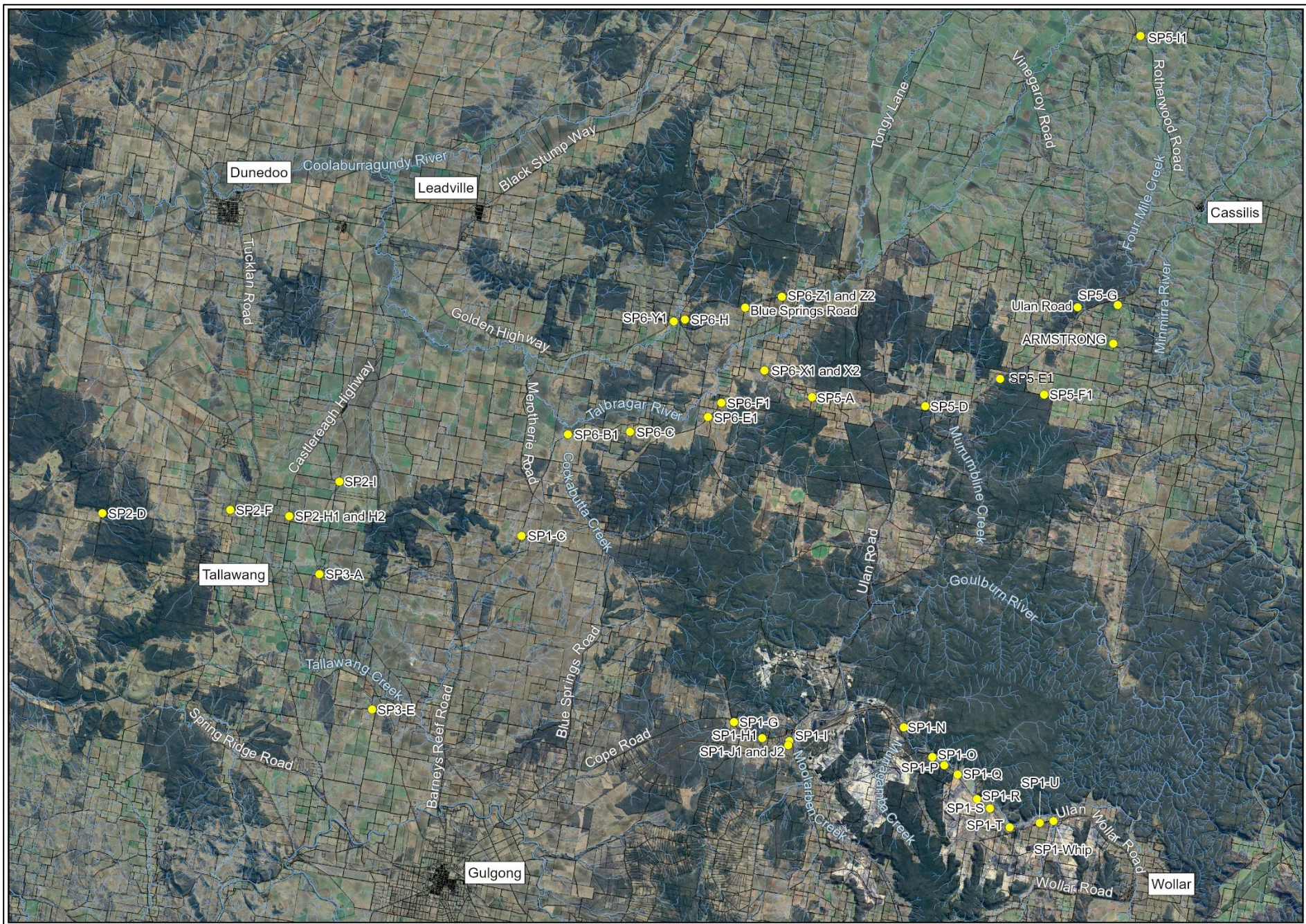


Figure 1. Overview map showing general location of proposed work areas



Figure 2. Recorded AHIMS site at SP1-R. Base image Google Earth.



Figure 3. Recorded AHIMS site at SP1-S. Base image Google Earth.



Figure 4. Recorded AHIMS site at SP1-U. Base image Google Earth.



Figure 5. Recorded AHIMS site at SP1-C. Base image Google Earth.

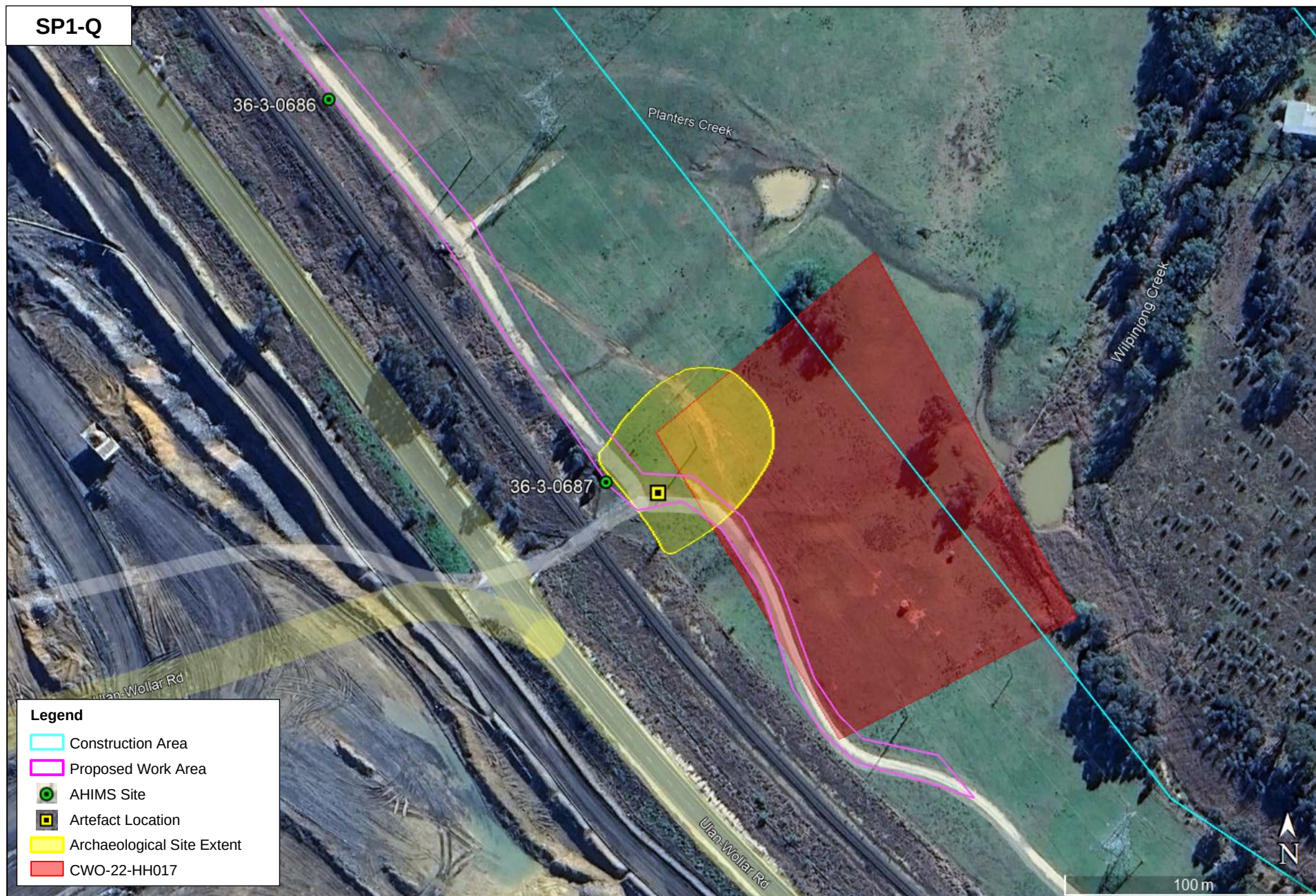


Figure 6. CWO-22-HH017, recorded AHIMS sites and archaeological site location at SP1-Q

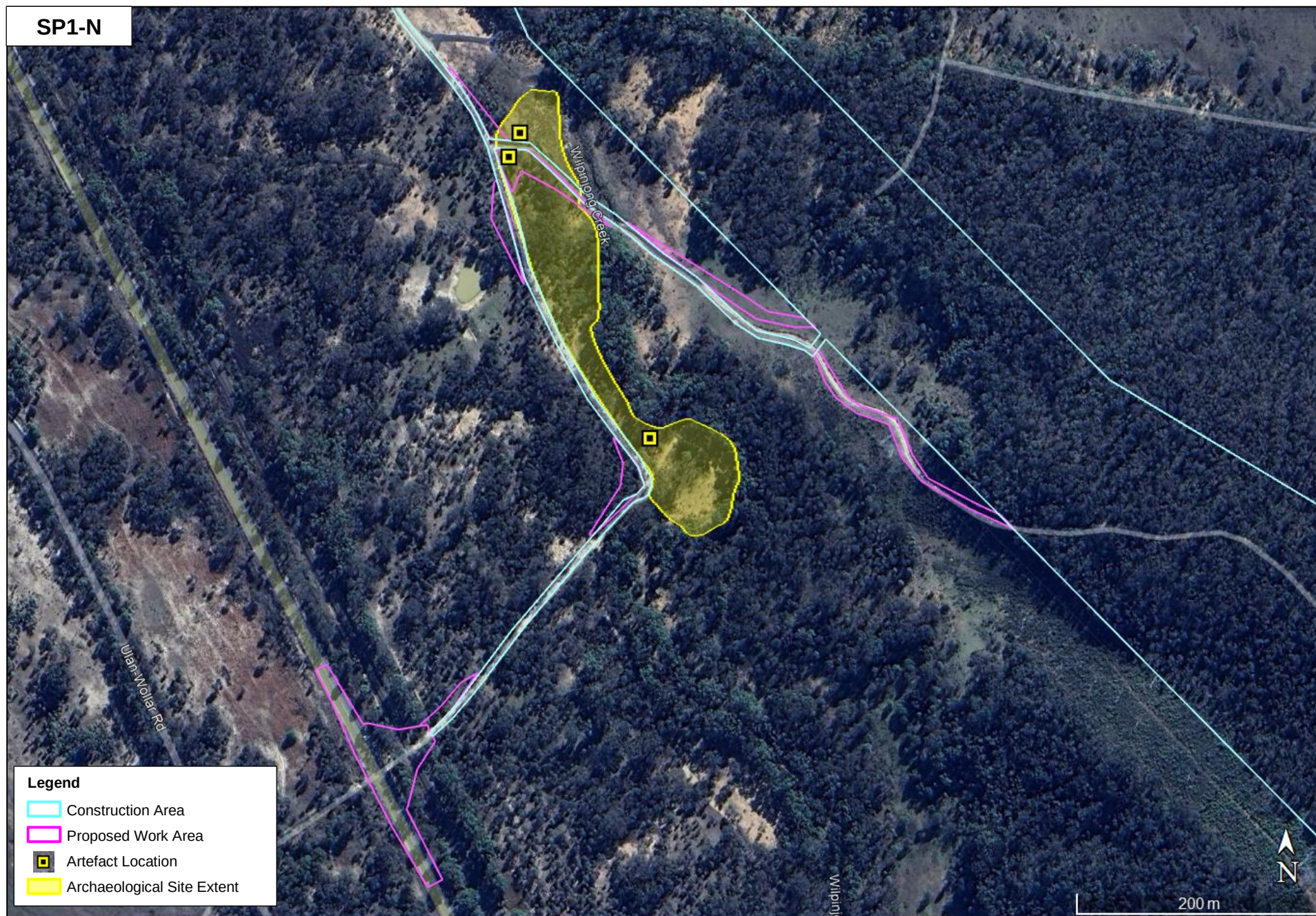


Figure 7. Archaeological site location at SP1-N. Base image Google Earth.



Figure 8. Archaeological site locations at SP1-O (north western)



Figure 9. Archaeological site location at SP1-O (south eastern)



Figure 10. Archaeological site location at SP1-T

Appendix A – AHIMS Search Results

BAM Report – Priority Areas 1

Central West Orana Renewable Energy Zone
Transmission Project

Report date: January 2026



DOCUMENT CONTROL

Document no. BA02

Project Title: BAM Report – Priority Areas 1 - Central-West Orana Renewable Energy Zone Transmission Project

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Draft v1.0	Jade Minto Jack Tatler (BAAS21006)	Alex Graham (BAAS19040)	04/04/2025
Draft v2.0	Jade Minto	Jack Tatler (BAAS21006)	11/08/2025
Final v1.0	Jade Minto	Jack Tatler (BAAS21006)	15/12/2025
Final v2.0	Jade Minto	-	07/01/2026
Final v3.0	Jade Minto	Jack Tatler (BAAS21006)	28/01/2026

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1. INTRODUCTION

1.1 Project Overview

Energy Corporation of NSW (EnergyCo) is proposing the construction and operation of new electricity transmission infrastructure, new energy hubs and switching stations and ancillary works required to connect new renewable energy generation and storage projects within the Central-West Orana Renewable Energy Zone (REZ) to the existing electricity network (the Project).

ACERREZ propose to modify the Project by incorporating an additional 35 areas outside of the approved Construction Boundary (hereafter referred to as Access Points). The Access Points will involve the widening of existing roads and access tracks to allow the movement of vehicles in and out of the Project alignment.

1.1.1 Location

The Access Points are dispersed across the entire Project. The Project extends north to south from Cassilis to Wollar and east to west from Cassilis to Goolma and is located within four local government areas (LGAs); Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter (**Figure 1**). This report assesses 16 out of the 35 Access Points, including:

- | | | | | |
|-------------|---------|------------|----------|----------|
| • SP1-G | • SP1-N | • SP1-T | • SP6-C | • SP5- |
| • SP1-H1/H2 | • SP1-O | • SP1-U | • SP6-E1 | E1/E2 |
| • SP1-J2 | • SP1-P | • SP1-Wilp | • SP6-F1 | • SP1-C. |
| | • SP1-Q | | • SP5-A | |

1.2 Purpose of this Assessment

The objective of this biodiversity assessment is to outline the assessment methods carried out by East Coast Ecology (ECE) and aims to:

- Describe the biodiversity values present within each Access Point, including the extent of native vegetation and the presence of Threatened Ecological Communities (TECs)
- Determine the habitat suitability within the Access Points for candidate threatened species
- Identify which candidate species credit species require further assessment for each Access Point, and
- Consider and assess the proposed works in accordance with other relevant legislation such as the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

All biodiversity assessments have been carried out with reference to the BAM (DPIE, 2020a), and this BAM Report has been prepared by Jade Minto and Dr. Jack Tatler (BAAS21006) and reviewed by Alex Graham (BAAS19040).

1.3 Permits and Licences

The biodiversity assessment was conducted under the terms of ECE's Scientific Licence issued by the NSW Department of Planning and Environment (SL102667). Fauna survey was conducted under approval RVF22/2367 from the NSW Animal Care and Ethics Committee.

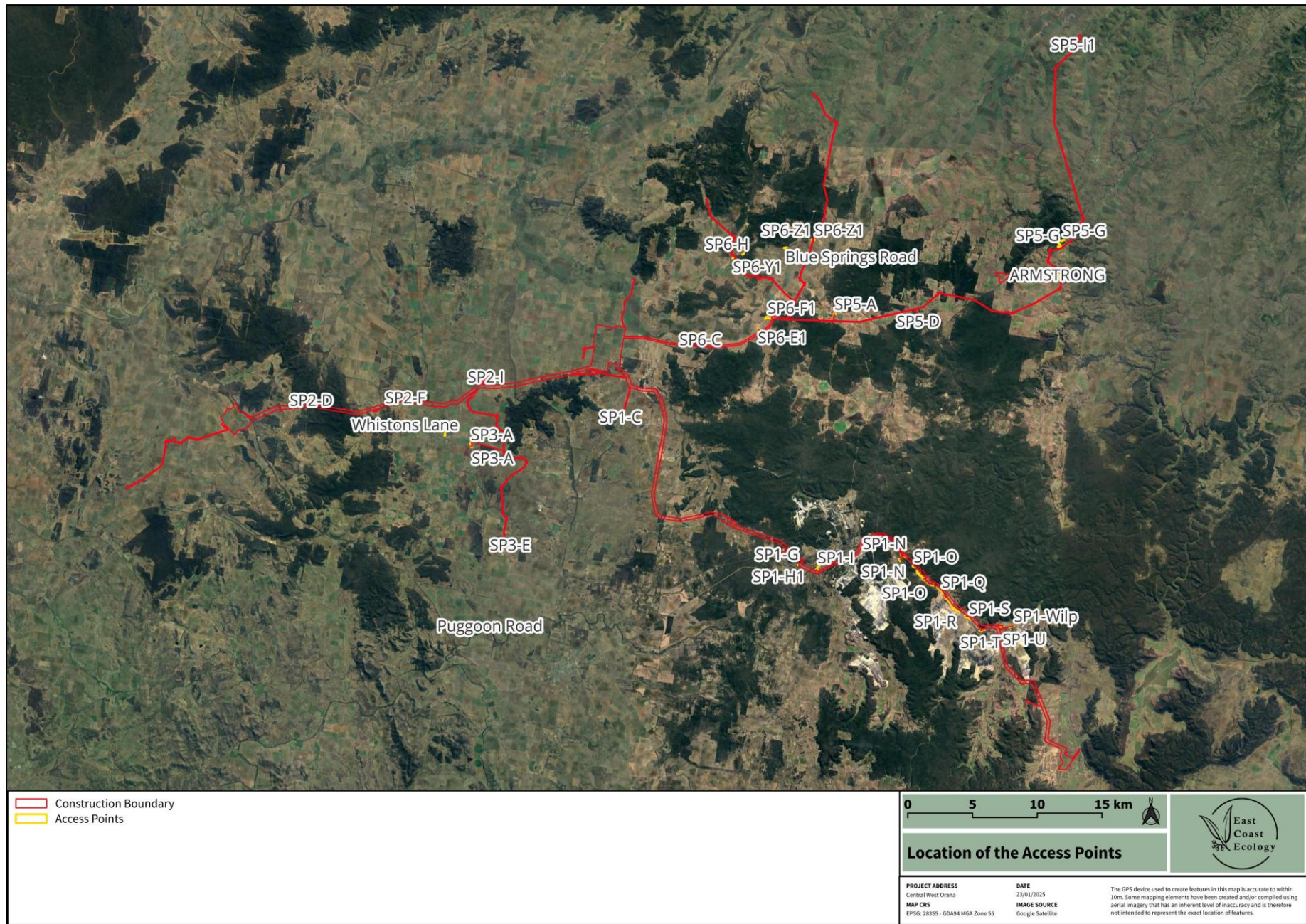


Figure 1. Location of the Access Points in relation to the Construction Boundary.

2. METHODS

2.1 Native Vegetation, Threatened Ecological Communities and Vegetation Integrity Methods

2.1.1 Existing Information

A review of the vegetation mapping conducted as part of the approved Biodiversity Development Assessment Report (BDAR) (WSP, 2024) and the State Vegetation Type Map (NSW DCCEEW, 2025f) was used to assist in the identification of Plant Community Types (PCTs) within the Access Points. The PCT of ‘best-fit’ was determined based on the floristics observed during the field surveys and the PCT descriptions and justifications in the approved BDAR, and the vegetation integrity plot data collected from field surveys. Each PCT has been divided into vegetation zones based on broad condition state and the same justification/reasoning for vegetation zones within the approved BDAR have been applied in this BAM report. For consistency, vegetation zones within BA01 – Biodiversity Assessment of Proposed Access Points (ECE, 2025a) have been referred to throughout this report.

