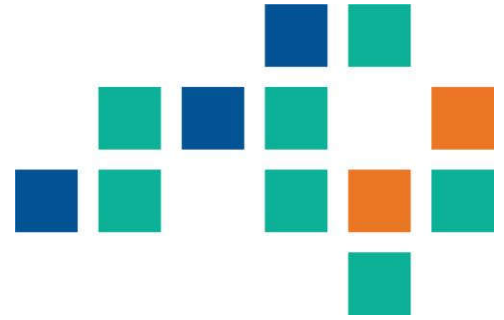
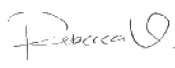

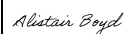




INTERNAL



Biodiversity Management Plan EnergyConnect (NSW – Western Section) Stage 2 45860-HSE-PL-D-0029

REV	DATE	GENERAL DESCRIPTION	PREPARED	REVIEWED	VERIFIED	VERIFIED	APPROVED
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Revision History	
Rev.	Detailed Description
A	Issued for internal review including aspects from <i>EnergyConnect (NSW – Western Section) Submission Report</i>
B	Issued for TransGrid review
C	Issued for agency consultation
D	Updated following agency review
E	Updated following ER review
F	Updated following DPE review

Key Document Stakeholders
To be communicated with during reviews and revisions of this document

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Abbreviations

Acronym	Definition
Amendment Report	<i>EnergyConnect (NSW – Western Section) Amendment Report</i>
DAM	<i>Biodiversity Assessment Method 2017</i>
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCD	Biodiversity and Conservation Division
BCS	Biodiversity, Conservation and Science Directorate, now known as the Biodiversity and Conservation Division
BMP	Biodiversity Management Plan
BOS	Biodiversity Offset Strategy
CCS	Community Communication Strategy
CEMP	Construction Environmental Management Plan
CSSI	Critical State significant infrastructure
Cth	Commonwealth
DAWE	Department of Agriculture, Water and Environment
DPE or Department	NSW Department of Planning and Environment
DPIE	NSW Department of Planning, Industry and Environment now known as NSW Department of Planning and Environment
EEC	Endangered Ecological Communities
EIS	<i>EnergyConnect (NSW – Western Section) Environmental Impact Statement</i>
EMF	Electromagnetic field
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
ER	Environmental Representative
Final BDAR	<i>Revised Biodiversity Development Assessment Report</i> (August, 2021)
FM Act	<i>Fisheries Management Act 1994</i>
GDE	Groundwater Dependent Ecosystem
GIS	Geographical Information System
IBRA	Interim Biogeographic Regionalisation for Australia
LGA	Local government area
LLS	Local Land Services
MNES	Matters of national environmental significance under the EPBC Act
NSW	New South Wales
PCT	Plant community type
PESCP	Progressive Erosion and Sediment Control Plan
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
Project, the	EnergyConnect (NSW – Western Section)
Project study area	The study area for the EIS, which comprises a one kilometre wide corridor between the SA/NSW border near Chowilla and Buronga and a 200m wide corridor between Buronga and the NSW/Victoria border at Monak, near Red Cliffs.
Response to DPIE Request for Information	The 'additional information letter dated 10 August 2021' in the definition section of the Infrastructure Approval; document is also titled <i>EnergyConnect (NSW – Western Section) Response to DPIE Request for Information – 7 May 2021 and subsequent discussions</i>

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Acronym	Definition
RMM	Revised mitigation measures
SA	South Australia
SAP	Sensitive area plan
SecureEnergy	Elecnor and Clough Projects Australia Pty Ltd have formed the SecureEnergy Joint Venture (SecureEnergy). SecureEnergy is the contractor who will be carrying out the project on behalf of TransGrid.
Submissions Report	<i>EnergyConnect (NSW – Western Section) Submissions Report</i>
TEC	Threatened ecological community
WMS	Work method statement
WONS	Weeds of National Significance

1 Introduction

1.1 Context

This Biodiversity Management Plan (BMP or this plan) forms part of the Construction Environment Management Plan (CEMP) for Stage 2 of EnergyConnect (NSW – Western Section).

This document has been prepared for construction activities undertaken during Stage 2 of the project, and supersedes the existing Stage 1 Biodiversity Management Plan. It does not address the operational phase of the project.

This plan has been prepared to address the relevant requirements of the Infrastructure Approval (SSI 10040), the *EnergyConnect (NSW – Western Section) Environmental Impact Statement (EIS)*, *EnergyConnect (NSW – Western Section) Submissions Report* (Submissions Report), *EnergyConnect (NSW – Western Section) Amendment Report* (Amendment Report) and the additional information letter dated 10 August 2021 (Response to DPIE Request for Information).

1.2 Background

On 29 August 2019, the NSW Minister for Planning and Public Spaces declared EnergyConnect to be critical State significant infrastructure (CSSI) under the *Environmental Planning and Assessment Act 1979* (EP&A Act) on the basis that it is critical to the State for environmental, economic or social reasons. EnergyConnect is therefore subject to assessment under Part 5, Division 5.2 of the EP&A Act.

TransGrid have two environmental planning approval applications for the sections within NSW:

- EnergyConnect (NSW – Western Section) – SA/NSW border to Buronga and Buronga to the NSW/Victorian border (the project); and
- EnergyConnect (NSW – Eastern Section) – Buronga to Wagga Wagga.

A referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was submitted on 27 May 2020. The Australian Department of Agriculture, Water and the Environment (DAWE) determined the project to be a controlled action on 26 June 2020 and thus, it would be assessed using the bilateral assessment process. As such, the project also requires approval from the Australian Minister for the Environment under the EPBC Act.

The EIS was prepared for the project in October 2020 and was placed on public exhibition from 30 October 2020 to 10 December 2020. A total of 20 submissions were received, with 15 from government agencies, three from organisations and two from the public.

The Submissions Report was prepared for the project in response to the submissions and was finalised on 14 April 2021.

TransGrid also prepared a separate Amendment Report to document design changes and additional environmental assessment undertaken since exhibition of the EIS. The Amendment Report describes the updated project for which approval has been sought and was also finalised on 14 April 2021.

On 7 May 2021, Department of Planning, Industry and Environment (DPE or Department) requested additional information (*EnergyConnect (NSW – Western Section)(SSI-10040) Request for Additional Information*) to assist with the assessment of the project. In response TransGrid prepared and provided the Response to DPIE Request for Information and a *Revised Biodiversity Development Assessment Report* (Final BDAR)(August 2021), which included revised mitigation measures (RMMs) which are to be applied. The Response to DPIE Request for Information was dated 10 August 2021.

Approval for the project under the EP&A Act was granted by the NSW Minister for Planning and Public Spaces (Infrastructure Approval SSI 10040). Approval for the project under the EPBC Act was granted by the Australian Minister for the Environment.

TransGrid have engaged SecureEnergy, a joint venture between Elecnor and Clough Projects Australia Pty Ltd to design and construct their portion of the EnergyConnect project.

1.3 Staging

Condition E2 allows preparation of plans on a staged basis, with the approval of the Planning Secretary. Where a plan is staged, the scope of works can be carried out without addressing particular requirements of conditions of approval that are not applicable to the particular stage. This BMP is staged in accordance with Condition E2.

The conditions of the Infrastructure Approval, and the RMMs identified in the Appendix G of the Response to DPIE Request for Information, that are relevant to biodiversity, are included in Table 2.1 and Table 2.2 respectively. The applicability of each requirement to this BMP is also addressed in the identified tables.

This BMP has been prepared specifically for EnergyConnect (NSW – Western Section) Stage 2 and will be implemented for the duration of Stage 2 of construction. The key project components of Stage 2 of construction include, but are not limited to, the activities provided in Table 1.1.

Table 1.1 - Key project components of Stage 2 of construction

Key activity	Description of key activity
Pre-construction minor works permitted in accordance with the Infrastructure Approval.	<p>Key activities nominated in this stage will have already commenced as part of the pre-construction minor works permitted in accordance with the Infrastructure Approval.</p> <p>The definition of 'construction' within the Infrastructure Approval excludes these activities. They will therefore not be subject to the Stage 2 CEMP and CEMP sub-plans. Irrespective of this, these activities will occur in accordance with the relevant conditions of the Infrastructure Approval.</p> <p>Key activities include:</p> <ul style="list-style-type: none"> • environmental investigations, including biodiversity and heritage protection, salvage and recordings; • Aboriginal heritage assessment, mitigation (ie exclusion zones) and salvage activities including subsurface testing/test excavation, additional survey, and consultation with RAPs; • other survey work, such as road dilapidation surveys, and surveys of the general alignment and existing utilities; • installation of environmental management measures, fencing, enabling works; and • connections and pre-commissioning of on-site utilities (wastewater treatment plant, electrical power, lighting and etc.) for the construction facilities.
Continuation of any outstanding Stage 1 construction activities	<p>Construction activities undertaken during Stage 1 of the project will continue where required. This includes, but is not limited to continuation of the following activities:</p> <ul style="list-style-type: none"> • any outstanding construction earthworks activity at the Buronga substation; • operation of the Buronga earthworks material site, including the crushing and screening plant, where required; • operation of the Buronga construction compound including offices and laydown area; and • use of access and egress points.
Establishment of Wentworth accommodation camp	<p>The main activities that would be undertaken at the Wentworth accommodation camp and construction compound and the Anabran South ancillary construction site include:</p> <ul style="list-style-type: none"> • clearing of vegetation within the disturbance area;

Key activity	Description of key activity
Establishment and operation of Wentworth construction compound	<ul style="list-style-type: none"> clearing and removal of topsoils. Topsoil would be stockpiled on site for later reuse; establishing the Wentworth accommodation and associated facilities, site offices, amenities, wastewater treatment plant, power generators, hazardous material and fuel storage area, and internal roads; establishing and operating Wentworth construction including but not limited to amenities compound site offices, concrete batching plant, internal roads and other ancillary facilities; and establishing and operating Anabran South ancillary construction site laydown areas, vehicle and equipment storage, maintenance sheds, potential stockpile areas, demountable offices and parking.
Establishment and operation of Anabran South ancillary construction site	
Buronga substation upgrade and expansion	<p>The existing Buronga 220kV substation would be upgraded and expanded to add a new 330kV substation on the land parcel adjacent to the existing 220kV substation. The upgrade and expansion of the Buronga substation would consist of the following key activities in addition to the works undertaken during Stage 2 of construction:</p> <ul style="list-style-type: none"> civil works including: <ul style="list-style-type: none"> underground mesh installation (earthing grid); foundation and footing works for the electrical equipment; and installation of the synchronous condenser (SynCon) building slab; mechanical works including: <ul style="list-style-type: none"> erection of the SynCon, transformers, shunt reactor and capacitor banks; installation of oil treatment; gantry erection; installation of electrical equipment; installation of supporting steel structure; overhead HV cables and cable pulling; switchyard building installation (including control equipment); and construction of the SynCon building; electrical works including: <ul style="list-style-type: none"> LV cable pulling, cable dressing and terminations; and outdoor installation of the lighting system.
Establishment of ancillary facilities along the transmission line corridor	<p>A number of minor staging, storage and laydown ancillary areas would be required within the project corridor for temporary storage of materials, plant and equipment required to construct the various elements of the proposal (in particular transmission line structures). Some temporary mobile batching plant locations may also need to be established to enable for easily access to concrete.</p> <p>Upon completion of works, these ancillary sites would be cleared of any temporary infrastructure and equipment, and rehabilitated. These sites would be in place for shorter periods at locations suitable to support the construction works as they move along the alignment.</p>
Property adjustment work, including adjustments to property fencing	<p>Installation or adjustment of gates and fences would be required at some locations along the alignment to enable access from the nearest roadway to construction areas. These would be constructed in consultation with the relevant council and/or affected landholder.</p>
Water supply points – establishment and/or use	<p>A series of water supply points have been identified as suitable connection points to existing water supply pipelines. The proposed water supply points which are to be established and / or used include:</p> <ul style="list-style-type: none"> Alcheringa Drive, Buronga; Modica Crescent, Buronga; Fletchers Lake Drive, Dareton; Beverley Street, Wentworth; and 690 Pomona Road, Pomona/Oxley Drive, Pomona.

Key activity		Description of key activity
Construct access points		<p>The establishment of access points would include:</p> <ul style="list-style-type: none"> establishing vehicle access and egress points including adjustment of state and regional roads to ensure safe vehicle movements; and establishing truck wheel wash or rumble grids. <p>The definition of construction within the Infrastructure Approval does not include road upgrades (which includes access points). Road upgrade works are, however, incorporated within the Traffic and Transport Management Plan as required by condition D40 b).</p>
Construct access tracks		<p>Access to each tower would be required during construction. Access tracks would be required to be traversable by a range of vehicles. Access tracks would fall into two broad groups:</p> <ul style="list-style-type: none"> un-improved access tracks - using existing roads or tracks, or driving on existing soil or ground surface with minimal or no prior preparation; and constructed access tracks – around six metres wide and would generally follow the natural contour of the land as far as practicable to minimise the amount of cut and fill and soil disturbance. Access tracks would also include drainage control features such as table drains or cross banks to minimise erosion. <p>Constructed access tracks would be required in areas, outside identified heritage risk zones, where there are no existing roads or tracks, or where terrain conditions prevent continuous access along the line easement between road crossings.</p>
Temporary works		<p>The project will require a significant quantity of temporary works during construction. Temporary works will be undertaken outside identified heritage risk zones. The temporary works will include, but not be limited to, the following:</p> <ul style="list-style-type: none"> earthworks, including trenches, excavations, temporary slopes, stockpiles, and embankments; structures, such as formwork, shoring, edge protection, temporary bridges, solid fencing/guardrails/barriers and signage, temporary scaffold; and equipment/plant foundations, such as work platforms, crane, and piling platforms.
Transmission line construction	Earthworks and transmission tower footing construction	<p>Excavation works and establishment of construction pads at each tower site would be required for the installation of foundations, levelling around the individual tower foundations, drainage and grading or preparation for construction at the tower site. Excavations would typically be up to five metres in depth. Construction of footings and foundation works for the new transmission line towers includes:</p> <ul style="list-style-type: none"> piling. Typical transmission line tower piling depth would be generally up to 6-15 metres below ground level and would depend on ground conditions (e.g. greater piling depths would be required where soft soil types are present). The foundation type would also vary (subject to detailed design) but would consist of either: <ul style="list-style-type: none"> bored pile (reinforced concrete); driven or screw pile (concrete or steel); and helical screw anchor, or cast in-situ reinforced concrete; excavation to create bench sites (stepped ground excavation) where required to provide a level platform for equipment setup, the erection of the tower and other construction activities. Benching would be constructed by use of earthing equipment such as graders and excavators; steel fabrication works; and concrete pours.
	Assembly and erection of transmission line towers	<p>The transmission line towers would typically be erected by assembling in sections on the ground and hoisting or lifting successive sections into place using cranes. Alternatively, towers may be erected in place on the footings by installing individual members. These towers would include infrastructure such as step bolts, climbing attachment plates, ladders, platforms, climbing barriers, identification plates, warning plates, other fixtures and fittings for the attachment of earthwires and insulators.</p>

Key activity		Description of key activity
	Stringing of transmission lines including conductors and overhead earth wires and optical ground wire	<p>Following erection and securing of the tower, the transmission line would be strung by either a ground pulled draw wire (with brake/winch sites) or a line stringing drone.</p> <p>The area required for the construction of each tower would require access for tower assembly and stringing works. Where a transmission tower is proposed to allow for a direction change of the transmission line, a larger area would be required (to allow for brake and winching sites). At a typical site, this would include a temporary area of up around 60 metres by 80 metres at each transmission line tower location.</p> <p>Stringing of transmission line would also be required across the following three major watercourses:</p> <ul style="list-style-type: none"> the Great Darling Anabranch, Wentworth NSW; Darling River, Ellerslie NSW; and Murray River, Monak NSW / Red Cliffs Victoria. <p>The general construction methodology is to assemble and erect a transmission line structure on either side of each major river crossing. A drone would then be used to take a lead wire over the river to allow cables to then be pulled and strung tower to tower.</p>
	Installation of earthing conductors	<p>The following key activities will be undertaken:</p> <ul style="list-style-type: none"> installation of earthing conductors at each of the transmission tower arms; and installation of earthing or isolation sections of fences and gates where the transmission line crosses or closely runs parallels to a metallic fence.
Utility works, adjustments and protection		<p>Utility adjustment works would be required to convert several overhead distribution powerlines up to and including 66kV to underground cables.</p> <p>The existing alignment of the Broken Hill transmission line would require relocation at two locations. This would comprise of:</p> <ul style="list-style-type: none"> a permanent relocation of the existing transmission line in the vicinity of the Darling River. This would require the construction of two new monopoles, and the stringing of conductors/earth wires between the existing and new structures. The redundant tower would be decommissioned; and a temporary relocation of a section of the existing transmission line that currently passes through the existing Buronga substation. This would be temporarily relocated around 200 metres to the east of its current alignment (along the eastern boundary of the existing substation site). Once the construction works to upgrade the substation are completed, the alignment of the 220kV Broken Hill line would be restored in a location generally consistent with the original line location. <p>General utility works, adjustment and protection including internal and external drainage, to allow for the Buronga substation expansion and upgrades works to occur and the establishment and operation of the construction compound.</p>
Decommissioning of existing infrastructure		<p>Decommissioning and removal of:</p> <ul style="list-style-type: none"> the existing 220 kV transmission line between Buronga substation and the NSW / Victoria border; the temporary bypass transmission line infrastructure installed to allow construction of the new double circuit 220kV line; and a single tower on the existing 220kV Broken Hill line in the vicinity of the Darling River.
Progressive site rehabilitation and landscaping		<p>Site rehabilitation would be carried out progressively along completed sections of the transmission line as well as the expanded substation site. These activities include:</p> <ul style="list-style-type: none"> removal of redundant environmental controls within the transmission tower easement; and removal of temporary equipment and machinery.

Some activities nominated in this stage will have already commenced as part of the pre-construction minor works permitted in accordance with the Infrastructure Approval. These works will remain

excluded from the definition of ‘construction’ and will therefore not be subject to the Stage 2 CEMP and this BMP.

Some of the activities nominated in this stage will include works not yet completed in Stage 1. These activities will be completed in accordance with the approved CEMP for Stage 2.

1.4 Environmental management system

The overall environmental management system for the project is described in Section 4 of the CEMP.

This BMP is a sub-plan that forms part of the CEMP and is also part of the environmental management framework for the project, as described in the CEMP. Figure 1.1 shows the CEMP framework for the project.

Management measures identified in this plan will be incorporated into relevant site-based documents including, but not limited to, site or activity specific relevant work pack or work method statements (WMSs), the geographical information system (GIS) / sensitive area plans (SAPs), or training and awareness material.

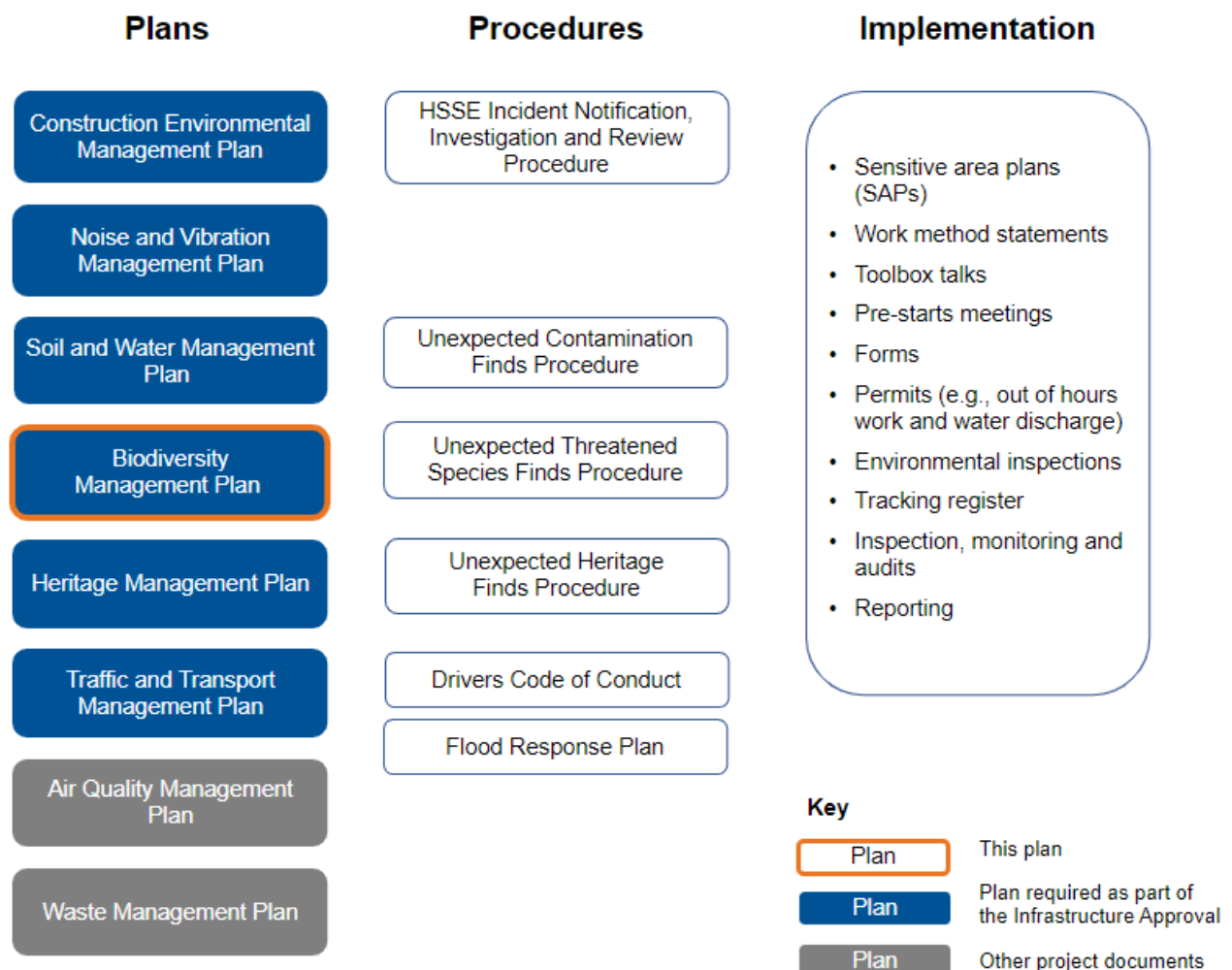


Figure 1.1 - CEMP framework

1.5 Purpose and objective

The purpose of this BMP is to describe the approach that will be adopted during construction of the project to manage biodiversity impacts.

The key objective of this plan is to detail management measures and inform site procedures for implementation so that biodiversity impacts are minimised. To achieve this, the following will be undertaken:

- implement appropriate measures to address the requirements outlined in the Infrastructure Approval, EIS, Amendment Report, Response to DPIE Request for Information and Final BDAR;
- implement appropriate measures during construction to minimise biodiversity impacts; and
- implement appropriate measures to comply with all relevant legislative requirements as described in Section 2.1 of this plan.

As a means of assessing environmental performance, environmental objectives (performance measures), targets (criteria) and performance indicators have been established for the project and are provided within Table 4.2 of the CEMP. The performance measures and indicators relevant to biodiversity management are detailed within Table 1.2.

Table 1.2 - Environmental objectives, targets and performance indicators relevant to biodiversity

Aspects	Objectives (performance measures)	Targets (criteria)	Performance indicators
Biodiversity	Minimise and manage the impacts of the project on biodiversity.	<ul style="list-style-type: none"> • No exceedance to clearing values of known biodiversity including flora and fauna species as specified in condition D25. • Minimise the risk of injury and mortality of fauna. 	<ul style="list-style-type: none"> • Total clearing area as recorded on clearing register. • Number of fauna injured as a result of procedures not being adhered to.

1.6 Preparation of this plan

In accordance with condition B6 of the Infrastructure Approval, this plan has been prepared by suitably qualified and experienced personnel. This plan was prepared by:

- Rebecca Walker-Edwards; and
- Laurenne Coetzee.

The plan has been reviewed by a representative from the project's ecological team, Michelle Patrick. Michelle is a senior ecologist and an accredited NSW BAM assessors (BAAS19078).

1.7 Consultation

1.7.1 Development of this plan

In accordance with condition B2(c) of the Infrastructure Approval, this plan has been prepared in consultation with:

- Biodiversity and Conservation Division (BCD); and
- Wentworth Shire Council (council).

The plan was issued to relevant stakeholders for review and comment. Comments from the consultation process have been incorporated into this plan where appropriate. Details of all consultation with BCD and Wentworth Shire Council will be submitted to DPE along with the submission of this management plan.

1.7.2 Ongoing communication and consultation

SecureEnergy will use a range of tools in accordance with the *Community Communication Strategy* (CCS) (45860-CM-PL-G-1001) to facilitate ongoing consultation and communication with the community and stakeholders regarding the project. Communication tools include, but are not limited to, stakeholder briefings, project website, community drop-in sessions via the project's mobile van,

door knocks and project factsheets. Notifications will be issued for, but not limited to following, commencement of construction, significant milestones and changes to the scope of work. Refer to the CCS for further information.

In accordance with condition E12 a) of the Infrastructure Approval, project documents including the EIS, approved strategies, plans or programs required under the conditions of approval and independent reports will be publicly available on the project website. The project website is <https://www.projectenergyconnect.com.au>. A 24-hour toll-free telephone number (1800 560 577) is also available for any project enquiries.

1.7.3 Complaints

Complaints will be managed by the Community and Stakeholder Engagement Team with the use of Consultation Manager database. Complaints will be received via phone calls, emails and letters. Any complaint received is regarded as a high priority and will be recorded, tracked and responded to in accordance with the CCS. Complaints will be investigated and dealt with impartially. The key principles of the complaint management process include:

- acknowledge - SecureEnergy staff should respect the communities' right to voice their concerns. All complaints received should be acknowledged to the complainant either by telephone or in writing;
- resolve - SecureEnergy staff should aim at first contact, resolution for all community concerns. SecureEnergy staff should investigate community concerns in detail before negotiating a resolution. All SecureEnergy staff should use their relevant discretions to achieve a mutually acceptable resolution to complaints;
- escalate - all SecureEnergy staff should aim to escalate the complaint if the community member remains dissatisfied with the investigation and/or resolution offered by their first point of contact at SecureEnergy. All complaints where community request to speak to a higher-level representative, should also be escalated;
- record – SecureEnergy staff should aim through the Engagement Team at recording all relevant information, on the community account in Consultation Manager System, regarding customer concerns along with details of all discussions had with the community member in the process of investigating and/resolving the complaint. Detailed information on the resolutions offered to address community concerns should also be clearly recorded;
- communicate – SecureEnergy staff should remain in constant touch with the community member while their concerns are being investigated. The community member should be informed of all steps of the investigation and the resulting outcome at appropriate times;
- report – SecureEnergy should report on all complaints received to the SecureEnergy Management Team and Transgrid. The reporting should include information on the number as well as type of complaints being received, the status of these complaints from time to time and the resulting outcomes or resolutions offered to close them;
- feedback – the SecureEnergy Engagement Team should aim at regular and intensive reviews to identify possible trends in the complaints being received. These reviews should be aimed at highlighting improvements required to avoid complaints being repeated;
- action - SecureEnergy should aim at effective implementation of improvements suggested directly by the community or highlighted by complaint trends.

Wherever possible, complaints will be resolved directly between SecureEnergy and the stakeholder. If a complaints management process has been followed and the issue cannot be resolved, dispute resolution will be undertaken in accordance with the CCS. DPE may request the Environmental Representative (ER) to assist in dispute resolution of community complaints.

All complaints will be provided to the ER and a summary of complaints received, such as a complaints register, will be updated monthly on the project website.

1.8 Submission and approval

Prior to submission to DPE, the BMP will be reviewed by the ER to ensure that the plan is consistent with the requirements of the Infrastructure Approval. A written statement to this effect will be prepared and submitted to DPE. This review will be undertaken in accordance with condition A19 of the Infrastructure Approval.

The BMP will be submitted to DPE for review and approval by the Planning Secretary prior to the commencement of Stage 2 of construction.

Stage 2 of construction will not commence until the CEMP and all sub-plans required under condition B2, or where staging is proposed the plans required for that stage, have been approved by the Planning Secretary. The approved BMP will then be implemented for the duration of the Stage 2 construction activities.

1.9 Periodic review

This BMP will be reviewed at least annually and updated, if required, in accordance with Section 1.10 of the CEMP – Updating the CEMP. Any updates to the BMP will be approved as described in Section 1.10 of the CEMP.

2 Environmental requirements

2.1 Legislation

Legislation relevant to the management of biodiversity includes:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- *Biodiversity Conservation Act 2016* (BC Act);
- *Biosecurity Act 2015*;
- *Fisheries Management Act 1994*; and
- *Local Land Services Act 2013*.

Relevant provisions of the above legislation are detailed within the register of legal and other requirements included in Appendix A1 of the CEMP. The legislation relevant to biodiversity is replicated in Appendix F of this BMP.

2.2 Conditions of Approval

The conditions of the Infrastructure Approval relevant to biodiversity for Stage 2 are presented in Table 2.1. A cross reference is also included to indicate where the condition is addressed within this plan or other project management documents.

Table 2.1 - Conditions of Approval relevant to biodiversity

Condition no.	Requirement	Where addressed	How addressed						
B1	<p>Prior to commencing construction, a Construction Environmental Management Plan (CEMP) must be prepared to detail how the performance outcomes, commitments and mitigation measures specified in the EIS will be implemented and achieved during construction to the satisfaction of the Planning Secretary.</p>	<p>Section 2.3 Section 5 The CEMP</p>	<p>The CEMP has been prepared and will be implemented during construction. The CEMP incorporates and responds to all relevant conditions of the Infrastructure Approval and RMMs identified in the EIS, Submissions Report, Amendment Report and Response to DPIE Request for Information.</p> <p>Section 2.3 and Section 5 of this BMP describe how the commitments of the EIS relevant to biodiversity will be implemented.</p>						
B2	<p>The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan in Table 1.</p> <p>Table 1: CEMP Sub-plans</p> <table><tr><th></th><th>Required CEMP Sub-plan</th><th>Relevant government agencies and stakeholders to be consulted for each CEMP Sub-plan</th></tr><tr><td>(c)</td><td>Biodiversity</td><td>BCS Council</td></tr></table>		Required CEMP Sub-plan	Relevant government agencies and stakeholders to be consulted for each CEMP Sub-plan	(c)	Biodiversity	BCS Council	<p>Section 1.7</p>	<p>This BMP was provided to BCD (previously known as the Biodiversity and Conservation Scientific Division or BCS) and Wentworth Shire Council for consultation. The outcomes of consultation have been incorporated throughout the BMP.</p>
	Required CEMP Sub-plan	Relevant government agencies and stakeholders to be consulted for each CEMP Sub-plan							
(c)	Biodiversity	BCS Council							

Condition no.	Requirement	Where addressed	How addressed
B3	Details of all information requested by an agency to be included in a CEMP Sub-plan as a result of consultation must be provided with the relevant CEMP Sub-Plan.	Section 1.7	This BMP has been developed in consultation with BCD and Wentworth Shire Council. Details of all consultation with BCD and Wentworth Shire Council will be submitted to DPE along with the submission of this BMP.
B4	Any of the CEMP Sub-plans may be submitted along with, or subsequent to, the submission of the CEMP but in any event prior to commencing construction.	Section 1.7.2	This BMP will be submitted as a CEMP Sub-Plan to DPE for review and approval by the Planning Secretary prior to commencing Stage 2 of construction.
B5	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary. The CEMP and CEMP Sub-plans, as approved by the Planning Secretary, must be implemented for the duration of construction. Where construction of the development is staged, construction of a stage must not commence until the CEMP and sub-plans for that stage have been approved by the Planning Secretary.	Section 1.7.2	Stage 2 of construction will not commence until the CEMP and all CEMP Sub-plans (including this BMP), or where staging is proposed and the plans required for that stage, have been approved by the Planning Secretary. The CEMP and CEMP Sub-plans (including this BMP) will be implemented for the duration of construction for Stage 2.
B6	The CEMP and CEMP Sub-plans required under this approval must be prepared by suitably qualified and experienced persons in accordance with relevant guidelines, and include where relevant:	Title page Section 1.6	This BMP has been jointly prepared by suitably qualified and experienced people and in accordance with relevant guidelines.
	a) a summary of relevant background or baseline data;	Section 3	The biodiversity values of the Stage 2 disturbance area are outlined in Section 3.
	b) details of:		
	(i) the relevant statutory requirements (including any relevant approval or licence conditions);	Section 2 Appendix F	The relevant legislation, conditions, RMMs and guidelines applicable to biodiversity are outlined in Section 2. Appendix F provides further detail on the relevant legislation applicable to biodiversity.

Condition no.	Requirement	Where addressed	How addressed
	(ii) any relevant limits or performance measures and criteria; and	Section 1.5 Section 4.2 of the CEMP – Objectives and targets	The objectives (performance measures) and targets (criteria) relevant to biodiversity management are outlined in Section 1.5. The CEMP also provides project-wide environmental objectives (performance measures) and targets (criteria).
	(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Section 1.5 Section 4.2 of the CEMP – Objectives and targets	The performance indicators relevant to biodiversity management are outlined in Section 1.5 of this BMP. The CEMP also provides project-wide performance indicators.
	c) any relevant commitments or recommendations identified in the EIS;	Section 2.3	Relevant biodiversity commitments and recommendations identified in the EIS, known as RMMs, have been outlined in Section 2.3.
	d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Section 5	Specific biodiversity related safeguards and management measures to address potential impacts associated with Stage 2 of construction and comply with the relevant statutory requirements, limits and performance measures are outlined in Section 5, and Appendix A to Appendix D.
	e) a program to monitor and report on the:		
	(i) impacts and environmental performance of the development (including a table summarising all the monitoring and reporting obligations under the conditions of this approval); and	Section 6 including: Section 6.3 Section 6.4 Section 6.5 Section 6.6 Table 6.1 and Table 6.2	Monitoring, inspections, auditing and reporting is outlined in Section 6.3 to 6.6 of this BMP.
	(ii) effectiveness of the management measures set out pursuant to paragraph d);	Section 6.3	Monitoring of the effectiveness of the management measures is outlined in Section 6.

Condition no.	Requirement	Where addressed	How addressed
	f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Section 6.8 Appendix B Section 8 of the CEMP – Incidents and emergencies Section 10 of the CEMP – Reporting Section 11 of the CEMP – Non-conformances, corrective and preventative action	Section 6.8 outlines a contingency plan in the event that unpredicted impacts are identified. In the event of the discovery of any unexpected threatened species find, the Unexpected Threatened Species Finds Procedure (Appendix B) will be followed. The CEMP also provides additional detail regarding incidents and emergencies, reporting, non-compliance, non-conformance, corrective and preventative actions.
	g) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 6 Section 1.9 Section 1.9 of the CEMP – Continuous improvement	Section 6 of this BMP outlines procedures for compliance management, including details for monitoring, inspections, auditing and reporting. This BMP will be reviewed at least annually as described in Section 1.9 of this BMP and Section 1.10 of the CEMP. The Plan-Do-Check-Act model will be applied to the continuous improvement process, also outlined in Section 1.9 of the CEMP.
	h) a protocol for managing and reporting any: (i) incident, non-compliance or exceedance of any impact assessment criterion and performance criterion;	Section 6.7 Section 6.8 Section 8 of the CEMP – Incidents and emergencies Section 10 of the CEMP – Reporting Section 11 of the CEMP – Non-compliance, non-conformance, corrective and preventative action	Section 6.7 and 6.8 describe the procedures for emergencies, incidents and non-compliances, including those related to biodiversity. Additional detail for managing incidents and emergencies, non-compliances and non-conformances is included in the CEMP. The protocol for reporting of any incidents, non-compliances or non-conformances is included in Section 10 of the CEMP.

Condition no.	Requirement	Where addressed	How addressed
	(ii) complaint; or	Section 1.7.3 Community Communication Strategy Section 7.2 of the CEMP – Complaints management	A summary of the complaints management procedure and reporting of complaints is included in Section 1.7.3 of this BMP. The procedure for managing and reporting any complaints is described in the <i>Enquiries, Complaint and Dispute Resolution Management Procedure</i> provided in the CCS. The procedure includes a complaints management process which outlines how SecureEnergy will respond to complaints related to the project.
	(iii) failure to comply with other statutory requirements;	Section 6.7 Section 8 of the CEMP – Incidents and emergencies Section 10 of the CEMP – Reporting Section 11 of the CEMP – Non-compliance, non-conformance, corrective and preventative action	In the event of failure to comply with statutory requirements, the procedures summarised in Section 6.7 of this BMP and described in more detail in the CEMP would be followed.
	i) set out the procedures that would be implemented to: (ii) keep the local community and relevant agencies informed about the construction and environmental performance of the development;	Section 1.7 Community Communication Strategy	The local community and relevant agencies will be kept informed of construction progress and environmental performance through communication tools such as notifications, and the project website as summarised in Section 1.7 of this BMP. Detailed information regarding project communication is found in the CCS.

Condition no.	Requirement	Where addressed	How addressed
	(ii) receive, handle, respond to, and record complaints;	Section 1.7.3 Community Communication Strategy	Section 1.7.3 of this BMP summarises the complaints management system, which includes a process to manage complaints including receiving, recording, tracking and responding to complaints within a defined timeframe. The complaints management system is described in detail in the CCS.
	(iii) resolve any disputes that may arise;	Community Communication Strategy Section 7.2 of the CEMP – Complaints management	Section 1.7.3 of this BMP describes dispute resolution, which is described in detail in the CCS. Wherever possible, complaints will be resolved directly between SecureEnergy and the stakeholder.
	(iv) respond to any non-compliance;	Section 6.7 Section 10.1 of the CEMP – Reporting non-compliances Section 11 of the CEMP – Non-compliance, non-conformance, corrective and preventative action	Section 6.7 of this BMP outlines that where a non-compliance has been identified, corrective actions will be developed as required and implemented to address the non-conformance that occurred (as described in more detail in the CEMP). Reporting of non-compliances will be undertaken as described in the CEMP.
	(v) respond to emergencies; and	Section 6.7 Section 8.1 of the CEMP – Emergency preparedness and emergency response	Emergency management and planning including environmental emergencies related to biodiversity will be undertaken in accordance with the Clough management system and relevant procedures as described in Section 6.7 of this BMP. Additional detail regarding emergency management is described in the CEMP.

Condition no.	Requirement	Where addressed	How addressed
	j) a description of the roles and environmental responsibilities, authority and accountability for all relevant employees, as well as training and awareness; and	Table 5.3 Section 6.1 Section 6.2 Section 4.9 of the CEMP – Roles and responsibilities	Section 6.2 identifies that SecureEnergy's organisational structure and overall roles and responsibilities are outlined in the CEMP. Specific responsibilities for the implementation of mitigation measures are detailed in Table 5.3 of this BMP. Training and awareness for all site personnel is outlined in Section 6.1.
	k) a protocol for periodic review of the CEMP and associated subplans and programs.	Section 1.9 Section 1.10 of the CEMP – Updating the CEMP	This BMP will be reviewed at least annually in accordance with the CEMP.
	<i>The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i>	Noted	Noted
Restrictions on clearing and habitat			
D25	<p>Unless otherwise agreed with the Planning Secretary, the Proponent must:</p> <p>a) ensure that no more than:</p> <ul style="list-style-type: none"> 19.6 hectares (ha) of BC Act listed Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW Southwestern Slopes bioregions; 0.04 ha of habitat for BC Act listed flora species <i>Acacia acanthoclada</i> (Harrow Wattle); 0.32 ha of habitat for BC Act and EPBC Act listed flora species <i>Atriplex frequens</i> (A saltbush); 1.51 ha of habitat for BC Act listed flora species <i>Austrostipa nullanulla</i> (A spear-grass); 14 individuals of BC Act listed <i>Santalum murrayanum</i> (Bitter Quandong); and 6.91 ha of habitat for BC Act and EPBC Act listed fauna species <i>Polytelis anthopeplus monarchoides</i> (Regent Parrot) (eastern subspecies). <p>is cleared for the development; and</p> <p>b) minimise:</p> <ul style="list-style-type: none"> the impacts of the development on hollow-bearing trees; the impacts of the development on threatened bird and bat populations; and the clearing of native vegetation and key habitat. 	Table 5.3 – BD3 and BD4 Section 5.3 Section 6.3 Section 6.4 Appendix A - Pre-clearing and Clearing Procedure	<p>The mitigation measures identified within Section 5 will be implemented to ensure that clearing for the development minimises impacts to hollow-bearing trees, threatened bird and bat populations, the clearing of native vegetation and key habitat. Clearing will be managed in accordance with the <i>Pre-clearing and Clearing Procedure</i> located within Appendix A. Progressive monitoring of the clearing quantities will occur to ensure that harm will not exceed the limits prescribed in D25a).</p> <p>Monitoring, inspections and auditing described in Section 6 of this BMP will check the implementation and effectiveness of the management measures identified in Section 5.</p>

Condition no.	Requirement	Where addressed	How addressed
Biodiversity Offset Package			
D26	Prior to carrying out any development that would impact on biodiversity values, the Proponent must prepare a Biodiversity Offset Package (Package) that is consistent with the EIS, in consultation with BCS and to the satisfaction of the Secretary in writing. The Package must include, but not necessarily be limited to:	Section 5.4 Biodiversity Offset Package	Transgrid has prepared a Biodiversity Offset Package in consultation with BCD and to the satisfaction of the Planning Secretary. Information relating to the offset package is provided in Section 5.4.
	a) details of the specific biodiversity offset measures to be implemented and delivered in accordance with the EIS;	Section 5.4 Biodiversity Offset Package	The Biodiversity Offset Package includes specific offset measures which are to be implemented.
	b) the cost for each specific biodiversity offset measure, which would be required to be paid into the Biodiversity Conservation Fund if the relevant measure is not implemented and delivered (as calculated in accordance with Division 6 of the Biodiversity Conservation Act 2016 (NSW) and the offsets payment calculator that was established as at 29 July 2021);	Section 5.4 Biodiversity Offset Package	The Biodiversity Offset Package (Package) includes the cost for each specific measure which will be required to be paid if the measure is not implemented.
	c) the timing and responsibilities for the implementation and delivery of the measures required in the Package; and	Section 5.4 Biodiversity Offset Package	The timing and responsibilities for implementation of the measures have been included in the Package.
	d) confirmation that the biodiversity offset measures will have been implemented and delivered no later than 31 December 2023.	Section 5.4 Biodiversity Offset Package	The Package confirms the measures that have been implemented and those that will be delivered by 31 December 2023.
	Following approval, the Proponent must implement and deliver the Biodiversity Offset Package.	Section 5.4 Biodiversity Offset Package	The Package will be implemented.
D27	<p>Prior to carrying out any development that could impact the biodiversity values requiring offset, the Proponent must establish an escrow account and pay into that account \$48 million, in accordance with the Deed of Agreement with the Planning Secretary executed on 13 September 2021. The Proponent must comply with the terms of the Deed.</p> <p><i>Note: this condition provides security to the Minister for the performance of the Proponent's obligations under this approval in relation to biodiversity offsets and release funds for payment into the Biodiversity Conservation Trust in the event that the biodiversity offsets (either in whole or part) are not delivered in accordance with the Package by the Proponent.</i></p>	N/A	Transgrid has already provided security to the Minister for Planning and Public Spaces (in the form of an escrow account – refer to condition D27) for a Biodiversity Conservation Fund payment to cover any outstanding offset credit liability if the package is not implemented.

