Appendix B2

Construction Biodiversity Management Sub-Plan

HumeLink West

Document Number: HLW-HLJV-PRW-ENM-PLN-000001

Revision: 8

TransGrid

Date 11/09/2026

Document Control

Approvals

Title	HumeLink West Construction Biodiversity Management Sub-Plan
Endorsed by Environment Representative	[redacted] (WolfPeak Pty Ltd)
Approved on behalf of HLWJV by	[redacted]
Signed	
Dated	11/09/2026

Version Control

Revision	Date	Description	Author	Reviewer	Approver
A	9/02/2024	Initial Draft – pending receipt of updated EIS/AR			
B	24/04/2024	Draft for TG Review			
C	30/05/2024	Amendments following TG Review and receipt of BDAR rev B data			
D	3/07/2024	Updates following receipt of UMMs and HLW mapping files			
E	19/08/2024	Updates following TG review			
0	3/09/2024	Updates following TG review pt.2			
1	20/12/2024	Updates following receipt of final MCoA & CoMA			
2	4/06/2025	Updates following ER, FCNSW & CPHR review			
3	28/07/2025	Updates following ER & CPHR review			
4	11/08/2025	Updates following CPHR comments			
5	3/09/2025	Updates following DPHI review			
6	22/05/2026	Minor update to Connectivity Strategy			
7	19/06/2026	Minor update to include reference to Fauna Impact Assessment (appendix to Blast Management Plan) and updates to Clearing Protocol & Biodiversity			

Revision	Date	Description	Author	Reviewer	Approver
		Monitoring Program	[redacted]		
7.1	19/06/2026	Up Rev for doc control			
8	11/09/2026	Minor updates for FcNSW comments			

Distribution of controlled copies

This document is available to all personnel and sub-contractors via the HLW document control management system. An electronic copy can be found on the HumeLink website.

The document is uncontrolled when printed. One controlled hard copy of the Management Plan will be maintained by the Quality Manager at the HLW office and on the HumeLink website, were relevant.

Copy number	Issued to	Version

Contents

1. Introduction **1**
1.1. Context 1
1.2. Background and project description 1
1.3. Scope 1
1.4. Interface with other planning documents 2
1.4.1. Biodiversity Offset Package 3
1.4.2. Supplementary Biodiversity Strategy 3
1.4.3. Biodiversity Assessment Verification Report 4

2. Purpose and objectives **5**
2.1. Purpose 5
2.2. Objectives 5

3. Environmental requirements **6**
3.1. Legislation 6
3.2. Guidelines and standards 6
3.3. Permits and licences 6
3.4. Preparation of this plan 7
3.5. Consultation for plan preparation 7

3.6. Ongoing consultation 7
3.7. Minister's Conditions of Approval 7
3.8. Federal Minister for Water and Environment Condition of Ministerial Approval 22
3.9. Updated Environmental Management Measures 26

4. Existing environment 65
4.1. Location and landscape context 65
4.2. IBRA region and subregion 65
4.2.1. Inland Slopes subregion (NSW South Western Slopes bioregion) 65
4.2.2. Bondo subregion (South Eastern Highlands bioregion) 65
4.2.3. Snowy Mountains subregion (Australian Alps bioregion) 65
4.3. Bushfire impacts 67
4.4. Vegetation 67
4.4.2. Threatened Ecological Communities (TECs) 71
4.5. Threatened flora 71
4.6. Threatened fauna 73
4.7. Entities at risk of Serious and Irreversible Impact (SAII) 76
4.8. Fauna habitat 76
4.9. Aquatic habitat 78
4.9.1. Threatened aquatic entities 78
4.10. Groundwater Dependent Ecosystems (GDEs) 79
4.11. Weeds and pathogens 80
4.12. Predator and pest species 81

5. Environmental aspects and impacts 82
5.1. Aspects 82
5.2. Potential impacts 82
5.2.1. Native vegetation and TECs 82
5.2.2. Threatened flora 88
5.2.3. Threatened fauna 89
5.2.4. Threatened aquatic entities 91
5.3. Key Threatening Processes (KTPs) 93

6. Environmental control measures 97
6.1. Detailed design 97
6.1.1. Disturbance zones 100
6.1.2. Micro-siting 101
6.2. No-go zones 101
6.3. Biodiversity management training 103
6.3.1. Induction 104
6.3.2. Toolbox talks 104
6.4. Clearing protocols 105
6.5. Bushfire management 105

6.6. Noise and vibration assessment for crushing and blasting 106
6.7. Aquatic works 108
6.7.1. Waterway crossing controls 108
6.8. Supplementary hollow and nest strategy 109
6.9. Unexpected finds procedure 110
6.10. Soil and water management 110
6.11. Biosecurity management plan 110
6.12. Connectivity strategy 110
6.13. Rehabilitation 111
6.14. Additional and Appropriate Measures for Serious and Irreversible Impact Entities 111
6.15. Biodiversity monitoring program 112
6.16. Summary of biodiversity management and mitigation strategies 113

7. Compliance management 132
7.1. Roles and responsibilities 132
7.2. Training 132
7.3. Monitoring 132
7.4. Auditing 132
7.5. Incidents and non-compliances 133
7.6. Reporting 150

8. Review and improvement 153
8.1. Continuous improvement 153
8.2. Plan update and amendment 153

9. References 154

Figures

Figure 1-1 Staging for HumeLink 1
Figure 5-1 IBRA regions, subregions and land tenure 66

Tables

Table 1-1 Key interfaces with this document 2
Table 3-1 MCoA relevant to the BMP 8
Table 3-2 CoMA relevant to the BMP 22
Table 3-3 UMMs relevant to the BMP 26
Table 4-1 PCTs within the HLW Area 67
Table 4-2 TECs within the HLW Area 71
Table 4-3 Threatened flora occurrence within the HLW Area 71
Table 4-4 Threatened fauna occurrence within the HLW Area 73

Table 4-5 Fauna habitat types within the HLW Area 77
Table 4-6 Potential GDEs within the HLW Area 79
Table 4-7 Weeds identified within the HLW Area 80
Table 5-1 Direct impacts to native vegetation and TECs 83
Table 5-2 Direct impacts to threatened flora 88
Table 5-3 Direct impacts to threatened fauna 90
Table 5-4 Stream crossing works as part of HLW 92
Table 5-5 Key Threatening Processes relevant to HLW 93
Table 6-1 Biodiversity constraint levels summary 97
Table 6-2 No-go zones 102
Table 6-3 Noise and vibration assessment for crushing and blasting – target species 106
Table 6-4 Biodiversity management and mitigation measures 113
Table 7-1 TARP 134
Table 7-2 Reporting program 150

Annexures

Annexure A Detailed design
Annexure B Clearing Protocol
Annexure C Hollow and Nest Strategy
Annexure D Unexpected Finds Procedure
Annexure E Biosecurity Management Plan
Annexure F Connectivity Strategy
Annexure G Rehabilitation Plan
Annexure H Biodiversity Monitoring Program
Annexure I Author's Qualifications and Experience
Annexure J Additional and Appropriate Measures under Condition B30(d)(xiii)
Annexure K Biodiversity figures
Annexure L Consultation Report – unattached annexure

Definitions

Term	Definition
Environmental aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment.
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental target	Defined by AS/NZS ISO 14001:2015 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
Environmental Representative	A suitably qualified and experienced person independent of HumeLink design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
HumeLink Approvals	HumeLink approvals include: ▪ HumeLink Infrastructure Approval NSW SSI 36656827. ▪ HumeLink EPBC Approval Cth EPBC 2021/9121.
Non-compliance	Failure to comply with the requirements of the HumeLink Approvals or any applicable licence, permit or legal requirements.
Non-conformance	Failure to conform to the requirements of HLW system documentation including this CEMP or supporting documentation.
Planning Approval Documentation	The NSW planning approval documents, as they relate to the HLW and as listed in MCoA A2 of the NSW Infrastructure Approval for HumeLink (SSI 36656827)

Abbreviations

Abbreviation	Expanded text
A&AMs	Additional and Appropriate Measures
BAVR	Biodiversity Assessment Verification Report
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BCS	Biodiversity Conservation Society
BCT	Biodiversity Conservation Trust
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Sub-plan
BOP	Biodiversity Offset Package
CEMP	Construction Environmental Management Plan
CoMA	Commonwealth Conditions of Ministerial Approval
CSSI	Critical State Significant Infrastructure
Cth	Commonwealth of Australia
CPHR	Conservation Programs, Heritage & Regulation Division
DCCEEW - Cth	The Commonwealth Department of Climate Change, Energy, the Environment and Water
DCCEEW – NSW	The NSW Department of Climate Change, Energy, the Environment and Water (formerly DPE)
DoE	Department of the Environment
DPE	Department of Planning and Environment (now known as NSW DCCEEW)
DPI	Department of Primary Industries
DPIE	Department of Planning, Industry and Environment (now known as NSW DCCEEW)
DPHI	Department of Planning, Housing and Infrastructure
EEC	Endangered Ecological Community
EHNV	Epizootic Haematopoietic Necrosis Virus
EIS	Environmental Impact Statement
EMS	Environmental Management System
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999* (Cth)
FCNSW	Forestry Corporation New South Wales
FM Act	*Fisheries Management Act 1994* (NSW)
GIS	Geographic Information System
HLE	The HumeLink East Stage of the HumeLink project
HLW	The HumeLink West Stage of the HumeLink project

Abbreviation	Expanded text
HLWJV	HumeLink West Joint Venture (UGL Limited and CPB Contractors)
HLW Area	Areas within and adjacent to the approved disturbance footprint of the HumeLink West Stage of the HumeLink project
HTW	High Threat Weed
IBRA	Interim Biogeographic Regionalisation for Australia
KTP	Key Threatening Process
LAMP	Local Action Management Program
MCoA	NSW Minister's Conditions of Approval
NPWS	National Parks and Wildlife Service
PCT	Plant Community Type
Revised BDAR	*HumeLink Biodiversity Development Assessment Report Rev 0* (Niche Environment and Heritage Pty Ltd, June 2024)
RtS	Response to Submissions Report
SBS	Supplementary Biodiversity Strategy
SSI	State Significant Infrastructure
TARP	Trigger Action Response Plan
TBC	To Be Confirmed
TBD	To Be Determined
TEC	Threatened Ecological Community
UMM	Updated Environmental Management Measure as outlined in the Planning Approvals Documentation
VRZ	Vegetated Riparian Zone
WoNS	Weeds of National Significance

1. Introduction

1.1. Context

This Biodiversity Management Sub-Plan (BMP) forms part of the HumeLink West project (HLW) Construction Environmental Management Plan (CEMP). The BMP has been prepared to outline and describe how the UGL Limited and CPB Contractors Joint Venture (HLWJV), during the construction of HLW, will comply with the Minister's Conditions of Approval (MCoA), the Federal Minister for Water and Environment Condition of Ministerial Approval (CoMA), the Updated Environmental Management Measures (UMM), and undertake its duties in accordance with the Planning Approval Documentation listed under the MCoA A2.