2.1.2 Mapping Native Vegetation Extent

The extent of native vegetation within the Access Points was determined through a field assessment with the aid of a GPS-enabled tablet. Native vegetation assigned to a PCT was then stratified into vegetation zones based on the vegetation zones used in the approved BDAR. Some areas within the Access Points contain areas of non-native vegetation. These areas have been allocated to PCT 0, and labelled ‘0, Miscellaneous ecosystem’ to be consistent with the approved BDAR. Roads, hardstand, and bare earth have also been allocated PCT 0, and labelled ‘0, Pre-existing infrastructure’. Vegetation mapping from the approved BDAR has been used where it overlaps with the Access Points.

2.1.3 Vegetation Integrity Survey

At least one 1,000m² BAM plot was sampled within each PCT and condition class to ensure allocation of PCTs and vegetation zones was consistent with the descriptions and justifications provided in the approved BDAR.

2.2 Threatened Flora Survey

2.2.1 Review of Existing Information

Threatened flora with potential to occur within the Access Points and immediate surrounds were identified following review of the approved BDAR. Soil mapping (NSW DCCEEW, 2025e) and topography (Google Earth) were also used to provide further context on habitat constraints for threatened flora.

2.2.2 Field Surveys

To determine whether any threatened flora species were present, a survey was undertaken using parallel field traverses in accordance with the 'Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020b).

2.3 Threatened Fauna Survey

2.3.1 Review of Existing Information

Threatened fauna with potential to occur within the Access Points and immediate surrounds were identified following review of the approved BDAR. Soil mapping (NSW DCCEEW, 2025e) and topography (Google Earth) were also used to provide further context on habitat constraints for threatened fauna.

2.3.2 Habitat Constraints

A field survey was undertaken to identify any habitat constraints (e.g. waterbodies, rocky areas, tree hollows) present within each Access Point and immediate surrounds. Potential habitat constraints within the broader area (1,500m buffer) were assessed using Google Earth and soil landscape mapping (NSW DCCEEW, 2025e) and habitat constraints identified in the approved BDAR.

2.3.3 Field Surveys

Threatened fauna were recorded opportunistically however, their habitats were targeted during the parallel field traverses.

2.4 Presence/ Absence of Threatened Species

Due to the critical nature of the assessment and narrow completion window, the only threatened species surveys completed were for potentially occurring flora. However, information collected during the desktop assessment, including review of the approved BDAR, as well as data collected during field surveys were used to determine which species could be excluded within the Subject Land based on known habitat constraints and/ or geographic restrictions. When assessing the presence/ absence of threatened species as part of this assessment, consideration was given to the targeted surveys undertaken as part of the approved BDAR. Comprehensive targeted surveys were undertaken for a range of species across the project alignment as part of the approved BDAR. Where applicable, the results from these targeted surveys were used to assist in the likelihood of a given threatened species occurring within the Subject Land. The exclusion/ assumed presence of threatened species has been determined in the approved BDAR per IBRA subregion, where a species has been excluded/ assumed present within an IBRA Subregion, the same has been done in this biodiversity assessment and the relevant justification from the approved BDAR has been used. Updates to the BAM-C and species listings under the BC Act or EPBC Act since finalisation of the approved BDAR may result in the identification of new Species Credit species. Only candidate Species Credit species included at the time of approval were considered in this assessment.

Where a species is assumed to be present and the unit of measure is 'counts of individuals', the number of individuals likely to be present within the Subject Land was estimated with reference to the approved BDAR.

2.5 Weather Conditions

Surveys were undertaken over several weeks in 2024 and 2025 (6th – 8th, 25th – 29th November 2024, 9th -12th, 16th -18th December 2024, and 15th, 20th and 22nd January 2025). Weather conditions taken from the nearest weather station (Mudgee, station no. 062101) during the field surveys are outlined in **Table 1**. Weather conditions during the field surveys were generally conducive for identifying threatened species should they occur within the Access Points.

Table 1. Weather conditions taken from the nearest weather stations (Station number 067113) in the lead up and during the field survey (BOM, 2024).

Timing/activities	Date	Day	Temperature		Rainfall (mm)
			Min	Max	
Field surveys- vegetation mapping, targeted flora surveys & fauna habitat surveys	06/11/2024	Wednesday	12.2	34.5	0
	07/11/2024	Thursday	16.7	32.9	1.0
	08/11/2024	Friday	10.5	26.7	5.4
	25/11/2024	Monday	15.2	34.1	0
	26/11/2024	Tuesday	15.4	33.6	0
	27/11/2024	Wednesday	15.1	31.8	0
	28/11/2024	Thursday	16.9	25.7	0.8
	29/11/2024	Friday	18.3	23.8	4.6
	09/12/2024	Monday	17.7	29.2	0
	10/12/2024	Tuesday	15.1	30.1	0
	11/12/2024	Wednesday	15.8	29.3	0
	12/12/2024	Thursday	9.8	30.4	0
	16/12/2024	Monday	18.9	34.5	0
	17/12/2024	Tuesday	16.3	35.0	0
	18/12/2024	Wednesday	18.1	23.2	0
	15/01/2025	Wednesday	18.0	36.4	0
	20/01/2025	Monday	10.3	30.5	0
	22/01/2025	Wednesday	14.5	36.3	0

2.6 Limitations

Not all flora and fauna species could be directly surveyed for during the site assessment. These species include nocturnal fauna and cryptic flora with flowering times outside of the survey period. The presence of nocturnal and cryptic species was assessed based on habitat constraints and historical records. Some areas within the Access Points were inspected from a distance due to property access issues and location within a rail corridor.

To ensure consistency, a review of the vegetation mapping conducted as part of the approved BDAR (WSP, 2024) was undertaken to assist in the identification of PCTs and vegetation zones within and surrounding the Access Points. The PCTs used in this Biodiversity Assessment are consistent with the approved BDAR. Some of the BAM plots were 10m x 100m owing to access constraints and the linear nature of some of the vegetation zones. Sampling plot locations were chosen in areas that were representative of the type and condition of vegetation across the Access Points.

3. SP1-G

3.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	NSW South Western Slopes	NSW South Western Slopes, Sydney Basin
IBRA Subregion	Inland Slopes	Inland Slopes, Kerrabee
Mitchell Landscape	Cope Hills Granite	Cope Hills Granite, Talbragar - Upper Macquarie Terrace Sands and Gravels
Native vegetation cover	0.19ha	69.70%
Rivers, streams, estuaries and wetlands	N/A	Two 4 th order watercourses (Rouses Creek and Sportsmans Hollow Creek) and multiple 1 st , 2 nd and 3 rd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Areas of granite rock outcrop have been identified during the approved BDAR. No other geological features of significance exist within the 1500m buffer.
Topography, Geology and Soils	Rouse soil landscape: undulating hills and low hills with granite outcropping as tors and sloping pavements. Gulgong Granite, biotite granite, adamellite, granodiorite. 464 – 460m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

3.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 2**.

Table 2. PCTs identified within SP1-G.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
481	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	0.19ha
Total Area		0.19ha

3.2.1 PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region

One PCT was determined to occur within the Access Point:

- PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region (**Table 3**).

Table 3. PCT 481.

PCT ID	481
PCT Name	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	North Coast Dry Sclerophyll Forests
Percent Cleared Value (%)	28.00
Extent within Access Point (ha)	0.19

3.2.1.1 Condition States

Native vegetation (PCT 481) was determined to be represented by three condition classes within the Access Point:

- PCT 481, Thinned
- PCT 481, Regrowth Shrubland, and
- PCT 481, Derived Native Grassland.

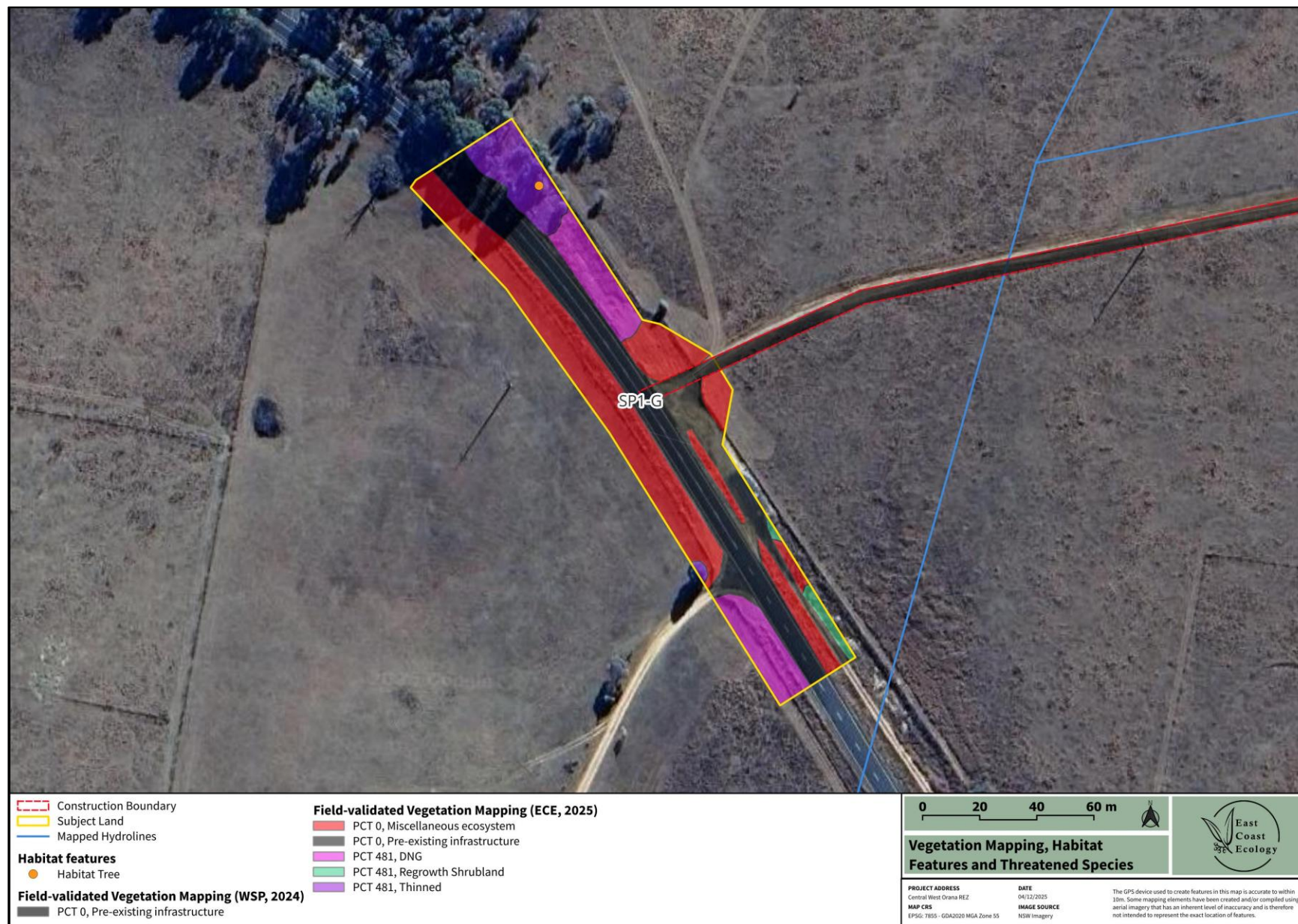


Figure 2. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-G.

3.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from the approved BDAR (WSP, 2024) (**Table 4** and **Table 5**). A summary of the targeted survey effort applied to each species is provided in **Table 4** and **Table 5** along with the results of the survey effort.

A total of seven Candidate Species Credit species for the Subject Land were derived from the approved BDAR (WSP, 2024). Four (4) of the seven Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining three species were assumed present within the Subject Land.

Table 4. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat Constraints absent. Habitat Constraint: Rocky areas (or within 50m of rocky areas).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat Constraints absent.	No	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Species excluded in the approved BDAR (WSP, 2024).		approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Table 5. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes	Yes (WSP) although not nearby. Yes (ECE) although survey conducted outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).

3.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SAIL) entities. Criteria for listing as an SAIL entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

No threatened entities assumed present within the Access Point have been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

3.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted at this Access Point are provided in **Table 6** and **Table 7**.

Table 6. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	Thinned	0.07
	Regrowth Shrubland	0.01
	Zone 27: Derived Native Grassland	0.11

Table 7. Impacts to threatened species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	481_Thinned	0.07
	481_Regrowth Shrubland	0.01
	481_Derived Native Grassland	0.11
<i>Cercartetus nanus</i> Eastern Pygmy-possum	481_Thinned	0.07
	481_Regrowth Shrubland	0.01
<i>Phascolarctos cinereus</i> Koala	481_Thinned	0.07
	481_Regrowth Shrubland	0.01

4. SP1-H1/H2

4.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	NSW South Western Slopes	NSW South Western Slopes, Sydney Basin
IBRA Subregion	Inland Slopes	Inland Slopes, Kerrabee
Mitchell Landscape	Cope Hills Granite	Cope Hills Granite, Talbragar - Upper Macquarie Terrace Sands and Gravels
Native vegetation cover	0.28ha	51.07%
Rivers, streams, estuaries and wetlands	One shallow waterbody containing emergent vegetation was present within the Access Point.	One 4 th order watercourse (Sportsmans Hollow Creek) and multiple 1 st , 2 nd and 3 rd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Areas of granite rock outcrop have been identified during the approved BDAR within the 1500m buffer. No other geological features of significance exist within the 1500m buffer.
Topography, Geology and Soils	Dexter soil landscape: rolling hills with extensive granite outcrops and rock pavements. Gulgong Granite. Approximately 450m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

4.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 8**.

Table 8. PCTs identified within SP1-H1/H2.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
481	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	0.28ha
Total Area		0.28ha

4.2.1 PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region

One PCT was determined to occur within the Access Point:

- PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region (**Table 9**).

Table 9. PCT 481

PCT ID	481
PCT Name	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	North Coast Dry Sclerophyll Forests
Percent Cleared Value (%)	28.00
Extent within Access Point (ha)	0.28ha

4.2.1.1 Condition States

Native vegetation (PCT 481) was determined to be represented by two condition classes within the Access Point:

- PCT 481, Thinned, and
- PCT 481, Moderate/Good.

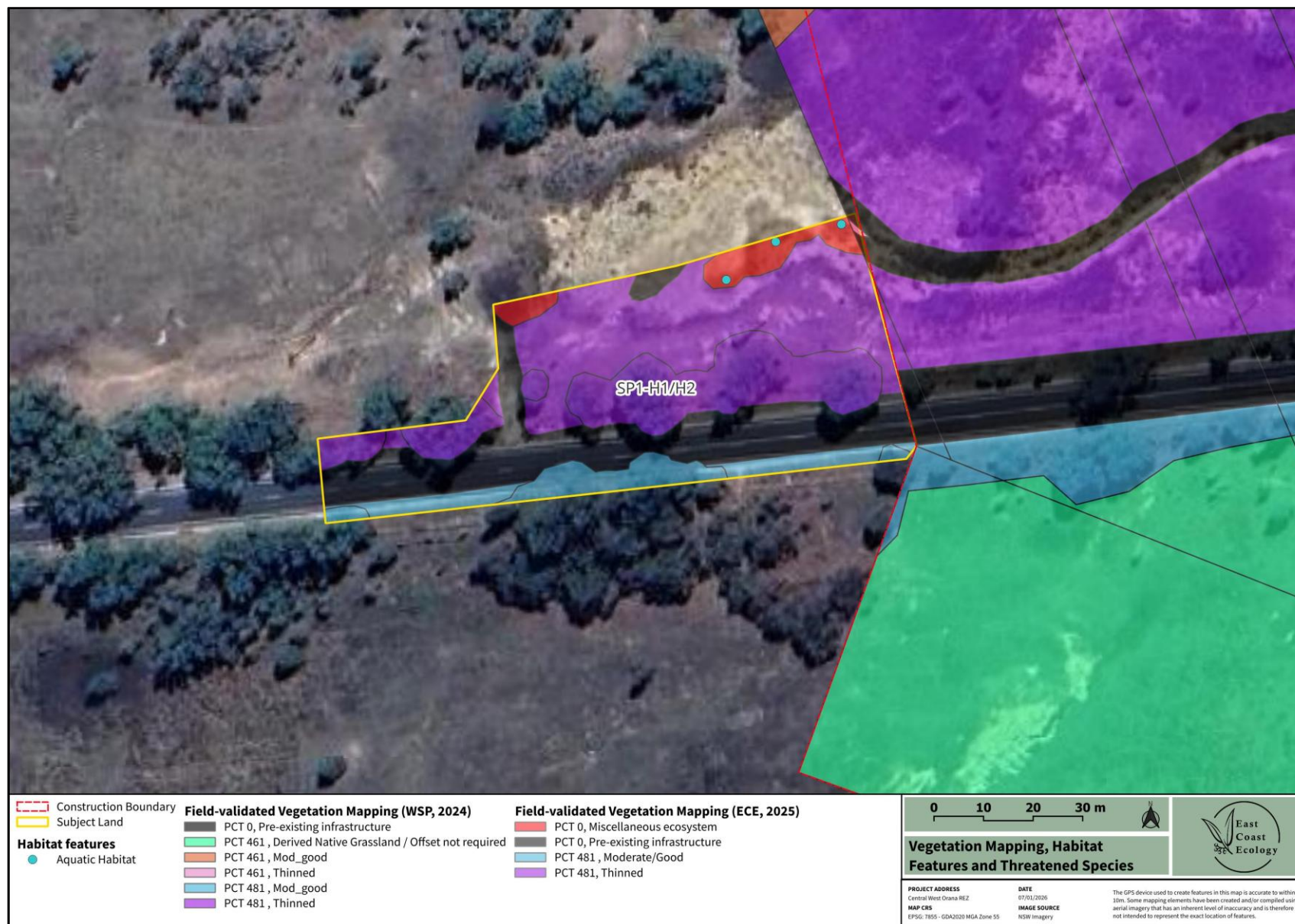


Figure 3. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-H1/H2.

4.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from the approved BDAR (WSP, 2024) (**Table 10** and **Table 11**). A summary of the targeted survey effort applied to each species is provided in **Table 10** and **Table 11** along with the results of the survey effort.

A total of seven Candidate Species Credit species for the Subject Land were derived from the approved BDAR (WSP, 2024). Five (5) of the seven Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining two species were assumed present within the Subject Land.

Table 10. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat Constraints absent. Habitat Constraint: Rocky areas (or within 50m of rocky areas).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat Constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Species excluded in the approved BDAR (WSP, 2024).	No	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Phascolarctos cinereus</i> Koala	No. Species excluded through nearby, extensive and exhaustive surveys (i.e. Koala drone survey and SAT) undertaken as part of the approved BDAR)	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Table 11. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (WSP) although survey conducted outside of NSW DCCEEW endorsed survey period. Yes (ECE) although survey conducted outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).

4.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SAIL) entities. Criteria for listing as an SAIL entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

No threatened entities assumed present within the Access Point have been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEE, 2025b).

4.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted at this Access Point are provided in **Table 12** and **Table 13**.