Condition no.	Requirement	Where addressed	How addressed
Biodiversity CEMP Sub-Plan			
D28	The Biodiversity CEMP Sub-Plan required under condition B2 must include: a) a description of the measures that would be implemented for: <ul style="list-style-type: none"> minimising the amount of native vegetation clearing within the approved development footprint; 	Table 5.3 – BD4, BD5, BD6, BD7 Appendix A - Pre-clearing and Clearing Procedure	The BMP includes measures that would be implemented within Section 5, Section 6 and the Appendices. Vegetation clearing will be minimised through ongoing review of detailed design, construction methodologies and construction impacts to determine opportunities to minimise clearing.
	<ul style="list-style-type: none"> minimising the loss of key fauna habitat, including tree hollows; 	Section 5.2 Table 5.3 – BD4, BD6 Appendix A - Pre-clearing and Clearing Procedure	Impacts to key fauna habitat and tree hollows will be minimised where possible through review of detailed design and temporary design (ie access tracks and laydown locations).
	<ul style="list-style-type: none"> minimising the impacts on fauna on site, including undertaking pre-clearance surveys; 	Section 5.1 Table 5.3 – BD6, BD7 Appendix A - Pre-clearing and Clearing Procedure Appendix C – Fauna Handling Procedure	Pre-clearing surveys will include inspections for fauna prior to clearing. Identified fauna will be relocated into adjacent suitable habitat. This process is identified within the <i>Pre-clearing and Clearing Procedure</i> in Appendix A and the <i>Fauna Handling Procedure</i> in Appendix C.
	<ul style="list-style-type: none"> minimising the potential indirect impacts on threatened flora and fauna species, migratory species and 'at risk' species; 	Table 5.3 – BD4, BD5, BD6, BD10, BD12, BD14	Indirect impacts to threatened fauna and flora species, migratory species and 'at risk' species may include for example, soil and water runoff impacting the adjoining threatened ecological communities. Measures have been incorporated within Table 5.3 in relation to erosion and sedimentation management.
	<ul style="list-style-type: none"> rehabilitating and revegetating disturbance areas; 	Section 5.9 Soil and Water Management Plan	Rehabilitation of the ancillary facilities, accommodation camps and earthwork material sites would be carried out in accordance with progressive erosion and sediment control plans (to provide safe, stable and non-polluting areas).

Condition no.	Requirement	Where addressed	How addressed
	<ul style="list-style-type: none"> protecting native vegetation and key fauna habitat outside the approved disturbance area; 	Section 5.1 Section 5.1.1 Table 5.3 – BD3, BD7 Appendix A - Pre-clearing and Clearing Procedure	Vegetation and key fauna habitat located outside of the disturbance area will be identified in accordance with the Pre-clearing and Clearing Procedure within Appendix A and the measures within Section 5.1, 5.3 and Table 5.3.
	<ul style="list-style-type: none"> maximising the salvage of resources within the approved disturbance area – including vegetative and soil resources – for beneficial reuse (such as fauna habitat enhancement) during the rehabilitation and revegetation of the site; 	Table 5.3 – BD18 Section 5.9 Appendix A - Pre-clearing and Clearing Procedure Soil and Water Management Plan	The salvage of resources is included within Table 5.2 and Section 5.9 Rehabilitation.
	<ul style="list-style-type: none"> collecting and propagating seed (where relevant); 	Table 5.3 – BD19 Appendix A - Pre-clearing and Clearing Procedure	In consultation with the ecologist, collection of seed will occur to assist with stabilisation of disturbed areas. This requirement is incorporated within Table 5.3 and Appendix A – Pre-clearing and Clearing Procedure.
	<ul style="list-style-type: none"> controlling weed; 	Appendix D – Biosecurity Management Plan	The Biosecurity Management Plan is included within Appendix D. This includes measures to control the spread of weeds.
	<ul style="list-style-type: none"> controlling erosion; and 	Table 5.3 – BD23, BD24, BD25, BD27 Soil and Water Management Plan	Table 5.3 includes measures for controlling erosion. The Soil and Water Management Plan has also been prepared for Stage 2 to minimise erosion and sedimentation impacts.
	<ul style="list-style-type: none"> bushfire management; 	Table 5.3 – BD29, BD30, BD31 Emergency Plan	Table 5.3 includes measures for bushfire management. The Emergency Plan has also been prepared to prevent and mitigate the potential for fires, including bushfire.
	b) details of the Proponent's commitment to make a one off \$150,000 funding contribution targeted at further scientific study into the impacts of electric and magnetic fields on birds in Australia;	N/A	Transgrid will make a one off \$150,000 funding contribution targeted at further scientific study into the impact of electric and magnetic fields on birds in Australia at the commencement of operations.

Condition no.	Requirement	Where addressed	How addressed								
	c) preparation and implementation of a two year bird impact monitoring program at the commencement of operations; and	N/A	Transgrid will prepare and implement a two year bird monitoring program at the commencement of operations								
	d) a detailed program to monitor and report on the effectiveness of these measures.	Section 6.3 Section 6.4 Section 6.5 Section 6.7 Section 6.8	Monitoring and reporting on the effectiveness of these measures will be undertaken in accordance with Section 6.3 to Section 6.6, and Section 6.8. This will include pre-clearing inspections, clearing inspections, weekly inspections, auditing and reporting. Inspections will assess the effectiveness of the measures being implemented to meet the requirements of the BMP. Monitoring and reporting will focus on clearing monitoring and reporting to track the spatial extent of clearing and inform any final biodiversity offset requirements.								
Rehabilitation											
D54	<p>Within 6 months of the completion of construction, upgrading or decommissioning, unless the Planning Secretary agrees otherwise, the Proponent must rehabilitate the areas where ancillary facilities, accommodation camps and earthwork material sites are located, to the satisfaction of the Planning Secretary. This rehabilitation must comply with the objectives in Table 3.</p> <p>Table 3: Rehabilitation objectives</p> <table><tr><th>Feature</th><th>Objective</th></tr><tr><td>Ancillary facilities, accommodation camps, earthwork material sites, the existing 220 kV transmission line between Buronga substation and the NSW / Victoria border (Line 0X1), and the temporary bypass transmission line between Tower 1 and Tower 19 of existing transmission line 0X1.</td><td><ul style="list-style-type: none">Safe, stable and non-pollutingProgressively rehabilitate the site as soon as possible following disturbanceTo be decommissioned and removed, unless the Planning Secretary agrees otherwise</td></tr><tr><td>Land use</td><td><ul style="list-style-type: none">Restore land capability to pre-existing use</td></tr><tr><td>Community</td><td><ul style="list-style-type: none">Ensure public safety at all times</td></tr></table>	Feature	Objective	Ancillary facilities, accommodation camps, earthwork material sites, the existing 220 kV transmission line between Buronga substation and the NSW / Victoria border (Line 0X1), and the temporary bypass transmission line between Tower 1 and Tower 19 of existing transmission line 0X1.	<ul style="list-style-type: none">Safe, stable and non-pollutingProgressively rehabilitate the site as soon as possible following disturbanceTo be decommissioned and removed, unless the Planning Secretary agrees otherwise	Land use	<ul style="list-style-type: none">Restore land capability to pre-existing use	Community	<ul style="list-style-type: none">Ensure public safety at all times	Section 5.9	Rehabilitation of the ancillary facilities, accommodation camps and earthwork material sites would be carried out in accordance with progressive erosion and sediment control plans (to provide safe, stable and non-polluting areas).
Feature	Objective										
Ancillary facilities, accommodation camps, earthwork material sites, the existing 220 kV transmission line between Buronga substation and the NSW / Victoria border (Line 0X1), and the temporary bypass transmission line between Tower 1 and Tower 19 of existing transmission line 0X1.	<ul style="list-style-type: none">Safe, stable and non-pollutingProgressively rehabilitate the site as soon as possible following disturbanceTo be decommissioned and removed, unless the Planning Secretary agrees otherwise										
Land use	<ul style="list-style-type: none">Restore land capability to pre-existing use										
Community	<ul style="list-style-type: none">Ensure public safety at all times										

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2.3 Revised mitigation measures

The revised mitigation measures (RMMs) are defined in Appendix G of the Response to DPIE Request for Information. The RMMs relevant to biodiversity management are detailed in Table 2.2 below.

A cross reference is also included to indicate where the measure is addressed within this plan or other project management documents. The management measures that will be implemented for the project are provided in Section 5 of this plan.

Table 2.2 - Revised environmental mitigation measures relevant to biodiversity

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
B1	Impacts to matters of biodiversity conservation significance will be avoided to the greatest extent practicable during finalisation of the detailed design and construction methodology for the project. Micro-siting of the transmission line infrastructure and associated construction working areas and other areas of disturbance will occur to avoid impacts wherever practicable. Site features with the highest biodiversity conservation significance, in particular, threatened species recorded and their habitat, including <i>Acacia acanthoclada</i> , <i>Atriplex infrequens</i> , <i>Austrostipa nullanulla</i> , <i>Dodonaea stenozyga</i> and <i>Santalum murrayanum</i> , will be given the highest priority.	All locations	Table 5.3 – BD2, BD4, BD5, BD6, BD7, BD8, BD10 Appendix A - Pre-clearing and Clearing Procedure Appendix C – Fauna Handling Procedure Appendix E – Biodiversity mapping	During detailed design and review of temporary design, opportunities to site items in locations where impacts to matters of biodiversity conservation significance are reduced, will occur.
B2	Where vegetation disturbance activities are required in areas that have not previously been subject to biodiversity survey, additional survey will be carried out prior to works occurring to inform detailed design and construction methodology. These surveys will be carried out by a suitably qualified ecologist.	All locations	Table 5.3 – BD3	Any works required to occur outside of previously surveyed areas will be surveyed.
B3	Opportunities to locate site offices, compounds and ancillary facilities in areas of limited biodiversity value (e.g. cleared land or areas of native vegetation with vegetation integrity scores of less than 17 (in accordance with the NSW Government Biodiversity Assessment Method Operational Manual) will be prioritised.	All locations	Table 5.3 – BD2	The earthworks material site will be required to impact threatened ecological community to enable earthworks material to be won or obtained for the substation foundation. This impact is approved as part of the Infrastructure Approval and the loss of biodiversity values will be offset. The site office and construction compound at both Buronga and Wentworth are located in an area of limited biodiversity value. Opportunities for any other ancillary facilities (such as laydown areas) will be reviewed.

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
B4	Existing tracks and clearings will be used, where possible, to avoid the construction of new tracks. Where this is not possible, the design will seek to minimise impacts to native vegetation as a priority.	Transmission line corridor	Table 5.3 – BD8	Existing tracks are proposed for use where possible to minimise impacts along the transmission line corridor.
B5	Transmission line structures will be located and constructed to minimise impact to vegetated riparian corridors, wherever practicable.	Transmission line corridor within the riparian zone as defined by “Guidelines for riparian corridors on waterfront land” (DPI – Office of Water, July 2012) of Great Darling Anabranch, Darling River and/or Murray River	Table 5.3 – BD27	Activities within the riparian zones will be managed to minimise impacts to aquatic environments wherever practicable.
B6	Conductor line-marking techniques will be implemented during detailed design to minimise bird strike. Use of bird diverters, most likely consisting of the “flapper” variety, will be implemented. Positioning and exact diverter model will be finalised during detailed design but at minimum these will be used within one kilometre of wetland / riverine habitats to reduce impacts on aerial fauna species from collision and allow safer passage within these areas.	Transmission line corridor – within one kilometre of wetland / riverine habitats (i.e. Great Darling Anabranch, Darling River and Murray River)	Table 5.3 – BD15	Detailed design will incorporate conductor line-marking techniques to minimise bird strike. The positioning and diverter model will be finalised during detailed design but at minimum these will be used within one kilometre of wetland / riverine habitats to reduce impacts on aerial fauna species from collision and allow safer passage within these areas.
B7	TransGrid will establish a series of 20-metre-wide connectivity corridors near tower locations that occur in woodland vegetation. These would occur at strategic locations that would be developed as part of a Connectivity Strategy under the Biodiversity Management Plan. These connectivity corridors will involve native vegetation retention up to the 10-metre-wide temporary construction centreline clearing zone to better facilitate woodland connectivity.	All locations	Section 5.7	Connectivity corridors will be provided adjacent to towers at select locations along the easement.
B8	A two year monitoring program following the completion of construction will be implemented to better understand interactions of bird species with the transmission lines and towers. Problematic interactions identified during the program would be considered and options for addressing them implemented as practicable. Options that would be	Transmission line – within one kilometre of wetland / riverine habitats (i.e. Great Darling Anabranch, Darling River	N/A	Not applicable to Stage 2 works. This is applicable to the operation phase only.

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
	considered include nesting deterrents in high risk areas, installation of alternative nest habitat, relocation of nests or their deconstruction in certain circumstances.	and Murray River)		
B9	TransGrid will make a one off funding contribution targeted at further scientific study into the impacts of electric and magnetic fields on birds in Australia.	Not applicable	N/A	This RMM is applicable 'Prior to the completion of construction'.
B10	<p>Nest boxes will be provided to offset the loss of tree hollow fauna habitat in accordance with a Supplementary Hollow and Nest Strategy. The strategy will include the following requirements:</p> <ul style="list-style-type: none"> survey of tree hollows and nests within the proposed clearing extents the size, type, number and location of nest boxes required will be based on the results of the ecological surveys appropriately sized nest boxes will be installed within the vicinity of hollow-bearing trees (subject to landholder agreement and suitable existing trees being present) no more than two weeks prior to clearing of the tree all nest boxes in a particular location will be installed within 6 months after clearing "nest boxes" will include consideration of natural tree hollow re-use and new tree hollow creation measures to address and manage nests (such as raptor nests) pre-clearing will be included. 	All locations where hollow bearing trees are being removed	Section 5.1 Table 5.3 – BD16, BD17	The presence of tree hollow habitat within the Stage 2 disturbance area will be confirmed during pre-clearing surveys (Section 5.1 and Appendix A). A <i>Supplementary Hollow and Nest Strategy</i> will be prepared and will include the requirements of RMM B10. Detail relating to the <i>Supplementary Hollow and Nest Strategy</i> is included in Section 5.2. Any nest boxes required for Stage 2 will be installed within the vicinity of hollow-bearing trees no more than two weeks prior to clearing of the tree and within 6 months after clearing in a particular location.
B11	<p>Pre-clearing surveys will be completed prior to clearing at each location by a suitability qualified ecologist. The proposed clearing extents will be marked out on site prior to the pre-clearing surveys. During the surveys, the ecologist will:</p> <ul style="list-style-type: none"> survey the proposed clearing extent identify any fauna that will require relocation prior to clearing confirm the location and mark out the extents of any biodiversity exclusion zones confirm that hollow-bearing trees within and adjacent to the 	All locations	Section 5.1 Table 5.3 – BD9 Appendix A - Pre-clearing and Clearing Procedure	Pre-clearing surveys will be undertaken in accordance with the <i>Pre-clearing and Clearing Procedure</i> located within Appendix A and the requirements listed within Section 5.1. Pre-clearing surveys will be undertaken by the project ecologist in accordance with the requirement of RMM B11. These requirements are listed within Appendix A.

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
	<p>clearing extents are prominently marked/tagged</p> <ul style="list-style-type: none"> confirm that nest boxes are in place (where required) in suitable locations adjacent to areas to be cleared, or suitable locations for installation have been identified. 			
B12	The results of the pre-clearing surveys will be used to update and confirm the accuracy of sensitive area maps.	All locations	<p>Section 5.1</p> <p>Table 5.3 – BD7</p> <p>Appendix A - Pre-clearing and Clearing Procedure</p>	The <i>Pre-clearing and Clearing Procedure</i> includes the requirement to update the Geographical Information System (GIS) or sensitive area plans (as required based on findings).
B13	Biodiversity exclusion zones for retained vegetation, including identified threatened flora populations will be clearly identified by a suitably qualified ecologist prior to the commencement of clearing or any site activity that could damage the vegetation within the exclusion zone. Biodiversity exclusion zones will be physically marked and demarcated, and included on sensitive area maps, prior to clearing.	All locations	<p>Section 5.1</p> <p>Section 5.1.1</p> <p>Table 5.3 – BD10</p> <p>Appendix A - Pre-clearing and Clearing Procedure</p>	The <i>Pre-clearing and Clearing Procedure</i> includes the requirement for the ecologist to identify biodiversity exclusion zones. The ecologists' tasks and responsibilities are also identified within Table 5.3.
B14	<p>Training on biodiversity management practices and the requirements for the project will be provided to all relevant project personnel, including relevant subcontractors, through inductions, toolbox talks and targeted training.</p> <p>Construction workforce will be supplied with sensitive area maps (showing clearing boundaries and exclusion zones), including updates as required.</p>	All locations	<p>Table 5.3 – BD1, BD7</p> <p>Section 6.1</p> <p>Section 4.5 of the CEMP</p> <p>Appendix A - Pre-clearing and Clearing Procedure</p>	<p>Training will be carried out by the site inductions, toolbox trainings and targeted training. Table 5.1 and Section 6.1 provides information in relation to the training and awareness that will be provided to all site personnel.</p> <p>Sensitive areas for the relevant works locations will be covered in the training, with GIS or sensitive area plans provided to relevant personnel within the construction workforce (Section 5.1).</p>
B15	<p>Clearing of native vegetation will be monitored to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements within the biodiversity offset package.</p> <p>The final offset requirements will be informed by a BAMC calculation on the recorded clearing. Any additional credit liability identified by this calculation will be met.</p>	All locations	<p>Section 5.1.1</p> <p>Table 5.3 – BD32</p> <p>Section 6.3</p> <p>Section 6.6</p>	<p>Monitoring of native vegetation which is cleared will occur in accordance with the requirements detailed within Section 6.3 and the reporting requirements included within Section 6.6.</p> <p>This will include the reporting of information relating to the type of clearing (eg Disturbance Area A) and the spatial extent of each PCT, TEC and threatened flora.</p>

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
B16	Shrub or ground stratum native vegetation within vegetated riparian zones (within the definition of <i>Water Management Act 2000</i>) of the Great Darling Anabranh, Darling River and/or Murray River (and other defined riparian areas) will be protected to the greatest extent practicable, with vegetation clearing ideally limited to the tree stratum only, with trunk bases being retained in-situ.	Transmission line within the riparian zone as defined by "Guidelines for riparian corridors on waterfront land" (DPI – Office of Water, July 2012) of Great Darling Anabranh, Darling River and/or Murray River	Table 5.3 – BD27	Activities within the riparian zones will be managed to minimise impacts to aquatic environments wherever practicable.
B17	Activities within vegetated riparian zones will be managed to minimise impacts to aquatic environments. Riparian areas subject to disturbance will be progressively stabilised and rehabilitated.	Transmission line within the riparian zone as defined by "Guidelines for riparian corridors on waterfront land" (DPI – Office of Water, July 2012) of Great Darling Anabranh, Darling River and/or Murray River	Table 5.3 – BD27	Activities within the riparian zones will be managed to minimise impacts to aquatic environments wherever practicable.
B18	A species unexpected finds protocol will be implemented if threatened ecological communities, flora and fauna species, not assessed in the biodiversity assessment, are identified in the disturbance area.	All locations	Appendix B – Unexpected Threatened Species Finds Procedure Table 5.3 – BD14	If an unexpected threatened species is discovered, the <i>Unexpected Threatened Species Finds Procedure</i> will be followed.
B19	TransGrid will maintain vegetation for the project in accordance with commitments in the EIS, as amended in the Amendment Report. Vegetation maintenance protocols will be developed accordingly prior to the commencement of any vegetation maintenance activities within the easement and implemented during the operational phase of the project. The vegetation maintenance protocols will identify and address the biodiversity exclusion zones identified in the construction phase and the areas within the maintenance zone where the vegetation is not of a height/growth form that will ever require management. Relevant TransGrid operational personnel and associated vegetation maintenance contractors will receive	All locations	N/A	Not applicable to Stage 2 works. This is applicable to the operation phase only.

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
	in training in the vegetation maintenance protocols prior to the commencement of any vegetation maintenance.			
B20	<p>TransGrid will retire the total quantum of the project's biodiversity offset credit liability confirmed in accordance with the Biodiversity Assessment Method. TransGrid will develop a Biodiversity Offset Package that identifies measures to address the project's offset obligations and the timing and responsibility for implementation. Before commencing any project activities that impact biodiversity values, TransGrid will:</p> <ul style="list-style-type: none"> confirm the Biodiversity Offset Package with the Department of Planning, Industry and Environment, and provide security to the Minister for Planning and Public Spaces for a Biodiversity Conservation Fund payment to cover any outstanding offset credit liability if the package is not implemented. 	All locations	Transgrid	<p>A Biodiversity Offset Package has been prepared by Transgrid. The Biodiversity Offset Package has been prepared in consultation with BCD and to the satisfaction of the Secretary, with approval received on 16 March 2022.</p> <p>Transgrid has already provided security to the Minister for Planning and Public Spaces (in the form of an escrow account – refer to condition D27) for a Biodiversity Conservation Fund payment to cover any outstanding offset credit liability if the package is not implemented.</p>
Land use and property				
LP5	Disturbed areas will be stabilised and appropriately rehabilitated as soon as feasible and reasonable following the completion of construction. This will be carried out in consultation with the relevant landholder.	All locations	Section 5.9 Table 5.3 – BD28	Disturbed areas will be stabilised in consultation with the landholders. This measure is included within Table 5.3, with further detail included in Section 5.9.
LP7	<p>Biosecurity controls will be implemented during construction to minimise the risk of off-site transport or spread of disease, pests or weeds. Controls will include (but not limited to):</p> <ul style="list-style-type: none"> inspections and cleaning of vehicles, machinery, and personnel equipment prior to movement on and off the construction work areas or between properties minimising movements across adjoining farmland including trip numbers and locations additional measures where localised areas of high biosecurity risks have been identified. <p>The specific controls applicable to a property will be identified in consultation with the affected landholder. The effectiveness of these controls will be regularly monitored.</p>	All locations	Table 5.3 – BD20 Appendix D - Biosecurity Management Plan	Appendix D provides a Biosecurity Management Plan which will be implemented to minimise the risk of off-site transport or spread of disease, pests or weeds. The Biosecurity Management Plan includes an inspection checklist for vehicles and equipment. Information from Property Management Plans and consultation with landowners will be used to identify specific controls applicable to a property.

Reference	Revised mitigation measures	Application location(s)	Where addressed	How addressed
LP8	Where present, weeds will be managed in consultation with Western Local Land Services (LLS), Wentworth Shire Council and NSW Department of Primary Industries.	All locations	Table 5.3 – BD16 Appendix D - Biosecurity Management Plan	Consultation with Western LLS, Wentworth Shire Council and Department of Primary Industries will occur where weeds are present. Wentworth Shire Council will review the Biosecurity Management Plan as part of this BMP review.
LP9	In the event of new infestations of notifiable weeds as a result of construction activities, the relevant control authority will be notified as per <i>Biosecurity Act 2015</i> and <i>Biosecurity Regulation 2017</i> .	All locations	Table 5.3 – BD20 Appendix D - Biosecurity Management Plan	Notification processes are included within the Biosecurity Management Plan.
Landscape and visual amenity				
LV1	Opportunities for the retention and protection of existing trees within the disturbance area will be identified during detailed construction planning. Trees that do not pose any risk to the safe operation of the transmission infrastructure will be retained where practicable.	Whole of proposal	Table 5.3 – BD6	Opportunities for retention of vegetation will occur through detailed design review and construction planning.
LV2	Temporary and permanent access will be designed to minimise vegetation removal, changes to landform, and visual impacts.	Whole of proposal	Table 5.3 – BD8	Existing access tracks will be used where possible to minimise vegetation clearing required.
LV7	The Tree Protection Zone (as defined in AS4970-2009 Protection of Trees on Development Sites) of retained trees within or immediately adjacent to the disturbance area will be protected through the restriction of construction activities (refer Section 4.2 of AS4970-2009), to minimise the impact of the works on the long term health of these trees.	Whole of proposal	Table 5.3 – BD13	Where tree protection zones can be protected on the boundary of Disturbance Area A, they will be. This measure is included within Table 5.3.

2.4 Permits and licences

Due to the potential for impacts on Matters of National Environmental Significance (MNES), a referral (EPBC 2020/8673) was prepared and lodged with the Commonwealth Department of Agriculture, Water and Environment under the EPBC Act. The Commonwealth Minister's delegate determined on 25 June 2020 that the proposed action is a "controlled action" under the EPBC Act.

A Scientific Licence under Part 2 of the BC Act (including Animal Ethics Approval under the *Animal Research Act 1985*) is required for fauna handling/rescue and survey work. Where rescued fauna requires rehabilitation and care, only wildlife rehabilitation organisations authorised under Part 2 of the BC Act may be used.

As this project has been designated CSSI and assessed under Part 5 of the EP&A Act, permits relating to fish passage are not required.

2.5 Guidelines

The main guidelines, specifications, and policy documents relevant to this plan include:

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- NSW *Biodiversity Assessment Method 2017* (BAM) (Office of Environment and Heritage);
- Natural Resources Access Regulator (NRAR) *Guideline for controlled activities on waterfront land* (2018); and
- *Restoration of degraded grazing country in the semi-arid areas of NSW* (2006) (NSW Department of Primary Industries).

Transgrid has assessed the project's potential impacts to biodiversity values in accordance with the Biodiversity Assessment Method. The final biodiversity credit liability will be confirmed in accordance with the Biodiversity Assessment Method.

The documents identified above are considered by the project as described and referenced throughout this BMP.

3 Existing environment

This section summarises the existing biodiversity within and adjacent to the project. The key reference documents include:

- Section 9.3 of the EIS; and
- the Final BDAR.

3.1 Vegetation communities

Native vegetation recorded within the indicative disturbance area was assigned to seven vegetation formations that occur within five Interim Biogeographic Regionalisation of Australia (IBRA) subregions. The IBRA regions and subregions and vegetation formations are outlined in Table 3.1.

Table 3.1 - IBRA Regions and Subregions within the project area

IBRA Region	IBRA Subregion	Vegetation formations
Murray Darling Depression	Murray Scroll Belt	Arid Shrublands (Acacia sub-formation)
Darling Riverine Plains	South Olary Plain Great Darling Anabranh Pooncarie-Darling	Arid Shrublands (Chenopod sub-formation) Forested Wetlands Freshwater Wetlands
Riverine	Robinvale Plain	Saline Wetlands Semi-arid Woodlands (Grassy sub-formation) Semi-arid Woodlands (Shrubby sub-formation)

The seven recorded native vegetation formations have been assigned to 23 plant community types (PCTs) and 30 vegetation zones.

An overview of the plant community types is provided within Table 3.2 and Figure 3.1.

Table 3.2 - Plant community types

Plant Community Type	IBRA Subregions				
	South Olary Plain	Great Darling Anabranh	Pooncarrie Darling	Murray Scroll Belt	Robinvale Plain
PCT11 – River Red Gum – Lignum very tall open forest or woodland wetland on floodplains of semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)			X		X
PCT13 – Black Box – Lignum woodland wetland of the inner floodplains in the semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)					X
PCT 15 – Black Box open woodland wetland with chenopod understorey mainly on the outer floodplains in south-western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	X	X	X		X
PCT17 – Lignum shrubland wetland of the semi-arid (warm) plains (mainly Riverina Bioregion and Murray Darling Depression Bioregion)					X
PCT19 – Cypress Pine woodland of source-bordering dunes mainly on the Murray and Murrumbidgee River floodplains	X	X			X
PCT 21 – Slender Cypress Pine – Sugarwood – Western Rosewood open woodland on sandy rises mainly in the Riverina Bioregion and Murray Darling Depression Bioregion	X		X		

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Plant Community Type	IBRA Subregions				
	South Olary Plain	Great Darling Anabranch	Pooncarrie Darling	Murray Scroll Belt	Robinvale Plain
PCT 58 – Black Oak – Western Rosewood open woodland on deep sandy loams mainly in the Murray Darling Depression Bioregion	X	X			
PCT 63 – Spiny Lignum – Slender Glasswort open forbland saline wetland on lake edges in the semi-arid and arid climate zones			X		
PCT 139 – Prickly Wattle tall open shrubland of dunes and sandplains of semi-arid and arid regions			X		
PCT 143 – Narrow-leaved Hopbush – Scrub Turpentine – Senna shrubland on semi-arid and arid sandplains and dunes	X				
PCT 153 – Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones	X		X	X	
PCT 154 – Pearl Bluebush low open shrubland of the arid and semiarid plains	X		X		
PCT 157 – Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone including Riverina Bioregion				X	
PCT 159 – Old Man Saltbush shrubland mainly of the semi-arid (warm) climate zone (south western NSW)	X			X	
PCT 163 – Dillon Bush (Nitre Bush) shrubland of the semi-arid and arid zones	X			X	
PCT 166 – Disturbed annual saltbush forbland on clay plains and inundation zones mainly of south-western NSW		X	X	X	
PCT 170 – Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones	X				
PCT 171 – Spinifex linear dune mallee mainly of the Murray Darling Depression Bioregion	X				
PCT 172 – Deep sand mallee of irregular dunefields of the semi-arid (warm) zone	X				
PCT 221 – Black Oak – Pearl Bluebush open woodland of the sandplains of the semi-arid warm and arid climate zones	X				
PCT 252 – Sugarwood open woodland of the inland plains mainly Murray Darling Depression Bioregion	X				
PCT 253 – Gypseous shrubland on rises in the semi-arid and arid plains	X				

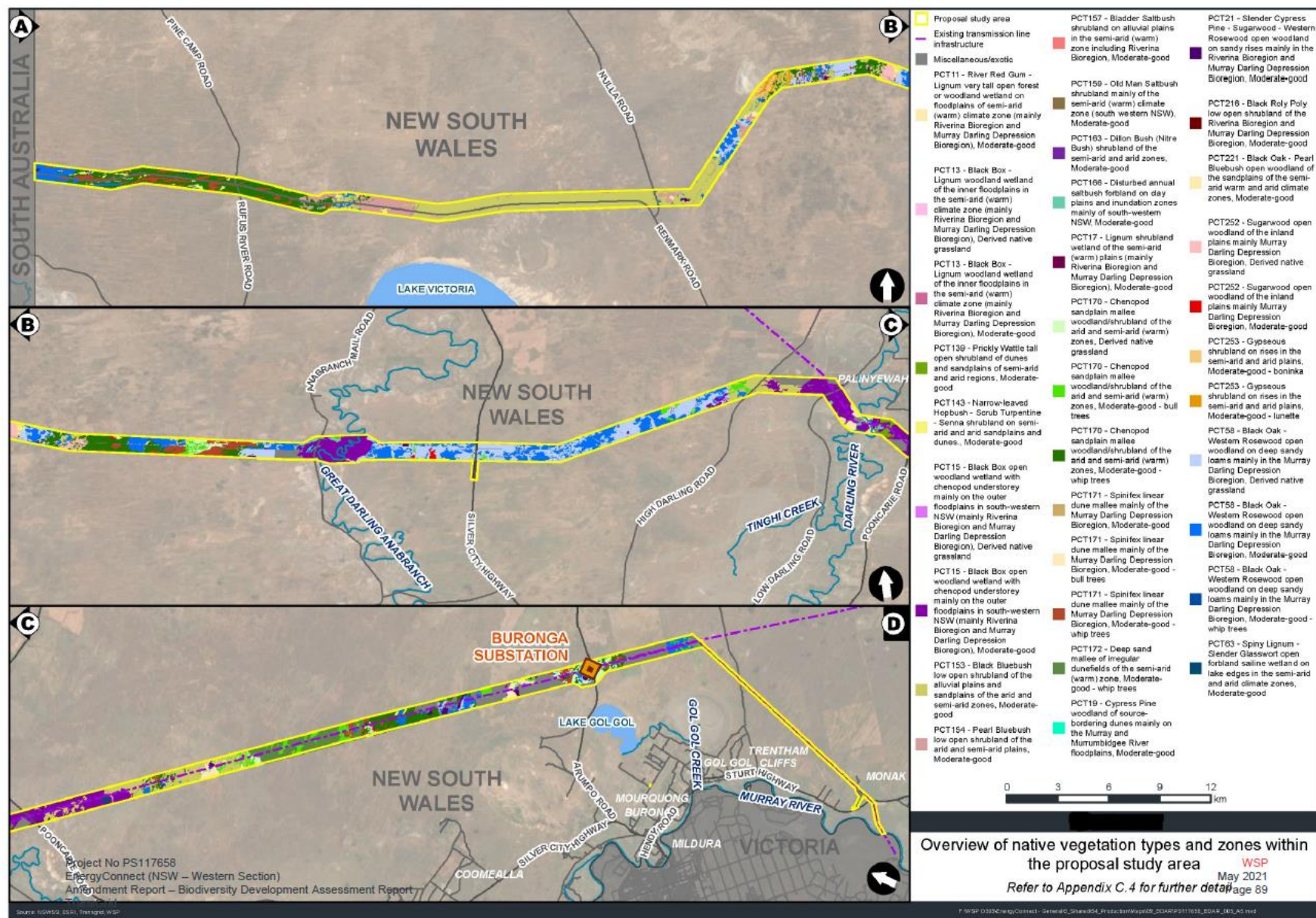


Figure 3.1 - Overview of vegetation types within the project area

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3.2 Threatened ecological communities

A total of four candidate threatened ecological communities (TECs) listed under the BC Act were considered to have the potential to occur within the project study area of EnergyConnect (NSW – Western Section).

Of these four candidate communities, only Sandhill Pine Woodland in the Riverina, Murray Darling Depression and NSW South Western Slopes bioregions (Sandhill Pine Woodland) was recorded. This community is listed as endangered under the BC Act. Sandhill Pine Woodland is not listed under the EPBC Act.

Two PCTs confirmed within the project study area are considered likely to be associated with this threatened ecological community. These are:

- PCT 19 – Cypress Pine Woodland of source-bordering dunes mainly on the Murray and Murrumbidgee River floodplains; and
- PCT 21 – Slender Cypress Pine – Sugarwood – Western Rosewood open woodland on sandy rises mainly in the Riverina Bioregion and Murray Darling Depression Bioregion.

PCT 19 was found to be located near Buronga substation, the western side of the Great Darling Anabranch and on the southern side of the Sturt Highway, heading towards the Murray River.

PCT 21 was found in discrete communities along the project easement. PCT 21 is also located at the Buronga substation earthworks area. The location of the threatened ecological communities are provided in Appendix E.

Two threatened ecological communities listed under the EPBC Act were considered likely to occur in the project area:

- Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions; and
- Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt of South Bioregion.

Neither of these, or any other threatened ecological communities listed under the EPBC Act, were recorded during the detailed native vegetation survey.




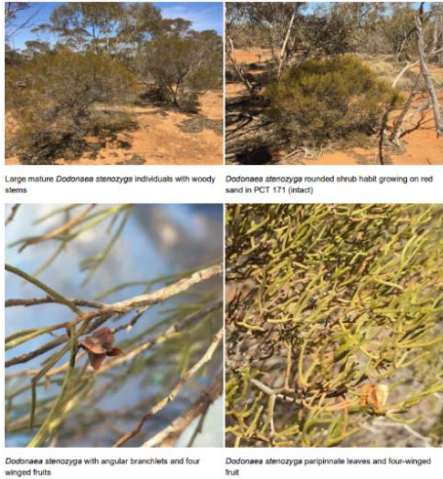
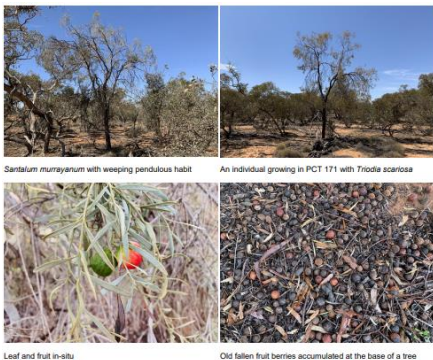
3.3 Threatened flora species

A total of 20 candidate threatened flora species were considered to have potential associated habitat within the broader project area and were therefore subject to targeted surveys. Of these, the following five threatened flora species were recorded in the broader project area:

- *Acacia acanthoclada* (Harrow Wattle);
- *Atriplex infrequens* (A saltbush);
- *Austrostipa nullanulla* (A spear-grass);
- *Dodonaea stenozyga* (Desert Hopbush); and
- *Santalum murrayanum* (Bitter Quandong).

Refer to Table 3.3 for images of the threatened flora species and Appendix E for the location of the threatened flora species.

Table 3.3 - Potential threatened flora species

Species name	Common name	BC Act ¹	EPBC Act ²	Images (Source: WSP)	Associated PCT
<i>Acacia acanthoclada</i>	Harrow Wattle	E	-	 <p>Acacia acanthoclada with stock proof fencing under PVP No. 17PVP00009</p> <p>Acacia acanthoclada on edge of track on the northern side of Renmark Road.</p> <p>Acacia acanthoclada flowers globular and golden</p> <p>Acacia acanthoclada with branchlets rigid and spinescent</p>	PCT 171
<i>Atriplex infrequens</i>	A saltbush	V	V		PCT 17 PCT 153 PCT 166 PCT 170 PCT 216
<i>Austrostipa nullanulla</i>	A spear-grass	E	-		PCT 19 PCT 170
<i>Dodonaea stenozyga</i>	Desert Hopbush	CE	-	 <p>Large mature <i>Dodonaea stenozyga</i> individuals with woody stems</p> <p><i>Dodonaea stenozyga</i> rounded shrub habit growing on red sand in PCT 171 (inset)</p> <p><i>Dodonaea stenozyga</i> with angular branchlets and four winged fruits</p> <p><i>Dodonaea stenozyga</i> pinnate leaves and four-winged fruit</p>	PCT 170 PCT 171 PCT 172
<i>Santalum murrayanum</i>	Bitter Quandong	E	-	 <p><i>Santalum murrayanum</i> with weeping pendulous habit</p> <p>An individual growing in PCT 171 with <i>Tridias scariosa</i></p> <p>Leaf and fruit in-situ</p> <p>Old fallen fruit berries accumulated at the base of a tree</p>	PCT 170 PCT 171 PCT 172

(1) V = vulnerable, E = endangered, CE = critically endangered under the BC Act

(2) V = vulnerable under the EPBC Act.

3.4 Threatened fauna species

A total of 18 candidate threatened fauna species were considered to have potential associated habitat within the indicative disturbance area and were the subject of targeted surveys.

Fauna habitat assessments were undertaken to assess the likelihood of threatened fauna species occurring within the project study area. Opportunistic sightings of animals were recorded during field surveys. Evidence of animal activity was also noted.

A number of threatened fauna species were observed directly or captured during surveys across the project study area or in adjacent lands. All except the Regent Parrot are ecosystem credit species and did not require individual assessment. The Regent Parrot is listed as Endangered under the BC Act and Vulnerable under the EPBC Act. Regent Parrots were only observed once during the survey period. A single pair were observed flying through Black Box woodland in floodplain topography near the Murray River.

The threatened fauna identified during surveys are listed within Table 3.4 with the recorded location shown in Figure 3.2.




Table 3.4 - Recorded threatened fauna species in the vicinity of project area

Species name	Common name	BC Act ¹	EPBC Act ²	Images (WSP)
<i>Hamirostra melanosternon</i>	Black-breasted Buzzard	V	-	
<i>Pseudomys bolami</i>	Bolam's Mouse	E	-	 Source: OEH website (Y Mooney)
<i>Cinclosoma castanotum</i>	Chestnut Quail Thrush	V	-	
<i>Nyctophilus corbeni</i> (syn. <i>N. timoriensis</i>)	South-eastern Long-eared Bat	V	V	
<i>Artamus cyanopterus</i>	Dusky Woodswallow	V	-	 Source: ebird
<i>Charadrius leschenaultii</i>	Greater Sand Plover	V	V	
<i>Pomatostomus temporalis</i>	Grey-crowned Babbler	V	-	

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Species name	Common name	BC Act ¹	EPBC Act ²	Images (WSP)
				Source: ebird
<i>Melanodryas cucullata</i>	Hooded Robin	V	-	
<i>Vespadelus baverstocki</i>	Inland Forest Bat	V	-	
<i>Hieraaetus morphnoides</i>	Little Eagle	V	-	
<i>Chalinolobus picatus</i>	Little Pied Bat	V	-	
<i>Lophochroa leadbeateri</i>	Major Mitchells Cockatoo	V	-	
<i>Leipoa ocellata</i>	Malleefowl	E	V	 Source: Bush heritage
<i>Pyrrholaemus brunneus</i>	Redthroat	V	-	
<i>Polytelis anthopeplus monarchoides</i>	Regent Parrot	E	V	 Source: ebird
<i>Ningaui yvonneae</i>	Southern Ningau	V	-	
<i>Cyclodomorphus melanops</i>	Spinifex Slender Blue Tongue	E	-	 Source: OEH
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	

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Species name	Common name	BC Act ¹	EPBC Act ²	Images (WSP)
<i>Polytelis swainsonii</i>	Superb Parrot	V	V	 <p>Source: Yass Tribune (Geoffrey Dabb)</p>
<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle	V	-	
<i>Epthianura albifrons</i>	White-fronted Chat	V	-	

(1) V = vulnerable, E = endangered, CE = critically endangered under the BC Act

(2) V = vulnerable, E = endangered under the EPBC Act

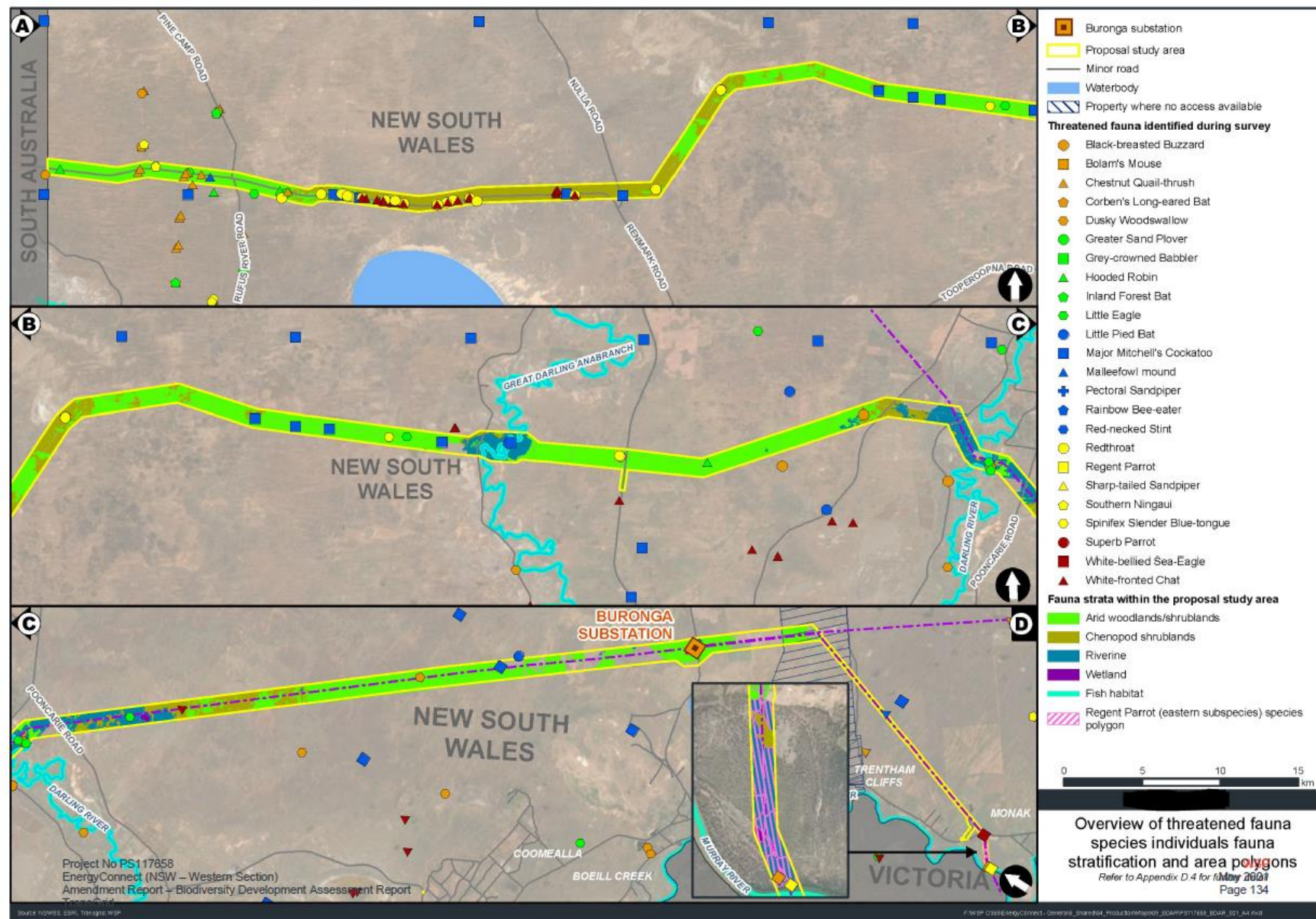


Figure 3.2 - Overview of threatened fauna species identified during survey

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3.5 Threatened aquatic species

The Final BDAR identified that threatened aquatic habitat occurs in the fresh and saline wetlands, rivers and creeks, and other open water bodies such as agricultural dams, irrigation canals, road table drains and low depressions.

The areas of mapped key fish habitat were considered to provide a moderate likelihood of occurrence for the following threatened species:

- Darling River Snail (*Notopala sublineata*) listed as critically endangered under the *Fisheries Management Act 1994* (FM Act);
- Eel-tailed Catfish (*Tandanus tandanus*) listed as endangered under the FM Act;
- Hanley's River Snail (*Notopala hanleyi*) listed as critically endangered under the FM Act;
- Murray Crayfish (*Euastacus armatus*) listed as vulnerable under the FM Act;
- Murray Hardyhead (*Craterocephalus fluviatilis*) listed as critically endangered under the FM Act and vulnerable under the EPBC Act; and
- Silver Perch (*Bidyanus bidyanus*) listed as vulnerable under the FM Act, and critically endangered under the EPBC Act.