1.2. Background and project description

The background and description of the HumeLink project (HumeLink) and the staging of HumeLink into the HumeLink East project (HLE) and the HumeLink West project (HLW) is detailed in Section 1.1 and Section 1.3 of the CEMP and is represented in Figure 1-1.



Figure 1-1 Staging for HumeLink

1.3. Scope

The scope of this Plan is to describe how the HLWJV proposes to manage biodiversity impacts during construction of HLW. This plan also describes the responsibilities of the HLWJV team including delivering continuous improvement, the auditing and reporting structure to be used during construction of HLW.

1.4. Interface with other planning documents

This Plan is a component of a suite of documents, prepared as part of the implementation of the HLW Environmental Management System. The Environmental Management System overview is described in Section 1.4 of the CEMP. The key documents that interface with this Plan are outlined in Table 1-1.

Table 1-1 Key interfaces with this document

Plan	Interface
Construction Environmental Management Plan (CEMP)	• Provides details on overall HLW staging, interactions between Sub-Plans of the CEMP, and management of cumulative impacts. • Provides a framework for how the construction works will be managed. • Identifies procedures, processes and management systems that will apply in relation to construction activities. • Provides environmental planning and controls for construction including environmental risk assessment, regulatory requirements, protection measures and sustainability requirements.
Soil and Water Management Sub-Plan	• Provides details on HLW management of soils to minimise water quality impacts.
Sustainability Management Plan	• Identifies the sustainability policy commitments, objectives, and targets for HumeLink West. • Describes the key drivers for those commitments. • Describes the sustainability management framework. • Provides a summary of how the sustainability targets will be met.
Health & Safety Management Plan	• Details framework for health and safety processes. • Provides health and safety procedures for those wastes that have potential human health risks.
Interface and Third-Party Management Plan	• Details framework for third party interaction. • Provides procedures, processes and management systems that will apply in relation third party management.
Community Communications Strategy	• Details the framework for management of stakeholders and how to engage them. • Provides processes and procedures that guide the outcome of community engagement. • Provides an assessment of sensitive receivers indicating special considerations that will impact traffic control devices.

In addition to the HLWJV's documents, the BMP will also interface with external documents including, but not limited to the HLE works and the Snowy 2.0 Transmission Line works (SSI-9717).

These documents are separate to the CPB Content Management System and do not form part of the approval of this CEMP document and will be managed through the HLWJV Interface Management Plan to assist in the management of cumulative impacts.

1.4.1. Biodiversity Offset Package

Transgrid prepared a Biodiversity Offset Package (BOP; Version 4, 19 December 2024) for the HumeLink project in accordance with Minister's Conditions of Approval (MCoA) B26 (refer Table 3-1). The BOP was prepared in consultation with NSW Biodiversity Conservation and Science Division (BCS) (now known as Conservation Programs, Heritage & Regulation [CPHR]) and the NSW Biodiversity Conservation Trust (BCT). The BOP was conditionally approved by the NSW Planning Secretary on the 20 December 2024 on the basis that:

- Further consultation be undertaken with the Department and Nature Markets and Offset division within CPHR including regarding reporting.
- At this stage, the Department does not accept the proposed use of the variation rules without further consultation.

A revised version of the BOP must be submitted for the Planning Secretary's approval within 3 months of the conditional approval (20 March 2025) or as otherwise agreed with the Department. Transgrid provided bank guarantees for the Biodiversity Offsets Package on the 20 December 2024 in accordance with MCoA B27.

The BOP may also be updated throughout construction, in consultation with CPHR and BCT, following preparation of a Biodiversity Assessment Verification Report (BAVR) in accordance with MCoA B29 to the satisfaction of the Planning Secretary (refer to Section 1.4.3 below). Transgrid will provide a report every 6 months from the approval of the BOP to the Planning Secretary, BCS and the BCT setting out the progress towards delivering each specific biodiversity offset measure.

1.4.2. Supplementary Biodiversity Strategy

Transgrid must prepare a Supplementary Biodiversity Strategy (SBS) for the HumeLink project in accordance with MCoA B28. The objectives of the SBS are to:

- Describe survey methods to confirm the extent of suitable habitat and presence of all listed Serious and Irreversible Impact (SAII) species potentially impacted by the Project, in accordance with the BAM and other guidance documents that are relevant and applicable.
- Describe the method for updated assessment of SAII entities potentially or likely to be impacted by the Project.
- Detail survey methods to confirm reduce assumed presence of specific non-SAII entities within unsurveyed areas for which a reduction in offset liability is being sought.
- Define the relevant biodiversity values with regard to the SBS.
- Describe methods for validation of Plant Community Types (PCT's) on previously inaccessible land.

The SBS must be prepared in consultation with CPHR and must be to the satisfaction of the Planning Secretary prior to the carrying out any Development that would impact on the relevant biodiversity values (excluding Enabling Works, if the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of MCoA B64). For the purpose of the SBS, the relevant biodiversity values are those SAII entities listed in condition MCoA B28 of the HumeLink infrastructure approval, and any other threatened entity impacted by the Project for which a credit liability reduction is being sought, specific to the location where assumed presence is being revised in a particular BDAR.

The SBS must be peer reviewed by a suitably qualified, experienced and independent biodiversity consultant with Biodiversity Assessment Method (2020; BAM) Accreditation whose appointment has been endorsed by the Planning Secretary. The Planning Secretary endorsed Transgrid's proposed independent biodiversity consultant on the 20 November 2024. The results of the supplementary biodiversity surveys outlined in the SBS will be reported in a Biodiversity Assessment Verification Report (BAVR) prepared in accordance with MCoA B29 (refer to Section 1.4.3 below).

1.4.3. Biodiversity Assessment Verification Report

Transgrid must prepare a Biodiversity Assessment Verification Report (BAVR) for the HumeLink project in accordance with MCoA C29. The objective of the BAVR is to

- Detail of the outcomes of surveys undertaken in accordance with condition B28 (i.e., SBS).
- Where species are found to be present following the surveys undertaken under condition B28 or that are assumed to be present, identify measures to avoid and / or mitigate the impact to those entities for inclusion in a revised version of the Biodiversity Management Plan required under condition B30.
- Provide findings and recommendations relating to the matters in (d), including, but not limited to, reducing the relevant credit obligations and calculating credit obligations for unexpected finds.

The BAVR must be prepared in consultation with CPHR and must be to the satisfaction of the Planning Secretary prior to the carrying out any Development that would impact on the relevant biodiversity values (excluding Enabling Works, if the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64). Submission of the BAVR may be staged as supplementary surveys continue along the project corridor prior to impacts upon relevant biodiversity values.

The BAVR must be prepared by a suitably qualified, experienced and independent biodiversity consultant with BAM Accreditation whose appointment has been endorsed by the Planning Secretary. The results of the BAVR will be incorporated into an updated version of the BOP and this BMP **within three months of BAVR approval**. Revision of this BMP will include updates to the known presence of threatened entities, mitigation measures and mapping / spatial data. The BMP will quantify the extent of survey coverage gaps, where the full suite of mitigation measures will be applied including Pre-clearing Surveys. Demonstrated minimisation of impacts to hollow-bearing trees and threatened species (in accordance with MCoA 25) will be reported.

2. Purpose and objectives

2.1. Purpose

This BMP has been prepared based on current best practice guidelines to minimise and manage the potential impacts of HLW on biodiversity, thus protecting adjoining biodiversity values from disturbance during construction works. The proposed management measures aim to address relevant actions and mitigation measures outlined in the following documents:

- *HumeLink Biodiversity Development Assessment Report Rev 0* (Revised BDAR; Niche Environment and Heritage Pty Ltd, June 2024), refer Table 3-3.
- Minister's Conditions of Approval (MCoA), refer Table 3-1.
- Federal Minister for Water and Environment Condition of Ministerial Approval (CoMA), refer Table 3-2.

2.2. Objectives

The key objective of the BMP is to ensure that all avoidance, mitigation, and management measures relevant to the protection of native flora and fauna, including threatened species and threatened ecological communities, referred to in the environmental assessment documents and relevant permits and approvals are addressed. This objective will be achieved through the following:

- Specify key biodiversity matters relating to HLW that require control measures.
- Outline a management framework for minimising and avoiding impacts on biodiversity.
- Establish management measures to evaluate and report against performance criteria.
- Establish monitoring and adaptive management responses to ensure effective implementation of biodiversity control measures.
- Identify and assign responsibilities for ongoing management actions.
- Ensure that HLW is planned, designed, and implemented by informed and experienced contractors in order to avoid harm to the quality, stability, and natural functions of the local ecology.

The BMP applies specifically to construction activities carried out within the HLW Area. Further information about the nature of works to be completed and details on HLW can be found in the CEMP.

3. Environmental requirements

3.1. Legislation

This BMP has been prepared in accordance with the following legislative framework:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- *Biodiversity Conservation Act 2016* (BC Act).
- *Fisheries Management Act 1994* (FM Act).
- *Environmental Planning and Assessment Act 1979* (EP&A Act).
- *Biosecurity Act 2015.*
- *Forestry Act 2012.*
- *National Parks and Wildlife Act 1974.*

Relevant provisions of the above legislation are available in the register of legal and other requirements included in Appendix A1 of the CEMP.

