REHABILITATION MANAGEMENT PLAN

Maragle 330kV Switching Station and 330kV Transmission Line Connections

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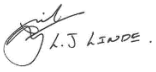
Revision: **0.06**

Plan Approval

Rev.	Approval	Name	Position	Organisation	Signature	Date
0.06	Approved By	Louis Linde	Operations Director	UGL		6/06/2025
0.06	Endorsed By	Andrew Buttigieg	Senior PM (Delivery)	Transgrid		10/06/2025

Document Revision History

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
0.01	09/11/2022	James Gullison	Josh Smart	Trevor Noble	Initial issue for review
0.02	04/05/2023	Alyce Gill	Olivia Merrick	Trevor Noble	Address Transgrid and stakeholder comments
0.03	08/05/2024	Sarah Steel	Brendan Toohey	Tim McCarthy	Updated by UGL for review
0.04	29/07/2024	Sarah Steel, Camille Palmer	Brendan Toohey	Louis Linde	Address Transgrid comments
0.05	17/01/2025	Sarah Steel, Camille Palmer	Brendan Toohey	Louis Linde	Address stakeholder comments
0.06	6/06/2025	Camille Palmer	Sarah Steel	Louis Linde	Address stakeholder comments

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ACRONYMS AND ABBREVIATIONS

Abbreviation	Explanation
ATZ	Access Track Zone
BC Act	*Biodiversity Conservation Act 2016*
BCD	Biodiversity Conservation and Science Directorate
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
Cth	Commonwealth
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
DPE	Department of Planning and Environment
DPHI	Department of Planning, Housing and Infrastructure
DPI	Department of Primary Industries
DPIE	Department of Planning, Industry and Environment
ECZ	Easement Clearing Zone
EIS	Environmental Impact Statement
EMS	Environmental Management System
EP&A	*Environmental Planning and Assessment Act 1979*
EPA	Environment Protection Authority
EPBC	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
ERMP	Excavated Rock Management Plan
ESCP	Erosion and Sediment Control Plans
EWMS	Environmental Work Method Statement
FCNSW	Forestry Corporation of NSW
FM Act	*Fisheries Management Act 1994*
GDE	Groundwater dependent ecosystems
ESCP	Erosion and Sediment Control Plan
Ha	Hectares
HCZ	Hand-clearing zone
HTZ	Hazard Tree Zone
KM	Kilometre
KNP	Kosciuszko National Park
kV	Kilovolts

Abbreviation	Explanation
LGA	Local Government Area
LTRS	Long-Term Road Strategy
m	Metres
MW	Megawatts
MWh	Megawatt hours
NEM	National Electricity Market
NPWS	National Parks and Wildlife Service
NSW	New South Wales
OVMP	Operational Vegetation Management Plan
PC	Principal Contractor (as defined above)
PCT	Plant Community Type
POM	Plan of Management
RDD	Regional Delivery Division of Conservation Programs, Heritage and Regulation
RMP	Rehabilitation Management Plan (this document)
SEA	Senior Environmental Advisor
SEP	Site Environmental Plan
SPA	Special Production Areas
SWMP	Soil and Water Management Plan
TARP	Trigger Action Response Plan
TEC	Threatened Ecological Community
TfNSW	Transport for NSW
TG	Transgrid
TSZ	Transmission Structure Zone
UGL	United Group Limited

DEFINITIONS

Term	Definition
Contractor or Principal Contractor	Stage 1 of the scope of works for design and construction the Contractor or Principal Contractor is UGL Pty Ltd Stage 2 of the scope of works for design and construction the Contractor or Principal Contractor is UGL/CPB Joint Venture. Any reference to the 'Contractor' relates to the activities of both appointed Contractors (UGL and UGL/CPB Joint Venture), but only as is relevant to the appointed stage of works.

1 INTRODUCTION

Snowy 2.0 is a pumped hydro-electric Project that will link the existing Tantangara and Talbingo reservoirs through a series of new underground tunnels and a hydro-electric power station. Most of the Project's 2.0 facilities will be built underground, with approximately 27 kilometres (km) of concrete-lined tunnels constructed to link the two reservoirs and a further 20 km of tunnels required to support the facility. Intake and outlet structures will be built at both Tantangara and Talbingo Reservoirs.

1.1 CONTEXT

To connect Snowy 2.0 to the National Energy Market (NEM), a new transmission connection is required. NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust (known as Transgrid and the Proponent) received development approval on 2 September 2022 to construct a switching station and overhead transmission lines ('the Project') to facilitate the connection of Snowy 2.0 to the existing electrical transmission network, approximately 27 km east of Tumbarumba, New South Wales (NSW).

Relevant to state development consent, a Staging Approval Request was submitted and approved by the Planning Secretary on 18 November 2022 in accordance with COA C3 of SSI-9717 for the delivery of relevant plans and strategies for the Project in two stages:

- Stage 1 – All activities associated with the construction and operation of infrastructure related to the 330kV grid connection; and
- Stage 2 – All activities associated with the construction and operation of infrastructure related to the 500kV component of the substation.

Transgrid (the Proponent) has engaged UGL Projects Division (UGL) as the Principal Contractor (PC) to construct Stage 1 of the works and UGL / CPB Contractors Joint Venture (HLWJV) as the PC to construct Stage 2 of the Works.

The eastern extent of the Project is defined by the location of the Snowy 2.0 cable yard at Lobs Hole in Kosciuszko National Park (KNP). The Project then spans west across Talbingo Reservoir to Transgrid's existing Transmission Line 64, 330 kilovolt overhead transmission line between Upper Tumut and Lower Tumut switching stations) in Bago State Forest. Line 64 is the point of connection of the Project to the NEM.

1.2 SCOPE

The total length of the overhead transmission line connection is approximately 9 km, with the Project having a disturbance area of approximately 119.55 hectares (ha), which comprises of 118.35 ha of native vegetation and remaining 1.20 ha of cleared land.

1.3 PURPOSE

This plan has been prepared to address the requirements of:

- Infrastructure Approval (SSI 9717) (Approval) issued on 2 September 2022;
- EPBC Act Approval 2018/8363, approved by DCCEEW on 21 October 2022;
- EPL 21753, which allows for extractive activities of between 100,000 – 500,000T per annum.

The purpose of the Rehabilitation Management Plan (RMP) is to describe how rehabilitation will be managed for the substation, access tracks, transmission structures and transmission line easement primarily during the construction phase of the Project. The RMP will be updated to include rehabilitation measures and objectives for rehabilitation during the operational and decommissioning phases of the Project, prior to the commencement of these phases. Existing access tracks will also be maintained and upgraded to a serviceable condition.

1.4 PROJECT TEAM MEMBERS

In accordance with Condition B48 of CSSI 9717, this RMP has been prepared by James Gullison (NGH Senior Ecologist) and Josh Smart (NGH Senior Ecologist). The RMP has been reviewed by Olivia Merrick (NGH Principal Consultant). Olivia holds a Bachelor of Science in Conservation Biology (Restoration Ecology) and a Bachelor of Environmental Science with Honours. She has over 25 years of environmental management experience that includes the development and implementation of large scale and extensive native vegetation reinstatement programs and rehabilitation planning Projects.

CVs for these qualified and experienced authors will be provided to Department of Planning, Housing and Infrastructure (DPHI) with submission of this plan. If CVs have not been provided, please contact:

- Transgrid Acting Senior Project Manager - Mark Perry (Mark.Perry@transgrid.com.au)
- UGL Operations Director – Louis Linde (louis.linde@ugllimited.com)

Review of this RMP has been undertaken by the Project UGL Environmental Team and supporting consultants, including;

- Camille Palmer – Senior Environmental Advisor.
- Sarah Steel – Principal Consultant, Treestone Environmental. Certified Professional in Erosion and Sediment Control.
- Donovan Rynne – GIS Specialist.

A summary of consultation is provided in Section 1.5.

1.5 CONSULTATION

In accordance with Condition B48, this RMP was prepared in consultation with National Parks and Wildlife Service (NPWS), Forestry Corporation of NSW (FCNSW), the Biodiversity Conservation and Science Directorate (BCD), the Environmental Protection Authority (EPA), NSW Department of Primary Industries (DPI) and Transport for New South Wales (TfNSW). Consultation with these bodies is discussed below.

1.5.1 NATIONAL PARKS AND WILDLIFE SERVICE

Date	Consultation
24/02/2022	Early consultation with NPWS. Discussion included managing Plant Community Types (PCTs) in the easement, as clearing and ongoing management will affect remaining groundcover.
08/02/2023	The Conditions of Approval (B48) stated that the RMP must be prepared within 12 months of commencing construction. However, NPWS indicated that the RMP must be prepared prior to clearing. It was agreed that Transgrid and UGL should meet with NPWS to discuss the minimum requirements to be addressed within the RMP.

Date	Consultation
30/09/2024	Rev0.04 of RMP provided to NPWS for comment. Comments received between 25 October to 11 November 2024 and addressed in Rev0.05 of RMP.
17/01/2025	Rev 0.05 of RMP provided to NPWS for comment. Minor comments received and incorporated into Rev 0.06 of RMP.

1.5.2 FORESTRY CORPORATION OF NSW

Date	Consultation
30/09/2024	Rev0.04 of RMP provided to Forestry Corporation of NSW (FCNSW) for comment. Response received 23 December 2024 advising FCNSW does not have any further advice on this management plan outside of those already submitted by other agencies.
17/01/2025	Rev 0.05 of RMP provided to FCNSW for comment. No feedback received as of 2 June 2025.

1.5.3 REGIONAL DELIVERY DIVISION (RDD) OF CONSERVATION PROGRAMS, HERITAGE AND REGULATION (PREVIOUSLY BIODIVERSITY CONSERVATION AND SCIENCE DIRECTORATE)

Date	Consultation
08/02/2023	BCD provided an email detailing NPWS feedback on the Snowy 2.0 Rehabilitation Plan for Transgrids consideration.
30/08/2023	BCS provided email feedback to Transgrid and NGH on 30/8/2023 about the Biodiversity Management Plan (BMP) Rev 0.06, and specifically BMP Appendix E ‘Seed Collection Method’. This feedback included items relevant to the RMP and was incorporated into Rev0.04 of the RMP.
30/09/2024	Rev0.04 of RMP provided to BCS for comment. Comments received between on 4 November 2024 and addressed in Rev0.05 of RMP.
4/02/2025	Comments received on Rev0.05 on 4 February 2025 relating to inclusion of relevant BDAR mitigation measures and mapping updated. Addressed in Rev0.06 of RMP.

1.5.4 NSW DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT (DPIE, PREVIOUSLY DEPARTMENT OF PRIMARY INDUSTRIES)

Date	Consultation
30/09/2024	Rev0.04 of RMP provided to NSW DPI for comment. No feedback received as of 17 January 2025.
2/04/2025	Request for Additional Information received on Rev0.05 on 2 April 2025 and addressed in Rev0.06.

1.5.5 TRANSPORT FOR NSW (TFNSW)

Date	Consultation
30/09/2024	Rev0.04 of RMP provided to TfNSW for comment. No feedback received as of 17 January 2025.
17/01/2025	Rev 0.05 of RMP provided to TfNSW for comment. No feedback received as of 2 June 2025.

A copy of this plan will be provided to the relevant agencies listed above, along with DPIE for review and comment. Any feedback will be appropriately considered (with feedback from NPWS) and, if necessary, included in future revisions of this plan.

1.6 INTEGRATION WITH OTHER PLANS

As required by Schedule 2 Condition B48 of CSSI-9717, the RMP has been developed to be consistent with other management plans which have been developed separately for the Project. These management plans include but are not limited to the below:

- Soil and Water Management Plan (SWMP).
- Biodiversity Management Plan (BMP).
- Bushfire Response Plan (BRP).

  Long-Term Road Strategy (will be prepared within 2 years of the commencement of construction, unless the Planning Secretary agrees otherwise in accordance with SSI-9717 Condition B33).
- Visual Impact Management Plan (VIMP) (rehabilitation activities will be consistent with commitments made in the VIMP regarding retaining vegetation parallel to Elliot way to screen views of the switchyard and substation).

1.7 DEVELOPMENT APPROVALS, LEASES AND LICENCES

1.7.1 DEVELOPMENT APPROVAL SSI 9717

Snowy 2.0 been declared Critical State Significant Infrastructure (CSSI) under the *State Environmental Planning Policy (State and Regional Development) 2011* as part of the CSSI declaration for the Snowy 2.0 and Transmission Project in Clause 9 of Schedule 5.

Infrastructure Approval CSSI 9717 was granted by the Minister for Planning and Public Spaces on 2 September 2022. Under Section 5.19 of the *NSW Environmental Planning and Assessment Act 1979*, SSI 9717 is subject to consent conditions. The Conditions of Approval (CoA) are listed in Table 1-1 below. A cross reference is also included to indicate where the requirement is addressed in this Plan or other Project management documents.

1.7.2 EPBC ACT APPROVAL 2018/8363

In addition to States approval, a referral (EPBC 2018/8363) was prepared and lodged with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Snowy 2.0 Transmission Connection Project is a “controlled action” under the EPBC Act and was assessed under Part 5, Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979*. The referral was approved by DCCEEW on 21 October 2022. Conditions relevant to the EPBC approval document were issued; however, the RMP is not specifically referenced under the EPBC approval.

Table 1-1 Project Conditions of Approval relevant to the RMP

Reference number	Requirement	Document Reference
Conditions of Approval		
B47	The Proponent must: (a) rehabilitate all parts of the site within the Kosciuszko National Park to comply with the rehabilitation objectives in Table 2 and the ecological rehabilitation objectives in Table 3; (b) rehabilitate the Bago State Forest site to comply with the rehabilitation objectives in Table 2 (included below); (c) complete the rehabilitation of the site, including the removal of all temporary infrastructure, creation of landforms, narrowing of roads within 3 years of completing construction; (d) complete the ecological rehabilitation of the site, apart from areas used for operations, within 20 years of completing construction; (e) complete the final rehabilitation of the site, including the removal of all remaining infrastructure within 3 years of decommissioning the development; and (f) complete the ecological rehabilitation of the areas used for operations within 20 years of decommissioning the development.	Section 4.1 Section 4.1 Section 5, Section 5.3 and Table 5-6

Table 2 Rehabilitation objectives

Feature	Objective
Land use	Return the site to its previous use in consultation with NPWS and FCNSW
Land	Safe, stable and non-polluting; Progressively rehabilitate the site as soon as possible following disturbance; Employ interim rehabilitation strategies to areas that cannot be permanently rehabilitated yet to minimise dust generation, erosion, uncontrolled discharges of sediment, and the spread of weeds to other parts of Kosciuszko National Park.
Infrastructure	Decommission and remove infrastructure, unless NPWS and/or FCNSW agrees otherwise.
Community	Ensure public safety

Refer to Table 4-2 for ecological restoration objectives.

B48	Within 12 months following commencement of construction, the Proponent must prepare a Rehabilitation Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person in consultation with the NPWS, FCNSW, BCS, EPA, NSW DPI and TfNSW; (b) be consistent with the Spoil Management Plan, Long-Term Road Strategy and Visual Mitigation Management Plan; (c) include a conceptual plan for the rehabilitation of the whole site;	This Plan Section 1.4 Section 5.1.4 Table 4-3

Reference number	Requirement	Document Reference
	(d) include the detailed program for the rehabilitation of roads in the Kosciuszko National Park in accordance with the approved Long-Term Road Strategy; (e) include a topsoil balance for the site, which includes a strategy for: i) maximising the reuse of topsoil on site (provided it is suitable for reuse); ii) using other suitable growth media; and iii) importing additional topsoil to the site (if necessary); (f) include a native seed collection and propagation program in accordance with Florabank (www.florabank.org.au) and/or NPWS guidelines for the site, which includes a strategy for: i) maximising the collection and use of native seed resources from the site prior to disturbance; ii) collecting seed from the surrounding area, including other parts of the Kosciuszko National Park (with the approval of the NPWS); and iii) prioritising the use of local sources of seed for the ecological rehabilitation of the site; (g) include a detailed ecological rehabilitation management plan for the development that: i) provides an overarching description of the proposed ecological rehabilitation works, identifying the: • plant community types to be established; and • area of land to be established for each plant community type; ii) provides maps showing the proposed location of each plant community type; iii) describes the detailed measures that would be implemented to comply with the ecological rehabilitation objectives in Table 2-2; (h) identify the key risks to the successful completion of the rehabilitation and describe the contingency measures that would be implemented to address these risks; i) include detailed completion criteria and performance indicators for the rehabilitation of the development (having regard) to the criteria and indicators in Table 2-2, including criteria for triggering remedial action (if necessary); and (j) include a program to monitor and publicly report on: i) the rehabilitation of the site; ii) the implementation of the each of the detailed plans, including the effectiveness of the proposed mitigation and contingency measures; and iii) progress against the detailed completion criteria and performance indicators. Following the Planning Secretary's approval, the Proponent must implement the Rehabilitation Management Plan.	Long-term Road Strategy Section 5 Appendix E of the BMP This Plan Section 5.1.5 APPENDIX A: Project Maps Table 4-3 Section 3 Section 6 Section 6

1.7.3 BIODIVERSITY MANAGEMENT MEASURES

Safeguards and management measures have been identified and included in the Snowy 2.0 Transmission Connection Project Biodiversity Management Plan, Section 2.3, Table 2-2 (UGL, 2024b).

1.7.4 GUIDELINES, POLICIES, REGULATIONS & PLANS

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

- Snowy 2.0 Main Works Project, Rehabilitation Plan (SLR, 2022).
- Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park (DECC, 2007).
- Kosciuszko National Park Plan of Management (NPWS, 2006).
- The Australian Alps Rehabilitation Manual – A guide to ecological rehabilitation in the Australian Alps ((Good, 2006).
- Managing Urban Stormwater – Soils and Construction, Volume 1, 4th edition (Landcom, 2004).
- Managing Urban Stormwater – Soils and Construction, Volume 2A Installation of Services (DECC, 2008a).
- Managing Urban Stormwater – Soils and Construction, Volume 2C Unsealed Roads (DECC, 2008b).
- Form and way: Rehabilitation management plan for large mines (NSW Resource Regulator, 2024).
- Guideline: Form and way for rehabilitation objectives statement, rehabilitation completion criteria statement and final landform and rehabilitation plan for large mines (NSW Resource Regulator, 2024).
- Guideline: Rehabilitation risk assessment (NSW Resource Regulator, 2021).
- Guideline: Rehabilitation objectives and rehabilitation completion criteria (NSW Resource Regulator, 2023).
- *Department of Primary Industries* - New South Wales Weed Control Handbook – A Guide to weed control in non-crop, aquatic and Bushland situations (DPI, 2018).
- *Department of Primary Industries* - Noxious and environmental weed control handbook – A guide to weed control in non-crop, aquatic and bushland situations (DPI, 2018).
- Regional Pest Management Strategy 2012 – 2017 (OEH, 2012).Green Book Rehabilitation Field Guide (MacPhee, 2013).
- The Gold Book – How to Select, Plan and Manage Alpine and Sub-Alpine Plants for Rehabilitation (MacPhee, 2021).

1.7.5 KOSCIUSZKO NATIONAL PARK PLAN OF MANAGEMENT

The Kosciuszko National Park (KNP) Plan of Management (PoM) provides a framework to guide the long-term management of KNP. The Snowy Scheme is mentioned within the Park Zoning provisions, which are intended to:

- Protect the natural, cultural and recreational values of the park.
- Optimise opportunities for a wide range of recreational activities and visitor experiences.

- Minimise conflict between visitors, recreational users, management operations and other authorised users of KNP.

The Project has sought to meet the general principles of the KNP PoM, through the reduction of visual and biodiversity impacts. At the time of writing the EIS, the Project was not compliant with the requirement for transmission lines to be located underground. An amendment to the KNP PoM has been agreed upon, in consultation with NPWS.

1.7.6 ENVIRONMENT PROTECTION LICENCE (EPL) 21753

Snowy 2.0 is regulated by EPL 21753, issued under the Protection of the Environment Operations Act 1997 (POEO Act). EPL 21753 includes extractive activities as a scheduled activity with a limit of between >100,000 – 500,000T per annum (extracted or processed).

EPL 21753 requirements include:

- Monthly environmental water quality monitoring (refer to Appendix G of the Soil and Water Management Plan (SWMP)).
- Spoil characterisation and treatment requirements (refer to Appendix A of the SWMP)
- Appropriate maintenance of plant and equipment (refer to Construction Environmental Management Plan (CEMP)).
- Activities are conducted in a manner that reduces dust generation (refer to SWMP (UGL, 2024c).
- Appropriate waste management practices are followed (refer to CEMP (UGL,2024a).
- Compliance with Section 120 of the Protection of the Environment Operations Act 1997 (refer to CEMP (UGL,2024a).

EPL 21753 is reviewed every five years.

1.8 EXISTING LAND USE AND ENVIRONMENT

The Project is located within the Snowy Valleys Local Government Area (LGA, refer to Figure 1-1).

Land within the Project site is owned by the NSW Government and managed by NPWS and FCNSW (refer to Figure 1-2). The existing landscape character of the Project area is predominantly a mix of undisturbed/managed forestry land that traverses mountainous and hilly terrain, and forested valleys (refer to Figure 1-3).

This landscape contains limited human disturbance, particularly at the eastern extent; however, existing transmission line easements, minor access tracks and infrastructure associated with the Talbingo Reservoir are located within and surrounding the Project area, particularly at the Bago State Forest extent. An existing Mineral Exploration Title (EL 9449) intersects the western portion of the Project (refer to Figure 1-3).

Sensitive areas maps, including vegetation mapping, exclusion zones, and heritage items located within and around the Project, are provided in APPENDIX A: Project Maps.

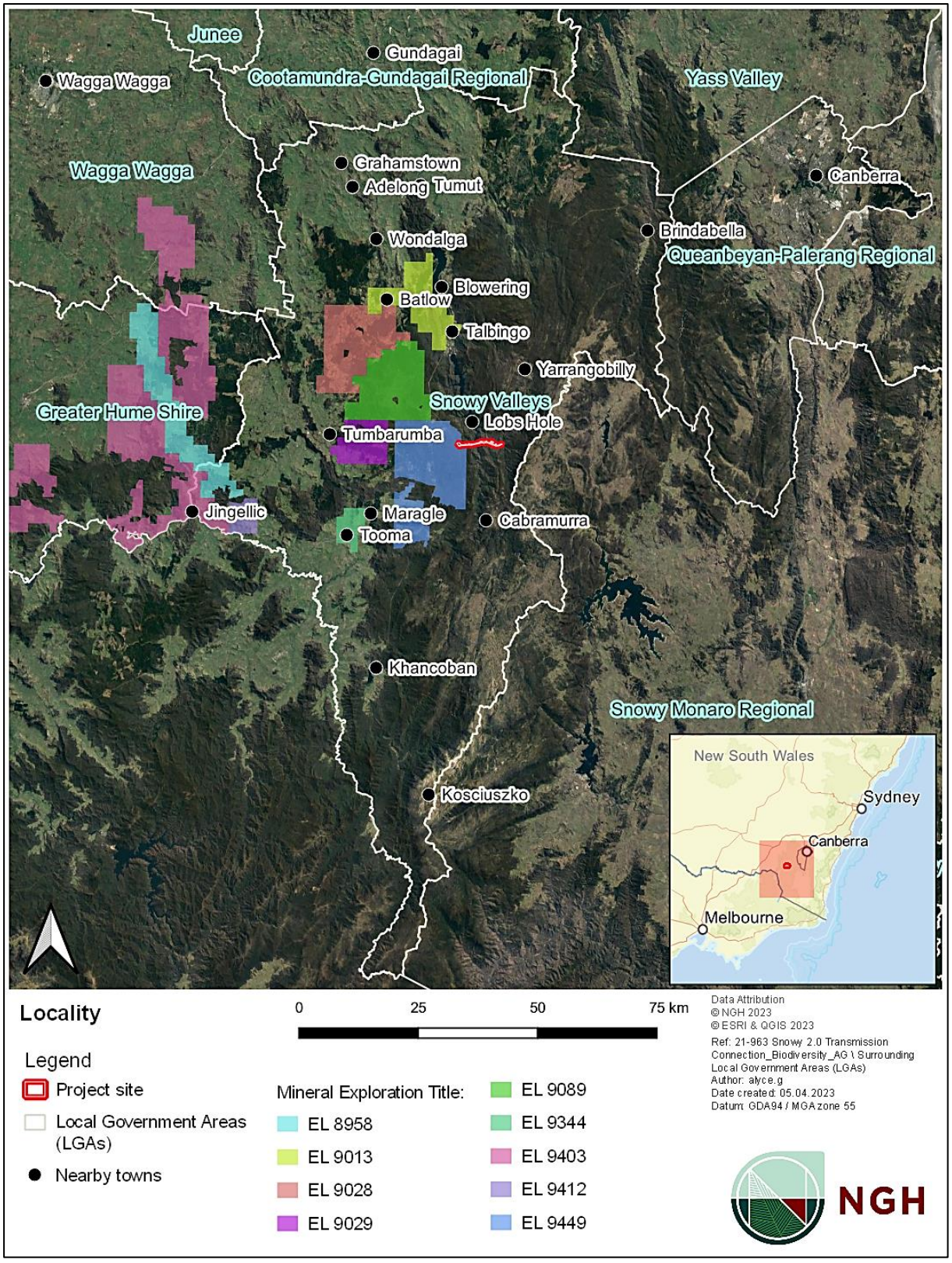


Figure 1-1 Locality Map (Local Government Areas and Mineral Exploration Areas)

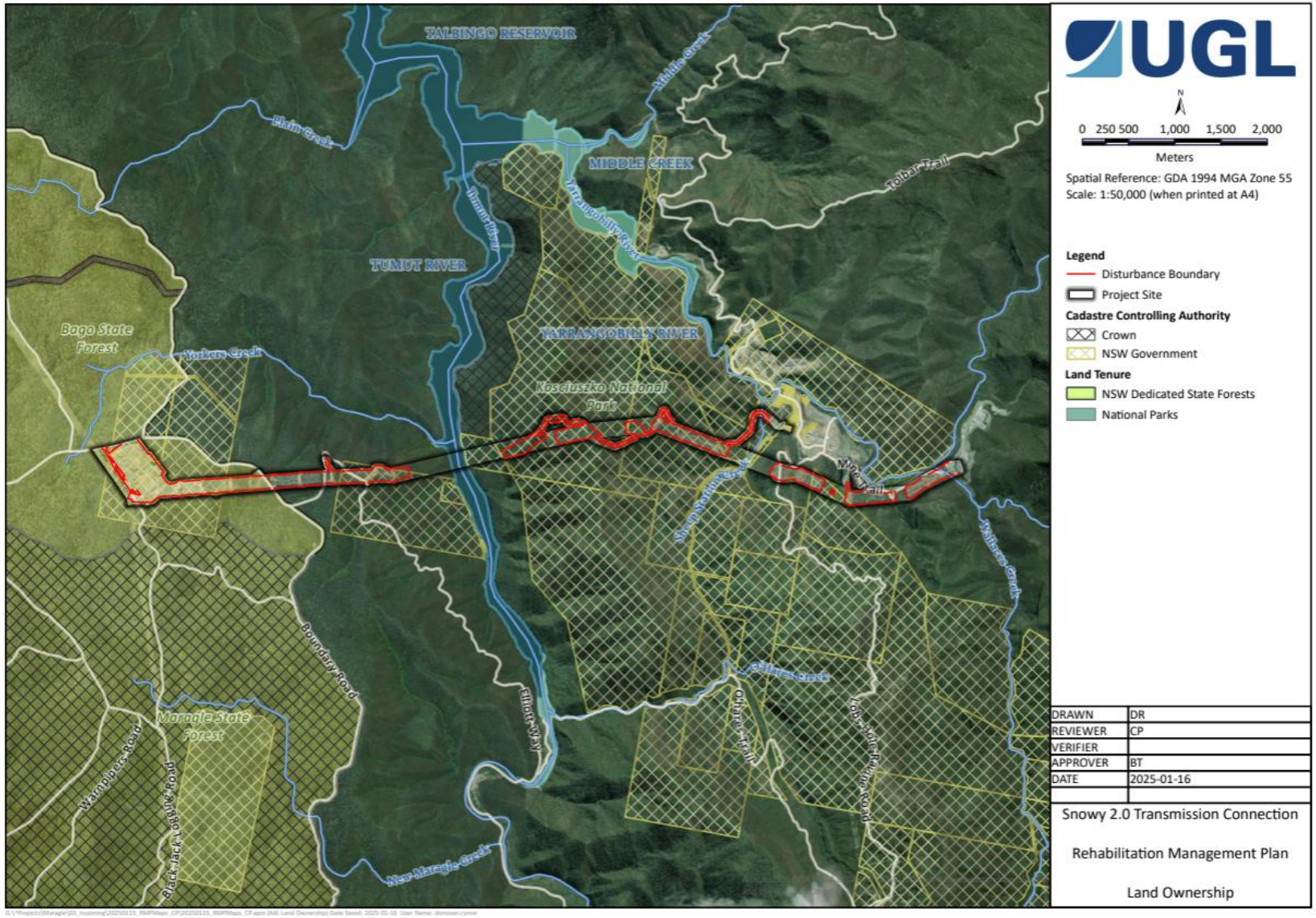


Figure 1-2 Land Ownership Map

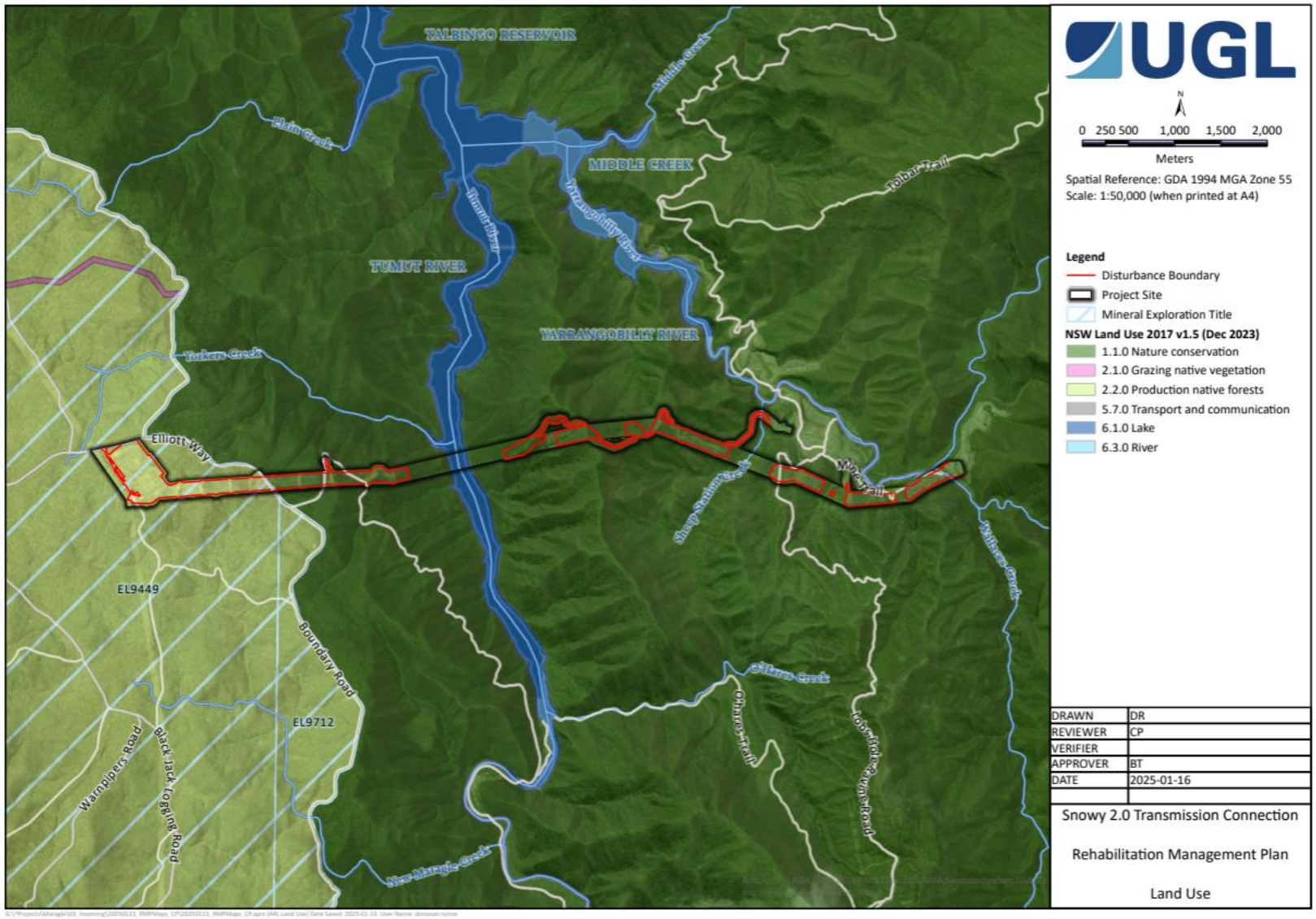


Figure 1-3 Land Use Map

1.8.1 SOILS AND GEOLOGY

The NSW Department of Environment and Climate Change (2001) mapping describes the following landscape features from east to west of the Project location (Jacobs, 2022):

- Pinbeyan – Ravine Ranges (approximately 48 per cent of the Project) - Structurally controlled ranges with prominent bluffs to 120 m and plateau top on a synclinal fold in Upper Devonian rhyolite, andesitic basalt, tuff, sandstone, shale, slate, limestone, conglomerate and siltstone. Elevation 500 to 1,400 m, local relief 700 m. Extensive rock outcrop. Steep debris slope below cliffs with rubbly brown sandy loam grading to red-brown texture-contrast soils on lower slopes.
- Cootamundra – Tumut Serpentinite and Ultramafics (approximately five per cent of the Project). Narrow ridges of extended linear outcrops of Devonian schistose serpentine, amphibolite and associated ultramafic rocks and sediments, general elevation 400 to 700 m, local relief 120 m. Dark structured clay loam and clay with unusual mineral content.
- Cooma Granite Ranges (approximately 43 per cent of the Project) – Rounded hills, ranges and plateau on Silurian gneissic granite with well-defined rectangular drainage pattern controlled by jointing. General elevation 700 to 1400 m. Red and yellow gritty texture-contrast soils merging to gradational profiles at about 1,000 m.

The Project area crosses between several areas of geological significance. Karst, caves, crevices and cliffs are generally considered significant geological features. Geology encountered along the Project area from west to east are described as follows (Jacobs, 2022):

- Greenhills Granodiorite and Rough Creek Tonalite (substation, substation access roads and 15 structure sites.
- Gooandra Volcanics (basalt) (Access track and five structure sites).
- Tumut Pond Group (sandstone) (two access tracks, helipad and four structure sites).
- Ravine Beds (shale) (Access track and seven structure sites).
- Byron Range Group (Limestone) (Access track and 11 transmission structure sites).

The soils of the Project area are variable primarily include red and brown earths/structured red earths with sandy loam. The western portion of the Project area is subject to localised sheet, gully and wind erosion following vegetation disturbance (Jacobs, 2022). Due to the elevation of the Project area, it is unlikely that acid forming soils will be encountered.