Table 12. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	Thinned	0.23
	Moderate/Good	0.05

Table 13. Impacts to threatened species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	481_Thinned	0.23
	481_Moderate/Good	0.05
<i>Cercartetus nanus</i> Eastern Pygmy-possum	481_Thinned	0.23
	481_Moderate/Good	0.05

5. SP1-J2

5.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	NSW South Western Slopes, Sydney Basin
IBRA Subregion	Kerrabee	Inland Slopes, Kerrabee
Mitchell Landscape	Talbragar - Upper Macquarie Terrace Sands and Gravels	Goulburn River Gorges, Cope Hills Granite, Talbragar - Upper Macquarie Terrace Sands and Gravels, Upper Goulburn Valleys and Escarpments
Native vegetation cover	0ha	53.17%
Rivers, streams, estuaries and wetlands	N/A	One 4 th order watercourse (Sportsman's Hollow Creek) and multiple 1 st , 2 nd and 3 rd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Areas of granite rock outcrop have been identified during the approved BDAR within the 1500m. No other geological features of significance exist within the 1500m buffer.
Topography, Geology and Soils	Ulan soil landscape: low undulating rises and flats. Shale, sandstone, conglomerate, chert, coal and torbanite seams. 421m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

5.2 Field-validated Vegetation

Vegetation within the Access Point could not be assigned to a PCT as it contained no native canopy or understorey species and was dominated by exotic species (**Figure 4**). No further assessment is required.

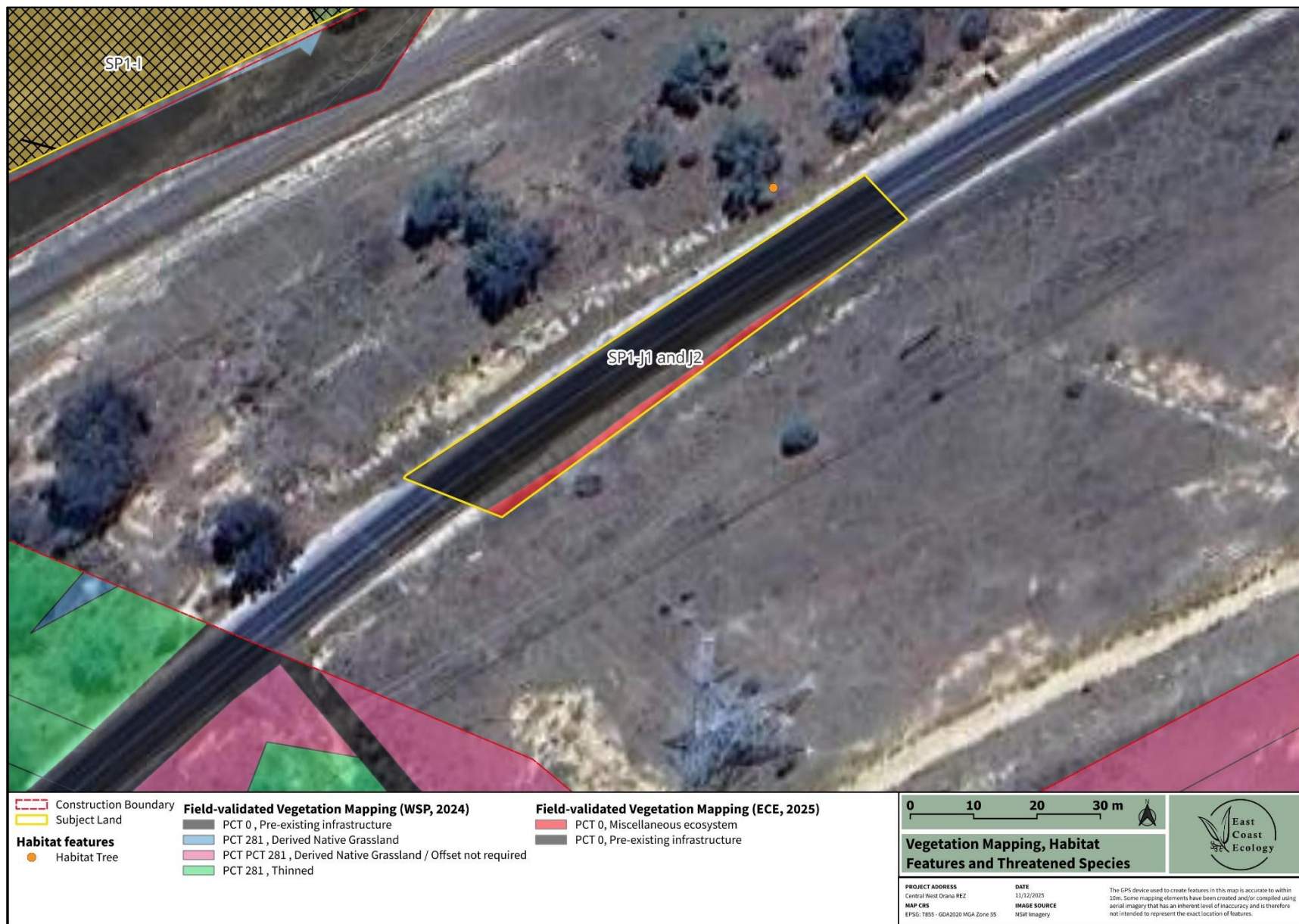


Figure 4. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1- J1 and J2.

6. SP1-N

6.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Lees Pinch Foothills	Lees Pinch Foothills, Upper Goulburn Valleys and Escarpment, Liverpool Range Valleys and Foothills
Native vegetation cover	0.63ha	72.72%
Rivers, streams, estuaries and wetlands	One 1 st order watercourse and one 4 th order watercourse (Wilpinjong Creek) intersect the Access Point.	Multiple 1 st , 2 nd and 3 rd order watercourses and two 4 th order watercourses (Wilpinjong Creek and Murragamba Creek) occur within the 1500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Multiple caves and a gully containing large outcropping and crevices has been identified during the approved BDAR within the 1500m buffer.
Topography, Geology and Soils	Ulan soil landscape: low undulating rises and flats. Shale, sandstone, conglomerate, chert, coal and torbanite seams. 438m asl to 421m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

6.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 14**.

Table 14. PCTs identified within SP1-N.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
481	Rough-barked Apple – Blakely’s Red Gum – Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open	0.41ha

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
	forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	
281	Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion	0.19
479	Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	0.03
Total Area		0.63ha

6.2.1 PCT 481: Rough-barked Apple – Blakely’s Red Gum – Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region

One PCT was determined to occur within the centre of the Access Point:

- PCT 481: Rough-barked Apple – Blakely’s Red Gum – Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region (**Table 15**)

Table 15. PCT 481

PCT ID	481
PCT Name	Rough-barked Apple – Blakely’s Red Gum – Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	North Coast Dry Sclerophyll Forests
Percent Cleared Value (%)	28.00
Extent within Access Point (ha)	0.41

6.2.1.1 Condition States

Native vegetation (PCT 481) was determined to be represented by three condition classes within the Access Point:

- PCT 481, Moderate/Good, and
- PCT 481, Derived Native Grassland.

6.2.2 PCT 281: Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the southern portion of the Access Point:

- PCT 281: Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion (**Table 15**)

Table 16. PCT 281

PCT ID	281
PCT Name	Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.19

6.2.2.1 Condition States

Native vegetation (PCT 281) was determined to be represented by two condition classes within the Access Point:

- PCT 281, Moderate/Good, and
- PCT 281, Thinned.

6.2.3 PCT 479: Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion

One PCT was determined to occur within the eastern portion of the Access Point:

- PCT 479: Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion (**Table 15**)

Table 17. PCT 479

PCT ID	479
PCT Name	Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrub sub-formation)
Vegetation Class	Western Slopes Dry Sclerophyll Forests
Percent Cleared Value (%)	40.00
Extent within Access Point (ha)	0.03

6.2.3.1 Condition States

Native vegetation (PCT 479) was determined to be represented by one condition classes within the Access Point:

- PCT 479, Moderate/Good.



Figure 5. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-N (Map 1 of 2).

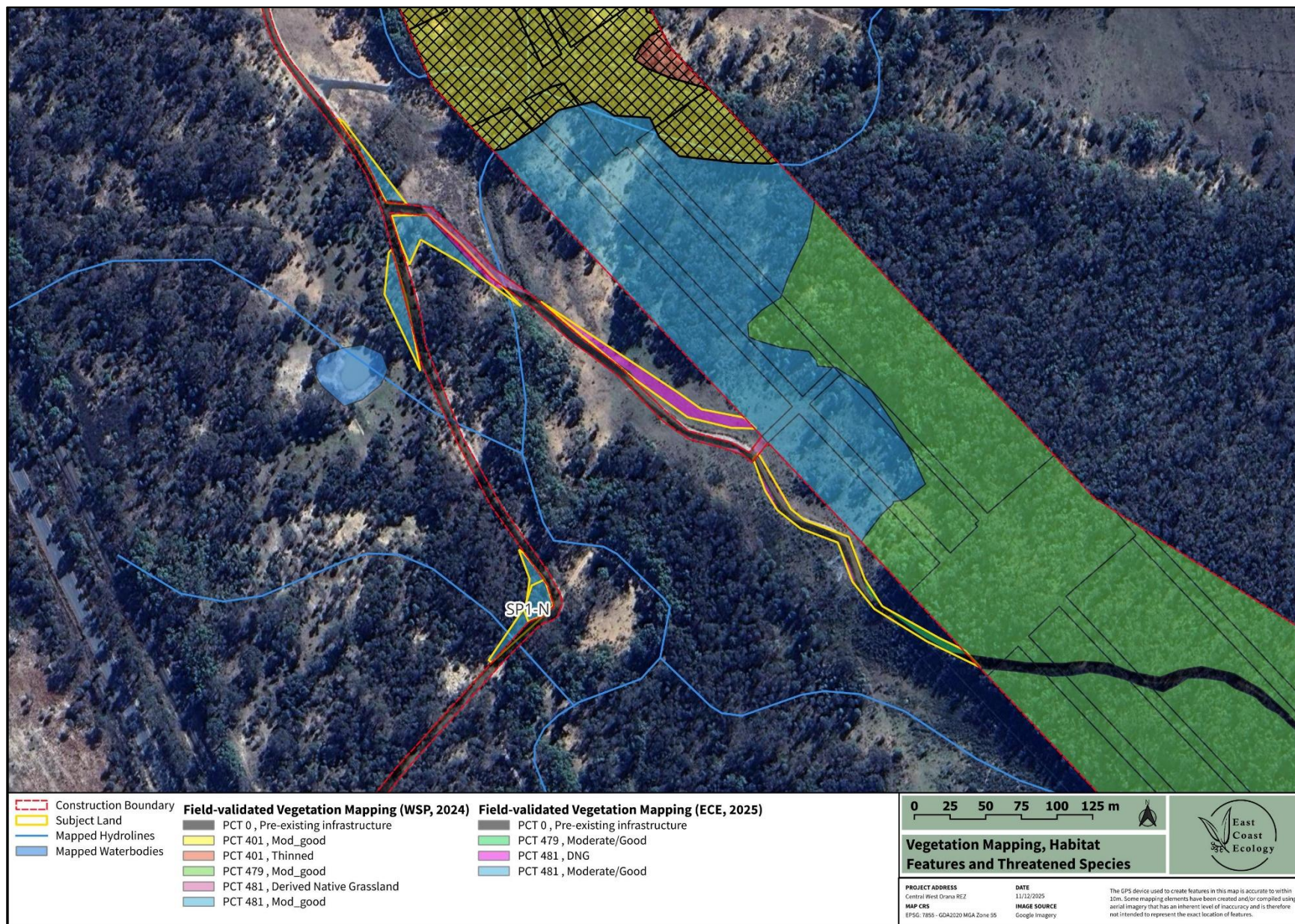


Figure 6. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-N (Map 2 of 2).

6.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from the approved BDAR (WSP, 2024) (**Table 18** and **Table 19**). A summary of the targeted survey effort applied to each species is provided in **Table 18** and **Table 19** along with the results of the survey effort.

A total of 29 Candidate Species Credit species for the Subject Land were derived from the approved BDAR (WSP, 2024). Twenty-three (23) of the 29 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining seven species were assumed present within the Subject Land.

Table 18. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	Yes. Habitat Constraints Present. Habitat Constraint: Important Habitat Map.	N/A	Assumed present - Mapped on Important Habitat Map
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat Constraints absent. Habitat Constraint: Rocky areas (or within 50m of rocky areas).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Eucalypt tree species with hollows at least 3 m above the ground and with hollow diameter of 7 cm or larger.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Calyptorhynchus lathami lathami</i> South-eastern Glossy Black-Cockatoo (Breeding)	No. Habitat Constraints absent. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Hollow bearing trees; living or dead tree with hollows greater than 15cm diameter and higher than 8m above ground.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) recorded nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP). No (ECE).	Assumed present (PCT 281 and 479) – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) although not nearby Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat Constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat Constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes. Assumed present where there are no nearby targeted surveys as per the approved BDAR (WSP, 2024).	Yes (WSP) nearby the northern portion of Access Point No (ECE)	Assumed present (PCT 281) - consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022). Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or clifflines.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	No. Species excluded through nearby, extensive and exhaustive surveys (i.e. Koala SAT and call playback) undertaken as part of the approved BDAR)	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species or any breeding camps. Habitat constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat constraints present. Habitat constraint: Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP). No (ECE).	Assumed present (PCT 281 and 479) – consistent with the approved BDAR (WSP, 2024).

Table 19. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (WSP) although not nearby Yes (ECE) although outside of NSW	Assumed present – consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
		DCCEEW endorsed survey period.	
<i>Androcalva procumbens</i> (syn. <i>Commersonia procumbens</i>)	Habitat constraints absent. Habitat constraint: Pilliga sandstone.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Eucalyptus camaldulensis</i> <i>Eucalyptus camaldulensis</i> population in the Hunter catchment	Yes.	Yes (ECE)	No.
<i>Monotaxis macrophylla</i> Large-leafed Monotaxis	Species excluded as suitable habitat deemed not to be present as per the approved BDAR (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE)	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE)	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present – consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Prasophyllum</i> sp. <i>Wybong</i>	Species excluded, considered a synonym of <i>Prasophyllum petilum</i> as per the approved BDAR (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tylophora linearis</i> (syn. <i>Vincetoxicum forsteri</i>)	Yes.	Yes (ECE)	No.

6.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Three threatened species, Regent Honeyeater, Large-eared Pied Bat and Eastern Cave Bat assumed present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

6.5 Impact Summary

A summary of the PCTs and species credits species that may be impacted at this Access Point are provided in **Table 20** and **Table 21**.

Table 20. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 481: Rough-barked Apple – Blakely’s Red Gum – Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	Moderate/Good	0.27
	Derived Native Grassland	0.15
PCT 281: Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion	Moderate/Good	0.14
	Thinned	0.05
PCT 479: Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow	Moderate/Good	0.03

PCT	Vegetation Zone	Area (ha)
Belt South Bioregion and Sydney Basin Bioregion		

Table 21. Impacts to threatened species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	481_Moderate/Good	0.27
	481_Derived Native Grassland	0.15
	281_Moderate/Good	0.14
	281_Thinned	0.05
	479_Moderate/Good	0.03
<i>Anthochaera phrygia</i> (Regent Honeyeater)	481_Moderate/Good	0.14
	481_Derived Native Grassland	0.04
	281_Moderate/Good	0.11
	281_Thinned	0.05
	479_Moderate/Good	0.02
<i>Cercartetus nanus</i> (Eastern Pygmy-possum)	481_Moderate/Good	0.27
	281_Moderate/Good	0.14
	281_Thinned	0.05
	479_Moderate/Good	0.03
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Moderate/Good	0.14
	281_Thinned	0.05
	479_Moderate/Good	0.03
<i>Petaurus norfolcensis</i> (Squirrel Glider)	281_Moderate/Good	0.14
	281_Thinned	0.05
<i>Vespadelus troughtoni</i> (Eastern Cave Bat)	281_Moderate/Good	0.14
	281_Thinned	0.05

Species	Vegetation Zone	Area (ha)
	479_Moderate/Good	0.03
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	281_Moderate/Good	0.14
	281_Thinned	0.05

7. SP1-O

7.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills, Gulgong Ranges
Native vegetation cover	2.14ha	78.14%
Rivers, streams, estuaries and wetlands	Two 1 st order watercourses and one 5 th order watercourse (Wilpinjong Creek) intersect the Access Point.	One 5 th order watercourse (Wilpinjong Creek), one 4 th order watercourse (Murrumbidgee Creek) and multiple 1 st and 2 nd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Multiple caves have been identified during the approved BDAR within the 1500m buffer. No other geological features of significance exist within the 1500m buffer.
Topography, Geology and Soils	Ulan soil landscape: low undulating rises and flats. Shale, sandstone, conglomerate, chert, coal and torbanite seams. Less Pinch soil landscape: rolling hills and low hills with steep rocky slopes and valley sides. Narrabeen sandstone, conglomerate sandstone, shale, conglomerate, mudstone, chert, coal and torbanite seams. 470m asl to 401m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

7.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCTs identified within **Table 22**.

Table 22. PCTs identified within SP1-O.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
401	Rough-barked Apple – Blakely's Red Gum – Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region	1.51ha
479	Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	0.50ha
281	Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion	0.13
Total Area		2.14ha

7.2.1 PCT 401: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region

One PCT was determined to occur within south eastern extent of the Access Point:

- PCT 401: Rough-barked Apple – Blakely's Red Gum – Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region (**Table 23**).

Table 23. PCT 401

PCT ID	401
PCT Name	Rough-barked Apple - Blakely's Red Gum - Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	Western Slopes Dry Sclerophyll Forests
Percent Cleared Value (%)	33.00
Extent within Access Point (ha)	1.51ha

7.2.1.1 Condition States

Native vegetation (PCT 401) was determined to be represented by three condition classes within the Access Point:

- PCT 401, Thinned
- PCT 401, Regrowth Shrubland, and
- PCT 401, Derived Native Grassland/ Offset not required.

7.2.2 PCT 479: Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion

One PCT was determined to occur within the north western extent of the Access Point:

- PCT 479: Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion (**Table 24**).

Table 24. PCT 479

PCT ID	479
PCT Name	Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	Western Slopes Dry Sclerophyll Forests
Percent Cleared Value (%)	28.00
Extent within Access Point (ha)	0.50ha

7.2.2.1 Condition States

Native vegetation (PCT 479) was determined to be represented by three condition classes within the Access Point:

- PCT 479, Excellent
- PCT 479, Moderate/Good, and
- PCT 479, Regrowth Shrubland.

7.2.3 PCT 281: Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the centre of the Access Point:

- PCT 281: Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion (**Table 24**).

Table 25. PCT 281

PCT ID	281
PCT Name	Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South western slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.13ha

7.2.3.1 Condition States

Native vegetation (PCT 281) was determined to be represented by one condition class within the Access Point:

- PCT 281, Thinned.