3.2. Guidelines and standards

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

- Revised BDAR (Niche, 2024).
- *HumeLink Vegetation Clearing Method and Management Memorandum* (Transgrid, 2023).
- *Transmission Line Design Manual – Major New Build 2023* (TLDM) Rev 2.0.
- *Transmission Line Construction Manual – Major New Build 2020* (TLCM) Rev 1.0.
- *Environmental Management Plan Guidelines* (DCCEEW - Cth, 2024).
- *Electric Line Clearance Management Plan – 1 July 2021 to 30 June 2026* (Transgrid, 2019).
- *Policy and Guidelines for Fish Habitat Conservation and Management* (Update 2013; DPI, 2013).
- *TransGrid Transmission Line Design Manual for 220kV, 330kV and 500kV – Major New Build.*
- *Why do Fish Need to Cross the Road? Fish Passage, Requirements for Waterway Crossings* (Fairfull and Witheridge, 2003).
- *Hygiene guidelines. Protocols to protect priority biodiversity areas in NSW from Phytophthora cinnamomi, myrtle rust, amphibian chytrid fungus and invasive plants* (DPIE, 2020).
- *Saving our Species Conservation Strategies* (various).
- Other relevant recovery plans, best practice guidelines and scientific literature.

Refer to Section 10 for a full list of references.

If necessary, results of the Supplementary Biodiversity Strategy (SBAS) & Biodiversity Assessment Verification Report (BAVR) will be incorporated as an amendment to this BMP.

3.3. Permits and licences

HumeLink was declared Critical State Significant Infrastructure (CSSI) under Section 5.13 under the EP&A Act and Clause 16 of the State Environmental Planning Policy (State and Regional Development) 2011.

A referral under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) was submitted in March 2022. The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) determined HumeLink to be a controlled action under

Section 75 of the EPBC Act on 13 April 2022. In May 2022, Supplementary SEARs were issued to provide additional requirements from DCCEEW.

In accordance with the NSW Assessment Bilateral Agreement made under Section 45 of the EPBC Act, the NSW Government has assessed Matters of National Environmental Significance (MNES) on behalf of the Australian Government and submitted an assessment report for DCCEEW to issue EPBC Act approval.

HumeLink was approved by the Minister for Planning and Environment (the NSW Minister) on 13 November 2024 and by the Minister for Climate Change, Energy, the Environment and Water (the Cth Minister) on 18 December 2024.

The permits and licences relevant to this BMP include:

- All Project Ecologists must, at a minimum, hold a Scientific Licence under Part 2 of the BC Act (including Animal Ethics Approval) for fauna handling, rescue and all additional survey works.
- Where rescued fauna requires rehabilitation and care, only wildlife rehabilitation centres authorised under Part 2 of the BC Act may be utilised.
- Clearing works to be managed and monitored using internal HLWJV Clearing Permits.

3.4. Preparation of this plan

In accordance with MCoA B30a, this strategy has been prepared by suitably qualified and experienced biodiversity experts of RPS AAP Consulting Pty Ltd. Please find qualifications and experience for the following in Annexure I:

- Polina Zadorojnaya (BSc, BAM Accredited Assessor [BAAS24055]).
- Chris Wellington (Bachelor Advanced Science (Hons1) Marine & Terrestrial Ecology).
- Tara Boreham (BSc [Chemistry, Biology]; BAM Accredited Assessor [BAAS23039]).
- Chelsea Tiller (BSocSci).
- Heather Duff (BSc [Botany, Ecology & Geology], BScHons Geology).
- Joe Baird (BSc).
- Natalie Wood (Cert. ESRI Int, Global Mapper, AutoCAD).
- Robert Suansri (BSc, BEc).

3.5. Consultation for plan preparation

Consultation undertaken in preparation of this BMP and all annexures is summarised in Annexure L.

3.6. Ongoing consultation

If consultation with relevant stakeholders or regulators is required to assess the efficacy of mitigation strategies detailed in this report or its annexures, this BMP will be updated to reflect any results of consultation per Section 9.

3.7. Minister's Conditions of Approval

The MCoA relevant to this Plan are listed in Table 3-1. A cross reference is also included to indicate where and how the conditions are addressed in this Plan or other HLW management documents.

Table 3-1 MCoA relevant to the BMP

MCoA No.	Condition Requirements	Document Reference
Riparian Areas		
B22	The Proponent must ensure all activities on waterfront land are constructed in accordance with the *Guidelines for Controlled Activities on Waterfront Land* (DPE 2022), *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (NSW Fisheries 2003) and the *Policy and Guidelines for Fish Habitat and Conservation and Management* (NSW Fisheries, 2013), unless Water Group and DPIRD Fisheries agrees otherwise	Section 6.1
Restrictions of Clearing and Habitat		
B25	Unless otherwise agreed with the Planning Secretary, the Proponent must: (a) ensure that the vegetation and habitat clearing limits specified in Table 2-1, Table 2-2 and Table 2-3 of Appendix 2 are not exceeded; and	This plan outlines clearing limits in Section 5.2 and includes provisions for clearing restrictions in Section 6.2. Further controls for ensuring vegetation and habitat clearing limits are not exceeded are detailed in Section 2.3 and 3 of Annexure B.
	(b) minimise: (i) the impacts of the development on hollow-bearing trees; (ii) the impacts of the development on threatened species; and (iii) the clearing of native vegetation and key habitat; and	Detailed design is guided by the ecological constraints mapping detailed in Section 6.1, including hollow-bearing trees, threatened species and their habitats, and native vegetation. Following completion of detailed design, Annexure A will be updated to include ecological constraints mapping to

MCoA No.	Condition Requirements	Document Reference
		demonstrate minimisation of such impacts. This plan includes provisions for clearing protocols to minimise impacts on threatened flora and fauna, including their habitats (Section 2.5 of Annexure B). Annexure C (Section 4) includes provisions for minimising impacts on threatened fauna populations via replacement of impacted hollows and nest impact management. Annexure D (Section 2 & 3) includes procedure to manage incidental finds of threatened flora and fauna. Annexure E (Section 5) includes provisions for minimising biosecurity impacts on native vegetation and threatened species. Annexure F includes provisions for minimising connectivity (Section 4.1-4.3) and collision impacts on fauna populations (Section 4.4), as well as minimising the clearing of native vegetation and key habitats in connectivity corridors (Section

MCoA No.	Condition Requirements	Document Reference
		4.1). Annexure G includes provisions for minimising impacts on threatened fauna populations via the salvage (Section 4.1) and reuse of habitat features (Section 4.3). Annexure H includes provisions for monitoring impacts in partial clearing zones to ensure impacts are minimised per this condition (Section 4.2).
	(c) not undertake any works that result in ground disturbance within a minimum setback distance of 50 metres from PCT 637 – *Alpine and sub-alpine peatlands, damp herbfields and fens, South Eastern Highlands Bioregion and Australian Alps Bioregion* and 30 metres from known locations of *Prasophyllum bagoense, Prasophyllum keltonni* and *Pterostylis oreophila* as mapped in the BDAR.	Section 6.2. Annexure H includes provisions for monitoring potential indirect impacts to these entities (Section 4.3 & 4.7).
Biodiversity Offset Package		
B26	Prior to carrying out any development that would impact on biodiversity values requiring offset or within 3 months of the date of the Project Approval whichever is sooner, the Proponent must update the Biodiversity Offset Package (Package) that is consistent with the EIS, in consultation with CPHR and BCT and to the satisfaction of the Planning Secretary in writing. The Package must include, but not necessarily be limited to: (a) details of the specific biodiversity offset measures to be implemented and delivered in accordance with the EIS; (b) the cost for each specific biodiversity offset measure, as determined in accordance with a BCF Charge Statement indexed on a monthly basis in	Section 1.4.1.

MCoA No.	Condition Requirements	Document Reference
	accordance with the Biodiversity Offsets Payment Calculator Order 2022; (c) the timing and responsibilities for the implementation and delivery of the measures required in the Package; (d) a report to be provided every 6 months from the approval of the updated Package to the Planning Secretary, (e) CPHR and the BCT setting out the progress towards delivering each specific biodiversity offset measure; and (f) confirmation that the biodiversity offset measures will have been implemented and delivered no later than 13 November 2026, unless otherwise agreed with the Planning Secretary. Following the Planning Secretary's approval, the Proponent must implement and deliver the Biodiversity Offset Package.	
B27	Prior to carrying out any development that could impact the biodiversity values requiring offset, the Proponent must lodge bank guarantee(s) with a total value of $502,332,107, in accordance with the Deed of Agreement with the Planning Secretary (or delegate) executed on 10 October 2024. The Proponent must comply with the terms of the Deed.	Section 1.4.1.
Supplementary Biodiversity Strategy		
B28	Prior to carrying out any development that would impact on the relevant biodiversity values (excluding Enabling Works, if the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64), the Proponent must prepare a Supplementary Biodiversity Strategy as committed to in the EIS, in consultation with CPHR and to the satisfaction of the Planning Secretary. Unless otherwise agreed by the Planning Secretary, the Strategy must: (a) be peer reviewed by a suitably qualified, experienced and independent biodiversity consultant with *Biodiversity Assessment Method* (2020) (BAM) Accreditation whose appointment has been endorsed by the Planning Secretary;	Section 1.4.2.

MCoA No.	Condition Requirements	Document Reference
	(b) detail survey methods for all entities to be targeted by the Strategy, in accordance with the *Biodiversity Assessment Method* (2020) and any other guidance document that is relevant and applicable at the time surveys were undertaken or the BDAR was prepared, including but not limited to: (i) surveys within unsurveyed areas of the development area identified in the EIS where a reduction in credit liability for the relevant biodiversity value assumed present is being sought; (ii) surveys for the following serious and irreversible impact (SAII) entities: ▪ *Prasophyllum bagoense* ▪ *Pterostylis oreophila* ▪ *Caladenia concolor* ▪ *Genoplesium superburn* ▪ *Pomaderris delicatat* ▪ *Litoria castanea* ▪ *Prasophyllum innubum* ▪ *Solanum armourense* ▪ *Calotis glandulosa* ▪ *Grevillea iaspicula* ▪ *Pomaderris pallida* ▪ *Mixophyes balbus* ▪ *Prasophyllum keltonii* ▪ *Bossiae fragrans* ▪ *Eucalyptus robertsonii* subsp*. hemisphaerica* ▪ *Grevillea wilkinsonii* ▪ *Chalinolobus dwyeri* ▪ *Pseudomy fumeus* ▪ *Pimelea bracteata* ▪ *Tyto tenebricosa*	
Biodiversity Assessment Verification Report		
B29	Unless otherwise agreed by the Planning Secretary, prior to carrying out any	Section 1.4.3.