No areas of geological significance have been identified to be directly impacted by the Project and no areas of land declared as an area of outstanding biodiversity value by the Minister for Energy and Environment in accordance with Section 3.1 of the *Biodiversity Conservation Act 2016* (BC Act) will be affected (Jacobs, 2022).

Up to 184,388 cubic metres (m3) of surplus soil will be generated during construction of the Maragle switching yard, access tracks, tower pads and benches. The spoil volume and associated environmental risks are included in Section 3.3 of Appendix A Spoil Management Plan (SMP) of the Soil and Water Management Plan (SWMP).

1.8.2 HYDROLOGY

The Project is located at the headwaters of the Murrumbidgee catchment within the Snowy Mountains region (Jacobs, 2022) and covers an area of approximately 84,000 km^2. The closest dams to the Project area are Talbingo Dam with a capacity of 921,400 ML and Blowering Dam with a capacity of 1,628,000 ML (NSW DPIE, 2025) The catchment is characterised by 5,100 square kilometres of national parks and reserves including KNP (Jacobs, 2022).

The Tumut Reservoir crosses beneath the Project, travelling for 182 km before entering the lower Murray Darling Basin. The waterway is the largest tributary of the Murrumbidgee River and contains several water storage dams along its length, including Talbingo Reservoir and Blowering Dam (Jacobs, 2022). Talbingo Reservoir is a major rock fill dam forming part of the Snowy Scheme and is located approximately 2.5 km downstream of the Project area at the confluence of the Tumut River and Yarrangobilly River (Jacobs, 2022). Blowering Dam is an additional 22 km downstream and is one of the largest dams in NSW (DPI Water, 2017, as cited by Jacobs, 2022).

In addition to Tumut River, the Project area also contains five waterways or streams including Wallaces Creek, Yarrangobilly River, Sheep Station Creek, Cave Gully, and Lick Hole Gully. Thirteen unnamed gullies/drainage lines also occur within the Project area, these gullies are ephemeral and have minor to no channel definition.

1.8.3 GROUNDWATER DEPENDENT ECOSYSTEMS

As cited by (Jacobs, 2022) The Project area and the broader study area contains some areas of moderate to high potential terrestrial groundwater dependent ecosystems (GDEs) including:

- Broad-leaved Sally grass - sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion (PCT 285).
- Brittle Gum - peppermint open forest of the Woomargama to Tumut region, NSW South Western Slopes Bioregion (PCT 296).
- Riparian Blakely's Red Gum - Broad-leaved Sally woodland - tea-tree - bottlebrush - wattle shrubland wetland of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion (PCT 302).

There are no identified PCTs likely to have a total reliance on groundwater, though PCT 285, PCT 296, PCT 300 and PCT 302 are likely to be facultative GDEs (Jacobs, 2022). Facultative GDEs are partially dependent on groundwater and may depend on the subsurface presence of groundwater during the presence of low flow or drought conditions. Within the Project area, PCT 285 and PCT 302 are likely to have the highest groundwater dependency as they are located on alluvial and colluvial soils located adjacent to waterways. As per Section 3.6.2 of the BMP, the Project is considered unlikely to affect groundwater to an extent that facultative GDEs would be detrimentally impacted.

1.8.4 PLANT COMMUNITY TYPES

The Biodiversity Development Assessment Report (BDAR, Jacobs, 2022) describes seven different types of PCTs identified within the Project area and these are listed below in Table 1-2. The listed vegetation does not correspond with a threatened ecological community, listed under the NSW BC Act or Commonwealth EPBC Act.

Table 1-2 PCT types found within the Project area.

PCT	PCT name	Area (ha) in Project area
285	Broad-leaved Sally grass - sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion	**2.74**
300	Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern - grass tall openforest on deep clay loam soils in the upper NSW South Western Slopes Bioregion andwestern Kosciuszko escarpment	**44.91**
1196	Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion	**35.84**
296	Brittle Gum - peppermint open forest of the Woomargama to Tumut region, NSW South Western Slopes Bioregion	**28**
302	Riparian Blakely's Red Gum - Broad-leaved Sally woodland - tea-tree - bottlebrush - wattle shrubland wetland of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion	**6.78**
729	Broad-leaved Peppermint - Candlebark shrubby open forest of montane areas,southern South Eastern Highlands Bioregion and South East Corner Bioregion	**67.12**
999	Norton's Box - Broad-leaved Peppermint open forest on footslopes, central andsouthern South Eastern Highlands Bioregion	**14.48**
Total Area		**199.87**

Refer to 0.2 for PCT mapping for the Project.

The 2019/20 Dunn's Road bushfire impacted the vegetation of the Project area. Much of the Project area was subject to either "Extreme – fully canopy consumption" or "High – full canopy scorch/partial consumption" (Jacobs, 2022) including damage to landscape slopes. In the study area and broader locality, lower fire intensity is mapped in Bago and Maragle State Forests compared to KNP, the area between the proposed substation and east to Elliott Way is mapped as 'Low - burnt understorey with unburnt canopy' (Jacobs, 2022).

1.8.4.1 BUSHFIRE RECOVERY

Following the bushfire in 2019/20, vegetated areas within and adjacent to the Project contained areas of bare ground (susceptible to weed invasion) and a reduction in fauna habitat features (hollows, logs, leaf litter etc), making fauna more vulnerable to predation (SLR, 2022). These changes to the ecology of the area were observed via aerial imagery where predominantly, changes included a reduction in vegetation cover and a change in landscape (Jacobs, 2022).

Since the Dunn's Road/East Ournie Creek/Riverina's Green Valley megafire, there has been extensive recovery planning undertaken by local Landcare Groups. The Murrumbidgee Landcare/Holbrook Landcare Groups produced an Ecological Recovery Report for the Murray and Riverina Local Land

Services (Murrumbidgee Landcare, 2023). The outcomes of recovery planning suggests that the protection of unburnt refuges from future fires was a priority. Controlling/removing weed species that could readily colonise burnt habitats and alter their capacity for those areas to naturally regenerate was also a priority. Pest animal control, with those species that pose the greatest threat to threatened native species (such as deer, feral cats and foxes) was also listed as a management priority.

These management and mitigation measures from the above management priorities (future fires, weed invasion and pest and predators) do not form a scope of this Rehabilitation Plan specifically, however further detail is provided within the Bushfire Control Plan, Weeds and Pathogen Management Plan and the Pest and Predator Management Plan for the Project. These management plans generally align with the intent of the ecological recovery projects and associated management actions that are currently underway.

1.8.4.2 DISTURBANCE FOOTPRINT

The construction of, and ongoing operational maintenance of the asset for the life of the Project will result in the loss of 118.35 ha of native vegetation from the Southern Eastern Highlands Bioregion and Australian Alps Bioregion as summarised in Table 1-3.

Table 1-3 Summary of direct impacts to vegetation within the disturbance area

PCT description	Full loss (ha)	Partial loss (ha)	Total impact (ha)
PCT 285: Broad-leaved Sally grass - sedge woodland on valley flats and swamps in the NSW South Western Slopes Bioregion and adjoining South Eastern Highlands Bioregion	2.2	-	2.2
PCT 296: Brittle Gum - peppermint open forest of the Woomargama to Tumut region, NSW South Western Slopes Bioregion	8.13	10.89	19.02
PCT 300: Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern - grass tall open forest on deep clay loam soils in the upper NSW South Western Slopes Bioregion and western Kosciuszko escarpment	14.86	17.14	32.01
PCT 302: Riparian Blakely's Red Gum - Broad-leaved Sally woodland - tea-tree - bottlebrush - wattle shrubland wetland of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion	0.58	1.75	2.34
PCT 729: Broad-leaved Peppermint - Candlebark shrubby open forest of montane areas, southern South Eastern Highlands Bioregion and South East Corner Bioregion	14.06	12.89	26.94
PCT 999: Norton's Box - Broad-leaved Peppermint open forest on foot slopes, central and southern South Eastern Highlands Bioregion	6.13	2.46	8.60
PCT 1196: Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion.	24.93	2.31	27.24
TOTAL	**70.90**	**47.45**	**118.35**

The Project is anticipated to involve loss of habitat within the disturbance area for the following threatened species:

- *Caladenia montana* – 9.35 ha (confined to South Eastern Bioregion).
- Gang-gang cockatoo – 89.06 ha of breeding habitat (over both bioregions).
- Masked owl – 10.86 ha of breeding habitat (over both bioregions).
- Booroolong Frog – 1.67 ha (confined to South Eastern Highlands Bioregion).
- Eastern Pygmy-possum – 117.29 ha (over both bioregions).
- Yellow-bellied Gilder population on the Bago Plateau 59.03 (over both bioregions).

The Project has potential to result in prescribed biodiversity impacts, namely impacts to connectivity and movement for gliding mammals (i.e. fragmentation by clearing along the transmission line corridor and collision with razor wire fences around the switching station) and impacts on water quality for aquatic species, including the Booroolong Frog (Jacobs, 2022). The Biodiversity Management Plan (BMP) includes specific management and mitigation measures associated with the potential biodiversity impacts of the Project.

1.8.5 THREATENED SPECIES

A list of threatened species has been identified and recorded from targeted surveys and shown in Table 1-4. The Booroolong Frog is included as this species was assumed to be present based on the results of the Snowy 2.0 Main Works EIS and confirmed within the same study area as the current assessment for the Transmission Connection (Jacobs, 2022).

Table 1-4 Threatened species recorded during targeted surveys of the Project area.

Species	Status	
	EPBC Act	BC Act
Litoria booroolongensis (Booroolong Frog)	E	E
Cercartetus nanus (Eastern Pygmy-possum)	-	V
Petaurus australis (Yellow-bellied Glider)	V	V
Tyto novaehollandiae (Masked Owl)	-	V
Callocephalon fimbriatum (Gang-gang Cockatoo)	E	E
Miniopterus orianae oceanensis (Large Bent-winged Bat)	-	V
Stagonopleura guttata (Diamond Firetail)	V	V
Daphoenositta chrysoptera (Varied Sittella)	-	V
Petroica phoenicea (Flame Robin)	-	V
Petroica boodang (Scarlet Robin)	-	V
Artamus cyanopterus (Dusky Woodswallow)	-	V

Falsistrellus tasmaniensis (Eastern False Pipistrelle)	-	V
Saccolaimus flaviventris (Yellow-bellied Sheathtail-bat)	-	V
Scoteanax rueppellii (Greater Broad-nosed Bat)	-	V
Caladenia montana	-	V
Petaurus volans (Greater Glider)	E	E

Vegetation removal will be confined to the Clearing Zones identified in Appendix A.1 These clearing zones have been subject to biodiversity offset calculations attributed and species credits applied (refer to Biodiversity Offset Package for more detail).

The Biodiversity Management Plan (UGL, 2024b) identifies Exclusion Zones which must not be disturbed during construction or operation of the Project. Exclusions Zones are to be marked by a surveyor and demarcated with high visibility fencing/flagging before clearing commences. The boundary of clearing works has been provided in the series of Exclusion Zone maps in APPENDIX A: Project Maps (refer also to BMP for more detail on Exclusion Zones).

Procedures and management strategies provided in the Glider Connectivity Strategy and the Booroolong Frog Monitoring Program (Appendix L and Appendix K of the BMP, respectively) will be adhered to throughout the rehabilitative process.

Refer to the BMP for detailed information regarding threatened species management for the Project.

2 FINAL LAND USE

2.1 REGULATORY REQUIREMENTS FOR REHABILITATION

A summary of the regulatory requirements for post construction land use and rehabilitation for the Project are listed in Table 2-1 below. Regulatory requirements have included consideration of the approvals and licences listed above in Section 1.7. Relevant Project Biodiversity and BDAR mitigation measures for rehabilitation are listed in Table 2-2 and Table 2-3.

Table 2-1 Post construction land use rehabilitation requirements

Condition	Requirement	Section addressed	Relevant Mitigation Measures
Schedule 2 Condition A9	**Protection of Public Infrastructure** Unless the Proponent and the applicable authority agree otherwise, the Proponent must: (a) undertake any works on or in the vicinity of public infrastructure in consultation with the applicable public authority or service provider responsible for the public infrastructure; (b) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and (c) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development. (d) This condition does not apply to any damage to roads caused as a result of general road usage which is expressly provided for in the conditions of this approval.	Table 4-3	N/A
Schedule 2 Condition A10	**Demolition** The Proponent must ensure that all demolition work on site is carried out in accordance with AS 2601-2001: The Demolition of Structures (Standards Australia, 2001), or its latest version.	Section 5.1.3	N/A

Condition	Requirement	Section addressed	Relevant Mitigation Measures
Schedule 2 Condition B47	**Rehabilitation Requirements** The Proponent must: (a) rehabilitate all parts of the site within the Kosciuszko National Park to comply with the rehabilitation objectives in Table 2 and the ecological rehabilitation objectives in Table 3; (b) rehabilitate the Bago State Forest site to comply with the rehabilitation objectives in Table 2 (included below); (c) complete the rehabilitation of the site, including the removal of all temporary infrastructure, creation of landforms, narrowing of roads within 3 years of completing construction; (d) complete the ecological rehabilitation of the site, apart from areas used for operations, within 20 years of completing construction; (e) complete the final rehabilitation of the site, including the removal of all remaining infrastructure within 3 years of decommissioning the development; and (f) complete the ecological rehabilitation of the areas used for operations within 20 years of decommissioning the development.	Section 4.1 Section 4.1 Section 5 and Table 5-6.	BIO3 BIO5 BIO10 BIO26 BMP51 BMP52

Condition	Relevant Mitigation Measures
Table 2 Rehabilitation Objectives **Table 2 Rehabilitation Objectives** **Feature** / **Objective** **Land Use** — Return the site to its previous use in consultation with NPWS and FCNSW **Land** — Safe, stable and non-polluting; Progressively rehabilitate the site as soon as possible following disturbance; Employ interim rehabilitation strategies to areas that can't be permanently rehabilitated yet to minimise dust generation, erosion, uncontrolled discharges of sediment, and the spread of weeds to other parts of the Kosciuszko National Park; **Infrastructure** — Decommission and remove infrastructure, unless NPWS and/or FCNSW agrees otherwise; **Community** — Ensure public safety Table 3 Ecological Rehabilitation Objectives **Table 3 | Ecological rehabilitation objectives, including indicative completion criteria and performance indicators** **Ecological rehabilitation objective** / **Completion criteria** / **Performance indicators** **Objective 1:** The vegetation composition of the rehabilitation is recognisable as a plant community type (PCT) contained within the BioNet Vegetation Classification and which was present on site prior to the project's temporary disturbance — (a) Native plant species composition is characteristic of the target PCT based on suitable analysis against a reference data set using the PCT Assignment Tool (b) The target PCT BAM composition score is within or greater than the inter-quartile range of local reference site values for the assigned PCT. — All native vascular plant species are monitored to species level from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary. Monitoring should include appropriate reference sites outside the disturbance area, ideally capturing the range of variation of the 2003 and 2019/20 fires. **Objective 2**: The vegetation structure of the rehabilitation is recognisable as, or shows a substantial trend towards, a PCT contained within the BioNet Vegetation Classification and which was present on site prior to the project's temporary disturbance. — Cover, abundance and height range of native plant growth forms are characteristic of the target PCTs and within or greater than the inter-quartile range of local reference site values for the assigned PCT. — The cover, abundance and height range of all native vascular plant species are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary. **Objective 3**: Levels of ecosystem function have been established that demonstrate the rehabilitation is self-sustainable or shows a substantial trend towards a self-sustaining state. — Growth medium, including topsoil, is suitable for target PCTs establishment, and indicators of nutrient cycling are suitable for sustaining the target PCTs. All priority attributes of nutrient cycling, soil processes and both subsoil and topsoil properties should be within or greater than the interquartile range of local reference site values for the assigned PCT. — Growth medium, covering both subsoil and topsoil properties, and soil processes are monitored using methods approved by the Planning Secretary. Rehabilitation vegetation communities are maturing, and natural recruitment is occurring for species within each growth form at rates within or greater than the interquartile range of local reference site values for the assigned PCT. — All species are monitored for establishment of second-generation juveniles/immatures and capacity for recruitment from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary The number and ground cover of weed species is comparable to, or less than, the interquartile range of local reference site values for the assigned PCT. — Number and ground cover of weed species are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary. Fauna habitat features and resources (food and shelter characteristics) within the rehabilitation vegetation communities are present and within or greater than the interquartile range of local reference site values for the assigned PCT. — Presence/absence of some fauna habitat features (e.g. flowering plant, decorticating bark, stags with hollows and/or nest boxes) and quantitative assessment of other features (e.g. leaf litter cover, bare ground, wood debris) are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method and/or other method approved by the Planning Secretary.	BIO3 BIO5 BIO10 BIO26 BMP10 BMP19 BMP51 BMP52

Table 2-2 Biodiversity Management and Mitigation Measures

ID	Measure/Requirement	Reference
Pre-construction		
BMP10	A seed collection methodology will be developed and implemented to assist with rehabilitation post construction. The methodology will include early collection of seeds onsite prior to clearing and other appropriate areas.	B47
Vegetation clearing, protection and management		

BMP19	A qualified Ecologist will undertake a pre-clearing inspection of the Project area at least 14 days prior to clearing. The ecologist will:
	• Physically mark any important habitat features with flagging/non-permanent spray paint suspected to be utilised by significant species in the area and record GPS coordinates of each biodiversity feature. Important habitat features include:
	  ○ Large active stick nests
	  ○ Hollow-bearing trees
	• HBTs with a diameter at breast height (DBH1) of >130cm that also contain dead wood / old branch stubs in the canopy shall be marked for 'limb by limb' (spray-painted 'LxL' or similar) removal treatment
	• HBTs that are smaller (trunk <130cm DBH, and / or do not contain dead wood / old branch stubs / or inaccessible by EWP in the canopy) shall be marked as 'Hollow Bearing' (spray-painted 'H' or similar)
	• If hollows are active at the time of inspection
	• Yellow-bellied Glider den trees and sap trees (i.e. presence of a v-notch)
	• Active nesting/breeding sites (dens, drays, nests etc.)
	• Threatened species habitat (as evidenced by scratchings, scats etc)
	• Unexpected threatened species (in accordance with the Unexpected Threatened Species Finds Procedure).
	• Targeted searches will also be undertaken for weed species, to ground truth the extent of weed occurrences within the Project area.
		BIO4

ID	Measure/Requirement	Reference
	• Identify suitable fauna release locations outside the Project area. • Identify and surround trees for protection with exclusion fencing. This consists of rope, flagging, bunting or other similarly robust and durable material, designated as “Environmental Protection” zones. • Contact will be made with the local vet and/or wildlife carer (contact details outlined in Appendix C) prior to the commencement of clearing works to ensure they are available in case fauna is found. *Within Booroolong Frog habitat:* • Any aquatic habitat features (rocks, logs) that are required to be removed will be salvaged for rehabilitation within riparian areas. *Within Yellow-bellied Glider and Greater Glider habitat:* • Inspect den/sap trees to determine if live gliders are present • If gliders are present or likely to be present, the tree is to be clearly marked for ‘limb by limb’ (spray-painted ‘LxL' or similar) removal treatment. The removal of the tree must allow time for fauna to vacate of its own accord (as outlined in more detail below, i.e., a two staged process, clearing non-habitat vegetation first).	
Rehabilitation		
BMP51	Disturbed areas are to be progressively stabilised to prevent erosion and weed establishment	BIO26
BMP52	Implement Rehabilitation Plan	BIO3

Table 2-3 Project BDAR Mitigation Measures Relevant to Rehabilitation

Action ID	Biodiversity Mitigation Action	Section Addressed
BIO3	A Rehabilitation Plan (RP) will be prepared and approved prior to clearing in consultation with BCS, NPWS and FCNSW. The Rehabilitation Plan will inform the implementation of rehabilitation within the lease/licence area. Such areas will be identified in the final detailed design and will also include areas disturbed during construction that are not required to be maintained or cleared for the operation of the project.	This RMP
	• The plan will focus on the implementation of soil erosion prevention, re- establishment of local expression of the original/adjacent plant community type, use local native plant species and habitat and outline the details of rehabilitation objectives and how their outcomes for success will be measured, locations, target landforms and plant community types	Section 5, Table 5-6
	• Restoration of riparian vegetation (i.e., weed control) will be implemented to protect and improve key habitat areas of the Booroolong Frog	Section 5.1.7.3
	• The plan will include a program for adaptive monitoring of specific success measures and reporting and include a Trigger Action Response Plan (TARP). The TARP will include notification to NPWS and BCS that remedial actions have been triggered and agreement about the response	Appendix B: Trigger Action Response Plan
	• Revegetation of slopes will be undertaken in accordance with the rehabilitation plan	Section 5.1.3.4
	• Landscaping of pervious surfaces using native indigenous species only.	Section 5.1.7.4
	• Soil loss will be prevented by immediate stabilisation of exposed surfaces (e.g., use of Jute mesh and/or soil binder)	Section 5.1.3
	• Ongoing maintenance of the rehabilitation work will be required, including management of weeds and pathogens.	Table 5-6, Appendix B: Trigger Action Response Plan
	Topsoil and subsoil generated during construction will be stockpiled separately on- site to be used for rehabilitation. Stockpiles will be managed according to best management practices (Managing Urban Stormwater: Soils and Construction).	Section 5.1.3.1
BIO5	Exclusion Zones: The boundary of the clearing limits for each disturbance zone will be clearly marked on site by a surveyor before vegetation clearing commences: • Exclusion zones, or 'No-Go' zones, will be clearly marked at the edge of the full clearing zones and ECZ to protect the vegetation to be retained outside the project from	APPENDIX A: Project Maps

	inadvertent direct impacts. These will be in place for pre-clearing, construction and remain in place until rehabilitation objectives or areas above/upstream of the zones have been met and slopes have been stabilised • Exclusion zones and the edge of the clearing boundary will be marked with high visibility fencing and signage • Booroolong Frog: A 50 m exclusion zone (refer to Figure 11-1 of the BDAR) will be marked and clearly delineated from other survey markers with signage also placed around the tributaries that flow downhill into the Yarrangobilly Creek, this includes the limits of clearing on the lower end of Sheep Station Creek, Cave Gully, Lick Hole Gully and Wallace Creek that are crossed by the project to protect the downstream habitat of Booroolong Frog by clearly identifying exclusion zones. Parts of the 50 m exclusion zone along Lick Hole Gully and Cave Gully occur within the ECZ and will require clearing of trees and shrubs, However, the introduction of the partial clearing zones are likely to reduce the risk of erosion and sedimentation from the project to downstream waterways where parts of the groundcover in the ECZ, HCZ and HTZ will remain partially intact or intact, and reduce soil disturbance. There will be no use of heavy machinery in the riparian zones. Due to the risk of indirect impacts from increased runoff at these locations, strict sediment control measures will be implemented and outlined in a Soil and Water Management Plan (SWMP). The plan will ensure protection of aquatic habitat in the tributaries crossed by the project, and particularly aimed at protecting the habitat for the Booroolong Frog associated with Yarrangobilly Creek • Booroolong Frog: The 50m exclusion zone adopted for the Main Works project on Yarrangobilly Creek, will be retained for construction of the transmission line. This will remain in place until rehabilitation objectives for areas upstream have been met and slopes have been stabilised • Hazard trees identified from the LiDAR assessment will be flagged for removal, and any other adjacent and important habitat trees and features, also identified for retention and to avoid disturbance during the felling activity will be clearly marked and included in maps within the CEMP.	
BIO10	A Soil and Water Management Plan (SWMP) will be prepared and implemented as part of the CEMP in consultation with NPWS and BCS. The plan will include stringent controls to mitigate impacts of runoff and sediment transfer from the project area during construction and operation. Control measures will remain in situ until site stabilisation completion criteria are met. The plan will ensure protection of aquatic habitat in the tributaries crossed by the	Soil and Water Management Plan

	project, and particularly aimed at protecting the habitat for the Booroolong Frog associated with Yarrangobilly Creek. this is particularly important for the lower reaches of Sheep Station Creek and Wallace Creek where the exclusion zone is encroached (refer Figure 11-1). An assessment of the current sediment basin design for the Main Works project will occur prior to vegetation clearing, to assess if the basin design specifications and design capacity are suitable for the additional sediment load expected during construction of the easement. Where modification or augmentation is required, sediment basins will be increased in size to cope with any additional expected sediment load. Sedimentation will be managed through implementation of effective sediment control management plans will be implemented to ensure that sediment does not enter the waterways and result in changes to the habitat structure of riparian areas or areas downstream of the project area. Effective control measures will include: • Erosion and sediment control plans for all stages of construction • The implementation of sediment control measures across the project area - sediment control ponds and sediment basins, coir logs and sediment fencing to control sediment run-off, catch drains and perimeter bunds and diversion drains. • A schedule will be included in the SWMP for cleaning and maintenance of sediment basins / controls with intervals to be informed from the outcomes of monitoring basins from Snowy 2 Main Works construction and catchment modelling. The schedule will include additional checks after rainfall events of >50 mm in 24 hours. A Trigger Action Response Plan will be documented in the SWMP, with management actions in place to address risk of sediment loads detrimental to Booroolong Frog entering the system. The triggers for response will be informed by evaluation of the construction monitoring results from Main Works. Immediate reporting to NPWS will occur in the event of any failure of sediment or stormwater mitigation measures, including overtopping of sediment basins. Indirect impacts are uncertain during high rainfall events during and/or after clearing. If mitigation measures and sedimentation controls fail, this could lead to a substantial loss or adverse impact to Booroolong Frog breeding and dispersal habitat. An adaptive management plan will be prepared in consultation with NPWS and BCS to address risk of increased sedimentation/run off to the identified breeding habitat and population extent downhill and downstream of the project area.	Erosion and Sediment Control Plans (ESCPs)

	• Additional or supplementary control measures (i.e., sediment fencing, diversions, and detention ponds) will be implemented at high-risk areas such as the creek crossings at Sheep Station Creek, Cave Gully and Wallaces Creek and at tower structures site ad access roads on the slopes around Yarrangobilly Creek and associated tributaries • Additional water quality monitoring points will be installed and monitored in locations to be agreed with NPWS and BCS, which are downhill of the construction footprint and upstream of Booroolong Frog habitat. • An adaptive management plan as part of the monitoring program will be included in the SWMP to address risk of increased sedimentation/run off to the identified breeding habitat and population extent of the Booroolong Frog downhill and downstream of the project area. The plan will be designed to estimate any residual impact if sediment mitigation measures fail. • Runoff from spoil piles will be managed through the above listed control measures to ensure that there is no contamination or sediment entering waterways or adjacent areas • Accidental spills will be reported to the contractor's environmental representative as soon as the incident is observed so that the site can be remediated rapidly • Implementation of tannin leachate management controls may be required as determined by the monitoring program • Sediment traps or filters (targeting removal of coarse sediment) will be maintained at all discharge locations and will be monitored and maintained as per the scheduled requirements. Other source controls, such as mulching, matting and sediment fences may be used in consultation with BCS and NPWS and need to be approved in the CEMP and any deviation from measures by DPIE will need to be sought. Similarly, natural erosion controls incorporating organic materials, micro water capture and contour shaping will need to be approved in the CEMP where appropriate • Disturbed areas will be stabilised and rehabilitated to reduce erosion potential (i.e. exposure period of bare earth). This will be particularly important for revegetation of slopes as soon as possible, in accordance with the rehabilitation plan. Landscaping of pervious surfaces using native indigenous species only. Soil loss will be prevented by immediate stabilisation of exposed surfaces (e.g. use of Jute mesh and/or soil binder) • Any imported fill will be certified at source locations to ensure it is pathogen and weed free Excavated Natural	

	Material or Virgin Excavated Natural Material) • An induction protocol will be mandatory for all personnel involved in construction and operation works • There needs to be acknowledgement of imported material e.g. road base being washed off tracks etc in the surrounding environment and how that will be dealt with.	
BIO26	Provide sediment and erosion controls to manage exposed soil surfaces and stockpiles to prevent sediment discharge into waterways, vegetation, and fauna habitat. Control measures will include: • Clearly identify stockpile and storage locations and provide erosion and sediment controls around stockpiles (documented in Vegetation Clearing Plan) • Source controls, such as mulching, matting and sediment fences will only be used where approved in the CEMP • Sediment traps or filters (targeting removal of sediment) will be maintained at all discharge locations and will be regularly monitored and maintained • Disturbed areas will be stabilised and rehabilitated as soon as the event has been reported to reduce erosion potential (i.e., exposure period of bare earth) (as per Rehabilitation Plan) • Accidental spills will be immediately reported and remediated • Contaminated water will be separated from stormwater and will be managed in a process water system • Provide on-site signage to identify contaminated topsoils	Section 5.1.3, Appendix B: Trigger Action Response Plan

2.2 REINSTATED (FINAL) LANDFORM AND USE

2.2.1 FINAL LANDFORM DESIGN

The final landform will be constructed from excavated material and supplemented by imported growth mediums (where needed, refer to the Project SWMP). The final landform includes constructed access tracks and towers pads. Partial clear areas will comprise of managed vegetation and remain consistent with the surrounding topography of the area.

Reuse of excavated material in the in the final landform will be subject to geochemical testing to confirm its suitability to remain onsite. Unsuitable material will be managed in accordance with the Spoil Management Plan.

Transgrid does not have any responsibility in relation to emplacement area rehabilitation managed by a third-party (e.g. SHL/FGJV/Leeds). The Temporary Emplacement Area managed by Leeds in Project Area East is managed under the Snowy 2.0 Main Works approval. Chain of custody documentation is maintained between UGL and Leeds for spoil generated by Snowy 2.0 Transmission Connection and placed in the temporary emplacement area Where the responsibility for the rehabilitation of emplacement areas rests with Snowy Hydro Limited, this will be covered in the Snowy 2.0 Rehabilitation Management Plan – Stage 1 (S2-SHL-ENV-PLN-0010 – Rev 3.3) available on the NSW Major Projects planning portal.

2.2.2 FINAL LAND USE ZONES

Final land use zones post construction have been defined in Table 2-4 according to land use objectives. Each land use zone will require specific decommissioning and rehabilitation methods.

Table 2-4 Final land use zones

Final land use domain	Description
Retained infrastructure	The following infrastructure areas will be retained during operation of the Project: • Switching station – benches and associated drainage will remain in-situ post construction. Vegetation regrowth within the Asset Protection Zone (APZ) will be maintained to a height of 100mm. • Transmission structures – benches are expected to remain in-situ to facilitate the safe operation of plant and equipment. Structure maintenance requires approximately 30m to be maintained as an 'operational TSZ'. Areas outside this zone would be rehabilitated and managed as per ECZ.
Access Roads	Agreement on road type and use is dependent upon approval of the Long-Term Road Strategy (refer to section 1.6) and forthcoming discussions with NPWS.
Transmission line easement	Post-construction, the Easement Clearing Zone (ECZ)will be rehabilitated to native vegetation land use. Ground disturbance resulting in the requirement for rehabilitation with the Hand Clearing Zone (HCZ) and Hazard Tree Zone (HTZ) is not expected due to these areas being subject to partial clearing requirements (refer section 5.2). The transmission line easement will require regular maintenance in accordance with operational safety requirements for the transmission line, noting the Operational Vegetation Management Plan (OVMP) is currently in draft. The OVMP required by BDAR Mitigation Measure BIO9 will be developed in consultation with NPWS and BCS.

Native vegetation	Unused roads and stockpiles will be rehabilitated to a native vegetation final land use, noting that the Long-Term Road Strategy is yet to be developed (refer section 1.6 and section 5.1.4.1) Rehabilitation of these areas will be conducted in accordance with section 5.1.7 of this Plan. Native species used for each area will be commensurate with that present prior to disturbance, as per the PCT) mapped for the area (refer to 0.2 for PCT mapping).

2.2.3 ACTIVE LAND USE ZONES

Active land use zones during the construction phase are provided in Table 2-5. These zones describe areas of active disturbance within the Project footprint.

Table 2-5 Active land use zones

Active zone	Description
Infrastructure	Switching station and transmission structures.
Access roads	This will include all access roads associated with the Project. The number of utilised and upgraded access roads will increase as the Project progresses. Stabilisation of disturbance associated with access roads will occur as soon as possible, following disturbance.
Transmission line easement	This includes the ECZ, HCZ and HTZ zones, which will require regular maintenance to maintain safety within the transmission line easement.
Stockpiles	This zone includes the on-land emplacement areas (stockpiles) utilised for excavated material management.
Substation	Includes the 500kV Substation and 330kV Switchyard and surrounding Asset Protection Zone.

3 REHABILITATION RISK ASSESSMENT

In accordance with Condition B48, the RMP must identify the key risks to the successful completion of the rehabilitation and describe the contingency measures that would be implemented to address these risks. High risks relevant to this Project have been identified in Table 3-1.