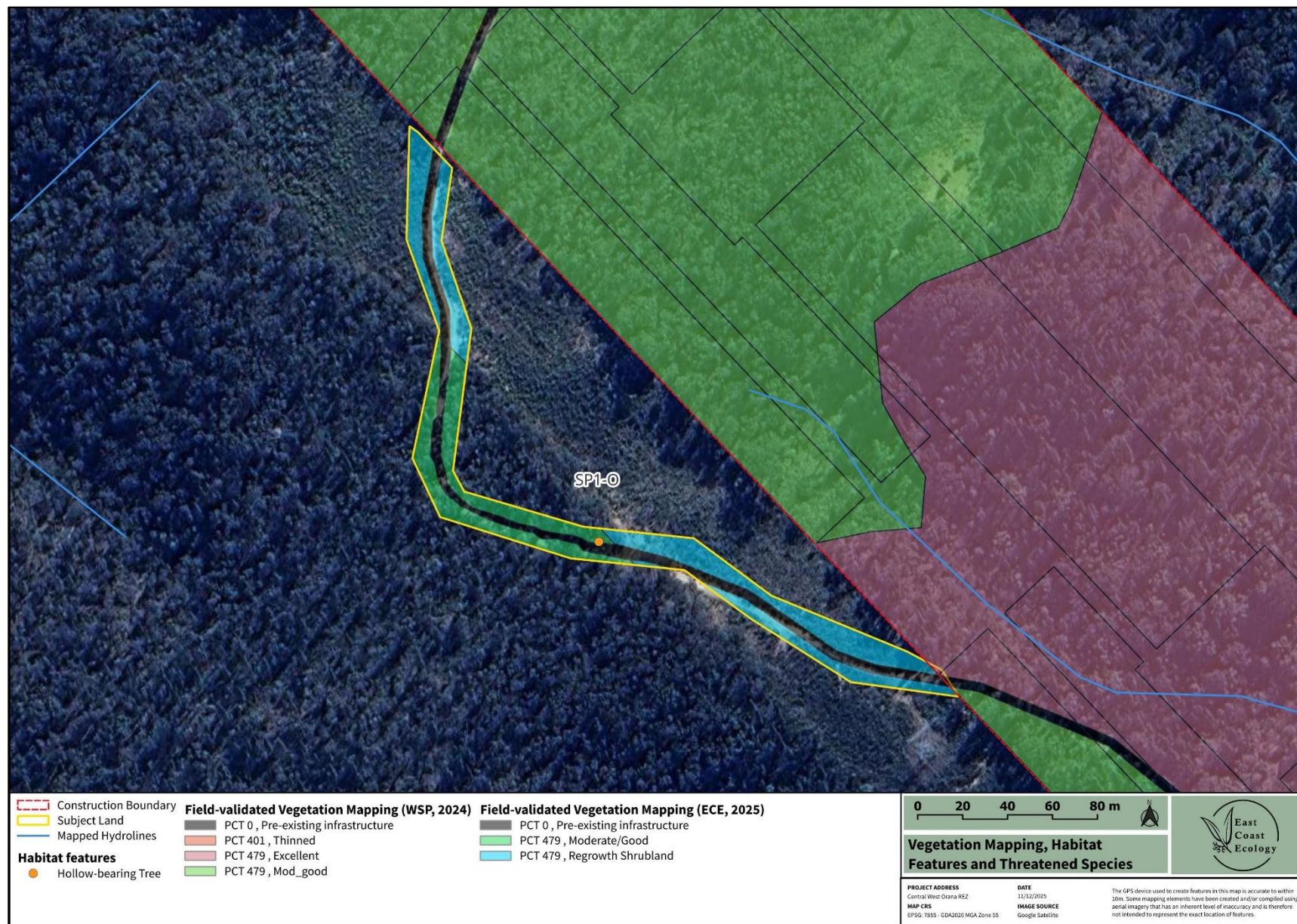


Figure 7. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-O (Map 1 of 3).

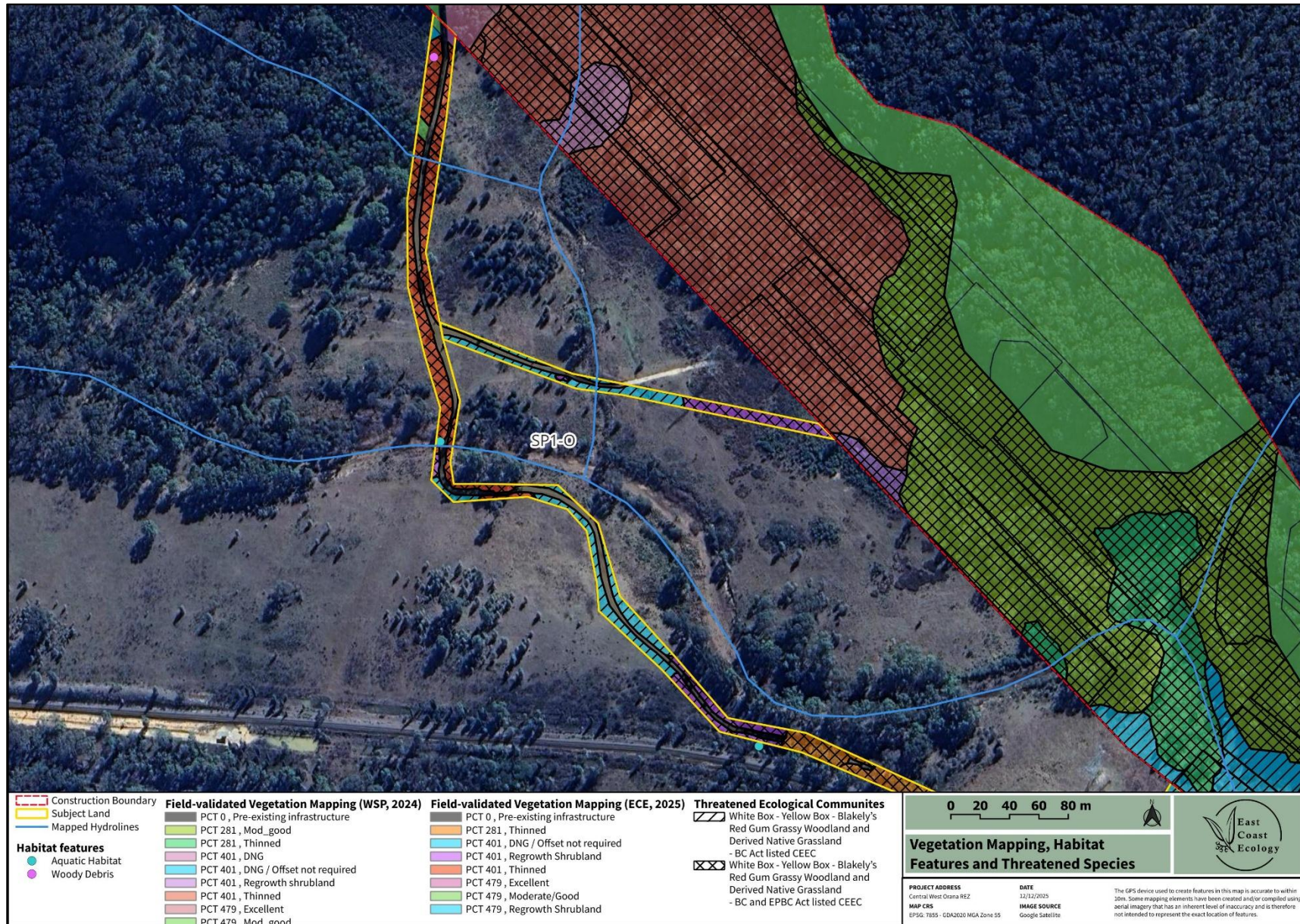


Figure 8. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-O (Map 2 of 3).

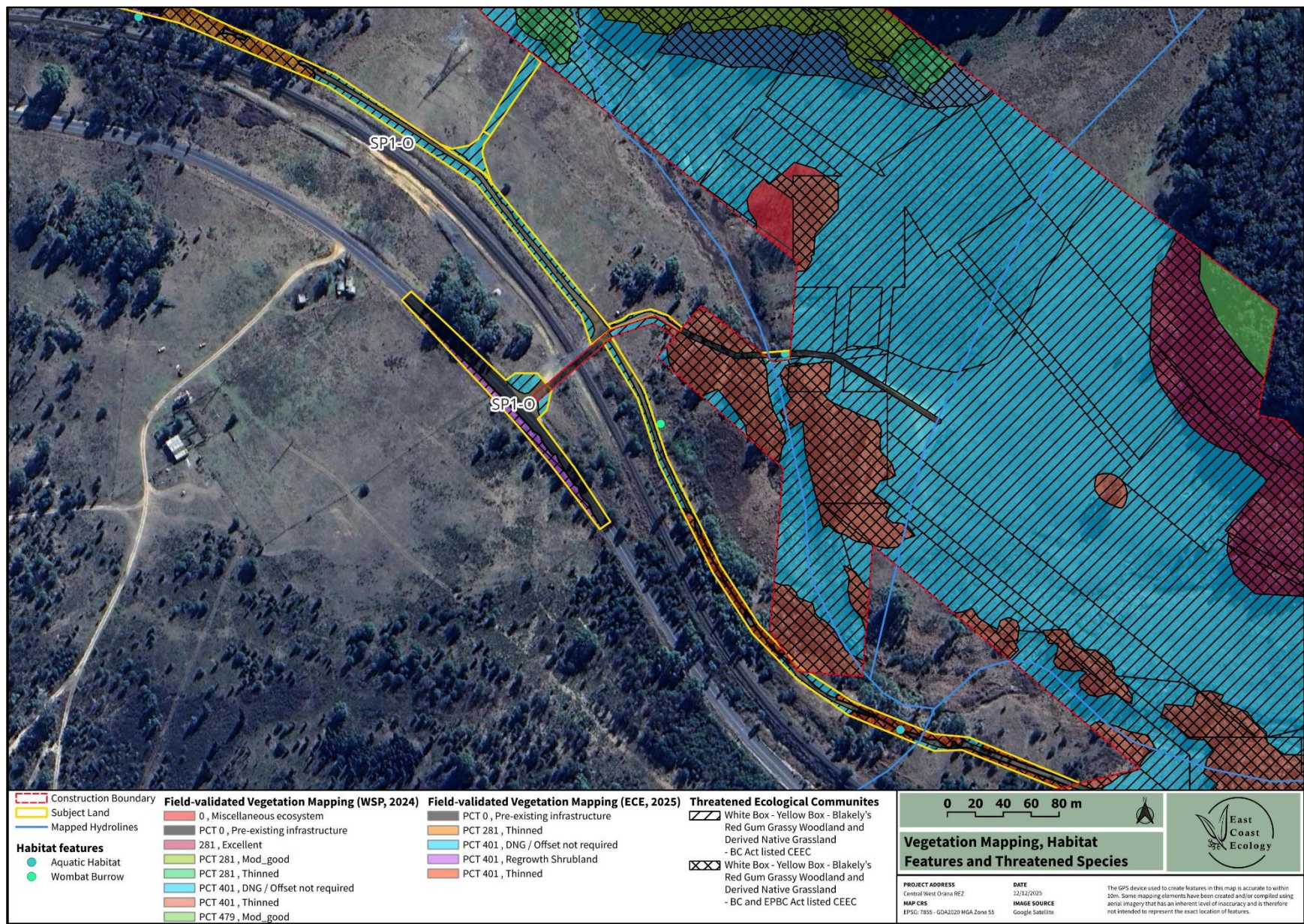


Figure 9. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-O (Map 3 of 3).

7.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from the approved BDAR (WSP, 2024) (**Table 26** and **Table 27**). A summary of the targeted survey effort applied to each species is provided in **Table 26** and **Table 27** along with the results of the survey effort.

A total of 30 Candidate Species Credit species for the Subject Land were derived from the approved BDAR (WSP, 2024). Nineteen (19) of the 30 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining 11 species were assumed present within the Subject Land.

Table 26. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	Yes. Habitat constraints present. Habitat Constraint: Important Habitat Map.	N/A	Assumed present - Mapped on Important Habitat Map
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	Yes. Habitat constraints present. Habitat Constraint: Rocky areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (breeding)	No. Habitat constraints present however extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Eucalypt tree species with hollows at least 3 m above the ground and with hollow diameter of 7 cm or larger.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptrorhynchus lathamii</i> <i>lathamii</i>	No. Habitat constraints absent.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
South-eastern Glossy Black-Cockatoo (Breeding)	Habitat Constraint: Hollow bearing trees; Living or dead tree with hollows greater than 15cm diameter and higher than 8m above ground		
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hoplocephalus bitorquatus</i> Pale-headed Snake	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent (the only hollow-bearing tree is located within PCT 479 which this species is not associated with). Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl (Breeding)	No. Habitat constraints present, however nearby targeted surveys (i.e. call playback) undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	Yes (WSP) No (ECE)	Assumed present (PCT 401 and 281) - consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022). Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffclines.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes. Assumed present where there are no nearby targeted surveys as per the approved BDAR (WSP, 2024). Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although only nearby the northern portion of access point No (ECE)	Assumed present - where there are no nearby targeted surveys
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species or any breeding camps. Habitat constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints only present within PCT 479 which this species is not associated with. Targeted surveys (call playback) undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat Constraints present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).

Table 27. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (WSP) although not nearby. Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Androcalva procumbens</i> (syn <i>Commersonia procumbens</i>)	No. Habitat constraints absent. Habitat Constraint: Piliga sandstone.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Diuris tricolor</i> Pine Donkey Orchid	Yes.	Yes (WSP) although not nearby. Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Eucalyptus camaldulensis</i> <i>Eucalyptus camaldulensis</i> population in the Hunter catchment	Yes.	Yes (ECE)	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE)	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE)	No.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum</i> sp. <i>Wybong</i>	Species excluded, considered a synonym of <i>Prasophyllum petilum</i> as per the approved BDAR (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tylophora linearis</i>	Yes.	Yes (ECE)	No.

7.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Three threatened species, Regent Honeyeater, Large-eared Pied Bat and Eastern Cave Bat assumed present within the Access Point have been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

7.5 Impact Summary

A summary of the PCTs and species credits species that may be impacted at this Access Point are provided in **Table 28** and **Table 29**.

Table 28. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 401: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	Thinned	0.57
	Regrowth Shrubland	0.26
	Derived Native Grassland/Offset not required	0.68
PCT 479: Narrow-leaved Ironbark – Black Cypress Pine – stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	Excellent	0.01
	Moderate/Good	0.19
	Regrowth Shrubland	0.31
PCT 281: Rough-barked Apple – Red Gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South	Thinned	0.13

PCT	Vegetation Zone	Area (ha)
western slopes Bioregion and Brigalow Belt South Bioregion		

Table 29. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	401_Thinned	0.57
	401_Regrowth Shrubland	0.26
	401_Derived Native Grassland/Offset not required	0.68
	479_Excellent	0.01
	479_Moderate/Good	0.19
	479_Regrowth Shrubland	0.31
	281_Thinned	0.13
<i>Anthochaera Phrygia</i> Regent Honeyeater	401_Thinned	0.06
	401_Regrowth Shrubland	0.04
	401_Derived Native Grassland/Offset not required	0.02
	479_Excellent	0.003
	479_Moderate/Good	0.17
	479_Regrowth Shrubland	0.04
	281_Thinned	0.12
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	479_Moderate/Good	0.19
	479_Regrowth Shrubland	0.31
<i>Cercartetus nanus</i> Eastern Pygmy-possum	401_Thinned	0.57
	401_Regrowth Shrubland	0.26
	479_Excellent	0.01
	479_Moderate/Good	0.19
	479_Regrowth Shrubland	0.31
	281_Thinned	0.13
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	401_Thinned	0.57
	401_Regrowth Shrubland	0.26
	479_Excellent	0.01

Species	Vegetation Zone	Area (ha)
	479_Moderate/Good	0.19
	479_Regrowth Shrubland	0.31
	281_Thinned	0.13
<i>Diuris tricolor</i> Pine Donkey Orchid	401_Thinned	0.57
	401_Regrowth Shrubland	0.26
<i>Hoplocephalus bitorquatus</i> Pale-headed Snake	401_Thinned	0.57
	401_Thinned	0.57
<i>Petaurus norfolcensis</i> Squirrel Glider	401_Regrowth Shrubland	0.26
	281_Thinned	0.13
	401_Thinned	0.57
<i>Phascolarctos cinereus</i> Koala	401_Regrowth Shrubland	0.26
	281_Thinned	0.13
	401_Thinned	0.57
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	281_Thinned	0.13
<i>Vespadelus trougtoni</i> Eastern Cave Bat	401_Thinned	0.57
	401_Regrowth Shrubland	0.26
	281_Thinned	0.13

8. SP1-P

8.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Upper Goulburn Valleys and Escarpment	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills, Gulgong Ranges
Native vegetation cover	0.08ha	75.66%
Rivers, streams, estuaries and wetlands	N/A	Multiple 1 st and 2 nd order watercourses, one 3 rd order watercourse and one 5 th order watercourse (Wilpinjong Creek).
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Multiple caves have been identified during the approved BDAR within the 1500m buffer. No other geological features of significance exist within the 1500m buffer.
Topography, Geology and Soils	Ulan soil landscape: low undulating rises and flats. Shale, sandstone, conglomerate, chert, coal and torbanite seams. Approximately 403m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

8.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 30**.

Table 30. PCTs identified within SP1-P.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW	0.07ha

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
	South Western Slopes Bioregion and Brigalow Belt South Bioregion	
401	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	0.01
Total Area		0.08ha

8.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the majority of the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 31**).

Table 31. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.07

8.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by four condition classes within the Access Point:

- PCT 281, Excellent
- PCT 281, Thinned

- Vegetation Zone 9: Regrowth Shrubland, and
- Vegetation Zone 10: Derived Native Grassland.

8.2.2 PCT 401: Rough-barked Apple – Blakely's Red Gum – Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region

One PCT was determined to occur within the northern extent of the Access Point:

- PCT 401: Rough-barked Apple – Blakely's Red Gum – Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region (**Table 31**).

Table 32. PCT 401

PCT ID	401
PCT Name	401
Associated TEC	Rough-barked Apple - Blakely's Red Gum - Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region
TEC Present?	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 – BC Act listed CEEC White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
Vegetation Formation	Yes
Vegetation Class	Dry Sclerophyll Forests (Shrubby sub-formation)
Percent Cleared Value (%)	Western Slopes Dry Sclerophyll Forests
Extent within Access Point (ha)	0.01

8.2.2.1 Condition States

Native vegetation (PCT 401) was determined to be represented by one condition class within the Access Point:

- PCT 401, Derived Native Grassland/ Offset not required.

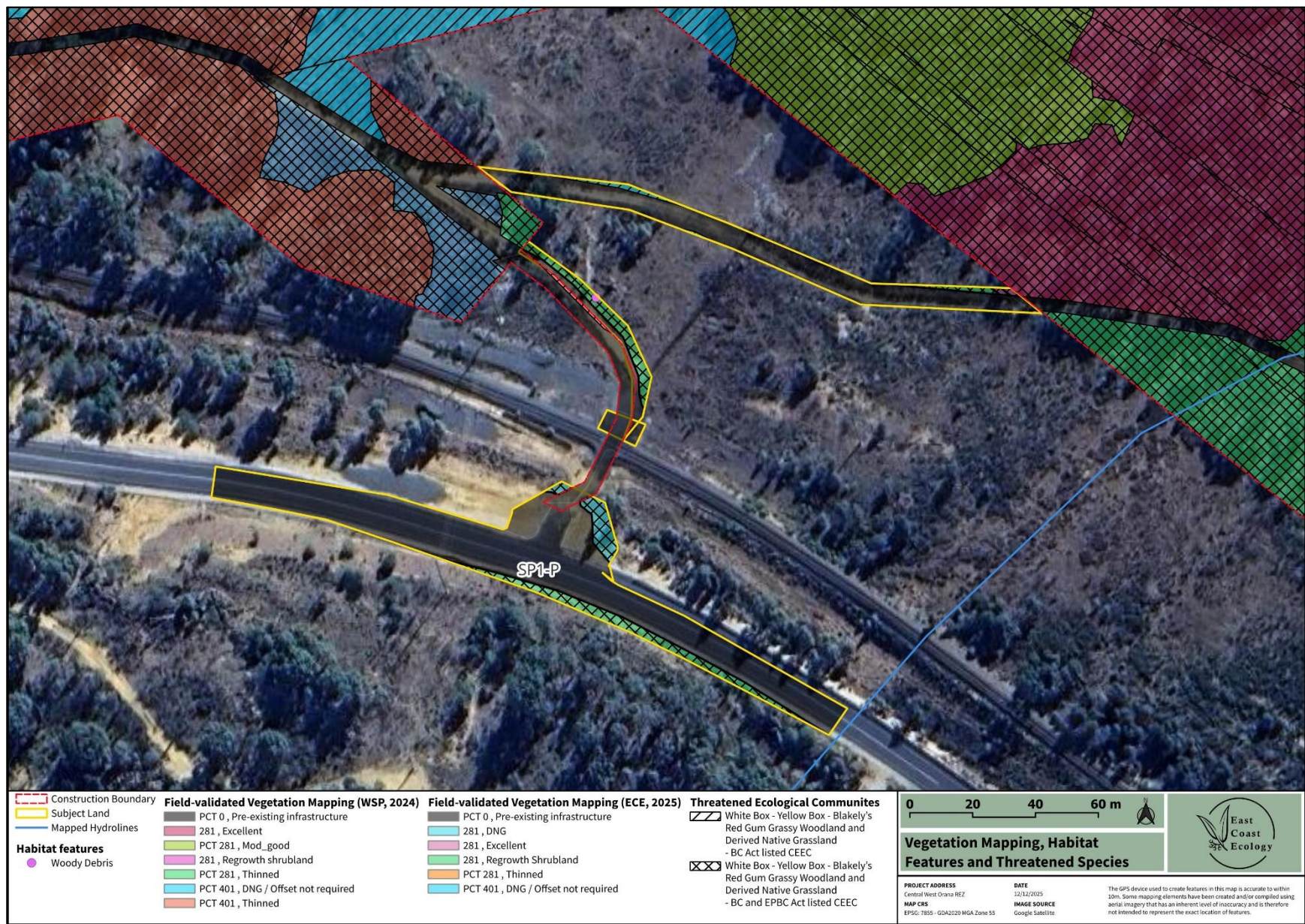


Figure 10. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-P.