MCoA No.	Condition Requirements	Document Reference
	development that would impact on the relevant biodiversity values subject to survey in the Supplementary Biodiversity Strategy in condition B28 (excluding Enabling Works, if the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64), the Proponent must prepare a Biodiversity Assessment Verification Report in consultation with CPHR and to the satisfaction of the Planning Secretary. The Report must: (a) be prepared by a suitably qualified, experienced and independent biodiversity consultant with *Biodiversity Assessment Method* (2020) (BAM) Accreditation whose appointment has been endorsed by the Planning Secretary; (b) be prepared in accordance with the *Biodiversity Assessment Method* (2020) and any other guidance document that is relevant and applicable at the time surveys were undertaken or the BDAR was prepared; (c) be prepared with regard to the final layout plans for the development required under condition C8, including the location of final access routes within each clearing zone and stockpile locations; (d) include: (i) detail of the outcomes of surveys undertaken in accordance with condition B28; (ii) where species are found to be present following the surveys undertaken under condition B28 or that are assumed to be present, identify measures to avoid and / or mitigate the impact to those entities for inclusion in a revised version of the Biodiversity Management Plan required under condition B30; (e) provide findings and recommendations relating to the matters in (d), including, but not limited to, reducing the relevant credit obligations and calculating credit obligations for unexpected finds. Any required changes to biodiversity offset or mitigation measures arising from the Biodiversity Assessment Verification Report must be incorporated into an updated version of the Biodiversity Offset Package under condition B26 in consultation with CPHR and BCT and addressed in a revised version of the Biodiversity Management Plan required under condition B30, in consultation with CPHR and FCNSW, to the	

MCoA No.	Condition Requirements	Document Reference
	satisfaction of the Planning Secretary.	
Biodiversity Management Plan		
B30	Prior to carrying out any development (excluding Enabling Works, if the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64) that could impact biodiversity values that require offsetting, the Proponent must prepare a Biodiversity Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	This plan, including all annexures, has been prepared to address this condition.
	(a) be prepared by a suitably qualified and experienced biodiversity expert/s;	Section 3.4.
	(b) be prepared in consultation with CPHR and FCNSW;	Section 3.5 and Annexure L.
	(c) be prepared generally in accordance with the *Revised Biodiversity Development Assessment Report* (Revision 0, dated 21 June 2024);	Section 3.2 and Table 3-3.
	(d) include a description of the measures that would be implemented for: (i) meeting the biodiversity mitigation requirements in condition B25 and as required by condition B29;	Refer MCoA B25 and B29 listed above.
	(ii) minimising: ▪ the amount of vegetation clearing on site; ▪ the loss of key fauna habitat (including tree hollows); ▪ the impacts of fauna on site, including undertaking pre-clearance surveys; and ▪ potential indirect impacts on threatened flora and fauna species;	This plan outlines clearing limits in Section 5.2 and includes provisions for clearing restrictions in Section 6.2. Further controls for ensuring vegetation and habitat clearing limits are not exceeded are detailed in Annexure B, including pre-clearing surveys (Section 3). Annexure C includes provisions for minimising impacts on

MCoA No.	Condition Requirements	Document Reference
		threatened fauna populations via replacement of impacted hollows and nest impact management (Section 4). Annexure D includes procedure to manage incidental finds of threatened flora and fauna (Section 2 & 3). Annexure E includes provisions for minimising biosecurity impacts on native vegetation and threatened species (Section 5). Annexure F includes provisions for minimising connectivity (Section 4.1-4.3) and collision impacts on fauna populations (Section 4.4), as well as minimising the clearing of native vegetation and key habitats in connectivity corridors (Section 4.1). Annexure G includes provisions for minimising impacts on threatened fauna populations via the salvage (Section 4.1) and reuse of habitat features (Section 4.3). Annexure H includes provisions for monitoring impacts in partial clearing zones to ensure

MCoA No.	Condition Requirements	Document Reference
		impacts are minimised per this condition (Section 4.2). It also includes monitoring programs for indirect impacts to threatened flora, fauna and Threatened Ecological Communities (Section 4.3-4.7).
	(iii) ensuring the development does not adversely affect the native vegetation and habitat outside the disturbance footprint;	This plan outlines clearing limits in Section 5.2 and includes provisions for clearing restrictions in Section 6.2. Further controls for ensuring vegetation and habitat clearing limits are not exceeded are detailed in Annexure B. Annexure E includes provisions for minimising indirect biosecurity impacts on native vegetation and threatened species outside of the disturbance footprint (Section 5). Annexure H includes provisions for monitoring impacts in partial clearing zones to ensure impacts are minimised per this condition (Section 4.2). It also includes monitoring programs for indirect impacts to threatened flora, fauna and

MCoA No.	Condition Requirements	Document Reference
		Threatened Ecological Communities (Section 4.3-4.7).
	(iv) protocols for unexpected finds of threatened species and threatened ecological communities within the disturbance footprint including the requirements for: ▪ all work in the associated location to stop to prevent further impact, and ▪ notification to the Planning Secretary and BCS (and AG DCCEEW where relevant) in writing on any additional mitigation measures to be implemented; and ▪ relevant agencies to be consulted and the Planning Secretary to endorse recommencement of work;	Annexure D (Section 2 & 3).
	(v) connectivity strategy for the potentially impacted species identified in the *Revised Biodiversity Development Assessment Report* (Revision 0, dated 21 June 2024) and a Supplementary Hollow and Nest Strategy;	Annexure F addresses the requirement for a connectivity strategy. Annexure C addresses the requirement for a Supplementary Hollow and Nest Strategy.
	(vi) protecting the conservation values of McPhersons Plain and avoiding impacts to *Prasophyllum bagoensis, Prasophyllum keltonni* and *Pterostylis oreophila*;	Section 6.2. Annexure H includes provisions for monitoring potential indirect impacts to these entities (Section 4.3 & 4.7).
	(vii) rehabilitating temporary disturbance areas to facilitate natural regeneration of suitable native species;	Annexure G (Section 4).

MCoA No.	Condition Requirements	Document Reference
	(viii) progressively monitoring the areas of partial clearance following the commencement of construction and provision of a verification report every three months during construction to confirm the assumptions made in the BDAR regarding partial clearance within the Easement Clearing Zone and whether any changes are required to this plan;	Annexure H (Section 4.2).
	(ix) maximising the salvage of resources within the approved disturbance area – including vegetative and soil resources – for beneficial reuse (such as fauna habitat enhancement) during the rehabilitation and revegetation of the site;	Annexure B includes provisions for pre-clearing surveys and the demarcation of resources (Section 2.2 & 3). Annexure C includes provisions for salvaging hollows (Section 4.1 & 4.2.1). Annexure F includes provisions for the reuse of salvaged resources within connectivity corridors (Section 4.2.1) Annexure G includes provisions for the salvage (Section 4.1), storage (Section 4.1.4) and reuse of resources including vegetative/soil (Section 4.3).
	(x) collecting and propagating seed (where relevant);	Annexure G (Section 4.1.1 & 4.3.3).
	(xi) controlling erosion, weeds and feral pests;	Erosion controls are detailed in Section 6.10. Annexure E provides for the control of weeds (Section 5.2.1) and pests (5.2.3).

MCoA No.	Condition Requirements	Document Reference
	(xii) bushfire management;	Section 6.5. Please refer to the HLW Bushfire Management Plan for further measures to address this condition.
	(xiii) minimising impacts on entities at risk of a serious and irreversible impact (SAII), including for Box Gum Woodland, Rice Flower (*Pimelea bracteata*) and Sooty Owl (*Tyto tenebricosa*) and other entities that are identified as requiring mitigation measures in the Biodiversity Assessment Verification Report required by condition B29 and the additional mitigation measures outlined in the additional information (Transgrid proposal dated 2 September 2024) within three years of the date of the Project Approval (over and above the relevant credit obligations); and	Detailed design is guided by the ecological constraints mapping detailed in Section 6.1, entities at risk of SAII as very high constraint. Following completion of detailed design, Annexure A will be updated to include ecological constraints mapping to demonstrate minimisation of such impacts. This BMP will be revised within three months of BAVR approval to address final design as necessary (refer Section 1.4.3 & 8.2). This plan outlines clearing limits in Section 5.2 and includes provisions for clearing restrictions in Section 6.2, particularly for Box Gum Woodland. Further controls for ensuring vegetation and habitat clearing limits are not exceeded are detailed in Annexure B, including pre-clearing surveys (Section 3) and sensitive clearing methods for SAII

MCoA No.	Condition Requirements	Document Reference
		species (Section 3.1). Annexure C includes provisions for replacement hollows for SAII entities including the Sooty Owl (Section 4.2). Annexure F includes provisions for minimising collision risk for SAII entities including the Sooty Owl (Section 4.4). Annexure E includes provisions for minimising biosecurity impacts on SAII entities through preventative (Section 5.1) and control measures (Section 5.2). Annexure G includes provisions for the rehabilitation of temporarily disturbed areas of Box Gum Woodland (Section 3.1.1.1, and Section 4). Annexure H includes provision for monitoring indirect impacts to SAII entities including *Pimelea bracteata* (Section 4.3) and Sooty Owl (Sections 4.5).
	(e) include a program to monitor, evaluate and publicly report on the effectiveness of these measures.	A Biodiversity Monitoring Program has been developed in Annexure H to address this condition.
	Following the Planning Secretary's approval, the Proponent must implement the	Section 3.4.