3.6 Threatened aquatic endangered ecological communities

Two endangered ecological communities listed under the FM Act were considered to have the potential to occur within the project study area:

- Aquatic Ecological Community in the Natural Drainage System of the Lowland Catchment of the Darling River Lowland; and
- Aquatic Ecological Community in the Natural Drainage System of the Lowland Catchment of the Murray River Lowland.

Both of these endangered ecological communities are considered to be affected by the project based on the clearing of riparian vegetation.

3.7 Groundwater dependent ecosystems

No high priority groundwater dependent ecosystems (GDEs) were identified within the water sharing plans for the *NSW Murray Darling Basin Porous Rock Groundwater Sources 2011* and for the *Lower Murray Darling Unregulated and Alluvial Water Sources 2011*.

GDE information obtained through the National Groundwater Information System (BOM, 2020) identified six GDEs with high potential for groundwater interaction within the project study area (Table 3.5).

Table 3.5 - GDE with high potential for groundwater interaction within the project area

GDE Type	Name	Associated PCT
Terrestrial (aquatic)	Darling River	N/A
Terrestrial (aquatic)	Murray River	N/A
Subterranean (vegetation)	<i>Eucalyptus camaldulensis</i>	PCT 11
Subterranean (vegetation)	<i>Eucalyptus largiforens</i>	PCT 13 and 15
Subterranean (vegetation)	Grassy Riverine Forest	
Subterranean (vegetation)	Mallee	PCT 170,171 and 172

Generally, all identified high potential GDEs are in proximity to the Darling River, Great Darling-Anabranch and Murray River, with larger GDE communities adjacent to the Darling River and Murray River.

The following high potential GDEs were also identified through the National Groundwater Information System:

- two non-connected populations of Mallee (vegetation) that occur northeast of Lake Victoria; one at the edge of the project study area and the other within the project study area and extending approximately five kilometres to the northwest; and
- an additional grouping of Mallee and *Eucalyptus largiflorens* which are proximal to the townships of Buronga and Wentworth, approximately one kilometre from the project study area.

One RAMSAR wetland, known as Riverland, is located within South Australia, about three and a half kilometres southwest of the project area.

3.8 Migratory species

The Final BDAR identified that twenty-six EPBC Act listed migratory species are moderately likely to occur within or adjacent to the project study area. An additional nine EPBC Act listed marine bird species may occur on occasion.

Of these species, three were recorded within the project study area:

- White-bellied Sea-Eagle;
- Rainbow Bee-eater; and
- Great Egret.

An additional seven migratory species were recorded outside the project study area in local or regional wetlands and therefore could move through the project site:

- Sharp-tailed Sandpiper (Chowilla regional reserve in SA);
- Pectoral Sandpiper (Chowilla regional reserve in SA);
- Red-necked Stint (Chowilla regional reserve in SA);
- Greater Sand Plover (Chowilla regional reserve in SA);
- Black-winged Stilt (Chowilla regional reserve in SA);
- Caspian Tern (Recorded in local riparian and wetland habitats); and
- Red-necked Avocet (Chowilla regional reserve in SA).

3.9 Wetlands of national and international importance

Seven nationally important wetlands are located within 25km of the project study area, however none of these nationally important wetlands occur within NSW.

Three RAMSAR wetlands or Wetlands of International importance were identified:

- Riverland Ramsar wetland complex – in Chowchilla Game Reserve in SA and is located three kilometres to the south-west of the SA/NSW border at its most western extent of the project;
- Banrock station wetland complex – located 40 to 50km downstream of the project in SA; and
- The Coorong, and Lakes Alexandra and Albert Wetland - located 150 to 200km downstream of the project.

The Riverland site would be the only wetland of international importance of concern to the project, however it will not be directly impacted.

3.10 Pests

During consultation of the EIS, local landholders and the Western Local Land Services (LLS) biosecurity officers identified rabbits, foxes, kangaroos, goats, wild dogs and pigs as the main vertebrate pests in the vicinity of the project study area. Common carp is also present throughout all

major river systems in the Western LLS region (Western LLS, 2018). Plague locusts can also cause problems in favourable seasons. No specific pest species have been identified in the vicinity of the project.

3.11 Weeds

The weeds identified across the project area and legislation or document under which they were identified are included within the *Biosecurity Management Plan* (45860-HSE-PLN-D-0032) (Appendix D).

There are several species of weeds identified in the EIS that are likely to be located in the vicinity of the project study area including:

- six species of weeds recorded during property inspections under the *Biosecurity Act 2015* (DPI, 2020);
- a likely occurrence of six noxious weeds, declared under the former *Noxious Weeds Act 1993*;
- 11 species that are identified as regional priority weeds on the *Western Regional Strategic Weed Management Plan 2017 – 2022* (Western LLS, 2017);
- one state priority weed – Bitou bush (*Chrysanthemoides monilifera*);
- four weeds that were specifically mentioned as problematic weeds by landholders and the Wentworth Shire Council biosecurity officer: Khaki weed, caltrops, thornapple and onionweed;
- Noogoora burr and Bathurst burr, which can be a problem in irrigation fields and contaminate wool.

Note that the reporting above is in line with what was reported in the EIS, however the *Biosecurity Act 2015* repeals and replaces the *Noxious Weeds Act 1993*. The term “priority weed” replaces the term “noxious weed” for the purposes of the Act (s 32).

3.11.1 Weeds under the Biosecurity Act 2015

Technical Paper 3 (Agricultural land impact assessment) reported that weeds recorded by authorised officers during property inspections under *Biosecurity Act 2015* (DPI, 2020b) are as follows:

- Horehound (*Marrubium vulgare*);
- Common pear (*Opuntia stricta*);
- Burr ragweed (*Ambrosia confertiflora*);
- Boneseed (*Chrysanthemoides monilifera*);
- Hudson pear (*Cylindropuntia rosea*); and
- African boxthorn (*Lycium ferocissimum*).

3.11.2 Weeds under the former Noxious Weeds Act 1993

Under the former *Noxious Weeds Act 1993* the following weeds were declared noxious in the Wentworth Shire local government area (LGA):

Class 4 (Locally controlled weeds)

- Rope pear (*Cylindropuntia imbricata*);
- Hudson pear (*Cylindropuntia rosea*); and
- Prickly pear (*Opuntia spp.*).

Class 5 (Restricted plant)

- Athel pine (*Tamarix spp.*);

- Bridal creeper (*Asparagus asparagoides*); and
- Willows (*Salix spp.*).

4 Environmental aspects and impacts

4.1 Construction activities

An environmental aspect is an element of an organisation's activities, products, or services that has or may have an impact on the environment (ISO 14001 Environmental Management Systems). The relationship of aspects and impacts is one of cause and effect.

Key construction activities of Stage 2 and the associated environmental aspects that could result in adverse impacts to biodiversity include:

- removal of vegetation as a result of clearing activities reducing available habitat and local biodiversity;
- stripping of topsoils as part of the initial earthwork's activities removing or harming any existing seed bank present and limiting natural regeneration potential;
- dust generation due to earthworks and vehicle movements affecting adjacent habitat;
- construction activities generally affecting the amenity and breeding cycles of any nearby fauna;
- introduction or spread of weeds and pathogens due to vehicle and machinery movements;
- surface grading and earthworks affecting root stock and soil structure, limiting natural regeneration potential;
- compaction of soils due to earthworks and vehicle movements increasing runoff and soil erosion risk and reducing future revegetation potential; and
- construction plant and equipment and site activities resulting in ignition of vegetation.

4.2 Impacts

The potential for impacts on biodiversity will depend on a number of factors. Primarily impacts will be dependent on the nature, extent and magnitude of construction activities and their interaction with the natural environment. Potential impacts attributable to construction are discussed below.

The environmental management measures described in Section 5 and Table 5.1 have been developed to minimise and mitigate the impacts to biodiversity.

4.2.1 Impacts on native vegetation

It should be noted that detailed design for the project has not been completed and as a result the disturbance area is indicative only.

The Final BDAR reported that direct impacts on native vegetation would include:

- **direct impacts on up to 642.85 hectares** of native vegetation. This impact on native vegetation comprises the following disturbance area impacts:
 - full disturbance in indicative **Disturbance Area A** is 399.98 hectares;
 - partial disturbance in indicative **Disturbance Area B** is 242.87 hectares.

Indicative Disturbance Area B has been assessed as two management subsets being:

- **Disturbance Area B4** – 187.72 hectares (where vegetation management is restricted to vegetation with growth height above 4 metres in height); and
- **Disturbance Area B10** – 55.15 hectares (where vegetation management is restricted to vegetation with growth height above 10 metres in height).

Total direct impact on native vegetation for each IBRA region is outlined in Table 4.1 below (Final BDAR Table 9.7). Note that this is subject to further detailed design.

Table 4.1 - Total direct impact on native vegetation

Native vegetation	IBRA Subregions					Direct impact (Ha)
	Murray Scroll Belt	South Olary Plain	Great Darling Anabranch	Pooncarrie Darling	Robinvale Plain	
Total direct impact on native vegetation for each IBRA subregion	7.81	524.03	24.95	77.50	8.56	642.85
Total direct impact on native vegetation						642.85

4.2.2 Impacts on threatened ecological communities

A total of 19.02 hectares of threatened ecological community will be impacted in the form of Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW Southwestern Slopes bioregions which is listed as endangered under the BC Act. The direct impacts on threatened ecological communities are detailed in Table 4.1 (Final BDAR Table 9.8).

Table 4.2 - Direct impact on threatened ecological communities

Native vegetation	BC Act ¹	IBRA Subregions					Direct impact (Ha)
		Murray Scroll Belt	South Olary Plain	Great Darling Anabranch	Pooncarrie Darling	Robinvale Plain	
Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW Southwestern Slopes bioregions	E	0	15.38	1.98	1.38	0.28	19.02
Total direct impact on threatened ecological communities							19.02

¹ E = endangered under the BC Act

4.2.3 Impacts on threatened flora species

Four threatened flora species (species credit species) will be impacted by the project. These include impacts to:

- 0.04 hectares of habitat for *Acacia acanthoclada* (Harrow Wattle) which is listed as endangered under the BC Act;
- 0.32 hectares of habitat for *Atriplex frequens* (A saltbush) which is listed as vulnerable under the BC Act and the EPBC Act;
- 1.51 hectares of habitat for *Austrostipa nullanulla* (A spear-grass) which is listed as endangered under the BC Act; and
- 14 individuals of *Santalum murrayanum* (Bitter Quandong) which is listed as endangered under the BC Act.

4.2.4 Impacts on threatened fauna species

The Final BDAR reported that a total of 18 threatened fauna species (species credit species) were considered to have potential habitat within the indicative disturbance area.

Of these, the project will directly affect one, *Polytelis anthopeplus monarchoides* (Regent Parrot (eastern subspecies)) which is listed as endangered under the BC Act and vulnerable under the EPBC Act. The project will involve the clearing of 6.91 hectares of habitat for the Regent Parrot.

4.2.5 Impacts on threatened aquatic species and habitats

4.2.5.1 Impacts on threatened aquatic species

The Final BDAR reported six threatened aquatic species with a moderate likelihood to occur in key fish habitat traversed by the project. Refer to Section 3.5.

Impacts on mapped key fish habitats (Strahler 4/5th order streams) were considered likely to be negligible.

As the impacts would be minor, and water quality impacts during construction would be managed, the project was not considered likely to significantly impact any listed threatened fish species.

4.2.5.2 Impacts on threatened aquatic habitats

The project will span the Great Darling Anabranch and Darling River and therefore would not lead to direct impacts on the native fish and aquatic invertebrates that are listed to form part of the two endangered ecological communities (refer Section 3.6).

The Final BDAR included an assessment of significance which determined that the project is unlikely to lead to a significant impact due to the predicted negligible aquatic impact.

4.2.6 Impacts on groundwater dependent ecosystems

No impacts direct or indirect were predicted as a result of the project. Subsurface interaction or modification of groundwater interaction with the GDEs and RAMSAR wetlands was reported to be nil to negligible.

4.2.7 Impacts on migratory species

Impacts on migratory species are not expected as:

- there are no important habitats for the Fork-tailed Swift or the White-throated Needletail as outlined in the *Draft Referral guideline for 14 birds listed as migratory species under the EPBC Act* (Department of the Environment, 2015b);
- construction of the project would not seriously disrupt the lifecycle of an ecologically significant proportion of a population of migratory birds; and
- the project will not substantially modify, destroy or isolate an area of important habitat for any EPBC Act listed migratory species.

4.2.8 Impacts on wetlands of national and international importance

The Riverland RAMSAR wetland complex in the Chowchilla Game Reserve is located around three kilometres to the south-west of the SA/NSW state border. The Banrock station wetland complex is located 40 to 50 kilometres downstream of the project study area. These wetlands would not be directly or indirectly impacted by the project.

The BDAR reported that the project would not impact on any wetlands of national or international importance.

4.2.9 Impacts on biosecurity

There are risks that animal diseases, plant diseases and especially weeds could be introduced or spread during construction.

Potential carriers of weed seeds, plant material and diseases include vehicles (especially tyres), machinery and personnel (clothing and footwear). Biosecurity matters could also be spread by soil and water movements associated with construction. The biosecurity risks are generally highest during the construction phase due to earthworks, and the frequency of vehicle and personnel movements.

Potential impacts of a biosecurity incident on agricultural businesses include increased costs associated with monitoring pests, weeds or diseases, and reduced income caused by reduced livestock, crop or pasture production.

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5 Management measures

A range of environmental requirements and mitigation measures are identified in the EIS, the Amendment Report, the Response to DPIE Request for Information and the Final BDAR.

Specific safeguards and management measures to address impacts to biodiversity are identified within Section 5.1 to Section 5.9 and in Table 5.3.

5.1 Pre-clearing surveys

The pre-clearing survey will be undertaken by the project ecologist. The pre-clearing surveys of the clearing extent will be undertaken prior to clearing and will include:

- confirmation of the location and extents of any biodiversity exclusion zones;
- identification and demarcation of all hollow bearing trees. Identification and demarcation may also occur during earlier surveys. If this is the case, the ecologist will confirm that hollow bearing trees are prominently marked / tagged;
- identification of fauna that require relocation;
- the identification of nearby habitats for suitable release of fauna; and
- identification of suitable resources for salvage and beneficial reuse within the approved disturbance area. This may include, for example, logs or tree hollows.

The pre-clearing survey and delineation of clearing extents will be undertaken in accordance with the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-0002) included within Appendix A.

The results of the pre-clearing surveys will be used to update and confirm the accuracy of the GIS or sensitive area plans and these will be communicated and distributed to the construction team.

5.1.1 Management of nests

Should any nests be identified during pre-clearing or clearing surveys, the following will occur:

- check nest to identify if active (i.e. 10-15 minute watch to see if being attended/there is movement);
- stop work in the surrounding area (20m minimum buffer);
- where the nest is active and is located at height:
 - if there is an elevated work platform (EWP) or tree climber present, use this approach to retrieve the nest along with any eggs/hatchlings;
 - if an EWP or tree climber is not present, the tree will not be removed until the nest can be safely relocated;
- fauna spotter catcher/ecologist to oversee process and advise if feasible to attempt relocation within the local area; and
- if not feasible to relocate, fauna spotter catcher/ecologist to secure within a dark, cool area until eggs/fledglings can be transported to a licensed wildlife carer.

5.2 Supplementary Hollow and Nest Strategy

During pre-clearing surveys, the project ecologists will survey and document tree hollows and nests within the proposed clearing extent as outlined in the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-0002). If the surveys identify tree hollow habitat within the disturbance area, a *Supplementary Hollow and Nest Strategy* will be prepared to inform the types of nest boxes that would be required.

The *Supplementary Hollow and Nest Strategy* will include the following:

- the size, type, number and location of nest boxes required based on the results of the ecological surveys;
- appropriately sized nest boxes will be installed within the vicinity of hollow-bearing trees (subject to landholder agreement and suitable existing trees being present) no more than two weeks prior to clearing of the tree;
- all nest boxes in a particular location will be installed within six months after clearing;
- “nest boxes” will include consideration of natural tree hollow re-use and new tree hollow creation where reasonable and feasible; and
- measures to address and manage nests (such as raptor nests) pre-clearing will be included.

The *Supplementary Hollow and Nest Strategy* will be implemented.

5.2.1 Nest box locations

The location of the nest boxes will be determined by the project ecologist following identification of the hollow bearing trees and available nearby habitat. Should there be no suitable areas and trees adjacent to this site, the boxes will be installed at the nearest suitable area. Suitability will be determined by installation guidelines. Spacing of the boxes in relation to the species natural home range is important to consider as overcrowding can be counterproductive and has potential to deter animals from using it.

The project ecologist will also determine the potential for relocation of natural tree hollows for re-use, either by attachment within adjacent vegetation, or by placement on the ground to create habitat for ground-dwelling fauna.

An ecologist will provide advice on recommended installation e.g. tree attachment, suitable height, density, location, aspect and timing of nest boxes and outlined in the *Supplementary Hollow and Nest Strategy*.

Considerations for the location and position of nest boxes will include:

- installing nest boxes as close as possible to the location of the original hollow-bearing tree;
- placing in areas of native vegetation ideally connected to other areas of native vegetation;
- placing nest boxes at varying heights according to the heights recommended height for the target species (refer also to Table 5.1);
- positioning the nest box on the tree in a location which will consider the hot afternoon sun and the predominant aspects of severe storms; and
- recipient tree should be robust and in good health.

5.2.2 Number of boxes required

The number and type of nest boxes to be installed will be determined based on the results of the surveys undertaken by WSP (as part of the Final BDAR) and any further surveys which are determined to be required by the project ecologist.

Hollow data will be collected during pre-clearing surveys and will include:

- location of the hollows;
- number of each hollow class (small <5cm, medium 5-15cm, large 15-25cm and extra-large >25cm);
- approximate depth (cm) of the hollow;
- approximate height (m) of the hollow from the ground; and
- suitability/evidence of fauna.

This data will be compared to species specific nest box dimensions to help determine an estimated quantity of nest boxes and specific types.

5.2.3 Nest box construction

Nest box dimensions will be detailed within the *Supplementary Hollow and Nest Strategy*, with Franks and Franks (Nest boxes for wildlife) used as a guide in determining nest box size. Table 5.1 provides an overview of some proposed nest box sizes based on *Nest boxes for wildlife*. Please note that it's recognised that there were no possums identified during field surveys, however this information is included as a general reference as the distribution of the Common Brushtail Possum does extend to the project area.

Table 5.1 - Nest box dimensions (based on *Nest boxes for wildlife* 2011)

Species	Inside measurement (mm)	Entrance diameter (mm)	Depth of chamber (mm) (from bottom of entrance hole)	Height above ground (m)	Comments
Small birds	150 x 150	50	30	3-6	Horizontal spout entrance
Parrots	150 x 200	30-50	400	2-4	Front entrance
Cockatoo	300 x 400	200	1200	8-10	Very heavy chewer; angled spout entrance
Possums (large)	250 x 250	100	300	2-4	Will use several den sites
Microbat	n/a	Various slot sizes	400 or 600	1.8-5	Bottom opening

Nest boxes will likely be constructed in plywood or timber.

The lid should overhang the front and sides of the nest box by at least 25 mm to prevent water damage. A hinged lid is recommended for monitoring and maintenance purposes.

To assist with drainage, small holes should be drilled into the base of the nest box. Either rough-sawn timber or grooves cut into the face of the box will allow animals to grip to the box. Grip should also be considered inside the box, either with mesh or grooves cut into the walls to allow young to climb out of the box.

A nest box identification number will be placed on the nest box (stamped on the side or bottom of the nest box).

5.2.4 Nest box installation

The installation of nest boxes in suitable habitat outside of the clearing extent is proposed to compensate for the loss of hollow-bearing trees which will be removed for the project.

The preferred method of attaching nest boxes to trees is the Habisure system, which involves:

- a length of plastic-coated soft fencing wire will be passed through the nest box and around the tree trunk;
- where the wire is in contact with the tree trunk or branch it will be threaded through a length of garden hose to protect the tree;
- details of each nest box will be recorded and include:
 - the GPS location;
 - date of installation;

- identification number; and
- nest box type.

Nest boxes will be installed during the following period:

- no more than two weeks prior to clearing of the tree; and
- all nest boxes in a particular location will be installed within six months after clearing.

5.2.5 Nest box monitoring and maintenance

Monitoring and maintenance of nest boxes will be detailed within the *Supplementary Hollow and Nest Strategy*.

Monitoring during construction will determine the use of nest boxes during the construction phase and will occur on an annual basis. Any requirement to maintain or replace nest boxes due to deterioration or invasion by pest species, will also be assessed based on the viability of the nest box to continue to be used by the target species. Where longer term use is considered unviable, consideration and assessment will be made to determine if nest box replacement is required.

Any longer-term maintenance and monitoring (post-construction) would be detailed within the Operational Environmental Management Plan.

5.3 Vegetation clearing

All vegetation clearing will be undertaken in accordance with the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-0002) included within Appendix A.

5.3.1 Staged or non-staged clearing

All areas that need to be cleared will be subject to staged or non-staged clearing. Staged clearing occurs in locations where the ecologist identifies habitat and is typically referred to as 'two-stage clearing'. Habitat vegetation will be identified with unique identifier numbers (identified by use of spray paint). Flagging will also be placed around the trunk of the vegetation.

Areas where two-stage clearing is required will clear non-habitat vegetation first, with habitat vegetation removed approximately 24 hours following this. Habitat vegetation will be removed following an inspection by the ecologists / fauna handlers. Relocation of fauna will occur.

Areas where no staging is required may be removed in one step. No habitat has been identified in these locations.

Both two-staged and non-staged areas are also subject to the requirements of the disturbance areas.

5.3.2 Disturbance areas

The method of clearing required changes based on the disturbance area. The key disturbance areas are as follows:

1. Disturbance Area A;
2. Disturbance Area A centreline clearing;
3. Disturbance Area B; and
4. Other areas (hazard / high risk trees and fauna corridors).

Figure 5.1 indicates the various disturbance areas.

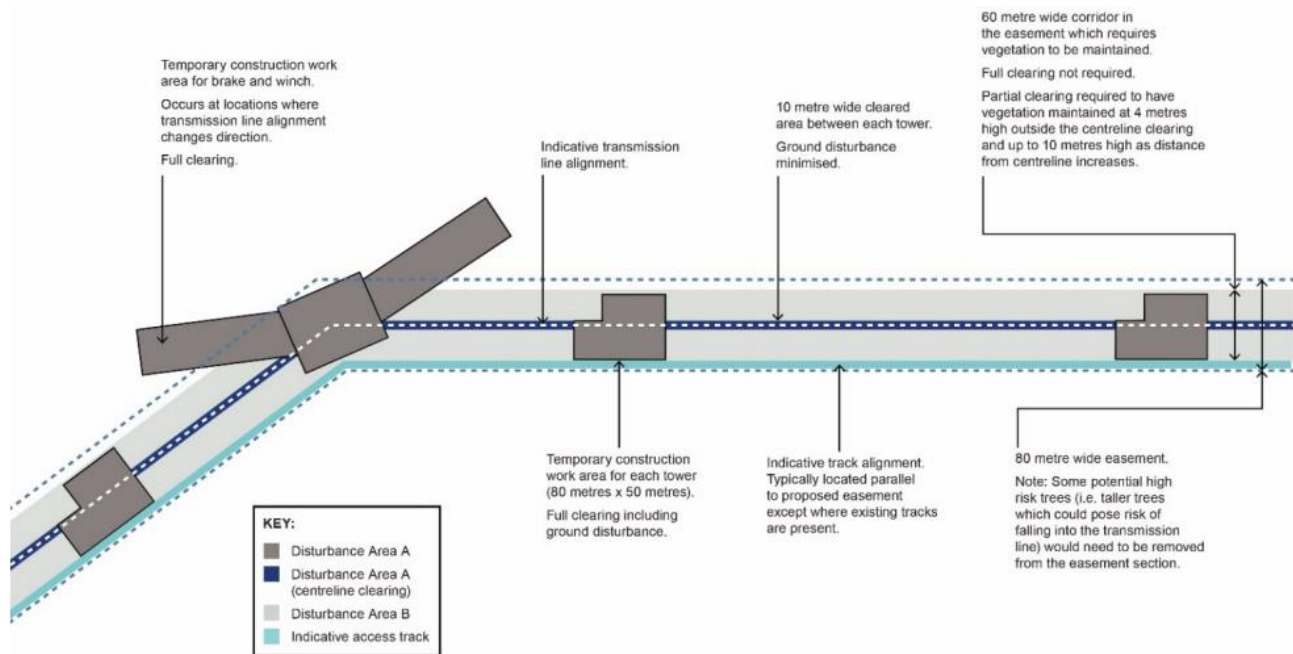


Figure 5.1 - Disturbance area types along the easement

Further detail in relation to the various disturbance areas and the clearing approach which will be undertaken within these locations is provided within the *Pre-Clearing and Clearing Procedure* in Appendix A. Any clearing will be subject to the management measures within Table 5.3 and the *Pre-Clearing and Clearing Procedure*.

Disturbance Area A

Disturbance Area A includes the tower pads, access tracks, laydowns, parking areas, accommodation camps, construction compounds, asset protection zones and the substation.

Vegetation is permitted to be removed to ground within Disturbance Area A. Where possible opportunities to retain vegetation will occur through review of temporary design and construction methodologies.

Disturbance Area A – centreline clearing

Disturbance Area A centreline clearing is the area required for line stringing activities. Disturbance Area A centreline clearing is 10 metres in width. Vegetation in this area will be removed, however topsoil and ground material would be retained (where possible). Tree stumps will be removed.

Disturbance Area B

Disturbance Area B is the area within the easement between the transmission towers. Disturbance Area B consists of:

- Disturbance Area B4; and
- Disturbance Area B10.

Disturbance Area B4 is an area where partial vegetation clearing occurs. Clearing is to occur to trees that are above 4 metres or have the potential to grow above 4 metres in height.

Disturbance Area B10 is an area where partial vegetation clearing occurs. Clearing is to occur to trees that are above 10 metres or have the potential to grow above 10 metres in height.

5.4 Biodiversity Offset Package

The extent of clearing of native vegetation will be recorded to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements within the biodiversity offset package. Actual clearing extents will be provided to Transgrid, who will calculate the final biodiversity offset requirements in accordance with the requirements of the BC Act, the RMMs and applicable conditions of approval. The following information will be recorded and provided to Transgrid in GIS format:

- the clearing extent; and
- the type of clearing at each clearing location as per the clearing approach identified and assessed in the EIS and BDAR (i.e., Disturbance Area A, Disturbance Area B4, Disturbance Area B10 etc).

5.5 Fauna handling

A *Fauna Handling Procedure* (45860-HSE-PRG-1005) has been developed for the project and is included within Appendix C. The procedure will be implemented.

5.6 Unexpected threatened species finds

If any threatened species or threatened ecological community are unexpectedly encountered, the *Unexpected Threatened Species Finds Procedure* (45860-HSE-PR-D-0002) will be implemented. Refer to Appendix B.

5.7 Connectivity Strategy

A wildlife corridor or connectivity corridor is an area of habitat connecting wildlife populations separated by human activities or structures (such as roads or easements). Wildlife corridors are a link of wildlife habitat, generally native vegetation, that connect two or more larger areas of similar habitat. Wildlife corridors can range in size from small, local corridors, to large corridors that stretch across various landscapes.

Connectivity of habitat is essential for the long-term survival of many species because it facilitates fauna movement on a local scale, for foraging and sheltering, as well as on a regional scale as a wildlife corridor for dispersal and migration.

The Final BDAR reported that remnants with habitat linkages are more likely to maintain their biodiversity in the long-term because wildlife corridors:

- provide increased foraging area for wide-ranging species;
- provide cover for movement between habitat patches, particularly for cover-dependent species and species with poor dispersal ability and enhance the movement of animals through sub-optimal habitats;
- reduce genetic isolation;
- facilitate access to a mix of habitats and successional stages to those species which require them for different activities (for example for foraging and breeding);
- provide refuge from disturbances such as fire;
- provide habitat in itself; and
- link wildlife populations and maintain immigration and re-colonisation between otherwise isolated patches. This in turn may help reduce the risk of population extinction (Wilson and Lindenmayer 1995).

Connectivity corridors are proposed for EnergyConnect (NSW – Western Section) at the following locations:

- in key riparian areas:

- the Darling River;
- the Greater Darling Anabranch; and
- the Murray River;
- areas of the alignment that join with proposed Biodiversity Stewardship Agreement sites and or conservation reserve estate; and
- areas of existing dense mallee / belah vegetation.

The connectivity corridors will be 20m wide and will typically be located adjacent to towers where the height of the transmission line is greater and an increased vegetation height can be accommodated (Figure 5.1).

Centreline clearing will occur in the connectivity corridor, however clearing on either side of the centreline will only occur to trees that are above 10m in height or have the potential to grow above 10m in height. The last 10m of the easement (the hazard tree location) will have no clearing at all. Where new or existing access tracks intersect with the connectivity corridor, these access tracks will be used during the construction period (to limit the need for additional clearing which would otherwise be required outside of, or around, the connectivity corridor).

The approach to vegetation clearing in the connectivity corridors is discussed in the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-1004).

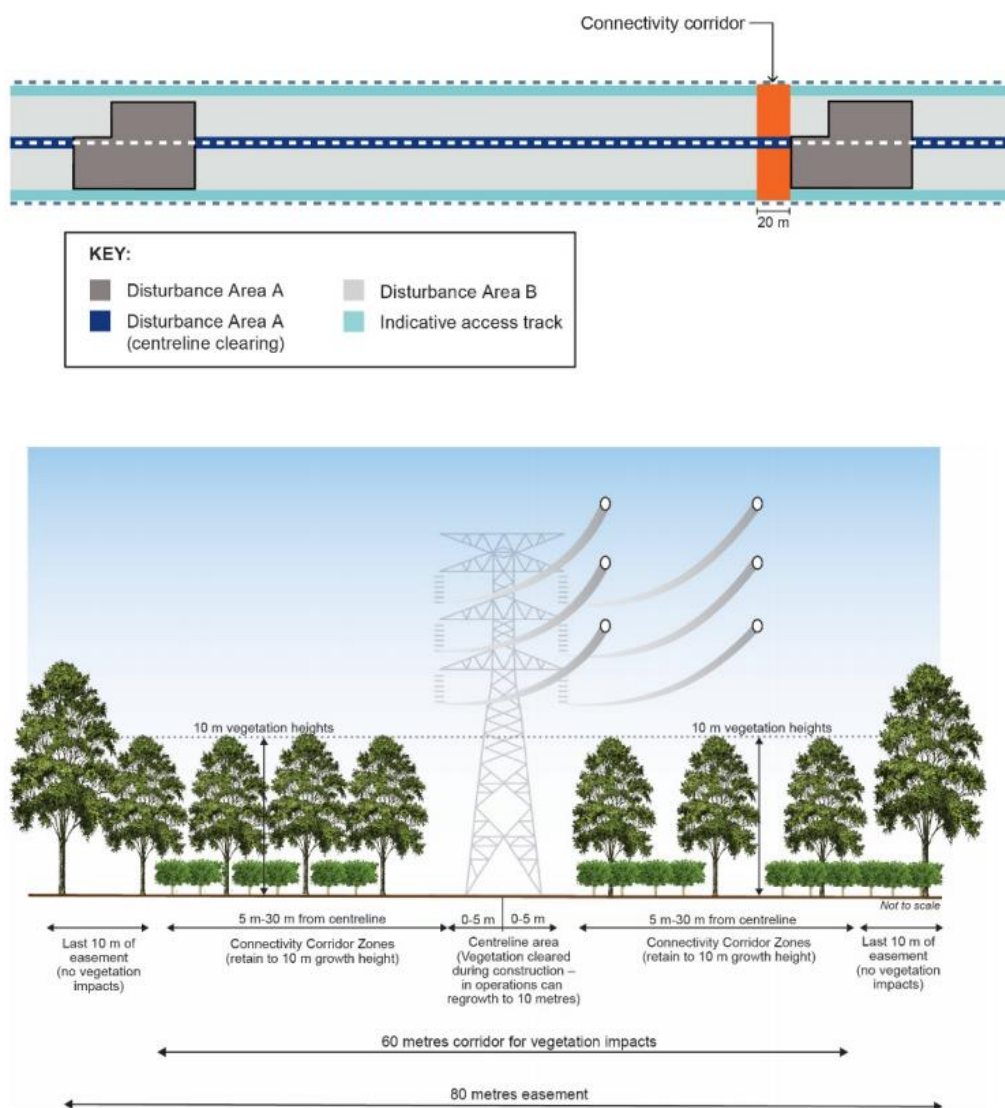


Figure 5.1 - Fauna connectivity corridors

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5.8 Aquatic species, habitats and riparian zones

Activities within vegetated riparian zones will be managed to minimise impacts to aquatic environments.

All vegetation clearing of riparian zones will be undertaken in accordance with the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-0002) included within Appendix A.

Shrub or ground stratum native vegetation within vegetated riparian zones (within the definition of *Water Management Act 2000*) of the Great Darling Anabranch, Darling River and/or Murray River (and other defined riparian areas) will be protected to the greatest extent practicable.

All activities on waterfront land will be constructed in accordance with the *Guidelines for Controlled Activities on Waterfront Land* (2012), unless DPE Water agrees otherwise.

Vegetation clearing will be limited to the tree stratum only, with trunk bases retained in-situ (vegetation to remain at four metres and 10 metres based on the disturbance area). Should the riparian zone be subject to a connectivity corridor, then vegetation within this connectivity corridor will be cleared at 10 metres in height, as detailed within the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-0002).

5.9 Rehabilitation

The rehabilitation objectives for the project are detailed within condition D54 of the Infrastructure Approval. Condition D54 states that the rehabilitation objectives for the ancillary facilities, accommodation camps, and the earthworks material site are:

- safe, stable and non-polluting;
- progressively rehabilitate the site as soon as possible following disturbance;
- to be decommissioned and removed, unless the Planning Secretary agrees otherwise;
- restore land capability to pre-existing use; and
- ensure public safety at all times.

The rehabilitation objectives as presented in the Infrastructure Approval are provided within Table 5.2.

Table 5.2 - Rehabilitation objectives

Feature	Objective
Ancillary facilities, accommodation camps, earthwork material sites, the existing 220 kV transmission line between Buronga substation and the NSW / Victoria border (Line OX1), and the temporary bypass transmission line between Tower 1 and Tower 19 of existing transmission line OX1.	<ul style="list-style-type: none"> • Safe, stable and non-polluting • Progressively rehabilitate the site as soon as possible following disturbance • To be decommissioned and removed, unless the Planning Secretary agrees otherwise
Land use	<ul style="list-style-type: none"> • Restore land capability to pre-existing use
Community	<ul style="list-style-type: none"> • Ensure public safety at all times

Within the easement, the rehabilitation objectives also apply to the existing 220kV transmission line (Line OX1) located between Buronga substation and the NSW / Victoria border, and the temporary bypass line if required (Table 5.2). For any locations within the easement which are outside of these (ie not the 220kV and not the bypass line), disturbed areas will be stabilised in consultation with the relevant landowner as requirement by RMM LP5.

The framework for addressing the objectives at the ancillary facilities, accommodation camps, the earthworks material site, the decommissioned Line OX1 and the decommissioned temporary bypass line are provided within Section 5.9.1 to Section 5.9.5. Reference is also made to the NSW DPI guideline *Restoration of degraded grazing country in the semi-arid areas of NSW* (2006) (NSW DPI guideline).

5.9.1 Safe, stable and non-polluting

An *Erosion and Sediment Control Strategy* (ESCS) (45860-HSE-DOC-D-0002) has been prepared and is included within Appendix A of the *Soil and Water Management Plan* (45860-HSE-PL-D-0008). The ESCS has been developed in line with the principles and requirements in:

- *Managing Urban Stormwater – Soils and Construction*, Volume 1 (Landcom 2004), commonly referred to as the 'Blue Book';
- *Managing Urban Stormwater – Soils and Construction*, Volumes 2A and 2C (NSW Department of Environment, Climate Change and Water 2008);
- *Best Practice Erosion and Sediment Control* (IESCA – 2008);
- Transgrid's HSE Guideline; and
- *Guidelines for Controlled Activities on Waterfront Land* (NRA 2018).

The ESCS will be implemented to guide the development of the Progressive Erosion and Sediment Control Plan (PESCPs).

The Progressive Erosion and Sediment Control Plans (PESCPs) will be prepared and implemented for locations where soil disturbance will occur. The PESCPs will outline controls to be implemented to manage and minimise soil erosion, and movement of sediment and other pollutants to land and/or waters.

The PESCPs will be progressively updated throughout the project to reflect the current construction activities occurring on site and to allow the removal of any measures that are ineffective or no longer needed.

As construction finalises, areas will become progressively available for stabilisation. Unless otherwise requested by the landowner, areas will be stabilised through the application of retained topsoil and natural regeneration. Application of cover crop (seed) may also occur, however consideration will need to be made of the available water supply and effectiveness of such an approach. The PESCPs will provide detail in relation to the measures which will be applied specific to each site. As required, advice will also be sought from the soil conservationist in relation to these measures.

5.9.2 Progressively rehabilitate

Areas such as the Buronga accommodation camp and construction compound and the Wentworth accommodation camp and construction compound will be used during construction of the project, with rehabilitation of these sites occurring following decommissioning and removal of the temporary infrastructure. Areas such as the earthworks material site will be rehabilitated once use of the site is complete.

As recommended by the NSW DPI guideline, harnessing natural processes or natural regeneration should be considered as a first option for re-establishing native vegetation. Natural regeneration involves the germination of seedlings from seedfall or existing nearby vegetation and is an effective method of establishing a large number of plants, particularly where establishment is required at a large scale. Natural regeneration is also a form of rehabilitation.

Natural regeneration provides the following advantages:

- genetics are appropriate and relevant to the location of the site;
- it ensures that indigenous species are established rather than non-indigenous species;
- it ensures that regeneration is reflective of the vegetation present within the adjacent plant community types;
- heavy machinery or vehicles won't necessarily be required to traverse the existing site following placement of topsoil. This is of particular benefit given the number of Aboriginal heritage sites on the project;

- it establishes vegetation with random spacing, reflective of natural processes which would occur with the surrounding plant community types; and
- it provides a greater chance of long-term success.

Seed production areas or seed banks will supply seed, which is dispersed by a combination of wind, water and animals is the preferred rehabilitation method. The seed source for natural regeneration can be from parent trees, residual native plant seed within the soil, wind-blown seed and fauna that transfer and deposit seeds in an area. Water and nutrients are captured in fertile patches of natural vegetation, where plants can germinate and grow. To create a fertile patch, branches can be laid across a slope or the soil can be physically manipulated using mechanical intervention to create divets or depressions where water and nutrients can be retained.

In consultation with the project ecologist, collection of seed will occur. Seed collection will be undertaken in consideration of the NSW DPI guideline. Where seed is collected onsite, records will be retained and will include the species type, quantities, and location of collection. Natural regeneration by existing seed production areas or seed banks is the preferred method of rehabilitation as recommended in the NSW DPI guideline. Dispersal of seed will be undertaken in the seed production areas or seed banks to supplement the existing area where required.

The DPI guideline reports that on degraded country much of the water, seed and nutrients are lost through the action of wind and water. The placement of vegetation, or use of divets and depressions, can assist in enabling seed, fine sediment and organic matter to accumulate.

Where remnant vegetation remains, it will be the starting point to encourage natural regeneration. Remnant vegetation will remain in various locations adjoining areas of temporary clearing including, for example, vegetation adjoining the access tracks and vegetation adjacent to the laydown areas (temporary disturbance areas). In undertaking rehabilitation, the following will occur:

- material resources from the area will be salvaged and stockpiled for beneficial reuse in future where possible. This could include soil and vegetative resources such as hollows and mulch;
- topsoil will be removed and stockpiled for future reuse;
- decommissioning or rehabilitation of the accommodation camp and construction compound will be carried out in accordance with information detailed within the progressive erosion and sediment control plan and/or in consultation with the landowners, where relevant;
- stabilisation of any areas available within the earthworks material site will occur in accordance with the progressive erosion and sediment control plans. Stabilisation would occur progressively, as any of the sections of the earthworks material site are no longer required and/or in consultation with the landowners, where relevant;
- on completion of the work in the temporary construction areas, topsoil shall be re-spread over the disturbed surface in order to promote natural revegetation from the seed and nutrient contained within the topsoil; and
- mulch and woody debris will be a by-product of vegetation clearing activities. Where practicable, this material will be reused in the progressive rehabilitation works following placement of topsoil.

During the construction period, monitoring of the rehabilitation of these areas will occur during the environmental inspections detailed within Section 9.1 of the CEMP.

5.9.3 Decommission and remove

At the end of the construction phase of the project, temporary infrastructure will be decommissioned and removed. In general, decommissioning activities will involve the following:

- disconnecting redundant services including power;
- removal of accommodation facilities;
- removal of other temporary buildings; and

- removal of temporary construction fencing.

5.9.4 Restore land capability to pre-existing use

The pre-existing use of the ancillary facilities, accommodation camps, and the earthworks material site is agricultural land. Consultation with the landholders will occur in stabilising the disturbed areas as required by RMM LP5.

5.9.5 Ensure public safety

Project works, including any decommissioning activities required as part of the rehabilitation works will be undertaken in accordance SecureEnergy's *Health and Safety Plan* (45860-HSE-PL-G-1004). The *Health and Safety Management Plan* details the safety management system and processes which will be implemented during delivery of the project.