Table 3-1 Summary of high and extreme risks for the Project

Risk	Risk Control	Current Risk Rating	Proposed controls/contingency measures	Residual risk
Insufficient funding for rehabilitation activities	▪ Budget preparation. ▪ Experienced team to prepare RMP.	High	▪ Benchmark pricing based off demonstrated, successful rehabilitation techniques to enable confident budgeting. Utilise information yielded from Snowy Main Works. ▪ Schedule a constructability seminar with Transgrid, UGL and contractor to ensure pricing and implementation measures are achievable within the allocated pricing schedule. ▪ Allocate a contingency budget to ensure rehabilitation objectives can be achieved despite budgetary discrepancy.	Low

Risk	Risk Control	Current Risk Rating	Proposed controls/contingency measures	Residual risk
Poorly defined, or unachievable ecological rehabilitation objectives	▪ EIS approved. ▪ Experienced team to prepare RMP. ▪ Data-driven lessons learnt. ▪ Review of rehabilitation objectives. ▪ NPWS engagement.	High	▪ Adopt learnings from Snowy Main Works. ▪ Consult with NPWS. ▪ Consider adopting methods based on monitoring results after 12 months and adapting rehabilitation techniques based on lessons learnt.	Low

Risk	Risk Control	Current Risk Rating	Proposed controls/contingency measures	Residual risk
Inadequate seed collection/supply	▪ Experienced Seed Collection Contractor. ▪ Seed collection will be consistent with the Seed Collection Methodology (Appendix E of the BMP). ▪ GIS and spatial mapping of the required rehabilitation areas.	High	▪ Commencement rehabilitation initially in areas that require small volumes of seed, to adaptively manage seed collection and vegetation reinstatement methods or within areas where future rehabilitation will be difficult to achieve based off slope gradients and built infrastructure. This would also allow more time for bulk seed collection in other areas. ▪ Adaptive management measures inclusive of the use of Special Production Areas (SPAs) for plants that produce seed quickly and in large quantities. ▪ Preliminary assessments for seed salvage to determine seed quantity and readiness for more targeted seed collection. ▪ If seed collection fails to generate the required volumes for rehabilitation, native seed from other regional locations may be sourced to supplement stocks following Transgrid and NPWS approval.	Medium - low

Risk	Risk Control	Current Risk Rating	Proposed controls/contingency measures	Residual risk
Poor topsoil management	▪ Experienced team to prepare RMP. ▪ Topsoil to be managed in line with the management and mitigation measures included in the Spoil Management Plan. ▪ Characterisation of materials to determine if growth mediums are required to be included in RMP.	High	▪ Adequate communication and training re. stripping procedures for contractors. ▪ Monthly inspections of topsoil stockpiles to ensure compliance with Plans. ▪ Investigate specialised offsite growth medium sources.	Low
Weed infestations in subsoil and topsoil resources	▪ Implement Weed and Pathogen Control Monitoring Program in BMP. ▪ Implement topsoil management measures in line with SWMP. ▪ Conduct weed monitoring and spraying. ▪ Consult with NPWS regarding weed management.	High	▪ Consider different approaches for weedy and non-weedy sites. Defer the reuse of topsoil for an appropriate period at weedy sites to allow for weed control. ▪ Weed Monitoring and Weed Management to be undertaken as per the Weed and Pathogen Control Monitoring Program in BMP. ▪ Surrounding native vegetation to inform weed management.	Low

Risk	Risk Control	Current Risk Rating	Proposed controls/contingency measures	Residual risk
Damage from fauna (e.g. kangaroos, horses, deer, etc)	▪ Implement Pest and Predator Management Plan in BMP. ▪ Implement monitoring.	High	▪ Fencing to be considered in consultation with NPWS for specialised rehabilitation areas. ▪ Trigger Action Response measures listed in the Pest and Predator Management Plan to be implemented.	Low
Failure to obtain sign off for works	▪ Experienced team to prepare RMP. ▪ Vegetation maintenance to be undertaken in accordance with the OVMP once developed in consultation with NPWS and BCS and approved.	High	▪ Post rehabilitation inspection reports provided to Transgrid in accordance with schedule in Table 7-1. ▪ Supply monitoring data to NPWS and the Planning Secretary.	Low

4 REHABILITATION OBJECTIVES AND COMPLETION CRITERIA

4.1 CSSI 9717 REQUIREMENTS

In accordance with Schedule 2 Condition B47 of CSSI 9717, Transgrid will:

a) rehabilitate all parts of the site within the Kosciuszko National Park to comply with the rehabilitation objectives in Table 2 and the ecological rehabilitation objectives in Table 3 (Table 4-3 and 4-2 of this RMP).

rehabilitate the Bago State Forest site to comply with the rehabilitation objectives in Table 2 (

b) Table 4-1 of this RMP).

c) complete the rehabilitation of the site, including the removal of all temporary infrastructure, creation of landforms, narrowing of roads within 3 years of completing construction.

d) complete the ecological rehabilitation of the site, apart from areas used for operations, within 20 years of completing construction.

e) complete the final rehabilitation of the site, including the removal of all remaining infrastructure within 3 years of decommissioning the development.

f) complete the ecological rehabilitation of the areas used for operations within 20 years of decommissioning the development.

Table 4-1 Rehabilitation objectives

Feature	Objective
Land use	Return the site to its previous use in consultation with NPWS and FCNSW.
Land	Safe, stable and non-polluting. Progressively rehabilitate the site as soon as possible following disturbance. Employ interim rehabilitation strategies to areas that cannot be permanently rehabilitated yet to minimise dust generation, erosion, uncontrolled discharges of sediment, and the spread of weeds to other parts of KNP.
Infrastructure	Decommission and remove infrastructure, unless NPWS and/or FCNSW agrees otherwise.
Community	Ensure public safety.

Table 4-2 Rehabilitation objectives, indicative completion criteria and performance indicators

Rehabilitation objective	Completion criteria	Performance indicator
Objective 1 The vegetation composition of the rehabilitation is recognisable as a plant community type (PCT) contained within the BioNet Vegetation Classification and which was present on site prior to the Project's temporary disturbance.	a) Native plant species composition is characteristic of the target PCT based on suitable analysis against a reference data set using the PCT Assignment Tool. b) The target PCT BAM composition score is within or greater than the inter-quartile range of local reference site values for the assigned PCT.	All native vascular plant species are monitored to species level from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary. Monitoring should include appropriate reference sites outside the disturbance area, ideally capturing the variation of the 2003 and 2019/20 fires.
Objective 2 The vegetation structure of the rehabilitation is recognisable as, or shows a substantial trend towards, a PCT contained within the BioNet Vegetation Classification, and which was present on site prior to the Project's temporary disturbance.	Cover, abundance and height range of native plant growth forms are characteristic of the target PCTs and within or greater than the inter-quartile range of local reference site values for the assigned PCT.	The cover, abundance and height range of all native vascular plant species are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary.
Objective 3 Levels of ecosystem function have been established that demonstrate the rehabilitation is self-sustainable or shows a substantial trend towards a self-sustaining state.	Growth medium, including topsoil, is suitable for target PCTs establishment, and indicators of nutrient cycling are suitable for sustaining the target PCTs. All priority attributes of nutrient cycling, soil processes and both subsoil and topsoil properties should be within or greater than the interquartile range of local reference site values for the assigned PCT.	Growth medium, covering both subsoil and topsoil properties, and soil processes are monitored using methods approved by the Planning Secretary.

Rehabilitation objective	Completion criteria	Performance indicator
	Rehabilitation vegetation communities are maturing, and natural recruitment is occurring for species within each growth form at rates within or greater than the interquartile range of local reference site values for the assigned PCT.	All species are monitored for establishment of second-generation juveniles/immatures and capacity for recruitment from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary.
	The number and ground cover of weed species is comparable to, or less than, the interquartile range of local reference site values for the assigned PCT.	Number and ground cover of weed species are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary.
	Fauna habitat features and resources (food and shelter characteristics) within the rehabilitation vegetation communities are present and within or greater than the interquartile range of local reference site values for the assigned PCT.	Presence/absence of some fauna habitat features (e.g. flowering plant, decorticating bark, stags with hollows and/or nest boxes) and quantitative assessment of other features (e.g. leaf litter cover, bare ground, wood debris) are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method and/or other method approved by the Planning Secretary.

4.2 REHABILITATION COMPLETION CRITERIA

Rehabilitation completion criteria are objective target levels or values assigned to a variety of indicators (e.g. slope, species diversity, percent groundcover), which can be measured to demonstrate progress and the ultimate success of rehabilitation. As such, they provide a defined end point, at which point in time rehabilitation can be deemed successful and the lease relinquishment process can proceed. Rehabilitation completion criteria for the Project have been provided in Table 4-3.

These completion criteria will be utilised to demonstrate achievement of rehabilitation objectives. It is noted that the completion criteria may be subject to refinement as rehabilitation progresses, including as a result of ongoing consultation with the relevant stakeholders, studies yet to be completed and continuous improvement process informed by rehabilitation monitoring results. The achievement (or otherwise) of the completion criteria will be monitored and reported as required.

Rehabilitation completion criteria have been informed by the following information:

- Relevant conditions of CSSI 9717
- Rehabilitation guideline documents including:
    - The Australian Alps Rehabilitation Manual – A guide to ecological rehabilitation in the Australian Alps ((Good, 2006)
    - Form and way: Rehabilitation management plan for large mines (NSW Resource Regulator, 2024)
    - Guideline: Form and way for rehabilitation objectives statement, rehabilitation completion criteria statement and final landform and rehabilitation plan for large mines (NSW Resource Regulator, 2024)
    - Guideline: Rehabilitation risk assessment (NSW Resource Regulator, 2021)
    - Guideline: Rehabilitation objectives and rehabilitation completion criteria (NSW Resource Regulator, 2023)
    - Green Book Rehabilitation Field Guide (MacPhee, 2013)
    - The Gold Book – How to Select, Plan and Manage Alpine and Sub-Alpine Plants for Rehabilitation (MacPhee, 2021)
- Completion criteria from the previously prepared rehabilitation strategies for the Snowy 2.0 Exploratory Works and Main Works
- Similar rehabilitation projects
- Specific information collected to date during detailed planning investigations.

Table 4-3 Rehabilitation completion criteria for the Project

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
Active phase						
All zones	All zones	Minimise risk of injury to people and animals	Appropriate security measures implemented (where required) prior to commencing work.	Appropriate security measures in place.	PC	Risk assessment completed and actioned.
		Minimise the impact of vegetation clearance activities on flora and fauna	Appropriate measures are implemented (as required) to minimise impacts to flora and fauna.	Pre-clearance surveys undertaken and disturbance/no go areas demarcated.	PC	Pre-clearance records.
		Manage erosion	Erosion and sediment controls.	Erosion and sediment control structures have been progressively installed and maintained during disturbance, in accordance with the site Erosion and Sediment Control Plans (ESCPs).	PC	Site records and reports Erosion and Sediment Control Plans (ESCP).
		Topsoil/subsoil will be appropriately stripped and managed for use in rehabilitation in accordance with the SWMP.	Topsoils/subsoils available and suitable for rehabilitation activities.	Topsoil/subsoil has been stripped and stockpiled in accordance with requirements stipulated in this RMP and the SWMP.	PC	Site records and reports Soil inventory SWMP.
		Seeds will be collected from appropriate PCTs for use in rehabilitation	Appropriate seeds are available for rehabilitation.	Appropriate seeds have been collected from appropriate	PC	Site records and reports Seed inventory.

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
				PCTs for use in final rehabilitation.		
		Employ interim rehabilitation strategies to areas that cannot be permanently rehabilitated straight away, to minimise dust generation, erosion, uncontrolled discharges of sediment, and the spread of weeds to other parts of KNP.	Installation of interim rehabilitation measures.	Appropriate interim rehabilitation measures, including erosion and sediment controls, have been progressively installed and maintained during disturbance.	PC	Site records, inspections and reports.
Demobilisation phase						
Access roads	Access roads Stockpiles	Decommission and remove infrastructure, unless NPWS agrees otherwise	All surface infrastructure that is not required for the final land use has been dismantled and removed from the site.	All redundant infrastructure is removed.	Transgrid	Statement provided, with before/after photos.
			Infrastructure to be retained is agreed with NPWS and/or FCNSW.	Infrastructure proposed for retention is acknowledged by NPWS and/or FCNSW.	Transgrid	Written agreement from NPWS and/or FCNSW.
Access roads	Access roads	Restore all roads on-site in accordance with the Long-Term Road Strategy.	Retained access roads will be stabilised and restored.	Stabilisation of access roads is complete.	Transgrid	As per the final landform plan Photos.
Retained infrastructure	Infrastructure Access roads	Unless the Proponent and the applicable authority	All public infrastructure damaged by the Project is	Repair/relocation works complete.	Transgrid	Post construction survey

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
Roads		agree otherwise, the Proponent must: a. repair, or pay the full cost associated with repairing, any public infrastructure that is damaged by the development; and b) relocate, or pay the full cost associated with relocating, any public infrastructure that needs to be relocated as a result of the development.	repaired/relocated and is safe and stable for use.			Written agreement from NPWS and/or FCNSW.
All zones	All zones	Land / water contamination: There is no residual soil contamination (including NOA) on site that is incompatible with the final land use, or that poses a threat of environmental harm.	Waste material and/or contamination occurring on site surface have been removed. **Note.** Under no circumstances will contaminated materials/soil be buried on site.	There is no evidence of contamination following the removal of plant, equipment and materials. All rubbish/waste materials have been removed from site.	PC/Transgrid	Contamination reports Written statement Photographic records Waste facility receipts.
			Contaminated areas are identified and remediated, removed or otherwise managed.	Contaminated soils presenting constraints to final land use have been identified and remediated or removed from the areas to be rehabilitated or appropriately managed (in accordance with legislation).		
Site preparation and landform establishment phase						

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
Transmission line easement Native vegetation	Infrastructure Roads Stockpiles	The final landform is stable for the long-term and does not present a risk of environmental harm downstream/downslope of the site or a safety risk to the public / native fauna. Landform is commensurate with surrounding natural landform.	Landform constructed to design.	Landform survey verifies that the final landform is safe and has been constructed in accordance with the approved landform detailed design.	Transgrid	Detailed design - use of heat map to compare as-built levels with design levels. Suitably qualified person will assess final landform using static erosion risk assessments (adjustments will be made to the final capping layer if required). Visual inspection including photographic documentation of any rills or gullies of concern. As constructed – surveys will be undertaken to verify features such as drainage lines.
			Indicators of erosion and land stability. Indicators that surface water management structures are functioning as designed.	Rehabilitated slopes are free draining with appropriate drainage in place so that water will not undermine the structure in the long term. No visual signs of land instability such as mass movement. No gullies, tunnel erosion features or rills > 300mm deep or wide.	Transgrid/PC	
			Drainage structures are constructed to design and specification.	Final landform drainage structures including drains, banks and drop structures constructed in accordance with the SWMP and ESCPs. Where specified on IFC drawings NPWS are to be consulted regarding final landform drainage structures	Transgrid/PC	
Growth medium development phase						
All zones	All zones	Growth media appropriate for the intended final land	Growth media application and depth.	Topsoil (or suitable alternative) is spread in	Transgrid/PC	Rehabilitation records

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
		use is reinstated at all rehabilitated areas and consistent with reference targets		designated areas, at the specified depth appropriate for the final land use.		Landform survey.
		Growth media characterised and ameliorated for final land use, as required.	Soil / spoil quality parameters.	Areas of benign excavated material are characterised as suitable for vegetation establishment.		Soil testing results Rehabilitation records.
				Soil ameliorants (e.g. gypsum, mulch, etc.) are applied where necessary at the recommended application rate, based on soil analysis.		
Ecosystem and land use establishment phase						
Native vegetation	All zones	Groundcover comparable to reference communities.	Hydromulching application rates	Hydromulching has been undertaken at the specified rate (tonnes/ha) to provide sufficient ground coverage once established.	Transgrid	Meeting the ecological rehabilitation requirements provided in Table 4-1 Monitoring, reporting, photographic record. Written agreement from NPWS and / or FCNSW.
			Plant density and ground cover			
		Community structure / species composition is comparable to reference vegetation communities.	Community composition	A mixture of native trees, shrubs and grasses consistent with the PCT for that area has been planted (via hydromulching), in accordance with specifications.		
All zones	All zones	Erosion does not present a safety hazard or	Indicators of erosion and land instability.	No erosion features (> 500 mm in depth) occur onsite.	Transgrid	Rehabilitation monitoring records.

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
		compromise post-construction land capability.				
		Weeds and animals do not present a risk to rehabilitation.	Weed density.	Weed density in rehabilitation areas is comparable with surrounding native vegetation sites.		Weed presence in rehabilitation monitoring and site inspection records.
			Grazing animal impacts.	Plantings have been installed, with appropriate vegetation protection implemented.		Site specific rehabilitation plans Planting records Site inspection records.
Ecosystem and land use sustainability – final indicators						
Native vegetation	Access roads Transmission line easement Stockpiles	**Ecological rehabilitation objective 1:** The vegetation composition of the rehabilitation is recognisable as a plant community type (PCT) contained within the BioNet Vegetation Classification and which was present on site prior to the Project's temporary disturbance.	All native vascular plant species are monitored to species level from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary. Monitoring should include appropriate reference sites outside the disturbance area, ideally capturing the variation of the 2003 and 2019/20 fires.	a) Native plant species composition is characteristic of the target PCT based on suitable analysis against a reference data set using the PCT Assignment Tool. b) The target PCT BAM composition score is within or greater than the inter-quartile range of local reference site values for the assigned PCT.	Transgrid	Rehabilitation monitoring reports Independent ecological reports validating completion criteria has been met Site specific rehabilitation plans.

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
Native vegetation	Access roads Transmission line easement Stockpiles	**Ecological rehabilitation objective 2:** The vegetation structure of the rehabilitation is recognisable as, or shows a substantial trend towards, a PCT contained within the BioNet Vegetation Classification, and which was present on site prior to the Project's temporary disturbance.	The cover, abundance and height range of all native vascular plant species are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary.	Cover, abundance and height range of native plant growth forms are characteristic of the target PCTs and within or greater than the inter-quartile range of local reference site values for the assigned PCT.	Transgrid	Rehabilitation monitoring reports Independent ecological reports validating completion criteria has been met
Native vegetation	Access roads Transmission line easement Stockpiles	**Ecological rehabilitation objective 3:** Levels of ecosystem function have been established that demonstrate the rehabilitation is self-sustainable or shows a substantial trend towards a self-sustaining state.	Growth medium, covering both subsoil and topsoil properties, and soil processes are monitored using methods approved by the Planning Secretary.	Growth medium, including topsoil, is suitable for target PCTs establishment, and indicators of nutrient cycling are suitable for sustaining the target PCTs. All priority attributes of nutrient cycling, soil processes and both subsoil and topsoil properties should be within or greater than the interquartile range of local reference site values for the assigned PCT.	Transgrid	Rehabilitation monitoring reports Independent ecological reports validating completion criteria has been met Soil sampling results.

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
			All species are monitored for establishment of second-generation juveniles / immatures and capacity for recruitment from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary.	Rehabilitation vegetation communities are maturing, and natural recruitment is occurring for species within each growth form at rates within or greater than the interquartile range of local reference site values for the assigned PCT.	Transgrid	Rehabilitation monitoring reports Independent ecological reports validating completion criteria has been met.
			Number and ground cover of weed species are monitored from fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method, and/or other method approved by the Planning Secretary.	The number and ground cover of weed species is comparable to, or less than, the interquartile range of local reference site values for the assigned PCT.	Transgrid	Rehabilitation monitoring reports Independent ecological reports validating completion criteria has been met.
			Presence/absence of some fauna habitat features (e.g. flowering plant, decorticating bark, stags with hollows and/or nest boxes) and quantitative assessment of other features (e.g. leaf litter cover, bare ground, wood debris) are monitored from	Fauna habitat features and resources (food and shelter characteristics) within the rehabilitation vegetation communities are present and within or greater than the interquartile range of local reference site values for the assigned PCT.	Transgrid	Rehabilitation monitoring reports Independent ecological reports validating completion criteria has been met Site specific rehabilitation plans.

Final Land use Zone	Active Zone	Rehabilitation objective	Indicator	Completion criteria	Responsibility	Record/validation method
			fixed 0.04 ha monitoring plots in accordance with the BAM, transect intercept method and/or other method approved by the Planning Secretary.			

5 IMPLEMENTATION

5.1 REHABILITATION SCHEDULE

5.1.1 PROGRESSIVE REHABILITATION

Stabilisation and rehabilitation will be undertaken progressively throughout the construction period and aligned with the phases outlined in Table 5-1. The rehabilitation schedule will be regularly reviewed during the Project, with additional areas incorporated as they become available. Updates to the rehabilitation schedule, particularly those relating to maintenance and decommissioning phases, will be included in future revisions of this RMP as required.

5.1.2 REHABILITATION PHASES

The phases of rehabilitation are outlined in Table 5-1.

Table 5-1 Rehabilitation Phases

Rehabilitation phase	Description
Active	Includes activities undertaken during (or prior to) construction and operations to enhance rehabilitation, such as: • Salvaging and managing soil resources. • Salvaging habitat resources. • Native seed collection. • Temporary or permanent stabilisation of batters and drainage features. • Construction of appropriate erosion and sediment control devices. • Full rehabilitation of completed areas.
Demobilisation	This phase of rehabilitation includes activities associated with the removal of infrastructure (unless agreed to be retained), and the removal, remediation or management of contaminated and hazardous materials.
Landform establishment	Includes works to construct surface water drainage features and prepare the substrate with the desired physical and chemical characteristics.
Growth medium development	This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short-lived pioneer species) to ensure achievement of the rehabilitation objectives and completion criteria. This phase may include spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.
Ecosystem and land use establishment	This includes establishing the desired vegetation community and implementing land management activities such as weed control.

Rehabilitation phase	Description
Ecosystem and land use development	This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas and thus achieve the rehabilitation objectives and completion criteria. For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat complexity, and development of a productive, self-sustaining soil profiles. This phase of rehabilitation may include specific vegetation management strategies and maintenance such as weed management.

5.1.3 ACTIVE PHASE

This will include the following activities:

5.1.3.1 MANAGING SOIL RESOURCES

Soil inventory

A soil balance / inventory will be maintained throughout the Project. The soil balance will include:

- Current soil stockpile locations, including estimate volumes.
- Projected soil clearing and future estimated soil volumes and rehabilitation volume requirements.
- Soil quality testing results and recommended amelioration requirements.

If the soil balance indicates that there is a deficit of soil resources for the required rehabilitation areas, alternative growth media options will be utilised (refer to section 5.1.6).

Topsoil stripping and handling

Topsoil will be stripped progressively and in a staged manner as per spoil segregation procedures outlined within Section 6.2 of the Spoil Management Plan (Appendix A of the SWMP) and recorded on the Stripping Topsoil and Stockpiling Form (Appendix I of the SMP). The following steps are recommended for soil stripping and handling:

- Clearly mark and fence off Exclusion zones (or ‘no-go zones’).
- Identify soil resources and ensure soil stripping will occur in line with soil management guidelines.
- Minimise the duration of soil exposure by stripping the soil just before the commencement of bulk earthworks.
- Plant and machinery will be inspected and certified to be free of weed seed / plant material prior to mobilisation. If machinery / vehicles have been in weed infested areas, they will be washed down before entering the work area.
- Install environmental control measures (e.g. erosion controls).
- Clearly identify the area to be stripped, to avoid over stripping or exceeding the approved disturbance footprint. Target depths for topsoil / subsoil stripping at each location will be clearly communicated to machinery operators and site supervisors.

- An inventory of soils to be stripped, including depths / volumes will be maintained by the Contractor.
- Topsoil and subsoils will be stockpiled separately for reuse. In areas where topsoils are shallower, topsoil and subsoil may be stripped and stockpiled together.
- Identify subsoil stockpile locations during site preparation and planning. Subsoil stockpile locations will be stripped of topsoil, prior to use.
- Trees will be cleared and grubbed prior to topsoil salvage.
- Mulched or felled vegetation will be stored in total clearing areas for re-use during rehabilitation (refer to section 5.1.3.2).
- Remove habitat features (stumps, roots, large rocks) from topsoils and subsoils. These habitat features may be retained on-site for future rehabilitation work (where practicable).
- Topsoil from contaminated areas, or areas of weed infestation, will not be stockpiled for use in rehabilitation. These materials will be appropriately managed on-site (e.g. weedy topsoils can be incorporated into the subsoil layer and capped with non-weedy topsoils) or disposed of at an appropriate off-site facility.
- Stockpiled soils will be regularly monitored for weeds and controlled, as necessary. Appropriate controls include:
    - Mulching (refer to section 5.1.7).
    - Scalping weed species.
    - Composting weedy vegetation.
    - Herbicides may be used in areas of severe weed infestation; however, this may impede the regeneration of native species.
- Handling of stripped topsoils will be kept to a minimum, by progressively stripping vegetation and soil as required during construction.
- Soil will not be stripped during particularly dry or wet conditions to avoid decline of soil structure. Water carts can be used during dry conditions to minimise dust creation and soil loss.
- Machinery haul routes will be clearly marked to minimise compaction of stockpiled soils.

Topsoil and subsoil maintenance

After stripping, topsoil maintenance will include the following:

- Topsoil will be stockpiled, signposted, surveyed, tracked and kept separate from other materials.
- Stripped topsoil will be stockpiled separately from woody material and subsoil stockpiles.
- Topsoil stockpile heights will not exceed 2.5 m, to minimise compaction and maintain seed viability. Duration of stockpiling should be the minimum practicable, ideally less than 12 months.
- Topsoils will be stockpiled using machinery that reduces compaction and soil structural decline, where practicable.

- Topsoil stockpile locations will be situated at least 40m away from water discharge zones and flow paths.
- Topsoil will not be stockpiled against fences or vegetation and should be retained separately from mulch (apart from a surface layer).
- Topsoil stockpiles will have appropriate control measures installed to prevent erosion, sedimentation and dust emissions.
- Topsoils to be maintained for an extended period of time will be suitably stabilised and the surface left in a rough state .
- The stockpile will be accessible to enable weed monitoring / control to be carried out. Weed management shall be implemented on a routine basis.
- Topsoil stockpiles may be subject to the application of a weed-free mulch. Mulch obtained from clearing activities within the same locality from which the topsoil was sourced will be used (where possible), to manage nutrient decline.
- Topsoil stockpiles may be covered with hydro-seeding, soil binder, jute mesh, geofabric or similar to provide a buffer for temperature extremes, reduce weeds and maintain soil integrity for future use.

Stripped subsoils will be maintained as follows:

- Subsoil should be removed and stockpiled separately from topsoil.
- Excess subsoil will be stockpiled separately for disposal/re-use by appropriate methods. This may include burial in voids, or, if tested and found suitable, as fill; and
- Subsoil stockpiles will have appropriate control measures installed to prevent erosion, sedimentation, and dust emissions.

Topsoil and Subsoil Re-spreading

Where available, topsoil will be respread within designated areas at a minimum depth of 100 mm, in accordance with the Stripping Topsoil and Stockpiling Form, or to a depth determined based on the final stockpiled volumes. Subsoil will be respread to a depth consistent with adjacent undisturbed areas or as informed by preliminary geotechnical investigations.

Prior to topsoil application, subsoil surfaces will be ripped to promote bonding between soil layers. Topsoil will then be progressively respread and hydromulched to minimise the risk of loss from wind and water erosion. Where practicable, contour ripping will be undertaken to maintain surface roughness, enhance infiltration, and provide a stable substrate for hydromulch application.

In areas with limited topsoil availability, suitable substitute materials (e.g., ameliorated subsoil) may be used in conjunction with hydromulch to support revegetation efforts.

Excavated Material Management

Excavated material management will be handled in accordance with the approved Spoil Management Plan (Appendix A of the SWMP). Soils will be excavated and stored locally at each tower site during the construction process. After the towers have been installed, excavated material will be re-distributed around each tower. All spoil material will be appropriately classified prior to placement or disposal.

5.1.3.2 SALVAGING HABITAT RESOURCES (COARSE WOODY DEBRIS)

Native trees and other features (e.g. trunks, logs, large rocks, branches, small stumps and roots; 'coarse woody debris') will be salvaged during vegetation clearance activities and stockpiled for later re-use in rehabilitation (refer to BMP for more details on salvaging felled timber).

Other vegetation material removed during clearing activities (i.e. shrubs, non-hollow bearing timber etc) will be mulched and stockpiled on-site for use in the rehabilitation areas, to provide ground cover and prevent weed return.

Mulch may also be used in erosion and sediment control measures (mulch berms) as determined by the approved erosion and sediment control plan for the respective areas.

5.1.3.3 NATIVE SEED COLLECTION

Seed collection for rehabilitation purposes will be undertaken in accordance with the UGL/Transgrid Seed Collection Methodology (SCM, Appendix E of the BMP).

If locally harvested seed does not produce the required quantities of seed required for the rehabilitative works, seeds may be sourced off-site from the local region, pending Transgrid and NPWS approval.

5.1.3.4 SLOPE/ BATTER STABILISATION

Disturbed areas will be temporarily stabilised to minimise dust generation, soil erosion and weed incursion. As soon as is practicable, the area will be permanently rehabilitated.

Temporary stabilisation and permanent rehabilitation methodologies will be determined on a case-by-case basis or as otherwise advised by a geotechnical engineer. The batter slope (Figure 5-1), length, height and water velocity potential will be considered as part of this as assessment. Rehabilitation options for Batter Types are categorised according to slope gradient (A to E) and are presented in Table 5-2.

Erosion and sediment control structures will remain in place and be maintained until sufficient ground cover has been established (refer to Table 5-2 for revegetation of batters, and Table 6-1 for performance indicators of revegetated areas), as directed by the Project's Certified Professional in Erosion and Sediment Control (CPESC).

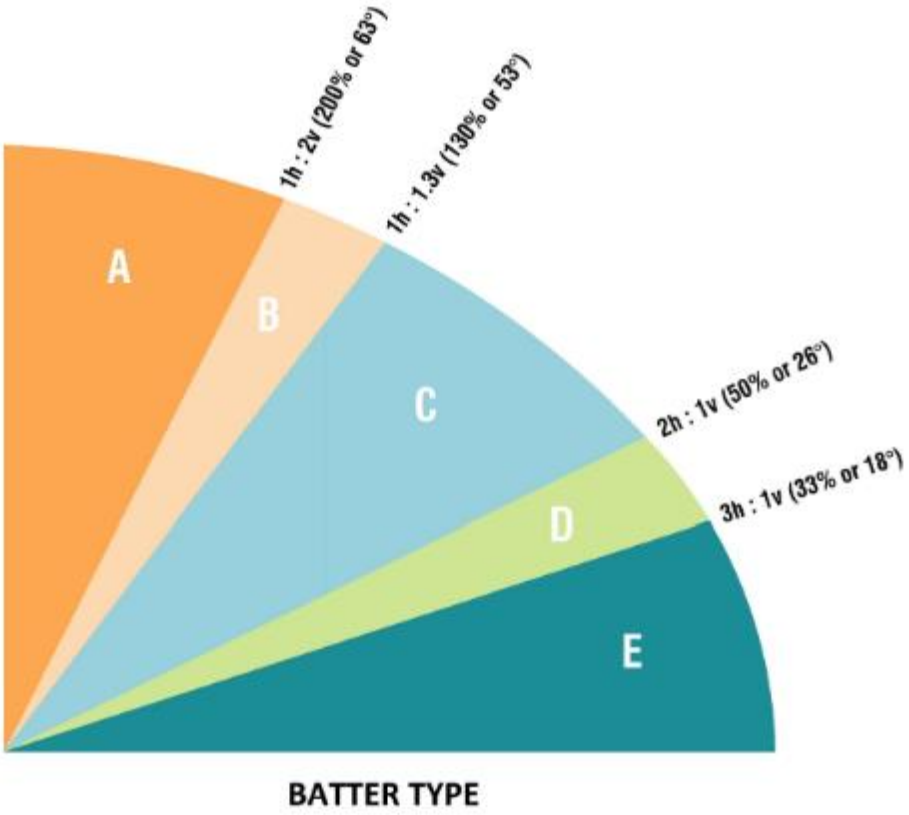


Figure 5-1 Batter types (SLR, 2022)

Table 5-2 provides temporary and permanent revegetation options for each batter type.

Table 5-2 Revegetation options for batters

Batter Type	Temporary Revegetation Options	Permanent Revegetation	Permanent Revegetation Comments
A	N/A	• Structural reinforcement if deemed necessary by geotechnical engineer • Batter Type A options subject to NPWS approval within NPWS estate.	Reinforcement measures could include: • Cellular confinement • Gabion walls • Shotcreting • Rock bolting • Soil nailing
B	N/A	• Cellular confinement system • Geo mat • Enkamat • Erosion control blanket/TRM • Seeded Compost Blanket	• Batter stabilising material may be required to retain the soil/compost containing seeds if vegetation is chosen as the rehabilitation method
C	• Soil binder	• Jute matting/mesh • Bonded Fibre Matrix • Hydromulching with organic matting • Rock mulching	• Hydromulching may be more successful if applied with organic matting
D	• Soil binder • Hydromulching	• Jute matting/mesh • Hydromulching • Rock mulching	• Hydromulching and/or use of the existing seed bank topsoil/mulch with cover crop is preferred
E	• Mulched timber • Soil binder • Hydromulching • Straw mulching	• Jute matting/mesh • Hydromulching • Use of existing topsoil and mulch • Rock mulching	

The design of slope stabilisation batters will involve long-term stabilisation techniques that require minimal monitoring and maintenance (refer to slope/stabilisation section above).

5.1.3.5 EROSION AND SEDIMENT CONTROL

A site-specific SWMP (3200-0645-PLN-021-CEMP-SWMP) has been prepared for the Project.

Site-specific erosion and sediment controls would also be developed to address the requirements of each construction area.

Erosion and sediment control devices will be designed and installed in accordance with the specifications contained in *Managing Urban Stormwater – Soils and Construction, Volume 1, 4th edition (Landcom, 2004), Volume 2A Installation of Services* (DECC, 2008a) and *Volume 2C Unsealed Roads* (DECC, 2008b) or equivalent.

Regular inspections and updates to Progressive Erosion and Sediment Control Plans (PESCP) shall be undertaken by the contractor and the Project's CPESC as outlined in the SWMP.

5.1.4 DEMOBILISATION PHASE

Following the completion of construction, demobilisation of temporary infrastructure would be carried out, including the removal of:

- Temporary fencing.
- On-site infrastructure, including site offices, amenities, equipment storage and maintenance sheds.
- Construction equipment and machinery.
- Remaining stockpiles and other waste materials.
- Temporary environmental controls (e.g. sediment fencing) which are no longer required.

Temporary surface infrastructure will also be decommissioned and removed:

- Disconnecting services / utilities such as power and water.
- The removal of:
    - Construction equipment, fixed plant and other infrastructure.
    - Unused stockpile materials.
    - Contaminated / hazardous material (if not remediated onsite).
- Remediation of temporary access roads (e.g. removal of surface gravel).
- Removal of construction fencing.
- Breaking up and removing any concrete footings, pads and pavements.
- Closure, backfilling and sealing of construction areas.

In accordance with Schedule 2 Condition A9 of State Significant Infrastructure (SSI) 9717, any demolition work will be undertaken in accordance with *AS 2601-2001: The Demolition of Structures*, or its latest version.

In accordance with Schedule 2 Condition A9 of State Significant Infrastructure (SSI) 9717, any public infrastructure (excluding roads) that is damaged by the development will be repaired unless agreed otherwise with the relevant public authority.

5.1.4.1 ROAD NETWORK

Some access roads constructed or upgraded for the Project are likely to be retained, pending agreement with NPWS. Some of these roads will be utilised exclusively by Transgrid, to facilitate access and maintenance activities, while others will be opened to the public. This will facilitate access to areas of KNP that were previously only accessible by four-wheel drive (4WD).

Transgrid will prepare a Long-Term Road Strategy (LTRS) for the Project in consultation with NPWS and RDD within 2 years of the commencement of construction, unless the Planning Secretary agrees otherwise in accordance with SSI-9717 Condition B33. The LTRS will provide a detailed program for the rehabilitation of roads in KNP. Once the LTRS has been endorsed by the relevant parties, this RMP will be updated to include the rehabilitation methodology for the KNP road network.

5.1.5 LANDFORM ESTABLISHMENT PHASE

Landform establishment for the Project will largely involve the reinstatement of the landscape to levels generally encountered during pre-construction. This phase will also return surface water drainage features and establish an appropriate soil substrate/ growing medium to maximise native revegetation success.

5.1.5.1 EXCAVATED ROCK MANAGEMENT

Excavated materials deemed suitable for rehabilitation, will be reused on site to shape the final landform. The final landform will as close to the original topography of the area, as much as practicable, incorporating undulations and micro-relief in an effort to mimic the pre-development landform.

As outlined in section 5.1.3.4 of this report, slope stabilisation, as well as appropriate water management and sediment and erosion controls will be implemented to ensure sufficient surface drainage is provided post-construction.

5.1.6 GROWTH MEDIUM DEVELOPMENT PHASE

Growth medium development involves enhancing the chemical, physical and biological properties of the substrate, as required based off soil testing results. This shall enable the successful establishment of native vegetation communities (inclusive of short-lived pioneer species), so that the area is capable of sustaining the required native vegetation assemblages, to meet rehabilitation objectives and completion criteria. Actions would include:

- Spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes.
- Applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, as required based off soil testing results.
- Establish erosion controls to minimise the loss of growth media due to rain splash, surface water flow and/ or any other erosive factors.
- Apply supplementary watering to treated batters during periods of dry weather.