<table>
<tr><th>MCoA No.</th><th>Condition Requirements</th><th>Document Reference</th></tr>
<tr><td></td><td>Biodiversity Management Plan.
Note: The Biodiversity Management Plan must incorporate all relevant aspects of the development, including Enabling Works consistent with the requirements of condition B67.</td><td></td></tr>
<tr><td colspan="3">Rehabilitation</td></tr>
<tr><td>B62</td><td>Unless the Planning Secretary agrees otherwise, within 12 months of commencing operation of the project, the Proponent must decommission and rehabilitate the accommodation camps to the satisfaction of the Planning Secretary. This rehabilitation must comply with the objectives in Table 3.
Table 3: Rehabilitation Objectives
<table>
<tr><th>Feature</th><th>Objective</th></tr>
<tr><td>Accommodation camp</td><td>• Safe, stable and non-polluting
• All infrastructure including above and below ground to be decommissioned and removed to a depth of 500 mm, unless the Planning Secretary agrees otherwise
• Restoring land capability to pre-existing productive capacity
• Ensure public safety at all times</td></tr>
</table></td><td>Annexure G has been prepared to address this condition.</td></tr>
<tr><td>B63</td><td>Unless the Planning Secretary agrees otherwise, within 6 months of the completion of construction, upgrading or decommissioning, the Proponent must rehabilitate the areas where ancillary facilities and earthwork material sites are located. This rehabilitation must comply with the objectives in Table 4.
Table 4: Rehabilitation Objectives
<table>
<tr><th>Feature</th><th>Objective</th></tr>
<tr><td>Ancillary facilities</td><td>• Safe, stable and non-polluting
• progressively rehabilitate the site as soon as possible following disturbance
• to be decommissioned and removed, unless the Planning Secretary agrees otherwise</td></tr>
<tr><td>Land Use</td><td>• Restore or maintain land capability to pre-existing use</td></tr>
</table></td><td>Annexure G has been prepared to address this condition.</td></tr>
</table>

MCoA No.	Condition Requirements		Document Reference
	Community	• Ensure public safety	
Enabling Works Management Plan			
B67	Unless otherwise agreed by the Planning Secretary, within 4 months of the commencement of the Enabling Works, the Proponent must update the approved management plans for the development to incorporate any relevant aspects of the Enabling Works Management Plan.		Section 3.4.

3.8. Federal Minister for Water and Environment Condition of Ministerial Approval

The CoMA relevant to this Plan are listed in Table 3-2. A cross reference is also included to indicate where and how the conditions are addressed in this Plan or other HLW management documents.

Table 3-2 CoMA relevant to the BMP

EPBC Condition No.	Condition Requirements	Document Reference
Part A – Avoidance, mitigation, and compensation conditions		
Clearing Limits		
1	The approval holder must undertake **clearing** and **construction** activities in accordance with conditions A2(c) and A2(d) of the **NSW approval** to the extent that they relate to **protected matters**.	This plan outlines clearing limits in Section 5.2 and includes provisions for clearing restrictions in Section 6.2. Further controls for ensuring vegetation and habitat clearing limits are not exceeded are

EPBC Condition No.	Condition Requirements	Document Reference
		detailed in Section 2.3 and 3 of Annexure B.
2	To avoid and mitigate **harm** to **protected matters**, the approval holder must comply with condition B25 of the **NSW approval** to the extent that it relates to **protected matters**.	Refer Table 3-1.
3	Prior to carrying out any activity that could **harm Habitat for Bago Leek-orchid**, **Habitat for Brandy Marys Leek Orchid**, **Habitat for Kelton's Leek-orchid** and **Habitat for Blue-tongued Orchid**, the approval holder must submit an Orchid Management Plan to the **department** for the **Minister's** approval.	Not addressed in this BMP, an Orchid Management Plan (OMP) will be developed by Transgrid independently (approved by DCCEEW – Cwth).
4	The approval holder must not **harm** any **Habitat for Bago Leek-orchid**, **Habitat for Brandy Marys Leek Orchid**, **Habitat for Kelton's Leek-orchid** and **Habitat for Blue-tongued Orchid** unless the **Minister** has approved the Orchid Management Plan in writing. The approval holder must implement the Orchid Management Plan approved by the **Minister** during construction and operation until the expiry of this approval.	
5	The Orchid Management Plan must be prepared by a **suitably qualified orchid specialist**. All commitments, including environmental outcomes, management measures, corrective measures, trigger values and performance indicators in the Orchid Management Plan must be **SMART** and based on referenced or included evidence of effectiveness. The Orchid Management Plan must be consistent with the **Environmental Management Plan Guidelines**, and must include: (a) clear environmental outcomes for the implementation of the **plan**, (b) details of the **Bago Leek-orchid, Brandy Marys Leek Orchid, Kelton's Leek-orchid** and the **Blue-tongued Orchid** and a reference to the **EPBC Act** approval conditions to which the **plan** refers, (c) a table of commitments made in the **plan** to achieve the environmental outcomes, and a reference to exactly where these commitments are detailed in the **plan**,	

EPBC Condition No.	Condition Requirements	Document Reference
	(d) commitments capable of ensuring that the environmental outcomes are achieved, (e) reporting and review mechanisms to demonstrate compliance with the commitments made in the **plan**, (f) an assessment of risks relating to achieving the environmental outcomes and risk management strategies and/or mitigation measures that will be applied to address identified risks, (g) impact avoidance, mitigation and/or repair/compensation measures, and the timing of those measures, (h) a monitoring program, which must include: (i) performance indicators, (ii) trigger values for corrective measures, (iii) the timing and frequency of monitoring, ensuring monitoring is capable of detecting trigger values and changes in the performance indicators, and (iv) proposed corrective measures if trigger values are reached, (i) links to other relevant **plans** or conditions of approval (including state or territory approval conditions), (j) consistency with species specific guidelines/conservation advices for the **Bago Leek-orchid**, **Brandy Marys Leek Orchid**, **Kelton's Leek-orchid** and the **Blue-tongued Orchid**.	
Field Verification Efforts		
6	The approval holder must provide to the **department** the Supplementary Biodiversity Strategy and Biodiversity Assessment Verification Report required under conditions B28 and B29 of the **NSW approval.**	Refer Table 3-1.
Biodiversity Management Plan		
7	The approval holder must comply with condition B30 (Biodiversity Management Plan) of the **NSW Approval**. The Biodiversity Management Plan must be prepared in	Refer Table 3-1.

EPBC Condition No.	Condition Requirements	Document Reference
	accordance with the **Environmental Management Plan Guidelines** and condition B30 of the **NSW Approval**.	
Part B – Administrative conditions		
Submission and Publication of Plans		
10	Wherever these conditions require the approval holder to submit any **plan** to the **department**, all such **plans** must be submitted to the **department** electronically.	CEMP Section 3.9.4.
11	Unless otherwise agreed to in writing by the **Minister**, the approval holder must publish each **plan** on the **website** within 15 **business days** of the date the plan is approved by the **NSW Planning Secretary** or the **plan** is approved by the **Minister** in writing.	CEMP Section 3.9.4.
12	The approval holder must keep all **plans** published on the **website**, in a format that is easily accessible and downloadable, from the first date which that **plan** must be published and until the expiry date of this approval. This requirement applies to all current and superseded versions of **plans**.	CEMP Section 3.9.4.
13	The approval holder is required to exclude or redact **sensitive biodiversity data** from any version of a **plan** before that **plan** is published on the **website** or otherwise provided to a member of the public. If **sensitive biodiversity data** is excluded or redacted from a **plan**, the approval holder must notify the **department** in writing what exclusions and redactions have been made in the version published on the **website**.	Noted.

3.9. Updated Environmental Management Measures

Biodiversity UMMs are listed in Table 3-3 below. A cross reference is also included to indicate where and how the conditions are addressed in this Plan or other HLW management documents.

Table 3-3 UMMs relevant to the BMP

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
Biodiversity				
B1	Impacts to matters of biodiversity conservation significance will be avoided to the greatest extent practicable during finalisation of the design and construction methodology for the project.	Detailed design and construction	All locations	Section 6.1 and Annexure A details measures taken during detailed design. Further controls for ensuring impacts will be avoided are detailed in Annexure B (Section 2.2, 2.3 and 3).
	Biodiversity constraints mapping will be used to guide prioritisation of areas of high biodiversity conservation significance (particularly serious and irreversible impacts (SAIIs), and critically endangered ecological communities (CEECs)) to avoid, where practicable. Spatial data, threatened species locations and constraints mapping will be provided to the design and construction teams and considered in detailed design. Associated mapping will be included on sensitive area plans and provided to the construction workforce.			Section 6.1.
	Micro-siting of the transmission line infrastructure and associated work sites and other areas of disturbance (e.g. controlled blasting and rock crushing sites) will occur to avoid or minimise impacts wherever practicable.			Section 6.1. Fauna Impact Assessment (appendix of Blast Management Plan)