8.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from the approved BDAR (WSP, 2024) (**Table 33** and **Table 34**). A summary of the targeted survey effort applied to each species is provided in **Table 33** and **Table 34** along with the results of the survey effort.

A total of 30 Candidate Species Credit species for the Subject Land were derived from the approved BDAR (WSP, 2024). Twenty-two (22) of the 30 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining eight species were assumed present within the Subject Land.

Table 33. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	Yes. Habitat constraints present. Habitat Constraint: Important Habitat Map.	N/A	Assumed present - Mapped on Important Habitat Map
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (breeding)	No. Habitat constraints absent. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Eucalypt tree species with hollows at least 3 m above the ground and with hollow diameter of 7 cm or larger.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathami</i> <i>lathami</i> South-eastern Glossy Black-Cockatoo	No. Habitat constraints absent.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
(Breeding)	Habitat Constraint: Hollow bearing trees; Living or dead tree with hollows greater than 15cm diameter and higher than 8m above ground. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.		
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Habitat constraints absent and extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hoplocephalus bitorquatus</i> Pale-headed Snake	No. Species is only associated with PCT 401 and there is no suitable habitat present within this PCT. Derived Native Grassland and Regrowth Shrubland has been excluded as potential habitat for the species as per the approved BDAR (WSP, 2024).	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Lathamus discolour</i> Swift Parrot (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR this species was not recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022). Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or clifflines.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints absent. Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species or any breeding camps. Habitat constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat constraints present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).

Table 34. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (WSP) Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Androcalva procumbens</i> (syn <i>Commersonia procumbens</i>)	No. Habitat constraints absent. Habitat Constraint: Piliga sandstone.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Diuris tricolor</i> Pine Donkey Orchid	No. Species excluded from vegetation zones that do not warrant an offset as per the approved BDAR (WSP, 2024).	Yes (WSP) although not nearby. Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Eucalyptus camaldulensis</i> <i>Eucalyptus camaldulensis</i> population in the Hunter catchment	Yes.	Yes (ECE)	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE)	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE)	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum</i> sp. <i>Wybong</i>	Species excluded, considered a synonym of <i>Prasophyllum petilum</i> as per the approved BDAR (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Tylophora linearis</i>	Yes.	Yes (ECE)	No.

8.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Three threatened species, Regent Honeyeater, Large-eared Pied Bat, and Eastern Cave Bat, assumed present within the Access Point have been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

8.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point are provided in **Table 35** and **Table 36**.

Table 35. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Excellent	0.001
	Thinned	0.0002
	Regrowth Shrubland	0.05
	Derived Native Grassland	0.01
PCT 401: Rough-barked Apple - Blakely's Red Gum - Black Cypress Pine woodland on sandy flats, mainly in the Pilliga Scrub region	Derived Native Grassland/ Offset not required	0.01

Table 36. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	281_Excellent	0.001
	281_Thinned	0.0002

Species	Vegetation Zone	Area (ha)
	281_Regrowth Shrubland	0.05
	281_Derived Native Grassland	0.01
	401_Derived Native Grassland/ Offset not required	0.01
<i>Anthochaera phrygia</i> (Regent Honeyeater)	281_Regrowth Shrubland	0.03
	281_Derived Native Grassland	0.01
	401_Derived Native Grassland/ Offset not required	0.01
<i>Cercartetus nanus</i> (Eastern Pygmy-possum)	281_Excellent	0.001
	281_Thinned	0.0002
	281_Regrowth Shrubland	0.05
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Excellent	0.001
	281_Thinned	0.0002
	281_Regrowth Shrubland	0.05
<i>Petaurus norfolcensis</i> (Squirrel Glider)	281_Excellent	0.001
	281_Thinned	0.0002
	281_Regrowth Shrubland	0.05
<i>Vespadelus troughtoni</i> (Eastern Cave Bat)	281_Excellent	0.001
	281_Thinned	0.0002
	281_Regrowth Shrubland	0.05
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	281_Excellent	0.001
	281_Thinned	0.0002
	281_Regrowth Shrubland	0.05
	281_Derived Native Grassland	0.01

9. SP1-Q

9.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Upper Goulburn Valleys and Escarpment	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills, Gulgong Ranges
Native vegetation cover	1.11ha	55.96%
Rivers, streams, estuaries and wetlands	One 1 st order watercourse, one 2 nd order watercourse	One 3 rd and 4 th order watercourse, multiple 1 st and 2 nd order watercourses and one 5 th order watercourse (Wilpinjong Creek).
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Multiple caves have been identified during the approved BDAR within the 1500m buffer.
Topography, Geology and Soils	Ulan soil landscape: low undulating rises and flats. Shale, sandstone, conglomerate, chert, coal and torbanite seams. Approximately 400m asl to 387m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

9.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 37**.

Table 37. PCTs identified within SP1-Q.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW	1.11ha

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
	South Western Slopes Bioregion and Brigalow Belt South Bioregion	
		Total Area 1.11ha

9.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 38**).

Table 38. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	1.11

9.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by four condition classes within the Access Point:

- PCT 281, Excellent
- PCT 281, Thinned
- PCT 281, Regrowth Shrubland, and
- PCT 281, Derived Native Grassland.

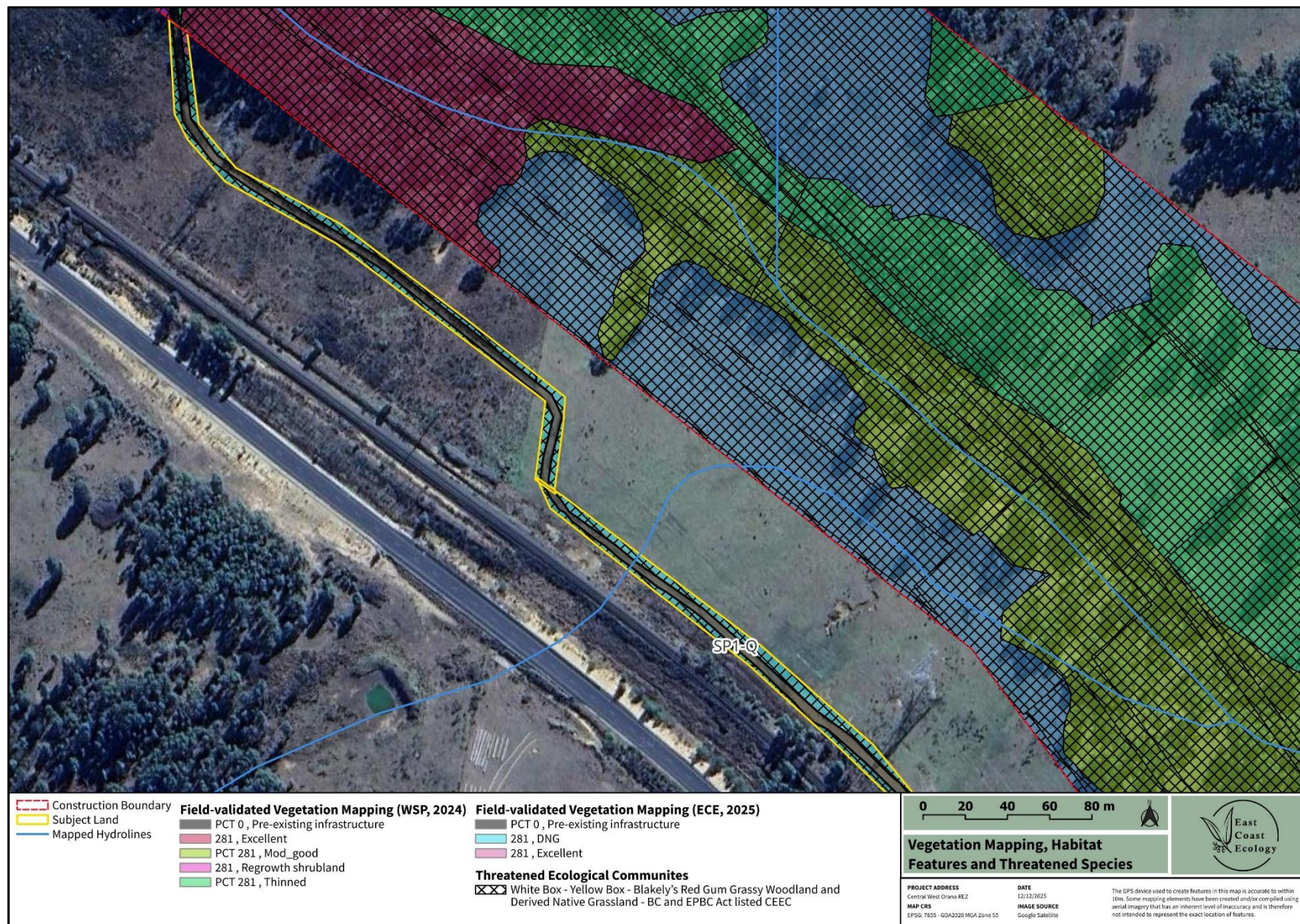


Figure 11. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-Q (Map 1 of 4).



Figure 12. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-Q (Map 2 of 4).



Figure 13. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-Q (Map 3 of 4).

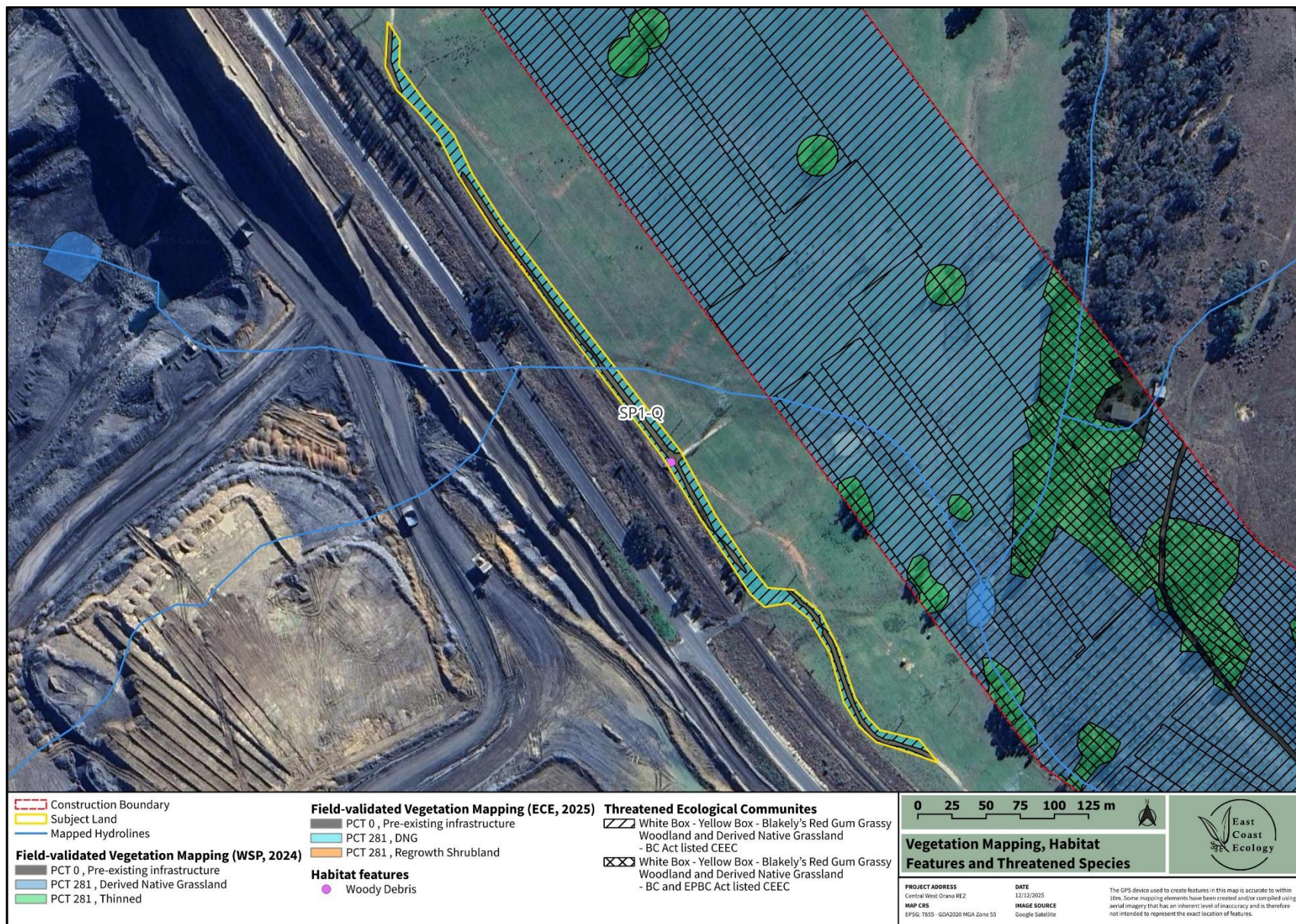


Figure 14. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-Q (Map 4 of 4).

9.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 39** and **Table 40**). A summary of the targeted survey effort applied to each species is provided in **Table 39** and **Table 40** along with the results of the survey effort.

A total of 26 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Nineteen (19) of the 26 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining seven species were assumed present within the Subject Land.

Table 39. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	Yes. Habitat constraints present. Habitat Constraint: Important Habitat Map.	No (ECE) Yes (WSP)	Assumed present - Mapped on Important Habitat Map
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Habitat Constraint: Eucalypt tree species with hollows at least 3m above the ground and with hollow diameter of 7cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Calyptrorhynchus lathamii</i> Glossy Black-Cockatoo (breeding)	No. Habitat constraints absent. Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20cm diameter that occurs >4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	No (ECE) Yes (WSP)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022).	Yes (WSP) No (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or clifflines.		approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	No. Extensive and exhaustive targeted surveys undertaken nearby during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat constraints present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).

Table 40. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Eucalyptus camaldulensis</i> Eucalyptus camaldulensis population in the Hunter catchment	Yes.	Yes (ECE).	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE).	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE).	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum sp. Wybong</i>	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

9.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Three threatened species, Regent Honeyeater, Large-eared Pied Bat and Eastern Cave Bat, assumed present within the Access Point have been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

9.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point are provided in **Table 41** and **Table 42**.

Table 41. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Excellent	0.005
	Thinned	0.07
	Regrowth Shrubland	0.05
	Derived Native Grassland	0.98

Table 42. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld’s Wattle	281_Excellent	0.005
	281_Thinned	0.07
	281_Regrowth Shrubland	0.05
	281_Derived Native Grassland	0.98
	281_Thinned	0.4

Species	Vegetation Zone	Area (ha)
<i>Anthochaera phrygia</i> (Regent Honeyeater)	281_Regrowth Shrubland	0.01
<i>Cercartetus nanus</i> (Eastern Pygmy-possum)	281_Excellent	0.005
	281_Thinned	0.07
	281_Regrowth Shrubland	0.05
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Excellent	0.005
	281_Thinned	0.07
	281_Regrowth Shrubland	0.05
<i>Petaurus norfolcensis</i> (Squirrel Glider)	281_Excellent	0.005
	281_Thinned	0.07
	281_Regrowth Shrubland	0.05
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	281_Excellent	0.005
	281_Thinned	0.07
	281_Regrowth Shrubland	0.05
	281_Derived Native Grassland	0.98
<i>Vespadelus troughtoni</i> (Eastern Cave Bat)	281_Excellent	0.005
	281_Thinned	0.07
	281_Regrowth Shrubland	0.05

10. SP1-T

10.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Upper Goulburn Valleys and Escarpment	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills
Native vegetation cover	0.24ha	24.44%
Rivers, streams, estuaries and wetlands	N/A	Two large dams occur within the 1500m buffer within a mine site. Multiple 1 st , 2 nd and 3 rd order watercourses, one 4 th order watercourse and one 5 th order watercourse (Wilpinjong Creek) occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Areas of geological significance including caves and large rocky outcrops are likely to occur in the 1500m buffer area.
Topography, Geology and Soils	Ulan soil landscape: low undulating rises and flats. Shale, sandstone, conglomerate, chert, coal and torbanite seams. Approximately 373m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

10.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 43**.

Table 43. PCTs identified within SP1-T.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	0.24ha
Total Area		0.24ha

10.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 44**).

Table 44. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.24

10.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by three condition classes within the Access Point:

- PCT 281, Thinned
- PCT 281, Regrowth Shrubland, and

- PCT 281, Derived Native Grassland.