Onsite growth medium development, as well as offsite supplementary alternatives, are discussed below.

5.1.6.1 ONSITE GROWTH MEDIUM DEVELOPMENT

Characterisation of materials

The soil classifications within the Project area were previously documented in the Environmental Impact Statement (EIS) prepared by Jacobs (2020). The majority of the Kosciuszko National Park (KNP) is categorised as Land and Soil Capability (LSC) Class 7 (very low capability) and Class 8 (extreme limitations). In contrast, most of the Bago State Forest is classified as LSC Class 4, indicating moderate land capability. Figure 5-2 of the EIS illustrates the distribution of LSC classes across the Project area.

Soils classified as LSC Classes 7 and 8 are inherently low in quality and may possess characteristics that hinder successful rehabilitation. To support the development of effective rehabilitation strategies, further soil and geological information collected during preliminary investigations—as detailed in Section 5.2 of the Soil Management Plan (SMP)—along with targeted sampling of stockpiled topsoil on

site, will be assessed to determine whether additional growth media are necessary to enhance rehabilitation outcomes.

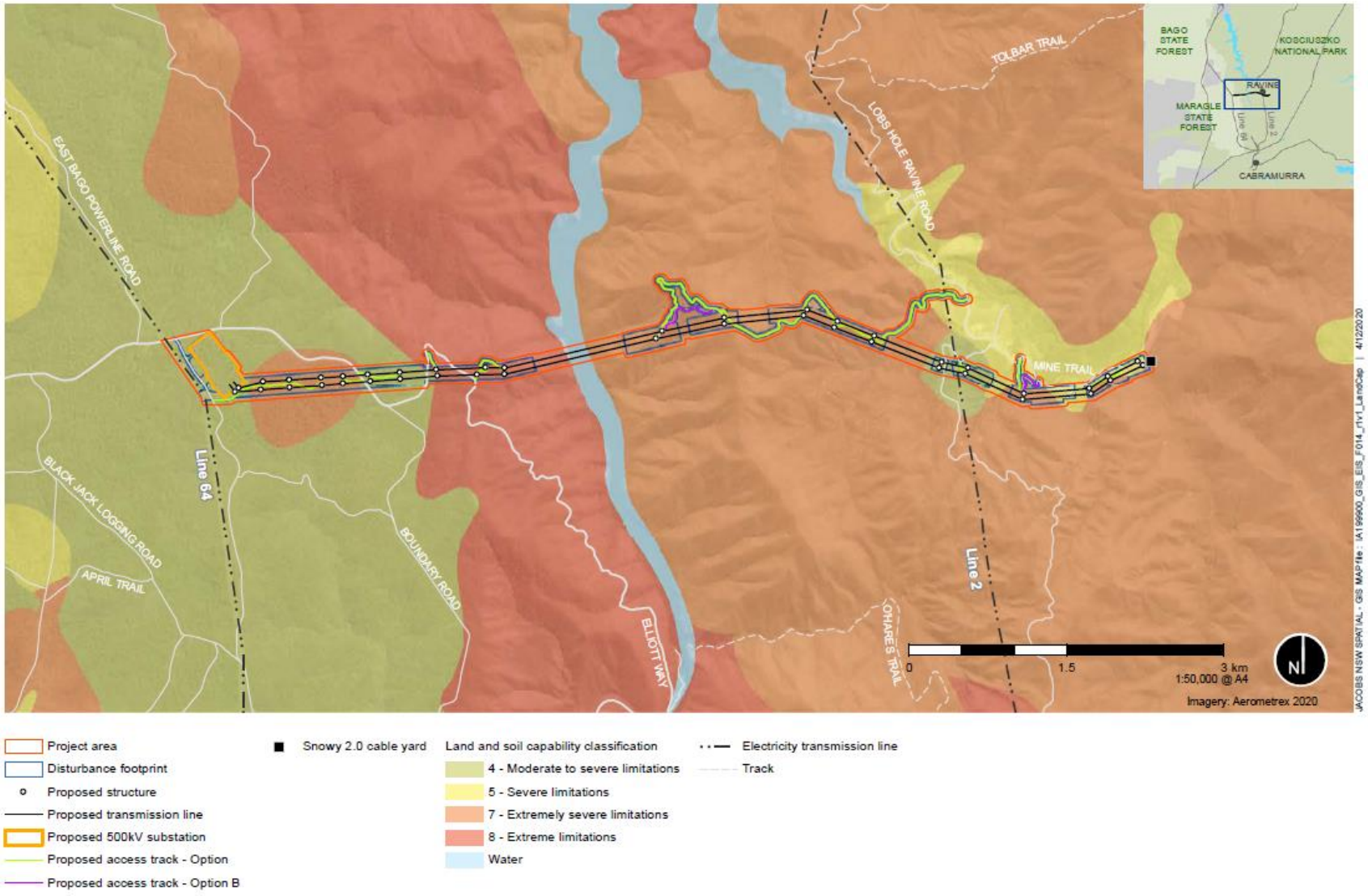


Figure 5-2 Land and Soil Capability Classes (Jacobs, 2020)

Sampling and analysis of topsoil resources will be conducted alongside preliminary geotechnical investigations to appropriately characterise the material prior to respreading. This will:

- Ensure that the soil quality is consistent with the proposed land use objective.
- Assist with estimating the amount of fertiliser and ameliorants required.
- Enable the blending of different soil types to achieve improved outcomes.

In order to achieve the above outcomes, soil testing will include the following parameters:

- Wettability.
- Chloride (soluble).
- Ca/Mg ratio.
- Exchangeable sodium percentage.
- Exchangeable cations:
    - Potassium.
    - Calcium.
    - Magnesium.
    - Sodium.
    - Aluminium.
- pH.
- Electrical Conductivity (EC).
- Particle Size Distribution (PSD).
- Exchangeable Sodium Percentage (ESP).
- Total Organic Carbon (TOC).
- Emerson Class Number.
- Total / Available Nitrogen.
- Total / Available Phosphorous.
- Ammonium.

5.1.6.2 OFFSITE GROWTH MEDIUM ALTERNATIVES

Off-site growth mediums can include soil, compost, mulch, peat moss, coconut coir, woodchip, perlite and sand. Some of these mediums can also be created onsite during the vegetation clearing phase, through mulching and chipping. As stated in Table 5-3, each medium offers different advantages for drainage, pH and nutrient availability. Therefore, site specific soil properties should be taken into consideration before choosing a growth medium.

It is not expected that the import of additional topsoil will be required, however, it the topsoil balance indicates a deficiency to successfully undertake rehabilitation further consultation will be undertaken with NPWS to determine requirements for importation of materials.

Table 5-3 Offsite growth mediums

Growth medium	Characteristics
Soil / Compost	• Rich in nutrients[1] • Sustainable • Weed free[2]
Peat Moss	• High water retention capability • Sterile • Acidic
Bark	• Resists decomposition • Beneficial for aeration and drainage • Effective for carbon storage
Coco Coir	• Free from fungus • High water retention capabilities • Beneficial for aeration
Rice Hulls	• Lightweight • Beneficial for aeration and drainage • Break down after a year
Perlite	• Beneficial for oxygen retention • Lightweight • Best when mixed 50/50 with another medium
Vermiculite	• pH neutral • Lightweight • Beneficial for water and nutrient retention
Pumice	• Porous • Lightweight • Beneficial for water and nutrient retention
Expanded clay pellets	• Reusable • pH neutral • Beneficial for increasing oxygen retention
Sand	• Inexpensive • Beneficial for increasing drainage

The above list is not exhaustive.

5.1.7 ECOSYSTEM AND LAND USE ESTABLISHMENT PHASE

5.1.7.1 SEED AND PLANTING MIX

This phase of rehabilitation would be undertaken in general accordance with the Seed Collection Methodology (SCM, Appendix E of the BMP).

[1] Where nutrients have been depleted through stripping and stockpiling, supplements may be required to support plant growth

[2] Appropriate hygiene reports and certifications will be obtained.

Native seed collected from site during the active phase may be used for rehabilitation purposes. If seed collection fails to generate the required volumes for rehabilitation, native seed from other regional locations may be sourced to supplement stocks, following Transgrid and NPWS approval. The species used for the individual planting of the riparian zone at Sheep Station Creek will be consistent with the existing vegetation and be sourced from local nursery stock.

Due to ongoing safety requirements associated with the Easement Clear Zone, rehabilitation will involve groundcover and low-growing (<4 m) shrub, grass and forb species (refer to Figure 5-2). The species used for each area will be consistent with that present prior to disturbance as per the PCT mapped for the area (refer to Appendix A for PCT mapping).

Indicative seed and planting mixes, suitable for rehabilitation via the preferred application techniques are discussed in Table 5-4, and outlined in Appendix C.

The seed mixes will consist of native species present prior to disturbance, as per the PCT mapped for the area, and supplemented with a cover crop species approved by NPWS to stabilise the site until the primary vegetation cover can be established. The seeds for the seed mixes will be collected from the relevant PCT, in line with the seed collection methodology included in the BMP and may be adjusted, based on seed availability, seed origin, application methodology and achieving post-construction PCT rehabilitation objectives. The mix and application will also be informed by Rehabilitation of former Snowy Scheme sites in Kosciuszko National Park (MacPhee & Wilks, 2013).

5.1.7.2 REHABILITATION METHODS

The Project involves the construction of a transmission line; therefore, the planting of trees or tall shrubs within the Project site presents a sustained risk to the operation of the asset. Unless directed otherwise by Transgrid, post-construction revegetation activities will primarily include the establishment of groundcovers and small shrubs.

A principal outcome of the rehabilitation process is to provide adequate groundcover of the soil surface so as to prevent erosive forces. Permanent hardstands and parking areas are to be suitably treated (i.e. gravel sheeting) and managed to inhibit any movement of materials but will not require rehabilitating.

The preferred methods for rehabilitation of the Project area will be the application of hydromulch seeding and the use of the existing seed bank that exists within the site won topsoil and mulch. Individual plantings (seedlings) will be undertaken if required and at the discretion and direction of Transgrid. Where monitoring results indicate that a TARP is required (Appendix B), rehabilitation methods will be revised, and additional controls implemented where required.

Table 5-4 outlines the rehabilitation methods and treatment type and the areas that they will be applied to are shown on the Rehabilitation Areas maps attached as Appendix A.5.

Table 5-4 Rehabilitation Methods, Treatment and Application Areas

Method	Description	Treatment	Application Area	Est. Area
Hydromulch Seeding	Hydromulching involves the application of a mixture of wood cellulose fibre, a binding chemical (tackifier), fertilisers, soil amelioration agents and seed as a slurry in water, onto	**Seed Mix 1** Native grasses and groundcovers with	Disturbed areas (primarily cut and fill batters) on the access track and tower pads that are sited under the	13.56ha

Method	Description	Treatment	Application Area	Est. Area
	disturbed ground to prevent erosion while supporting revegetation. Bonded Fibre Matrix applications may also be considered and are similar to hydromulching, but thicker, which allows for better performance if moderate to heavy rainfall or surface runoff occurs during the plant establishment period.	a temporary cover crop[3]	transmission line (ECZ).	
		Seed Mix 2 Native grasses and shrubs with a temporary cover crop3	Disturbed areas (primarily cut and fill batters) on the sections of access track that are situated outside of the transmission line (ECZ).	1.96ha
Mulching	Site generated mulch to ensure that disturbed areas are adequately protected from erosion.	**Mulching** Site generated mulch	Being a bushfire prone area, a layer of mulch will be applied to disturbed areas around the switchyard and office compound to ensure a minimum vegetation clearance of 10m is maintained. The Asset Protection Zone (APZ) around the substation will also be mulched.	2.30 ha
Hydromulch seeding and individual planting into mulched areas or environmental matting	Container stock planting to riparian areas and bridge abutments will be protected by a layer of mulch or environmental matting and supplemented with hydromulching from Seed Mix 1.	**Planting Mix 1** Native grasses, groundcovers and shrubs	This treatment is proposed for the riparian area (including bridge abutments) of Sheep Station Creek.	0.07 ha

A summary of site preparation and maintenance activities to be carried out for each of the rehabilitation areas are described in Appendix D of this report.

[3] Competition with native species by using a cover crop is expected to be minimal. Any impact is expected to be outweighed by the provision of ground cover assisting with erosion and sediment control and long-term establishment of native vegetation through soil improvement and appropriate micro-climate.

5.1.7.3 RIPARIAN VEGETATION

Construction and operation of the Project has potential to indirectly impact water quality of habitat occupied by the Booroolong Frog. To protect Booroolong Frog habitat, a 50 m exclusion zone (refer to 0.3) will be adopted around the tributaries that flow downhill into the Yarrangobilly Creek. However, parts of the 50 m exclusion zone occur within clearing zones (refer to 0.1). There will be no use of heavy machinery in the riparian zones (Jacobs, 2020).

Due to the risk of indirect impacts from increased runoff at these locations, strict sediment control measures have been detailed in the SWMP. In addition to this, rehabilitation of riparian vegetation will be conducted, in accordance with Section 5.1.7 of this RMP.

Regular monitoring and inspections of these locations will occur, in accordance with the Booroolong Frog Monitoring Program.

5.1.7.4 VEGETATION PROTECTION

Browsing animals

Browsing animals (whether native or introduced) can have detrimental effects on regenerating vegetation, through grazing pressure, weed spread and increased erosion.

The vegetation protection program outlined in Table 5-5 will be implemented during rehabilitation.

Table 5-5 Vegetation Protection Program

Stage	Measures

Prior to Rehabilitation	• Inspect the site before planting or hydromulching to determine grazing, browsing or foraging risks from:
	  ○ Wild Horses
	  ○ Deer
	  ○ Pigs
	  ○ Rabbits
	  ○ Wallabies / Kangaroos
	  ○ Wombats
	  ○ Lyrebirds
	• Determine protection measure to be used based on identified risk (Refer to Appendix D)

During Rehabilitation	• Implement determined protection measure (Appendix E).
Post Rehabilitation	• Inspect rehabilitated areas weekly to identify if protection measures are effective • Implement additional controls if protection measures are ineffective • Protection measures to be implemented for a minimum of 6 months

Options for vegetation protection measures are outlined in Appendix E of this report.

Weed control

A Weed and Pathogen Monitoring Program (WPMP) has been developed in consultation with NPWS and is available as Appendix H of the BMP.

As described in the WPMP, weed management will involve:

- Regular inspections of the Project site, to identify potential weed infestations
- The identification and removal (or spraying) of weedy areas, as required.

5.2 ECOSYSTEM AND LAND USE DEVELOPMENT

This phase of the rehabilitation process generally involves ongoing monitoring and maintenance, as well as land management activities.

Monitoring activities will be undertaken to comply with the rehabilitation objectives outlined in Tables 4-1 and 4-2 of this RMP.

Maintenance activities will be informed by ongoing rehabilitation monitoring, and may involve, but are not limited to:

- Weed control.
- Supplemented rehabilitation.
- Browsing animal control.
- Bushfire management.
- Maintaining erosion and sediment controls.
- Minor earthworks, in response to erosion occurring on site. This would include contour banks and diversion channels.

5.2.1 VEGETATION ZONES (MAINTENANCE)

Vegetation management zones have been designated for the Project easement infrastructure, with these Project zones provided in APPENDIX A: Project Maps. A cross-section of the easement has also been provided in Figure 5-3.

Easement Clearing Zone (ECZ)

In accordance with the BMP, shrubs and vegetation < 4 m heigh will be retained during construction of the Project. Vegetation > 4 height will be removed, due to safety risks associated with the transmission line.

Natural regeneration within the ECZ zone is expected to occur rapidly, due to partial clearing requirements (as described above). However, areas impacted by plant or equipment resulting in vegetation removal and exposed surfaces will be rehabilitated, in accordance with rehabilitation methods outlined in section 5.1.7.2.

Ground disturbances may occur during glider pole installation within the ECZ. Potential rehabilitation outcomes will be confirmed following site-based assessment by potential suppliers and in consultation with RDD and NPWS.

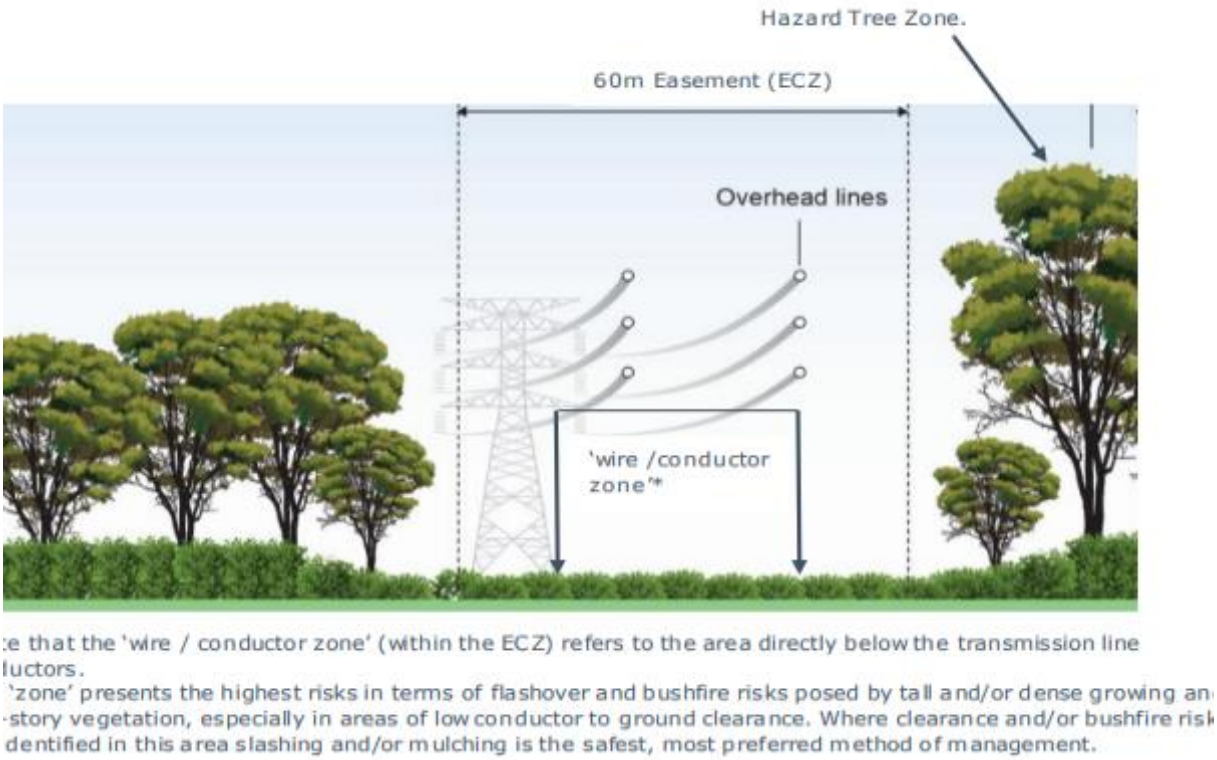


Figure 5-3 Cross section of a typical easement showing the relative areas of vegetation management (Transgrid 2021)

Hazard Tree Zone (HTZ)

Select trees (hazard) which pose a considerable bushfire risk and risk to the asset will be removed during the construction phase. Due to this requirement, it is not expected that ground disturbing works will occur within this area and as such, rehabilitation is not expected to occur. Hazard trees will be assessed and maintained during ongoing operation.

Hand Clearing Zone (HCZ)

HCZ are defined sections of the ECZ (described above) that are not safe or practically accessible for machine clearing during construction. Due to hand clearing/felling that will occur within these areas and ground vegetation remaining intact, it is not expected that rehabilitation will occur within this zone.

5.3 REHABILITATION MEASURES

Measures to be undertaken during site rehabilitation activities are outlined in Table 5-6.

Table 5-6 Rehabilitation measures to be undertaken during the Project

Id	Measure/requirement	Resources needed	When to implement	Responsibility	Reference
Pre-rehabilitation					
RM1	The Rehabilitation Management Plan will be prepared by a suitably qualified and experienced person in consultation with the NPWS, FCNSW, RDD, EPA, NSW DPI and TfNSW.	This Plan	Pre-construction	Transgrid SEA	BDAR BIO3
RM2	Areas to be rehabilitated will be identified on as-built designs and within this document.	This plan (RMP) BDAR BMP	Pre-construction	Transgrid SEA	BDAR BIO3
RM3	All stockpile areas will be prepared to receive materials that will be excavated during the construction process. This will include bunding with robust erosion and sediment controls, the removal of woody vegetation from most areas and the removal of all organic material.	ESCP Environmental inspection records	During construction	SEA	Best practice
RM4	In areas to be fully cleared, consisting of predominantly native vegetation, biomass should be scraped with a machine blade and stockpiled for reuse. If possible, the topsoil and roots of most plants should be left in situ.	Environmental inspection records	During construction	SEA	Best practice
RM5	Stockpile bunding will be functional and contain all materials within the stockpile area	ESCP Environmental inspection records	During construction	SEA	Best practice
RM6	All stockpiled materials to be classified into categories for re-use onsite, rehabilitation (or final landform) and drainage rock.	Environmental inspection records	During construction	SEA	Best practice

Id	Measure/requirement	Resources needed	When to implement	Responsibility	Reference
RM7	A Site Environmental Plan (or markup) will be provided to earthwork contractors of what materials are to be stockpiled where and provide temporary signage at stockpile areas to provide clarity to all personnel.	Environmental inspection records	During construction	SEA	Best practice
RM8	Weeds are to be managed in accordance with the Weed and Pathogen Control Monitoring Program (WPCMP, BMP Appendix H). It is recommended that weedy topsoils are treated and managed in line with the WPCMP.	Weed and Pathogen Monitoring Program	During construction	SEA	Best practice
RM9	Vegetation stockpiles from Project related clearing will be spread following the respreading of topsoil.	Environmental inspection records	During construction	SEA	Best practice
RM10	Local topsoil stockpiles will be spread over the disturbed sites to utilise native seed banks within the topsoil.	Environmental inspection records	During construction	SEA	Best practice
RM11	Topsoil and subsoil generated during construction will be stockpiled separately on-site to be used for rehabilitation. Stockpiles will be managed according to best management practices as outlined in the Soil and Water Management Plan (SWMP).	Environmental inspection records	During construction	SEA	BDAR BIO3
Rehabilitation activities					
RM12	Only native vegetation species, excluding temporary sterile cover crops will be utilised in rehabilitation works.	Environmental inspection records Seed Collection Methodology	During construction	SEA	BDAR BIO3
RM13	All rehabilitation activities will be undertaken in accordance with the SWMP and Erosion and Sediment Control Plans (ESCPs) to prevent soil loss and erosion during works.	SWMP ESCP	During construction	SEA	Best practice

Id	Measure/requirement	Resources needed	When to implement	Responsibility	Reference
RM14	After earthworks are completed, total clearing areas will have an appropriate organic layer spread over them. If there any slopes greater than 35% and covering a distance of 20m or more, small cross drains may be used across the contour. Moderate to steeply sloping ground (where machinery access is permitted) will be cross ripped (scarified) to aid the binding of mulch or topsoil to sloping ground.	Environmental inspection records	During construction	SEA	Best practice
RM15	Soil loss will be prevented by immediate stabilisation of exposed surfaces with soil binder, jute mesh, mulch or similar.	ESCP Environmental inspection records	During construction	SEA	BDAR BIO3
RM16	Booroolong Frog habitat areas will be monitored for coarse sediment and restoration of riparian vegetation during rehabilitation. Transgrid may advise tailored plantings to supplement this as required, particularly within Sheep Station Creek Bridge works area	Booroolong Frog Monitoring Program Environmental inspection records	During construction	Transgrid	BDAR BIO3
RM17	Areas of total clearing will be either lightly scarified by the last pass of the machinery on site or 'roughed up' so that the soil is not left smooth and compacted. Preparation of soil surfaces will remain consistent regardless of the methodology (e.g. direct seeding/hydromulching).	Environmental inspection records	During construction	SEA	Best practice
RM18	Mulching of the midspan areas and hydomulching of cut and fill batters will include salvaged native seed stock, or shall be supplemented with approved offsite seed, in line with the Seed Collection Methodology.	Seed Collection Methodology	During construction	SEA	Best practice
RM19	Where partial disturbance & mulching is required, site generated mulch will be used in the first instance, preferably from the location it is generated (due to the PCT seed bank). Failing that, organic weed free mulch (as detailed in Section 5.1.7 above) will be used where hydromulching is	Environmental inspection records	During construction	SEA	Best practice

Id	Measure/requirement	Resources needed	When to implement	Responsibility	Reference
	deemed unsuitable. Such mulch will be tacked or bound to the ground if wind disturbance is likely. Stockpiled woody vegetation will then be placed over the mulch where available.'				
RM20	Track rehabilitation will be at the direction of Transgrid in consultation with NPWS, subject to ongoing operational usage requirements and as agreed upon in the LTRS once developed and approved.	Environmental inspection records	During construction	Transgrid	Best practice
RM21	Road restoration will include reinstating berms, roll-overs, and drainage features, such as drains and turn-outs) which may have been removed during Project use of tracks.	Environmental inspection records	During construction	SEA	Best practice
RM22	Where it has been determined that an access track will remain permanently, the track will encompass adequate drainage features (such as a crowned surface) to avoid erosion.	ESCP Environmental inspection records	During construction	SEA	Best practice
RM23	The rehabilitation of roads in KNP will remain consistent with the Long Term Roads Strategy. Once the Long-Term Roads Strategy has been approved and implemented, this Plan will be updated, as required.	Long Term Roads Strategy	During construction During operation	Transgrid	B48
RM24	Rehabilitation activities within Kosciuszko National Park will comply with the rehabilitation objectives and ecological rehabilitation objectives provided in the Conditions of Consent.	This Plan Booroolong Frog Monitoring Program SWMP	During construction During operation Post-construction	Transgrid	B48
RM25	The Bago State Forest site will be rehabilitated in accordance with the rehabilitation objectives provided in the Conditions of Consent.	This Plan	During construction During operation Post-	Transgrid	B48

Id	Measure/requirement	Resources needed	When to implement	Responsibility	Reference
			construction		
RM26	Rehabilitation of the site, including the removal of all temporary infrastructure, creation of landforms and narrowing of roads, will be completed within 3 years of the completion of construction. The ecological rehabilitation of the site, apart from areas used for operations, will be completed within 20 years of completing construction.	This Plan Booroolong Frog Monitoring Program SWMP	During construction Post-construction	Transgrid	B48
RM27	The final rehabilitation of the site, including the removal of all remaining infrastructure, will be completed within 3 years of decommissioning the development. The ecological rehabilitation of these areas will be completed within 20 years of decommissioning the development.	This Plan Booroolong Frog Monitoring Program SWMP	During operation Post-construction	Transgrid	B48
Post-rehabilitation					
RM28	A Trigger Action Response Plan (TARP) (Appendix B) will be implemented during adaptive monitoring as required.	Appendix B	During construction During operation	SEATransgrid	BDAR BIO3
RM29	NPWS and RDD will be notified that remedial actions have been triggered in the event that the TARP is implemented.	Appendix B	During construction During operation	SEA	BDAR BIO3
RM30	Monitoring of rehabilitated areas will occur one week, one month, 6 months and 12 months after rehabilitation and thereafter for 2 more years.	Monitoring records	During construction During operation	SEA Transgrid	Best practice

Id	Measure/requirement	Resources needed	When to implement	Responsibility	Reference
RM31	Initial monitoring will assess the placement of mulches, any disturbance or soil erosion processes occurring and weed seed germination.	Monitoring records	During construction	SEA	Best practice
RM32	Six months after rehabilitation, the site will be monitored for seedling germination and % of weeds versus natives. Monitoring results will be provided to Transgrid, RDD and NPWS.	Monitoring records	During construction During operation	SEA	Best practice
RM33	Twelve months and annually thereafter for 5 years after rehabilitation, the site will be monitored for the occurrence of weeds, the growth and establishment of native species and the presence of bare ground. Monitoring for operational vegetation management will be undertaken in accordance with the OVMP once developed.	Monitoring records	During construction During operation	Transgrid	Best practice
RM34	Any potential erosion processes occurring (if any) will be immediately addressed and concentrated water flows will be redirected wherever possible.	Monitoring records	During construction During operation	SEA	Best practice
RM35	Sediment controls will be installed as required during monitoring of rehabilitated areas.	Monitoring records	During construction During operation	SEA	Best practice
RM36	Weed control, post rehabilitation (during the defects liability phase) will be undertaken in consultation with Transgrid. An assessment with recommendations may be part of this consultation.	Monitoring records	During construction During operation	Transgrid	Best practice

6 PROGRESSIVE REABILITATION MONITORING

The PC will be responsible for implementing monitoring of hydromulched and/or hand seeded areas (progressive rehabilitation) for the following periods post application and during construction:

- One Week
- One Month
- 6 Months
- 12 Months
- Additional monitoring events will be conducted after periods of high rainfall, to assess the effectiveness of erosion and sediment controls

The method of monitoring during these periods will be conducted in accordance with UGL Rehabilitation Monitoring Checklist (UGLMS-4-2172) for progressive rehabilitation.

The primary focus for progressive rehabilitation monitoring will be within TSZ and ATZ zones (refer to Appendix A.1) to align with planned rehabilitation areas within Appendix A.5. As described in Section 5.2.1, natural regeneration is expected within ECZ zones, however, where rehabilitation has occurred in areas impacted by plant or equipment these will be monitored in accordance with the UGL Checklist.

Performance indicators for the above noted monitoring phases will include:

- Evidence of bare earth.
- Evidence of erosion.
- % of weed growth and establishment.
- % of ground cover.

Monitoring will involve the establishment of a $1m^2$ quadrat at each Tower location and centrally along access tracks or rehabilitated areas in ECZ zones. The survey method will include:

- Stake the RMP for easy field reference (using sighter post).
- Take a photo of a quadrat on the ground with the sighter post as the centre point.
- Take a photo of the landscape with the stake as the centre point and mid picture in all compass directions.
- Visually inspect for erosion, weed and pests and landform consistency.
- Identify the dominant vegetation species that characterise the disturbed community in a $1m^2$ quadrat with the sighter post as the centre point and compare with a reference quadrat in the adjoining vegetation community/undisturbed area. (i.e. in nearby ECZ zone outside total clear areas).
- Visually inspect ground cover and germination.
- Complete the Rehabilitation Monitoring Checklist at each RMP.

The checklists for each monitoring phase are detailed in Appendix F: Rehabilitation Monitoring Checklists.

Notification to NPWS, FCNSW, RDD and DPHI will occur in the event of non-conformance with the metrics outlined within this Plan. This process is outlined in a Trigger Action Response Plan (TARP), provided in Appendix B: Trigger Action Response Plan.

The proposed monitoring schedule for construction is provided in Table 6-1. This RMP will be updated to include details on reference sites for ECZ zones and monitoring methods during maintenance and operational phases prior to commencement. Long-term rehabilitation monitoring would be consistent with the objectives provided in Schedule 2, Condition 47 (refer to Section 4.1) and the rehabilitation objectives listed in Table 4-1 and completion criteria outlined in Table 4-2.

Table 6-1 Construction Growth Stage Rehabilitation Monitoring Program

Timing (post-rehabilitation)	Details of monitoring to be undertaken	Performance indicator	Relevant Trigger Action Response Plan Factors
One week	Assess: • Rehabilitation treatment application • Erosion and sediment controls • Browsing animal presence / absence	• No areas of bare earth • No erosion is evident • Evidence of treatment application present (soil binder, hydromulching) • No evidence of damage from browsing animals	• Groundcover • Erosion Control • Browsing Animals
One month	Assess: • Mulch placement • Erosion and sediment controls • Weed germination • Browsing animal presence / absence • Native vegetation growth	• No areas of bare earth >10m^2 • No erosion is evident • < 10% of vegetation consists of weedy growth • < 10% of native plants show evidence of browsing, or comparable to the reference quadrat. • Presence of vascular plant species within the rehabilitated area	• Groundcover • Erosion Control • Weeds • Browsing Animals • Species Composition
Six months	Assess: • Mulch placement • Erosion and sediment controls • Weed germination • Browsing animal presence / absence • Native vegetation growth (compare % native / weedy growth)	• Minimum ground cover of 60%, or comparable to the reference quadrat. • No erosion is evident • The number and ground cover of weed species is comparable to, or less than the reference quadrat. • < 10% of native plants show evidence of browsing, or comparable to the reference quadrat. • Presence of native vascular native plant species within the rehabilitated area	• Groundcover • Erosion Control • Weeds • Browsing Animals • Species Composition

Timing (post-rehabilitation)	Details of monitoring to be undertaken	Performance indicator	Relevant Trigger Action Response Plan Factors
Twelve months	Assess: • Mulch placement • Erosion and sediment controls • Weed germination • Browsing animal presence / absence • Evidence of invertebrate use • Native vegetation growth (compare % native / weedy growth)	• Minimum ground cover of 70%, or comparable to the reference quadrat. • No erosion is evident • The number and ground cover of weed species is comparable to, or less than, the reference quadrat. • < 10% of native plants show evidence of browsing, or comparable to the reference quadrat. • Invertebrate observations (e.g. ants, saw fly, wasps etc.) within the site • Species belonging to the target PCT are present within the site	• Groundcover • Erosion Control • Weeds • Browsing Animals • Species Composition

7 ROLES AND RESPONSIBILITES

Ecological rehabilitation specific roles and responsibilities to be undertaken by UGL personnel with instruction from the Site PM, as per the RMP. As detailed in section 5.3 of this RMP, the SEA and Transgrid are responsible for implementing the measures in this Plan.

The roles and responsibilities of the SEA includes, but is not limited to:

- Ensuring the UGL commitment to the RMP and regulatory approvals are realised.
- Implementing the RMP for the works, including the applications of assigned mitigations.
- Facilitating the review and update of the RMP, as required.
- Developing site specific environmental plans for the benefit of work crews engaging with environmental aspects.
- Developing or improving environmental forms, guidelines, procedures, or checklists in response to audits, non-conformances and internal reviews to ensure continual improvement during construction.
- Maintaining and completing required environmental registers required by the Project.
- Utilizing the UGL Environmental Management System (EMS) to support environmental monitoring and outcomes.
- Facilitating environmental inductions, training and awareness as required, including with subcontracted personnel.
- Arranging environmental equipment and resources to sufficiently address environmental risk, as supported by the Construction Manager, or as otherwise delegated under contract.
- Promoting workplace environmental culture and awareness through posters, toolbox talks, pre-starts, access to environmental documentation and person to person discussions.
- Enabling Project personnel and the Client to access the environmental management plans and contract environmental requirements, at all times.
- Establishing working relationships with construction personnel for environmental outcomes.
- Having regular communication with the Project and Construction Managers to advise environmental performance and offer support for environmental outcomes.
- Frequently assessing work areas for environmental compliance (site inspections) and addressing non-conformances identified with relevant parties.
- Checking environmental controls for required outcomes and address deficiencies and improvement opportunities.
- Attending all high-risk environmental activities and ensuring mitigations have been applied.
- Engaging effectively with supervisors and leading hands-on environmental issues to ensure environmental commitments or improvements are realized by work crews and subcontractors.
- Arranging environmental corrective actions with the construction team and applying timeframes and tracking for closeout. Relevant items to be entered into Synergy.
- Maintaining environmental scheduling for key environmental outcomes via the UGL CheckIt planner.
- Ensuring environmental incident readiness and capability to respond, particularly with regard to spill management.