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	Site features with the highest biodiversity conservation significance, in particular recorded threatened species, and their habitat, will be given the highest priority for impact avoidance. This will also include micro-siting to avoid or minimise prescribed impacts (as described in *Technical Report 1 – Revised Biodiversity Development Assessment Report* (the BDAR)) where possible (i.e. avoiding impact to rocky habitats or caves and waterways).			Section 6.1.
	Micro-siting of infrastructure requiring sub-surface work, such as transmission line structure footings, will be undertaken as part of the detailed design stage of the project, to minimise prescribed impacts where possible (i.e. avoiding impact to breeding habitat features, groundwater dependent ecosystems (GDEs), aquatic habitats and supporting aquifers).			Section 6.1.2.
	Clearing will be undertaken in accordance with the Vegetation Clearing Memo and where practicable will conserve mid and ground story vegetation in the ECZ and HTZ. Vegetation clearing methods in areas of threatened groundcovers (e.g. orchids) may require a bespoke approach.			Annexure B details clearing methods in accordance with this condition (Section 4.1) as well as species-specific pre-clearing and clearing controls (Section 3.1).
B2	Design and micro-siting of project infrastructure including transmission line structure benches and access tracks will avoid and/or minimise impacts within protected areas (i.e. nature refuges) and conservation lands (i.e. established BioBank and Biodiversity Stewardship sites and Conservation Agreement sites) occurring within the project footprint.	Detailed design	Conservation Agreement site situated adjacent to Bago State Forest or	Section 6.1.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
			any established BioBank and Biodiversity Stewardship sites within the project footprint	
B3	A Biodiversity Management Plan (BMP) will be prepared in consultation with NSW DCCEEW Environment and Heritage and approved by DPHI prior to construction. The BMP will be prepared by a qualified ecologist and include a plan for implementing, evaluating and reporting on the effectiveness of all mitigation measures outlined in *Technical Report 1 – Revised Biodiversity Development Assessment Report*, including:	Detailed design and construction	All locations	This entire plan, including all annexures, has been developed to address this condition. Evaluating and reporting is detailed in Section 7.3, 7.6 and Annexure H.
	• Measures to minimise impacts to biodiversity, including measures to reduce disturbance to sensitive flora and fauna procedures for clearing of vegetation, including pre-clearing inspections and procedures for the relocation of flora and fauna.			This plan includes provisions for clearing protocols to minimise impacts on threatened flora and fauna, including their habitats (Section 2-5 of Annexure B). Annexure C (Section 4) includes provisions for minimising impacts on threatened fauna populations via replacement of impacted hollows and nest impact management.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
				Annexure D (Section 2 & 3) includes procedure to manage incidental finds of threatened flora and fauna. Annexure E (Section 5) includes provisions for minimising biosecurity impacts on native vegetation and threatened species. Annexure F includes provisions for minimising connectivity (Section 4.1-4.3) and collision impacts on fauna populations (Section 4.4), as well as minimising the clearing of native vegetation and key habitats in connectivity corridors (Section 4.1). Annexure G includes provisions for minimising impacts on threatened fauna populations via the salvage (Section 4.1) and reuse of habitat features (Section 4.3). Annexure H includes provisions for monitoring impacts in partial clearing zones to ensure impacts are minimised per this condition (Section 4.2).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	• Preparation of a fauna handling and rescue procedure to be implemented during construction and operation for the ethical handling of injured or displaced fauna. Further, the fauna handling and rescue procedure would include an incident reporting protocol for fauna relocations, rescue and rehabilitation, euthanasia and/or fatality.			Annexure B (Section 5 & Attachment 3).
	• Procedures for the demarcation and protection of retained vegetation, including vegetation adjacent to construction areas and during weed management.			Section 6.2. Annexure B (Section 2.3 & 3). Annexure E (Section 5.1.1 & 5.1.4).
	• Vegetation clearing procedures for a two staged habitat removal process required for removal of key habitat features (hollow-bearing trees, habitat trees, and bushrock) identified in *Technical Report 1 – Revised Biodiversity Development Assessment Report* (the BDAR) and/or pre-clearing inspection, including procedures to record the effort and outcomes of the habitat removal process.			Annexure B (Section 2.2, 3 & 4) detail clearing procedures, with recording procedures detailed in Sections 3.2 & 4.2.3.
	• Retention of habitat features such as rocky outcrops, surface rock, dead wood, logs, wherever practicable.			Annexure B includes provisions for the identification and demarcation of habitat features for retention (Section 3). Annexure G includes provisions for the retention of habitat features (Section 4.1.2). Annexure F includes provisions for the retention of habitat features

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
				within connectivity corridors (Section 4.2.1.2).
	• Proposed rehabilitation of temporary disturbance areas including management and maintenance measures.			Annexure G has been prepared to address this condition.
	• Unexpected species finds protocol to be implemented if threatened ecological communities, flora and fauna species, not assessed in *Technical Report 1 – Revised Biodiversity Development Assessment Report* (the BDAR), are encountered during pre- clearing inspections.			Annexure D has been prepared to address this condition.
	• A description of biosecurity protocols for plant and equipment movement between sites, including species specific measures.			Annexure E has been prepared to address this condition.
	• Education of construction teams regarding the presence of native fauna and risks of vehicle collision, particularly early in the morning and late in the afternoon/at night; implementation of speed limits on sealed and unsealed tracks and roads.			Section 6.3 and Annexure F (Section 4.4).
	• Outline monitoring and compliance management requirements.			This plan summarises monitoring and compliance management in Section 7, however each Annexure also includes specific monitoring and compliance requirements. Monitoring is to extend into operation, to be

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
				detailed in the Transgrid Operational Environmental Management Plan.
	• Approach to relocation of nests by suitably qualified ecologist where found within construction work sites (i.e. nests found in hazardous areas will be translocated to nearby safe areas, direct handling of eggs and chicks will be avoided where possible). This could include potentially new poles/nest platforms.			Annexure C (Section 4.3).
	• Details on the pre-clearing and clearing supervision process.			Annexure B (Section 2.2, 3 and 4).
	• Procedures for consultation with DPI Fisheries and pre-construction survey (where required) for threatened aquatic species should be established (and Commonwealth DCCEEW for Riek's Crayfish, as required), along with processes for reporting and consideration of recommendations into design and construction methods, as relevant.			Section 6.7.
	• Procedures for reporting the outcomes of pre-construction aquatic biodiversity surveys (where required under mitigation measure B33) at CLASS 1 crossing locations (new and upgraded tracks) potentially supporting threatened aquatic species and any management measures to be implemented (e.g. timing construction outside of breeding seasons, crossing type, micro siting).			Section 6.7.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	• Procedures for the stockpiling and supply of felled trees for KFH rehabilitation or improvement works, including procedures for consultation with DPI Fisheries.			Section 6.7 and Annexure G (Sections 4.1.2 & 4.3.2.1).
	The BMP will include adaptive management measures for uncertain/ indirect/ prescribed impacts and a biodiversity monitoring program. The adaptive management measures would detail procedures for uncertain impacts, risk associated with potential failure of mitigation, circumstances where avoidance may not be achievable and prescribed impacts. The adaptive management measures would be underpinned by monitoring programs, to provide early warning of ineffective measures and/or uncertain impacts occurring. The adaptive management measures would include: • performance criteria to guide monitoring • measurable thresholds to identify when remedial action is triggered • adaptive management response/actions • a trigger for additional credit obligations and/or conservation measures for uncertain, indirect or prescribed impacts, where these impacts cannot be adaptively managed • reporting requirements. The adaptive management measures and monitoring program will be developed to target specific species considered to be most at risk of significant impacts, as determined during the detailed design phase. The BMP will stipulate objectives for monitoring, reporting and evaluation, and how baseline data will be captured and represented.			A Biodiversity Monitoring Program has been prepared to address this condition (Annexure H). Monitoring is to extend into operation, to be detailed in the Transgrid Operational Environmental Management Plan.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B4	Where construction activities are required in areas of native vegetation that have not been previously subject to biodiversity survey, supplementary biodiversity survey will, where possible, be carried out prior to disturbance to inform detailed design and micro-siting opportunities, adherence to clearing limits and biodiversity offsetting requirements. Areas subject to additional survey may include but are not limited to previously inaccessible lands, tracks to access isolated clearing areas and any areas requiring direct impacts outside the project footprint. The surveys will be carried out by a suitably qualified person and would incorporate the following at a minimum: • survey of the area of vegetation to be cleared to determine clearing extent • vegetation surveys to determine PCTs/TECs and Vegetation Integrity of the areas to be impacted • survey and map habitat constraints for candidate threatened species to inform presence/ absence • additional targeted surveys to confirm presence/ absence of candidate flora and fauna species conservatively assumed present. • adaptive management measures in the BMP will outline appropriate response actions to be implemented in the event that additional biodiversity constraints are identified. • an assessment of the likelihood of additional indirect and prescribed impacts as a result of additional clearing and disturbance to be undertaken prior to clearing.	Detailed design and construction	All locations	Section 7.1.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	Future survey requirements and processes for reporting and consideration of recommendations into design and construction methods, as relevant, will be included in the BMP (mitigation measure B3).			
B5	A Supplementary Biodiversity Assessment Strategy (SBAS) will be prepared and implemented by Transgrid with the primary purpose of credit liability reduction. The SBAS will be prepared in consultation with NSW DCCEEW Environment and Heritage and will include but is not limited to: • Target species, approach and timing of post *Technical Report 1 – Revised Biodiversity Development Assessment Report* biodiversity surveys. Results will be used for design and construction avoidance (where possible) plus validation of assumed presence where a credit liability reduction is proposed. • Method for validation of PCTs/TECs assumed present on previously inaccessible land where surrogate, duplicate or benchmark plots were used and low confidence of PCT allocation or condition. • Monitoring, and periodic reporting of final areas of impact and application for credit liability reduction. • Approach for any newly identified PCTs/candidate species. A trigger for additional credit obligations and/or conservation measures for uncertain, indirect or prescribed impacts, where these impacts cannot be adaptively managed.	Detailed design and construction	All locations	Section 1.4.2.
B6	The design and construction methodology for the project must identify additional avoidance and minimisation	Detailed design	Where SAII candidate	This plan outlines clearing limits in Section 5.2 and includes

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	measures to further reduce impacts to entities which are likely to have a serious and irreversible impact to the greatest extent practicable. Opportunities for intact and/ or higher condition remnants should be prioritised for avoidance incorporating consideration of connectivity between retained remnants within and adjacent to the project footprint must be considered in the connectivity strategy.		species considered likely to result in SAII are mapped	provisions for clearing restrictions in Section 6.2, particularly for Box Gum Woodland. Further controls for ensuring vegetation and habitat clearing limits are not exceeded are detailed in Annexure B, including pre-clearing surveys (Section 3) and sensitive clearing methods for SAII species (Section 3.1). Annexure F includes provisions for minimising collision risk for SAII entities including the Sooty Owl (Section 4.4). It also includes provisions for connectivity corridors (Section 4.2). Annexure H includes provision for monitoring indirect impacts to SAII entities including *Pimelea bracteata* (Section 4.3) and Sooty Owl (Sections 4.5). Monitoring is to extend into operation, to be detailed in the Transgrid Operational Environmental Management Plan.
B7	Additional and Appropriate Measures (compensatory measures) are to be implemented by Transgrid where impacts to likely SAIIs cannot be further reduced and/ or where likely SAII risks remain. Compensatory measures will be developed and delivered in consultation with the NSW	Construction and operation	Retained remnants and potential stewardship	Measures will be detailed in the Biodiversity Assessment Verification Report (BAVR), refer Section 1.4.3, and incorporated into this BMP within three months