Table 5.3 - Biodiversity management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
General				
BD1	Training will be provided to all project personnel, including relevant sub-contractors on biodiversity management practices and the requirements from this plan through inductions, toolbox talks and activity specific training.	Pre-construction	HSSE Manager	RMM B14
BD2	Any site offices or crib sheds which may be required will be located in an area of limited biodiversity value (e.g. cleared land or areas of native vegetation with vegetation integrity scores of less than 17 (in accordance with the NSW Government Biodiversity Assessment Method Operational Manual) will be prioritised).	Detailed design	Design Manager, Construction Manager, Environmental Manager	RMM B3
BD3	Where vegetation disturbance activities are required in areas that have not previously been subject to biodiversity survey, additional survey will be carried out prior to works occurring to inform detailed design and construction methodology. These surveys will be carried out by a suitably qualified ecologist.	Pre-construction and construction	Environmental Manager	RMM B2
BD4	Clearing of native vegetation and key habitat will be minimised where possible. This will include minimising impacts on the clearing of hollow-bearing trees and threatened species. Opportunities to minimise clearing will occur through review of temporary design and construction methodologies for the Stage 2 disturbance area.	Pre-construction and construction	Environmental Manager, Supervisor, Engineer	Condition D25 Condition D28
BD5	Clearing is not to exceed the follow limits: <ul style="list-style-type: none"> 19.6 hectares (ha) of BC Act listed Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW Southwestern Slopes bioregions; 0.04 ha of habitat for BC Act listed flora species <i>Acacia acanthoclada</i> (Harrow Wattle); 0.32 ha of habitat for BC Act and EPBC Act listed flora species <i>Atriplex frequens</i> (A saltbush); 1.51 ha of habitat for BC Act listed flora species <i>Austrostipa nullanulla</i> (A spear-grass); 14 individuals of BC Act listed <i>Santalum murrayanum</i> (Bitter Quandong); and 6.91 ha of habitat for BC Act and EPBC Act listed fauna species <i>Polytelis anthopeplus monarchoides</i> (Regent Parrot) (eastern subspecies). Spatial data and threatened species locations will be provided to the detailed design team for consideration in detailed construction planning.	Pre-construction and construction	Design Manager, Construction Manager, Environmental Manager, Supervisor	Condition D25
BD6	Detailed design and construction methodologies will avoid impact to matters of biodiversity conservation significance to the greatest extent practicable. Micro-siting of the transmission line infrastructure and associated construction working areas and other areas of disturbance will occur to avoid impacts wherever practicable.	Detailed design and construction	Design Manager Environmental Advisor Environmental Manager	Condition D28 RMM B1 RMM LV1

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
	<p>Opportunities for the retention and protection of existing trees within the disturbance area will be identified during construction planning. Trees that do not pose any risk to the safe operation of the transmission infrastructure will be retained where practicable.</p> <p>Threatened species recorded and their habitat, will be given the highest priority in terms of impact minimisation. This includes:</p> <ul style="list-style-type: none"> • Harrow wattle (<i>Acacia acanthoclada</i>); • A saltbush (<i>Atriplex frequens</i>); • A spear-grass (<i>Austrostipa nullanulla</i>); • Desert Hopbush (<i>Dodonaea stenozyga</i>); and • Bitter Quandong (<i>Santalum murrayanum</i>). <p>Threatened species and their habitats will be identified through the GIS or sensitive area plans (SAPs).</p>		Construction Manager	
BD7	<p>The geographical information system (GIS) or sensitive area plans will be prepared and will include:</p> <ul style="list-style-type: none"> • the location of clearing boundaries; • the location of exclusion zones; and • the location of threatened flora or vegetation which is to be retained. <p>Access to the GIS or sensitive area plans will be issued to relevant site personnel with updates issued as required. The GIS or relevant sensitive area plans will be updated based on the results of the pre-clearing surveys.</p>	Construction	Environmental Advisor, Environmental Manager	RMM B12 RMM B14
BD8	Existing tracks and clearings will be used, where possible, to avoid the construction of new tracks. Where this is not possible, the design will seek to minimise impacts to native vegetation as a priority.	Detailed design and construction	Design Manager, Environmental Manager	RMM B4 RMM LV2
Pre-clearing and clearing				
BD9	Pre-clearing surveys will be completed prior to construction by a suitably qualified ecologist in accordance with the <i>Pre-clearing and Clearing Procedure</i> (45860-HSE-PR-G-1008) located in Appendix A.	Pre-construction	Environmental Advisor, Environmental Manager, Ecologist	Condition D28 RMM B11
BD10	<p>Prior to clearing, biodiversity exclusion zones for retained vegetation, including identified threatened flora populations that have a high susceptibility to trampling and compaction, will be:</p> <ul style="list-style-type: none"> • clearly identified by a suitably qualified ecologist prior to the commencement of clearing or any site activity that could damage the vegetation within the exclusion zone; • physically marked and demarcated; and • included on sensitive area plans. 	Pre-construction	Environmental Advisor, Environmental Manager and Ecologist	RMM B13

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
BD11	Clearing will be carried out in accordance with the <i>Pre-clearing and Clearing Procedure</i> (45860-HSE-PR-G-1008) located in Appendix A.	Pre-construction and construction	Environmental Manager, Supervisor, Construction Manager	Condition D28 RMM B11
BD12	Threatened species and their habitats will be identified through the GIS or sensitive area plans (SAPs). Impacts to threatened species will be avoided as far as practicable during detailed design and when determining construction methodologies. In the event that unexpected threatened species are identified, the Unexpected Threatened Species Finds Procedure will be implemented.	Detailed design and construction	Design Manager, Environmental Advisor, Environmental Manager, Supervisors	Condition D28 RMM B1
BD13	The Tree Protection Zone (as defined in <i>AS4970-2009 Protection of Trees on Development Sites</i>) of retained trees within or immediately adjacent to the disturbance area will be protected where possible, through the restriction of construction activities (refer Section 4.2 of AS4970- 2009), to minimise the impact of the works on the long-term health of these trees.	Pre-construction	Environmental Advisor, Environmental Manager, Supervisors	RMM LV7
Threatened species management				
BD14	The <i>Unexpected Threatened Species Finds Procedure</i> (45860-HSE-PR-D-0002) located in Appendix B of this plan will be implemented if threatened ecological communities and threatened flora and fauna species, not assessed in the biodiversity assessment, are identified in the disturbance area.	Pre-construction and construction	All personnel	RMM B18
BD15	Detailed design will incorporate conductor line-marking techniques to minimise bird strike. Use of bird diverters, most likely of the “flapper” variety, will be implemented. Positioning and diverter model will be finalised during detailed design but at minimum these will be used within one kilometre of wetland / riverine habitats to reduce impacts on aerial fauna species from collision and allow safer passage within these areas.	Detailed design and construction	Design Manager Environmental Manager	RMM B6
Habitat retention and rehabilitation				
BD16	Nest boxes will be provided to offset the loss of tree hollow fauna habitat in accordance with a Supplementary Hollow and Nest Strategy. The strategy will include: <ul style="list-style-type: none"> a survey of tree hollows and nests within the proposed clearing extents; the size, type, number and location of nest boxes based on the results of the ecological surveys; appropriately sized nest boxes will be installed within the vicinity of hollow-bearing trees (subject to landholder agreement and suitable existing trees being present) no more than two weeks prior to clearing of the tree; all nest boxes in a particular location will be installed within 6 months after clearing; nest boxes will include consideration of natural tree hollow re-use and new tree hollow creation; and measures to address and manage nests (such as raptor nests) pre-clearing will be included. 	Pre-construction and construction	Environmental Manager	RMM B10

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
BD17	TransGrid will establish a series of 20-metre-wide connectivity corridors near tower locations that occur in woodland vegetation. The connectivity corridors will involve native vegetation retention up to the 10-metre-wide temporary construction centreline clearing zone to better facilitate woodland connectivity.	Detailed design and construction	TransGrid Environmental Manager	RMM B7
BD18	Resources such as topsoil and mulch within the approved disturbance area will be reused where possible for rehabilitation of the site.	Pre-construction	Environmental Manager, Supervisor	Condition D28
BD19	In consultation with the ecologist, seed will be collected or obtained to assist with stabilisation of disturbed areas.	Construction	Environmental Manager, Ecologist	Condition D28
Biosecurity				
BD20	<p>The biosecurity controls outlined in the <i>Biosecurity Management Plan</i> (45860-HSE-PLN-D-0032) in Appendix D will be implemented during construction to minimise the risk of off-site transport or spread of disease, pests or weeds. Controls will include (but not limited to):</p> <ul style="list-style-type: none"> inspections and cleaning of vehicles, machinery, and personnel equipment prior to movement on and off the construction work areas; and minimising movements across adjoining farmland including trip numbers and locations where possible. <p>Additional measures where localised areas of high biosecurity risks have been identified will be implemented. The effectiveness of these controls will be regularly monitored.</p>	Construction	Environmental Manager, Environmental Advisor, Supervisor	RMM LP7 RMM LP8
BD21	Where weeds are present within the disturbance area, weeds will be managed in consultation with Western LLS, Wentworth Shire Council and NSW Department of Primary Industries.	Construction	Environmental Manager and Environmental Advisor	RMM LP8
BD22	In the event of new infestations of notifiable weeds as a result of construction activities, the relevant control authority will be notified as per <i>Biosecurity Act 2015</i> and <i>Biosecurity Regulation 2017</i> .	Construction	Environmental Manager	RMM LP9
Soil and water quality				
BD23	Soil and water quality management measures will be implemented in accordance with the <i>Soil and Water Management Plan</i> (45860-HSE-PL-D-0008) to minimise erosion during clearing.	Pre-construction and construction	Environmental Manager, Supervisor, Engineer	Condition D28
BD24	<p>An <i>Erosion and Sediment Control Strategy</i> (ESCS) (45860-HSE-DOC-D-0002) has been provided in Appendix A of the Soil and Water Management Plan. It has been prepared in line with the principles and requirements in:</p> <ul style="list-style-type: none"> <i>Managing Urban Stormwater – Soils and Construction</i>, Volume 1 (Landcom 2004), commonly referred to as the 'Blue Book'; <i>Managing Urban Stormwater – Soils and Construction</i>, Volumes 2A and 2C (NSW Department of Environment, Climate Change and Water 2008); 	Construction	Environmental Manager	Condition D16 b) RMM HF5 RMM SCG9

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
	<ul style="list-style-type: none"> • <i>Best Practice Erosion and Sediment Control</i> (IESCA – 2008); • Transgrid's HSE Guideline; and • <i>Guidelines for Controlled Activities on Waterfront Land</i> (NRA 2018). <p>The ESCS will be implemented to guide the development of the Progressive Erosion and Sediment Control Plan (PESCPs) for the project.</p>			
BD25	<p>Progressive Erosion and Sediment Control Plan (PESCPs) will be prepared and implemented for locations where soil disturbance will occur. 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.</p> <p>The PESCPs will be progressively updated throughout the project to reflect the current construction activities occurring on site and to allow the removal of any measures that are ineffective or no longer needed.</p>	Construction	Environmental Manager	Condition D16 a) RMM HF5
BD26	Transmission line structures will be located and constructed to minimise impact to vegetated riparian corridors, wherever practicable.	Detailed design and construction	Design Manager, Environmental Manager	RMM B5
BD27	<p>Activities within the riparian zone as defined by the <i>Guidelines for Controlled Activities on Waterfront Land</i> (2012) will:</p> <ul style="list-style-type: none"> • will be managed to minimise impacts to aquatic environments wherever practicable; • shrub or ground stratum native vegetation within vegetated riparian zones (within the definition of <i>Water Management Act 2000</i>) of the Great Darling Anabranch, Darling River and/or Murray River (and other defined riparian areas) will be protected to the greatest extent practicable, with vegetation clearing ideally limited to the tree stratum only, with trunk bases being retained in-situ; • riparian areas subject to disturbance will be progressively stabilised and rehabilitated. 	Construction	Environmental Manager, Environmental Advisor and Supervisor	Condition D20 RMM B16 RMM B17
BD28	Disturbed areas will be stabilised to minimise soil and water impacts. This will be carried out in consultation with the relevant landholder.	Construction	Environmental Manager, Supervisor, Engineer	Condition D28 RMM LP5
Bushfire management				
BD29	Construction activities will be managed in accordance with the <i>Emergency Plan</i> (45860-HSE-PL-D-0025). The Emergency Plan includes measures to minimise the potential for bushfire risk and will be prepared in consultation with Rural Fire Service. It will be made publicly available upon approval.	Construction	Environmental Advisor, Environmental Manager	Condition D28
BD30	<p>The following resources will be available at the work front/work locations to respond to localised fires:</p> <ul style="list-style-type: none"> • fire-fighting appliances such as a 'slip-on' fire-fighting unit, tanker trailers or water cart should be positioned nearby where possible; • water filled knapsacks; 	Construction	Supervisor	Condition D47 e)

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
	<ul style="list-style-type: none"> shovels; and fire extinguisher located within vehicles. 			
BD31	<p>The following will be implemented during all outdoor hot works, grinding activities and vegetation slashing within and adjacent to the construction compound:</p> <ul style="list-style-type: none"> shielding will be used; a water supply will be present (nine kilogram water fire extinguisher); and a trained operator will be present. 	Construction	Supervisor, Project Manager, HSSE team	RMM HR7
Monitoring				
BD32	Clearing of native vegetation will be monitored to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements. The clearing report will be provided within two months of completion of clearing.	Pre-construction and construction	Design Manager, Environmental Manager	RMM B15
BD33	Monitor weather forecasts from Mildura Airport AWS to determine when adverse bushfire weather conditions are predicted.	Construction	Supervisor, Environmental Manager, HSSE team	Good practice
BD34	Monitor the Fire Danger Ratings of Wentworth Shire Council on NSW RFS website.	Construction	HSSE team	Good practice

6 Compliance management

6.1 Training and awareness

All site personnel will undergo the SecureEnergy site induction. The induction training addresses elements related to biodiversity management including, but not limited to:

- relevant legislation;
- the environmental management system, including the CEMP;
- biodiversity values;
- land disturbance and clearing;
- biosecurity and weeds; and
- GIS / sensitive area plans.

Targeted training in the form of toolbox talks or specific training will also be delivered to personnel with a key role in biodiversity management. Examples of training topics include:

- clearing procedures;
- no-go zones;
- threatened species within the project area;
- unexpected finds procedure for threatened species; and
- biosecurity procedures.

Further details regarding the staff induction and training are in Section 6 of the CEMP.

6.2 Roles and responsibilities

SecureEnergy's organisational structure and overall roles and responsibilities are outlined in Section 4 of the CEMP. Specific responsibilities for the implementation of mitigation measures are detailed in Section 5 of this BMP.

6.3 Monitoring

The proposed monitoring program relevant to biodiversity is provided within Table 6.1.

Table 6.1 - Monitoring program

Item	Scope	Frequency	Responsibility	Records/ reporting
Weekly inspections	Inspection of the performance and effectiveness of exclusion zones when works are being undertaken in the Stage 2 areas.	Weekly	Environmental Advisor Supervisors	Weekly Environmental Inspection Checklist
Pre-clearing inspection	Inspecting work areas before clearing in accordance with the <i>Pre-clearing and Clearing Procedure</i> (45860-HSE-PR-G-1008).	24 hours prior to clearing	Ecologist Environmental Advisor	Clearing and Land Disturbance Permit
During clearing supervision	Ecological supervision of clearing operations and removal of habitat trees during two-stage clearing approach in accordance with the <i>Pre-clearing and Clearing Procedure</i> (45860-HSE-PR-G-1008).	During second stage of two-stage clearing	Ecologist / Fauna handler Environmental Advisor	Clearing report

Item	Scope	Frequency	Responsibility	Records/ reporting
Monitoring vegetation clearing	Clearing of native vegetation will be monitored to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements within the biodiversity offset package.	Prior to and during clearing	Environmental Manager Transgrid (offsets) Ecologist	Clearing Register
Nest box monitoring	Monitoring and inspection of nest boxes that have been installed for the project, as per the vegetation clearing offset requirements. Monitoring and associated data to involve: <ul style="list-style-type: none"> confirmed presence or absence of fauna activity and/or habituation including occupation by pest insects e.g. termite/European bees; nest box maintenance requirements and/ or replacement of the asset where necessary; verification of nest box identification i.e asset number. 	Annually	Ecologist / Environmental Manager	Annual report
Fauna handling and rescue	Handling and rescue of fauna in accordance with the <i>Fauna Handling Procedure</i> (45860-HSE-PRG-1005).	As discovered	Supervisor Environmental Advisor	Fauna Handling Record Sheet

6.4 Inspections

Weekly inspections will be performed by Environmental Advisor and documented in the Weekly Environmental Checklist. The inspections will check the implementation and effectiveness of the management measures identified in Section 5 and the environmental performance of the project relevant to biodiversity. Visual monitoring of delineated/fenced disturbance boundaries will be undertaken.

6.5 Auditing

Audits will be undertaken to assess the effectiveness of the management measures and overall compliance with this plan, and other relevant approvals, licences and guidelines. Audit requirements are detailed in Section 9.3 of the CEMP.

6.6 Reporting

Reporting which will be undertaken in accordance with the BMP is summarised within Table 6.2.

Table 6.2 - Reporting program

Item	Scope	Frequency	Responsibility	Recipient
Clearing report	Following completion of clearing a clearing report will be prepared summarising clearing details. The clearing report will be provided within two months of completion of clearing.	Following clearing	Environmental Manager	Transgrid
Monitoring reporting	Reporting of biodiversity matters on the project website in accordance with condition E12.	As required	Environmental Manager	Transgrid

Item	Scope	Frequency	Responsibility	Recipient
Audit reports	Independent audits undertaken in accordance with the Infrastructure Approval will include audits of biodiversity measures (based on the Independent Auditor's program). Audit reports will be prepared. Further detail in relation to auditing is provided within Section 9.3 of the CEMP.	At intervals, no greater than 26 weeks from the date of the initial Independent Audit or as otherwise agreed by the Secretary.	Environmental Manager / Independent Auditor	Transgrid DPE

The clearing reports will include:

- information on clearing operations, dates, procedures and areas;
- the type of clearing (i.e. Disturbance Area A);
- the spatial extent and type of clearing of each Plant Community Type;
- the spatial extent and type of clearing of threatened ecological communities and threatened flora;
- the number of individuals and type of clearing for *Santalum murrayanum* (Bitter Quandong);
- the spatial extent and type of clearing of habitat for *Polytelis anthopeplus monarchoides* (Regent Parrot) (eastern subspecies);
- live animal sightings, captures, any releases or injured/shocked wildlife;
- fauna that may have died as a result of clearing; and
- photographs of any rescued fauna (where obtained).

The spatial extent of clearing will be recorded in GIS file format.

Clearing of native vegetation will be monitored and recorded to inform any final biodiversity offset requirements within the biodiversity offset package. This information will be tracked in the *Clearing and Land Disturbance Register* (45860-HSE-REG-1008).

6.7 Emergencies, incidents and non-compliances

Emergency management and planning including emergencies related to biodiversity matters will be undertaken in accordance with the Clough management system and relevant procedures. Emergencies will be managed in accordance with the relevant Health, Safety, Security and Environment (HSSE) Plan as identified in Section 8.1 of the CEMP – Emergency preparedness and emergency response.

Environmental incidents, including incidents related to biodiversity matters (e.g. unauthorised/unapproved impact to threatened ecological communities) will be managed as described in Section 8.2 of the CEMP – Environmental incidents and the Incident, Notification and Investigation Procedure Flowchart provided in Appendix A4 of the CEMP.

Incident reporting is described in Section 8.3 of the CEMP – Incident notification and reporting.

Where a non-compliance has been identified, including those relevant to biodiversity matters (e.g. not installing nest boxes within the required timeframe), corrective actions will be developed as required and implemented to address the non-conformance that occurred as described in Section 11 of the CEMP – Non-compliance, non-conformance, corrective and preventative action. Reporting of non-compliances will be undertaken as described in Section 10.1 of the CEMP – Reporting non-compliances.

6.8 Contingency plan

Although the project has been assessed through the environmental impact assessment process and potential impacts identified, unpredicted impacts may occur as the project progresses. In the event

that unexpected impacts are identified, the action or cause will be categorised and as required will be managed as:

- an emergency or environmental incident in accordance with Section 8 of the CEMP – Incidents and emergencies; and/or
- a non-compliance or non-conformance in accordance with Section 11 of the CEMP – Non-compliance, non-conformance, corrective and preventative action.

Reporting of the unpredicted impacts would be in line with the above processes and as described in Section 10 of the CEMP – Reporting.

Through the identification of corrective and/or preventative actions through the above processes, the following steps will be considered as relevant:

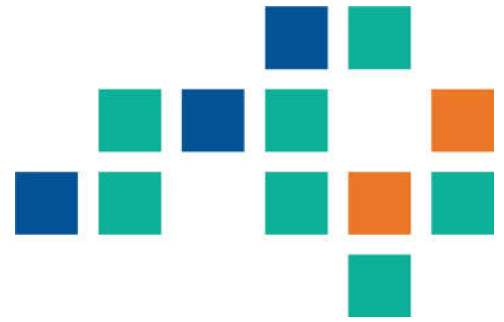
- a) determine the relevant impact assessment criterion/criteria, below which the impact should be reduced, consistent with the requirements of this BMP;
- b) identify options to reduce the unexpected impacts to below the relevant criterion/criteria and appropriate timeframe for implementation;
- c) implement the selected measure(s) to reduce the unexpected impacts; and
- d) identify and implement an appropriate monitoring program to determine the effectiveness of the selected measure(s) to reduce the unexpected impact.

If the above monitoring program identifies that the unexpected impacts have not been reduced to below the nominated criterion/criteria, items b) to d) of the contingency process will be repeated.






This section does not apply to unexpected threatened species finds. These will be managed in accordance with the Unexpected Threatened Species Finds Procedure included in Appendix B of this BMP.

Appendix A – Pre-clearing and Clearing Procedure

INTERNAL



Pre-clearing and Clearing Procedure EnergyConnect (NSW – Western Section) Stage 2 45860-HSE-PR-D-0004

REV	DATE	GENERAL DESCRIPTION	PREPARED	REVIEWED	VERIFIED	VERIFIED	APPROVED
A	31/05/2021	Issued for internal review	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
B	22/12/2021	Issued for Transgrid review	R.Walker-Edwards	M.Lee	G.Crighton	JL.Barrenechea	D.Whatmough
C	21/01/2022	Issued for agency review	R.Walker-Edwards	M.Lee	G.Crighton	JL.Barrenechea	D.Whatmough
D	7/04/2022	Updated following agency review	R.Walker-Edwards	M.Lee	G.Crighton	JL.Barrenechea	D.Whatmough
E	11/05/2022	Updated following agency review	 R.Walker-Edwards	 M.Lee	 G.Crighton	 JL.Barrenechea	 D.Whatmough

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Revision History	
Rev.	Detailed Description
A	Issued for internal review
B	Issued for Transgrid review
C	Issued for agency review
D	Updated following agency review
E	Updated following agency review

Key Document Stakeholders
To be communicated with during reviews and revisions of this document

1 Introduction

This Pre-clearing and Clearing Procedure is an appendix to *the Biodiversity Management Plan* (45860-HSE-PL-D-0029) and forms part of overall environmental management framework for the project.

1.1 Purpose

The purpose of this Pre-clearing and Clearing Procedure is to describe how SecureEnergy proposes to manage clearing during construction of the Stage 2 works to minimise impacts on biodiversity.

2 Induction/Training

Personnel taking part in construction activities shall be informed of this Pre-clearing and Clearing Procedure through the site-specific induction, daily prestart briefings or other targeted training as required.

Personnel involved in clearing activities will be subject to toolbox training and daily prestart briefings which will discuss items such as:

- the proposed clearing for the day;
- the limits of clearing;
- whether the clearing is staged (or not);
- the type of clearing (for Disturbance Area A, Disturbance Area A – centreline clearing or Disturbance Area B);
- known or potentially occurring threatened species; and
- sensitive areas.

3 Scope

This procedure is applicable for the pre-clearing and clearing activities conducted by site personnel (including sub-contractors) for Stage 2 of the project.

This includes, but is not limited to, clearing and grubbing at the following locations:

- on access tracks;
- along the transmission line easement;
- at the tower pads (and associated ancillary sites such as laydown and parking areas);
- at Wentworth compound; and
- operation of the laydown at Anabran South.

4 Pre-clearing

The following tasks are required to occur prior to clearing:

- a suitably qualified and experienced ecologist will be engaged for the project (the project ecologist);
- a clearing and grubbing work pack or Environmental Work Method Statement will be developed for construction teams;
- opportunities to retain and protect existing vegetation within the disturbance area will be identified during construction planning through review of temporary design and construction methodologies for the Stage 2 disturbance area;
- the predicted extent clearing of native vegetation will be monitored against:
 - the extent of clearing permitted by condition D25 of the Infrastructure Approval. All reasonable and feasible measures will be implemented to ensure that clearing to no more than the values detailed within condition D25; and
 - the Plant Community Types as detailed within the *Revised Biodiversity Development Assessment Report* (Final BDAR)(August 2021).

The predicted extent of clearing will also consider the type of clearing (i.e. Disturbance Area A);

- the extent of clearing required for construction and permanent infrastructure will be marked on site;
- the project ecologist is to confirm the location and mark out the extent of the biodiversity exclusion zones;
- the Supervisor will ensure the clearing limit is delineated. The clearing limits will be delineated using regularly placed pegs or identification markers in areas which are not adjacent to sensitive areas (such as threatened ecological communities); or highly visible barrier or star pickets with tape such as colour-coded UV-stabilised rope, bunting, nightline or other similarly robust and durable material in locations adjacent to sensitive areas or where pegs and identification markers will not be suitably visible (for example of obscured by existing vegetation). Two key exclusion zones are:
 - **heritage exclusion zones** - for heritage sites (including Potential Archaeological Deposits, scarred trees and artefact sites). These will be clearly identified in accordance with the *Heritage Management Plan* (45860-HSE-PL-D-0022)prior to the commencement of construction at each location. The clearing permitted in these locations will change during project delivery based on the recommendations of the Aboriginal Cultural Heritage Strategy and Aboriginal Cultural Heritage Assessment Report;
 - **biodiversity exclusion zones** - for identified threatened flora populations that have a high susceptibility to trampling and compaction. These will be clearly identified by a suitably qualified ecologist prior to the commencement of clearing or any site activity that could damage the vegetation within the exclusion zone;
- threatened flora populations that will be retained will be clearly identified by a suitably qualified ecologist prior to any site activity that could damage the vegetation within the exclusion zone;
- the Environment team will ensure delineation is installed and maintained consistently through Stage 2 to mark boundaries and sensitive areas and to reduce the risk of error or misinterpretation of boundaries;
- prior to clearing commencing, the project ecologist will:
 - identify and demarcate hollow bearing trees that are suspected to accommodate fauna;
 - record GPS coordinates for all identified hollow bearing trees during the pre-clearing survey;

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- record the total number of hollows which will be incorporated into the *Supplementary Hollow and Nest Strategy* (45860-HSE-DOC-D-0004);
 - confirm nearby habitat suitable for the release of any fauna that may be encountered during clearing works;
 - check for the presence of threatened flora and fauna species by visual inspection of potential habitat features. If found, the *Unexpected Threatened Species Finds Procedure* (45860-HSE-PR-D-0002) will be followed;
 - identify and confirm the location of any weeds present within and immediately adjacent to the clearing extents;
 - check for any signs or observations of domestic fauna such as stray sheep and cattle. Ecologists to notify the Environment team who will contact the Land and Property Access Manager. The Land and Property Access Manager will contact the owner to collect and / or manage their animals if required;
 - the project ecologist will capture and/or remove fauna that have the potential to be disturbed as a result of clearing activities and relocate any captured fauna into pre-determined habitat identified for fauna release;
- any relevant findings from the pre-clearing inspections will be used to update and confirm the accuracy of sensitive area plans;
 - the construction workforce will be supplied with sensitive area maps (showing clearing boundaries, exclusion zones and the location of threatened flora or vegetation which is to be retained) through the relevant Work Packs;
 - resources within the approved disturbance area (i.e. topsoil) will be reused where possible for rehabilitation of the site;
 - Environment team to check clearing limits and other delineation requirements are installed prior to clearing as per *Clearing and Land Disturbance Permit* (45860-HSE-FO-G-1004);
 - the Supervisor, clearing operators and Environment team to discuss any findings from the pre-clearing walk during the daily pre-start meetings including changes to sequence of clearing, sensitive areas, avoidance areas, or habitat features; and
 - the *Clearing and Land Disturbance Permit* (45860-HSE-FO-G-1004) will be approved by the Environment Manager or delegate prior to clearing activity commencing.

4.1 Heritage sites or items

Prior to clearing on the project, areas need to be reviewed for identified heritage items/and or features as outlined in the *Heritage Management Plan* (HMP) (45860-HSE-PL-D-0022).

There is to be no clearing of potential archaeological deposit (PAD) sites or heritage sites without ensuring that the relevant requirements of the *Heritage Management Plan* (45860-HSE-PL-D-0022) have been implemented. To ensure this occurs, the *Clearing and Land Disturbance Permit* (45860-HSE-FO-G-1004) is to be completed and as required, a Heritage Clearance Certificate is to be in place for the site.

In some instances, clearing is required to enable heritage management including excavations or salvage. These would be recorded in the *Clearing and Land Disturbance Permit* (45860-HSE-FO-G-1004) and will be approved by the Environmental Manager or delegate prior to clearing commencing.

Mitigation measures for each of the recorded items/and or features is identified in Appendix B of the HMP and would need to be implemented prior to any clearing/land disturbance. Additional measures including any further heritage surveys for areas previously not inspected may need to be undertaken in accordance with the project archaeologist.

If scarred trees are identified in an area requiring clearing, these will be managed in accordance with the HMP. There are strict requirements in relation to scarred trees and any requirements of the HMP must be met prior to any impact to the trees.

5 Vegetation clearing

There are two important methods of clearing which must be considered for each clearing location:

1. whether **staged clearing** is required (due to presence of habitat features (or not));
2. the **Disturbance Area** type.

5.1 Staged or non-staged clearing

All areas that need to be cleared will be subject to staged or non-staged clearing. Staged clearing occurs in locations where the ecologist identifies habitat and is typically referred to as 'two-stage clearing'.

Areas where two-stage clearing is required will clear non-habitat vegetation first, with habitat vegetation removed approximately 24 hours following this. Habitat vegetation will be removed following an inspection by the ecologists / fauna handlers. Relocation of fauna will occur.

Areas where no staging is required may be removed in one step. No habitat has been identified in these locations.

Both two-staged and non-staged areas are also subject to the requirements of the disturbance areas.

5.1.1 Clearing where there are no habitat features (One-stage clearing)

If no habitat features have been identified in the pre-clearing surveys, then a two-stage clearing process is not required and clearing can be undertaken in a single-step without the ecologist present. An example is crop land/agricultural pasture area.

All other demarcation and flagging is to occur as required by the *Clearing and Land Disturbance Permit* (45860-HSE-FO-G-1004).

5.1.2 Clearing where there is habitat features (Two-stage clearing)

Where habitat features have been identified during the pre-clearing surveys, two-stage clearing is required. Habitat vegetation will be identified with unique identifier numbers (identified by use of spray paint). Flagging will also be placed around the trunk of the vegetation. For these locations, the clearing area will be surveyed by the project ecologist within 24 hours or immediately prior to clearing, to:

- obtain updated information on fauna and flora habitat that is present, including:
 - inspection of identified habitat features for evidence of fauna habitation;
 - demarcate any newly identified habitat;
 - capture and relocate non-mobile fauna, such as reptiles and frogs; and
- collect data on any newly identified threatened species in the area.

5.1.2.1 Initial clearing – removal of non-habitat vegetation

In this first stage, only non-habitat vegetation will be removed. All marked habitat features will be retained until the final stage of clearing. This allows respite between the initial disturbance and the final removal of habitat. The changed environment and the disturbance from clearing should encourage residing fauna to individually relocate voluntarily without human handling.

A respite period of approximately 24 hours after removal of non-habitat vegetation is intended to allow resident fauna the opportunity to vacate remaining habitat before final clearing commences.

5.1.2.2 Final clearing

A suitably qualified and experienced fauna handler will be onsite to:

- thoroughly inspect all hollows that are accessible from the ground immediately prior to clearing;
- carefully supervise removal of habitat features and hollows when trees are dropped to the ground;
- ensure detected fauna will be encouraged to self-relocate or will be captured and released in the identified release areas;
- to capture and relocate any encountered fauna to pre-identified release sites;
- ensure that any injured wildlife is transported to veterinarian or wildlife carer; and
- where breeding fauna or dependent young are detected during the clearing works, consult with a licensed carer to determine whether the animal/s require ongoing care or can be safely relocated to adjacent habitat.

Locations of fauna release (including GPS coordinates) will be recorded in a post-clearing report.

Once all fauna habitat inspection and any required fauna removal is complete, the remaining vegetation clearing will commence.

5.2 Disturbance Areas

5.2.1 Clearing methodology

The method of clearing required across the project changes based on the disturbance area. The key disturbance areas are as follows:

1. Disturbance Area A;
2. Disturbance Area A centreline clearing;
3. Disturbance Area B; and
4. Other areas (hazard / high risk trees and fauna corridors).

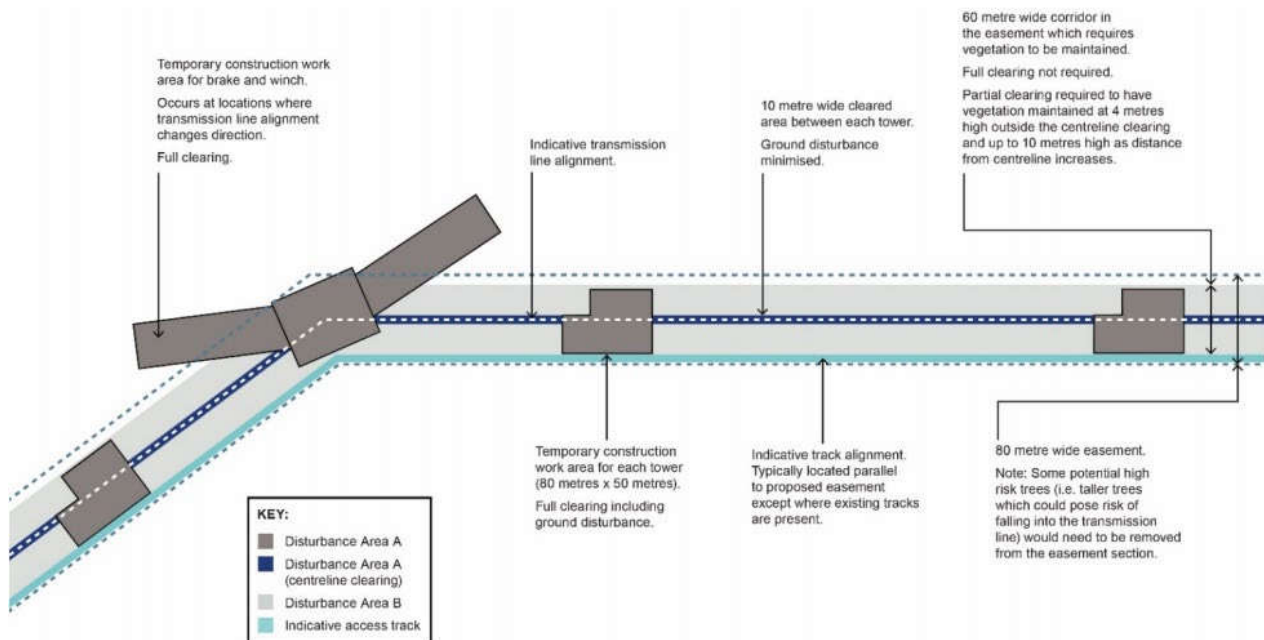


Figure 5.1 – Disturbance areas

5.3 Disturbance Area A

Disturbance Area A includes the tower pads, access tracks, laydowns, parking areas, accommodation camps, construction compounds, asset protection zones and the substation.

Vegetation is permitted to be removed to ground within Disturbance Area A. Where possible opportunities to retain vegetation will occur through review of temporary design and construction methodologies. Trees, vegetation and stumps in Disturbance Area A can be removed.

Disturbance Area A is the **dark grey** and **aqua blue** areas indicated in Figure 5.1.

5.4 Disturbance Area A - centreline clearing

Disturbance Area A centreline clearing is the area required for line stringing activities. Disturbance Area A centreline clearing is **10 metres in width**. Vegetation in this area will be removed, however topsoil and ground material would be retained (where possible). Tree stumps will be removed.

Disturbance Area A centreline clearing is the **dark blue** area indicated in Figure 5.1 and Figure 5.2.

5.5 Disturbance Area B

Disturbance Area B is the area within the easement between the transmission towers. Disturbance Area B consists of:

- Disturbance Area B4;
- Disturbance Area B10.

Disturbance Area B4 is an area where partial vegetation clearing occurs. Clearing is to occur to trees that are above 4 metres or have the potential to grow above 4 metres in height.

Disturbance Area B10 is an area where partial vegetation clearing occurs. Clearing is to occur to trees that are above 10 metres or have the potential to grow above 10 metres in height.

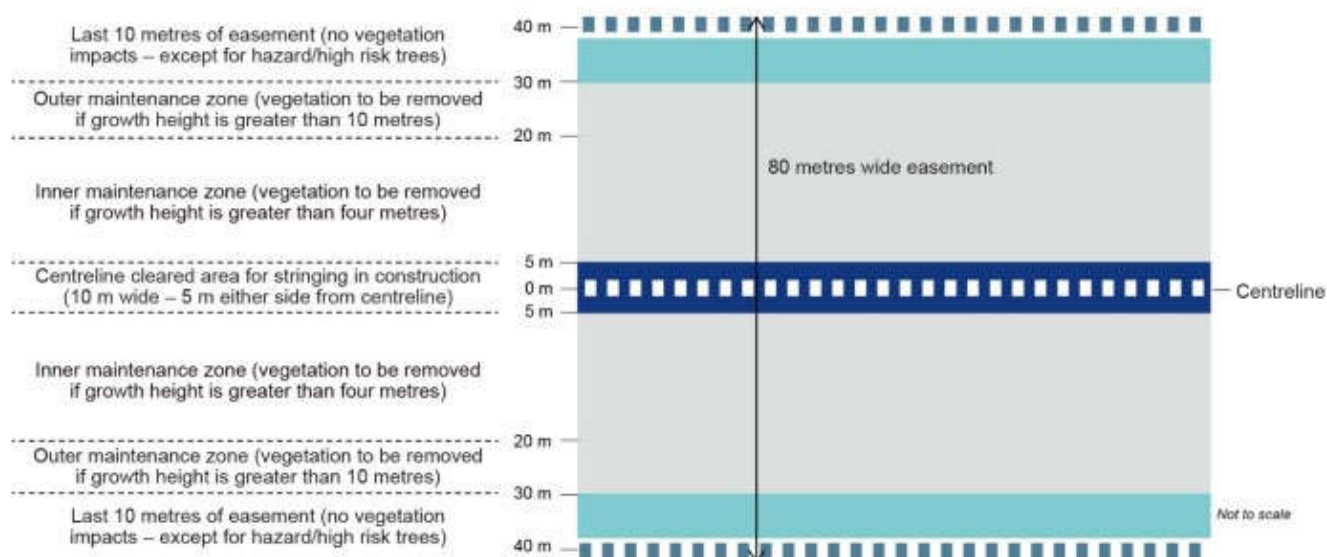


Figure 5.2 – Easement sections

5.5.1 Disturbance Area B4

An area where partial vegetation clearing occurs. Clearing is to occur to trees that are above **4 metres** or have the potential to grow above **4 metres** in height.

Disturbance Area B4 is **15 metres in width each side of the centreline clearing (total 30 metre width)**. Therefore Disturbance Area B4 commences at the 5 metre mark and ends at the 20 metre mark each side of the centreline.

The Final BDAR reports that there is potential for temporary minor changes to understorey composition in these areas due to the temporary ground disturbance activities. Minor impacts to understorey to remove a tree will occur however impacts must be minimised as much as possible to remain minor. Retention of root bases and tree stumps will occur where practicable.

5.5.2 Disturbance Area B10

An area where partial vegetation clearing occurs. Clearing is to occur to trees that are above **10 metres** or have the potential to grow above **10 metres** in height.

Disturbance Area B10 is **10 metres in width each side of the centreline clearing (total 20 metre width)**. Therefore Disturbance Area B10 commences at the 20 metre mark and ends at the 30 metre mark on each side of the centreline.

The Final BDAR reports that there is potential for temporary minor changes to understorey composition in these areas due to the temporary ground disturbance activities. Minor impacts to understorey to remove a tree will occur however impacts must be minimised as much as possible to remain minor. Retention of root bases and tree stumps will occur where practicable.

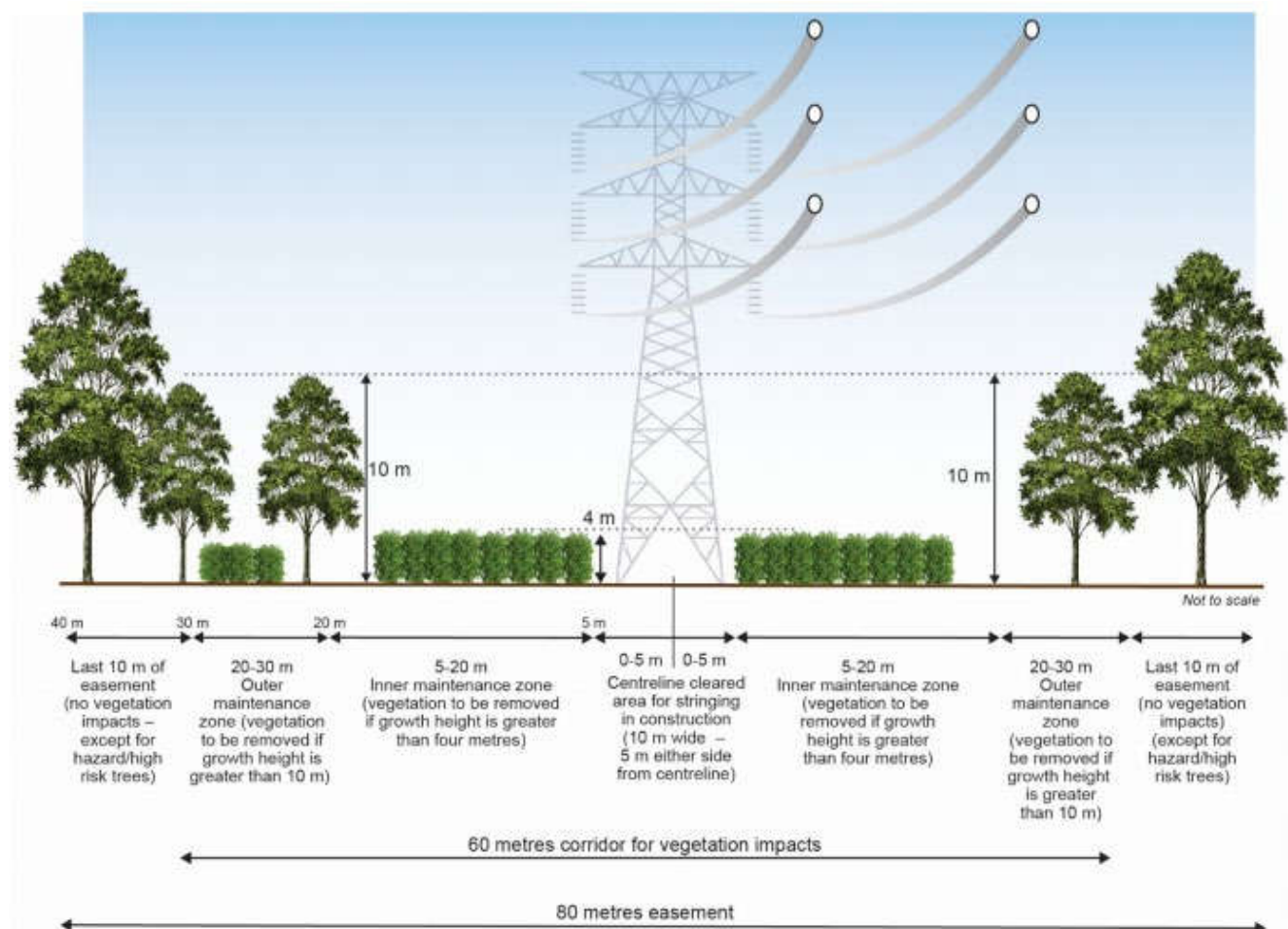


Figure 5.3 – Cross-sectional view of clearing areas

5.6 Other areas

5.6.1 Hazard / high risk trees

Hazard or high risk trees within the final 10 metres of each side of the easement may require removal based on the arborist report. If heritage sites are to be impacted, removal is not permitted without seeking advice from the Environmental Manager regarding the need for additional approvals.

5.6.2 Fauna connectivity corridors

A wildlife corridor or connectivity corridor is an area of habitat connecting wildlife populations separated by human activities or structures (such as roads or easements). Wildlife corridors are a link of wildlife habitat, generally native vegetation, that connect two or more larger areas of similar habitat. Wildlife corridors can range in size from small, local corridors, to large corridors that stretch across various landscapes.

The following locations will be considered for connectivity corridors:

- in key riparian areas:
 - the Darling River;
 - the Greater Darling Anabranch; and
 - the Murray River;
- areas of the alignment that join with proposed Biodiversity Stewardship Agreement sites and or conservation reserve estate; and
- areas of existing dense mallee / belah vegetation.

The connectivity corridors will be 20m wide and will typically be located adjacent to towers where the height of the transmission line is greater and an increased vegetation height can be accommodated (Figure 5.4).

Centreline clearing will occur in the connectivity corridor, however clearing on either side of the centreline will only occur to trees that are above 10m in height or have the potential to grow above 10m in height. The last 10m of the easement (the hazard tree location) will have no clearing at all. Where new or existing access tracks intersect with the connectivity corridor, these access tracks will be used during the construction period (to limit the need for additional clearing which would otherwise be required outside of, or around, the connectivity corridor).

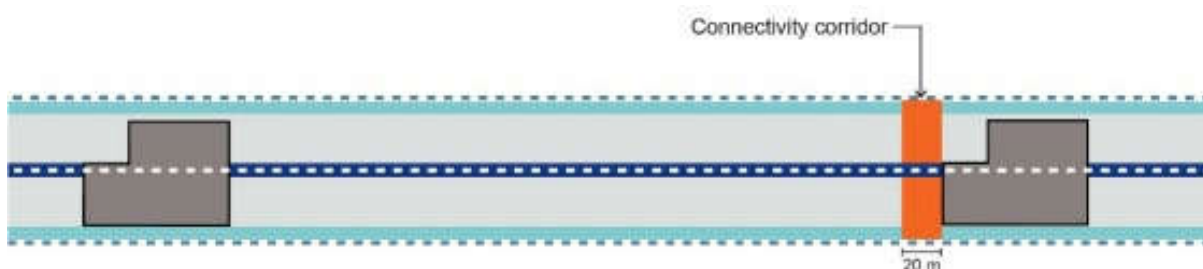


Figure 5.4 – Fauna connectivity corridor

5.6.3 Watercourses

There are three key watercourses within the transmission line easement:

- the Darling River;
- the Greater Darling Anabranch; and
- the Murray River.