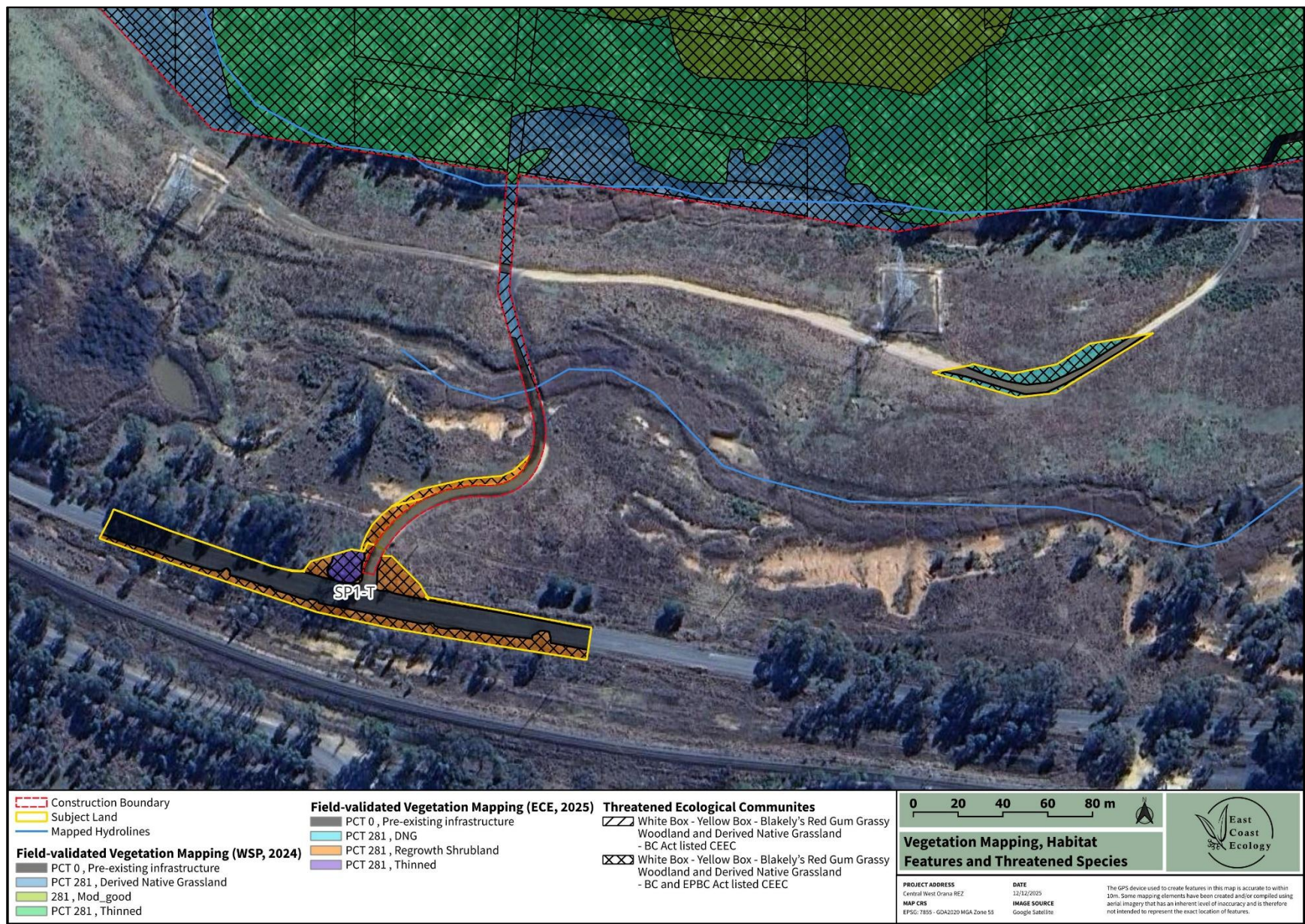


Figure 15. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-T.

10.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 45** and **Table 46**). A summary of the targeted survey effort applied to each species is provided in **Table 45** and **Table 46** along with the results of the survey effort.

A total of 26 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Nineteen (19) of the 26 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining seven species were assumed present within the Subject Land.

Table 45. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Habitat Constraint: Eucalypt tree species with hollows at least 3m above the ground and with hollow diameter of 7cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathamii</i> Glossy Black-Cockatoo (breeding)	No. Habitat constraints absent.	Yes (WSP) No (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.		approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints likely present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) Yes (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraint: Nest trees.		approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20cm diameter that occurs >4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	No (ECE) Yes (WSP)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffines.		
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints present and no targeted surveys undertaken nearby during preparation of the approved BDAR (WSP, 2024). Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat constraints likely present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Table 46. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present – consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Eucalyptus camaldulensis</i> Eucalyptus camaldulensis population in the Hunter catchment	Yes.	Yes (ECE).	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE).	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE).	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum sp. Wybong</i>	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

10.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Two threatened species, Large-eared Pied Bat and Eastern Cave Bat, assumed present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

10.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point are provided in **Table 47** and **Table 48**.

Table 47. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Thinned	0.02
	Regrowth Shrubland	0.17
	Derived Native Grassland	0.05

Table 48. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	281_Thinned	0.02
	281_Regrowth Shrubland	0.17
	281_Derived Native Grassland	0.05

Species	Vegetation Zone	Area (ha)
<i>Cercartetus nanus</i> (Eastern Pygmy-possum)	281_Thinned	0.02
	281_Regrowth Shrubland	0.17
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Thinned	0.02
	281_Regrowth Shrubland	0.17
<i>Petaurus norfolcensis</i> (Squirrel Glider)	281_Thinned	0.02
	281_Regrowth Shrubland	0.17
<i>Phascolarctos cinereus</i> (Koala)	281_Thinned	0.02
	281_Regrowth Shrubland	0.17
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	281_Thinned	0.02
	281_Regrowth Shrubland	0.17
	281_Derived Native Grassland	0.05
<i>Vespadelus trougtoni</i> (Eastern Cave Bat)	281_Thinned	0.02
	281_Regrowth Shrubland	0.17

11. SP1-U

11.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Upper Goulburn Valleys and Escarpment	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills
Native vegetation cover	0.10ha	38.44%
Rivers, streams, estuaries and wetlands	N/A	One 3 rd order watercourse (Bens Creek), two 5 th order watercourses (Wilpinjong Creek and Cumbo Creek) and multiple 1 st and 2 nd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Areas of geological significance including caves and large rocky outcrops are likely to occur in the 1500m buffer area.
Topography, Geology and Soils	Barigan Creek soil landscape: undulating low rises and flats. Shale, sandstone, siltstone, conglomerate, chert. Approximately 372m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

11.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 49**.

Table 49. PCTs identified within SP1-U.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	0.10ha
Total Area		0.10ha

11.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 44**).

Table 50. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.10

11.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by one condition class within the Access Point:

- PCT 281, Derived Native Grassland.

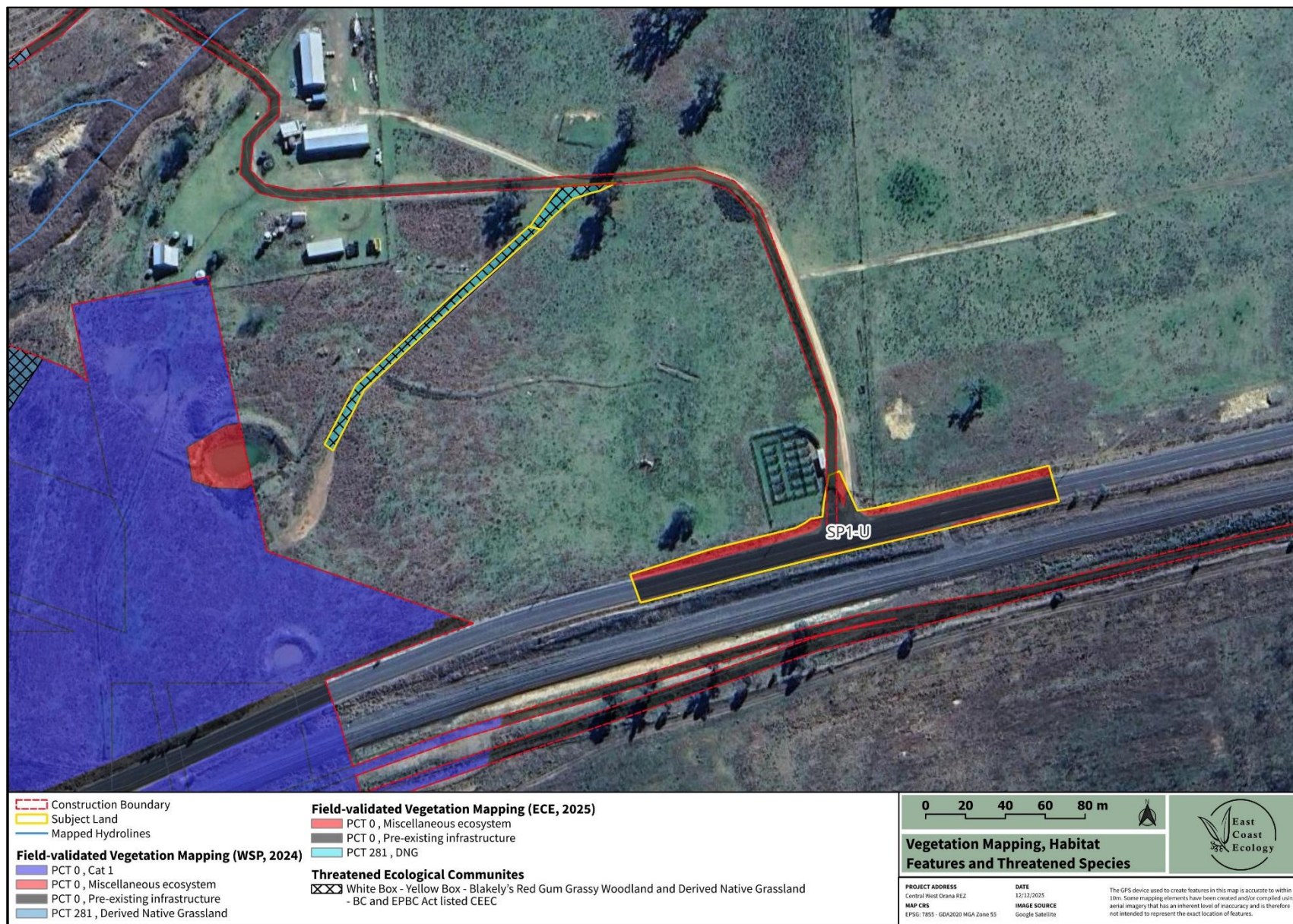


Figure 16. Figure 17. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-U.

11.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 51** and **Table 52**). A summary of the targeted survey effort applied to each species is provided in **Table 51** and **Table 52** along with the results of the survey effort.

A total of 26 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Twenty-four (24) of the 26 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). Two species were assumed present within the Subject Land.

Table 51. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Habitat Constraint: Eucalypt tree species with hollows at least 3m above the ground and with hollow diameter of 7cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathamii</i> Glossy Black-Cockatoo (breeding)	No. Habitat constraints absent.	Yes (WSP) No (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.		approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	No. Derived Native Grassland has been excluded as potential habitat for the species as per the approved BDAR (WSP, 2024).	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	No. Habitat constraints absent. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) Yes (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraint: Nest trees.		approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20cm diameter that occurs >4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	No. Derived Native Grassland has been excluded as potential habitat for the species as per the approved BDAR (WSP, 2024).	No (ECE) Yes (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffines.		
<i>Phascolarctos cinereus</i> Koala	No. Habitat constraints absent. Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	No. Habitat constraints absent. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Excluded - consistent with the approved BDAR (WSP, 2024).

Table 52. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Eucalyptus camaldulensis</i> Eucalyptus camaldulensis population in the Hunter catchment	Yes.	Yes (ECE).	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE).	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE).	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum sp. Wybong</i>	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

11.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SAIL) entities. Criteria for listing as an SAIL entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

11.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point are provided in **Table 53** and **Table 54**.

Table 53. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Derived Native Grassland	0.10

Table 54. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	281_Derived Native Grassland	0.10
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	281_Derived Native Grassland	0.10

12. SP1-Wilp

12.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Upper Goulburn Valleys and Escarpment	Upper Goulburn Valleys and Escarpment, Lees Pinch Foothills
Native vegetation cover	0.06ha	35.98%
Rivers, streams, estuaries and wetlands	N/A	One 3 rd order watercourse (Bens Creek), two 5 th order watercourses Wilpinjong Creek and Cumbo Creek and multiple 1 st and 2 nd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	Areas of geological significance including caves and large rocky outcrops are likely to occur in the 1500m buffer area.
Topography, Geology and Soils	Barigan Creek soil landscape: undulating low rises and flats. Shale, sandstone, siltstone, conglomerate, chert. Approximately 365m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

12.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 37**. The majority of the Access Point has been mapped as 'PCT 0 – Miscellaneous ecosystem' as it was dominated by exotic species.

Table 55. PCTs identified within SP1-Q.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	0.06ha
Total Area		0.06ha

12.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 38**).

Table 56. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.06

12.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by one condition class within the Access Point:

- PCT 281_Thinned

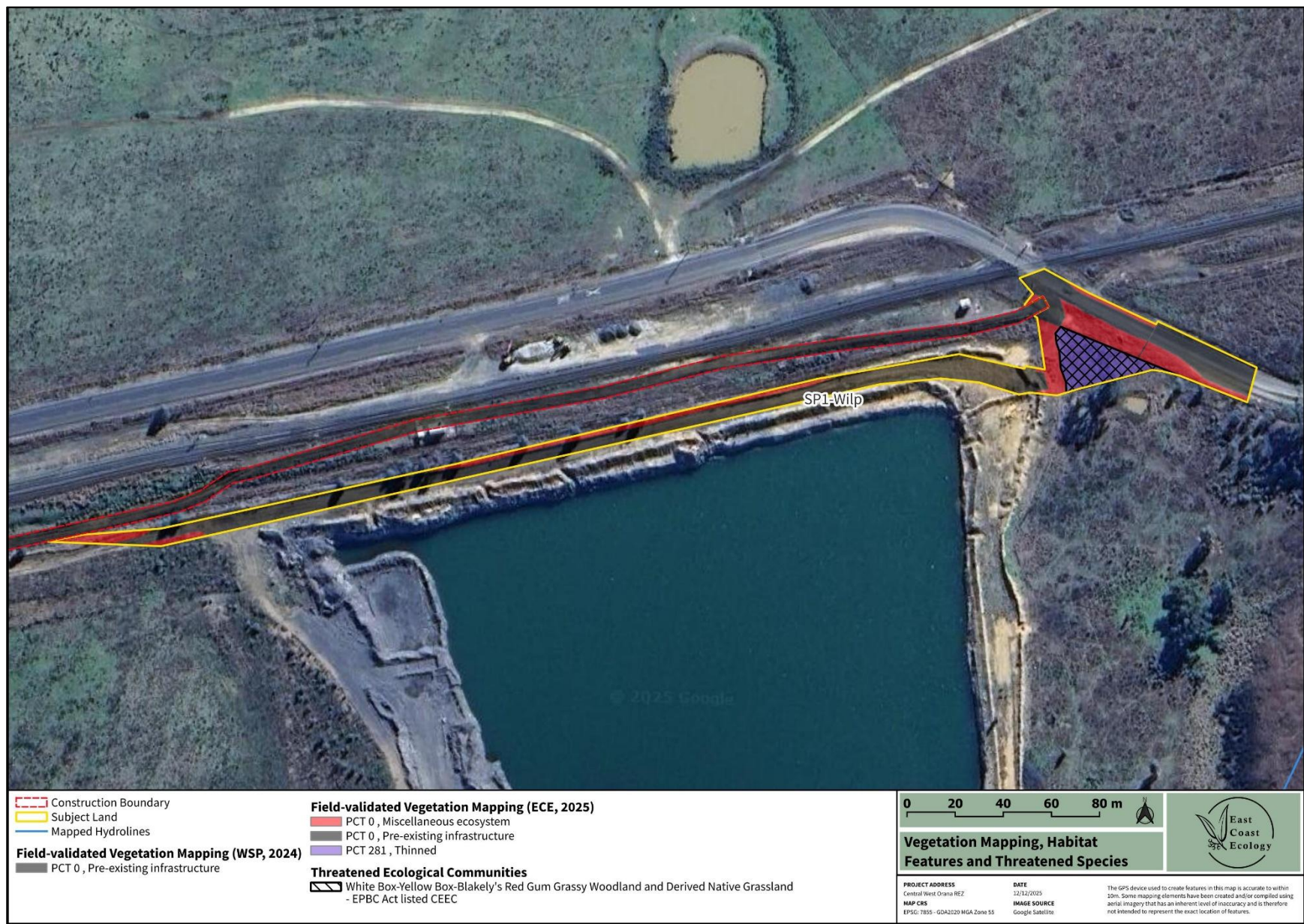


Figure 18. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-Wilp.

12.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 57** and **Table 58**). A summary of the targeted survey effort applied to each species is provided in **Table 57** and **Table 58** along with the results of the survey effort.

A total of 26 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Twenty (20) of the 26 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining six species were assumed present within the Subject Land.

Table 57. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) although not nearby No (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Habitat Constraint: Eucalypt tree species with hollows at least 3m above the ground and with hollow diameter of 7cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Calyptrorhynchus lathamii</i> Glossy Black-Cockatoo (breeding)	No. Habitat constraints absent. Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints likely present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20cm diameter that occurs >4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	No (ECE) Yes (WSP)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022).	Yes (WSP) No (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffines.		approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	No. Habitat constraints absent, no trees of suitable size (only saplings occur within the Access Point, the one large tree occurs outside of the Access Point). Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat constraints likely present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Table 58. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present – consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Eucalyptus camaldulensis</i> Eucalyptus camaldulensis population in the Hunter catchment	Yes.	Yes (ECE).	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period no <i>Pomaderris spp.</i> were identified.	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE).	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	Yes (ECE) although outside of NSW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum sp. Wybong</i>	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

12.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Two threatened species, Large-eared Pied Bat and Eastern Cave Bat, assumed present within the Access Point have been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

12.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point are provided in **Table 59** and **Table 60**.

Table 59. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Thinned	0.06

Table 60. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	PCT 281_Thinned	0.06
<i>Cercartetus nanus</i> (Eastern Pygmy-possum)	PCT 281_Thinned	0.06
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	PCT 281_Thinned	0.06
<i>Petaurus norfolcensis</i> (Squirrel Glider)	PCT 281_Thinned	0.06
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	PCT 281_Thinned	0.06

Species	Vegetation Zone	Area (ha)
<i>Vespadelus troughtoni</i> (Eastern Cave Bat)	PCT 281_Thinned	0.06

13. SP6-C

13.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Cassilis Slopes, small section in the south occurs on Liverpool Range Valleys and Foothills	Cassilis Slopes, Liverpool Range Valleys and Foothills, Talbragar - Upper Macquarie Terrace Sands and Gravels
Native vegetation cover	1.87ha	32.28%
Rivers, streams, estuaries and wetlands	N/A	One 6 th order watercourse (Talbragar River) and multiple 1 st , 2 nd and 3 rd order watercourses occur within the 1500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	Minor rocky habitat including sandstone outcrops exist within the Access Point.	Rocky areas including sandstone outcrop with overhangs occur with the 1500m buffer. No other areas of geological significance exist with the 1500m buffer.
Topography, Geology and Soils	Bald Hill soil landscape: low hillocks and small basalt caps with moderate to steep slopes. Basalt. 442m asl to 535m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

13.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 61**.

Table 61. PCTs identified within SP6-C.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
618	White Box x Grey Box - red gum - Rough-barked Apple grassy woodland on rich soils on hills in the upper Hunter Valley	0.08

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
483	Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	1.79
Total Area		1.87ha

13.2.1 PCT 618: White Box x Grey Box - red gum - Rough-barked Apple grassy woodland on rich soils on hills in the upper Hunter Valley

One PCT was determined to occur as canopy within the Access Point:

- PCT 618: White Box x Grey Box - red gum - Rough-barked Apple grassy woodland on rich soils on hills in the upper Hunter Valley (**Table 62**).

Table 62. PCT 618

PCT ID	618
PCT Name	White Box x Grey Box - red gum - Rough-barked Apple grassy woodland on rich soils on hills in the upper Hunter Valley
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Coastal Valley Grassy Woodlands
Percent Cleared Value (%)	73.00
Extent within Access Point (ha)	0.08

13.2.1.1 Condition States

Native vegetation (PCT 618) was determined to be represented by one condition class within the Access Point:

- PCT 618, Thinned.

13.2.2 PCT 483: Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley

One PCT was determined to occur within the Access Point:

- PCT 483: Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley (**Table 62**).

Table 63. PCT 483

PCT ID	483
PCT Name	Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	90.00
Extent within Access Point (ha)	1.79

13.2.2.1 Condition States

Native vegetation (PCT 483) was determined to be represented by one condition class within the Access Point:

- PCT 483, Derived Native Grassland.