- Supporting environmental incident events for immediate mitigation, and notification of such events to required parties.
- Leading or participating in environmental incident investigations, and ensuring incidents are entered into Synergy and/or Transgrid's equivalent incident management system.
- Aiding incident remedial activities and motivating preventative actions to ensure incident closeout.
- Performing or facilitating environmental monitoring and sampling as required by the Project.
- Verifying environmental works, hold points and invoicing as required.
- Supporting monthly environmental reporting.
- Engaging in environmental risk management and mitigation, starting with the Aspects / Impacts register (refer to Appendix F of CEMP).
- Keeping up to date with environmental laws, permit conditions, and scope changes to ensure items are not missed.
- Gathering supporting evidence for upcoming audits and supporting the auditing process as best practicable.
- Engaging and facilitating Environmental Representative interaction with the Project works.
- Engaging with Project shutdowns and demobilization to ensure all relevant environmental requirements are met.

Transgrid's environmental accountability for the RMP includes, but is not limited to:

- Fulfilling the Proponent's obligations under the Conditions of Approval for the Project works.
- Providing UGL visibility and transparency to Project environmental requirements and commitments, to enable outcomes.
- Advising or enabling environmental requirements and considerations in a timely manner.
- Reviewing and endorsing the RMP for approval or update.
- Initiating and participating in Project meetings, workshops, and consultations to facilitate outcomes throughout the Project.
- Setting up and managing a Project complaint handling and resolution process, as detailed by the Project CoAs.
- Making Project approvals and environmental documents publicly accessible, as detailed by the Project CoAs.
- Regularly monitoring environmental performance, and maintaining visibility on work sites for environmental compliance with regard to the RMP.
- Advising the Department and Stakeholders on Project environmental performance.
- Duty to Notify and timely reporting of environmental incidents and non-compliances to the Department, and as otherwise required.
- Ensuring all Project activities (including those performed by the PC) are carried out in an environmentally responsible way, without environmental harm, and in compliance with the Project CoAs.
- Engaging independent environmental auditing, and disclosure of findings to the Department, as detailed by the Project CoAs.

- Engaging a contract Superintendent that is familiar with the Projects environmental requirements and that in the event of contractual ambiguity or discrepancy an informed interpretation will be made, and the PC instructed accordingly.
- Advising the Department and Stakeholders of key timeframes and dates associated with the RMP.
- Validating the capabilities, proficiencies and performance of parties engaged for the works.
- Engaging, nominating, and supporting a Project Site Environmental Advisor for the works, as required by the CoAs.

The roles and responsibilities for all personnel involved in the Project have been detailed in Section 4.11 of the CEMP.

7.1 TRAINING

Training will be provided to all personnel involved in construction and management phases of the Project including the relevant sub-contractors through inductions, toolbox talks and targeted training.

All employees, contractors, sub-contractors and visitors to the Project site will undergo site induction training relating to biodiversity management issues. The induction training will address elements related to biodiversity management including:

- Existence and requirements of this RMP and associated documentation.
- Relevant legislation.
- Requirements of due diligence and duty of care.
- Conditions of environmental licences, permits and approvals.
- Potential environmental emergencies on site and the emergency response procedures.
- Reporting and notification requirements for pollution and other environmental incidents or reportable events, including identification of contaminated land and damage and maintenance to environmental controls.
- High risk activities and associated environmental safeguards.
- Controls when working in or near environmentally sensitive areas.
- Specific environmental management requirements and responsibilities.
- Mitigation measures for the control of environmental issues.
- Incident response and reporting requirements.
- The existence of Environmental Work Method Statements (EWMS) for high-risk activities.
- Information relating to the location of environmental constraints.

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

7.2 MONITORING AND INSPECTION

Requirements and responsibilities in relation to monitoring and inspections, post-rehabilitation, are detailed in Section 6 of this Plan.

7.3 REPORTING

Reporting requirements for the RMP are detailed in Table 7-1 below.

Table 7-1 Reporting requirements.

Report	Requirement	Timing	Responsibility	Recipient
Periodic post-rehabilitation monitoring and inspection reports	Report prepared to summarise findings of monitoring and inspections, as detailed in section 6 of this RMP.	• Immediately post-rehabilitation • One week post-rehabilitation • 1 month post-rehabilitation • 6 months post-rehabilitation • 12 months post-rehabilitation	SEA	Transgrid
		• Annually post-rehabilitation for 5 years, with frequency to be reviewed thereafter	Transgrid	NPWS FCNSW RDD
Post-rehabilitation monitoring and inspection reports	Report prepared to summarise findings of inspections after a high rainfall event	As required	SEA	Transgrid
Non-conformance notification report	Report prepared and submitted within 7 days of a non-conformance being identified onsite	As required	SEA/Transgrid	Transgrid NPWS FCNSW RDD

7.4 AUDITING

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this sub plan and other relevant approvals, licenses and guidelines.

Flora and fauna management should be considered within any environmental audit of impacts undertaken during the construction phase.

Internal audits

Internal audits are to be carried out within three (3) months of commencing work onsite and then at least every six (6) months after that. These audits will be risk-based and verify that the work under the contract complies with the CEMP, sub-plans and approval requirements. More frequent auditing may occur if environmental checks indicate major deficiencies with environmental management of the site.

Internal audit reports would be submitted to Transgrid within ten (10) working days of the audit. A final audit report will be submitted to the principal within five working days of the contract completion date.

Refer to Section 9.3 of the CEMP for detailed information regarding internal audit requirements.

External audits

Relevant external audits, required for the Project, have been summarised below. Refer to Section 9.3 of the CEMP for detailed information regarding these external audits.

- **Infrastructure Approval -** In accordance with Condition C10 of the infrastructure Approval, Independent Audits of the Project must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020).
- **EPBC Approval** - In accordance with Condition 28 of the EPBC Approval, Transgrid must ensure that an independent audit of compliance with the conditions is conducted for every five-year period following the commencement of the Action until this approval expires, unless otherwise specified in writing by the Minister.

8 REVIEW AND IMPROVEMENT

8.1 CONTINUOUS IMPROVEMENT

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against the rehabilitation objectives provided in

Table 4-1 of this RMP.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

8.2 RMP UPDATES AND AMENDMENTS

The processes described in the CEMP may result in the need to update or amend this Plan. This will occur as needed.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure - refer to Section 11 of the CEMP.

9 REFERENCES

DECC. (2007). *Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park.* Department of Environment and Climate Change NSW.

DECC (2008a). Managing Urban Stormwater: Soils and Construction. Volume 2A: Installation of Services. NSW Government, Sydney.

DECC (2008b). Managing Urban Stormwater: Soils and Construction. Volume 2C: Unsealed Roads. NSW Government, Sydney

DPI. (2018). *NSW Weed Control Handbook - A guide to weed control in non-crop, aquatic and bushland situations.* 7th edition

https://weeds.dpi.nsw.gov.au/Weeds/OxeyeDaisy#control

DPIE. (2007). *Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park.* NSW Department of Planning, Industry and Environment. Retrieved from https://www.environment.nsw.gov.au/research-and-publications/publications-search/rehabilitation-guidelines-for-the-resort-areas-of-kosciuszko-national-park

Good, Rodger. (2006). *The Australian Alps Rehabilitation Manual - A guide to ecological rehabilitation in the Australian Alps. Prepared for the Australian Alps Liason Committee.*

Jacobs. (2020). *Snowy 2.0 Transmission Connection Project EIS.* Jacobs Pty Ltd.

Jacobs. (2022). *Biodiversity Development Assessment Report.*

Landcom (2004). *Managing Urban Stormwater: Soils and Construction*. Volume 1. NSW Government, Sydney.

MacPhee, Liz (2013). Green Book Rehabilitation Field Guide. Published by Australian Alps Liason Committee

MachPhee, Liz (2021). *The Gold Book - How to Select, Plan and Manage Alpine and Sub-Alpine Plants for* Rehabilitation. Published by Australian Alps Liason Committee.

MacPhee , E., & Wilks, G. (2013). Rehabilitation of former Snowy Scheme sites in Kosciuszko National Park. *Ecological Management and Restoration Vol 14*, 159-171.

Murrumbidgee Landcare. (2023). *Ecological Recovery after the Dunn's Road Bushfire*. Retrieved from NSW Landcare Gateway: https://landcare.nsw.gov.au/groups/murrumbidgee-landcare-inc/ecological-recovery-after-the-dunns-road-bushfire/

NPWS. (2006). *Kosciuszko National Park - Plan of Management.* National Parks and Wildlife Service.

NPWS. (2020). *National Parks & Wildlife Service*. Retrieved from Kosciuszko National Park 2020 Fire Recovery, NSW: https://fnpw.org.au/project/kosciuszko-national-park-2020-fire-recovery/

NSW DPIE (2025). *Murrumbidgee Catchment - Water* Storages. Department of Planning, Industry and Environment. *https://water.dpie.nsw.gov.au/about-us/learn-about-water/basins-and-catchments/catchments/murrumbidgee.*

NSW Resource Regulator (2021). *Guideline: Rehabilitation risk assessment*. Version 1.

NSW Resource Regulator (2023). *Guideline: Rehabilitation objectives and rehabilitation completion criteria*. Version 4.

NSW Resource Regulator (2024). *Form and Way: Rehabilitation management plan for large mines*. Version 2.

NSW Resource Regulator (2024). Guideline: Form and way for rehabilitation objectives statement, rehabilitation completion criteria statement and final landform and rehabilitation plan for large mines. Version 3.

SLR. (2022). *Main Works Snowy 2.0 Rehabiliation Management Plan.* SLR Consulting.

TransGrid. (2021). *Appendix B Biodiversity Development Assessment.*

TransGrid. (2021, February). *Environmental Impact Statement: Snowy 2.0 Transmission Connection Project - Volume 2.*

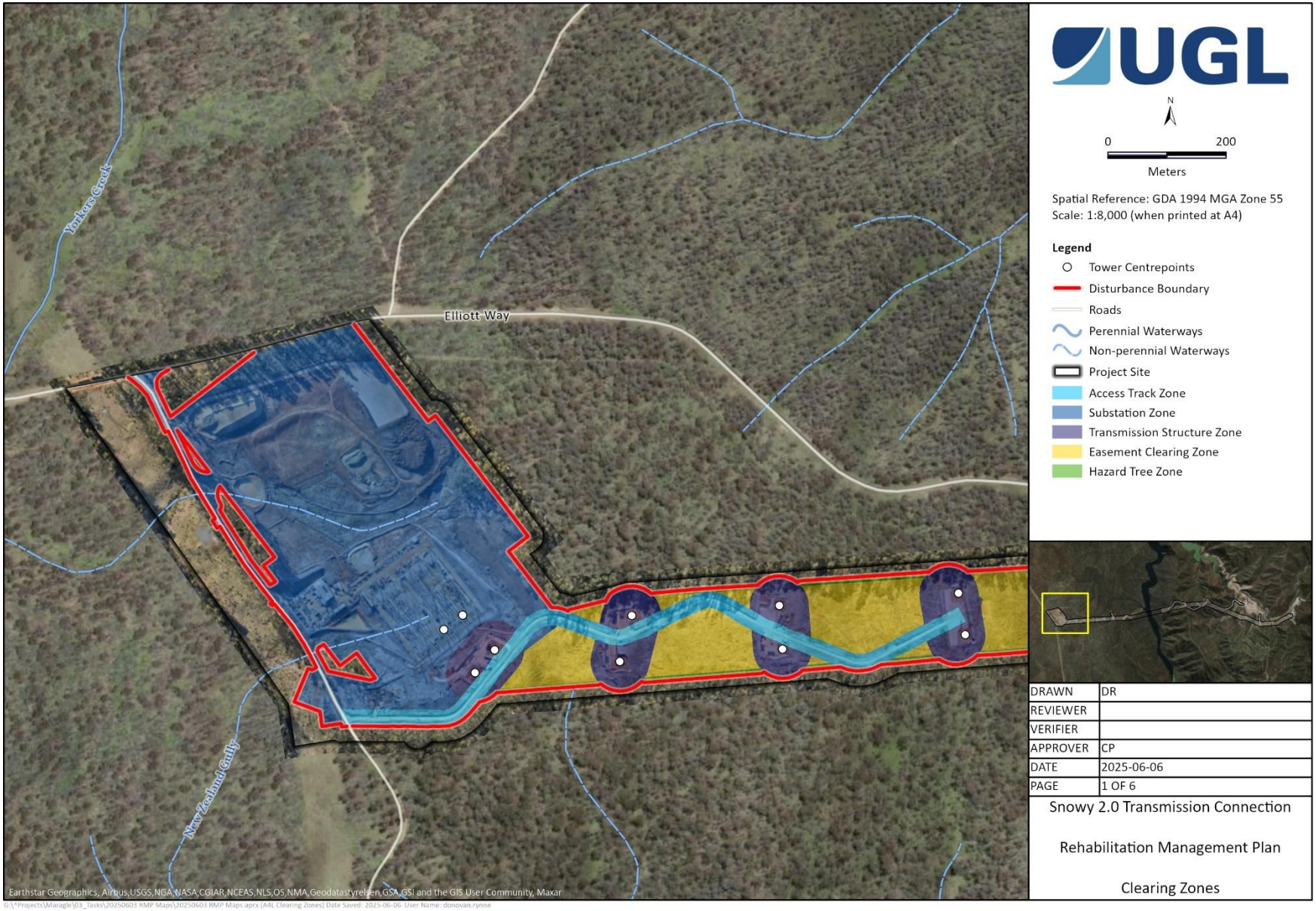
UGL. (2024a). *Snowy 2.0 Transmission Connection: Maragle 330kV Switching Station and 330kV Transmission Line Connections CEMP* (3200-0645-PLN-012-CEMP).

UGL. (2024b). *Snowy 2.0 Transmission Connection: Maragle 330kV Switching Station and 330kV Transmission Line Connections BMP* (3200-0645-PLN-017-CEMP-BMP).

UGL. (2024c). *Snowy 2.0 Transmission Connection: Maragle 330kV Switching Station and 330kV Transmission Line Connections SWMP* (3200-0645-PLN-021-CEMP-SWMP).