Activities within the riparian zones of these watercourses will be managed to minimise impacts to aquatic environments wherever practicable. The riparian zone is defined by the *Guidelines for riparian corridors on waterfront land* (DPI – Office of Water, July 2012).

Shrub or ground stratum native vegetation within vegetated riparian zones of the Greater Darling Anabranch, Darling River and/or Murray River will be protected to the greatest extent practicable.

Vegetation clearing will be limited to the tree stratum only, with trunk bases retained in-situ (vegetation to remain at four metres and 10 metres based on the disturbance area). Should the riparian zone be subject to a connectivity corridor, then vegetation within this connectivity corridor will be cleared at 10 metres in height.

5.7 Nest boxes

Nest boxes will be provided to offset the loss of tree hollow fauna habitat in accordance with the *Supplementary Hollow and Nest Strategy* (45860-HSE-DOC-D-0004). Project ecologists will record the total number of hollows requiring clearing in the pre-clearing inspections which will be incorporated into the Strategy.

The size, type, number and location of nest boxes required will be based on the results of the pre-clearing inspections. Appropriately sized nest boxes will be installed within the vicinity of hollow-bearing trees (subject to landholder agreement and suitable existing trees being present) no more than two weeks prior to clearing of the tree. All nest boxes in a particular location will be installed within 6 months after clearing.

6 Unexpected Threatened Species Finds Procedure

The *Unexpected Threatened Species Finds Procedure* (45860-HSE-PR-D-0002) is applicable to all activities that have the potential to impact upon threatened flora and fauna species that have not been assessed and approved.

If during construction activities the project ecologist (or other project personnel) identify a threatened species or threatened ecological community that has not been (or is suspected to have not been) assessed as a part of the project assessment, the *Unexpected Threatened Species Finds Procedure* (45860-HSE-PR-D-0002) will be followed.

7 Reporting

Post-clearing reports will be prepared by project ecologists and will include:

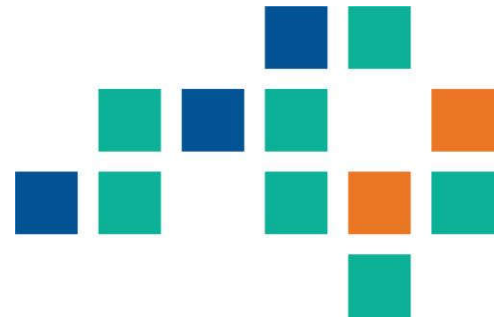
- information on clearing operations, dates, procedures and areas;
- the type of clearing (i.e. Disturbance Area A);
- a breakdown of the spatial extent and type of clearing of each Plant Community Type;
- a breakdown of the spatial extent and type of clearing of threatened ecological communities and threatened flora;
- the number of individuals and type of clearing for *Santalum murrayanum* (Bitter Quandong);
- the spatial extent and type of clearing of habitat for *Polytelis anthopeplus monarchoides* (Regent Parrot) (eastern subspecies);
- live animal sightings, captures, any releases or injured/shocked wildlife;
- fauna that may have died as a result of clearing; and
- photographs of any rescued fauna.

The spatial extent and type of clearing will be recorded in GIS file format and provided to TransGrid to allow the final offset requirements to be calculated based on the recorded clearing in accordance with RMM B15.

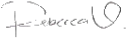




Clearing of native vegetation will be monitored and recorded to inform any final biodiversity offset requirements within the biodiversity offset package. This information will be tracked in the *Clearing and Land Disturbance Register* (45860-HSE-REG-1008).

Appendix B – Unexpected Threatened Species Find Procedure

INTERNAL



Unexpected Threatened Species Finds Procedure EnergyConnect (NSW – Western Section) 45860-HSE-PR-D-0002

REV	DATE	GENERAL DESCRIPTION	PREPARED	REVIEWED	VERIFIED	VERIFIED	APPROVED
A	23/06/2021	Issued for internal review	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
B	25/06/2021	Issued for TransGrid review	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
C	5/08/2021	Issued for TransGrid review	R.Walker-Edwards	M.Lee	G.Crighton	JL.Barrenechea	D.Whatmough
D	23/11/2021	Revised to address agency comments	R.Walker-Edwards	M.Lee	G.Crighton	JL.Barrenechea	D.Whatmough
E	16/12/2021	Issued for TransGrid review	 R.Walker-Edwards	 M.Lee	 G.Crighton	 JL.Barrenechea	 D.Whatmough

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Revision History	
Rev.	Detailed Description
A	Issued for internal review
B	Issued for TransGrid review
C	Issued for TransGrid review
D	Revised to address agency comments
E	Issued for TransGrid review

Key Document Stakeholders
To be communicated with during reviews and revisions of this document

1 Introduction

This Unexpected Threatened Species Finds Procedure is part of the *Biodiversity Management Plan* (45860-HSE-PL-D-0006) prepared for EnergyConnect (NSW – Western Section) and forms part of the overall environmental management framework for the project.

1.1 Purpose

The purpose of this procedure is to detail the actions to be taken in the event that an unexpected actual or potential threatened species or endangered ecological communities is encountered during project works.

2 Induction/Training

All site personnel (including subcontractors) will undertake an induction which will include details relating to this procedure. Training may also occur through toolbox talks, pre-starts and targeted training as required.

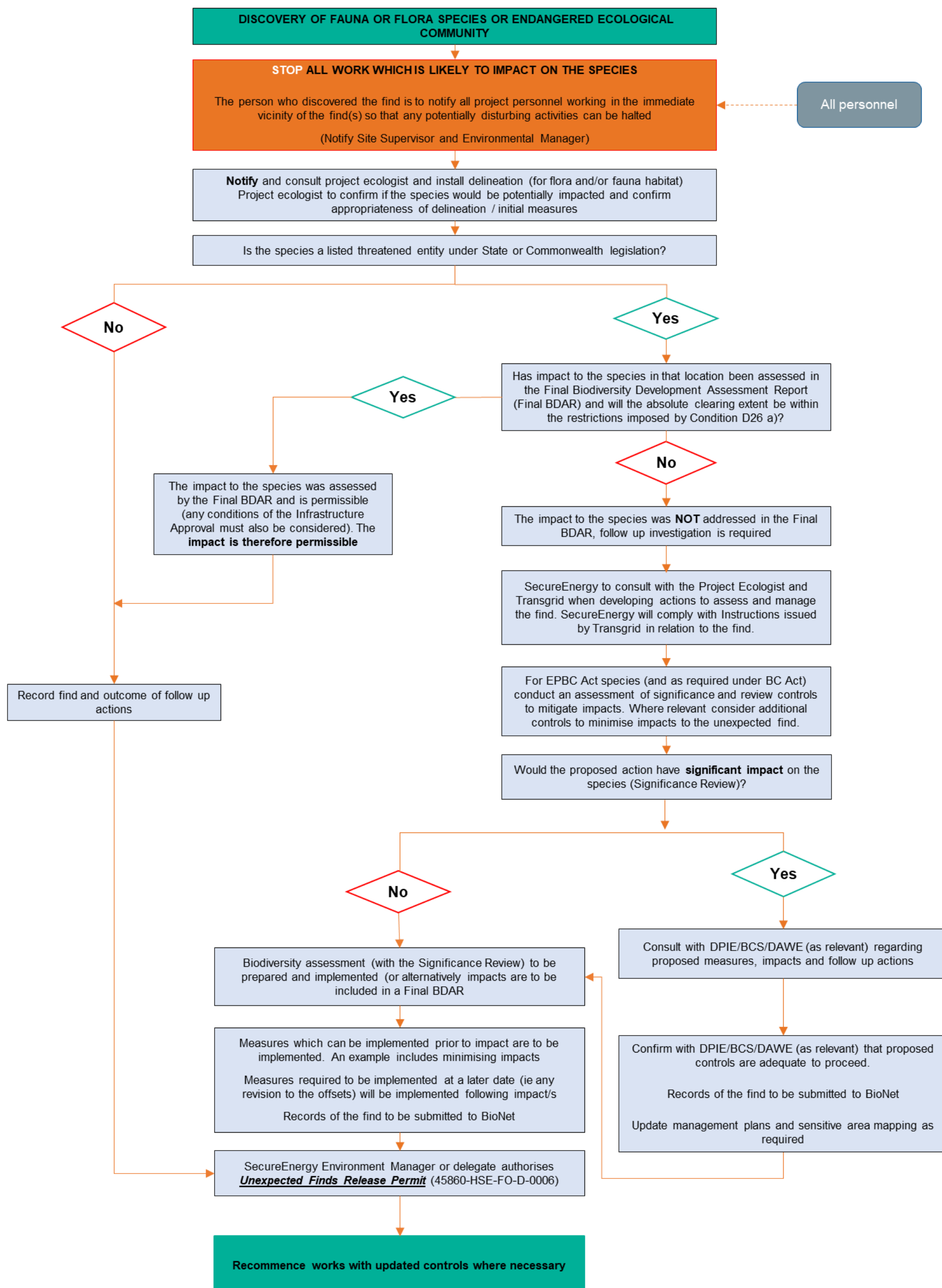
3 Scope

This procedure is applicable for the following:

- all activities conducted by site personnel (including sub-contractors) that have the potential to encounter unexpected threatened species finds (usually during pre-clearing inspections and construction);
- where the project does not have approval to impact the threatened species; and
- where mitigation measures for managing the disturbance (apart from this procedure) are not contained in the environmental impact assessment.

Biodiversity Management Procedure

Unexpected Threatened Species Finds Procedure








Appendix C – Fauna Handling Procedure

INTERNAL



Fauna Handling Procedure EnergyConnect (NSW – Western Section) 45860-HSE-PR-G-1005

REV	DATE	GENERAL DESCRIPTION	PREPARED	REVIEWED	VERIFIED	VERIFIED	APPROVED
A	23/06/2021	Issued for internal review	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
B	25/06/2021	Issued for TransGrid review	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
C	5/08/2021	Issued for TransGrid review	 R.Walker-Edwards	 M.Lee	 G.Crighton	 JL.Barrenechea	 D.Whatmough

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Revision History	
Rev.	Detailed Description
A	Issued for internal review
B	Issued for TransGrid review
C	Updated following receipt of TransGrid's comments and draft Infrastructure Approval

Key Document Stakeholders
To be communicated with during reviews and revisions of this document

1 Introduction

This Fauna Handling Procedure is part of the *Biodiversity Management Plan* (BMP) (45860-HSE-PL-D-0006) for EnergyConnect (NSW – Western Section) and forms part of the overall environmental management framework for the project.

1.1 Purpose

This procedure is applicable to the handling of any fauna encountered during construction if required.

Handling of fauna may be necessary when they are encountered and need to be relocated or if injured, taken to a vet or wildlife carer. Fauna handling should be undertaken either by the project ecologist or a person skilled in handling the species of fauna encountered.

Should any threatened species be identified, the *Unexpected Threatened Species Find Procedure* (45860-HSE-PR-D-0002) would be implemented.

2 Induction/Training

All site personnel (including sub-contractors) will undertake a site induction which will include details relating to this procedure. Training may also occur through toolbox talks, pre-starts meetings and targeted training as required.

Training will include the need for fauna handlers to be appropriately licensed or approved under relevant legislation. This includes the need for:

- those handling reptiles to have a Biodiversity Conservation Licence under the *Biodiversity Conservation Act 2016*; and
- any injured native fauna to be taken to a vet or to a licensed wildlife rehabilitation provider. The wildlife rehabilitation provider must hold a Biodiversity Conservation Licence (Wildlife Rehabilitation Licence) under the *Biodiversity Conservation Act 2016*.

3 Scope

This procedure is applicable for the following:

- all activities conducted by site personnel (including subcontractors) that have the potential to encounter fauna; and
- vegetation clearing and land disturbance.

4 General fauna handling requirements

Fauna may be encountered in a variety of situations during delivery of the project.

During clearing activities, any fauna handling will be carried out by the project ecologist or a trained fauna handler.

During other construction activities (when the project ecologist or fauna handler may not be present on site), fauna may require handling by other project personnel. Wherever possible, the project ecologist or trained fauna handler will be used and if they are not available, the Environment Team will attend to the fauna. Due to the remoteness and large distances between work sites there may be times when the project ecologist or fauna handler will not always be present on site and it is more important to move the fauna from danger or harm. In these circumstances, SecureEnergy personnel may be required to handle the fauna (i.e. where that movement removes the fauna from danger or harm). The general fauna handling requirements during construction are as follows:

- any fauna removed from hollows will only be removed in accordance with the *Pre-clearing and Clearing Procedure*. Fauna will be removed by hand. Removal may require cutting the entrance

of the hollow with a chainsaw, therefore extreme care is advised. If a chainsaw must be used to increase the entrance size, a suitable plug (for example, several scrunched-up cloth capture bags or towels) must be placed between the animal and the chainsaw wherever feasible. Care must be taken not to injure the animal during the extraction process. Firm but gentle pressure will be applied, to encourage the animal from the hollow. An inverted cloth capture bag must be used if appropriate to the circumstance, so that when the animal is extracted, the bag can be pulled over the animal immediately. Where it is not possible to extract the animal from a hollow, the log can be carefully removed intact and located outside of the disturbance area so that the fauna can leave of their own accord. Ensure that egress from the hollow is not blocked when placing the log down;

- if nocturnal fauna is required to be kept during the day, they will be kept in either standard pet carrying cages, ventilated cardboard/plastic animal boxes or cloth capture bags. Captive fauna will generally be kept at a cool or ambient temperature and shaded conditions to avoid any heat stress. Water will be provided if necessary. Captured fauna will be kept in accordance with recommendations from the project ecologist. The project ecologist is to regularly monitor captive fauna when in attendance, otherwise monitoring will be conducted Environment team in consultation with project ecologist;
- if juvenile fauna is displaced and cannot be re-united with its parent(s), they must be taken to an authorised wildlife shelter within the region; and
- in the event that fauna is injured during construction, the animal should initially be assessed and first aid rendered by the project ecologist (if available) and subsequently taken to a Veterinarian for further assessment and treatment, and if necessary, euthanasia. Injured fauna will be kept in shaded conditions with water provided if necessary. Providing external heat (where available) may assist.

If fauna is handled or moved during clearing activities, this will be recorded in clearing reports. A *Fauna Handling Record Sheet* (45860-HSE-FO-D-001) will not be required to be completed during these activities. During other times of project delivery, if fauna is handled or moved, the *Fauna Handling Record Sheet* (45860-HSE-FO-D-001) is to be completed.

If fauna is struck by a vehicle this is recorded by the Environment team in the *Fauna Strike Register* (45860-HSE-REG-D-0001).

4.1 Fauna strike during travel

Due to the linear nature of the project, there will be a range of different roads and access tracks in which project personnel or subcontractors are likely to encounter fauna within and to and from worksites, ancillary areas and camps. The likelihood of encountering fauna during dawn and dusk is increased.

If during travel to and from the project on nominated project road or access tracks, SecureEnergy personnel or subcontractors accidentally strike fauna, the following is to occur:

- where safe to do so, direct the vehicle to a slow stop in a safe location with clear visibility to other oncoming vehicles;
- if the animal is deceased, where safe to do so, and if physically possible, move the animal off to the side of the road as far away from the road edge as practical. This will prevent any further fauna strike to other animals feeding on the carcass. If it is not physically possible to move the animal (due to size, nature of impact or safety concerns), leave it in place, note the location of and report the event to the Supervisor on return to the work site or camp. The Supervisor is to report the strike to the Environment team who will record the event in the *Fauna Strike Register* (45860-HSE-REG-D-0001);
- if the animal is alive, and escapes into adjacent habitat, note the location of the impact and the report the strike to the Environment team;

- if the animal is alive but injured, first aid should be provided and the Environment team should be contacted. The animal should be taken to a Veterinarian for further assessment and treatment;
- if the animal is alive but too dangerous to assist (e.g., a raptor such as a Wedge-tailed Eagle), note the location and report the event to the Supervisor on return to the work site or camp. The supervisor is to report the strike to the Environment Team; and
- if the animal is deceased but has an orphan in the pouch, contact the Environment team who will seek advice from the project ecologist regarding the best way to remove, store and transport the orphaned fauna. If the joey's mouth is attached to the teat, do not try to detach them, but instead, if possible, take the deceased mother, or cut off the teat. Where possible and safe to do so, recover the animal, keep warm in blanket or towel and transport in an aerated box to the work site or camp. Personnel to report immediately to the supervisor who will report the strike to the Environment team who will complete the *Fauna Handling Record Sheet* (45860-HSE-FO-D-001) and manage the animal in accordance with advice from the project ecologist.

4.2 Transmission line bird strike/electrocution

There is the potential that birds may accidentally fly into powerlines in the project easement or they may perch on transmission lines and spread their wings causing potential electrocution. If during construction of the project, any birds are found to be impacted by the project itself (such as by the bypass line), they must be reported to the Supervisor. The Supervisor is to notify the Environment team and they would complete *Fauna Handling Record Sheet* (45860-HSE-FO-D-001) and manage the animal with project ecologists.

4.3 Livestock interactions

Refer to the *Livestock and Construction Conflict Management Procedure* (45860-HSE-PR-G-1007).

5 Specific handling requirements

5.1 Birds

General rescue approach for birds:

- where possible and safe to do so, gain access to nests using an elevated platform/ladder. Capture and remove any nestlings;
- place nestlings in cotton capture bags and assess for injuries. Store bags containing nestlings in a pet carrying cage or ventilated cardboard box. The animal container will be covered to reduce stress on the bird. Deliver to specialist wildlife carer; and
- if adult birds are captured, they will be released away from construction activities.

5.2 Ground dwelling mammals: Echidna

General rescue approach for echidnas:

- if echidnas are found within the construction zone or during habitat removal, they will need to be captured and relocated;
- dig echidna out by hand or carefully by shovel to the side of the echidna. The aim is to get a hand(s) beneath the echidna and to grasp a hind leg(s) and lift the echidna from the soil; and
- place in a dig-proof container, such as a ventilated plastic box or garbage bin. Captive echidnas will be kept in a cool, well ventilated location, out of direct sun. Uninjured echidnas will be translocated and released as soon as possible.

5.3 Ground dwelling mammals: Native rodents

General rescue approach for native rodents:

- capture rodents using a hand net; and
- once captured, rodents will be placed into a cloth capture bag, assessed and if not injured, retained until dusk and then released into appropriate habitat.

5.4 Ground dwelling mammals: Kangaroos, wombats and wallabies

General rescue approach for kangaroos, wallabies and wombats:

- if a macropod is within the construction zone, activities in the area which may impact the macropod may need to cease;
- in the event that a juvenile macropod is displaced (thrown from a pouch) and cannot be re-united with its parent, orphaned macropods will be taken to a vet or wildlife carer; and
- uninjured adults will be calmly ushered from construction zone (as required).

5.5 Reptiles: Snakes, lizards, turtles

General rescue approach for reptiles:

- reptiles will be captured by the project ecologist (when they are available) or with a person who is licensed under the *Biodiversity Conservation Act 2016* to catch and release reptiles;
- snakes will only be captured and relocated if they present a potential threat to construction personnel or are likely to be harmed by the works. In most cases, snakes will attempt to move away from a disturbed area; and
- lizards will be released as soon as possible after capture into suitable habitat outside of the construction zone.

5.6 Amphibians: Frogs

General rescue approach for frogs:

- the capture and relocation of frogs require specific attention to minimise disease transmission. The following hygiene protocol applies:
 - capture, handling and housing of wild frogs will be minimised or avoided where possible;
 - single-use latex, nitrile or vinyl gloves or single-use plastic bags will be used when handling/capturing frogs (where available);
 - hand washing with 70% ethanol (allowing hands to dry) between handling individual frogs is acceptable if no gloves are available (note, repeated use on human skin is not recommended). Alcohol is toxic to frogs so hands must be washed thoroughly in water after treatment with alcohol;
 - each frog is to be housed separately in plastic zip lock bags (with air holes punched into the bag prior to frog capture). Bagged frogs are to be kept in a cool quiet location and released into suitable habitat at the earliest opportunity (immediate release ideal or release before night fall on the day of capture); and
 - plastic bag will not be re-used and are to be disposed of after a single use.

5.7 Arboreal mammals: Possums

General rescue approach for arboreal mammals:

- the project ecologist will be on site to inspect trees for possums that may need to be relocated;
- if possums are found during vegetation clearing, the project ecologist will determine if capture and relocation is warranted;
- possums will be captured either by hand or net and placed into a suitable cage;

- captured possums will be released at a location deemed suitable by the project ecologist; and
- in the event that juvenile possums/gliders are displaced and cannot be re-united their mother, they will be taken to an authorised wildlife shelter within the region.

5.8 Other mammals: Microbats

General rescue approach for microbats:

- there is potential for microbats to carry the Australian Bat Lyssavirus (a rabies like virus), a disease potentially fatal to humans. To reduce the risk of infection, only experienced and vaccinated personnel be authorised to handle microbats;
- the project ecologist is to be on site during the removal of vegetation and to inspect trees for microbats that may need to be relocated;
- microbats will be captured by hand using protective gloves;
- as soon as possible, captured microbats will be placed into a cloth bag hung vertically in a quiet, cool, dark place until released;
- all captured microbats will be relocated into adjacent suitable habitat; and
- in the event that a juvenile microbat is displaced and cannot be re-united with its parent, orphaned microbats will be taken to a vet or wildlife carer.

6 Contact details

The closest wildlife carer organisation to the clearing operations or construction activity will be contacted prior to the clearing operations to advise of any potential animals that may come into care and determine their available to assist with caring of injured or orphaned native wildlife if required.

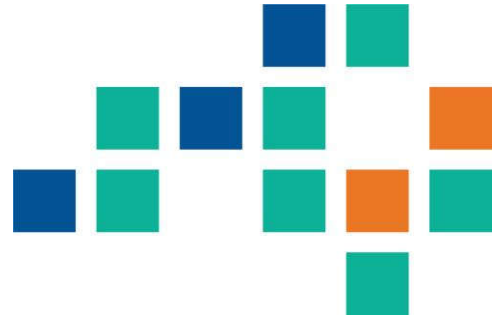
In the event that local wildlife carers are not available, the national WIRES contact number can be used to identify any other local qualified wildlife carers.

Table 6.1 - Contact details

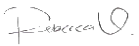




Role	Organisation	Location	State	Contact details
Project Ecologist	ngh	Wagga Wagga	NSW	The contact details for the Project Ecologist will be retained by the project staff and available to personnel upon request.
Wildlife Carers	WIRES	National service utilising local volunteers	NSW	1300 094 734
Veterinary Clinic	Mildura Veterinary Hospital	370 Deakin Ave, Mildura	VIC	(03) 5023 3838
Veterinary Clinic	Wagga Wagga Veterinary Clinic	132 Urana St, Turvey Park NSW	NSW	(02) 6926 0900
Veterinary Clinic	Hay Veterinary Clinic	379 Murray St,	NSW	(02) 6993 1861

Appendix D – Biosecurity Management Plan

INTERNAL



Biosecurity Management Plan EnergyConnect (NSW – Western Section) 45860-HSE-PL-D-0032

REV	DATE	GENERAL DESCRIPTION	PREPARED	REVIEWED	VERIFIED	VERIFIED	APPROVED
A	23/06/2021	Issued for internal review	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
B	29/06/2021	Issued to Transgrid	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
C	9/09/2021	Issued to Transgrid	L.Coetzee	R.Walker-Edwards	G.Crighton	JL.Barrenechea	D.Whatmough
D	24/11/2021	Issued to Transgrid	 R.Walker-Edwards	 M.Lee	 G.Crighton	 JL.Barrenechea	 D.Whatmough

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Revision History	
Rev.	Detailed Description
A	Issued for review
B	Issued to Transgrid
C	Revised to address Transgrid comments
D	Revised to address Transgrid comments. No comments from agency review.

Key Document Stakeholders
To be communicated with during reviews and revisions of this document

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Abbreviations / Definitions

Acronym	Definition
Amendment Report	<i>EnergyConnect (NSW – Western Section) Amendment Report</i>
BC Act	<i>Biodiversity Conservation Act 2016</i>
Biosecurity duty	<p>Biosecurity duty is defined in Part 4, Division 3, Section 30 of the <i>Biosecurity Act 2015</i> (NSW) as:</p> <p>(1) A person who becomes aware of, or suspects, that a prohibited matter event has occurred, is occurring or is about to occur has a biosecurity duty to immediately notify the prohibited matter event in accordance with the requirements specified in the regulations.</p> <p>(2) A biosecurity duty arises under this Division only if the person—</p> <ul style="list-style-type: none"> (a) is the owner, occupier or person in charge of, or has the care, custody or control of, premises, a carrier or other thing in relation to which the prohibited matter is present or suspected of being present, or (b) becomes aware of, or suspects, the occurrence of the prohibited matter event as a result of any consultation or other work carried out in relation to premises, a carrier or other thing in the person's professional capacity, or (c) is a person of a class prescribed by the regulations.
Biosecurity matter	<p>Biosecurity matter is defined in Section 10 of the <i>Biosecurity Act 2015</i> (NSW) as:</p> <ul style="list-style-type: none"> a) any living thing, other than human, or b) any part of an animal, plant or living thing, other than a human, or c) a product of a living thing, other than a human, or d) a disease, or e) a prion, or f) a contaminant, or g) a disease agent that can cause disease in a living thing (other than a human) or that can cause disease in a human via transmission from a non-human host to a human, or h) anything declared by the regulations to be biosecurity matter.
Final BDAR	Final <i>Biodiversity Development Assessment Report</i> (August 2021)
CEMP	Construction Environmental Management Plan
DECCW	Department of Environment, Climate Change and Water (now Department of Environment, Energy and Science)
DPIE	Department of Planning, Industry and Environment
DPI	Department of Primary Industries
EIS	<i>EnergyConnect (NSW – Western Section) Environmental Impact Statement</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
HSSE	Health, Safety, Security and Environment
HSSE Manual	Health, Safety, Security and Environment Management Manual
IMS	Integrated Management System
KTP	Key Threatening Process
LGA	Local Government Area
LLS	Local Land Services
NSW	New South Wales
OEH	Office of Environment and Heritage (now Department of Environment, Energy and Science)
OJD	Ovine Johne's Disease
Prohibited Matter Event	<p>As per Section 31 of the <i>Biosecurity Act 2015</i> (NSW):</p> <p>A prohibited matter event means—</p> <ul style="list-style-type: none"> (a) the presence of biosecurity matter in a part of the State in which it is prohibited matter, or

Acronym	Definition
	(b) the introduction of biosecurity matter into a part of the State in which it is prohibited matter.
Project, the	EnergyConnect (NSW – Western Section)
RMM	Revised mitigation measures
SecureEnergy	Elecnor and Clough Projects Australia Pty Ltd have formed SecureEnergy. SecureEnergy is the contractor who will be carrying out the project on behalf of Transgrid.
Submissions Report	<i>EnergyConnect (NSW – Western Section) Submissions Report</i>
WMS	Work Method Statement
WoNS	Weeds of National Significance

1 Introduction

1.1 Context

This Biosecurity Management Plan (or plan) is an Appendix to the Biodiversity Management Plan which forms part of the Construction Environmental Management Plan (CEMP) for EnergyConnect (NSW - Western Section).

This plan has been prepared to address the requirements of the Infrastructure Approval (SSI 10040), the *EnergyConnect (NSW - Western Section) Environmental Impact Statement* (EIS), the *EnergyConnect (NSW - Western Section) Submissions Report* (Submissions Report), *EnergyConnect (NSW - Western Section) Amendment Report* (Amendment Report) and the additional information letter dated 10 August 2021 (Response to DPIE Request for Information).

1.2 Purpose and objective

The key objective of the Biosecurity Management Plan (this plan) is to describe the management measures that will be implemented to ensure that biosecurity impacts are minimised and in accordance with the requirements of:

- the *Biosecurity Act 2015* (NSW); and
- the Infrastructure Approval, EIS, Amendment Report and Response to DPIE Request for Information.

To achieve this the plan describes:

- the existing and potential weeds, pest animals and animal diseases identified within the study area during the preparation of the environmental assessment;
- the implementation of appropriate processes to manage the spread of weeds, pests and diseases; and
- how the implementation of practical measures will be undertaken prior to and during construction to avoid the introduction of new weeds and to minimise the spread of existing weeds.

2 Environmental requirements

2.1 Legislation

Legislation relevant to weed management is detailed within Table 2.1.

Table 2.1 – Relevant legislation and its application

Legislation	Application
<i>Biosecurity Act 2015</i> (NSW) and <i>Biosecurity Regulation 2017</i> (NSW)	<p>The <i>Biosecurity Act 2015</i> (Biosecurity Act) and the <i>Biosecurity Regulation 2017</i> (NSW) provides for risk-based management of biosecurity in NSW. It provides a statutory framework to protect the NSW economy, environment and community from the negative impact of pests, diseases and weeds.</p> <p>The primary object of the Act is to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter.</p> <p>Under the <i>Biosecurity Act 2015</i> there is a general obligation on people to be aware of their surroundings and take action to prevent the introduction and spread of pests, diseases, weeds and contaminants, referred to as the general biosecurity duty under Part 3, section 22 of the Act.</p> <p>The Act also identifies Biosecurity Zones and imposes Biosecurity Control Orders. No weeds listed under the three applicable Biosecurity Zones or one listed under a Biosecurity Control Order were identified during field surveys, however provisions for their identification and management are included in this plan.</p> <p>In addition to the general biosecurity duty, the Biosecurity Act also identifies 'prohibited matter', which includes twenty-seven (27) weeds. It is an offence to deal with prohibited matter under the Act without a prohibited matter permit.</p> <p>As outlined in the Revised BDAR Section 5.3, two exotic flora species were recorded within the proposal study area during field surveys were listed in the <i>Biosecurity Act 2015</i> as priority weeds for the Western Region (Department of Planning, Industry and Environment, 2020).</p> <p>Both the <i>Biosecurity Act 2015</i> (NSW) and the <i>Biosecurity Regulation 2017</i> (NSW) impose notification requirements on the landowner or the occupier to report to the Department of Primary Industries or the local council (Wentworth Shire Council) of biosecurity events, prohibited matters or notifiable weeds, pests and diseases. These are discussed further in Section 5 of this plan.</p> <p>Biosecurity control orders may also be in place as part of the <i>Biosecurity Act 2015</i>. A control order can prohibit or control the doing of anything, subject to certain limitations, to prevent the introduction or eradicate a biosecurity matter that poses a biosecurity risk. Control measures may include requirements to take, or not to take, any action necessary to prevent, eliminate, minimise or manage the biosecurity risk or biosecurity impact.</p>
<i>Biodiversity Conservation Act 2016</i> (NSW) (BC Act)	<p>Key Threatening Processes (KTPs) as outlined under Division 5 of the BC Act are discussed in Section 9.10 of the Revised BDAR. A number of weeds are identified as Key Threatening Processes (KTPs) under Division 5 of the BC Act (list provided in Schedule 4 of the Act). None of those listed in Schedule 4 of the Act, have been identified in the project area.</p>
<i>Pesticides Act 1999</i> (NSW)	<p>It is an offence under this act to wilfully or negligently use pesticides in a manner that may harm humans, animals or property or threaten endangered, vulnerable or protected species outlined under the BC Act.</p>
<i>Pesticides Regulation 2017</i> (NSW)	<p>Specifies that pesticides used in an occupational setting may only be used by qualified persons and that a Pesticide Use Notification Plan must be prepared and implemented when use of pesticides occurs on public lands such as rail corridors. The plan must include public consultation requirements of this regulation.</p>

2.2 Conditions of Approval

The conditions of the Infrastructure Approval relevant to biosecurity management are detailed in Table 2.2 in bold, italicised text.

Table 2.2 – Conditions relevant to biosecurity management

Condition	Requirement	Where addressed
D28	<p>The Biodiversity CEMP Sub-Plan required under condition B2 must include:</p> <p>a) a description of the measures that would be implemented for:</p> <ul style="list-style-type: none"> minimising the amount of native vegetation clearing within the approved development footprint; minimising the loss of key fauna habitat, including tree hollows; minimising the impacts on fauna on site, including undertaking pre-clearance surveys; minimising the potential indirect impacts on threatened flora and fauna species, migratory species and 'at risk' species; rehabilitating and revegetating disturbance areas; protecting native vegetation and key fauna habitat outside the approved disturbance area; maximising the salvage of resources within the approved disturbance area – including vegetative and soil resources – for beneficial reuse (such as fauna habitat enhancement) during the rehabilitation and revegetation of the site; controlling weeds; controlling erosion; and bushfire management; <p>b) details of the Proponent's commitment to make a one off \$150,000 funding contribution targeted at further scientific study into the impacts of electric and magnetic fields on birds in Australia;</p> <p>c) preparation and implementation of a two year bird impact monitoring program at the commencement of operations; and</p> <p>d) a detailed program to monitor and report on the effectiveness of these measures.</p>	This document and the Biodiversity Management Plan

2.3 Revised mitigation measures

The revised mitigation measures (RMMs) are defined in Appendix G of the Additional Information (August 2021). The RMMs relevant to biosecurity for the project are presented in Table 2.3 below. The RMMs provided below are extracts from the Additional Information (August 2021). The management measures that will be implemented for the project are provided in Section 4 and Section 5 of this plan.

Table 2.3 – Revised mitigation measures relevant to biosecurity management

Reference	Revised mitigation measures	Where addressed
LP2	<p>The locations of transmission line structures, (other permanent structures and the extents of associated construction areas or compounds) will be located where possible to avoid or minimise impacts, or as agreed with the affected landholder, on:</p> <ul style="list-style-type: none"> cropping and irrigated horticultural land areas used for set up and pack up of agricultural equipment, entry points and turning areas radiocommunication sensitive areas drainage catchments for farm dams locations of high biosecurity risk. 	Section 5 Table 5.1
LP7	<p>Biosecurity controls will be implemented during construction to minimise the risk of off-site transport or spread of disease, pests or weeds. Controls will include (but not be limited to):</p> <ul style="list-style-type: none"> inspections and cleaning of vehicles, machinery, and personal equipment prior to movement on and off the construction work areas or between properties 	Section 5 Table 5.1

Reference	Revised mitigation measures	Where addressed
	<ul style="list-style-type: none"> minimising movements across adjoining farmland including trip numbers and locations additional measures where localised areas of high biosecurity risks have been identified. <p>The specific controls applicable to a property will be identified in consultation with the affected landholder. The effectiveness of these controls will be regularly monitored.</p>	
LP8	Where present, weeds will be managed in consultation with Western Local Land Services (LLS), Wentworth Shire Council and NSW Department of Primary Industries.	Section 5 Table 5.1
LP9	In the event of new infestations of notifiable weeds as a result of construction activities, the relevant control authority will be notified as per <i>Biosecurity Act 2015</i> and <i>Biosecurity Regulation 2017</i> .	Section 5.5 Table 5.1

2.4 Guidelines

The guidelines within Table 2.4 were considered in the development and implementation of this plan.

Table 2.4 – Relevant guidelines

Guideline / Strategy	Application
Western Regional Strategic Weed Management Plan 2017-2022	<p>Regional Strategic Weed Management Plans have been developed for eleven regions of NSW. The Plans provide guidance on the outcomes required to discharge the duty for managing weeds under the Biosecurity Act.</p> <p>The Western Regional Strategic Plan is applicable to the Project area and lists priority weed species as determined by NSW Department of Primary Industries and includes regional management measures for priority weeds. For each priority weed, the management objective and specific requirements for management is included. Outcomes to demonstrate compliance with the General Biosecurity Duty are identified for each regional priority weed species and recommended measures that will assist in the achievement of these outcomes.</p> <p>Weeds listed in the Western Regional Strategic Weed Management Plan that occur or have the potential to occur in the project area are discussed in Section 3 of this plan.</p>
National Weeds Strategy 2017-2027	<p>Identifies thirty-two (32) introduced plants as Weeds of National Significance (WoNS). These weeds are regarded as a current priority and future weed threat to Australia because of their invasiveness, potential for spread, and economic and environmental impacts.</p> <p>Two (2) WoNS were identified in the project area and another fourteen (14) identified as potentially occurring in the vicinity of the project area.</p> <p>The Strategy also identifies twenty-eight (28) introduced plants as National Environmental Alert Weeds. These weeds are in the early stages of establishment and have the potential to become a significant threat to biodiversity if they are not managed.</p> <p>No National Environmental Alert weeds were identified in the project area.</p>
NSW <i>Invasive Species Plan 2018-2021</i> (DPI, 2018a).	<p>The plan adopts four goals for managing invasive species (including weeds):</p> <ol style="list-style-type: none"> 1. Exclude – prevent the establishment of new invasive species. 2. Eradicate or contain – eliminate or prevent the spread of new invasive species. 3. Effectively manage – reduce the impacts of widespread invasive species. 4. Capacity building – ensure NSW has the ability and commitment to manage invasive species. <p>This plan will aim to align with the relevant first three main goals of preventing the establishment of new invasive species and containing invasive species in areas directly impacted by construction as outlined in Sections 4 and 5 of this plan.</p>
<i>Western Local Land Services Region Priority Weed Identification Guide</i> (May 2020)	<p>The guide has been developed as an easy to use resource to assist land managers and members of the general community to identify high priority weeds.</p> <p>It is not intended to provide detailed information on each species and their control.</p> <p>Notification details are also provided within the guide for the identified priority weeds.</p>

3 Existing environment

The following section summarises existing known weed, pest animal and pathogen species within and adjacent to the project based on the information contained in Chapter 12 and Technical Paper 3 (Agricultural land impact assessment) of the EIS, and the Final BDAR.

3.1 Weeds

The Far West region of NSW has the potential to effectively manage biosecurity risks due to its separation from major populations and intensive agricultural industries, and as its semi-arid climate, which is challenging for exotic animals and plants to survive. The EIS found that the project area has relatively few examples of widespread introduced species of weeds in the areas surveyed for the biodiversity assessment.

The EIS identified 35 species of weeds that are known or likely to be located in the project area, including:

- weeds under the *Biosecurity Act 2015* including:
 - two weeds which are listed as priority weeds for the Western Region and are also listed as Weeds of National Significance;
 - six species of weeds recorded during property inspections undertaken in accordance with the *Biosecurity Act 2015* (DPI, 2020);
- 11 species that are identified as regional priority weeds on the *Western Regional Strategic Weed Management Plan 2017 – 2022* (Western LLS, 2017);
- one state priority weed – Bitou bush (*Chrysanthemoides monilifera*);
- four weeds that were specifically mentioned as problematic weeds by landholders and the Wentworth Shire Council biosecurity officer: Khaki weed, caltrops, thornapple and onionweed; and
- Noogoora burr and Bathurst burr, which can be a problem in irrigation fields and contaminate wool.

3.1.1 Weeds under the *Biosecurity Act 2015*

As identified in Section 5.3 of the Final BDAR, there are two exotic species that were recorded in the project area and are listed as priority weeds and Weeds of National Significance. These species are:

- African boxthorn (*Lycium ferocissimum*); and
- Prickly pear (*Opuntia* spp.).

The EIS Technical Paper 3 (Agricultural land impact assessment), reported weeds recorded by authorised officers during property inspections under the *Biosecurity Act 2015* (DPI, 2020b):

- Horehound (*Marrubium vulgare*);
- Common pear (*Opuntia stricta*);
- Burr ragweed (*Ambrosia confertiflora*);
- Boneseed (*Chrysanthemoides monilifera*);
- Hudson pear (*Cylindropuntia rosea*); and
- African boxthorn (*Lycium ferocissimum*) (also listed as a priority weed above).

3.1.2 Weeds under the former *Noxious Weeds Act 1993*

Under the former *Noxious Weeds Act 1993* the following weeds were declared noxious in the Wentworth Shire local government area (LGA):

Class 4 (Locally controlled weeds)

- Rope pear (*Cylindropuntia imbricata*);
- Hudson pear (*Cylindropuntia rosea*); and
- Prickly pear (*Opuntia* spp.)

Class 5 (Restricted plant)

- Athel pine (*Tamarix* spp.);
- Bridal creeper (*Asparagus asparagoides*); and
- Willows (*Salix* spp.).

3.1.3 State priority weeds

As outlined in EIS Technical Paper 3 (Agricultural land impact assessment), the only state priority weed which may be present in the vicinity of the proposal study area is Bitou bush (*Chrysanthemoides monilifera*) (DPI, 2000c).

3.1.4 Other weeds identified in the EIS

The *Western Regional Strategic Weed Management Plan 2017 – 2022* (LLS, 2017) identifies regional priority weeds, some of which may be present in the vicinity of the proposal study area (DPI, 2000c), as follows:

- Boxing glove/coral cactus (*Cylindropuntia fulgida*);
- Burr ragweed (*Ambrosia confertiflora*);
- Clock weed (*Oenothera curtiflora*);
- Willow rhus (*Searsia lancea*);
- Giant reed (*Arundo donax*);
- Silver-leaf nightshade (*Solanum elaeagnifolium*);
- African boxthorn (*Lycium ferocissimum*);
- Bridal creeper (*Asparagus asparagoides*);
- Rope pear (*Cylindropuntia imbricata*);
- Prickly pear; (*Opuntia* spp. excl *Opuntia ficus-indica*) and
- Spiny burrgrass (*Cenchrus* spp.)

The weeds identified as likely to be present across the study area, and legislation or document under which they were identified are listed in Table 3.1 with images of the weeds included in Appendix B. In addition to priority weeds and Weeds of National Significance the following environmental weeds were also recorded in the ecological surveys to support the EIS:

- *Asphodelus fistulosus* (onion weed);
- *Emex australis* (Spiny Emex);
- *Marrubium vulgare* (Horehound);
- *Nicotiana glauca* (Tree Tobacco);
- *Onopordum acaulon* (Stemless Thistle);
- *Tribulus terrestris* (Cat-head); and
- *Xanthium occidentale* (Noogoora Burr).

Table 3.1 – Weeds, pests and pathogens known or potentially occurring in the study area

Note regarding General Biosecurity Duty and Prohibited matter

Where identified (refer to table below) plants are regulated with a *general biosecurity duty* (GBD) to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

Weeds identified as *Prohibited matter* means that the plant (or any parts of the plant) must not be imported into the state, sold, bartered, exchanged or offered for sale.

Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
<i>Lycium ferocissimum</i> African boxthorn	✓		✓		✓	✓	✓	✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. Regional Recommended Measure Land managers mitigate the risk of the plant spreading from their land. Land managers reduce impact of plant on priority assets (riparian areas and floodplains).
<i>Parthenium hysterophorus</i> Parthenium weed Note that there are no occurrences of Parthenium weed in the Western LLS region, however, it has been included to ensure any plant / equipment relevant to Division 8, Clause 35 of the <i>Biosecurity Regulation, 2017</i> is appropriately managed.					✓	✓	✓	✓	✓	Prohibited Matter A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries Prohibition on certain dealings The following equipment <u>must not be imported into NSW from Queensland</u> : grain harvesters (including the comb or front), comb trailers (including the comb or front), bins used for holding grain during harvest operations, augers or similar for moving grain, vehicles used to transport grain harvesters, support vehicles driven in paddocks during harvest operations, mineral exploration drilling rigs and vehicles used to transport those rigs, unless set out as an exception in Division 5, Part 2 of the <i>Biosecurity Order (Permitted Activities) 2017</i> .