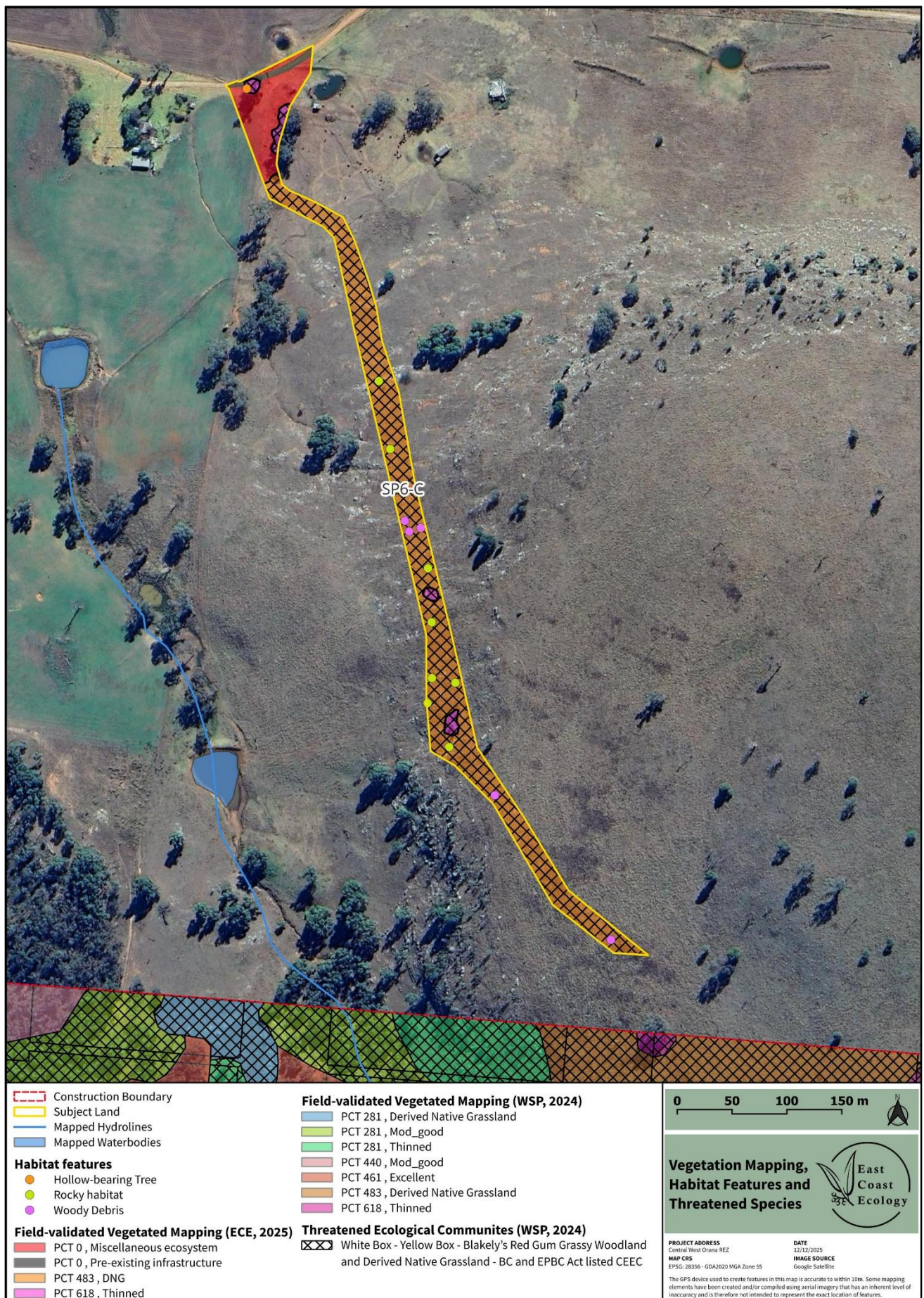


Figure 19. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP6-C.

13.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 64** and **Table 65**). A summary of the targeted survey effort applied to each species is provided in **Table 64** and **Table 65** along with the results of the survey effort.

A total of eight Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Four (4) of the eight Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining four species were assumed present within the Subject Land.

Table 64. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	Yes. Habitat Constraints present. Habitat Constraints: Rocky areas or within 50 m of rocky areas.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Delma impar</i> Striped Legless Lizard	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat Constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat Constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	Yes (WSP) although no nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints present. Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Table 65. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Monotaxis macrophylla</i> Large-leafed Monotaxis	No. Suitable habitat deemed not to be present as per the approved BDAR (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

13.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

13.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point is provided in **Table 66** and **Table 67**.

Table 66. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 618: White Box x Grey Box - red gum - Rough-barked Apple grassy woodland on rich soils on hills in the upper Hunter Valley	Thinned	0.08
PCT 483: Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Derived Native Grassland	1.79

Table 67. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Aprasia parapulchella</i> (Pink-tailed Legless Lizard)	618_Thinned	0.08
	483_Derived Native Grassland	1.79
<i>Delma impar</i> (Striped Legless Lizard)	618_Thinned	0.08
	483_Derived Native Grassland	1.79
<i>Petaurus norfolcensis</i> (Squirrel Glider)	618_Thinned	0.08

Species	Vegetation Zone	Area (ha)
<i>Phascolarctos cinereus</i> (Koala)	618_Thinned	0.08

14. SP6-E1

14.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Talbragar - Upper Macquarie Terrace Sands and Gravels, Cassilis Slopes (half, half)	Talbragar - Upper Macquarie Terrace Sands and Gravels, Cassilis Slopes
Native vegetation cover	0.04ha	20.18%
Rivers, streams, estuaries and wetlands	N/A	One 6 th order watercourse (Talbragar River), one 4 th order watercourse (Mona Creek), two 1 st order watercourses and one 2 nd order watercourse occur within the 1500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	A few small areas of sandstone outcrop have been identified in the approved BDAR, no other areas of geological significance are likely to occur within the 1500m buffer.
Topography, Geology and Soils	Turill soil landscape: undulating low hills with some sandstone outcrop. Narrabeen Sandstone, mudstone, and Jurassic shale and sandstone. 435m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

14.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 68**.

Table 68. PCTs identified within SP6-E1.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	0.04ha
Total Area		0.04ha

14.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 69**).

Table 69. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.04

14.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by two condition classes within the Access Point:

- PCT 281, Thinned, and
- PCT 281, Derived Native Grassland.



Figure 20. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP6-E1.

14.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 70** and **Table 71**). A summary of the targeted survey effort applied to each species is provided in **Table 70** and **Table 71** along with the results of the survey effort.

A total of 26 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Twenty-one (21) of the 26 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining five species were assumed present within the Subject Land.

Table 70. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints present however extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Eucalypt tree species with hollows at least 3m above the ground and with hollow diameter of 7cm or larger.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathamii</i> Glossy Black-Cockatoo (breeding)	No. Habitat constraints present however extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger.		approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	No. Targeted surveys undertaken adjacent to the site during preparation of the approved BDAR (WSP, 2024) did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Nest trees.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20cm diameter that occurs >4m above the ground.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints present however targeted surveys undertaken nearby during preparation of the approved BDAR did not detect this species. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	No. Extensive and exhaustive targeted surveys undertaken nearby during preparation of the approved BDAR did not detect this species.	No (ECE) Yes (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022). Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffines.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints present and no targeted surveys undertaken nearby during preparation of the approved BDAR (WSP, 2024). Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby NO (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints present however targeted surveys undertaken nearby during preparation of the approved BDAR did not detect this species. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troungtoni</i> Eastern Cave Bat	Yes. Habitat constraints present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Table 71. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Eucalyptus camaldulensis</i> Eucalyptus camaldulensis population in the Hunter catchment	Yes.	Yes (ECE).	No.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE).	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE).	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (survey conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum</i> sp. Wybong	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

14.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SAIL) entities. Criteria for listing as an SAIL entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Two threatened species, Large-eared Pied Bat and Eastern Cave Bat, assumed present within the Access Point have been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

14.5 Impact Summary

A summary of PCTs and species credit species that may be impacted in this Access Point is provided in **Table 72** and **Table 73**.

Table 72. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Thinned	0.03
	DNG	0.02

Table 73. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	281_Thinned	0.03
	281_DNG	0.02
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Thinned	0.03
<i>Phascolarctos cinereus</i> Koala	281_Thinned	0.03

Species	Vegetation Zone	Area (ha)
<i>Prasophyllum petilum</i> <i>Tarengo Leek Orchid</i>	281_Thinned	0.03
	281_DNG	0.02
<i>Vespadelus trougtoni</i> Eastern Cave Bat	281_Thinned	0.03

15. SP6-F1

15.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Sydney Basin	Sydney Basin
IBRA Subregion	Kerrabee	Kerrabee
Mitchell Landscape	Talbragar - Upper Macquarie Terrace Sands and Gravels, Cassilis Slopes	Talbragar - Upper Macquarie Terrace Sands and Gravels, Cassilis Slopes
Native vegetation cover	0.42ha	36.69%
Rivers, streams, estuaries and wetlands	N/A	One 6 th order watercourse (Talbragar River), one 4 th order watercourse (Mona Creek) and multiple 1 st order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	A few small areas of sandstone outcrop and one small crevice cave have been identified in the approved BDAR no other areas of geological significance are likely to occur within the 1500m buffer.
Topography, Geology and Soils	Turill soil landscape: undulating low hills with some sandstone outcrop. Narrabeen Sandstone, mudstone, and Jurassic shale and sandstone. Grades gently from 437m asl to 450m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

15.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 74**.

Table 74. PCTs identified within SP6-F1.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	0.42ha
Total Area		0.42ha

15.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 75**).

Table 75. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.42

15.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by two condition classes within the Access Point:

- PCT 281, Thinned, and
- PCT 281, Derived Native Grassland/Offset not required.



Figure 21. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP6-F1.

15.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 76** and **Table 77**). A summary of the targeted survey effort applied to each species is provided in **Table 76** and **Table 77** along with the results of the survey effort.

A total of 26 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Nineteen (19) of the 26 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining seven species were assumed present within the Subject Land.

Table 76. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grallarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (WSP)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Habitat Constraint: Eucalypt tree species with hollows at least 3m above the ground and with hollow diameter of 7cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathamii</i> Glossy Black-Cockatoo (breeding)	No. Habitat constraints absent.	Yes (WSP) No (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.		approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolor</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) Yes (ECE)	Excluded – consistent with the

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraint: Nest trees.		approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent. Habitat constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20cm diameter that occurs >4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes. Confirmed species created polygons nearby during preparation of the approved BDAR.	No (ECE) Yes (WSP)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022).	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffines.		
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints present and no targeted surveys undertaken nearby during preparation of the approved BDAR (WSP, 2024). Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Vespadelus troughtoni</i> Eastern Cave Bat	Yes. Habitat constraints present. Habitat Constraints: Caves; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within two kilometres of old mines, tunnels, old buildings or sheds.	Yes (WSP) No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).

Table 77. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present – consistent with the approved BDAR (WSP, 2024).

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Eucalyptus camaldulensis</i> Eucalyptus camaldulensis population in the Hunter catchment	Yes.	Yes (ECE).	No.
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE).	No.
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE).	No.
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (surveyed conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum sp. Wybong</i>	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

15.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

Two threatened species, Large-eared Pied Bat and Eastern Cave Bat assumed present within the Access Point have been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

15.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point is provided in **Table 78** and **Table 79**.

Table 78. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Thinned	0.07
	DNG/Offset not required	0.35

Table 79. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	281_Thinned	0.07
	281_DNG/Offset not required	0.35
<i>Cercartetus nanus</i> (Eastern Pygmy-possum)	281_Thinned	0.07
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Thinned	0.07

Species	Vegetation Zone	Area (ha)
<i>Petaurus norfolcensis</i> (Squirrel Glider)	281_Thinned	0.07
<i>Phascolarctos cinereus</i> (Koala)	281_Thinned	0.07
<i>Vespadelus troughtoni</i> (Eastern Cave Bat)	281_Thinned	0.07
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	281_Thinned	0.07

16. SP5-A

16.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Brigalow Belt South	Brigalow Belt South, Sydney Basin
IBRA Subregion	Pilliga	Pilliga, Kerrabee
Mitchell Landscape	Cassilis Slopes	Cassilis Slopes, Liverpool Range Valleys and Foothills
Native vegetation cover	0.23ha	60.03%
Rivers, streams, estuaries and wetlands	N/A	Three 2 nd order watercourses including Salty Creek and Curryall Creek and multiple 1st order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	No areas of geological significance have been identified within the 1500m buffer.
Topography, Geology and Soils	Goonoo soil landscape: undulating rises and low hills. Pilliga Sandstone. Approximately 540m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

16.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 80**.

Table 80. PCTs identified within SP5-A.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
479	Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	0.23ha

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
		Total Area 0.23ha

16.2.1 PCT 479: Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion

One PCT was determined to occur within the Access Point:

- PCT 479: Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion (**Table 81**).

Table 81. PCT 479

PCT ID	479
PCT Name	Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	Western Slopes Dry Sclerophyll Forests
Percent Cleared Value (%)	40.00
Extent within Access Point (ha)	0.23

16.2.1.1 Condition States

Native vegetation (PCT 479) was determined to be represented by two condition classes within the Access Point:

- PCT 479, Moderate/Good, and
- PCT 479, Derived Native Grassland.

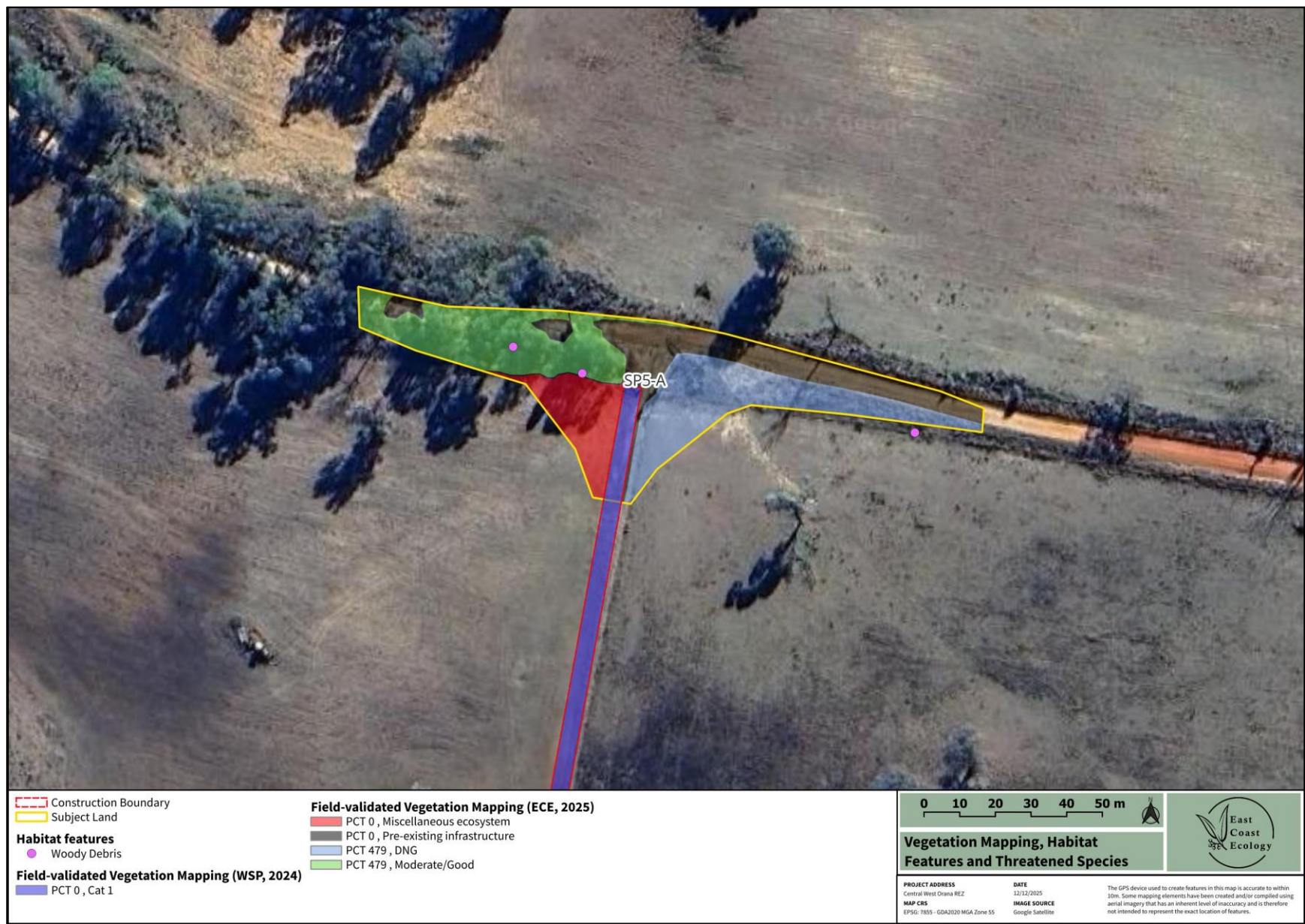


Figure 22. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP5-A.

16.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 82** and **Table 83**). A summary of the targeted survey effort applied to each species is provided in **Table 82** and **Table 83** along with the results of the survey effort.

A total of 12 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Eight (8) of the 12 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining four species were assumed present within the Subject Land.

Table 82. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathami lathami</i> South-eastern Glossy Black-Cockatoo (Breeding)	No. Habitat constraints absent and excluded from this subregion as extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Hollow bearing trees; Living or dead tree with hollows greater than 15cm diameter and higher than 8m above ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolour</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect breeding habitat.		
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints present. Habitat Constraint: Suitable habitat and Koala Use Trees.	No (ECE) Yes (WSP)	Assumed present - consistent with the approved BDAR (WSP, 2024).

Table 83. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of the NSW DCCEEW endorsed survey period.	Assumed present - consistent with the approved BDAR (WSP, 2024).
<i>Androcalva procumbens</i> (<i>syn. Commersonia procumbens</i>)	Yes. Habitat Constraints present. Habitat Constraint: Piliga sandstone.	Yes (ECE)	Excluded - consistent with the approved BDAR (WSP, 2024).
<i>Monotaxis macrophylla</i> Large-leafed Monotaxis	No. This species has been excluded due to the absence of suitable habitat (rocky sandstone rock platforms and ridgelines) as per the approved BDAR.	N/A	Excluded - consistent with the approved BDAR (WSP, 2024).
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE)	No.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Tylophora linearis</i>	Yes.	Yes (ECE)	No.

16.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SAIL) entities. Criteria for listing as an SAIL entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

No threatened entities assumed present within the Access Point have been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

16.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point is provided in **Table 84**.

Table 84. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 479: Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	Moderate/Good	0.11
	Derived Native Grassland	0.12

Table 85. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	479_Moderate/Good	0.11
	479_Derived Native Grassland	0.12
<i>Cercartetus nanus</i> Eastern Pygmy-possum	479_Moderate/Good	0.11
<i>Petaurus norfolcensis</i> Squirrel Glider	479_Moderate/Good	0.11
<i>Phascolarctos cinereus</i> (Koala)	479_Moderate/Good	0.11

17. SP5-E1/E2

17.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	Brigalow Belt South	Brigalow Belt South
IBRA Subregion	Pilliga	Pilliga
Mitchell Landscape	Cassilis Slopes	Cassilis Slopes
Native vegetation cover	0.03ha	72.13%
Rivers, streams, estuaries and wetlands	N/A	Four 1 st order watercourse and one 2 nd order watercourse (Yellow Waterholes Gully) occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	No areas of geological significance have been identified within the 1500m buffer.
Topography, Geology and Soils	Goonoo soil landscape: undulating rises and low hills. Pilliga Sandstone. Turill soil landscape: undulating low hills with some sandstone outcrop. Narrabeen Sandstone, mudstone, and Jurassic shale and sandstone. 465m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

17.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 86**.

Table 86. PCTs identified within SP5-E1/E2.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
481	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open	0.03ha

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
	forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	
		Total Area 0.03ha

17.2.1 PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region

One PCT was determined to occur within the Access Point:

- PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region (**Table 87**).