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	DCCEEW Environment and Heritage and incorporate and/or support the long-term augmentation, enhancement and protection of native vegetation and/or habitat of the target entity within landscapes local to the impact.		site locations within and adjacent to the easement	of approval.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B8	Where threatened frog (including Booroolong Frog) habitats have been identified the following avoidance measures will be implemented, where practicable: • avoid installing waterway crossings • avoid disturbance within 50 m of the top of bank of the waterway (including riparian vegetation). Where avoidance is not possible: • Waterway crossing designs should avoid instream structures to minimise the potential for hydrological change, erosion and sedimentation impacts of downstream environments. • Location of waterway crossings will be determined in consultation with a suitably qualified Ecologist to avoid or minimise impacts to potential habitats or ecological features. • Develop site specific erosion and sedimentation control plans to ensure the potential for erosion and sedimentation impacts are minimised as far as practicable, including monitoring the success of erosion and sediment control measures. • Develop and implement site-specific hygiene protocols (e.g. cleaning of plant machinery), to minimise the spread of pathogens and exotic weeds during and post-construction (in line with *Hygiene protocols for the control of diseases in Australian frogs* [DCCEEW, 2011]).	Detailed design and construction	Threatened frog habitats within 250 m downstream of the project footprint. Potential construction monitoring site locations have been identified at Adjungbilly Creek, Brungle Creek, Yaven Creek and Adelong Creek (Figure 13-2 of *Technical Report 1 – Revised Biodiversity Development*	Section 6.1.
	A suitably qualified ecologist will be engaged to undertake site specific monitoring surveys for the species at the proposed creek crossing sites within and adjacent to the			Annexure H (Section 4.6). Monitoring is to extend into operation, to be detailed in the

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	species habitat as well as downstream receiving environments that may be subject to potential indirect impacts. The BMP (refer to mitigation measure B3) will incorporate a monitoring program for threatened frogs to be implemented during construction.		*Assessment Report*).	Transgrid Operational Environmental Management Plan.
B9	The detailed design will consider opportunities to avoid and minimise impacts to Golden Sun Moth and Key's Matchstick Grasshopper within transmission line easements to be implemented during construction. As a part of the BMP (refer to mitigation measure B3), a rehabilitation plan would be developed for threatened insect habitat temporarily disturbed during construction. Planting specifications and requirements for post-care, including weed control, are to be outlined in the plan and would be subject to agreement of the relevant landowner.	Detailed design and construction	Within mapped habitats	Golden Sun Moth is not relevant to the HLW stage of the HumeLink Project. Refer to Section 6.1 for avoiding and minimising impacts to Key's Matchstick Grasshopper habitats. Annexure G addresses the rehabilitation of temporarily disturbed Key's Matchstick Grasshopper habitats (Section 4.3.3.1).
B10	As a part of the BMP (refer to mitigation measure B3), a Connectivity Strategy will be developed in consultation with NSW DCCEEW Environment and Heritage. The core objectives of the strategy will be to outline the final locations of the proposed mitigation measures identified within *Technical Report 1 – Revised Biodiversity Development Assessment Report*.	Detailed design and construction	Transmission line corridor at strategic locations (as identified in *Technical Report 1 - Revised Biodiversity Developme*	Annexure F has been developed to address this condition. Monitoring of the Connectivity Strategy is to extend into operation, to be detailed in the Transgrid Operational Environmental Management Plan.
	The Connectivity Strategy will be implemented to maintain connectivity in areas identified as facilitating fauna movement. Consideration of connectivity corridors will occur as a minimum at:			Annexure F (Section 4.2.1.3).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	• key riparian crossings		*nt Assessment Report; Attachment 24, Figure 13-2*.	
	• areas of the transmission line joining proposed biodiversity stewardship sites (i.e. Donna Valley Biodiversity Stewardship Site) and/or conservation reserve estate (i.e. Tarlo River National Park, Bango Nature Reserve, Mudjarn Nature Reserve and Minjary National Park)			Annexure F (Section 4.2.1.3). Tarlo River National Park, Bango Nature Reserve, Mudjarn Nature Reserve and Minjary National Park are relevant to HumeLink East only and have therefore been excluded from the HLW BMP.
	• transmission line structure locations that occur in woodland vegetation at strategic locations (i.e. vegetation corridors with moderate to high landscape connectivity, and with moderate to high levels of fauna activity/ movement).			Annexure F (Section 4.2.1.3).
	The final locations of connectivity corridors and minimum width requirements will be identified. Access tracks will avoid connectivity corridors and favour existing access wherever possible. Construction will avoid and minimise any disturbance of connectivity corridors, where practicable. Connectivity measures such as fauna sensitive structures (i.e. under transmission glider poles), vegetation stepping stones, or reduced clearing will be considered. Glider connectivity opportunities will be considered in at least six locations within the project footprint that align with glider corridors and opportunities identified in the glider memo (Niche, 2023).			Annexure F (Section 4.2.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B11	Conductor line-marking techniques will be considered at specific locations identified in *Technical Report 1 – Revised Biodiversity Development Assessment Report* (the BDAR) during design refinement to minimise bird strike. Use of fauna deterrent devices, most likely consisting of the "flapper" variety, will be considered. Positioning and exact diverter model will also be considered during detailed design and will be developed as part of the project design. At a minimum, these will be used at sites recommended for specific corridors (refer to *Technical Report 1 – Revised Biodiversity Development Assessment Report*, Attachment 24) where flapper devices are considered warranted based on distribution, and nature of avifauna records, and nearby suitable waterbird habitat (within 1 km). Fauna deterrent methods proposed are outlined in the Connectivity Strategy.	Detailed design	Transmission line corridor – at sites recommended for specific corridors (as identified in *Technical Report 1 – Revised Biodiversity Development Assessment Report*; Attachment 24.	Annexure F (Section 4.4.1).
B12	Develop and implement a Supplementary Hollow and Nest Strategy to provide alternative roosting and/or nesting habitat for threatened fauna displaced during clearing. The strategy should address measures such as nest boxes, hollow re-use / creation, re-use of timber/logs as habitat within the transmission line easement where practicable.	Construction	All locations where hollow bearing trees are being removed	Annexure C has been developed to address this condition.
	The strategy would be captured in the BMP (as per mitigation measure B3) and will address the following requirements:			Annexure C (Section 4.2.4).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	• nest boxes and other supplementary measures (such as hollow hogs) to be installed as close to the cleared area as possible (subject to landowner agreement and suitable trees being present)			
	• survey of tree hollows and nests within the proposed clearing extents			Annexure C (Section 4.1).
	• identify the target species, size, type, number and suitable location of nest boxes/hollows required based on the results of the ecological surveys and active hollow resources in adjacent areas			Annexure C including target species (Section 3.4), size (Section 4.2.2.4), type (Section 4.2), number (Section 4.1 & 4.2.4), and location (Section 4.1 & 4.2.4).
	• the installation of appropriate nest boxes or hollow replacements will be undertaken as early as practicable prior to clearing activities to prevent the use of the nest boxes or hollow replacements by invasive or non-targeted species			Annexure C (Section 4.2.4.1).
	• nest boxes can also include the re-use of existing hollows salvaged prior to or during clearing where practicable			Annexure C (Section 4.1 & 4.2.1).
	• record the type, height, orientation and location of nest boxes installed and provide as spatial data to Transgrid			Annexure C (Section 5.4.3).
	• an annual monitoring program to assess the efficacy of supplementary habitat measures throughout the construction phase.			Annexure C (Section 5.4.4). Monitoring is to extend into operation, to be detailed in the