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
										Note from Western Local Land Services Weed Identification Guide Parthenium weed is not currently present in the Western Local Land Services region.
<i>Tamarix spp.</i> Athel pine		✓	✓		✓	✓	✓	✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale.
<i>Xanthium spinosa</i> Bathurst burr				✓			✓			NA
<i>Alternanthera philoxeroides</i> Alligator weed					✓	✓	✓	✓	✓	Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. Biosecurity Zone The Alligator Weed Biosecurity Zone is established for all land within the state except land in the following regions: Greater Sydney; Hunter (but only in the local government areas of City of Lake Macquarie, City of Maitland, City of Newcastle or Port Stephens). The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone. Note from Western Local Land Services Region Priority Weed Identification Guide: Alligator weed is not currently present in the Western Local Land Services region; however there are infestations further upstream in the Murray and Murrumbidgee catchments.
<i>Eichhornia crassipes</i> Water hyacinth					✓	✓	✓	✓	✓	Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. Biosecurity Zone The Water Hyacinth Biosecurity Zone applies to all land within the State, except for the following regions: Greater Sydney or North Coast, North West (but only the local government area of Moree Plains), Hunter (but only in the local government areas of City of Cessnock, City of Lake Macquarie, MidCoast, City of Maitland, City of Newcastle

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
										<p>or Port Stephens), South East (but only in the local government areas of Eurobodalla, Kiama, City of Shellharbour, City of Shoalhaven or City of Wollongong).</p> <p>The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone</p> <p>Regional Recommended Measure</p> <p>Land managers should mitigate the risk of new weeds being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment. Notify local control authority if found.</p>
<i>Chrysanthemoides monilifera subsp. rotunda</i> Bitou bush				✓	✓	✓	✓	✓	✓	<p>Prohibition on certain dealings</p> <p>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</p> <p>Biosecurity Zone</p> <p>The Bitou Bush Biosecurity Zone is established for all land within the State except land within 10 kilometres of the mean high water mark of the Pacific Ocean between Cape Byron in the north and Point Perpendicular in the south. The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone</p>
<i>Chrysanthemoides monilifera subsp. monilifera</i> Boneseed		✓	✓		✓	✓	✓	✓	✓	<p>Prohibition on certain dealings</p> <p>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</p> <p>Control Order - Boneseed Control Zone: Whole of NSW</p> <p>Owners and occupiers of land on which there is boneseed must notify the local control authority of new infestations. A person who deals with a carrier of boneseed must ensure the plant (and any seed and propagules) is not moved from the land; and immediately notify the local control authority of the presence of the plant.</p>
<i>Cylindropuntia fulgida</i> Boxing glove/coral cactus			✓		✓	✓	✓	✓	✓	<p>Prohibition on certain dealings</p> <p>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</p> <p>Regional Recommended Measure</p> <p>Land managers should mitigate the risk of new weeds being introduced to their land. The plant should not be</p>

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
										bought, sold, grown, carried or released into the environment. Notify local control authority if found.
<i>Asparagus asparagoides</i> Bridal creeper		✓	✓		✓	✓	✓	✓		Prohibition on certain dealings: Must not be imported into the state, sold, bartered, exchanged or offered for sale. *this requirement also applies to the Western Cape form of bridal creeper Regional Recommended Measure: Land managers mitigate the risk of the plant spreading from their land. Land managers reduce impact of plant on priority assets (riparian areas and commercial horticultural areas).
<i>Ambrosia confertiflora</i> Burr ragweed			✓		✓		✓	✓	✓	Regional Recommended Measure Land managers should mitigate the risk of new weeds being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment. Notify local control authority if found.
<i>Tribulus terrestris</i> Caltrops or Cat-head	✓		✓							NA
<i>Oenothera curtiflora</i> Clock weed			✓		✓				✓	Regional Recommended Measure Land managers should mitigate the risk of new weeds being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment. Notify local control authority if found. Note from Western LLS Region Priority Weed Guide Land managers should notify their local shire council or Western Local Land Services immediately if they have found or suspect that clockweed is present on their land. Minor use permits currently exist for a small number of herbicides if larger infestations are encountered.
<i>Opuntia spp.</i> Prickly pears	✓		✓		✓	✓	✓	✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. For all <i>Opuntia</i> species except for <i>Opuntia ficus-indica</i> (Indian fig).

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
										Regional Recommended Measure Land managers mitigate the risk of the plant spreading from their land. Land managers mitigate the risk of the plant being introduced to their land. The plant or parts of the plant are not traded, carried, grown or released into the environment. This Regional Recommended Measure applies to all species of <i>Opuntia</i> except for <i>Opuntia ficus-indica</i> (Indian fig). <u>Related species:</u> Aaron's beard prickly pear Blind cactus Bunny ears cactus Chicken dance cactus Common pear Smooth tree pear Tiger pear Velvety tree pear Wheel cactus
<i>Opuntia stricta</i> Common pear			✓		✓	✓		✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. Regional Recommended Measure Land managers mitigate the risk of the plant spreading from their land. Land managers mitigate the risk of the plant being introduced to their land. The plant or parts of the plant are not traded, carried, grown or released into the environment. Land managers reduced impact of the plant on priority assets (grazing, conservation and urban areas). Note from Western LLS Region Priority Weed Guide Land managers with infestations can contact Western Local Land Services to organise a release of biocontrol agents, which will kill the plants over time. Isolated plants can be dug up and then buried or burned, or treated with a herbicide registered for that purpose. Land managers should take measures that reduce impact of prickly pear on

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
										grazing lands, conservation areas and urban areas and mitigate the risk of the plant spreading to other properties.
<i>Pennisetum setaceum</i> Fountain grass (also identified as <i>Cenchrus setaceus</i>)		✓					✓			NA
<i>Arundo donax</i> Giant reed					✓		✓			Regional Recommended Measure Exclusion zone: whole region except for the core infestation area of Wentworth Shire Council Wentworth Shire Council Area Land managers within the core infestation area (the Wentworth Shire Council) should take measures that reduce impact of giant reed on riparian areas and mitigate the risk of the plant spreading to other properties. Land managers in all other areas of the region should destroy all plants found and ensure any subsequent generations are also destroyed. Whole region: Land managers should mitigate the risk of the plant being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment.
<i>Marrubium vulgare</i> Horehound	✓		✓				✓			NA
<i>Cylindropuntia rosea</i> Hudson pear			✓		✓	✓	✓	✓	✓	Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. Regional Recommended Measure Land managers should mitigate the risk of new weeds being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment. Notify local control authority if found.
<i>Cylindropuntia imbricata</i> Rope pear			✓		✓	✓	✓	✓		Prohibition on certain dealings: Must not be imported into the state, sold, bartered, exchanged or offered for sale. All species in the <i>Cylindropuntia</i> genus have this requirement.

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
										Regional Recommended Measure Land managers should mitigate spread from their land. Land managers reduce impact of plant on priority assets (grazing conservation and urban areas). The plant should not be bought, sold, grown, carried or released into the environment.
<i>Alternanthera pungens</i> Khaki weed			✓	✓			✓			NA
<i>Prosopis</i> spp. Mesquite		✓			✓	✓	✓	✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. All species in the genus <i>Prosopis</i> have this requirement Regional Recommended Measure Exclusion zone: whole region except for the core infestation area of Evelyn, Yantara, Mootwingee, Yancowinna, Menindee, Tandora, Livingstone and Windeyer counties Whole region: Land managers should mitigate the risk of the plant being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment.
<i>Xanthium occidentale</i> Noogoora burr				✓			✓			NA
<i>Asphodelus fistulosus</i> Onion weed	✓		✓				✓			NA
<i>Solanum elaeagnifolium</i> Silver-leaf nightshade		✓			✓	✓	✓	✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. Regional Recommended Measure Land managers mitigate the risk of the plant spreading from their land. Land managers reduce impact of plant on priority assets (dryland farming areas).
<i>Cenchrus</i> spp. Spiny burgrass	✓				✓		✓	✓		Regional Recommended Measure Land managers mitigate the risk of the plant spreading from their land. Land managers reduce impact of plant on

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
Note two species listed as Priority Weeds for Western LLS Region: <i>Cenchrus longissimus</i> and <i>Cenchrus spinifex</i> syn. <i>Cenchrus incertus</i>)										priority assets (commercial horticultural areas, grazing lands and conservation areas). The plant or parts of the plant are not traded, carried, grown or released into the environment.
<i>Datura spp.</i> Thornapple			✓				✓			NA
<i>Searsia lancea</i> Willow rhus					✓		✓		✓	Regional Recommended Measure Land managers should mitigate the risk of new weeds being introduced to their land. The plant should not be bought, sold, grown, carried or released into the environment. Notify local control authority if found.
<i>Salix spp.</i> Willows			✓			✓	✓	✓		Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale. All species in the <i>Salix</i> genus have this requirement, except <i>Salix babylonica</i> (weeping willows), <i>Salix x calodendron</i> (pussy willow) and <i>Salix x reichardtii</i> (sterile pussy willow).
<i>Emex australis</i> (now re-named as <i>Rumex hypogaeus</i>) Spiny emex (Also known as: cathead, doublegee, prickly jacks, three-cornered jacks)	✓			✓			✓			NA
<i>Nicotiana glauca</i> Tree Tobacco	✓			✓			✓			NA
<i>Brassica tournefortii</i> Wild / Mediterranean turnip	✓		✓				✓			Noted as Herbicide resistant weed in Additional species of concern Appendix 2 Western Regional Strategic Weed Management Plan 2017 - 2022

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
<i>Carrichtera annua</i> Ward's weed	✓		✓	✓			✓			Noted as 'other' in Additional species of concern Appendix 2 Western Regional Strategic Weed Management Plan 2017 - 2022
<i>Echium plantagineum</i> Paterson's Curse	✓			✓			✓			NA
<i>Onopordum acaulon</i> Stemless thistle	✓						✓			NA
<i>Hordeum glaucum</i> Barley Grass	✓		✓				✓			Noted as Herbicide resistant weed in Additional species of concern Appendix 2 Western Regional Strategic Weed Management Plan 2017 – 2022.
<i>Limonium lobatum</i> Winged sea lavender	✓		✓				✓			Noted as 'other' in Additional species of concern Appendix 2 Western Regional Strategic Weed Management Plan 2017 – 2022.
<i>Sonchus oleraceus</i> Common sow thistle	✓						✓			Noted as Herbicide resistant weed in Additional species of concern Appendix 2 Western Regional Strategic Weed Management Plan 2017 – 2022.
Vertebrate Pests • rabbits; • foxes; • kangaroos; • goats; • wild dogs; • feral pigs; and • feral cats.			✓							NA Where identified property owners will be advised as a courtesy.
Sheep Footrot			✓				✓		✓	The occurrence of sheep footrot in the vicinity of the proposal study area has been low in recent years. DPI (2016) reported no flocks were quarantined for footrot in either March 2014 or December 2015. Duty to Notify There is a duty to notify any awareness or suspicion of notifiable matter or a biosecurity event. The duty to notify is detailed in the Biosecurity Act 2015 (Sections 30 and 38) and the Biosecurity Regulation 2019 (clause 7).

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Species Name Common name	Weeds identified in project area or likely in vicinity				Weed Category		Biosecurity Act 2015 and WRSW MP Requirements			
	Identified during EIS field surveys	DECCW reported weeds in region	Landowners / DPI / LLS / Council weeds in vicinity	Other environmental / agricultural weeds in vicinity	State or Regional Priority Weed	Weed of National Significance	General Biosecurity Duty applies	Prohibited matter	Notification to Local Control Authority required if identified / found	Species Specific biosecurity duty for Priority Weeds in NSW and/or Western LLS Region
Ovine Johne's disease			✓				✓		✓	The landowners consulted confirmed that footrot and OJD has not been a significant problem in the past and is unlikely to readily spread in the proposal study area. Duty to Notify There is a duty to notify any awareness or suspicion of notifiable matter or a biosecurity event. The duty to notify is detailed in the Biosecurity Act 2015 (Sections 30 and 38) and the <i>Biosecurity Regulation 2019</i> (clause 7).
Potato Biosecurity Zone							✓	✓		The potato biosecurity zone restricts the movement of any potato biosecurity matter into the potato biosecurity zone.
Greater Sunraysia Pest Free Area							✓			There is a ban on bringing fresh fruit and vegetables into the Pest Free Area (including Wentworth LGA) to ensure that the area remains pest free, there is a ban on bringing fresh fruit and vegetables into the area.
Phylloxera Exclusion Zone							✓	✓		The project area is included with the Phylloxera Exclusion Zone and is related to the movement of grapes, grapevine plant material and soil / organic materials from vineyards that are within Infestation and Risk Zones coming into the Exclusion area. The project area is not within any current Infested Zone or Risk Zone. Not generally applicable to project activities, however, Phylloxera can be transported on machinery and vehicles.

The above table has been compiled by cross referencing the following information:

Appendix D Revised Biodiversity Development Assessment Report

EnergyConnect (NSW – Western Section) Technical Paper 3: Agricultural land impact assessment

Appendices C-2 and C-3 *EnergyConnect (NSW - Western Section) Technical paper 1 – Biodiversity Development Assessment Report*

<https://weeds.dpi.nsw.gov.au/>

https://www.lls.nsw.gov.au/_data/assets/pdf_file/0006/722391/Western-RSWMP-web.pdf

<https://weeds.dpi.nsw.gov.au/WeedListPublics/CategoryResults?showImages=True&categoryId=1&pageTitle=Weeds%20of%20National%20Significance>

Western Local Land Services Region Priority Weed Identification Guide (DPI LLS, May 2020)

Western Regional Strategic Weed Management Plan 2017 – 2022 (DPI LLS May 2017)

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3.2 Pest animal species

The EIS advised that during consultation, local landholders and the Western Local Land Services (LLS) biosecurity officer identified the following main vertebrate pest species in the area:

- rabbits;
- foxes;
- kangaroos;
- goats;
- wild dogs;
- feral pigs; and
- feral cats.

Common carp is also present throughout all major river systems in the Western LLS region (Western LLS, 2018). Plague locusts can also cause problems in favourable seasons.

It is important to note that goats and pigs can pose significant biosecurity, economic and social threats to the Western region as they can transmit endemic and exotic disease.

The Department of Environment, Climate Change and Water reported that feral donkeys and deer were increasing in abundance in the Lower Murray Darling region, but numbers were still at low levels.

3.3 Potential animal diseases

The EIS Technical Paper 3 concluded that the occurrence of sheep footrot has been low in recent years with only one flock out of 861 flocks being quarantined in 2015.

The study area is in a “low prevalence area” of Ovine Johne’s disease (OJD) in 2011 with an estimated infected flock proportion of less than 0.8 per cent (DPI, 2011). No known OJD infections were reported during landowner consultations.

Landowners confirmed the above-mentioned diseases have not been an issue in the past and are unlikely to spread, however stock movement due to the drought could increase their incidence.

Horticultural enterprises are particularly susceptible to plant diseases and pests. Parts of the study area are located in plant quarantine zones including the:

- Greater Sunraysia Pest Free Area - aimed at preventing the entry of the Queensland fruit fly by banning certain fruit and vegetables from entering the area;
- Phylloxera Exclusion Zone - bans taking grapevines, cuttings or budwood into this zone;
- Potato Biosecurity Zone - bans the movement of plants belonging to the Solanaceae family and associated matter into this zone.

It is unlikely that the proposed activities will introduce any prohibited matter in relation the above potential animal and pest diseases.

4 Biosecurity risks and impacts

There are risks that animal diseases, plant diseases, feral pests and (especially) weeds could be introduced or spread during the construction of the proposal through vegetation clearing, ground disturbance and vehicle, machinery or construction personnel movements. Soil borne biosecurity hazards could also be spread by soil erosion and water runoff associated with construction works.

These risks are identified within the Environmental Aspect and Impact Register within Appendix A3 of the CEMP.

4.1 Risk of weed spread

The risk of weed spread is generally highest during the earthworks phase of construction, due to the high frequency of vehicle movements and disturbance of ground cover and soil, which could lead to weed growth. Some species of weeds are readily spread by vehicles, machinery and human activity, including cactuses, spiny burrgrass, khaki weed, Noogoora burr and Bathurst burr.

Biosecurity incidents (as defined in Section 5) have the potential to impact surrounding agricultural enterprises due to the costs of monitoring pests, weeds or diseases and implementing control measures as well as the reduced income caused by loss of livestock, crop or pasture production and lower produce quality.

To minimise the risk of biosecurity incidents occurring due to construction, mitigation measures would be implemented to avoid the spread of weeds. In addition, the study area lies within the biosecurity zones for alligator weed, bitou bush and water hyacinth (as per the *Biosecurity Regulation 2017*), which means that the local control authority would need to be notified of a new infestation of the weeds as well as action undertaken by the contractor to eradicate, destroy or suppress the weeds.

4.2 Risk of livestock disease / pathogens

There is the potential for livestock diseases to be spread during construction of the proposal including:

- ovine footrot, which is an important risk despite its low current prevalence due to the relative ease of its spread and economic consequences due to impacts to stock health, productivity and value, as well as disease control costs
- ovine Johne's disease, which can result in significant economic losses due to sheep deaths, lost meat production, fewer lambs and less wool
- sheep lice, which can cause significant losses in sheep enterprises due to treatment costs, reduced wool growth and lower meat production.

Under the *Biosecurity Act 2015* Schedule 1, ovine footrot and Ovine Johne's disease are notifiable diseases.

However, considering the low density livestock and low prevalence of disease in the area, the overall risk of spreading these livestock diseases during construction is low.

4.3 Risk of other pests

The most significant pest animals in the vicinity of the proposal study area are pigs, foxes and rabbits, which may result in economic impacts on livestock and crop enterprises due to lamb predation, fence damage or consumption of pasture and crops. However, construction activities are unlikely to significantly change the number or movement patterns of these pests.

5 Weed pest and pathogen management

The management of weeds is based on managing the risk of introducing new weeds to any project work areas during the construction phase due to project activities.

Safeguards and management measures will be implemented to avoid, minimise or manage impacts from the introduction and spread of weeds. These are summarised in Table 5.1 below.

5.1 Training and awareness

Construction personnel and subcontractors will be inducted in the importance of preventing weeds from entering the project and the measures which must be taken for vehicles, machinery and plant used on the project.

5.2 Vehicle and mobile equipment weed hygiene when arriving on the project

In order to minimise the risk of any new weeds being introduced to the project, vehicles, and mobile plant shall be inspected on arrival at the construction compounds by the SecureEnergy Plant Department (or their delegate). In accordance with project onboarding obligations, vehicle, plant and equipment hygiene inspection forms will be completed by suppliers prior to arrival on the project and presented to the Plant Department (or their delegate). If a Hygiene Inspection Form is not present or completed prior to arrival, one will be completed by the deliverer prior to inspection. If the vehicle, plant or equipment does not present clean, it will either be washed down at a site compound or be removed off the project and cleaned by the supplier at a suitable facility. A Hygiene Inspection Form shall be completed (refer to **Appendix A – Hygiene Inspection Form**). This form is an example form that may be amended during project delivery as required.

Vehicle or plant inspected will be assigned an identification number and this identification number will be used on vehicle washdown log sheets.

A copy of the Hygiene Inspection Form is to be retained on the project files and / or provided to a member of the Environmental Team.

5.3 Management of weeds, pests and or pathogens

Washdown bays will be established at designated points along the project and at compounds. Washdown bays will contain apparatus to clean vehicles, plant, equipment and footwear. The location of washdown bays will be dependent on the biosecurity risks identified in that location and confirmed with the affected landholder in the Property Management Plans referred to in Section 5.4 below. Water from washdown bays will drain to a contained sump/low point and materials (sediments) from washdown bays will be contained and disposed of in accordance with the *Waste Management Plan*.

5.4 Property Management Plans

All properties affected by the project area will have a Property Management Plan and where relevant will contain specific 'on-farm' biosecurity requirements.

Appropriate demarcation or signage (similar to below) will be installed in areas identified as having biosecurity risks or requirements as outlined in the in the Property Management plans. Figure 5.1 shows a sample Farm Biosecurity signage that is installed by property owners to indicate that a property has biosecurity requirements and/or an existing Biosecurity Management Plan. Please note that not all property owners may have this sign installed.



Figure 5.1 – Example signage advising that farm biosecurity measures exist

5.5 Incident notification

A biosecurity incident on the project means the detection of a terrestrial contaminant or terrestrial species on freight, people, plant, or equipment on the project which was not previously identified in the EIS. This would include a situation where there are weed species which were not previously identified in the EIS and are suspected to be spread to new locations as a result of project activities. This would exclude weeds which might be detected on properties or previously known locations (adjacent to or in the study area), that are distant from project activities. In the event of a biosecurity incident which has occurred as a result of construction activities, the process outlined in Section 8.2 of the CEMP will be implemented. Incident management and response will be undertaken in accordance with the incident reporting procedures detailed within the Construction Environmental Management Plan.

There are several instances that require notification in accordance with the *Biosecurity Act 2015* and *Biosecurity Regulation 2017*. These include the requirement to notify a biosecurity event and the requirement to notify a certain pest or disease.

Notification requirements with respect to biosecurity matters are detailed below.

5.5.1 Notifiable biosecurity events and prohibited matter events

In accordance with Section 39 of the *Biosecurity Act 2015* (Act), a biosecurity event is something that has, is having, or could have, a significant biosecurity impact.

In terms of the Act, a biosecurity event does not involve prohibited matter. For example, a biosecurity event could be the sudden death of a flock of birds or a herd of cattle.

Prohibited matter is defined as any species listed in Schedule 2 of the *Biosecurity Act 2015*. Schedule 2 includes pests and diseases of plants and animals, diseases of aquatic animals, pest terrestrial invertebrates, terrestrial and freshwater weeds, and aquatic pests. Examples include the diseases African swine fever, foot and mouth disease, Hendra virus and the pest species Siam weed and rubber vine. If any of these are identified on the project site by project ecologists or informed by Property Owners, during construction delivery of the project, the SecureEnergy Environmental Manager would notify Transgrid and Department of Primary Industries. A person is required to immediately notify of a biosecurity event or prohibited matter event. The SecureEnergy Environmental Manager would notify Transgrid and the Department of Primary Industries (if SecureEnergy is the occupier of the project site at the time).

5.5.2 Notifiable pests or diseases

The *Biosecurity Regulation 2017* (Regulation) includes requirements for the notification of certain pests and diseases that are found in NSW and could have a severe effect on the economy, environment or community if not managed appropriately.

Pests and diseases that require notification are listed in:

- Schedule 2 of the Act; and
- Schedule 1 of the Regulation.

In terms of diseases identified as animal diseases of concern (under the *Biosecurity Act 2015* and *Regulation*), sheep footrot and OJD are notifiable diseases.

The list of notifiable pests and diseases in the Act and Regulation is large and they typically require specialist knowledge to identify. The list is not, therefore, repeated within this plan. No notifiable pests or diseases were identified as occurring or likely to occur in the project area.. Presence of notifiable pests or diseases on the project would be identified in the Property Management Plans in consultation with landholders / property owners or as advised by Department of Primary Industries.

5.5.3 Notifiable weeds

Biosecurity zones cover most of NSW, including the project area and require landowners and occupiers to notify the local control authority in accordance with section 30 and section 38 of the *Biosecurity Act 2015* of a new infestation of the weeds, and eradicate, destroy or suppress the weeds. The Wentworth Shire Council is the local control authority for this project. Refer to table 3.1 for identification of weeds that require notification to the local control authority. Note that should Boneseed be found / identified DPIE should be notified.

The EIS Technical Paper 3 (Agricultural land impact assessment) advises that the project area lies within the biosecurity zones for alligator weed, bitou bush and water hyacinth (listed under Part 5 of the *Biosecurity Regulation 2017*). If these weeds are encountered during construction, the owner or occupier of the project site must:

- (a) if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6 of the *Biosecurity Regulation 2017*, and
- (b) eradicate the weed or, if that is not practicable, destroy as much of the weed as is practicable and suppress the spread of any remaining weed.

5.5.4 Who is required to notify?

In the case of a pest or disease that is listed as prohibited matter in Schedule 2 of the *Biosecurity Act 2015* or a biosecurity event, the duty to notify applies only if the person has anything to do with the premise in which the pest and disease is identified or suspected. This could include the owner (Transgrid) or occupier of the premise (SecureEnergy).

In the case of a pest or disease that is listed as notifiable in Schedule 1 of the Regulation, the duty to notify applies to any person who is aware of the presence or suspected presence of the pest or disease.

Notification must occur within one working day of first becoming aware.

SecureEnergy will notify Transgrid and the NSW Department of Primary Industries (DPI). DPI indicates that there are several contact points based on what the issue is. As a first point of call it is recommended to contact DPI Biosecurity on 1800 680 244.

Where it is an animal pest, SecureEnergy will advise the relevant property owner (should the property owner wish to be informed).

5.6 Management measures

The management measures outlined in Table 5.1 will be implemented to minimise biosecurity impacts.

Table 5.1 – Biosecurity management measures

ID	Measurement/Requirement	When to implement	Responsibility	Source document
BS1	All construction personnel and subcontractors will attend the project induction which will include awareness of priority weeds, content regarding the importance of preventing weeds from entering the project site and the measures which must be taken for vehicles, machinery and plant used on the project.	Pre-construction Construction	HSSE Manager	Good practice
BS2	Prior to arriving on the project site, the supplier/owner of plant and equipment shall complete a Hygiene Inspection Form. If a Hygiene Inspection Form is not present or completed prior to arrival, one will be completed by the deliverer prior to inspection. All vehicles and mobile plant will be inspected on arrival at the construction compounds. A Hygiene Inspection Form with an assigned inspection number will be issued for vehicle / plant assets inspected as required. If plant or equipment arrives on the project site unclean it will either be washed down at the site compound or be removed from the project site by the supplier/owner and cleaned at an appropriate facility.	Pre-construction Construction	Subcontractor/owner/suppliers Plant Department or delegate	Good practice
BS3	The specific controls applicable to a property will be identified in consultation with the affected landholder, documented in a Property Management Plan as appropriate and implemented during all relevant site activities. The effectiveness of these controls will be regularly monitored.	Pre-construction Construction	Community and Stakeholder Engagement Team, Environmental Manager	RMM LP7
BS4	Where any of the weeds listed in the Biosecurity Plan are identified pre-construction or during construction, consultation (where relevant or required) will occur with Property Owners, Western Local Land Services (LLS), Wentworth Shire Council and/or NSW Department of Primary Industries.	Construction	Environmental Manager	RMM LP8
BS5	Cleaning of vehicles and machinery will occur at designated washdown bays prior to movement onto the construction work areas or between properties (as required by the Property Management Plans).	Construction	All personnel	RMM LP7
BS6	Water from washdown bays will drain to a contained sump/low point and materials (sediments) from washdown bays will be contained and disposed of in accordance with the <i>Waste Management Plan</i> .	Construction	Supervisor, Environmental Manager, Environmental Advisor	Good practice
BS7	Site demarcation or signage will be installed in areas of significant biosecurity risk where access is required.	Construction	Environmental Manager, Environmental Advisor	Good practice
BS8	The locations of permanent structures (and the extents of associated construction areas or compounds) will be located where possible to avoid or minimise impacts, or as agreed with the affected landholder, on locations of high biosecurity risk.	Construction	Engagement Manager, Environmental Advisor	RMM LP2
BS9	Vehicle and equipment movements across adjoining farmland, including trip numbers and locations, will be minimised where possible where localised areas of high biosecurity risks have been identified.	Construction	Supervisor, Environmental Manager, Environmental Advisor	RMM LP7

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ID	Measurement/Requirement	When to implement	Responsibility	Source document
BS10	If during construction, new infestations of notifiable weeds, pests or diseases are identified in project areas that are owned by Transgrid and/or occupied by SecureEnergy, the Environment Manager will notify Transgrid and will report the infestation to the relevant local control authority.	If required during construction only	Environmental Manager	<i>Biosecurity Act 2015</i> <i>Biosecurity Regulation 2017</i> RMM LP9
BS11	Weeds are to be identified as part of pre-clearing inspections by project ecologists.	Pre-Construction	Ecologist	Good practice
BS12	Weeds are to be managed appropriately in accordance with legislative (or local control authority) requirements and may use a range of options including but not limited to: <ul style="list-style-type: none"> • slashing (timing/species dependent); • onsite burning; • onsite deep burial; or • stockpile spraying. 	Construction	Supervisor, Environmental Manager, Environmental Advisor	Good practice

Appendix A – Hygiene inspection form

Hygiene inspection form














Part A - Information				
Date:				
Supplier/Owner of vehicle/plant:				
Description of vehicle / plant:				
Make:				
Registration No:				
Name of Operator / Driver:				
Travelling / delivered from:				
Part B – Washdown, brush down or blower log				
Location of washdown, brush down or blowing of soil and Inspection:				
Inspection criteria	Is the item free of soil?		Action required (eg cleaning of area)	
Underside of the vehicle				
Wheel arches	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Mud flaps	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tyres and rims	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Engine bay				
Radiator	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Grill	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Top of transmission gearbox	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other areas	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Interior of the plant / machinery				
Foot wells	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Carpet	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other				
Utes and trucks – inspect tray	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Trailers – check inside of the trailer, wheels, guards				
Please provide details of any action taken as required				
Part C - Declaration				
(I, the undersigned declare that the information that I have provided in this declaration is true and correct)				
Name:				
Signature:				
Date:				
Please ensure that a copy of this form is recorded on the project files and / or provided to a member of the Environment Team.				














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Appendix B – Identification of weeds











Weed identification guide


Common name	Species name	Images
African boxthorn	<i>Lycium ferocissimum</i>	 
Alligator weed	<i>Alternanthera philoxeroides</i>	
Athel pine	<i>Tamarix spp.</i>	 
Barley grass	<i>Hordeum glaucum</i>	
Bathurst burr	<i>Xanthium spinosa</i>	 
Bitou bush	<i>Chrysanthemoides monilifera</i> *State priority	  
Boneseed	<i>Chrysanthemoides monilifera</i>	

Common name	Species name	Images
Boxing glove/coral cactus	<i>Cylindropuntia fulgida</i>	
Bridal creeper	<i>Asparagus asparagoides</i>	
Burr ragweed	<i>Ambrosia confertiflora</i>	
Caltrops or Cat-head	<i>Tribulus terrestris</i>	  
Clock weed	<i>Oenothera curtiflora</i>	 
Common pear	<i>Opuntia stricta</i>	 
Common sow thistle	<i>Sonchus oleraceus</i>	
Fountain grass	<i>Pennisetum setaceum</i>	 

Common name	Species name	Images
Giant reed	<i>Arundo donax</i>	
Horehound	<i>Marrubium vulgare</i>	 
Hudson pear	<i>Cylindropuntia rosea</i>	 
Khaki weed	<i>Alternanthera pungens</i>	
Mediterranean turnip	<i>Brassica tournefortii</i>	
Mesquite	<i>Prosopis spp.</i>	 
Noogoora burr	<i>Xanthium occidentale</i>	 
Onion weed	<i>Asphodelus fistulosus</i>	 

Common name	Species name	Images
Parthenium weed	<i>Parthenium hysterophorus</i>	 
Paterson's curse	<i>Echium plantagineum</i>	
Prickly pear	<i>Opuntia</i> spp.	 
Rope pear	<i>Cylindropuntia imbricata</i>	  
Silver-leaf nightshade	<i>Solanum elaeagnifolium</i>	 
Spiny burrgrass	<i>Cenchrus</i> spp.	  
Spiny emex	<i>Rumex hypogaeus</i>	

Common name	Species name	Images
Stemless thistle	<i>Onopordum acaulon</i>	
Thornapple	<i>Datura spp.</i>	  
Tree tobacco	<i>Nicotiana glauca</i>	
Ward's weed	<i>Carrichtera annua</i>	
Water hyacinth	<i>Eichhornia crassipes</i>	
Willow rhus	<i>Searsia lancea</i>	
Willows	<i>Salix spp.</i>	 

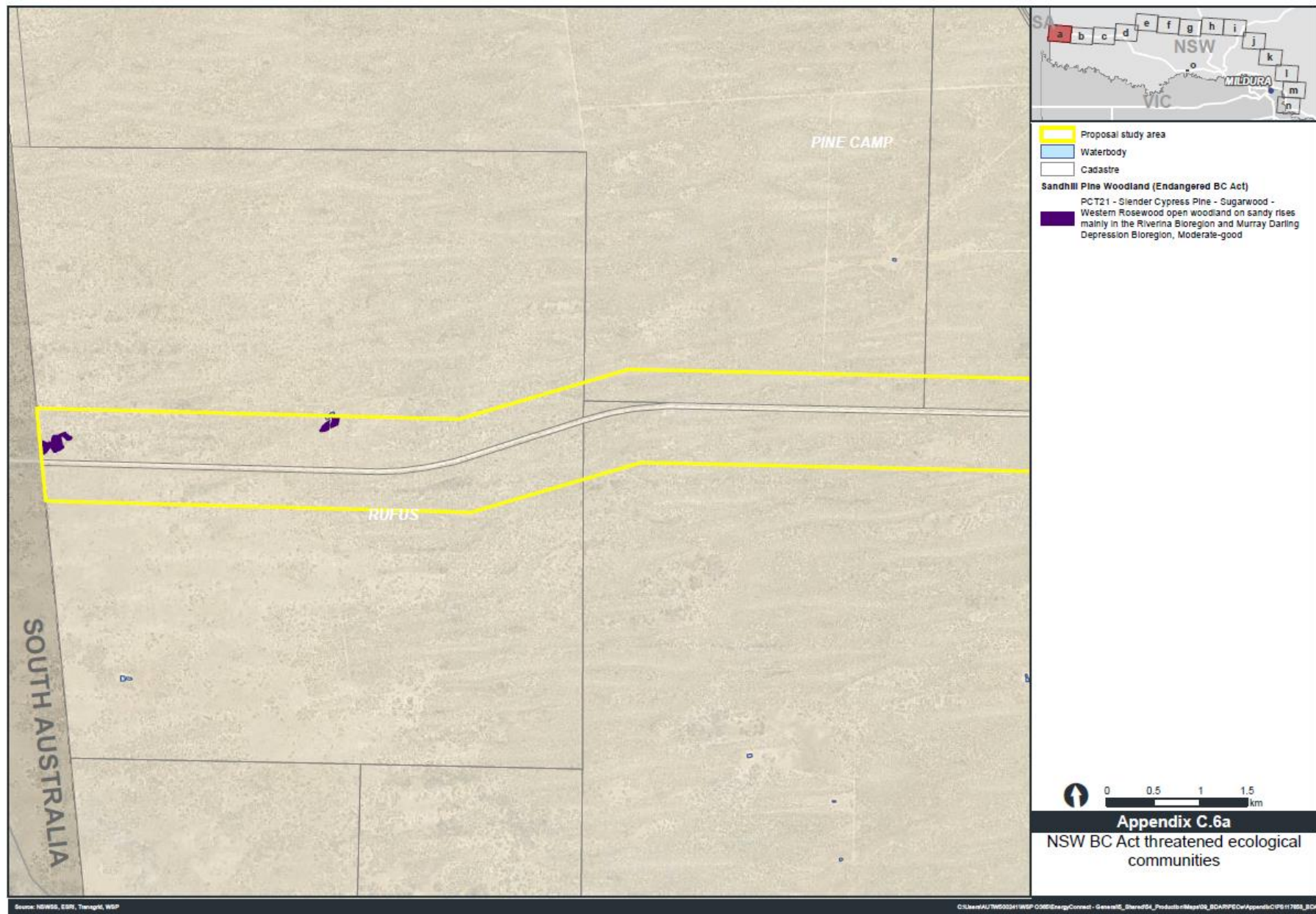
Common name	Species name	Images
Winged sea lavender	<i>Limonium lobatum</i>	

Appendix E – Biodiversity Mapping

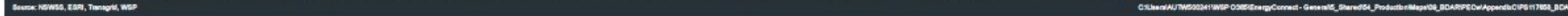
E1 - Threatened Ecological Community Mapping

E2 - Threatened Flora Mapping

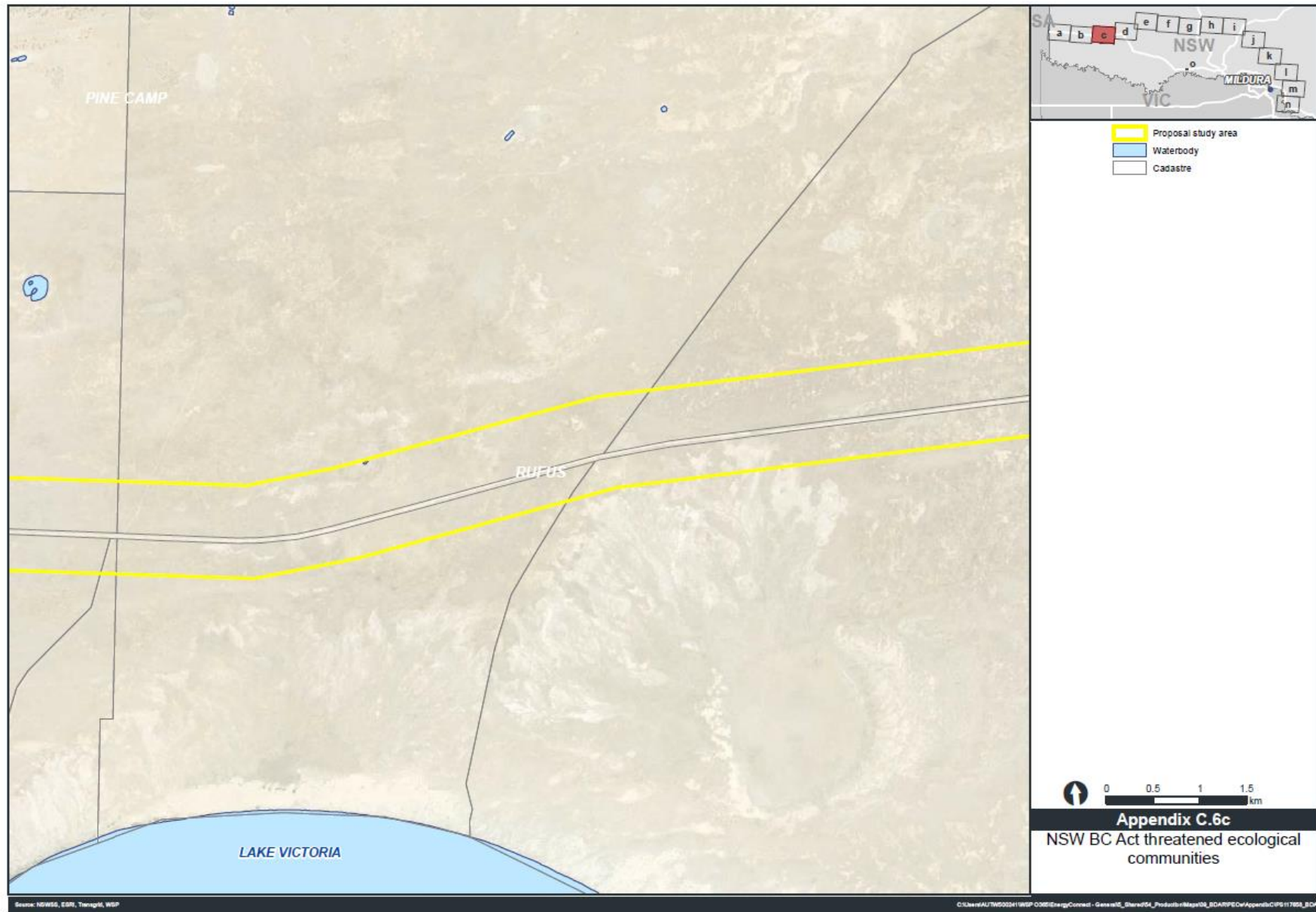
E1 – Threatened Ecological Community Mapping