Table 87. PCT 481

PCT ID	481
PCT Name	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region
Associated TEC	N/A
TEC Present?	N/A
Vegetation Formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	North Coast Dry Sclerophyll Forests
Percent Cleared Value (%)	28.00
Extent within Access Point (ha)	0.03

17.2.1.1 Condition States

Native vegetation (PCT 481) was determined to be represented by one condition class within the Access Point:

- PCT 481, Thinned.

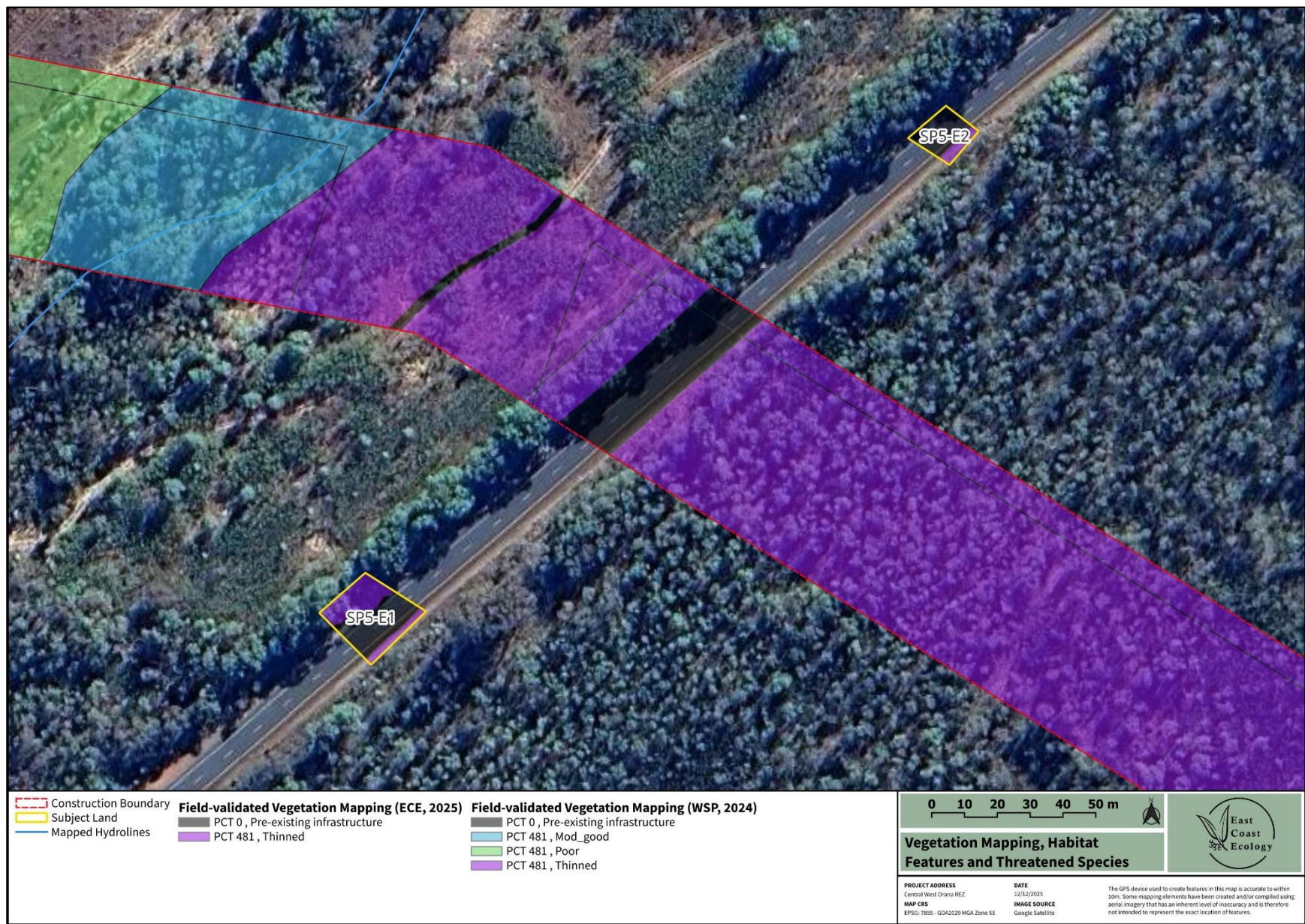


Figure 23. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP5-E1/E2.

17.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 88** and **Table 89**). A summary of the targeted survey effort applied to each species is provided in **Table 88** and **Table 89** along with the results of the survey effort.

A total of nine Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Eight (8) of the nine Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). Two species was assumed present within the Subject Land.

Table 88. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraint: Rocky Areas or within 50m of rocky areas.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolour</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat Constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Phascolarctos cinereus</i> Koala	No. Extensive and exhaustive targeted surveys (i.e. Koala drone survey) undertaken during preparation of the approved BDAR did not detect this species. Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) No (ECE)	Excluded – consistent with the approved BDAR (WSP, 2024).

Table 89. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of the NSW DCCEEW endorsed survey period.	Assumed present.
<i>Androcalva procumbens</i> (<i>syn. Commersonia procumbens</i>)	Yes. Habitat constraints present. Habitat Constraint: Piliga sandstone.	Yes (ECE)	No
<i>Monotaxis macrophylla</i> Large-leafed Monotaxis	No. This species has been excluded due to the absence of suitable habitat (rocky sandstone rock platforms and ridgelines) as per the approved BDAR.	N/A	Excluded – consistent with the approved BDAR (WSP, 2024).

17.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SII) entities. Criteria for listing as an SII entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

No threatened entities have been identified as an entity at risk of an SII in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

17.5 Impact Summary

A summary of the PCTs and species that may be impacted in this Access Point is provided in **Table 90** and **Table 91**.

Table 90. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	Thinned	0.03

Table 91. Impacts to threatened species.

PCT	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	481_Thinned	0.03
<i>Cercartetus nanus</i> Eastern Pygmy-possum	481_Thinned	0.03

18. SP1-C

18.1 Landscape Features

Feature	Access Point	Assessment area (1,500m)
IBRA Bioregion	NSW South Western Slopes	NSW South Western Slopes
IBRA Subregion	Inland Slopes	Inland Slopes
Mitchell Landscape	Cope Hills Granite	Cope Hills Granite, Talbragar - Upper Macquarie Terrace Sands and Gravels, Goonoo Slopes
Native vegetation cover	0.19ha	15.37%
Rivers, streams, estuaries and wetlands	N/A	Multiple 1 st , 2 nd and 3 rd order watercourses occur within the 1,500m buffer.
Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance	The Access Point did not contain any areas of geological significance.	No areas of geological significance have been identified within the 1500m buffer.
Topography, Geology and Soils	Turill soil landscape: undulating low hills with some sandstone outcrop. Narrabeen Sandstone, mudstone, and Jurassic shale and sandstone. 480m asl to 490m asl.	N/A
Areas of Outstanding Biodiversity Value	N/A	N/A
Patch size class	>100ha	N/A

18.2 Field-validated Vegetation

Vegetation within the Access Point has been assessed as aligning with the BioNet Vegetation Classification PCT identified within **Table 92**.

Table 92. PCTs identified within SP1-C.

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	0.19ha

PCT ID	PCT Scientific Name	Area within the Access Point (ha)
		Total Area 0.19ha

18.2.1 PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion

One PCT was determined to occur within the Access Point:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (**Table 93**).

Table 93. PCT 281

PCT ID	281
PCT Name	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion
Associated TEC	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 – BC Act listed CEEC White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – EPBC Act listed CEEC
TEC Present?	Yes
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
Percent Cleared Value (%)	67.00
Extent within Access Point (ha)	0.19

18.2.1.1 Condition States

Native vegetation (PCT 281) was determined to be represented by two condition classes within the Access Point:

- PCT 281, Thinned, and
- PCT 281, Derived Native Grassland.

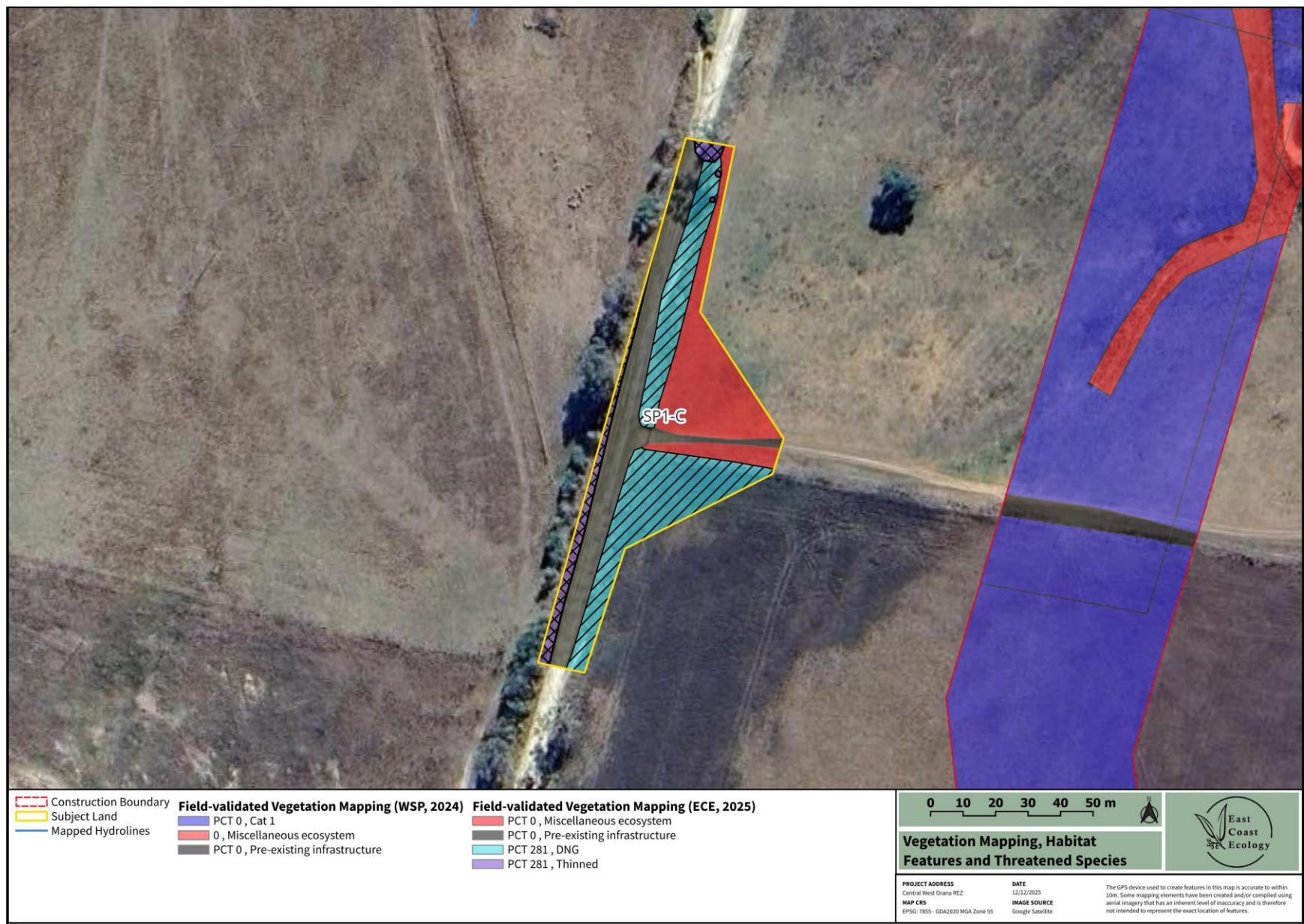


Figure 24. Vegetation Mapping, Habitat Features and Threatened Species within Access Point SP1-C.

18.3 Candidate Species Credit Species Summary

This section provides a summary of the Candidate Species Credit fauna and flora species for the Subject Land derived from BAM-C (NSW DCCEEW, 2025d) (**Table 94** and **Table 95**). A summary of the targeted survey effort applied to each species is provided in **Table 94** and **Table 95** along with the results of the survey effort.

A total of 33 Candidate Species Credit species for the Subject Land were derived from the BAM-C (NSW DCCEEW, 2025d). Twenty-eight (28) of the 33 Candidate Species Credit species were excluded from the assessment in accordance with the BAM and approved BDAR (WSP, 2024). The remaining five species was assumed present within the Subject Land.

Table 94. Candidate Fauna Credit Species predicted to occur within the Access Point.

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No. Habitat constraints absent. Habitat Constraints: Rocky areas or within 50 m of rocky areas.	N/A	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Burhinus grillarius</i> Bush Stone-curlew	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. Habitat Constraint: Fallen/standing dead timber including logs.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo (Breeding)	No. Habitat constraints absent. Habitat Constraint: Hollow bearing trees; Eucalypt tree species with hollows at least 3 m above the ground and with hollow diameter of 7 cm or larger. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Calyptorhynchus lathamii</i> Glossy Black-Cockatoo (Breeding)	No. Habitat constraints absent.	Yes (WSP). No (ECE).	Excluded – consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
	Habitat constraint: Eucalypt tree species with hollows at least 8m above the ground and with hollow diameter of 15cm or larger. Extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR did not detect this species.		
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	Yes. Habitat constraints present. Habitat Constraint: Cliffs; Within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes (WSP) Yes (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Hieraaetus morphnoides</i> Little Eagle (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required Habitat Constraint: Nest trees - live (occasionally dead) large old trees within vegetation).	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Lathamus discolour</i> Swift Parrot (Breeding)	No. Habitat constraints absent. Habitat Constraint: Important Habitat Map.	N/A	Excluded– consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Lophoictinia isura</i> Square-tailed Kite (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Nest trees.	Yes (WSP) Yes (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Miniopterus orianae oceanensis</i> Large Bent-winged Bat (Breeding)	No. Habitat constraints absent and no breeding habitat for this species was detected during extensive and exhaustive surveys undertaken during preparation of the BDAR. Habitat Constraint: Caves; Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding including species records with microhabitat code "IC - in cave;" observation type code "E nest-roost;" with numbers of individuals >500.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Myotis macropus</i> Southern Myotis	No. Habitat constraints absent. Habitat Constraints: Waterbodies with permanent pools/stretches 3m or wider, including rivers, large creeks, billabongs, lagoons, estuaries, dams and other waterbodies, on or within 200m of the site.	No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Ninox connivens</i> Barking Owl (Breeding)	No. Habitat constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Despite extensive and exhaustive targeted surveys undertaken during preparation of the approved BDAR, no breeding habitat was recorded.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Ninox strenua</i> Powerful Owl	No. Habitat constraints absent. Habitat Constraints: Living or dead trees with hollows greater than 20 cm diameter and greater than 4m above the ground. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).

Scientific Name (<i>italics</i>) and common name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes.	Yes (WSP) although not nearby No (ECE)	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby	No. Species excluded as per the approved BDAR (populations within the locality were considered extinct as of 2022). Habitat Constraints: Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliffclines.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Phascogale tapoatafa</i> Brush-tailed Phascogale	No. Suitable habitat deemed not to be present (WSP, 2024).	No (WSP). No (ECE).	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Phascolarctos cinereus</i> Koala	Yes. Habitat constraints present. Habitat Constraint: Suitable habitat and Koala Use Trees.	Yes (WSP) although not nearby No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Polytelis swainsonii</i> Superb Parrot (Breeding)	No. Species has been excluded from Inland Slopes and Pilliga Subregions through adequate survey undertaken as part of the approved BDAR.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox (Breeding)	No. Extensive and exhaustive targeted surveys undertaken during the preparation of the approved BDAR did not detect this species. No further assessment required. Habitat Constraint: Breeding camps.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Tyto novaehollandiae</i> Masked Owl	No. Habitat constraints absent. Habitat Constraints: Hollow bearing trees; a living or dead tree with a hollow >20 cm diameter that occurs >4 metres above the ground.	Yes (WSP) No (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).

Table 95. Candidate Flora Credit Species predicted to occur within the Access Point.

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Acacia ausfeldii</i> Ausfeld's Wattle	Yes.	Yes (ECE) although outside of NSW DCCEEW endorsed survey period.	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Ammobium craspedioides</i> Yass Daisy	Species excluded. The Subject Land does not meet the geographic constraints for this species.	No (WSP). No (ECE).	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Cullen parvum</i> Small Scurf-pea	No Considered to be vagrant (see Section 5.1.1 of the approved BDAR).	No (WSP). No (ECE).	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Dichanthium setosum</i> Bluegrass	No. Habitat constraints absent. Habitat constraints: Areas of basalt geology. Assumed species polygons have been restricted to areas of basalt geology within the approved BDAR	Yes (ECE)	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Euphrasia arguta</i>	Yes.	Yes (ECE)	No
<i>Grevillea wilkinsonii</i> Tumut Grevillea	No. Considered to be vagrant (see Section 5.1.1 of the approved BDAR).	No (WSP). No (ECE).	Excluded– consistent with the approved BDAR (WSP, 2024).
<i>Pomaderris cotoneaster</i> Cotoneaster Pomaderris	Yes.	Yes (ECE)	No

Scientific Name	Included in Assessment?	Targeted Survey conducted?	Present within Access Point?
<i>Pomaderris queenslandica</i> Scant Pomaderris	Yes.	Yes (ECE)	No
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	Yes.	No (ECE) (surveyed conducted outside of the NSW DCCEEW endorsed survey period).	Assumed present – consistent with the approved BDAR (WSP, 2024).
<i>Prasophyllum sp. Wybong</i>	No. Species excluded as it is considered a synonym of <i>Prasophyllum petilum</i> (WSP, 2024).	No	N/A
<i>Swainsona sericea</i> Silky Swainson-pea	Yes.	Yes(ECE)	No

18.4 Serious and Irreversible Impacts

This Section addresses Section 10.2 of the BAM and follows the Guidance to assist a decisionmaker to determine a serious and irreversible impact (DPIE, 2019). All threatened entities impacted by the proposal have been considered if they form or have potential to be Serious and Irreversible Impact (SAIL) entities. Criteria for listing as an SAIL entity are those species which:

- Are in a rapid rate of decline
- Have a very small population size
- Are severely degraded or disrupted
- Have a very limited geographic distribution, and
- Are unlikely to respond to measures to improve habitat.

One threatened species, Large-eared Pied Bat, assumed present within the Access Point has been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b). The BC Act listed CEEC, 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, present within the Access Point has been identified as an entity at risk of an SAIL in the Threatened Biodiversity Data Collection (NSW DCCEEW, 2025b).

18.5 Impact Summary

A summary of the PCTs and species credit species that may be impacted in this Access Point is provided in **Table 96** and **Table 97**.

Table 96. Impacts to native vegetation.

PCT	Vegetation Zone	Area (ha)
PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Thinned	0.03
	Derived Native Grassland	0.16

Table 97. Impacts to species credit species.

Species	Vegetation Zone	Area (ha)
<i>Acacia ausfeldii</i> Ausfeld's Wattle	281_Thinned	0.03
	281_Derived Native Grassland	0.16
<i>Cercartetus nanus</i> Eastern Pygmy-possum	281_Thinned	0.03
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	281_Thinned	0.03

Species	Vegetation Zone	Area (ha)
<i>Petaurus norfolcensis</i> (Squirrel Glider)	281_Thinned	0.03
<i>Prasophyllum petilum</i> (Tarengo Leek Orchid)	281_Thinned	0.03
	281_Derived Native Grassland	0.16

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Threatened Species Scientific Committee (2020) 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 – Critically Endangered Ecological Community listing.

WSP (2024) Central-West Orana Renewable Energy Zone Transmission project Technical paper 4 – Biodiversity Development Assessment Report



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