APPENDIX A: PROJECT MAPS

A.1 CLEARING ZONES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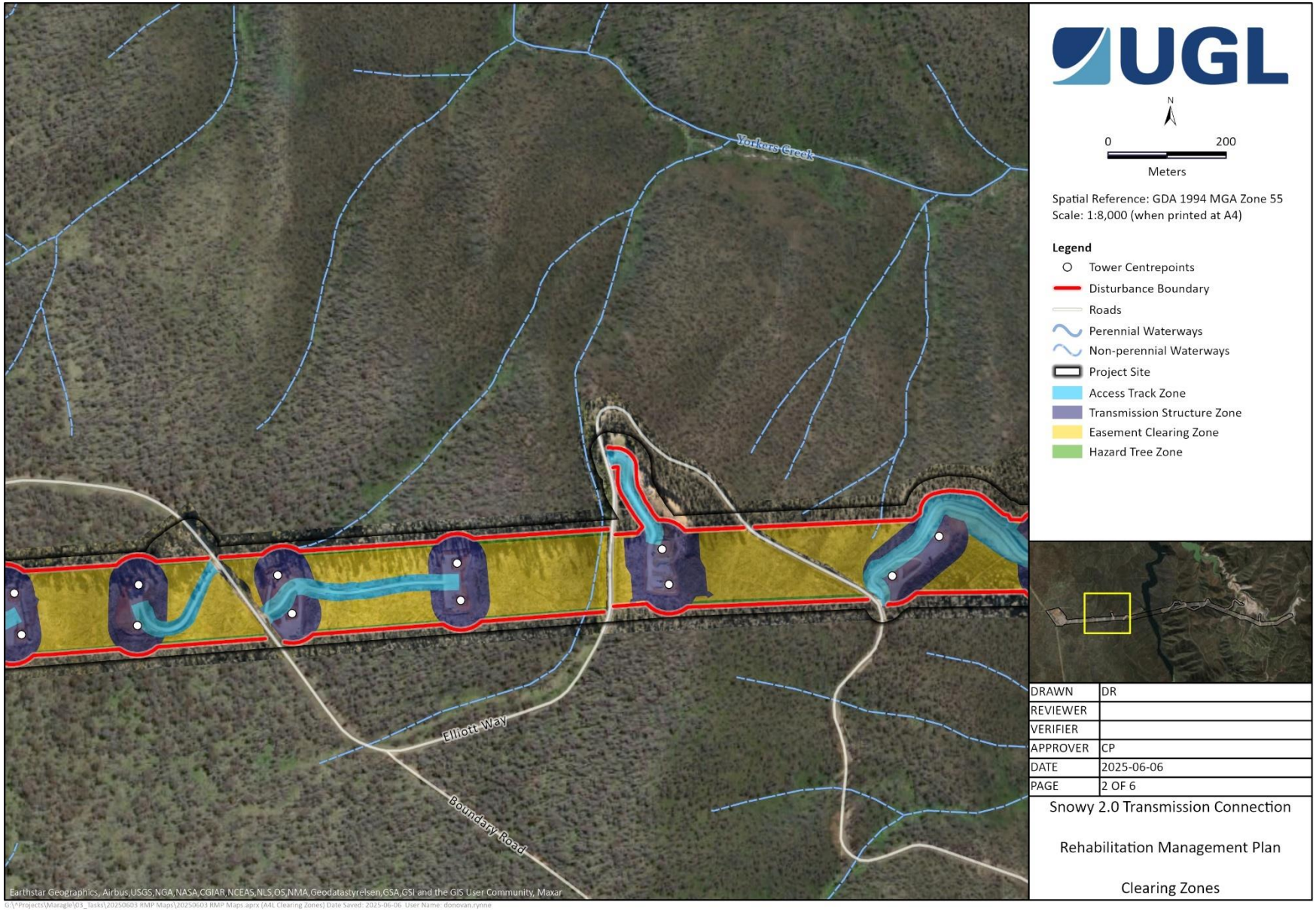
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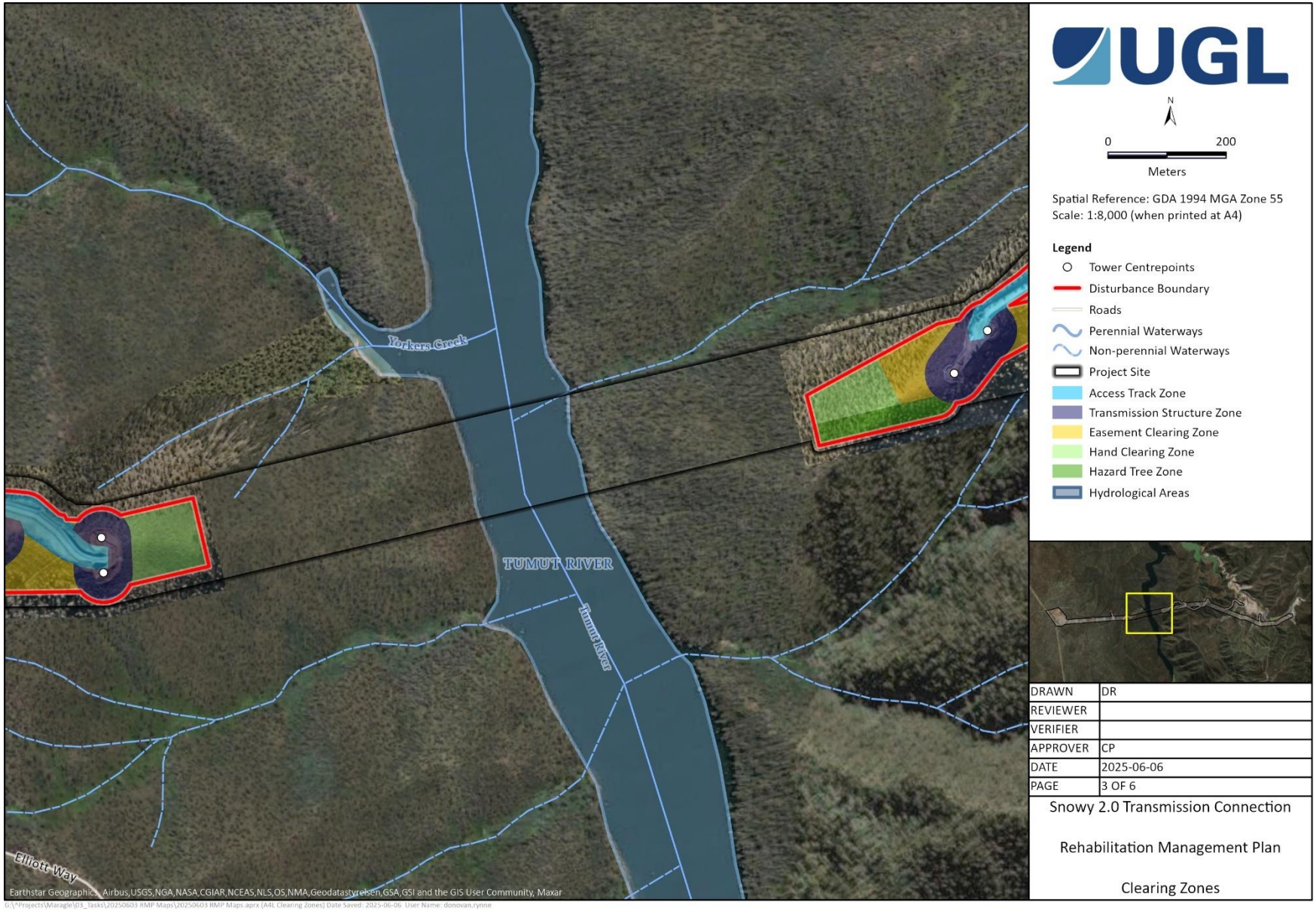
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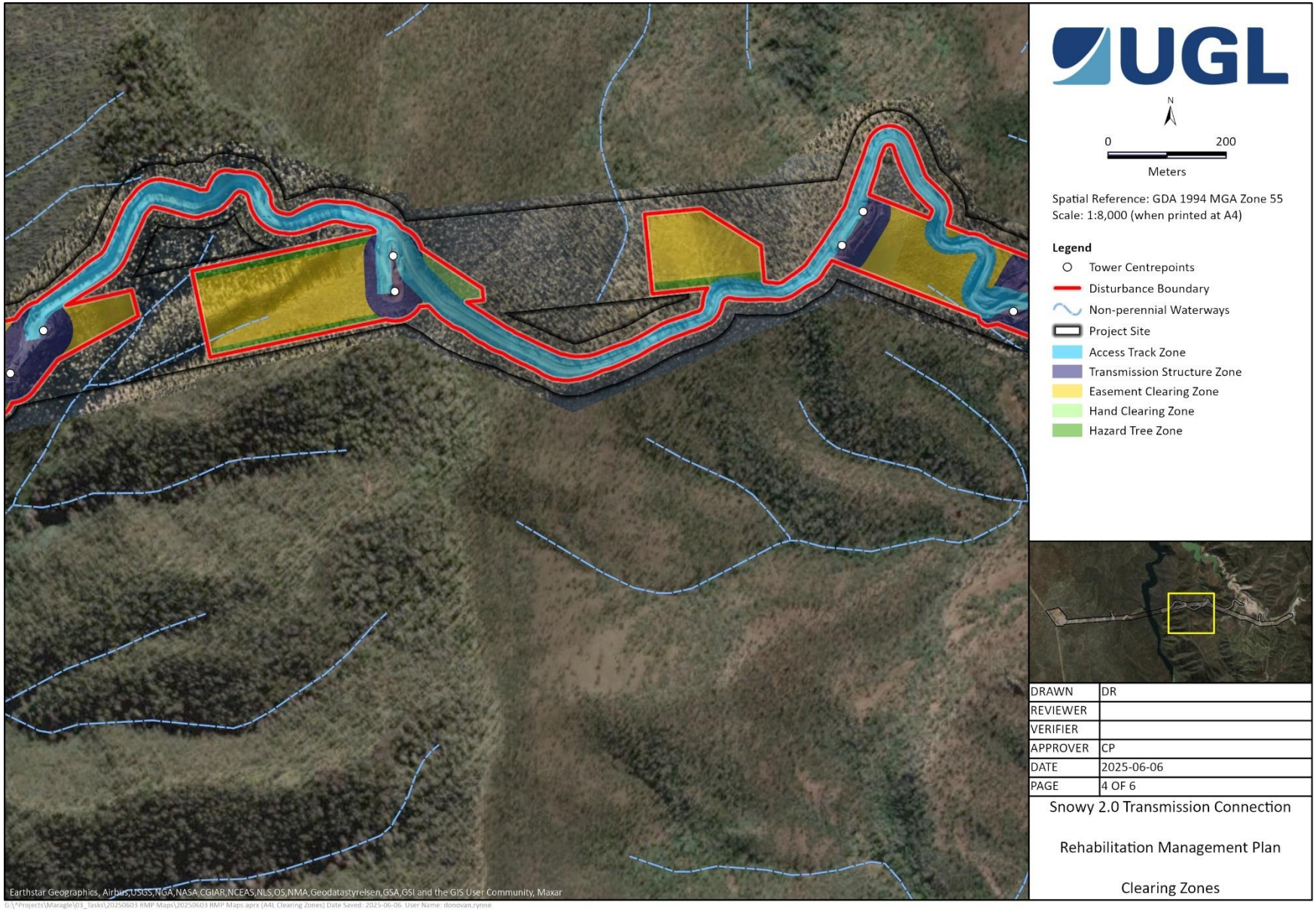
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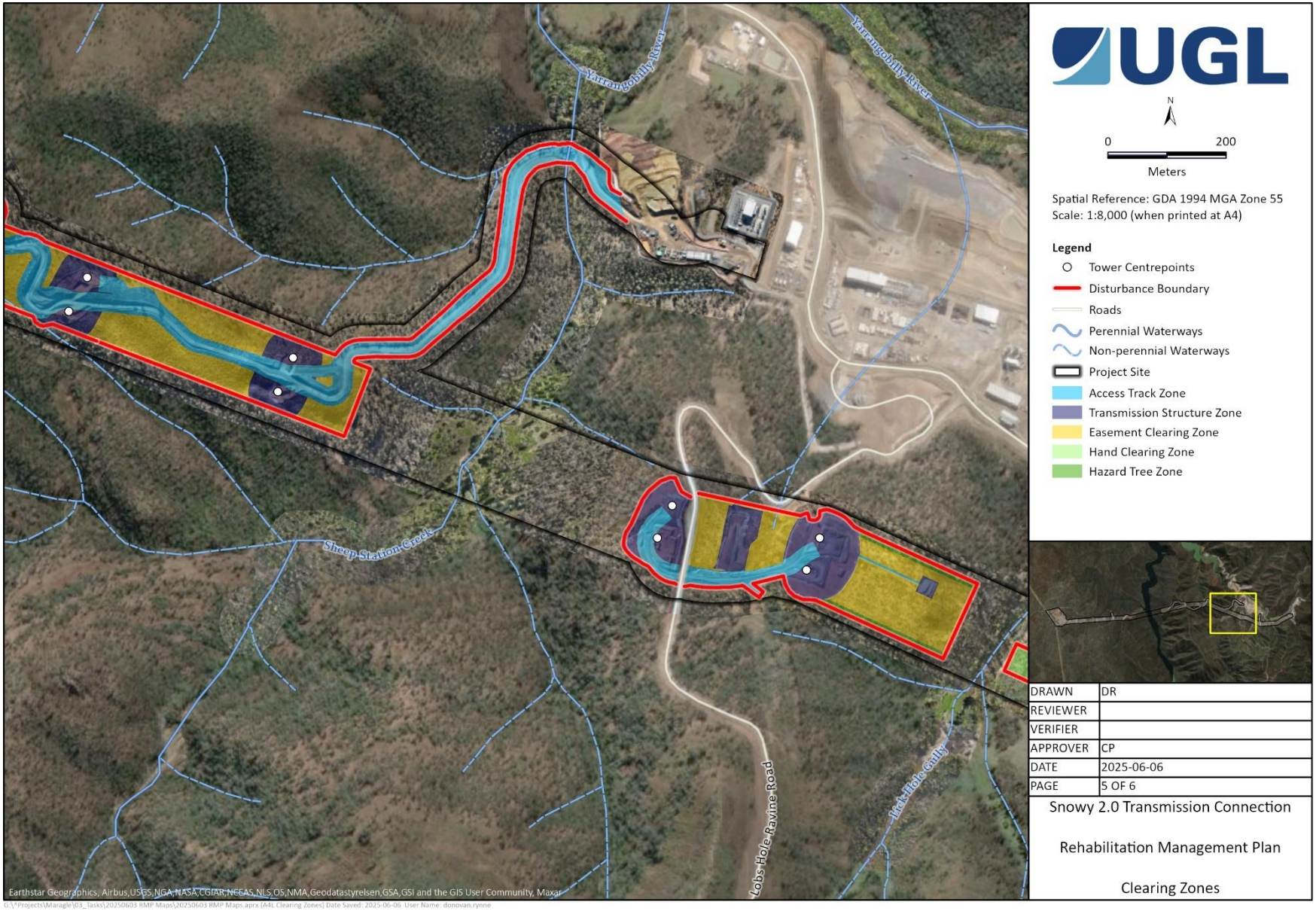
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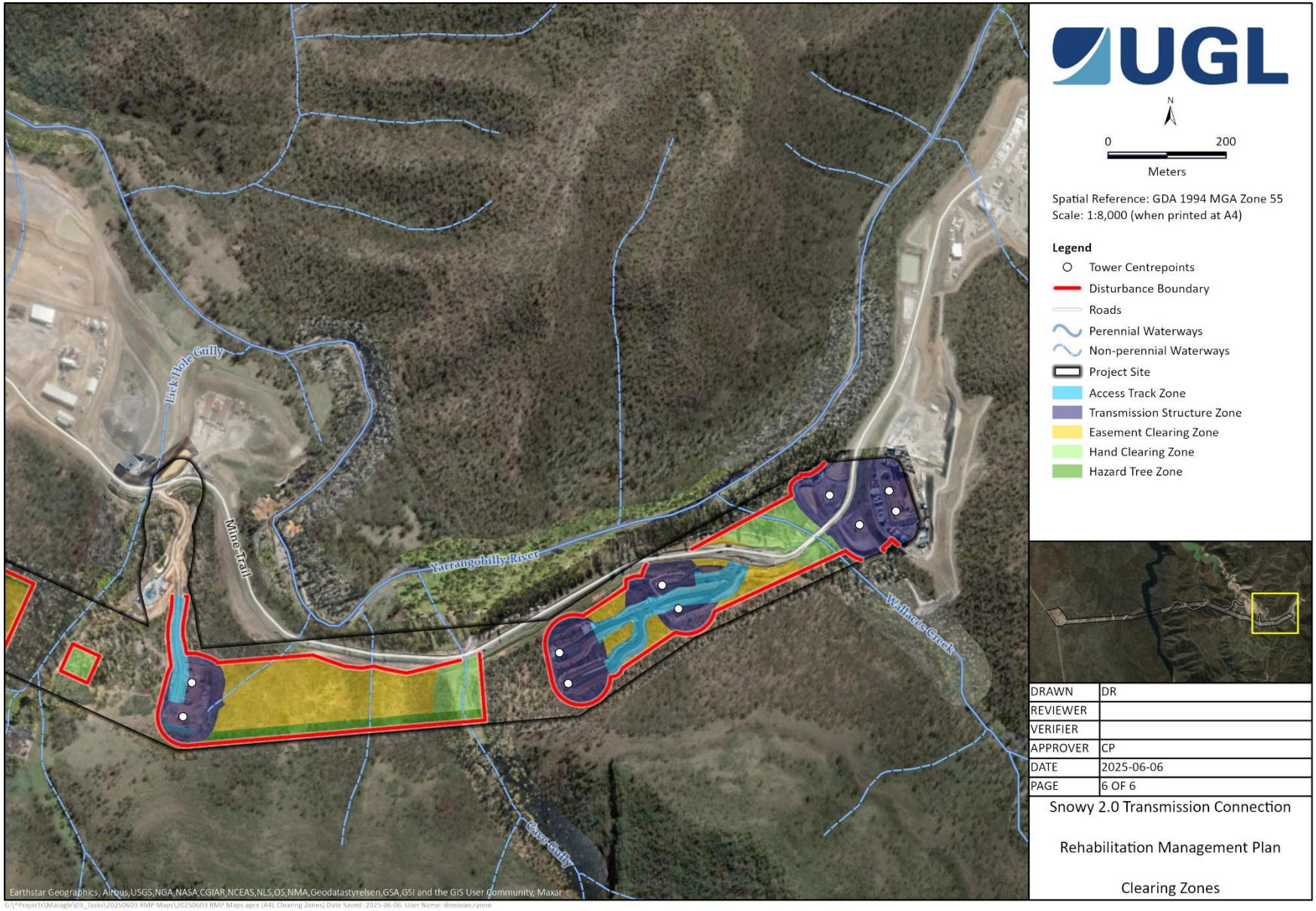
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Mine Trail
Yarrangobilly River
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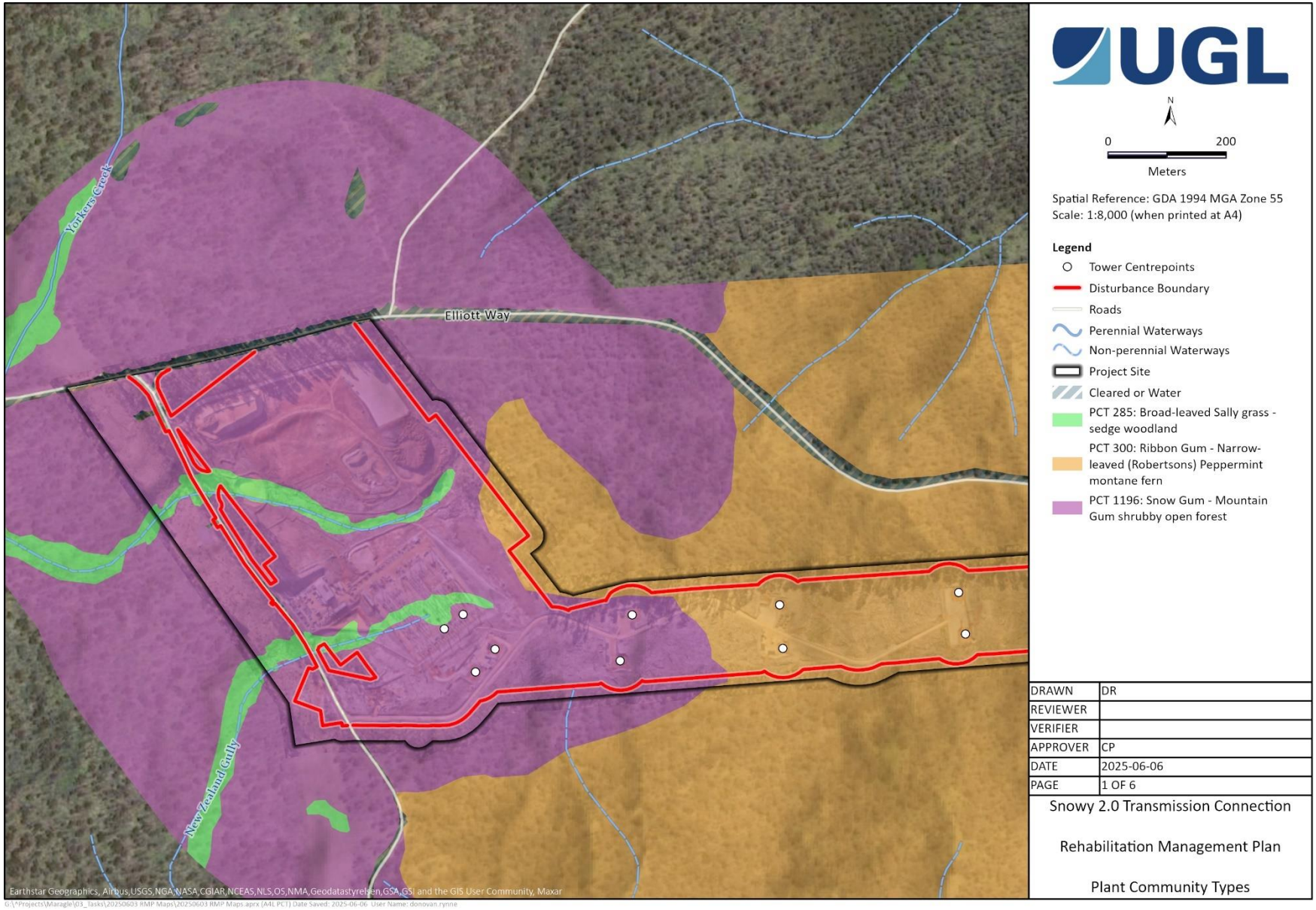
A.2 PLANT COMMUNITY TYPE (PCT) MAPPING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PCT 285: Broad-leaved Sally grass - sedge woodland
PCT 300: Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern
PCT 1196: Snow Gum - Mountain Gum shrubby open forest
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Snowy 2.0 Transmission Connection
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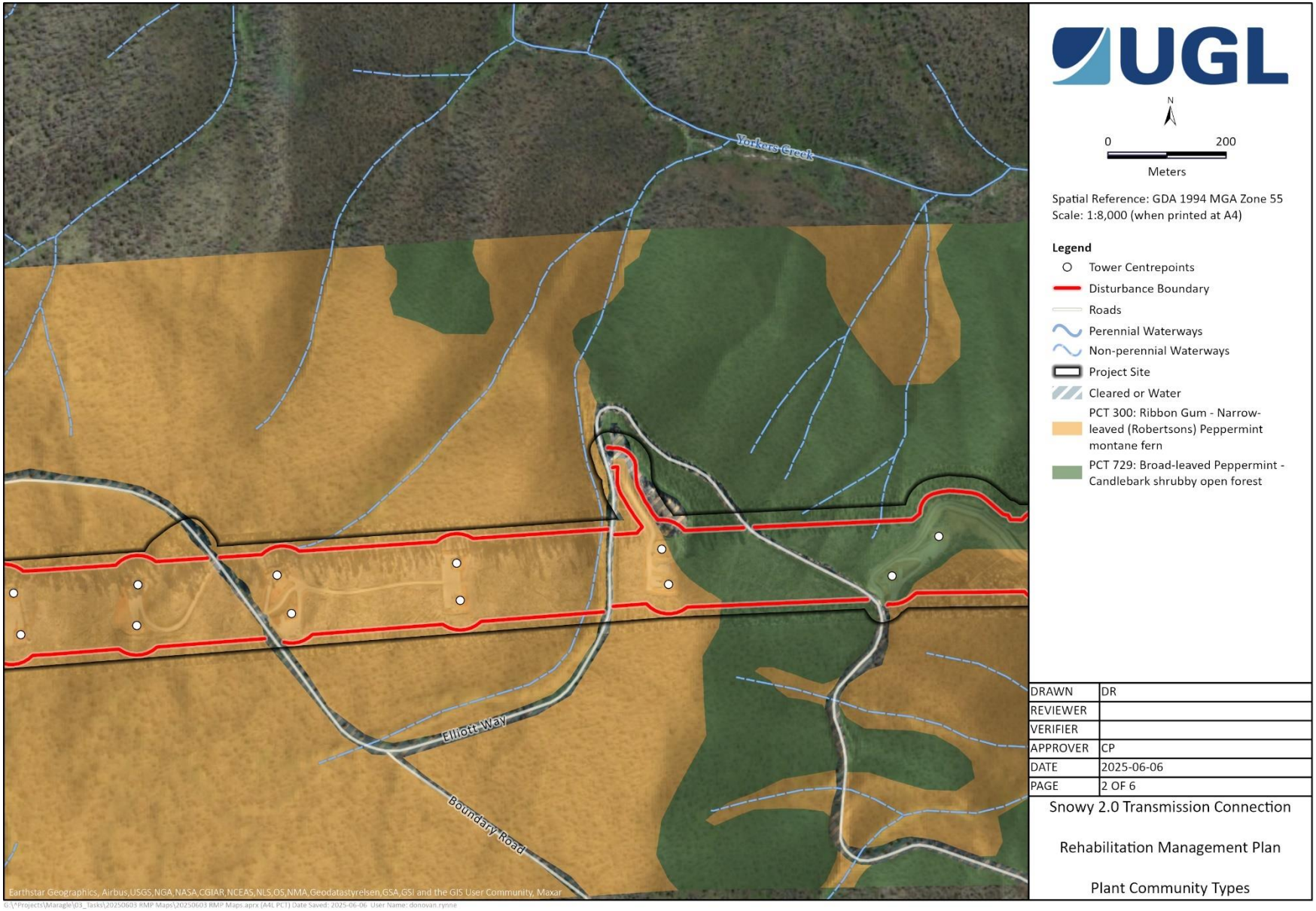
Plant Community Types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PCT 300: Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern
PCT 729: Broad-leaved Peppermint - Candlebark shrubby open forest
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Snowy 2.0 Transmission Connection
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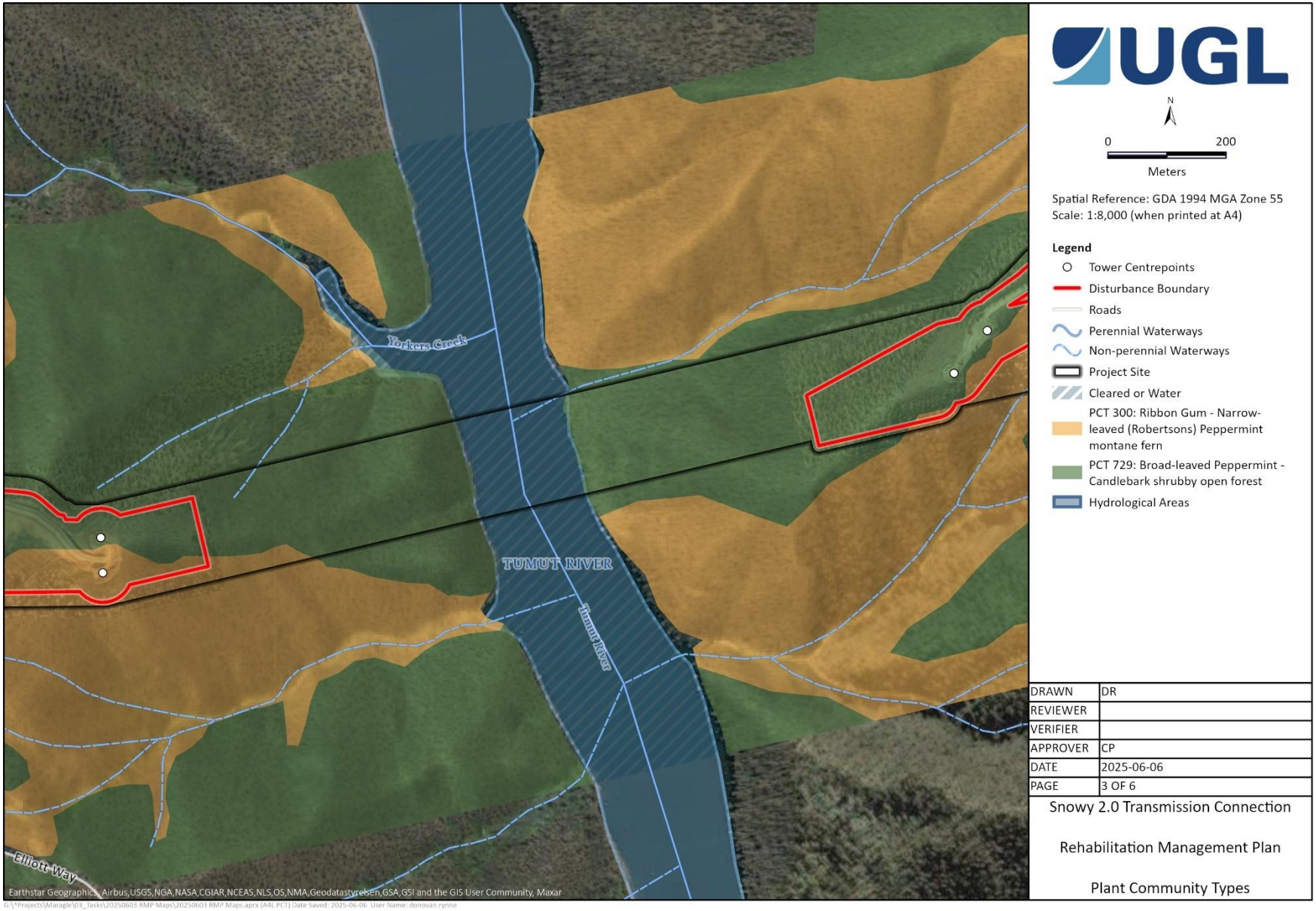
Plant Community Types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PCT 729: Broad-leaved Peppermint - Candlebark shrubby open forest
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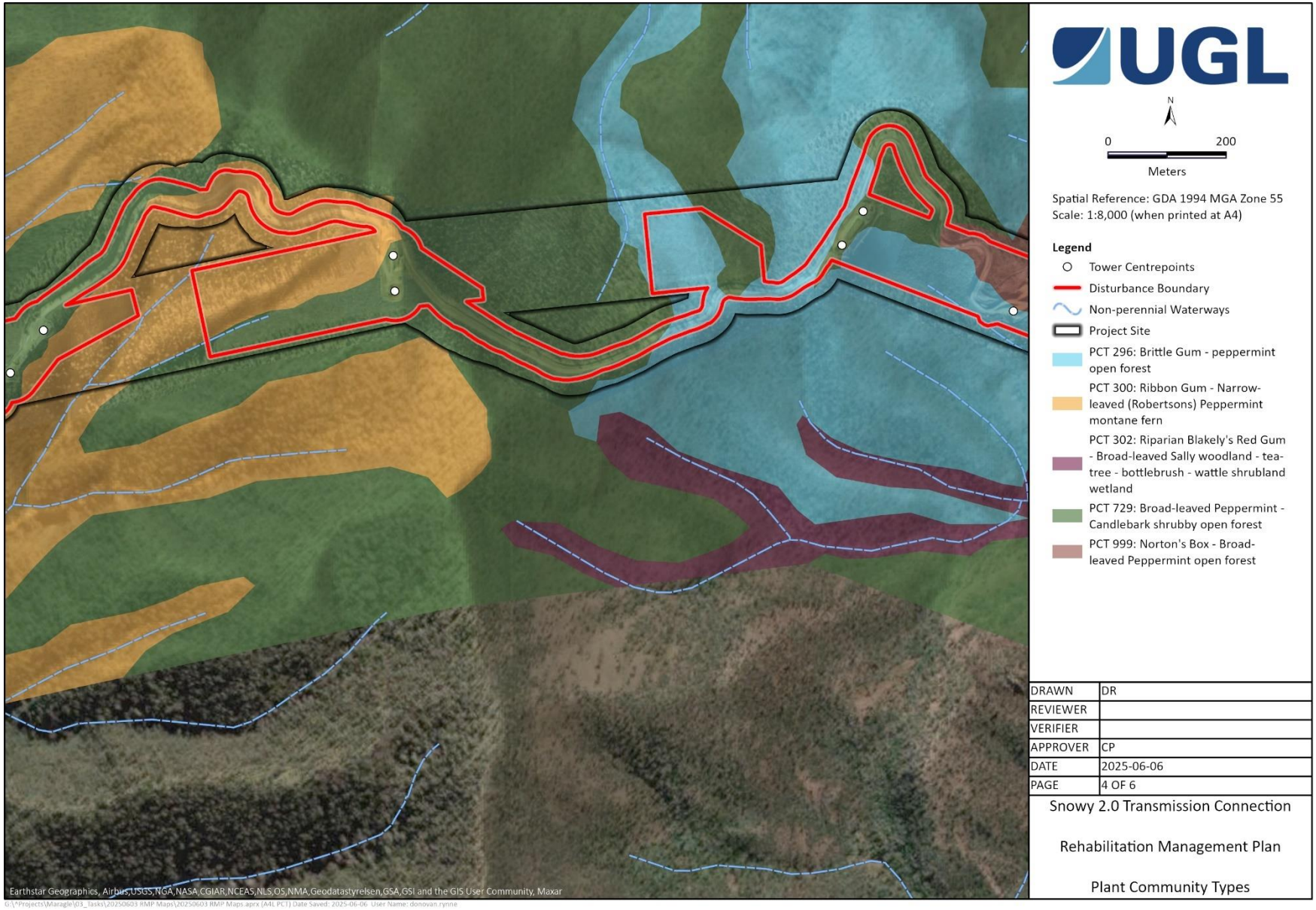
Plant Community Types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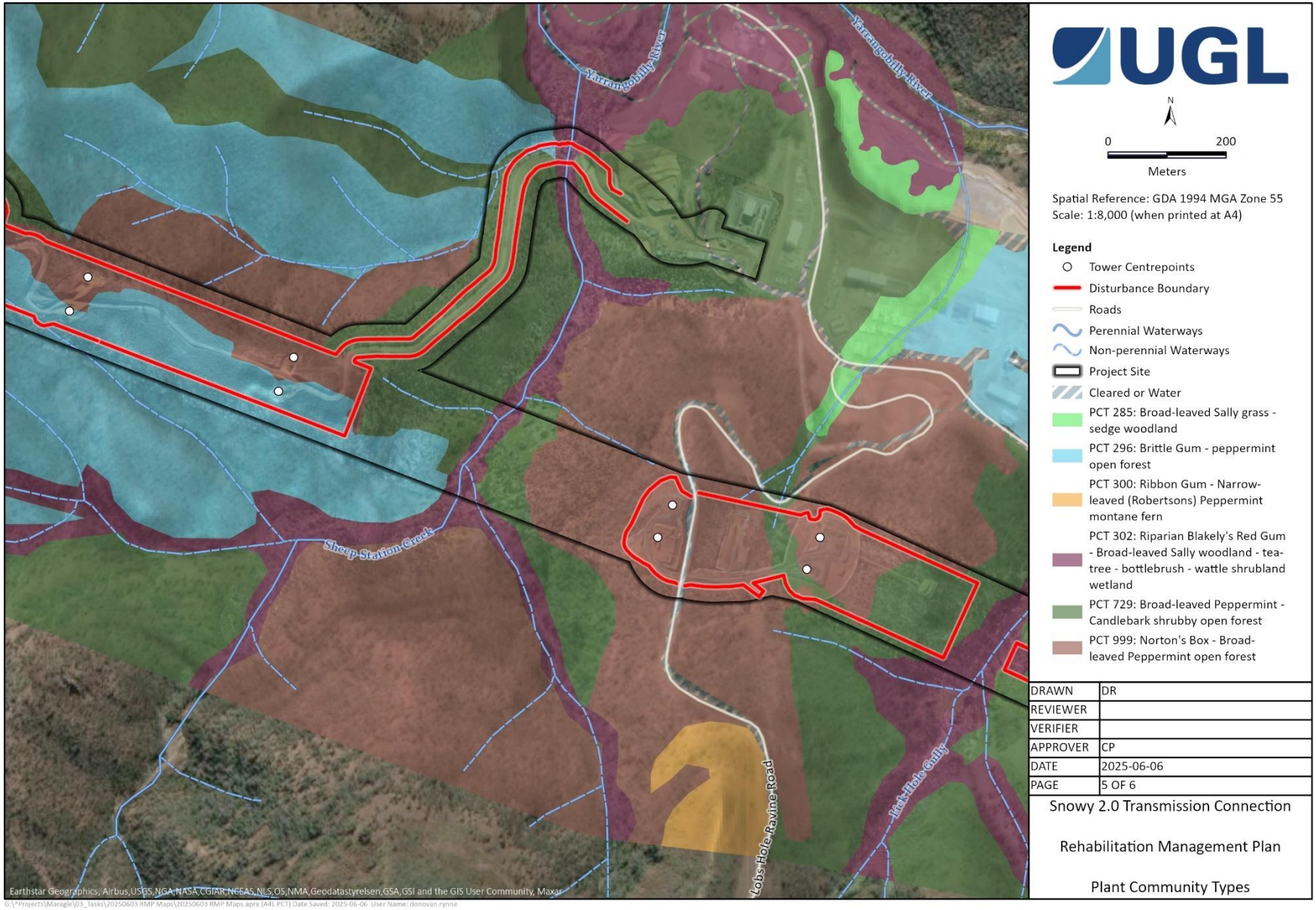
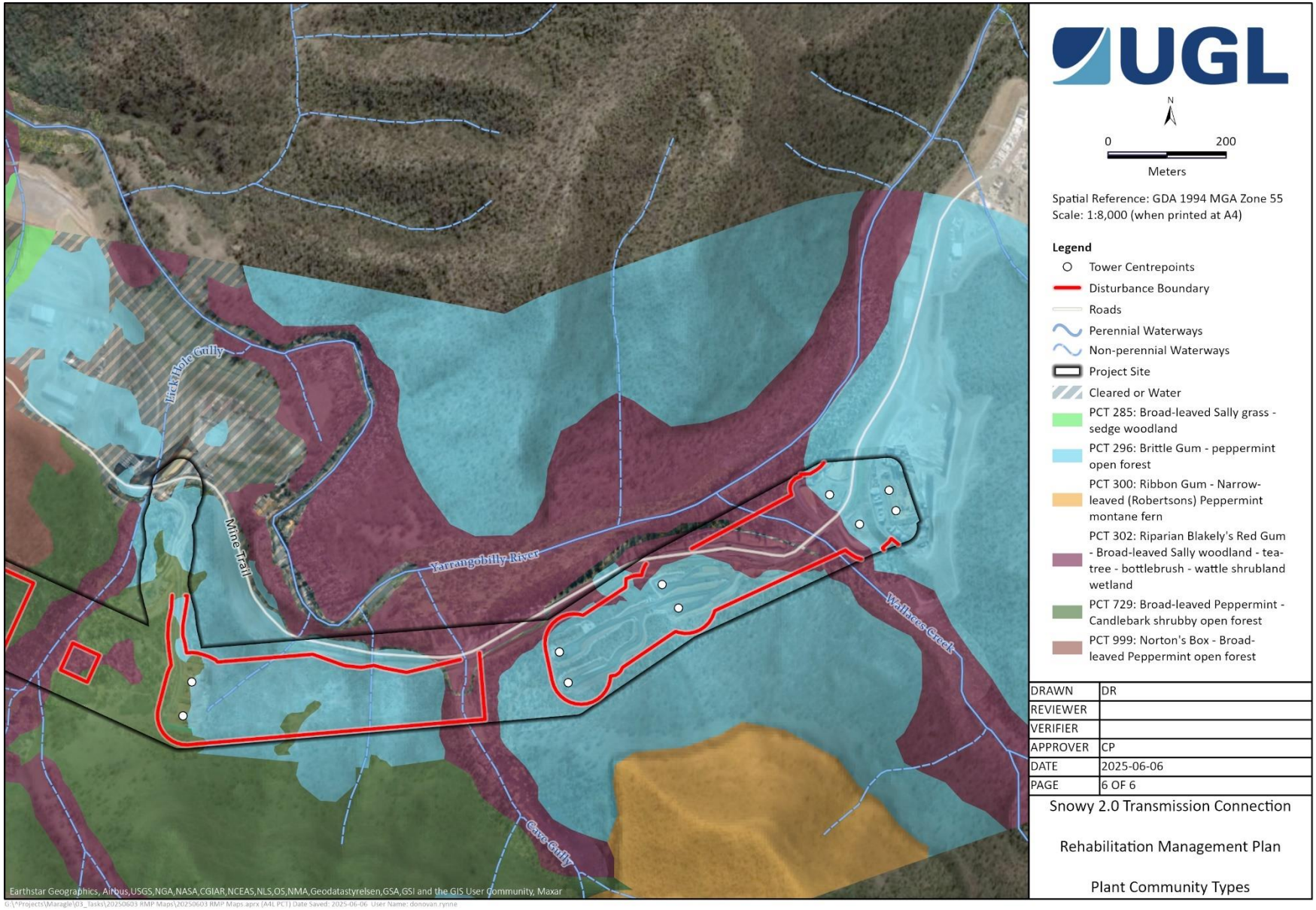
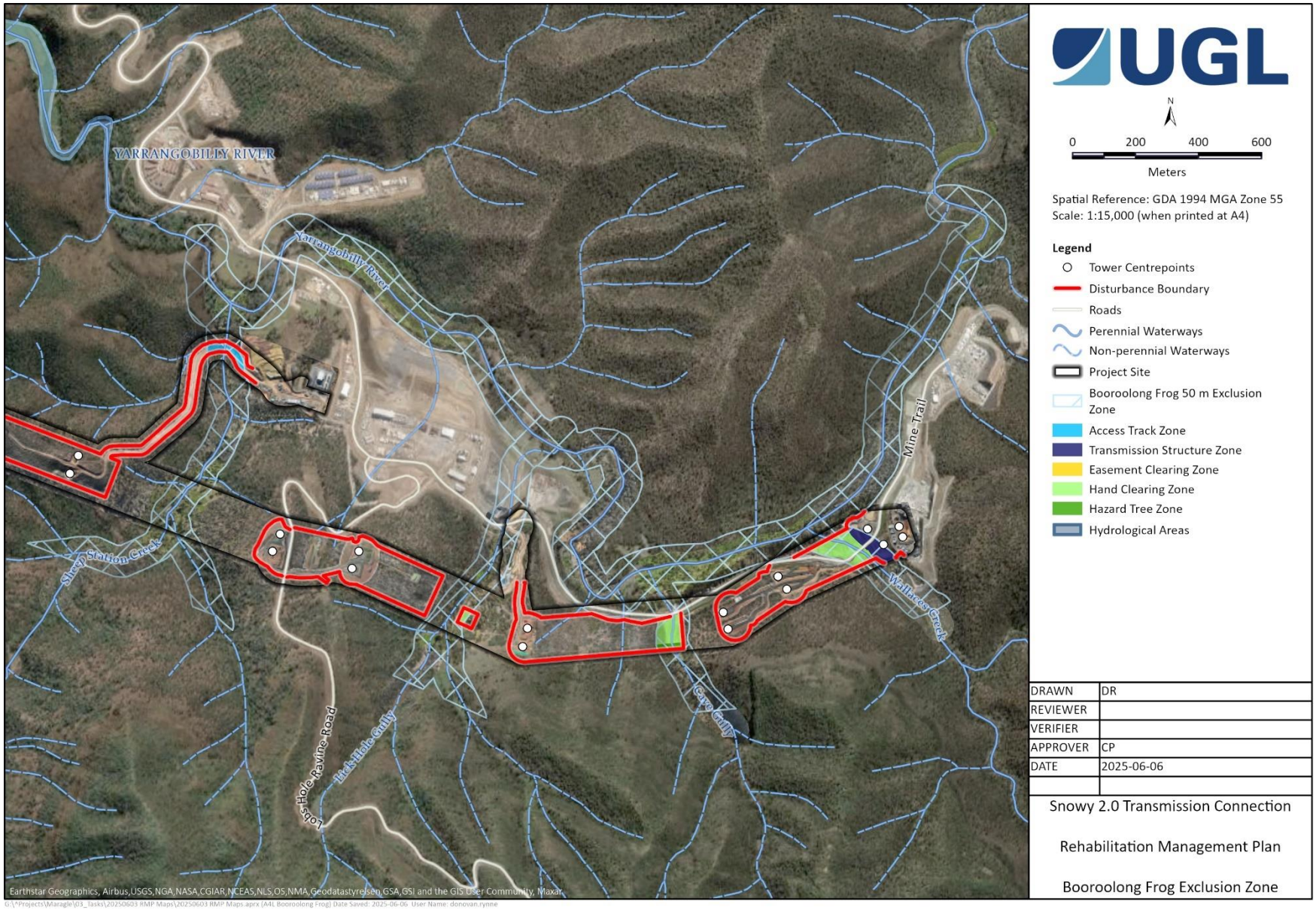
Project Site
PCT 296: Brittle Gum - peppermint open forest
PCT 300: Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern
PCT 302: Riparian Blakely's Red Gum - Broad-leaved Sally woodland - tea-tree - bottlebrush - wattle shrubland wetland
PCT 729: Broad-leaved Peppermint - Candlebark shrubby open forest
PCT 999: Norton's Box - Broad-leaved Peppermint open forest
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 4 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Plant Community Types
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar

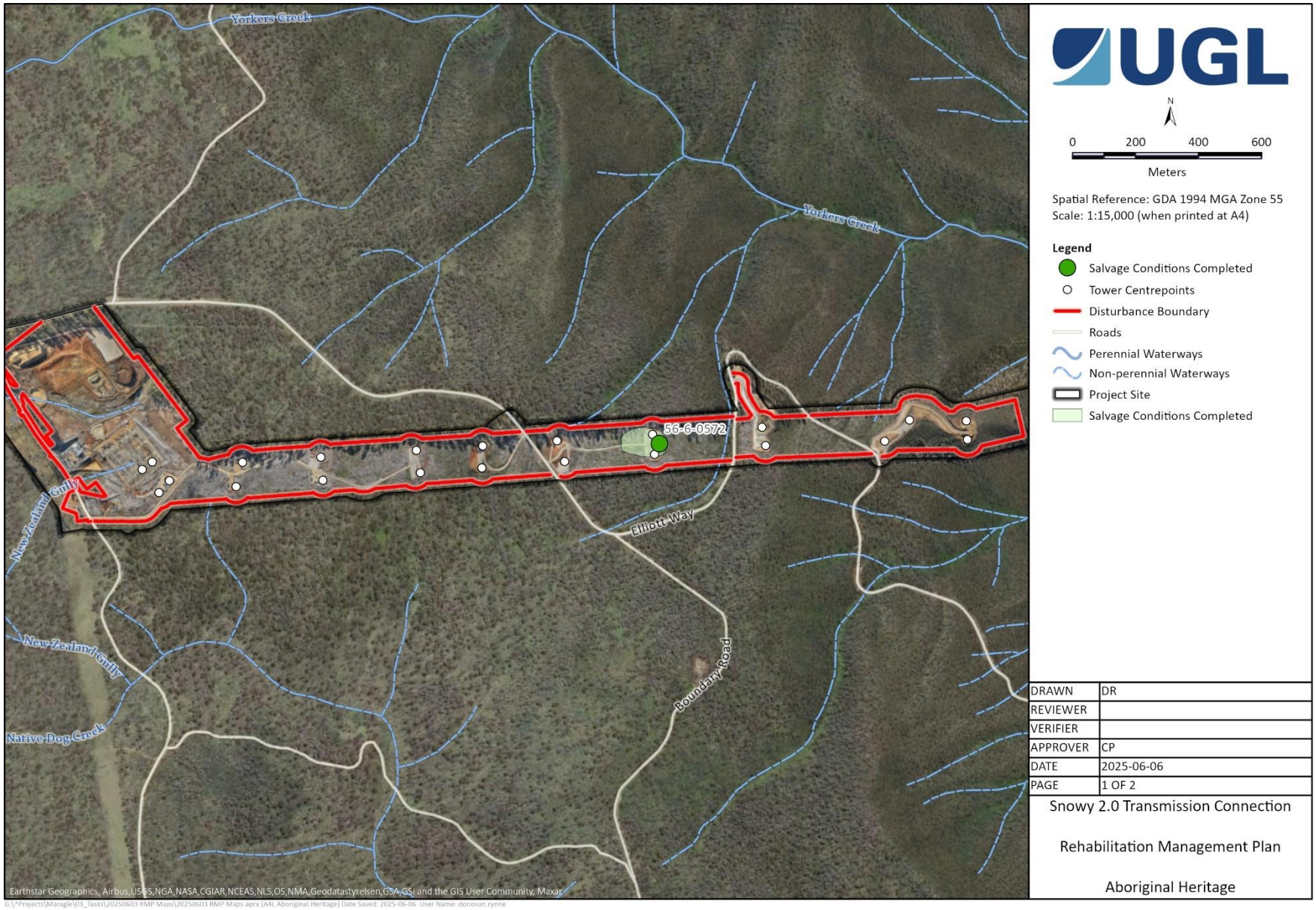

Yarrangobilly River
Yarrangobilly River
Sheep Station Creek
Lobs Hole Ravine Road
Jack Hole Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NEGAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
UGL
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Roads
Perennial Waterways
Non-perennial Waterways
Project Site
Cleared or Water
PCT 285: Broad-leaved Sally grass - sedge woodland
PCT 296: Brittle Gum - peppermint open forest
PCT 300: Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern
PCT 302: Riparian Blakely's Red Gum - Broad-leaved Sally woodland - tea-tree - bottlebrush - wattle shrubland wetland
PCT 729: Broad-leaved Peppermint - Candlebark shrubby open forest
PCT 999: Norton's Box - Broad-leaved Peppermint open forest
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 5 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Plant Community Types

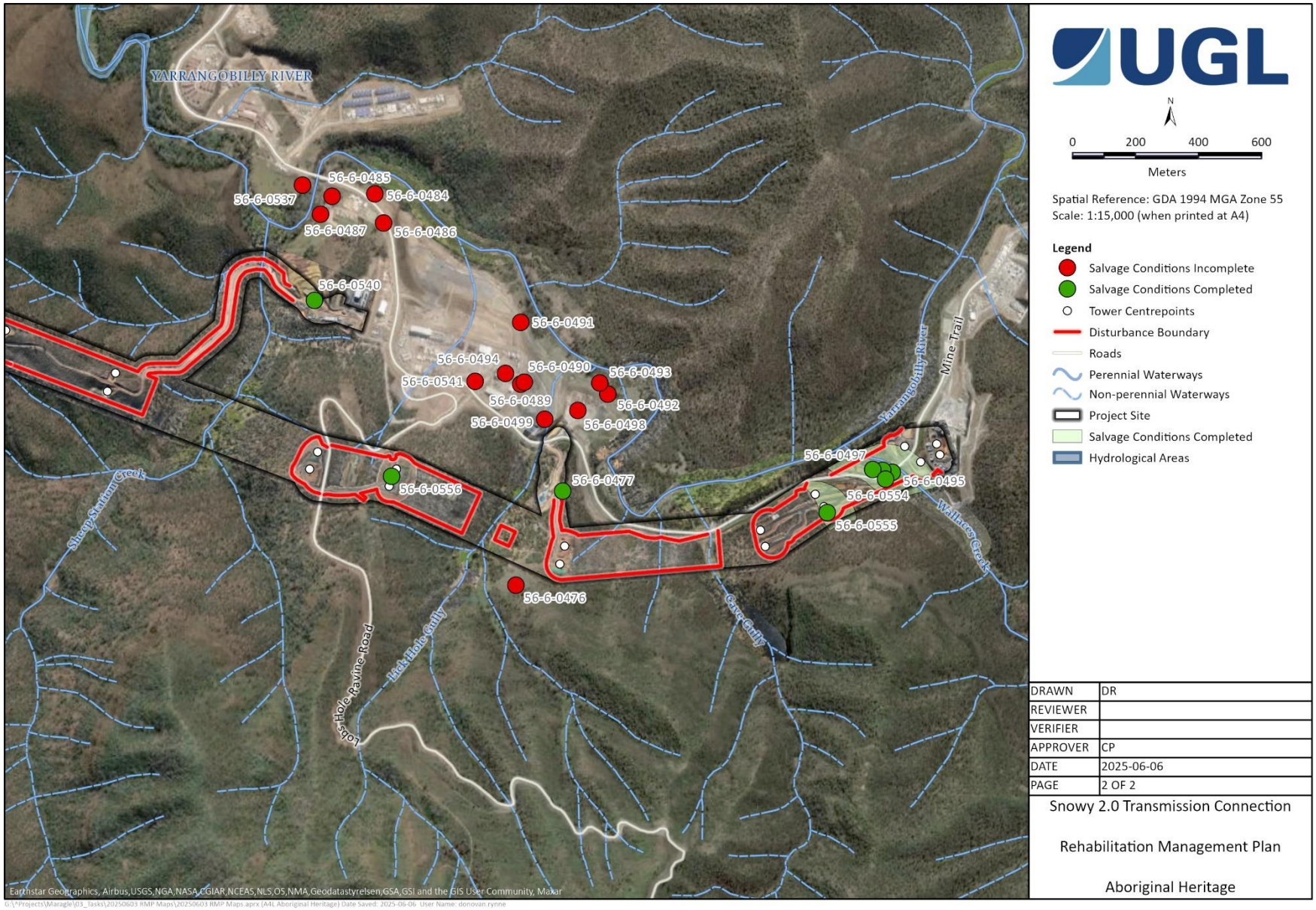

Brick Hole Gully
Mine Trail
Yarrangobilly River
Wallaces Creek
Cave Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Roads
Perennial Waterways
Non-perennial Waterways
Project Site
Cleared or Water
PCT 285: Broad-leaved Sally grass - sedge woodland
PCT 296: Brittle Gum - peppermint open forest
PCT 300: Ribbon Gum - Narrow-leaved (Robertsons) Peppermint montane fern
PCT 302: Riparian Blakely's Red Gum - Broad-leaved Sally woodland - tea-tree - bottlebrush - wattle shrubland wetland
PCT 729: Broad-leaved Peppermint - Candlebark shrubby open forest
PCT 999: Norton's Box - Broad-leaved Peppermint open forest
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 6 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Plant Community Types

A.3 PARTIAL CLEARING ZONES WITHIN 50 M BOOROOLONG FROG HABITAT EXCLUSION ZONE (EZ)