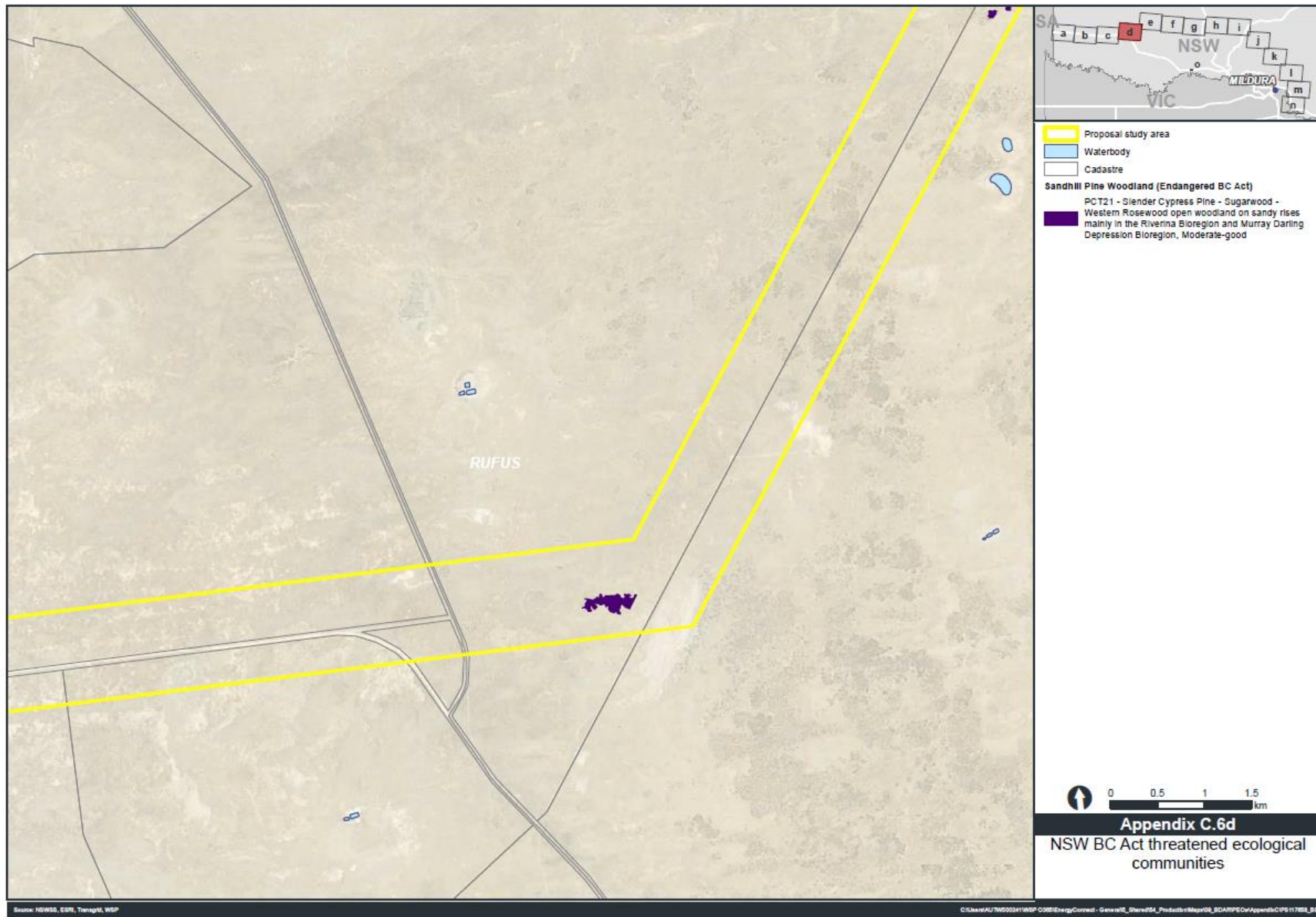
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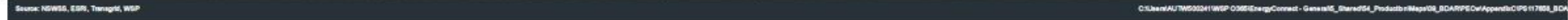
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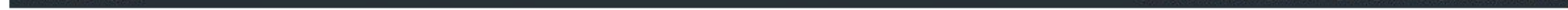
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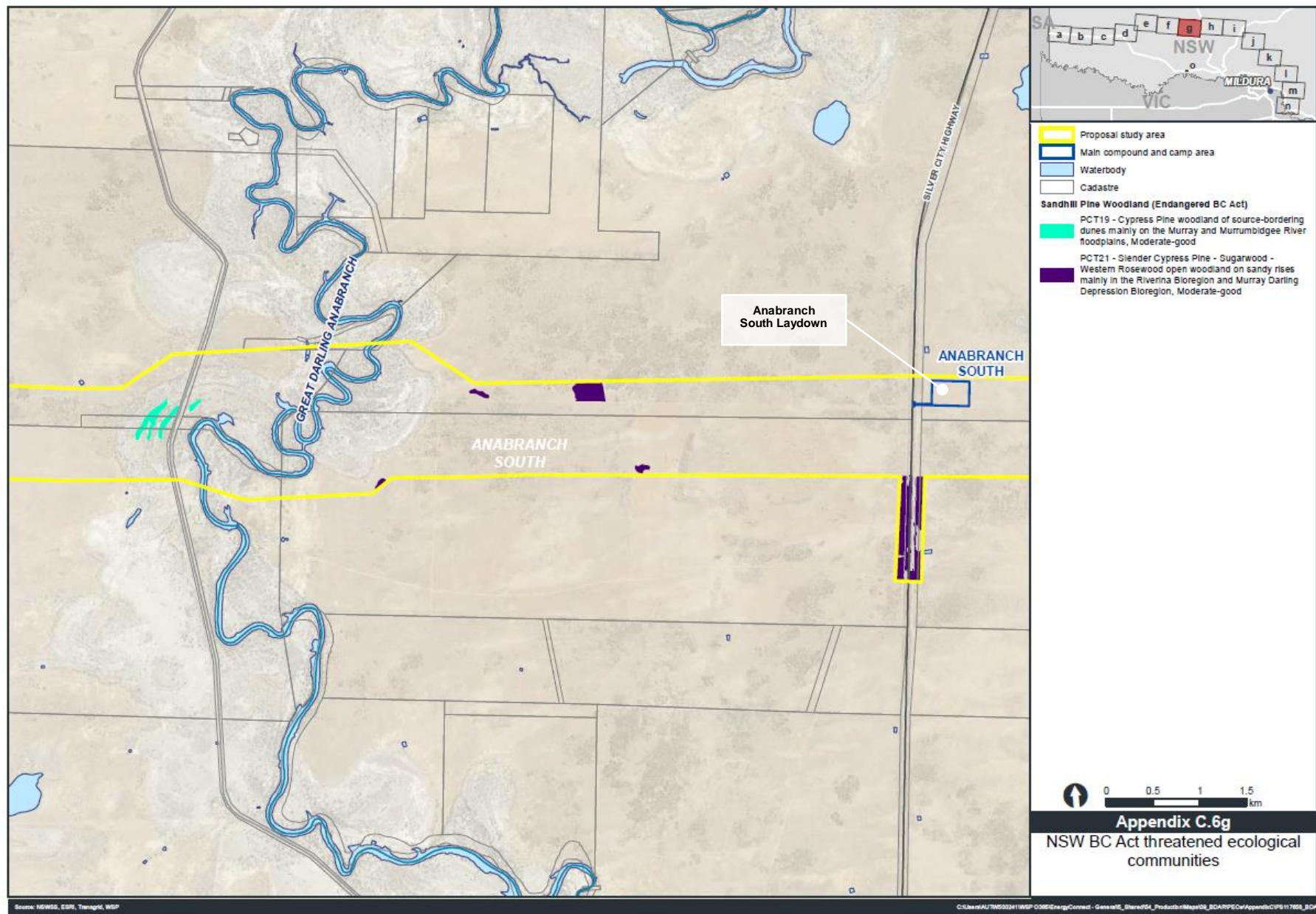
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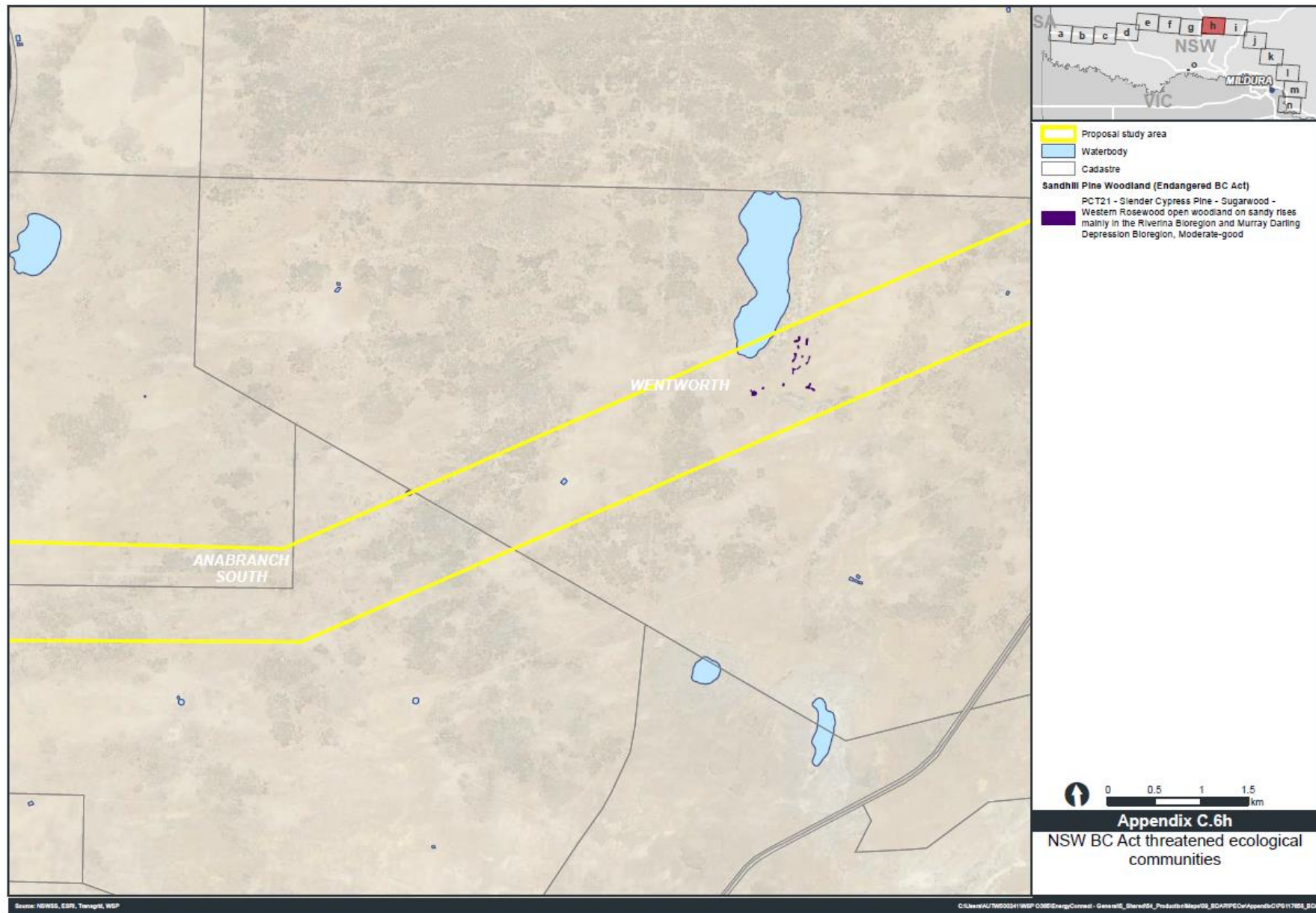
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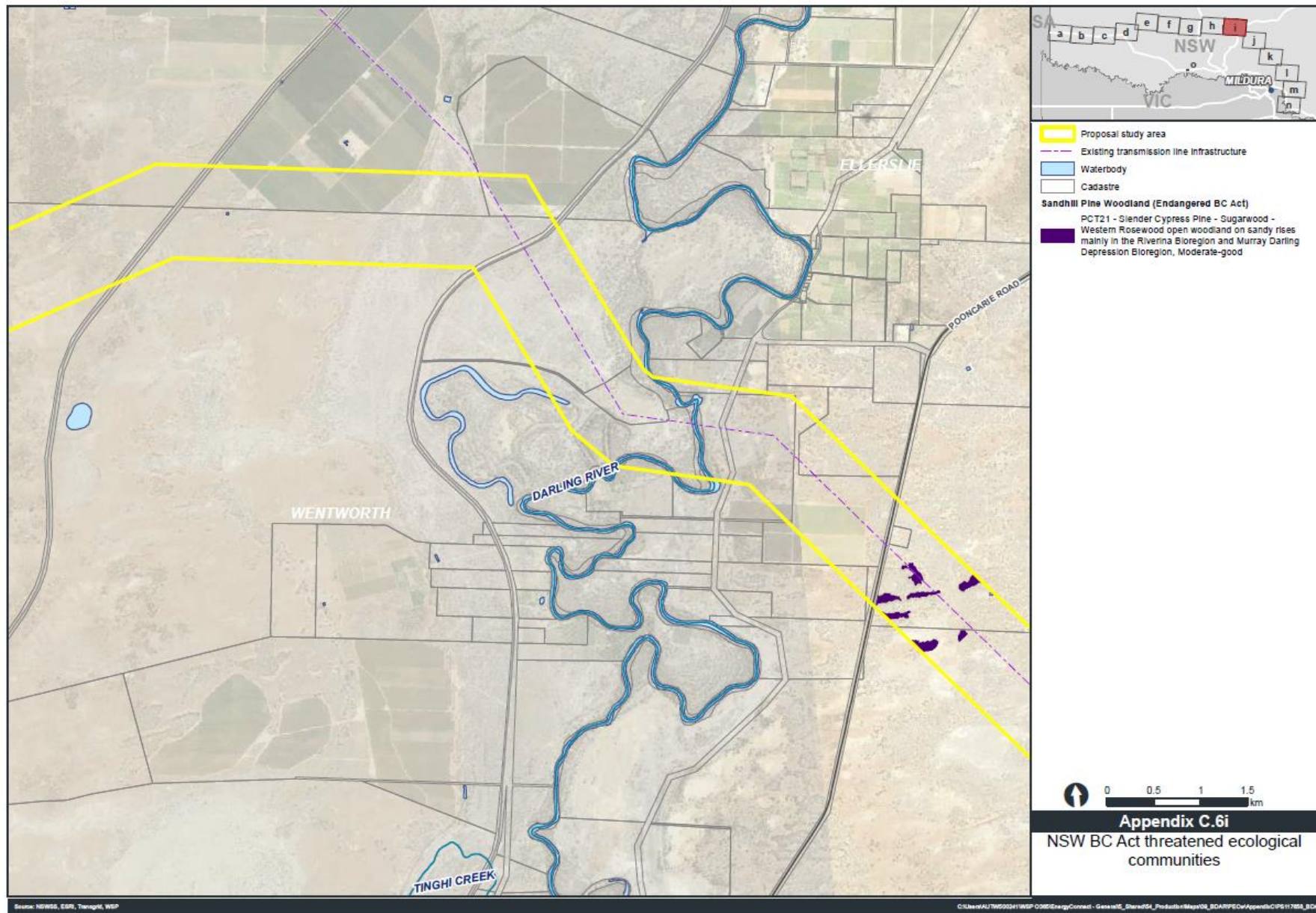
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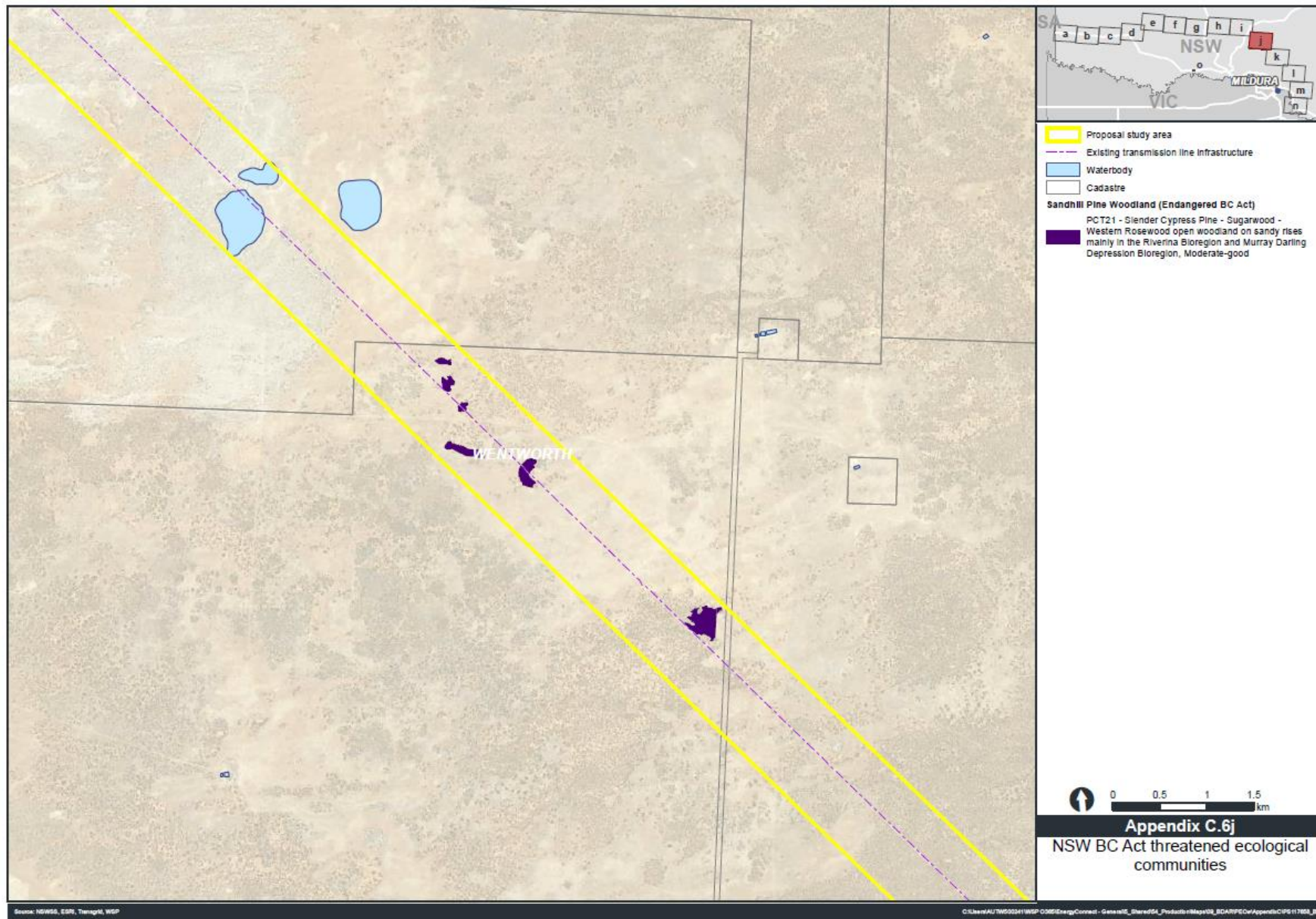
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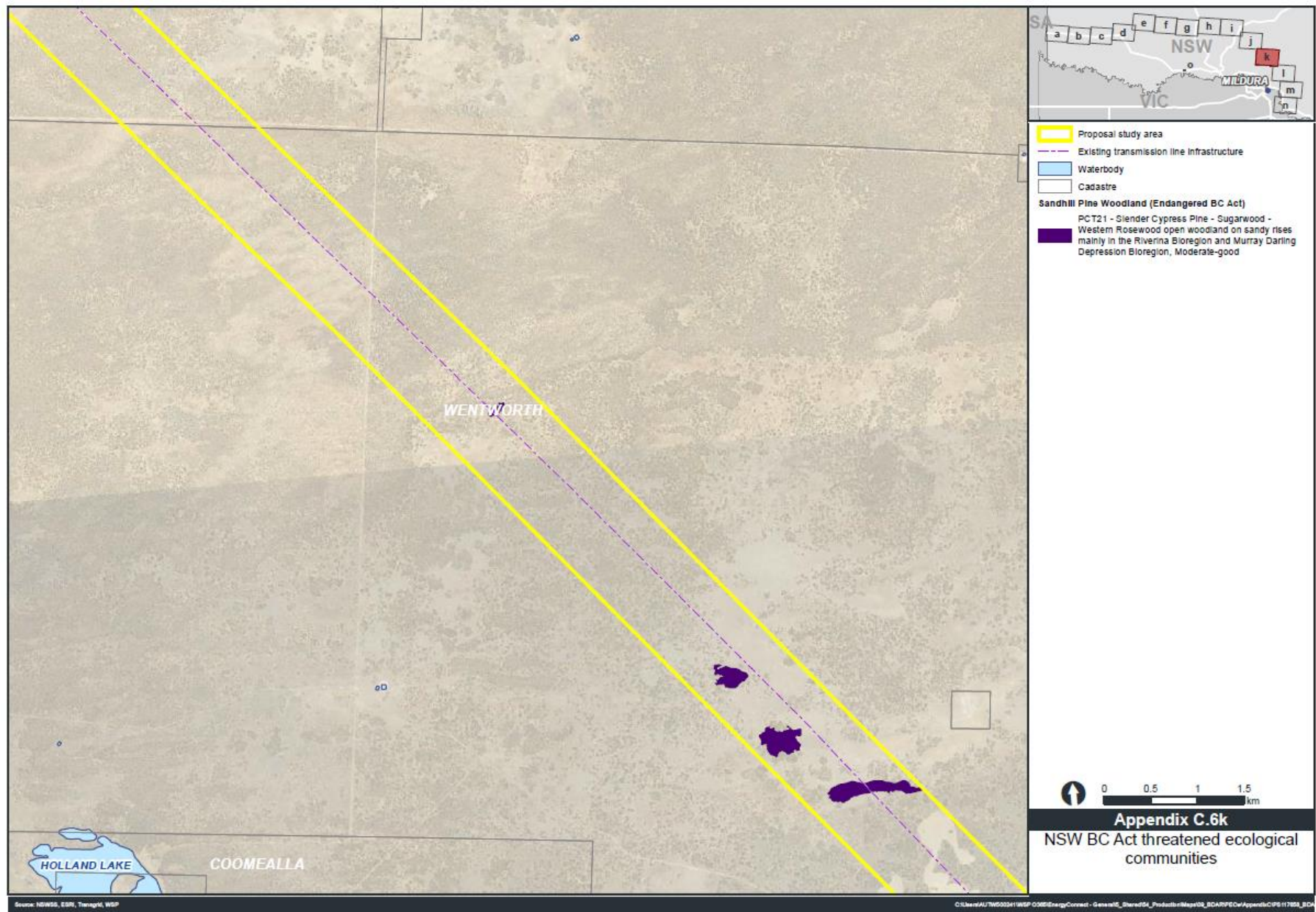
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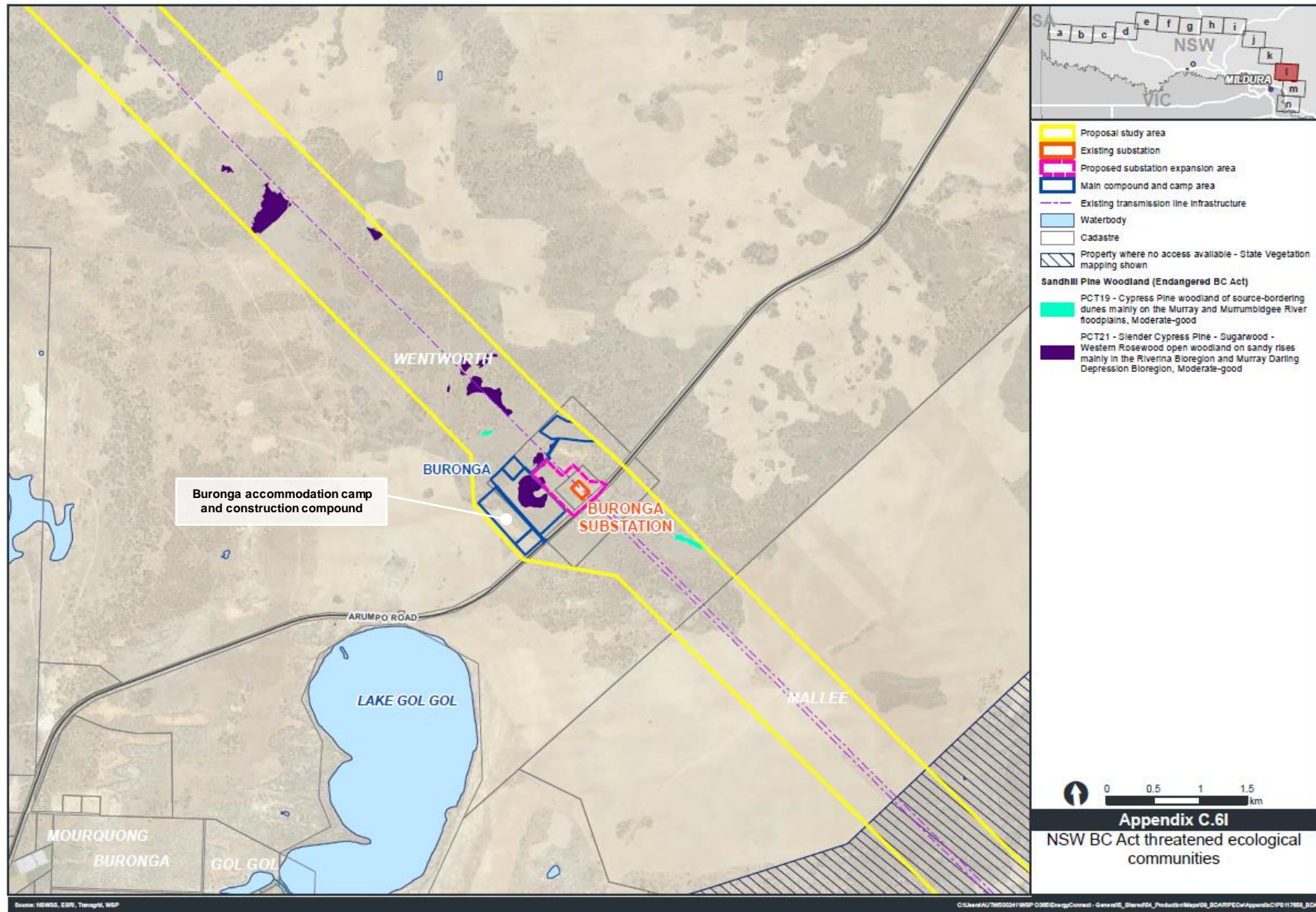
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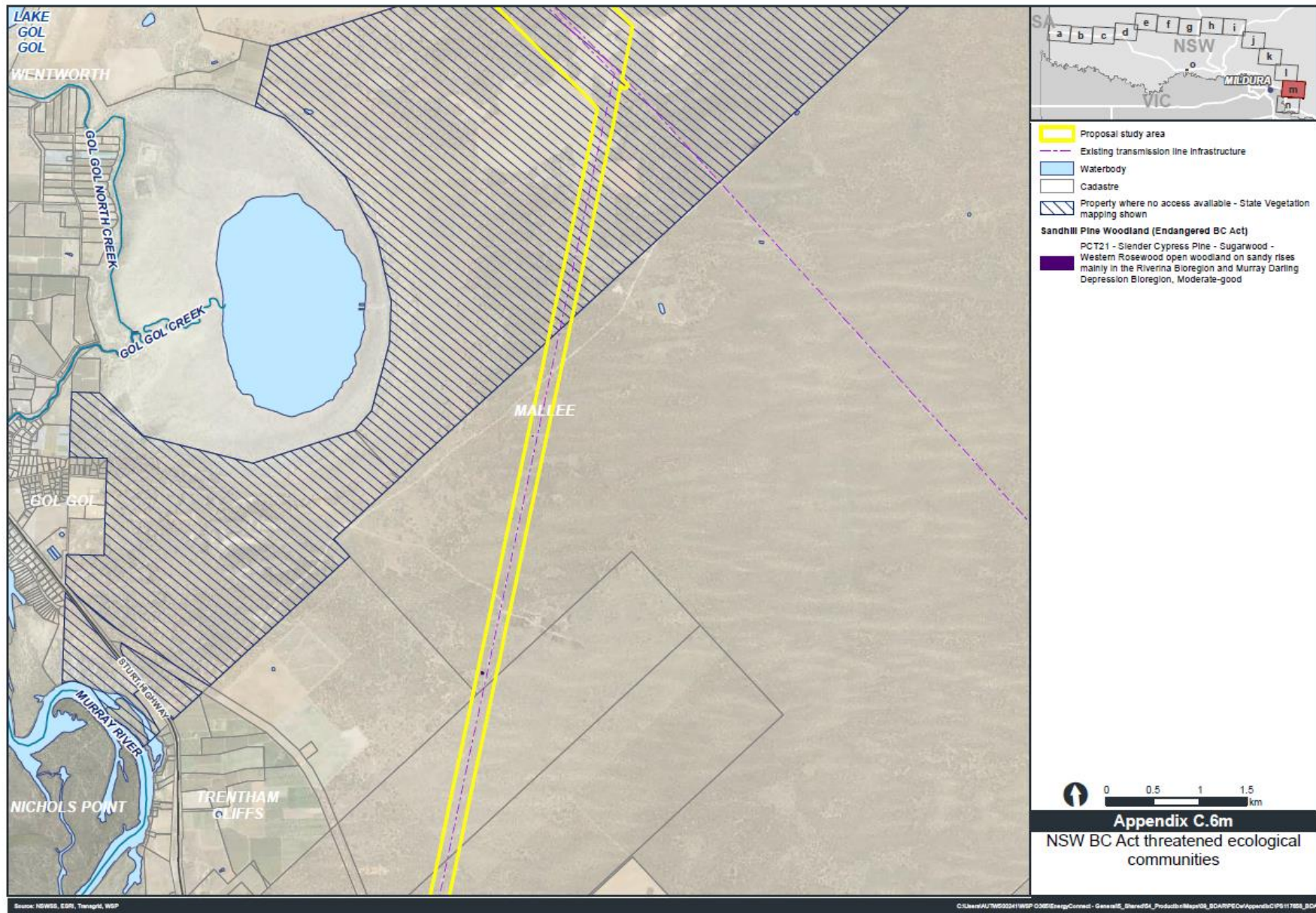
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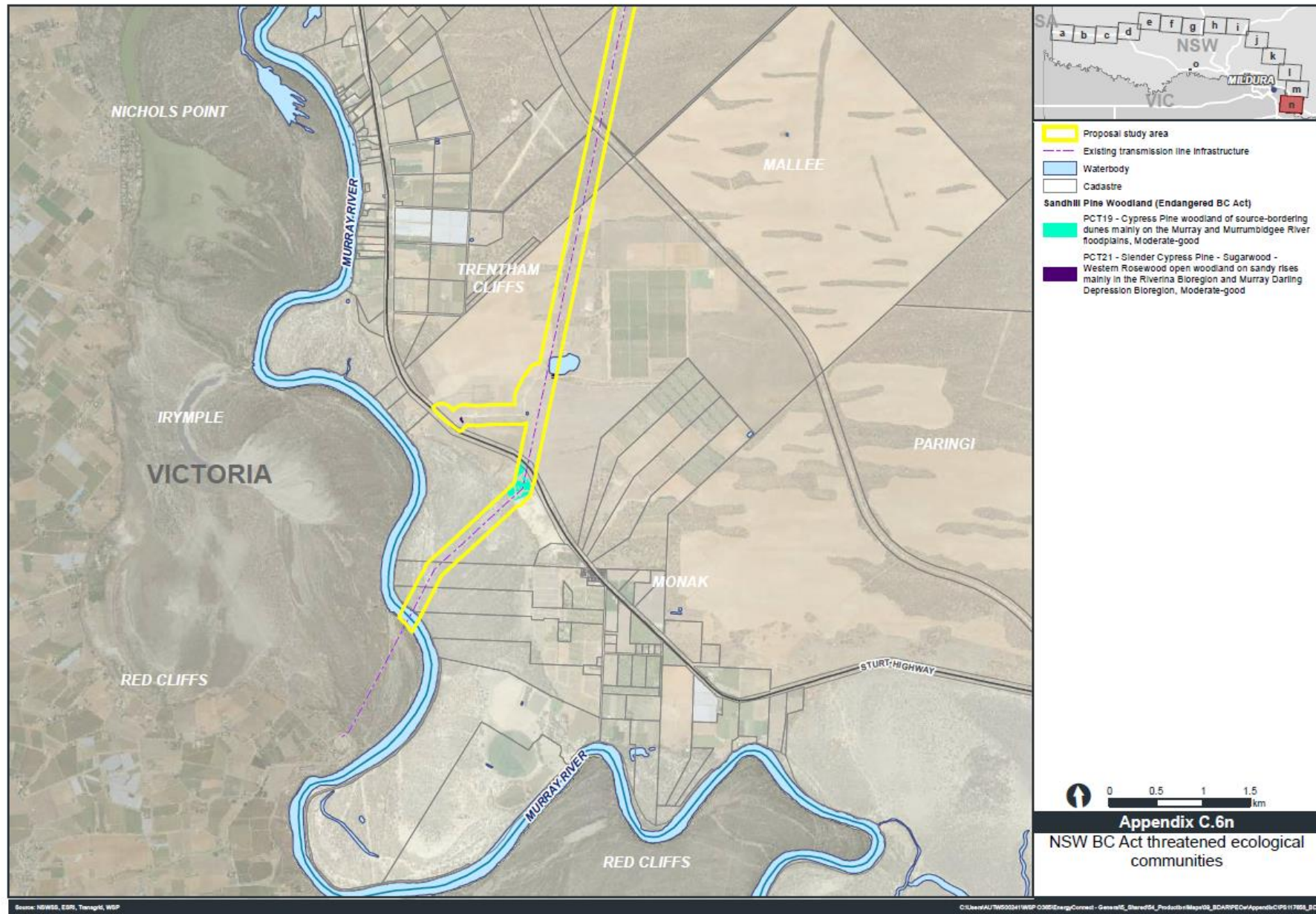
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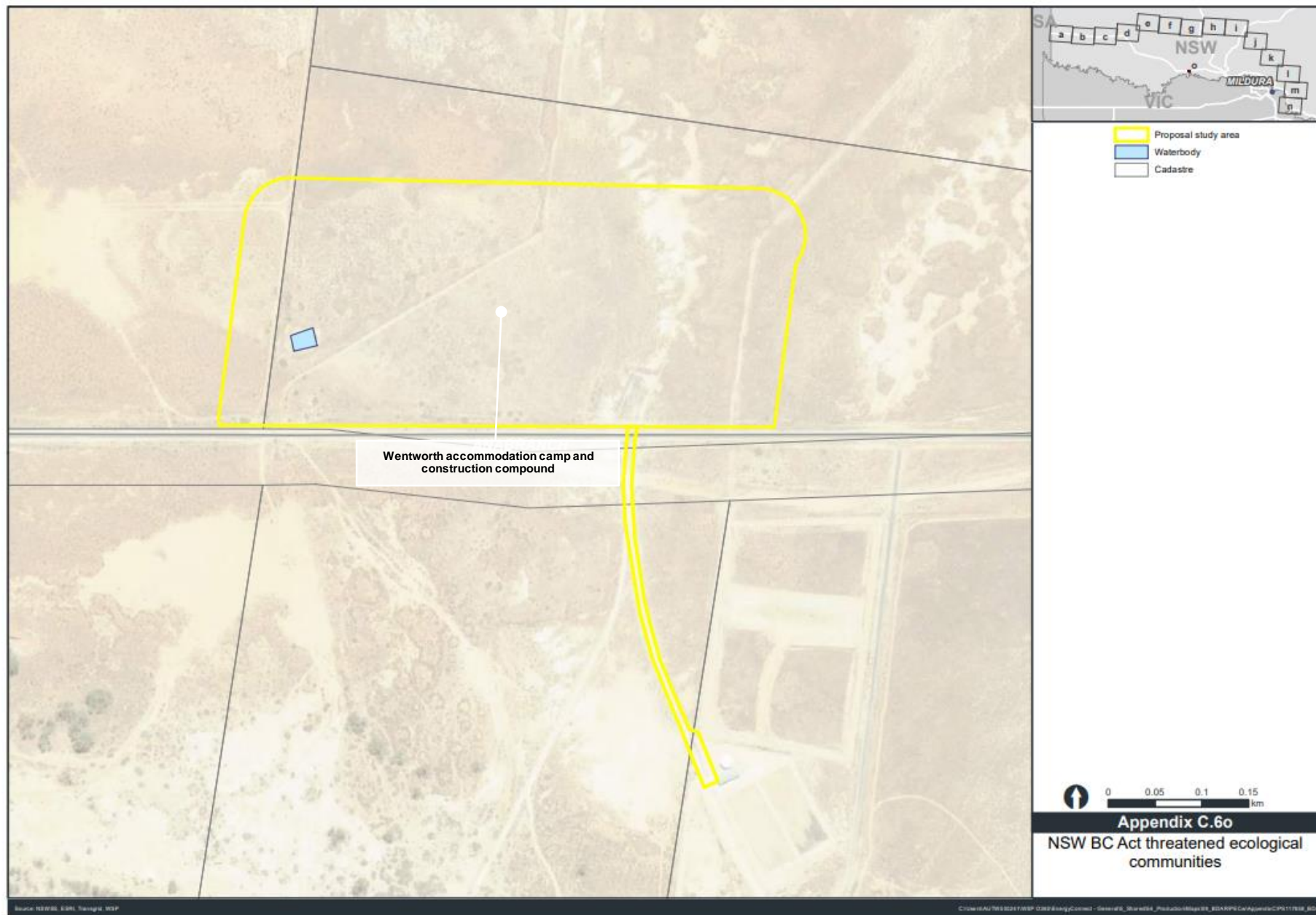
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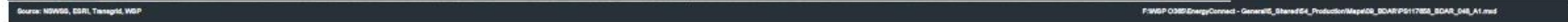


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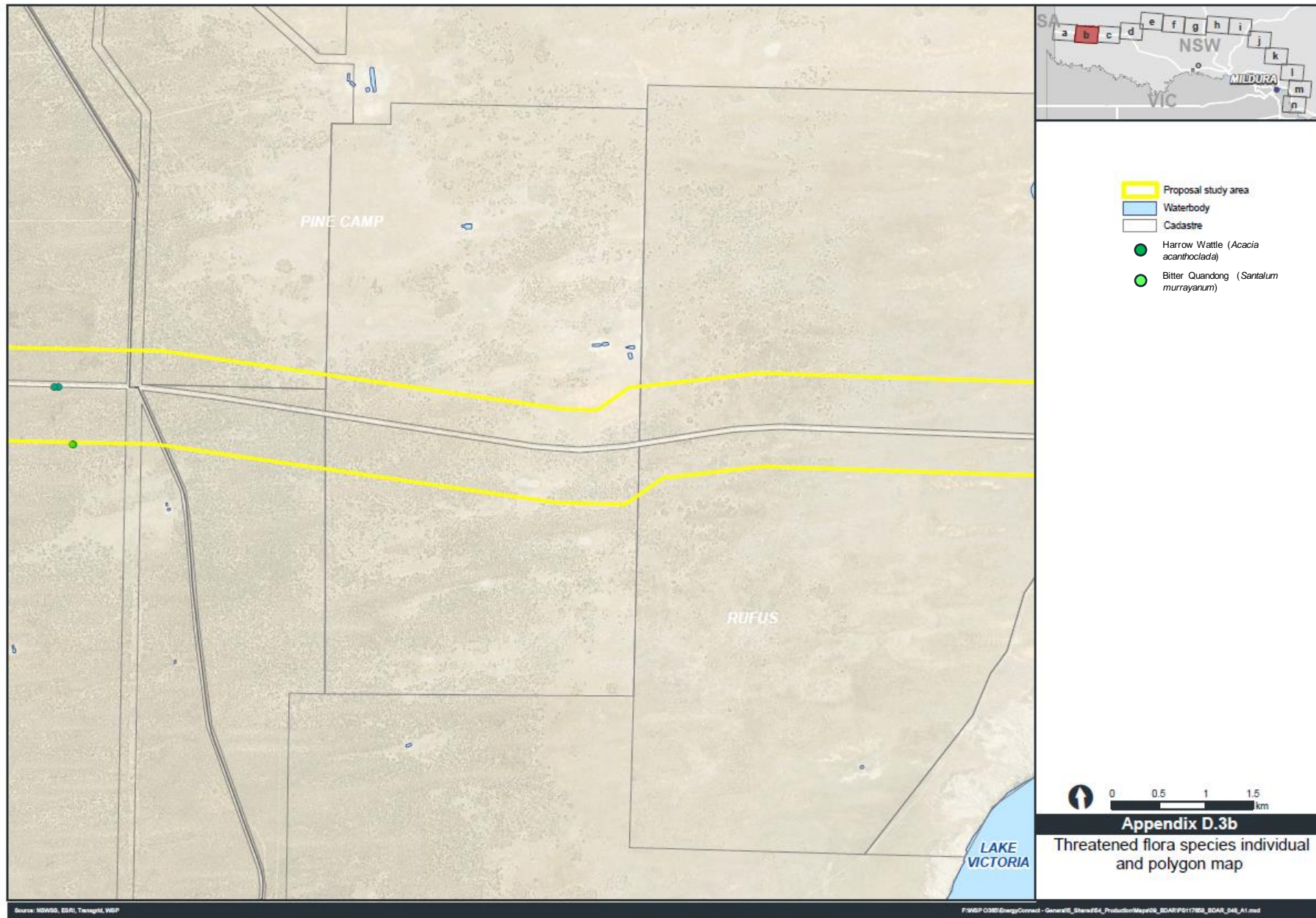


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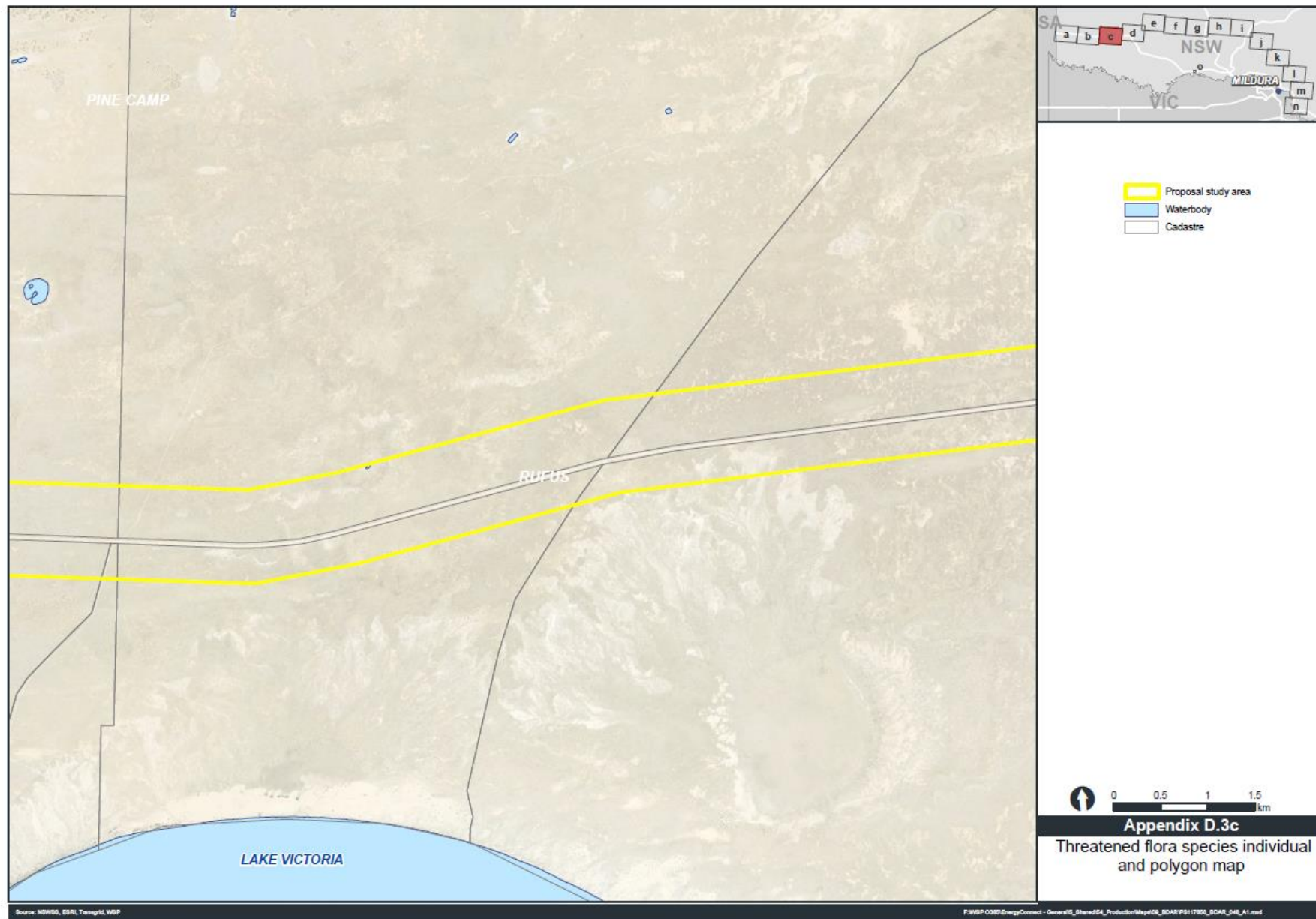
E2 – Threatened Flora Mapping



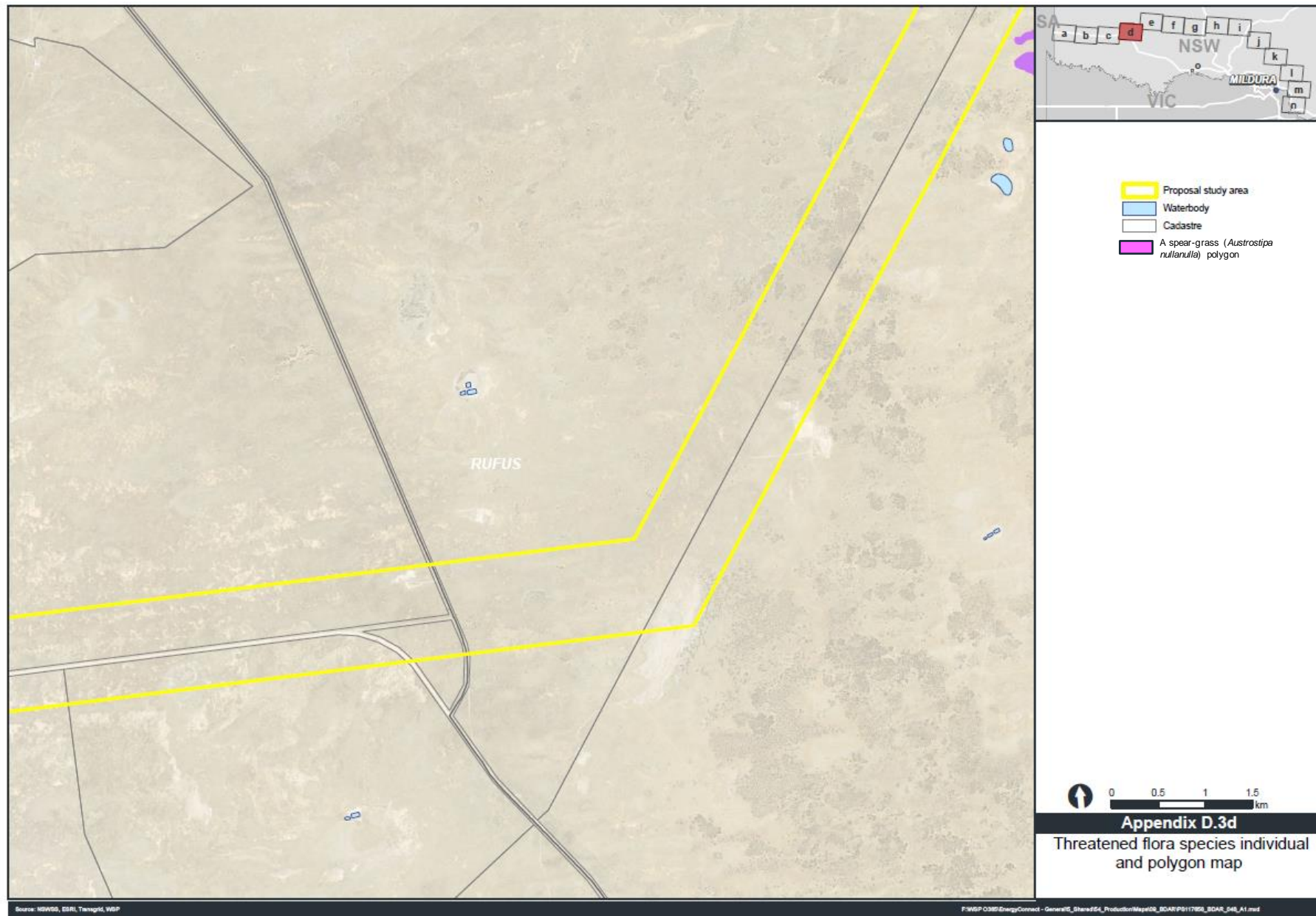
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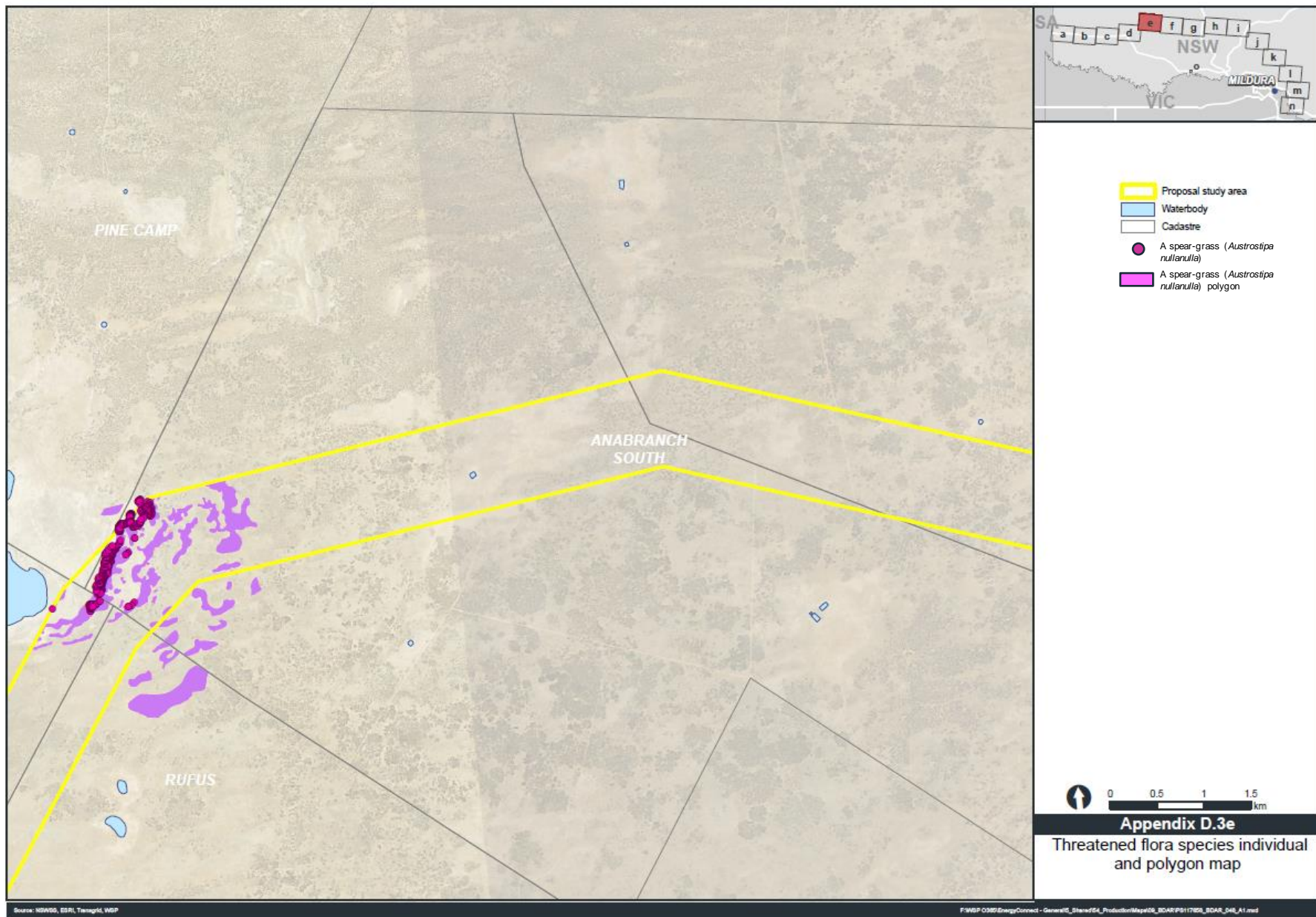
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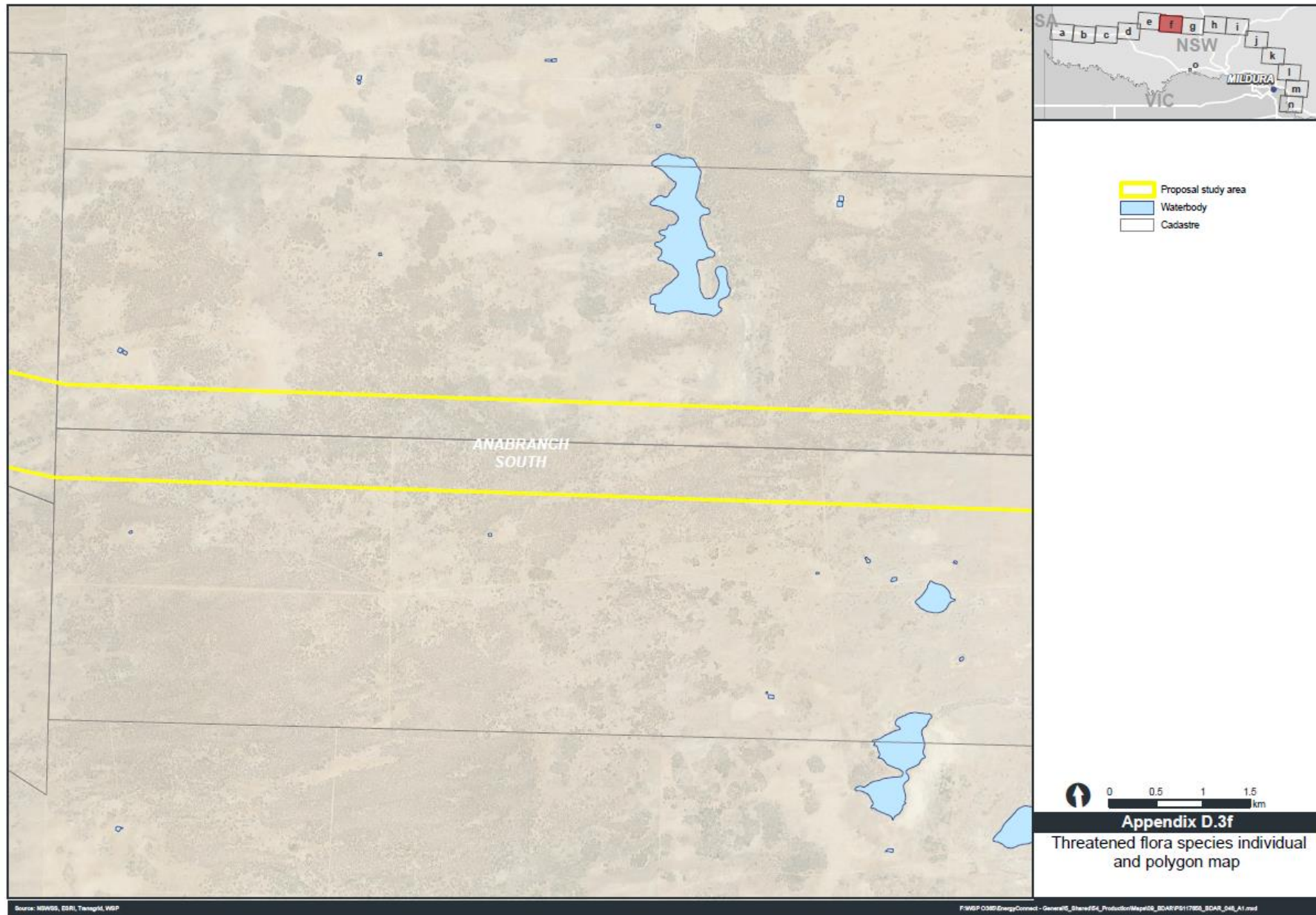
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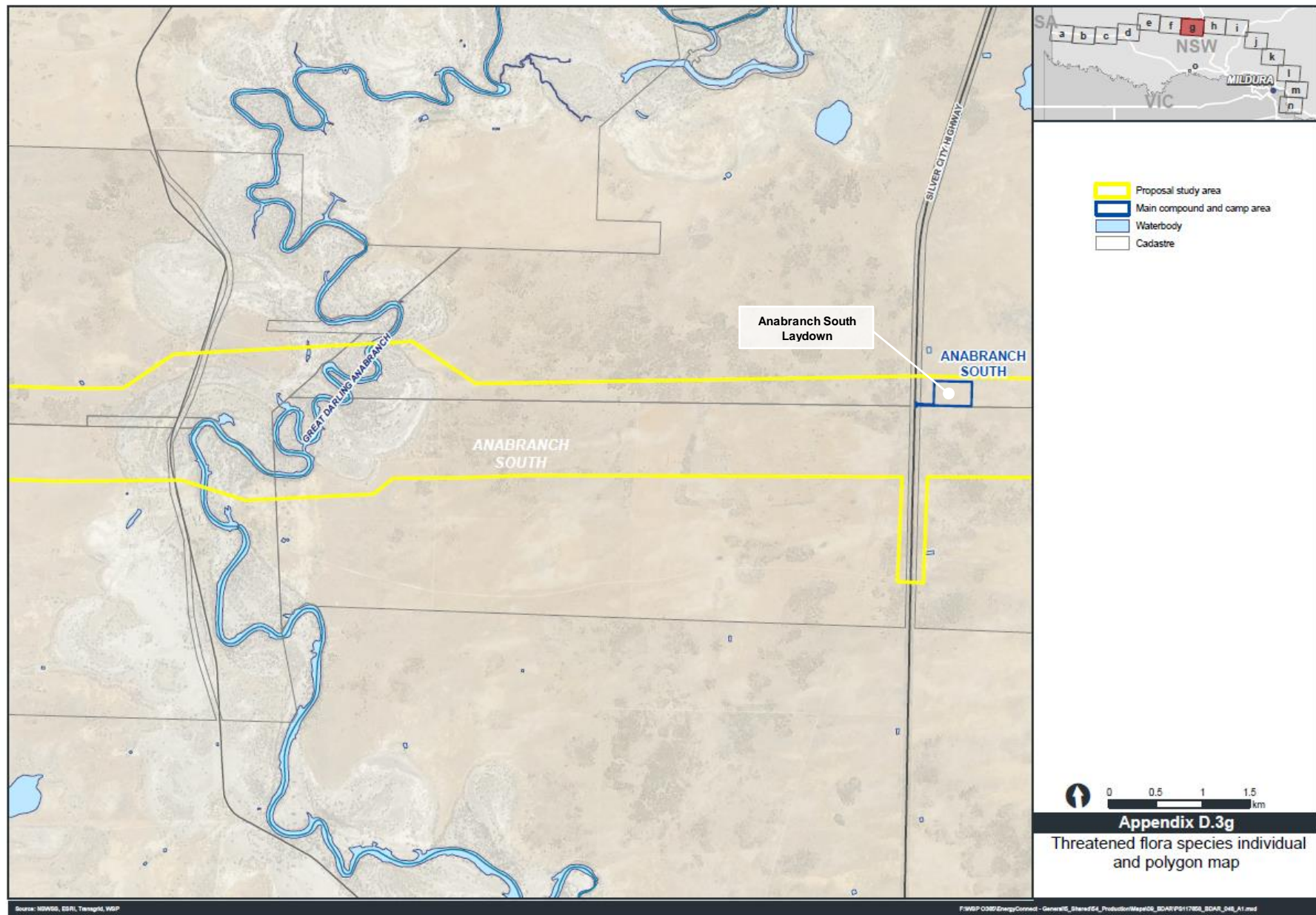
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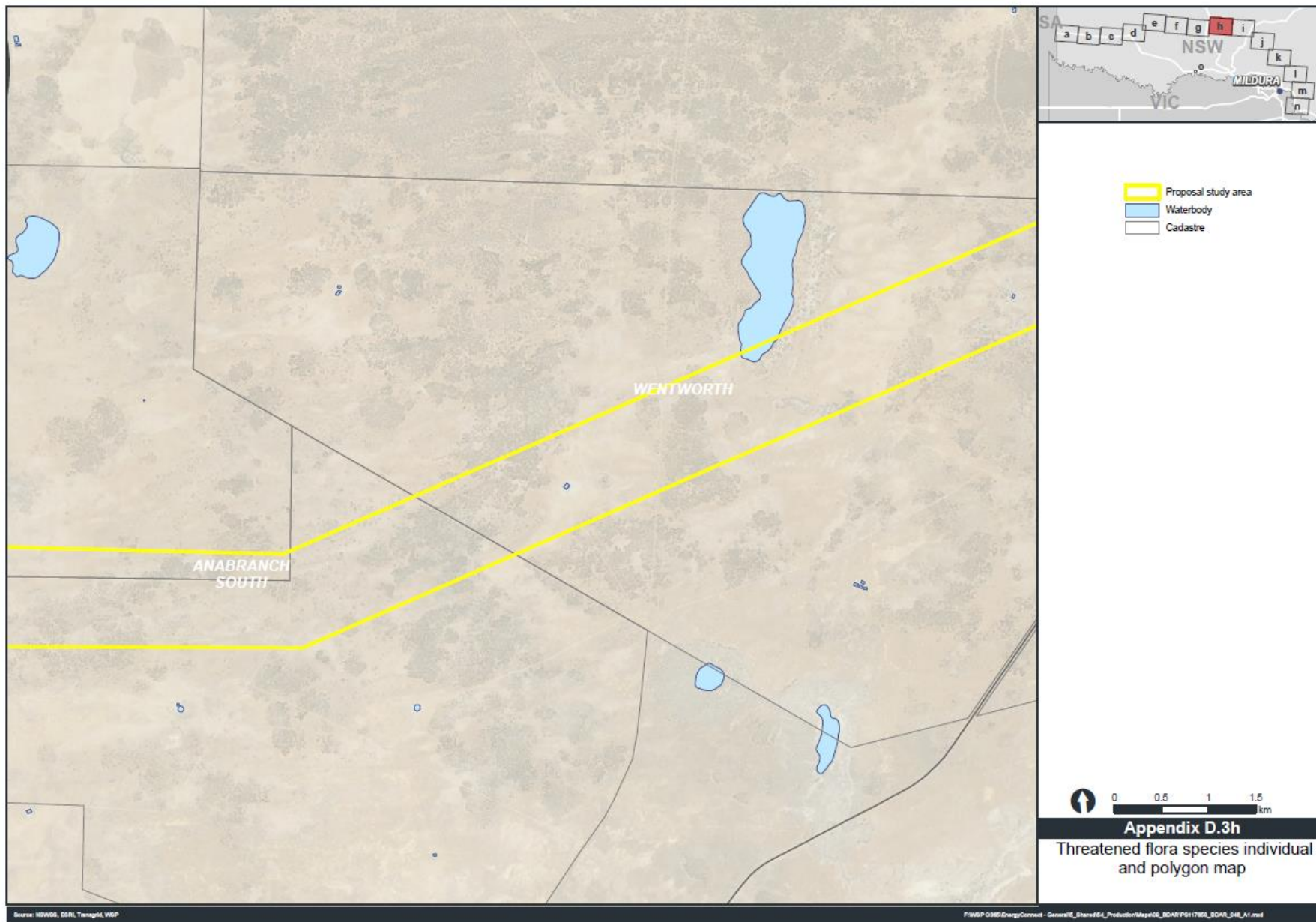
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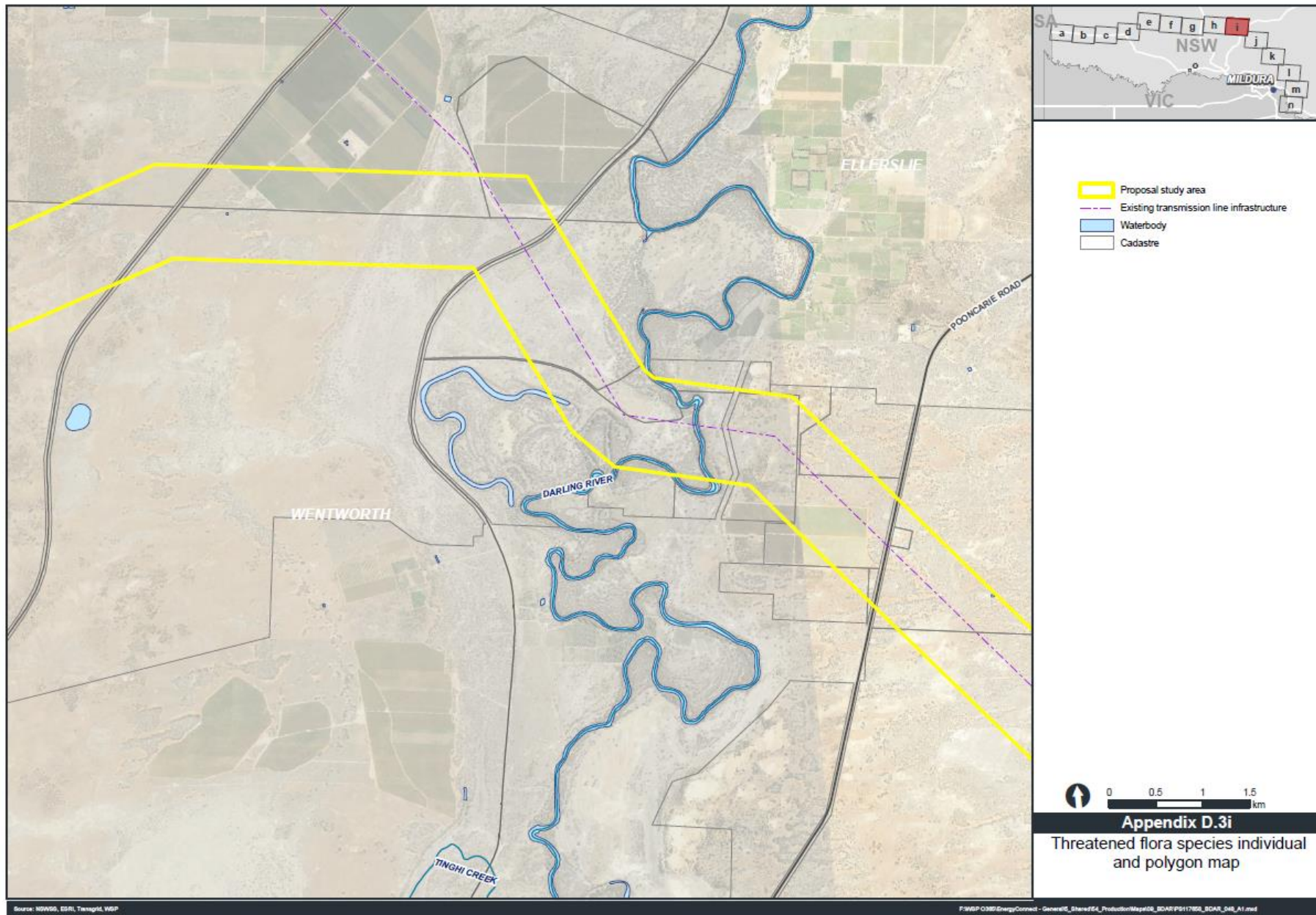
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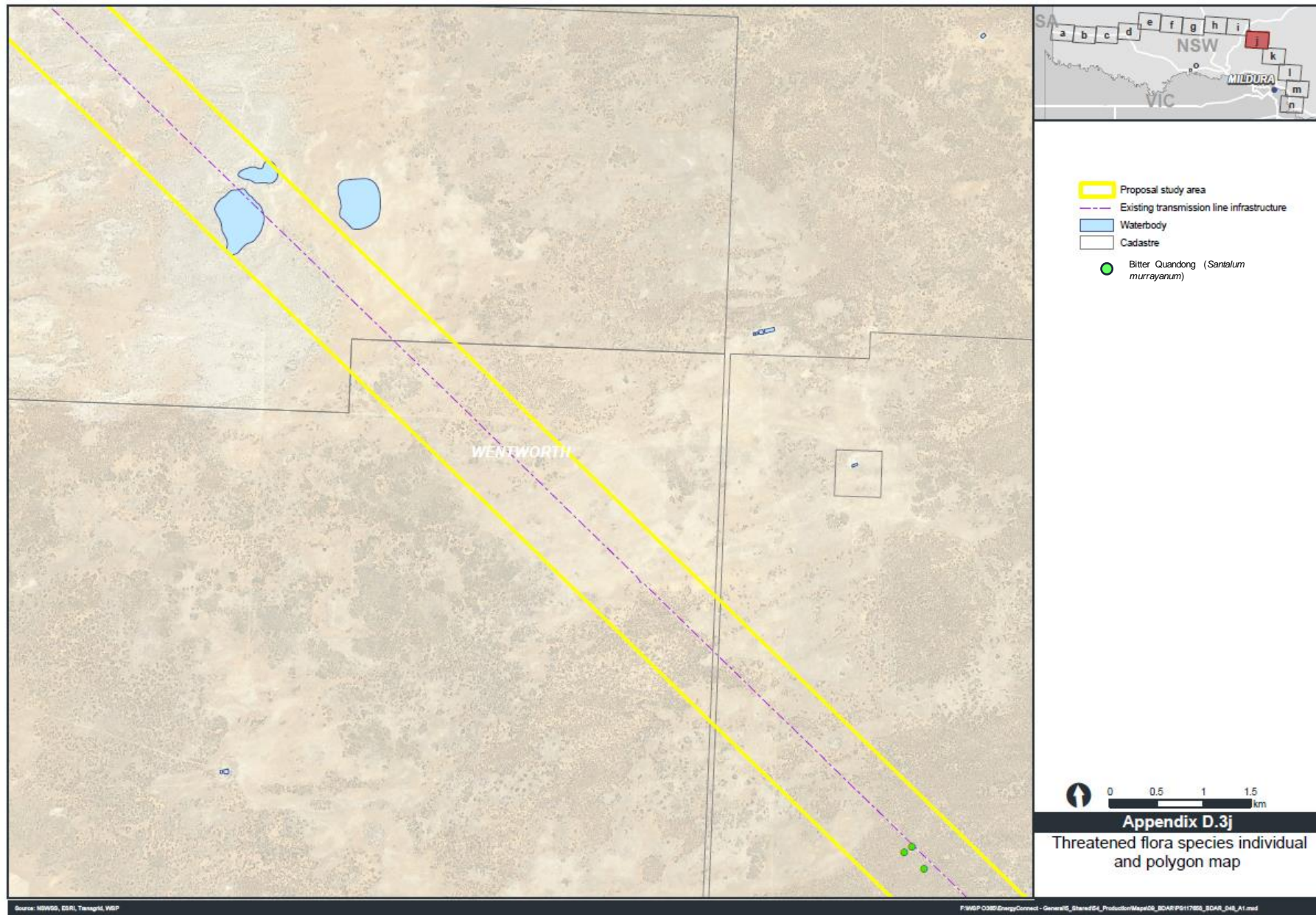
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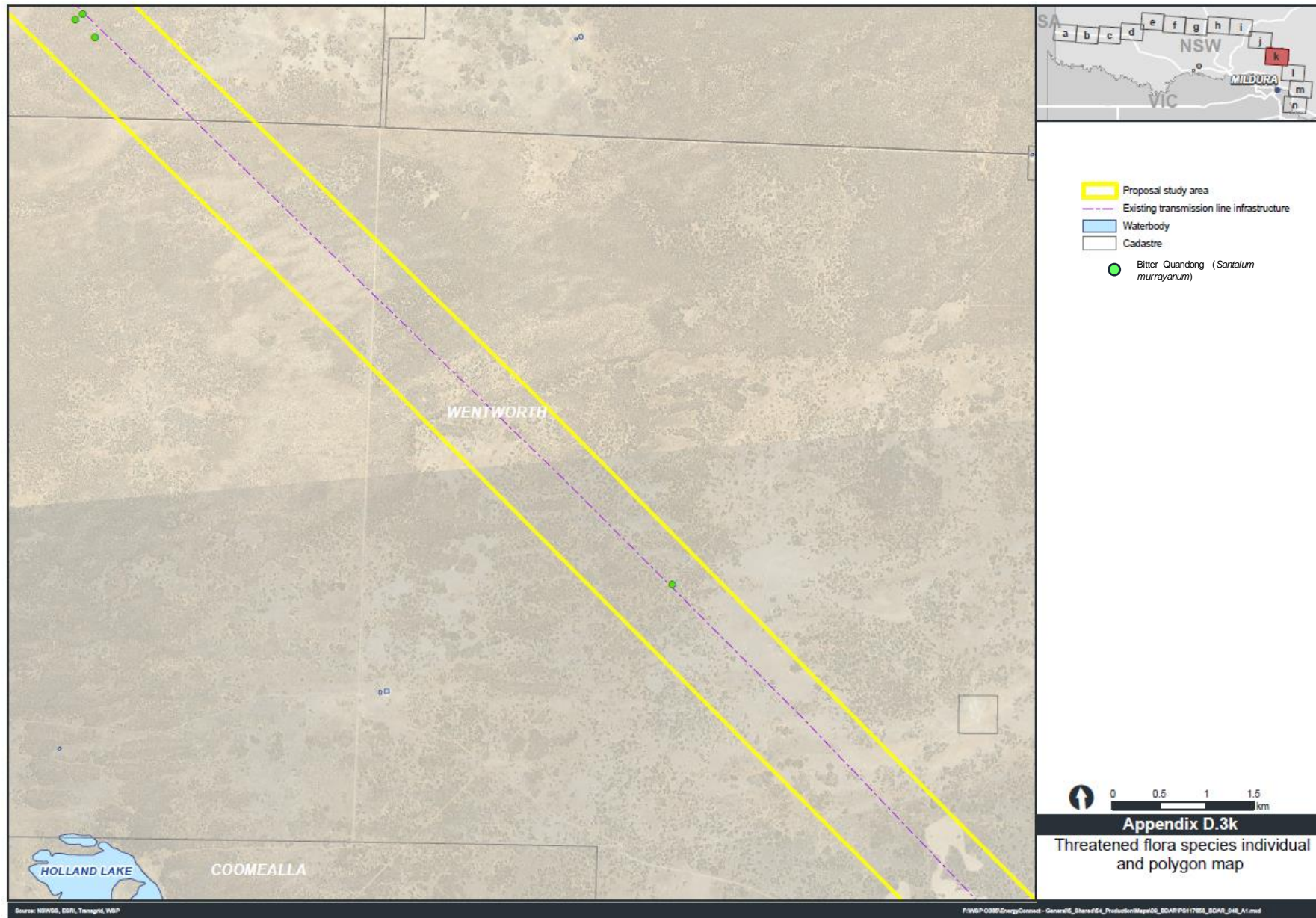
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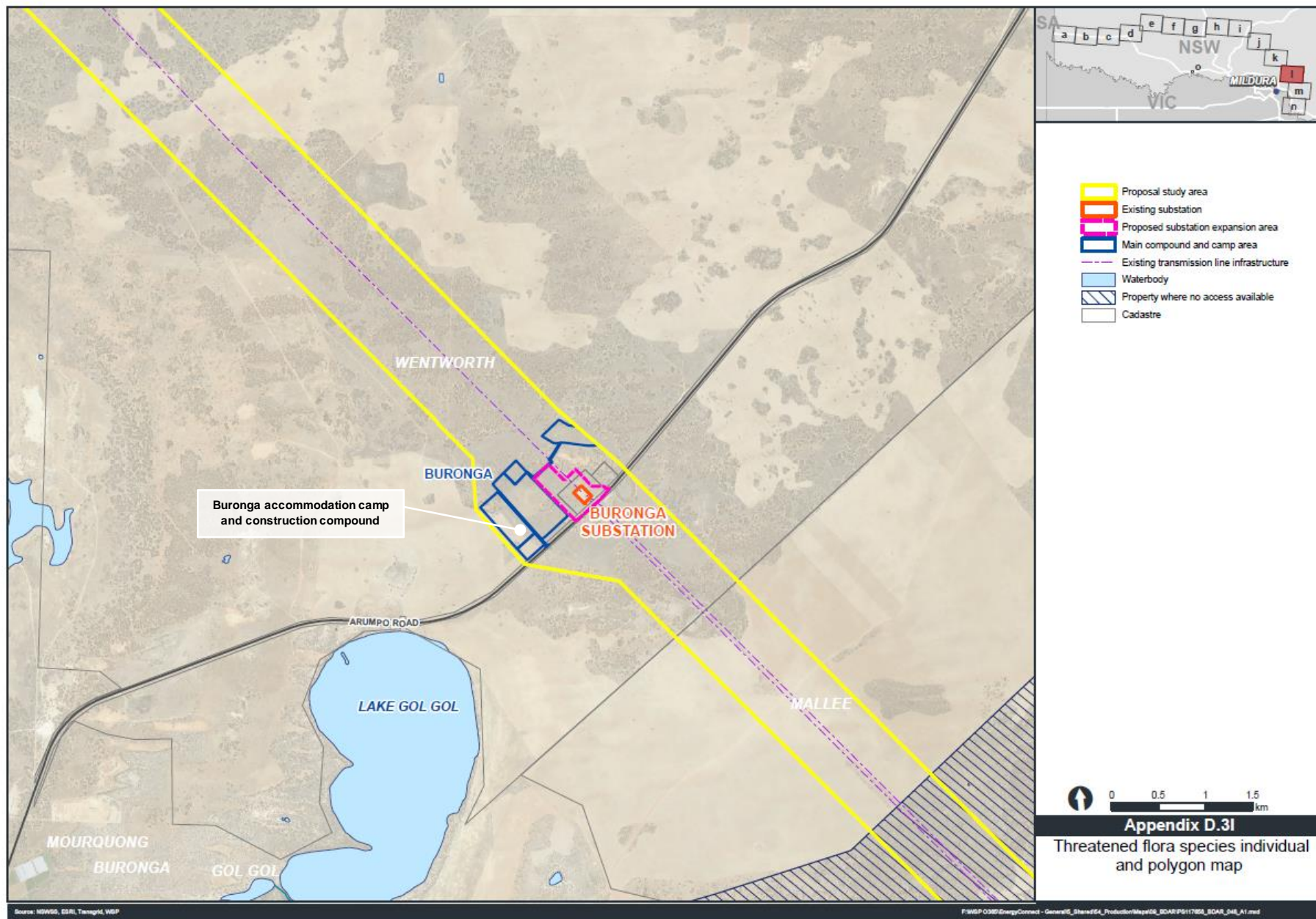
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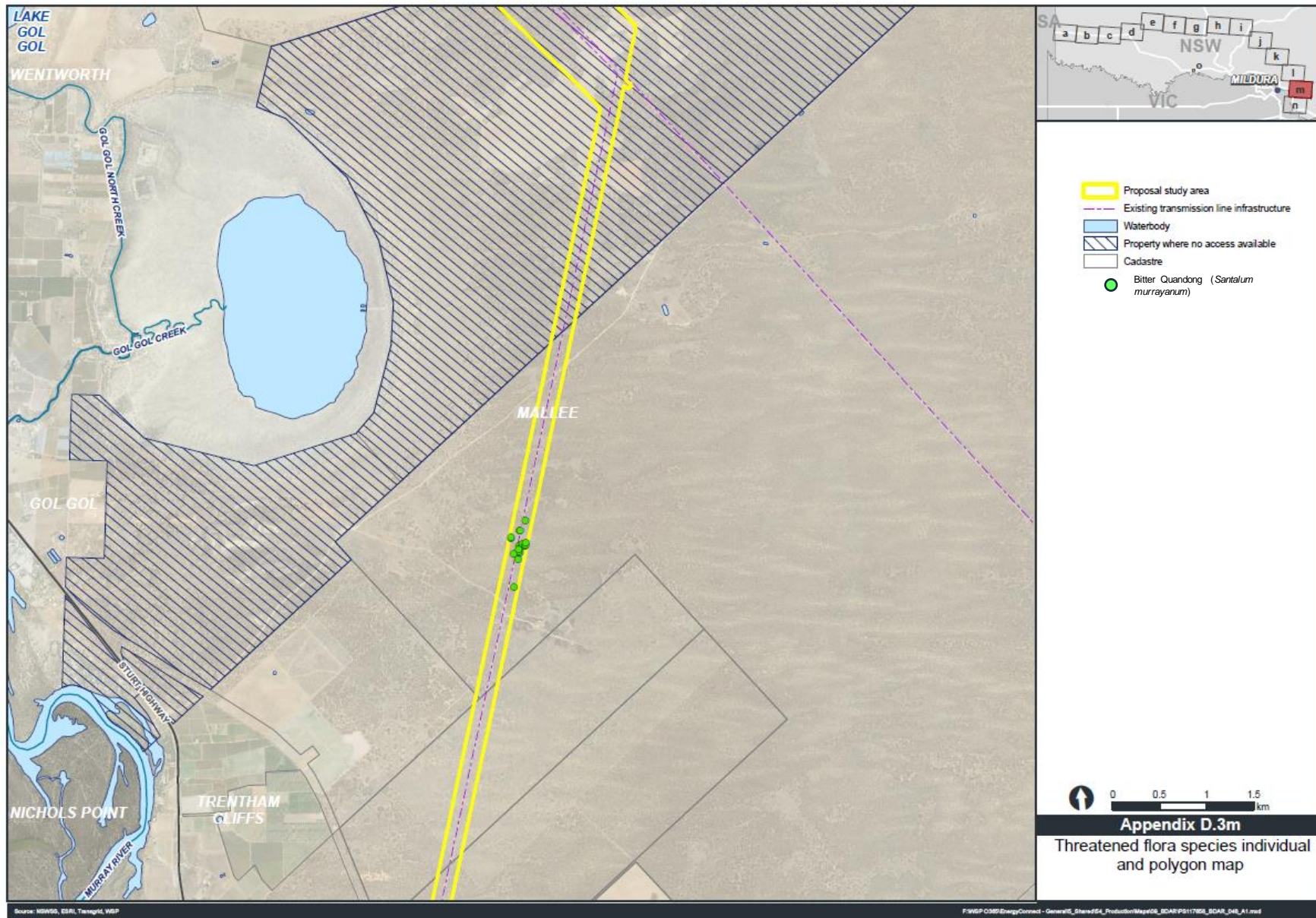
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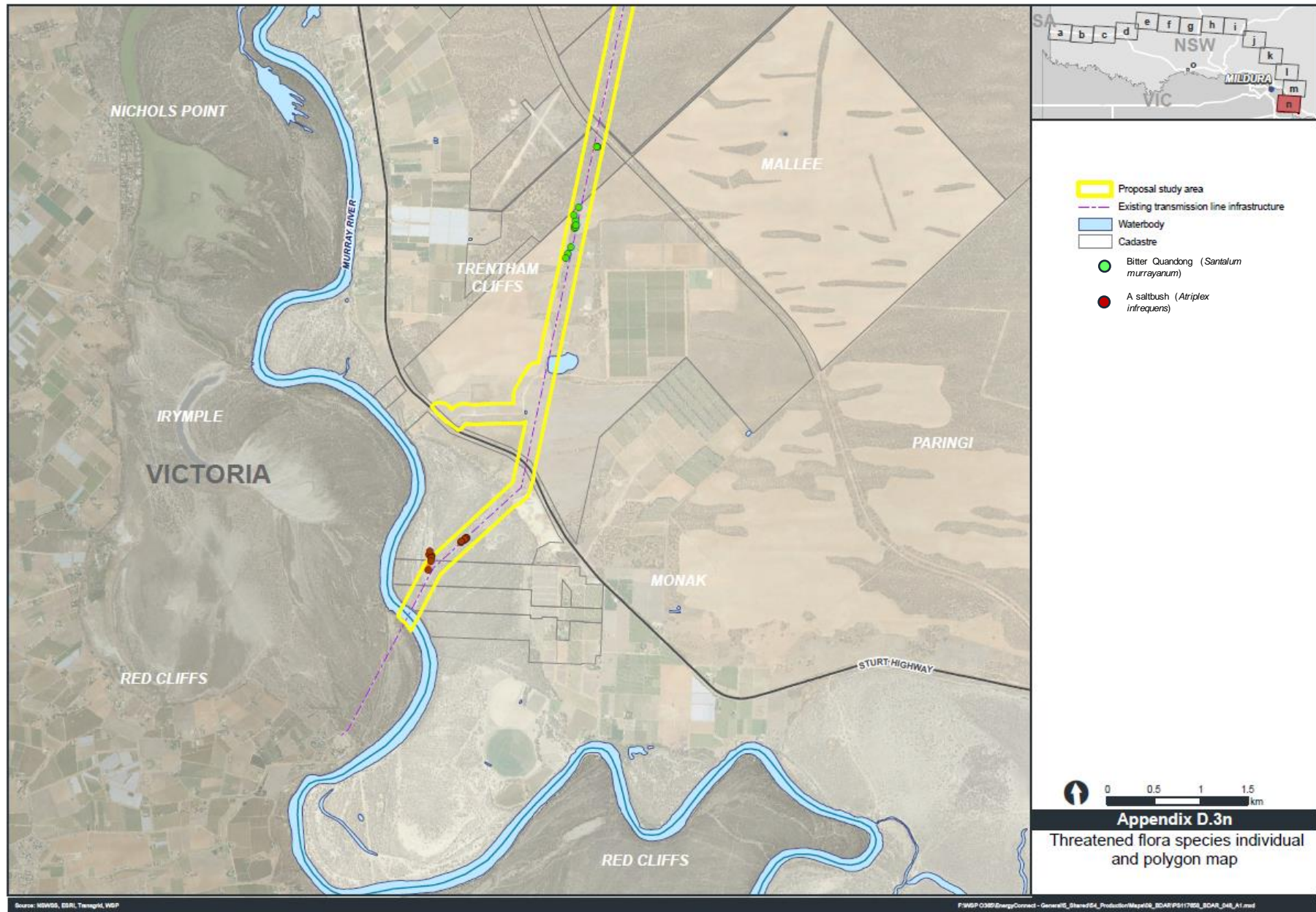
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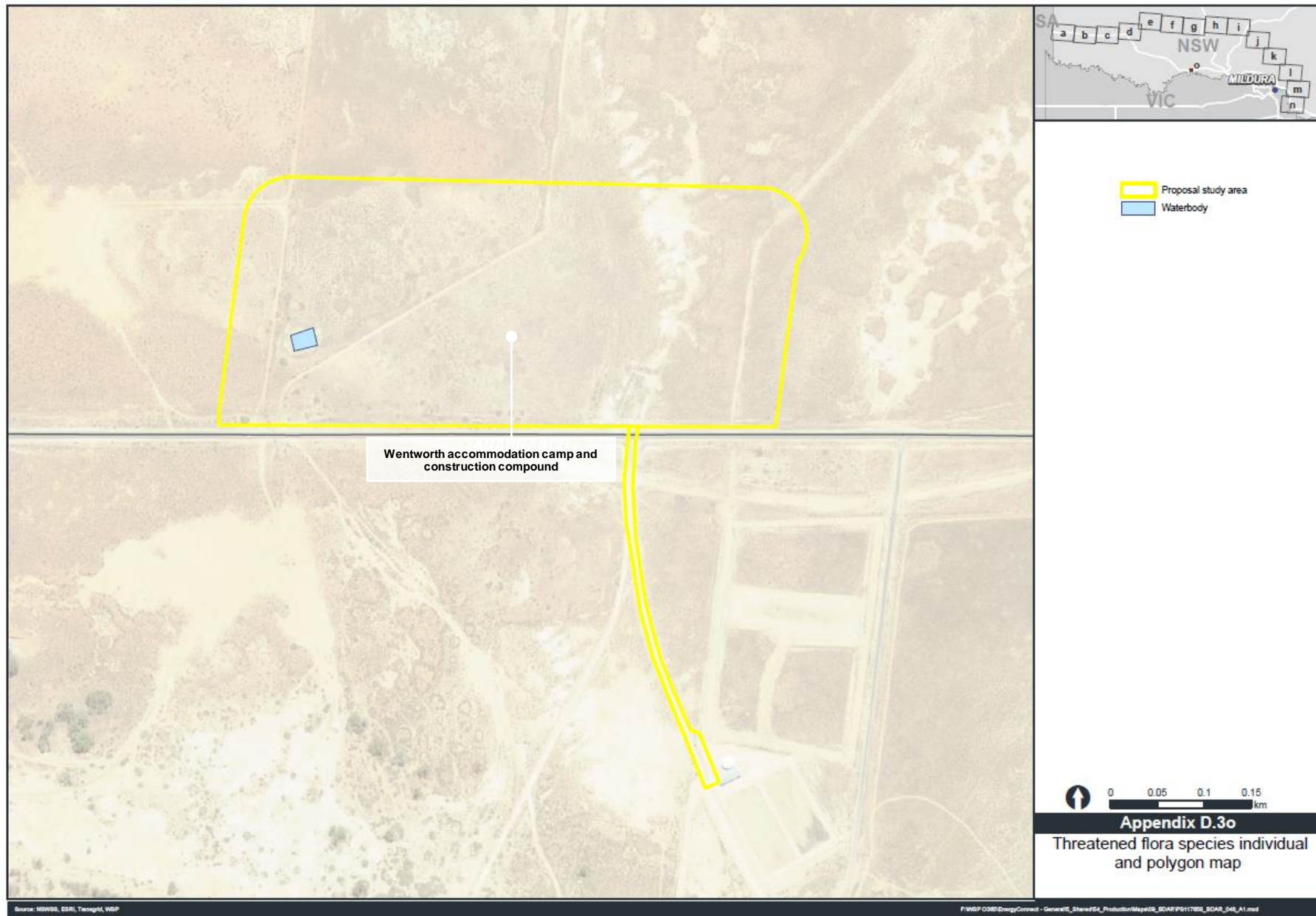
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Appendix F – Relevant legislation

Legislation/ Regulations	Aspect	Reference	Requirement	Applicability	Responsibility
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Proposed action	Section 28	A person must not take an action that has, will have or is likely to have a significant impact on any of the matters of national environmental significance without approval.	Yes, the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) aims to protect matters of national environmental significance (MNES) including national heritage places. Following referral of the project to Department of Environment, Agriculture and Water, the project was determined on 25 June 2020 to be a controlled action under section 75 of the EPBC Act, and therefore required further assessment and approval under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> . The referral number is EPBC 2020/8673. The EPBC Act controlling provisions for the proposed actions are listed threatened species and communities (section 18 and 18A). It should be noted that no MNES were identified in the EIS or Amendment Report for the project.	Transgrid
	Bilateral Agreement	Chapter 3 Clause 45	A bilateral agreement is a written agreement between the Commonwealth and a State with the intention of protecting the environment, promoting the conservation and ecologically sustainable use of natural resources, ensuring an efficient, timely and effective process for environmental assessment and approval of actions and to minimising duplication in the environmental assessment and approval process.	EnergyConnect (NSW - Western Section) will be assessed using the bilateral assessment process in accordance Amending Agreement No. 1.	Transgrid
<i>Biodiversity Conservation Act 2016</i> (BC Act)	Flora and Fauna	All	Legislation responsible for the conservation of biodiversity in NSW through the protection of threatened flora and fauna species, populations and Endangered Ecological Communities (EECs). The <i>Biodiversity Conservation Act 2016</i> , together with the <i>Biodiversity Conservation Regulation 2017</i> , established the Biodiversity Offsets Scheme which is outlined below.	The biodiversity impacts of the project have been assessed in accordance with the BC Act, which includes the Biodiversity Assessment Method (BAM) and documented in a Biodiversity Development Assessment Report (BDAR). A Biodiversity Management Plan has been prepared and will be implemented for the project to manage the conservation and protection of threatened flora and fauna.	Transgrid
		Part 6 Division 1 Clause 6.2	This Act, and the <i>Biodiversity Conservation Regulation 2017</i> , outlines the framework for addressing impacts on biodiversity from development and clearing. Biodiversity Offsets Scheme is a framework to avoid, minimise and offset impacts on biodiversity	As part of the assessment under the BC Act, the biodiversity offset credits has been estimated for the project and are outlined in the BDAR. Biodiversity Offset Credits is applicable for clearing on the project. Transgrid as the proponent will retire the	Transgrid

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Legislation/ Regulations	Aspect	Reference	Requirement	Applicability	Responsibility
			from development and clearing, and to ensure land that is used to offset impacts is secured in-perpetuity.	full biodiversity offset credit liability of the development.	
<i>Fisheries Management Act 1994</i>	Taking or possessing fish or marine vegetation	Section 37	Permit to take and possess fish or marine vegetation	A section 37 permit is required for any activity that involves taking or possessing fish or marine vegetation that would otherwise be unlawful under the <i>Fisheries Management Act 1994</i> including any collecting activities. There is currently no intention to take and possess fish or marine vegetation, however in the event that this is required, a permit would be developed.	Transgrid / SecureEnergy
	Mangroves, seagrasses and marine vegetation	Section 205	Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.	As the project has been declared as Critical State significant infrastructure, in accordance with s.5.23 of EP&A Act, section 205 of the <i>Fisheries Management Act 1994</i> does not apply.	Not applicable
	Fish passage	Section 219	Do not block fish passage without a permit	As the project has been declared as critical State significant infrastructure, in accordance with s.5.23 of EP&A Act, section 219 of the <i>Fisheries Management Act 1994</i> does not apply.	Not applicable
<i>Biosecurity Act 2015</i>	Weeds and Pest Management	Section 22	Under Part 3 of the <i>Biosecurity Act 2015</i> , landowners or land managers have a general biosecurity duty to prevent, eliminate or minimise the biosecurity risk posed or likely to be posed by priority weeds. A biosecurity risk exists where priority weeds have the potential to negatively impact on agriculture, industry, the liveability of our city, human health or the environment. Invasive weeds are known as 'Biosecurity Matter' or 'Priority Weeds'.	Biosecurity matters will be discussed with the affected landholders and addressed in project management plans for each property.	Transgrid / SecureEnergy
<i>Local Land Services Act 2013</i>	Clearing of native vegetation in regulated rural areas	Part 5A Division 3 Clause 60N and Clause 60O	Clause 60N details the offence to clear native vegetation in a regulated rural area. Clause 60O details the planning approval and authorisation for clearing native vegetation in a regulated rural area.	Yes, as detailed 60O(b) of the Act, approval and authorisation for clearing native vegetation in a regulated rural area is subject to approval of the project under Part 5 of the EP&A Act. The Infrastructure Approval will satisfy this compliance requirement.	Transgrid