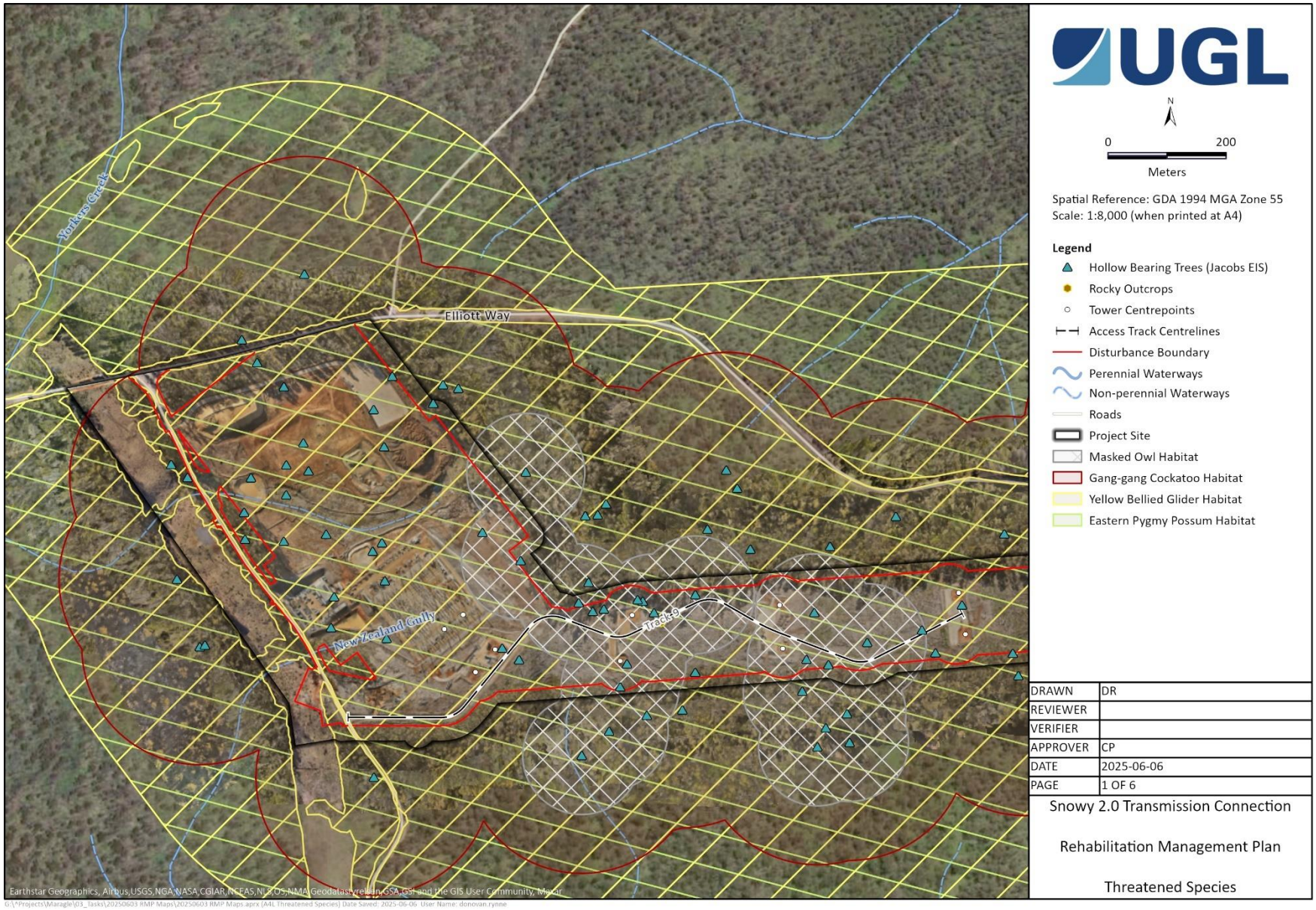

YARRANGOBILLY RIVER
Yarrangobilly River
Mine Trail
Sheep Station Creek
Wallaces Creek
Cave Gully
Lobs Hole-Rayline Road
Jacks Hole Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
N
0
200
400
600
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:15,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Roads
Perennial Waterways
Non-perennial Waterways
Project Site
Booroolong Frog 50 m Exclusion Zone
Access Track Zone
Transmission Structure Zone
Easement Clearing Zone
Hand Clearing Zone
Hazard Tree Zone
Hydrological Areas
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Booroolong Frog Exclusion Zone

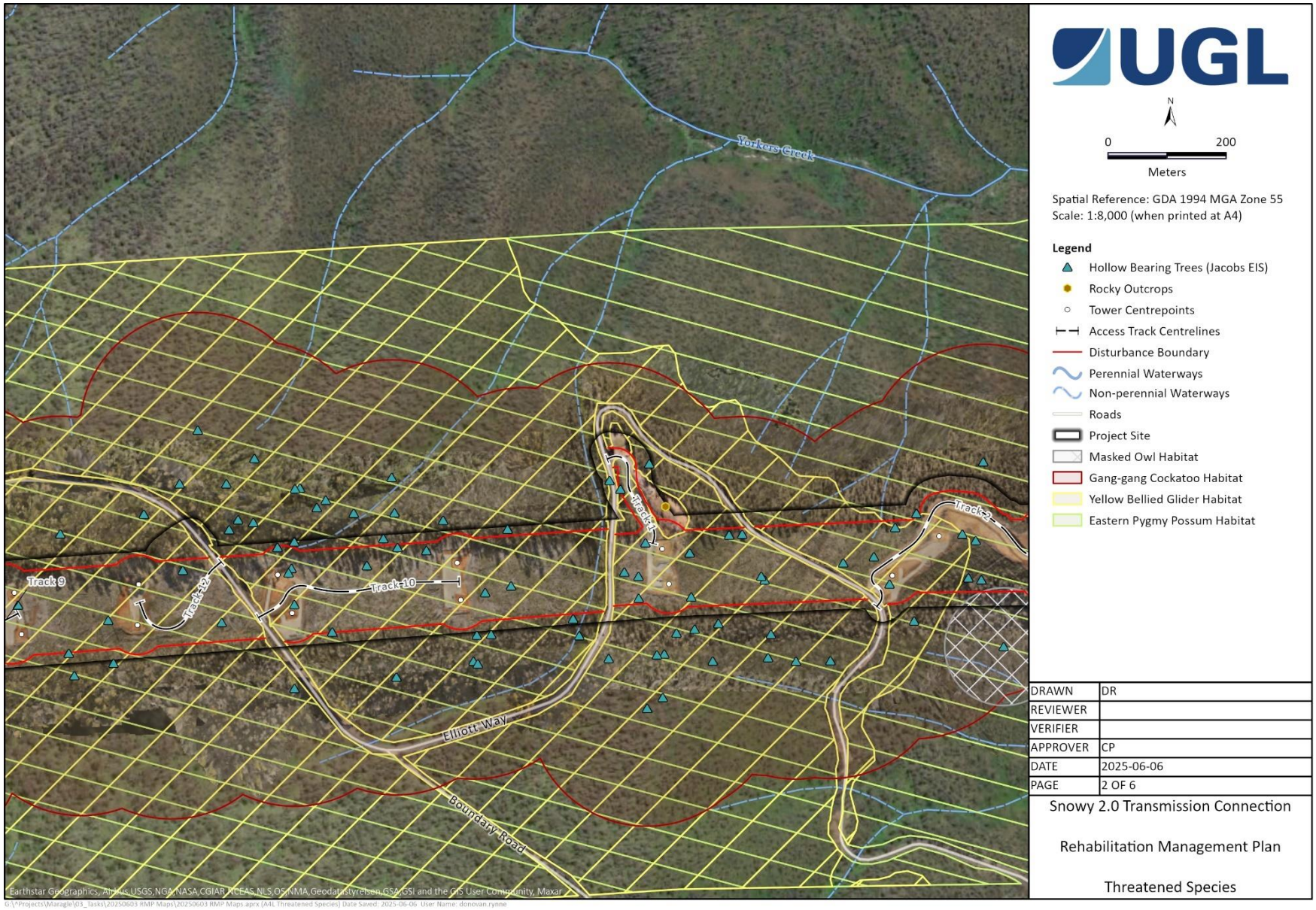
A.4 HERITAGE SITES

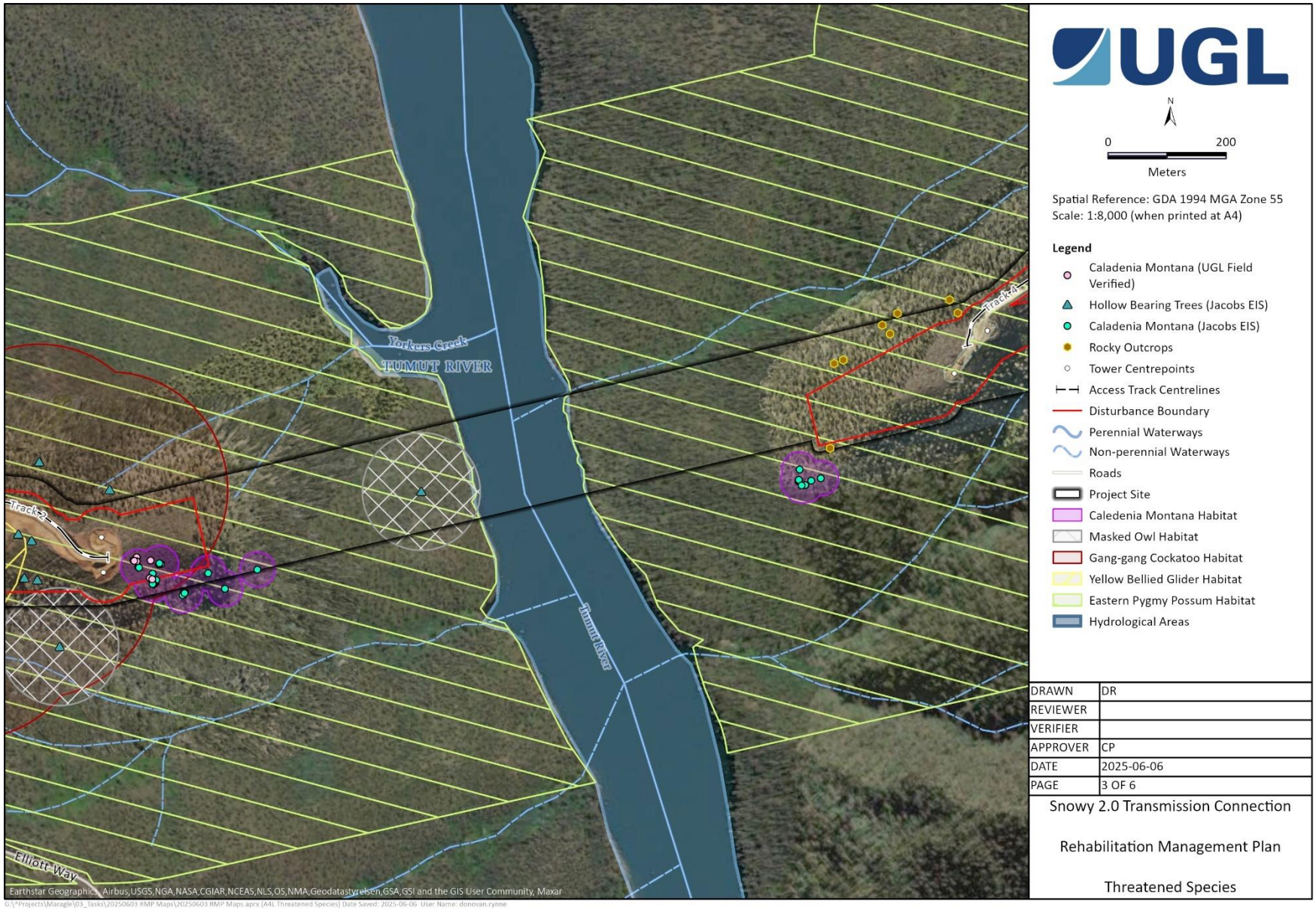

Yorkers Creek
Yorkers Creek
56-6-0572
New Zealand Gully
Elliott Way
New Zealand Gully
Native Dog Creek
Boundary Road
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Aboriginal Heritage) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
N
0
200
400
600
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:15,000 (when printed at A4)
Legend
Salvage Conditions Completed
Tower Centrepoints
Disturbance Boundary
Roads
Perennial Waterways
Non-perennial Waterways
Project Site
Salvage Conditions Completed
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 1 OF 2
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Aboriginal Heritage

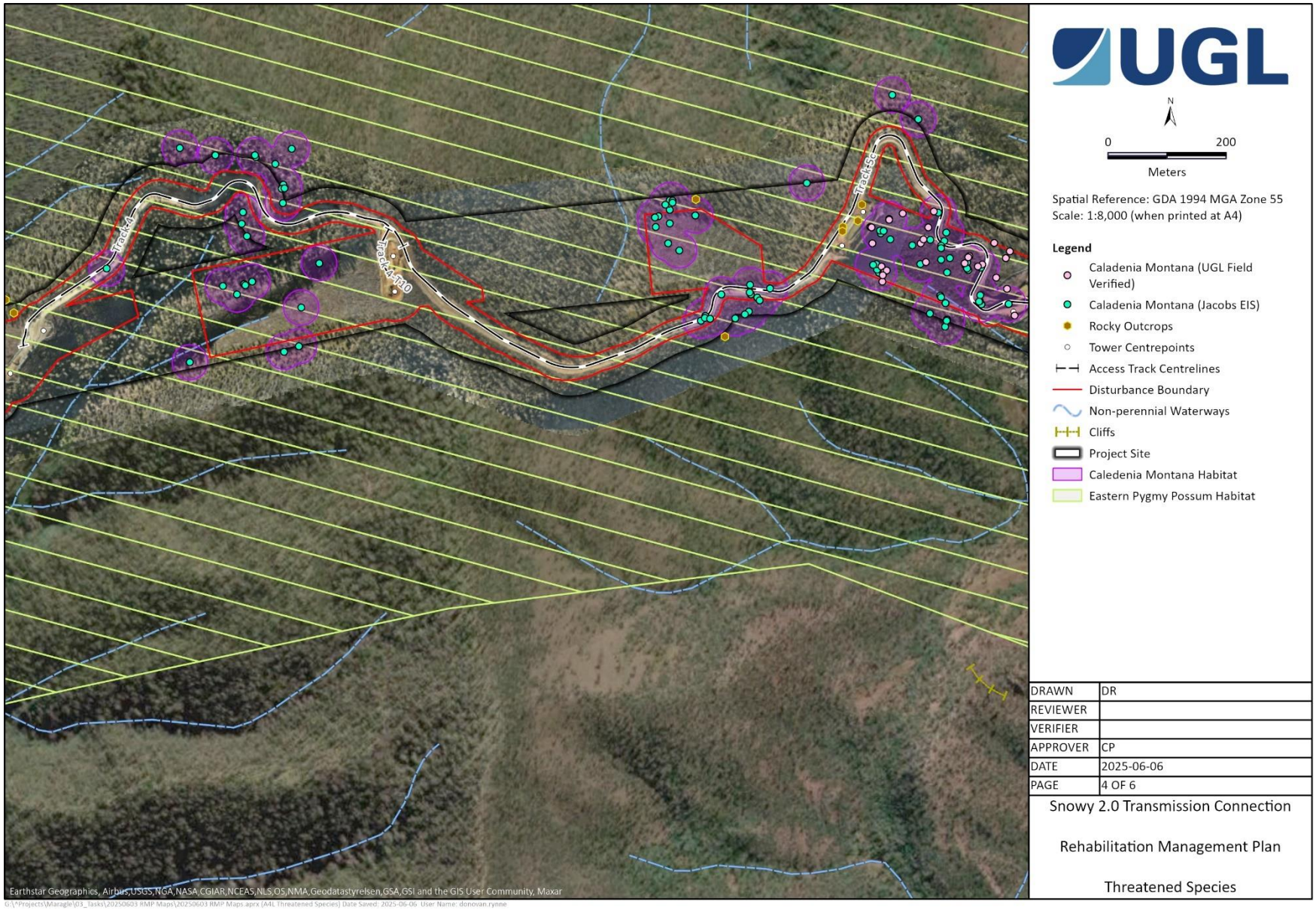

YARRANGOBILLY RIVER
56-6-0485
56-6-0537
56-6-0434
56-6-0487
56-6-0486
56-6-0540
56-6-0491
56-6-0494
56-6-0490
56-6-0493
56-6-0541
56-6-0489
56-6-0492
56-6-0499
56-6-0498
56-6-0497
56-6-0495
56-6-0556
56-6-0477
56-6-0554
56-6-0555
56-6-0476
Sheep Station Creek
Lob's Hole Ravine Road
Jack Hole Gully
Cave Gully
Wallaces Creek
Yarrangobilly River
Mine Trail
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
UGL
N
0
200
400
600
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:15,000 (when printed at A4)
Legend
Salvage Conditions Incomplete
Salvage Conditions Completed
Tower Centrepoints
Disturbance Boundary
Roads
Perennial Waterways
Non-perennial Waterways
Project Site
Salvage Conditions Completed
Hydrological Areas
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 2 OF 2
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Aboriginal Heritage

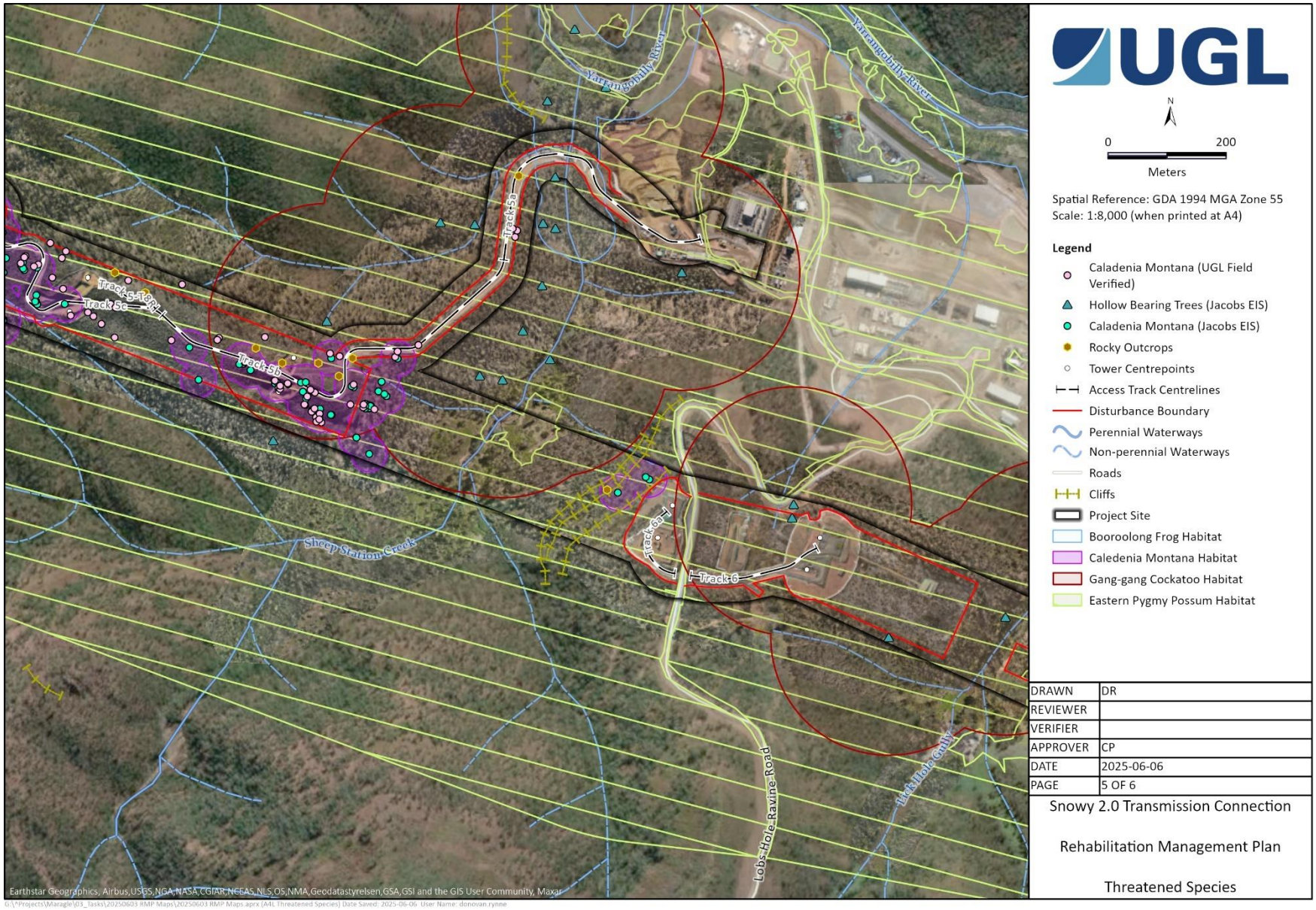
A.5 THREATENED SPECIES

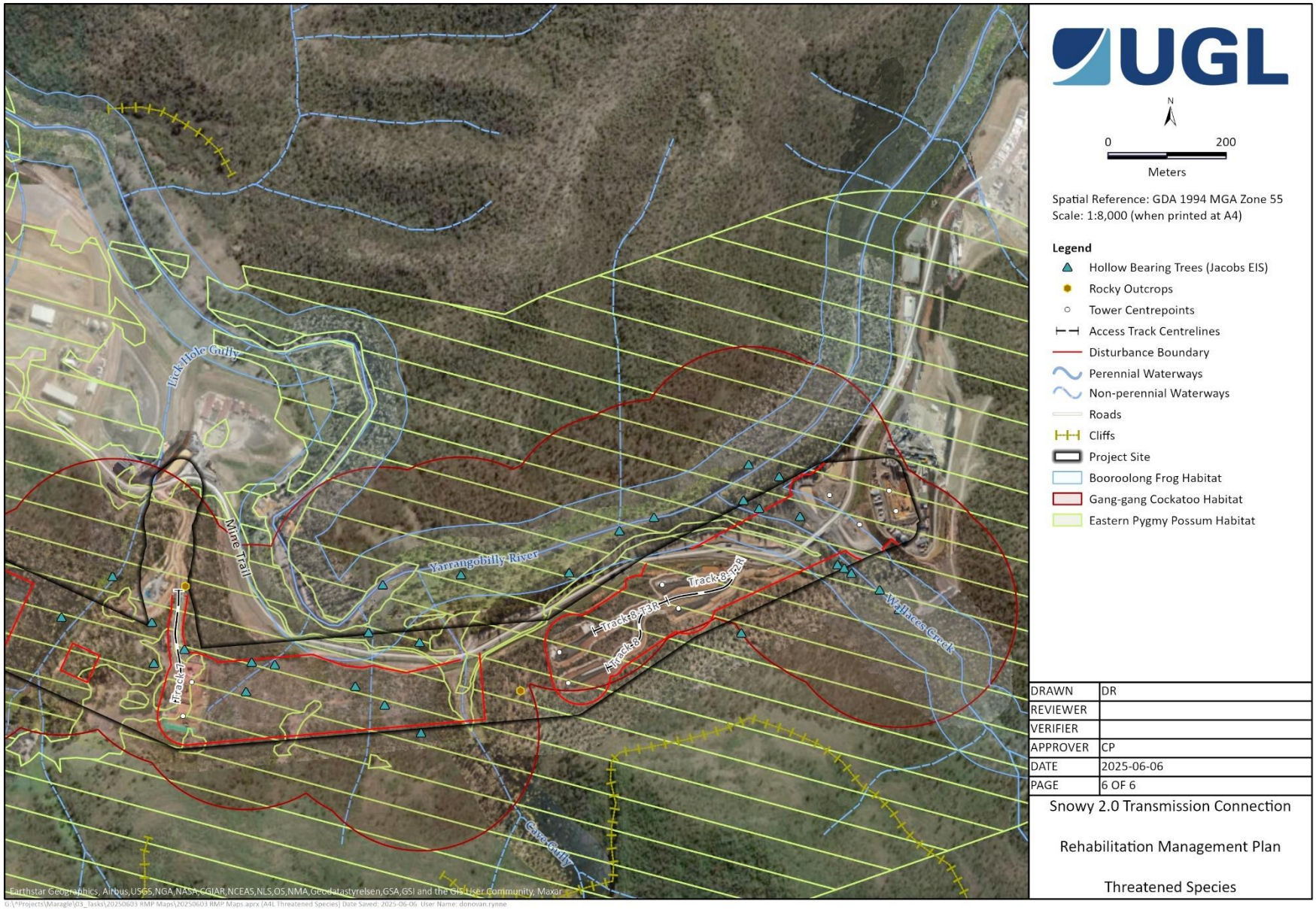

Yorkers Creek
Elliott Way
New Zealand Gully
Track 9
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Threatened Species) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Hollow Bearing Trees (Jacobs EIS)
Rocky Outcrops
Tower Centrepoints
Access Track Centrelines
Disturbance Boundary
Perennial Waterways
Non-perennial Waterways
Roads
Project Site
Masked Owl Habitat
Gang-gang Cockatoo Habitat
Yellow Bellied Glider Habitat
Eastern Pygmy Possum Habitat
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 1 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Threatened Species


Yorkers Creek
Track 9
Track 12
Track 10
Track 1
Track 2
Elliott Way
Boundary Road
Earthstar Geographics, Airbus USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Hollow Bearing Trees (Jacobs EIS)
Rocky Outcrops
Tower Centrepoints
Access Track Centrelines
Disturbance Boundary
Perennial Waterways
Non-perennial Waterways
Roads
Project Site
Masked Owl Habitat
Gang-gang Cockatoo Habitat
Yellow Bellied Glider Habitat
Eastern Pygmy Possum Habitat
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 2 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Threatened Species

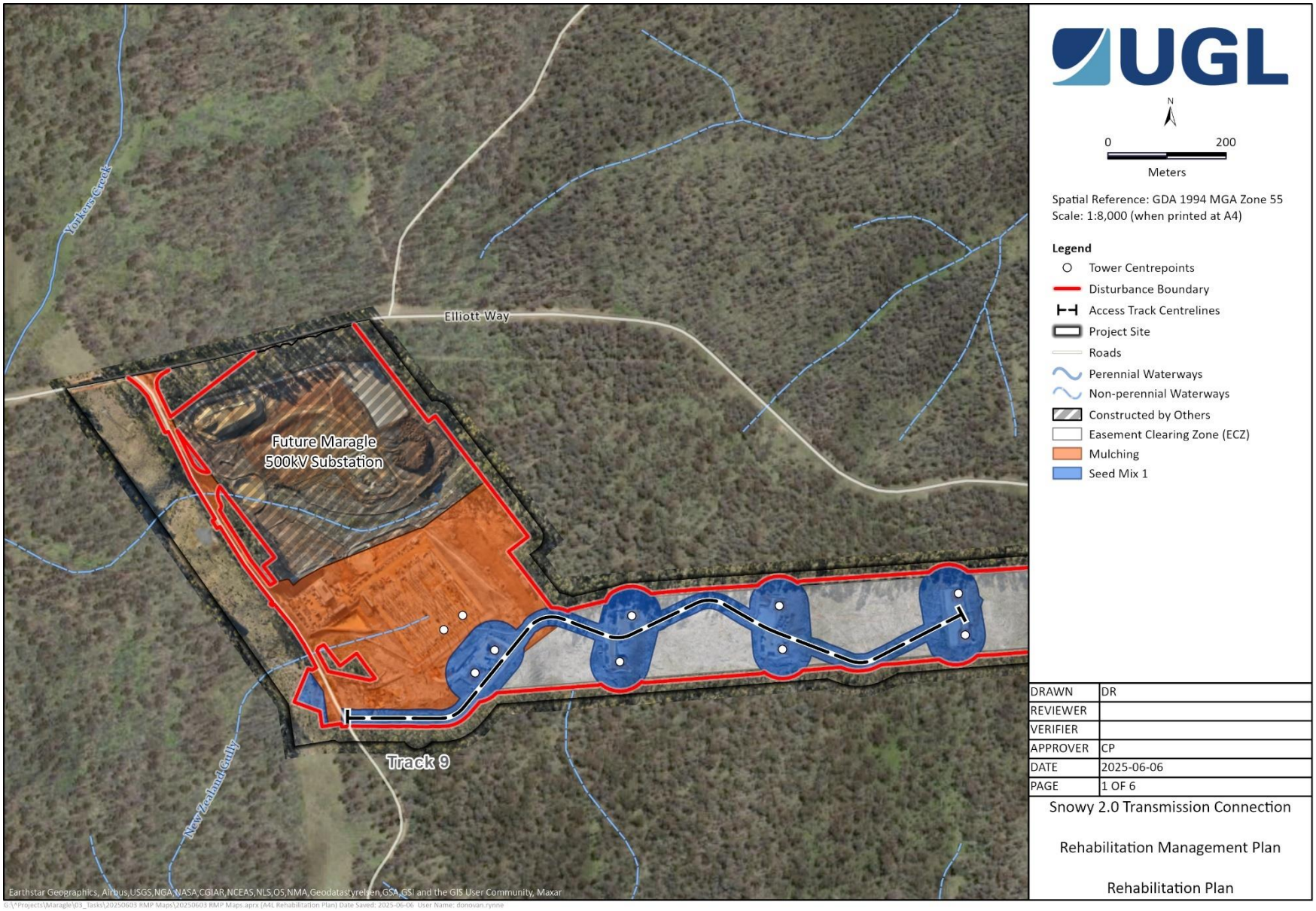

Yorkers Creek
TUMUT RIVER
Track-2
Track-4
Elliott Way
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
UGL
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Caladenia Montana (UGL Field Verified)
Hollow Bearing Trees (Jacobs EIS)
Caladenia Montana (Jacobs EIS)
Rocky Outcrops
Tower Centrepoints
Access Track Centrelines
Disturbance Boundary
Perennial Waterways
Non-perennial Waterways
Roads
Project Site
Caledenia Montana Habitat
Masked Owl Habitat
Gang-gang Cockatoo Habitat
Yellow Bellied Glider Habitat
Eastern Pygmy Possum Habitat
Hydrological Areas
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 3 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Threatened Species


Track-A
Track-A-Tr10
Track-Sc
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Caladenia Montana (UGL Field Verified)
Caladenia Montana (Jacobs EIS)
Rocky Outcrops
Tower Centrepoints
Access Track Centrelines
Disturbance Boundary
Non-perennial Waterways
Cliffs
Project Site
Caledenia Montana Habitat
Eastern Pygmy Possum Habitat
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 4 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Threatened Species


Yarrangobilly River
Yarrangobilly River
Track-5a
Track-5c
Track-5b
Track-6
Sheep Station Creek
Lobs Hole Ravine Road
Lick Hole Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NEGAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Caladenia Montana (UGL Field Verified)
Hollow Bearing Trees (Jacobs EIS)
Caladenia Montana (Jacobs EIS)
Rocky Outcrops
Tower Centrepoints
Access Track Centrelines
Disturbance Boundary
Perennial Waterways
Non-perennial Waterways
Roads
Cliffs
Project Site
Booroolong Frog Habitat
Caledenia Montana Habitat
Gang-gang Cockatoo Habitat
Eastern Pygmy Possum Habitat
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 5 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Threatened Species


Lick Hole Gully
Mine Trail
Yarrangobilly River
Track-8-T3R
Track-8-T2R
Track-8
Track-7
Wallaces Crack
Cave Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Threatened Species) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Hollow Bearing Trees (Jacobs EIS)
Rocky Outcrops
Tower Centrepoints
Access Track Centrelines
Disturbance Boundary
Perennial Waterways
Non-perennial Waterways
Roads
Cliffs
Project Site
Booroolong Frog Habitat
Gang-gang Cockatoo Habitat
Eastern Pygmy Possum Habitat
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 6 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Threatened Species

A.6 REHABILITATION AREAS


Yonkers Creek
Elliott Way
Future Maragle
500kV Substation
Track 9
New Zealand Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Rehabilitation Plan) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
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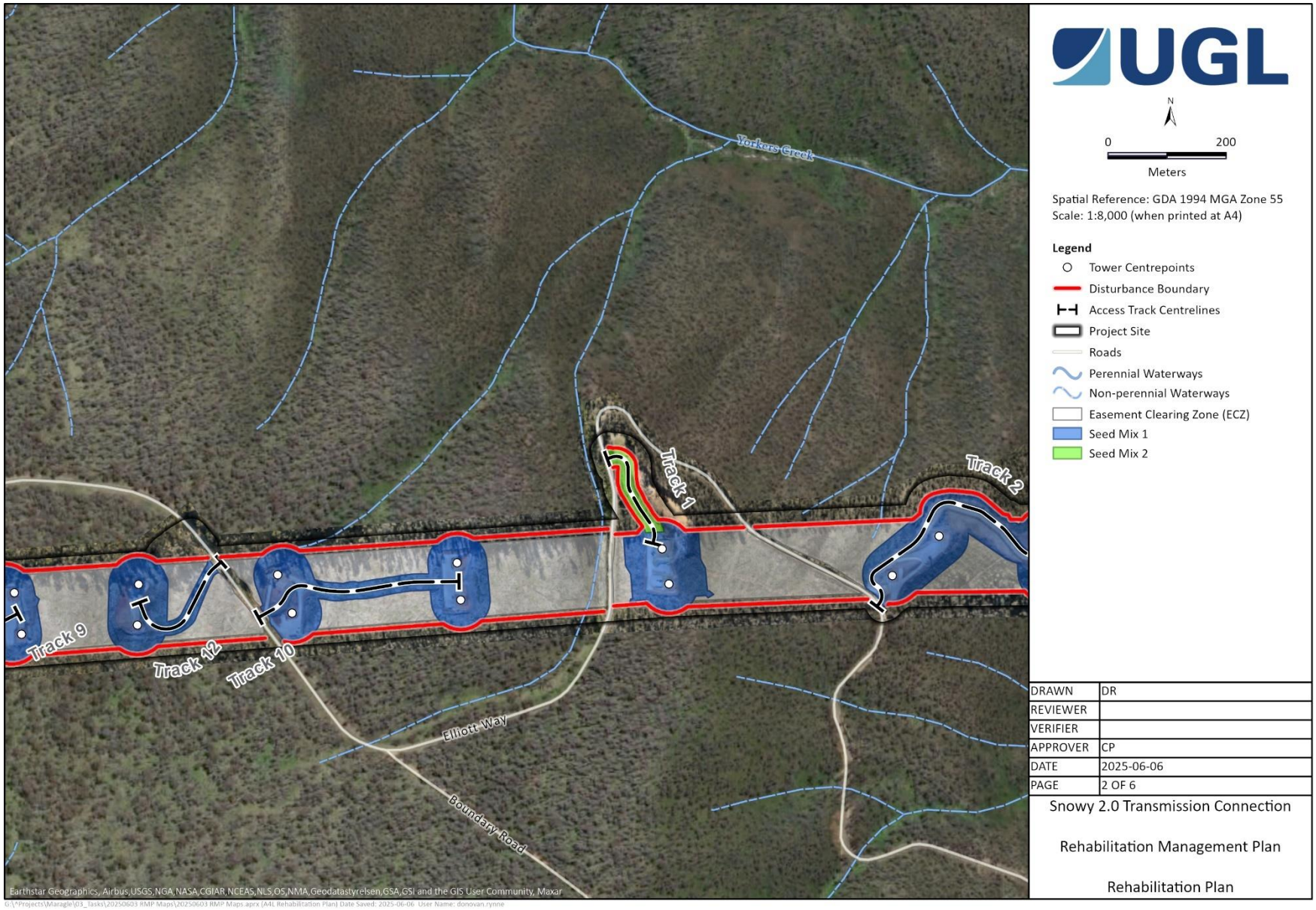
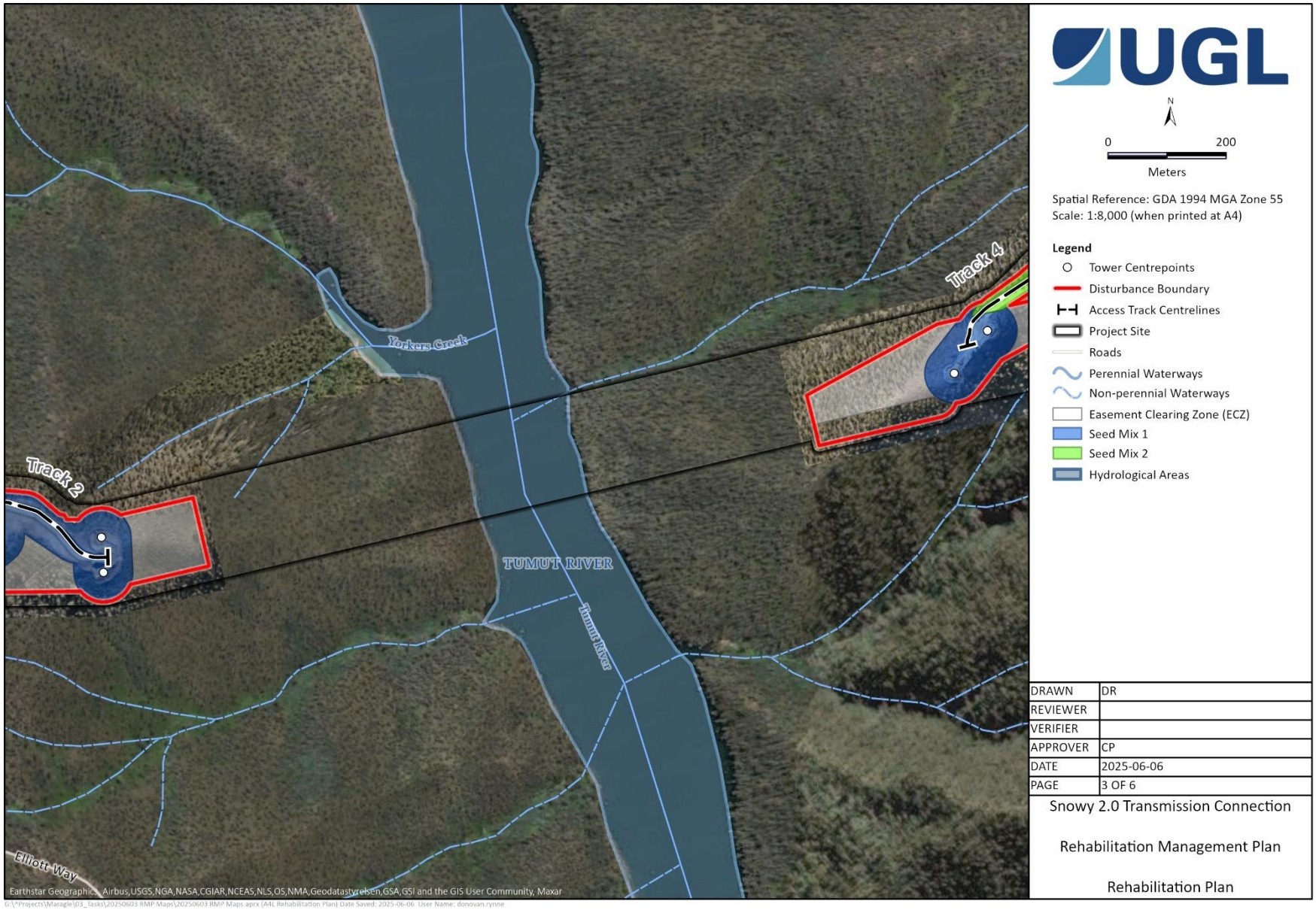
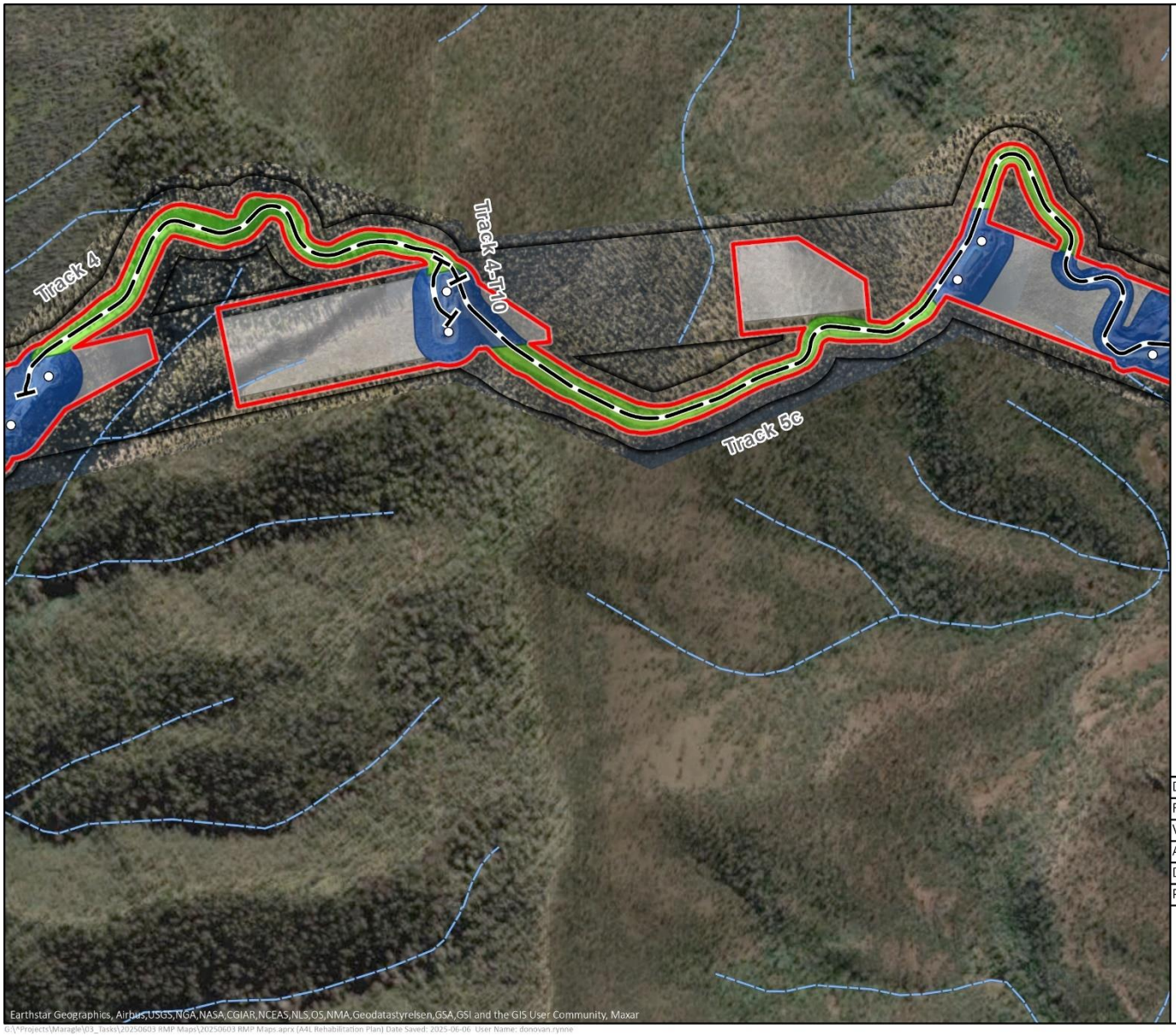
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Access Track Centrelines
Project Site
Roads
Perennial Waterways
Non-perennial Waterways
Constructed by Others
Easement Clearing Zone (ECZ)
Mulching
Seed Mix 1
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 1 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Rehabilitation Plan


Yorkers Creek
Track 1
Track 2
Track 9
Track 12
Track 10
Elliott Way
Boundary Road
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
UGL
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Access Track Centrelines
Project Site
Roads
Perennial Waterways
Non-perennial Waterways
Easement Clearing Zone (ECZ)
Seed Mix 1
Seed Mix 2
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 2 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Rehabilitation Plan


Track 2
Track 4
Yorkers Creek
TUMUT RIVER
Jounama River
Elliott Way
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
UGL
N
0
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Access Track Centrelines
Project Site
Roads
Perennial Waterways
Non-perennial Waterways
Easement Clearing Zone (ECZ)
Seed Mix 1
Seed Mix 2
Hydrological Areas
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 3 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Rehabilitation Plan


Track 4
Track 4-T10
Track 5C
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Rehabilitation Plan) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
N
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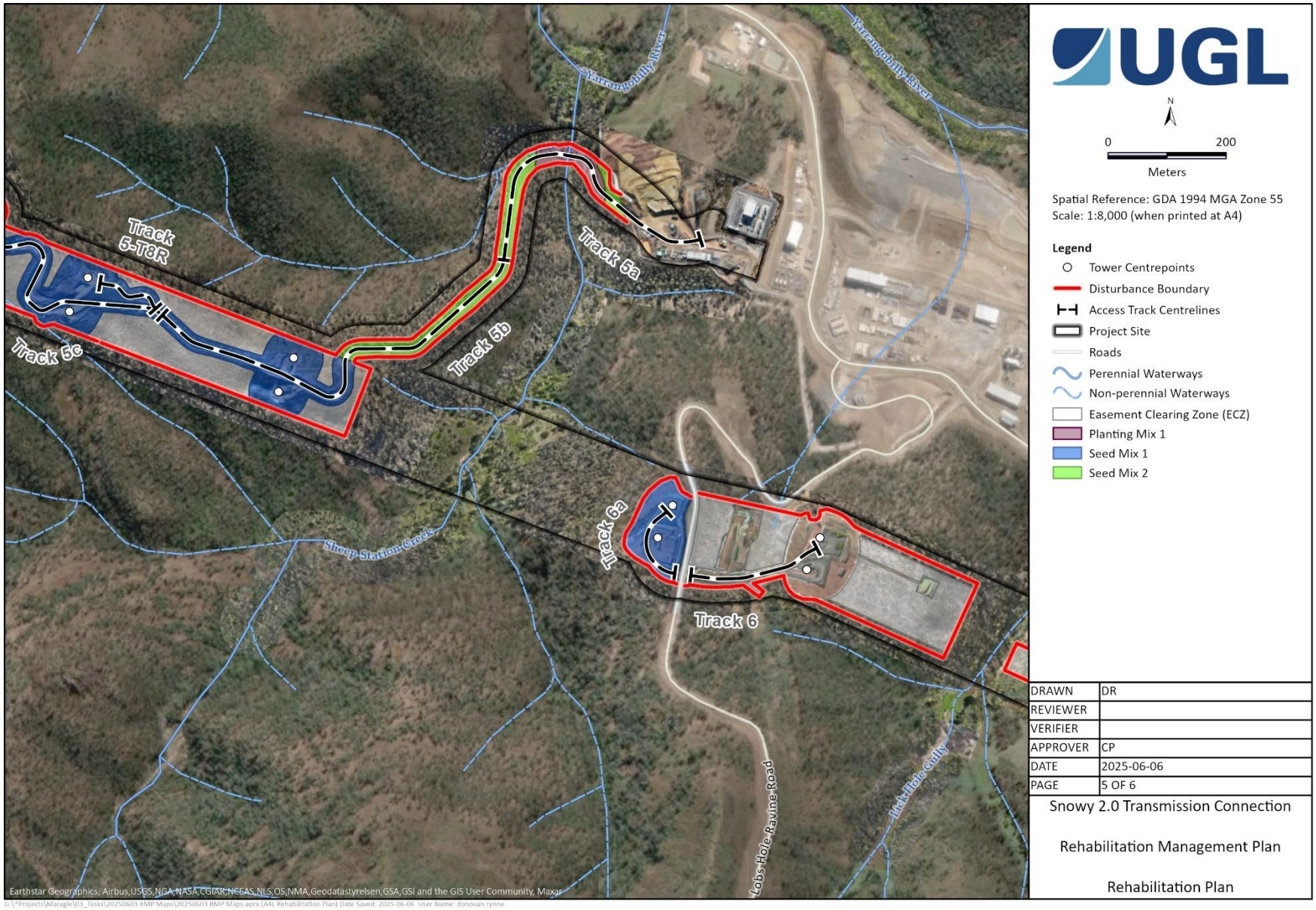
200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Access Track Centrelines
Project Site
Non-perennial Waterways
Easement Clearing Zone (ECZ)
Seed Mix 1
Seed Mix 2
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 4 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Rehabilitation Plan


Yarrangobilly River
Yarrangobilly River
Track 5-T&R
Track 5a
Track 5b
Track 5c
Track 6a
Track 6
Sheep Station Creek
Lobs Hole Ravine Road
Jerrk-Hole Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NEGAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Rehabilitation Plan) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
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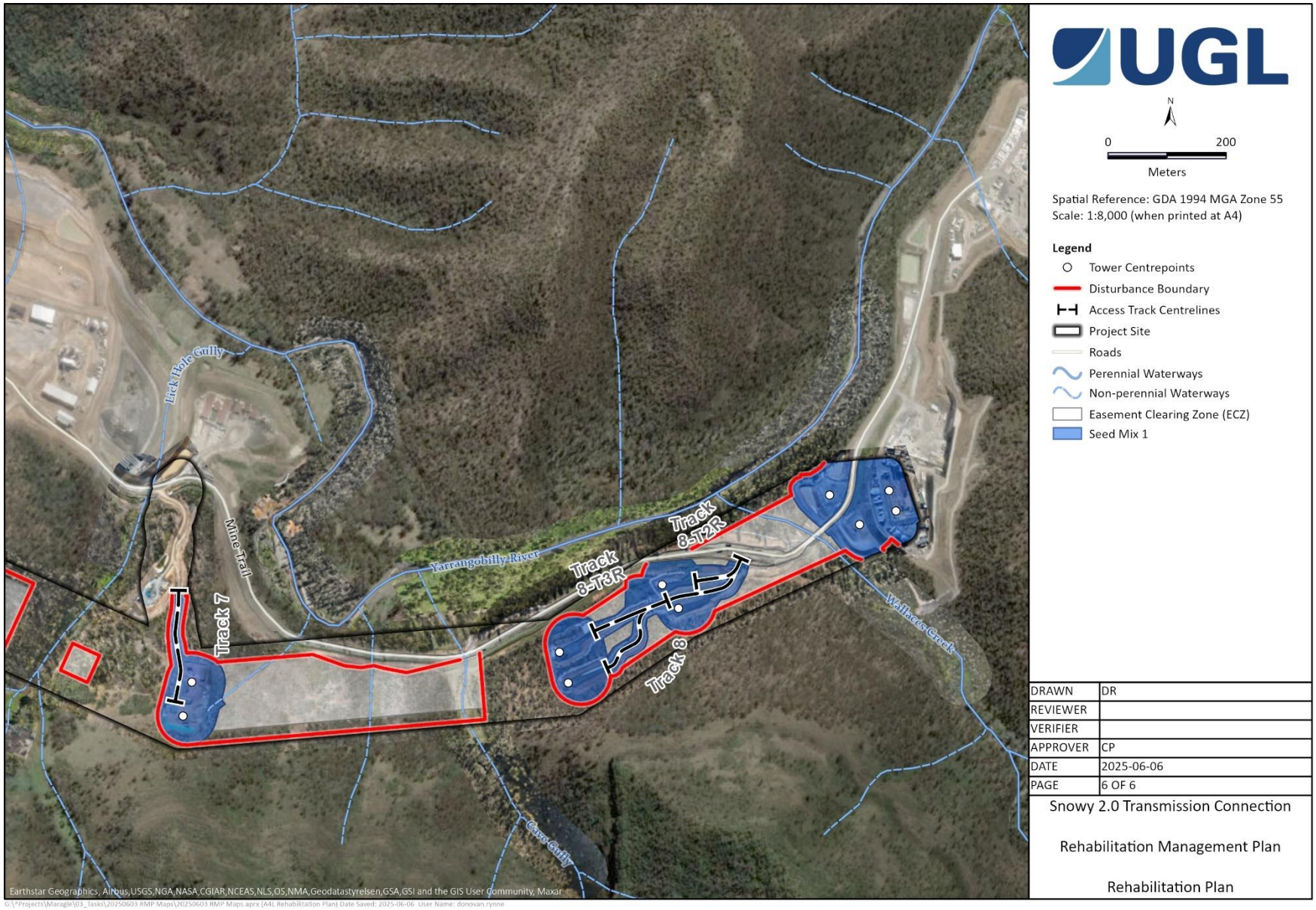
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Access Track Centrelines
Project Site
Roads
Perennial Waterways
Non-perennial Waterways
Easement Clearing Zone (ECZ)
Planting Mix 1
Seed Mix 1
Seed Mix 2
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
PAGE 5 OF 6
Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Rehabilitation Plan


Brick Hole Gully
Mine Trail
Track 7
Yarrangobilly River
Track 8-T3R
Track 8-T2R
Track 8
Wallaces Creek
Cave Gully
Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar
G:\^Projects\Maragle\03_Tasks\20250603 RMP Maps\20250603 RMP Maps.aprx (A4L Rehabilitation Plan) Date Saved: 2025-06-06 User Name: donovan.rynne
UGL
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200
Meters
Spatial Reference: GDA 1994 MGA Zone 55
Scale: 1:8,000 (when printed at A4)
Legend
Tower Centrepoints
Disturbance Boundary
Access Track Centrelines
Project Site
Roads
Perennial Waterways
Non-perennial Waterways
Easement Clearing Zone (ECZ)
Seed Mix 1
DRAWN DR
REVIEWER
VERIFIER
APPROVER CP
DATE 2025-06-06
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Snowy 2.0 Transmission Connection
Rehabilitation Management Plan
Rehabilitation Plan

APPENDIX B: TRIGGER ACTION RESPONSE PLAN

Factor	Trigger / Response	First Level Trigger	Second Level Trigger
Erosion control	Trigger	Minor erosion present.	Major erosion present, which is compromising landform stability.
	Response	An inspection of the site will be undertaken by a suitably trained person. Investigate opportunities to install (or augment existing) water management infrastructure to address erosion. Remediate as appropriate.	Engage a consultant to assist with the management of erosion and sedimentation at the site and provide recommendations to appropriately remediate the erosion. Remediate as soon as practicable.
Topsoil quantity	Trigger	Soil inventory (refer to section 5.1.2.1 – soil inventory) indicates a deficiency in topsoil available for rehabilitation.	Topsoil deficiency is significant, and an alternate is not available, such that it will delay rehabilitation progression - thus the likelihood of rehabilitation success is low.
	Response	The engagement of local nurseries and large-scale landscaping services to provide alternative growth mediums (refer to section 5.1.6.2) for use within NPWS estate is subject to NPWS approval.	Sources and budgeting for alternative growth mediums will be established prior to the commencement of rehabilitation.
Topsoil quality	Trigger	Soil properties (refer to section 5.1.3 – onsite growth medium development) are not consistent with surrounding native vegetation but are capable of sustaining selected vegetation species.	Properties of soil are inconsistent with surrounding native vegetation and the area is not able to sustain selected vegetation species.
	Response	Investigate application of additional soil, and/or use of appropriate soil ameliorants or management options to address soil quality if unable to meet completion criteria.	Consultant to be engaged to assist with recommendations to appropriately remediate soil quality and depth. Remediate as soon as practicable.
Groundcover	Trigger	Bare patches are present. Ground cover <60% at 6 months.	Bare patches are > 10m^2. Ground cover <70% at 12 months.

Factor	Trigger / Response	First Level Trigger	Second Level Trigger
	Response	Investigate likely causes of unsatisfactory germination rates. Reseed areas with unsatisfactory cover. Review hydromulching procedures including seasonal mixes, timing and application rate (per hectare).	Undertake analytical soil testing and review rehabilitation methodology (e.g. hydromulching procedures / approach). Implement appropriate management actions including soil amelioration, or revising rehabilitation procedures, if required.
Vegetation health	Trigger	Rehabilitated areas show evidence of die-back or mortality.	Rehabilitated areas show long-term declining trend re. die-back or mortality.
	Response	Investigate cause of the issue (e.g. diseases such as *Phytophthora*) and treat accordingly. Replant (via hydromulching) areas impacted by high mortality rates. Review planting methodology and revise to suit the area showing evidence of die-back / mortality.	Engage a suitably qualified specialist to investigate causes (e.g. diseases such as *Phytophthora*). Review planting methodology and revise to suit the area showing evidence of die-back / mortality.
Species composition	Trigger	Species composition is not characteristic of the target PCT and / or surrounding native vegetation sites.	Ongoing decline in species composition away from analogue site and target PCT composition.
	Response	Investigate the likely causes of unsatisfactory germination and or, growth rates. Reseed (via hydromulching) areas with unsatisfactory cover. Review rehabilitation procedures including seasonal mixes, timing and seed application per hectare.	Engage a suitably qualified specialist to investigate causes (e.g. diseases such as *Phytophthora*). Undertake analytical soil testing and evaluation. Where appropriate implement recommendations for amelioration. Implement appropriate management actions including revising rehabilitation procedures (e.g. seeding application) if required.

Factor	Trigger / Response	First Level Trigger	Second Level Trigger
Vegetation community maturation/establishment	Trigger	Rehabilitated area lacks second-generation juveniles / immatures	Rehabilitated areas show reduced capacity for recruitment and species composition is not characteristic of the target PCT
	Response	Investigate the likely causes of unsatisfactory germination and or, growth rates Reseed (via hydromulching) areas with unsatisfactory cover. Review rehabilitation procedures including seasonal mixes, timing and seed application per hectare.	Engage a suitably qualified specialist to investigate causes (e.g. diseases such as *Phytophthora*). Undertake analytical soil testing and evaluation. Where appropriate implement recommendations for amelioration. Implement appropriate management actions including revising rehabilitation procedures (e.g. seeding application) if required.
Weeds	Trigger	Monitoring indicates the density of weeds in rehabilitation areas exceeds surrounding native vegetations.	Monitoring indicates substantial weed infestations.
	Response	Undertake weed management to remove / spray introduced weed species. Treatment of infestations as appropriate to the species.	Undertake weed management to remove introduced weed species. Investigate management measures to reduce weeds including additional soil amelioration, establishment and retention of cover crops until weed presence is at acceptable levels. Implement recommendations as appropriate.
Browsing animals	Trigger	Browsing animal species are causing damage to rehabilitation.	Continued damage to rehabilitation from pests after tree guards and fencing has been installed.

Factor	Trigger / Response	First Level Trigger	Second Level Trigger
	Response	Consult with NPWS and / or FCNSW for recommendations regarding appropriate controls. Implement appropriate control measures / campaign.	Liaise with government agencies and consider appropriate options in accordance with NPWS guidelines regulations.
Fauna habitat features and resources	Trigger	Monitoring indicates fauna habitat features (e.g. stags with hollows, decorticating bark, flowering plants) are not present or consistent with PCT site values	Natural habitat features such as leaf litter cover, woody debris and ground cover are not regenerating or present following rehabilitation
	Response	Investigate the likely causes of absent habitat features Revise site features and investigate if substitutes are required (e.g., nest boxes, translocation of woody debris or decorticating bark)	Implement appropriate management actions including revising rehabilitation procedures (e.g., hydromulch application) if required. Review planting methodology and revise to suit the area showing evidence of die-back / mortality.

APPENDIX C: PRIMARY SEED AND PLANTING MIX

Seed Mix 1 - Native grasses with a temporary cover crop

Species	Occurrence of Species within each PCT						
	285	296	300	302	729	999	1196
Themeda triandra	√	√	√	√	√	√	√
Rytidosperma pallidum		√	√	√	√	√	√
Poa sieberiana	√	√	√	√	√	√	√
Poa labillardierei			√	√	√	√	√
Microlaena stipoides	√		√	√			√
Anthosachne scabra			√	√	√	√	√
Austrostipa scabra		√	√		√	√	

Temporary Stabilising 'Cover' Crop Species	Comments
Sterile Ryecorn	Non-invasive, short lived, sterile and non-persistent exotic species may be valuable in providing short term soil cover and weed control until permanent native vegetation can be established

Seed Mix 2 – Native grasses and shrubs with a temporary cover crop

Species	Occurrence of Species within each PCT						
	285	296	300	302	729	999	1196
Themeda triandra	√	√	√	√	√	√	√
Rytidosperma pallidum		√	√	√	√	√	√
Poa sieberiana	√	√	√	√	√	√	√
Poa labillardierei			√	√	√	√	√
Microlaena stipoides	√		√	√			√
Anthosachne scabra			√	√	√	√	√
Austrostipa scabra		√	√		√	√	
Acacia dealbata			√	√	√	√	√
Acacia melanoxylin	√	√	√			√	√
Cassinia longifolia		√	√	√	√	√	√
Senecio gunnii		√	√				√
Senecio quadridentatus		√	√	√	√	√	√

Temporary Stabilising 'Cover' Crop Species	Comments
Sterile Ryecorn	Non-invasive, short lived, sterile and non-persistent exotic species may be valuable in providing short term soil cover and weed control until permanent native vegetation can be established

Planting Mix 1 – A combination of hydromulching and individual planting to be applied to the riparian area of Sheep Station Creek

Species	Hydromulching	Individual Planting
	302	302
Themeda triandra	√	√
Rytidosperma pallidum	√	
Poa sieberiana	√	√
Poa labillardierei	√	√
Microlaena stipoides	√	
Anthosachne scabra	√	
Acacia dealbata	√	
Cassinia longifolia	√	
Senecio quadridentatus	√	
Lomandra longifolia *Lomandra filiformis*		√

Temporary Stabilising 'Cover' Crop Species	Comments
Sterile Ryecorn	Non-invasive, short lived, sterile and non-persistent exotic species may be valuable in providing short term soil cover and weed control until permanent native vegetation can be established

APPENDIX D: SITE PREPARATION CHECKLIST AND MAINTENANCE ACTIVITIES

SITE PREPARATION CHECKLIST			
Action	Task	C (Conforming) / NC (Non-conforming) / NA	Comments
Site Preparation	Soil Sampling	☐ C / ☐ NC / ☐ NA	Sufficient topsoil sampling undertaken
	Soil amelioration	☐ C / ☐ NC / ☐ NA	Topsoil amelioration undertaken as per Soil Sampling Report
	Erosion and sediment controls installed	☐ C / ☐ NC / ☐ NA	ESC controls in place as per PESCP
	Site drainage	☐ C / ☐ NC / ☐ NA	Site drainage installed as per final design
	Surface preparation and shaping	☐ C / ☐ NC / ☐ NA	Surface preparation complete and shaping as per final design
	Mulch spreading	☐ C / ☐ NC / ☐ NA	Mulch spread to protect soil
	Weed control	☐ C / ☐ NC / ☐ NA	Prior to rehabilitation commencing

MAINTENANCE ACTIIVITIES					
Action	Task	Frequency			
		Weekly	Monthly	As Req'd	As Noted
Watering		Every 2nd day until seeds germinate		Water to ensure healthy growth is maintained	
Fertilising					8 Months post individual planting if required
Erosion and Sediment Controls			Inspection	Repair	
Bare Ground	Bare areas should		Inspection	Treat	

MAINTENANCE ACTIIVITIES					
Action	Task	Frequency			
		Weekly	Monthly	As Req'd	As Noted
	be covered as soon as possible				
Weed Control			Inspection	Treat	Prior to weeds setting flower
Vegetation Protection Measures	Inspect protection measures and repair as soon as possible	Inspection		Repair	
Auditing and Reporting	Undertaken monitoring and provide reports to Transgrid	1st Week	1st Month	1 Week 1 Month 6 Months 12 Months	

APPENDIX E: VEGETATION PROTECTION MEASURES

Protection Type	Options	Species Suited For	Benefits	Limitations
Fencing	• Electric • Wire mesh • Multi-strand / plain wire • Temporary construction panels	• Will be dependent on type used	• Restrict access to destructive grazing (e.g., horses, deer and kangaroos). • Wire mesh fences constructed to a height of 600mm with an additional 300mm of fence pinned or rocked to the ground aids in preventing entry from digging mammals (e.g., rabbits and wombats). • Aids in preventing human access.	• Wombats will breach most fences. • No one fence type will exclude all fauna entry – may require multiple methods to exclude all fauna species. • Will not deter browsing by birds. • Costs associated with fencing large areas.
Tree Guards	• Bio-degradable plastic • Plastic mesh	• Rabbits • Wallabies • Kangaroos	• Protect against weather (e.g., wind and frost). • Protect from grazing and browsing mammals. • Provide a microclimate to the seedling.	• Guards without holes may keep a seedling soft, retaining its palatability after 6 months. • Hard ground conditions may limit ability to drive stakes into the ground. • High winds in alpine regions may blow guards away.

Foraging Deterrent	• Jute matting
	• Course woody debris and logs
		• Lyrebirds
		• Browsing species such as:
		  ○ Wallabies
		  ○ Kangaroos
		Deer
		Horses
			• Insulate soil from cold and retain warmth, facilitating plant growth.
			• Supress weed growth.
			• Protect from grazing and browsing mammals.
				• Rock may be required over the top of jute mats placed around base of tube-stock to prevent the birds from digging it up.
				• Will not prevent all browsing as is a deterrent only.

Browsing Deterrent	• Mixture consisting of 3 Parts:
	  ○ Part A: Whole egg solids
	  ○ Part B: Acrylic polymer
	  ○ Part C: Silicon carbide grit
		• Browsing species such as:
		  ○ Wallabies
		  ○ Kangaroos
		  ○ Deer
			• Animals' associate odour with unpalatable texture, potentially reducing browsing.	• Will not prevent all browsing as is a deterrent only.
				• Short term protection.

Protection measures adapted from MacPhee (2013)

APPENDIX F: REHABILITATION MONITORING CHECKLISTS

Rehabilitation Monitoring Checklist:

Details	
Project Name:	
Rehabilitation Monitoring Point (RMP):	
Date:	
Person monitoring:	
RMP Type:	1 Week

Checklist	C (Conforming) / NC (Non-conforming) / NA	Comments
No visible dust is being generated.	☐ C / ☐ NC / ☐ NA	
No evidence of erosion.	☐ C / ☐ NC / ☐ NA	
(At waters) No evidence of increase in sedimentation.	☐ C / ☐ NC / ☐ NA	
No evidence of subsoil visible at surface.	☐ C / ☐ NC / ☐ NA	
No visible subsidence (associated with buried infrastructure).	☐ C / ☐ NC / ☐ NA	
Temporary erosion and sediment controls are installed and maintained in good working order as per the site's Plan.	☐ C / ☐ NC / ☐ NA	
No waste or litter present.	☐ C / ☐ NC / ☐ NA	
No evidence of browsing or damage to area	☐ C / ☐ NC / ☐ NA	
Evidence of treatment application is present (soil binder, hydromulching)	☐ C / ☐ NC / ☐ NA	
No areas of bare earth	☐ C / ☐ NC / ☐ NA	
Exclusion signage is present to prevent access during rehabilitation.	☐ C / ☐ NC / ☐ NA	

Rehabilitation Monitoring Checklist:

Details	
Project Name:	
Rehabilitation Monitoring Point (RMP):	
Date:	
Person monitoring:	
RMP Type:	1 Month

Checklist	C (Conforming) / NC (Non-conforming) / NA	Comments
No visible dust is being generated.	☐ C / ☐ NC / ☐ NA	
No evidence of erosion.	☐ C / ☐ NC / ☐ NA	
(At waters) No evidence of increase in sedimentation.	☐ C / ☐ NC / ☐ NA	
No evidence of subsoil visible at surface.	☐ C / ☐ NC / ☐ NA	
No visible subsidence (associated with buried infrastructure).	☐ C / ☐ NC / ☐ NA	
Temporary erosion and sediment controls are installed and maintained in good working order as per the site's Plan.	☐ C / ☐ NC / ☐ NA	
No waste or litter present.	☐ C / ☐ NC / ☐ NA	
<10% of native plants show evidence of browsing or comparable to the reference quadrat	☐ C / ☐ NC / ☐ NA	
<10% of weeds visible in the vegetation	☐ C / ☐ NC / ☐ NA	
Presence of vascular plant species within the area	☐ C / ☐ NC / ☐ NA	
No areas of bare earth >10m^2	☐ C / ☐ NC / ☐ NA	
Exclusion signage is present to prevent access during rehabilitation.	☐ C / ☐ NC / ☐ NA	

Rehabilitation Monitoring Checklist:

Details	
Project Name:	
Rehabilitation Monitoring Point (RMP):	
Date:	
Person monitoring:	
RMP Type:	6 Months

Checklist	C (Conforming) / NC (Non-conforming) / NA	Comments
No evidence of erosion.	☐ C / ☐ NC / ☐ NA	
(At waters) No evidence of increase in sedimentation.	☐ C / ☐ NC / ☐ NA	
Temporary erosion and sediment controls are installed and maintained in good working order as per the site's Plan.	☐ C / ☐ NC / ☐ NA	
No waste or litter present.	☐ C / ☐ NC / ☐ NA	
Minimum ground cover of 60%, or comparable to the reference quadrat.	☐ C / ☐ NC / ☐ NA	
<10% of native plants show evidence of browsing or comparable to the reference quadrat.	☐ C / ☐ NC / ☐ NA	
The number and ground cover of weed species is comparable to, or less than the reference quadrat.	☐ C / ☐ NC / ☐ NA	
Presence of vascular plant species within the area	☐ C / ☐ NC / ☐ NA	
Exclusion signage is present to prevent access during rehabilitation.	☐ C / ☐ NC / ☐ NA	

Rehabilitation Monitoring Checklist:

Details	
Project Name:	
Rehabilitation Monitoring Point (RMP):	
Date:	
Person monitoring:	
RMP Type:	12 Months

Checklist	C (Conforming) / NC (Non-conforming) / NA	Comments
No evidence of erosion.	☐ C / ☐ NC / ☐ NA	
(At waters) No evidence of increase in sedimentation.	☐ C / ☐ NC / ☐ NA	
Temporary erosion and sediment controls are installed and maintained in good working order as per the site's Plan.	☐ C / ☐ NC / ☐ NA	
No waste or litter present.	☐ C / ☐ NC / ☐ NA	
Minimum ground cover of 70%, or comparable to the reference quadrat.	☐ C / ☐ NC / ☐ NA	
<10% of native plants show evidence of browsing or comparable to the reference quadrat.	☐ C / ☐ NC / ☐ NA	
The number and ground cover of weed species is comparable to, or less than the reference quadrat.	☐ C / ☐ NC / ☐ NA	
Species belonging to the target PCT are present within the site	☐ C / ☐ NC / ☐ NA	
Invertebrate observations (e.g. ants, saw fly, wasps etc.) within the site	☐ C / ☐ NC / ☐ NA	
Exclusion signage is present to prevent access during rehabilitation.	☐ C / ☐ NC / ☐ NA	