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
				Transgrid Operational Environmental Management Plan.
	Post construction monitoring and replacement of damaged nest boxes will form part of discussions with individual landowners.			Annexure C (Section 5.4.4). Monitoring is to extend into operation, to be detailed in the Transgrid Operational Environmental Management Plan.
B13	Biodiversity exclusion zones for retained vegetation and threatened species habitats will be confirmed by a suitably qualified ecologist and identified as 'No disturbance' zones prior to the commencement of clearing or any site activity that could damage the vegetation within the exclusion zone. These areas will be identified as a no-go zone within approved plans and on-site demarcation will be required. High visibility protection fencing will be erected on site including signage clearly identifying these areas as no-go zones. Requirements for the protection and management of no-go zones will be addressed as a part of the site induction. Biodiversity exclusion zones will be physically marked and demarcated, and included on sensitive area maps and project GIS/GPS systems, prior to clearing.	Detailed design and construction	Transmission line easement (at relevant sites)	Section 6.2 and Annexure B (Section 2.3).
B14	All relevant project personnel involved in vegetation clearance, including relevant sub-contractors will be trained on biodiversity management protocols and the requirements for the project, through inductions, toolbox talks and targeted training, and provided with sensitive area maps (showing	Construction	All locations	Section 7.4 and 8.2.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	clearing boundaries and exclusion zones) and updates as required.			
B15	Features of high biodiversity conservation significance within the operational easement, including biodiversity exclusion zones identified during construction and retained habitat for threatened species, will be recorded in Transgrid's GIS. The GIS information will be reviewed during the planning of all maintenance or other future activities that could cause disturbance.	Construction and operation	All locations, as relevant	Annexure B (Section 2.2, 2.3 & 3).
B16	Update and implement existing procedures and guidelines for operation and maintenance of the project that address the following: • vegetation clearing and maintenance commitments in *Technical Report 1 – Revised Biodiversity Development Assessment Report* (the BDAR) and EIS • avoiding access and disturbance in biodiversity exclusion zones identified during the construction • avoiding access and disturbance in areas of high biodiversity conservation significance • avoiding maintenance of vegetation that does not need to be maintained during operation Provide training to relevant Transgrid operational workers and vegetation maintenance contractors regarding the operational and maintenance guidelines and procedures.	Operation	All locations	N/A – To be detailed in Operational Environmental Management Plan.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B17	Works for clearing and construction of access tracks will be carried out in such a manner that the least practicable disturbance to actual ground cover and contours is caused. Trees will be removed as close as possible to ground level and root balls will be left in situ wherever practicable. Areas of particular focus for minimising ground disturbance include the following: • steep or Highly Erodible lands where slopes are in excess of 18 degrees from the horizontal • Protected Riparian Land (PRL) defined as land within 20 m of the bed or bank of a prescribed stream. Generally, named watercourses are classed as protected riparian land; however, some unnamed watercourses may be classed as protected riparian land • waterfront land (40 m from the top of bank) • in areas where large rock outcrops are prevalent on the easement • hazard trees identified from the LiDAR assessment will be flagged for removal, and any adjacent and important habitat trees and features identified for retention will be clearly marked and included in maps within the CEMP to avoid disturbance during the felling activities.	Construction	Transmission line corridor - Protected Lands or waterfront land	Annexure B (Section 4.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B18	All disturbed lands/areas must be managed throughout the construction work (in accordance with the relevant *Managing Urban Stormwater* (Landcom, 2004) (Blue Book) or comparable best practice guidelines, including: • vegetation removal, restoration, and management • stockpiling, erosion and sediment management • stabilization / rehabilitation of disturbed lands/areas must be undertaken within suitable timeframes • temporary erosion and sediment controls must be maintained (and not removed) until rehabilitation measures are providing effective stabilization of disturbed lands/areas. Disturbed areas (including areas not required for operation) will be stabilised/rehabilitated to a standard either: • as agreed with the landowner • in accordance with the relevant Managing Urban Stormwater (Blue Book) or comparable best practice guidelines.	Construction	All locations	Annexure G includes provisions for all components of this condition within temporarily disturbed areas.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B19	Logs and tree hollows that could provide fauna habitat (the total length of wood at least 10 cm in diameter and at least 0.5 m long) will be relocated to adjacent and/or suitable woodland locations where available/feasible. Opportunities to retain felled trees as habitat on-easement will be considered in select areas (i.e. connectivity corridors and riparian lands). The opportunity to stockpile and supply felled trees for KFH rehabilitation or improvement work will be discussed with DPI Fisheries. Trees within the boundaries of State forests, Crown Lands, Travelling Stock Reserves, public roads or within 40 m of the bank of any river will be disposed of strictly in accordance with the requirements of the appropriate authorities. These requirements will be determined by the contractors before carrying out such work.	Construction	Transmission line corridor	Annexure G (Section 4.1.2 & 4.3.2).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B20	Pre-clearing surveys will be completed prior to clearing at each location by a suitability qualified and experienced ecologist. The proposed clearing extents will be marked out on site prior to the pre-clearing surveys. During the surveys, the ecologist will: • survey the proposed clearing extent • identify any fauna habitat and fauna that will require relocation prior to clearing; document location of any fauna release sites off easement • confirm the location and mark out the extents of any biodiversity exclusion zones including locations of unexpected finds (threatened species or threatened species habitat) • confirm presence of karst roosting habitat for bats within areas identified as high potential karst habitats and develop adaptive safeguards to mitigate indirect impacts to roosting individuals • confirm that hollow-bearing trees to be retained within and adjacent to the clearing extents are prominently marked/tagged • confirm that nest boxes are in place (where required) in suitable locations • survey and confirm the presence of raptor nests within and adjacent to the clearing extents	Detailed design and construction	Transmission line easement (at relevant sites)	Annexure B (Section 2.2 & 3).
B21	Opportunities for individually assessing and selectively clearing hazard trees will be considered further during detailed design to minimise impacts. Hazard tree inspections	Detailed design and construction	Hazard tree zone	Annexure B (Section 4.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	would be undertaken by an appropriately qualified arborist prior to the commencement of construction in accordance with *Transgrid's Maintenance Plan – Easement and Access Tracks*.			
B22	A Biosecurity Management Plan will be developed as a part of the BMP, to be implemented during construction. The plan will include: • Protocols for the identification of priority weed species, relevant pests and diseases of concern, mandatory reporting obligations and management of Emergency, Control and Biosecurity zones as per the NSW Biosecurity Act 2015.	Detailed design and construction	All locations	Annexure E (Section 3.1, 5 & 6.3).
	• Weed and pest animal management and monitoring requirements would also be outlined within the plan where relevant.			Annexure E (Section 5 & 6.1).
	• Inclusion of a Trigger Action Response Plan (TARP) for key biosecurity threats including known biosecurity threats to threatened species and populations.			Annexure E (Section 6.2).
	• Locations, timing and methods for removing soil and plant matter from vehicles and machinery and sourcing clean soil and materials free of contaminants for construction work.			Annexure E (Section 5.1).
	• Clean down stations (water or air, dependent on the identified biosecurity risk) will be constructed at suitable locations to clean down vehicles and employee shoes to stop the spread of weeds, pathogens (e.g. amphibian chytrid fungus,			Annexure E (Section 5.1.3).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	Phytophthora cinnamomi, exotic rust fungi and Epizootic Haematopoietic Necrosis Virus (EHNV)) and the introduction of new species. The biosecurity plan would address any Property Management Plan requirements where relevant.			
	• Phytophthora has been detected in locations associated with the adjoining Snowy 2.0 project and in Lob's Hole (as identified in Appendix C (NSW DCCEEW Environment and Heritage detailed response) of the Submissions Report). If construction vehicles are required to move through areas of known or likely infestation, the risk of spread will be managed through the implementation of suitable hygiene protocols detailed in the Biosecurity Management Plan.			Annexure E (Section 5.2.2).
	Transgrid would consult with relevant agencies and groups involved with pest management in order to contribute to existing or future monitoring and management programs. Consideration of potential contributions would be targeted towards areas where greatest impacts occur, particularly through relatively intact landscapes where easement introduction increases the risk of native fauna predation.			Annexure E (TBD – Section 2.4).
B23	A weed control strategy would be developed and implemented during the operational stage of the project will be guided by existing Transgrid operational weed management procedures to manage existing or emerging issues.	Operation	All locations, as relevant	N/A – To be detailed in Operational Environmental Management Plan.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B24	Directional lighting will be used for any permanent lighting (i.e. substation) or temporary lighting (i.e. worker accommodation) required to minimise light spill as much as possible in accordance with *Australian standard AS4282:2019*. Artificial lighting required during construction will be directed towards the work site and minimise light spill, to the extent practicable. Permanent lighting will be erected at least 50 m from remnant vegetation where practicable.	Detailed design and construction	All locations	Section 6.1.
B25	Prior to blasting and/or crushing activities taking place an ecologist will be engaged to determine potential impacts on Bats, Owls, Cockatoos, Raptors and Superb Parrot. An impact assessment of proposed activities will be completed, and if impacts are likely, appropriate mitigation measures will be proposed. Mitigation measures may include cessation of certain activities, avoiding breeding seasons (where practicable) and/or amending the construction methodology including selecting alternative plant or equipment. Any impact assessments conducted will be provided to NSW DCCEEW Environment and Heritage. In the unlikely event that impacts are unavoidable, offsetting requirements will be discussed with NSW DCCEEW Environment and Heritage.	Detailed design and construction	All locations	Section 6.6 Fauna Impact Assessment (appendix of Blast Management Plan)
B26	The key measures proposed to avoid, manage and/or mitigate impacts to surface water, and groundwater and soils will involve: • Preparation of Soil and Water Management Plans (SWMPs) as part of the Construction Environmental Management Plan (CEMP) to manage water quality	Detailed design and construction	All locations	Soil and Water Management Plans (SWMP) and Erosion and Sediment Control Plans (ESCP)

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	impacts during construction of the project, including water quality monitoring requirements. • Preparation of Erosion and Sediment Control Plans (ESCPs) by a certified professional in erosion and sediment control. • Consideration of appropriately designed scour protection at new stormwater management points. The SWMP will include a combination of the following: • ESCPs • water quality monitoring requirements • management of dewatering processes • Emergency Spill Procedure • Unexpected Contaminants Finds Protocol. ESCPs will be developed for the activities and areas that are considered higher risk. The plans will detail the processes, responsibilities and measures to manage potential soil and water quality impacts in accordance with the principles and requirements in: • *Managing Urban Stormwater – Soils and Construction, Volume 1* (Landcom, 2004) and Volumes 2A (DECC, 2008a) and Volume 2C (DECC, 2008b), commonly referred to as the 'Blue Book' • *Best Practice Erosion and Sediment Control* (IECA, 2008) • Controlled activities - Guidelines for instream works on Waterfront Land (DPE Water, 2022b).			
B27	To the greatest extent practicable:			Section 6.1.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	• Transmission line structures will be located and constructed to minimise impact to vegetated riparian zones (VRZs).	Detailed design and construction	Transmission line corridor - within riparian corridors	
	• The final transmission line easement will target narrow crossing points of waterways and riparian areas clear of vegetation.			Section 6.1.
	• Shrub or ground stratum native vegetation within vegetated riparian zones will be protected to the greatest extent practicable, with vegetation clearing ideally limited to the tree stratum only, with trunk bases being retained in-situ.			Annexure B (Section 4.1).
	• Where threatened species are known to occur, work methods will avoid or minimise impacts by limiting clearing wherever possible and delineating their habitat outside the final disturbance area as no-go zones.			Annexure B (Section 2.2 & 3.1).
	• Work near waterways will be undertaken to avoid impacts such as herbicide drift/overspray, erosion and damage to the banks. Riparian areas subject to disturbance will be progressively stabilized and rehabilitated.			Section 6.7. Stabilization and rehabilitation is detailed in Annexure G (Section 4.3.2.1).
	• Disturbance of bush rock in riparian areas will be avoided wherever practicable.			Section 6.1 and Annexure B (Section 4.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B28	Micro-siting of infrastructure requiring sub-surface work, such as transmission line structure footings and access tracks, will be undertaken as part of the detailed design-stage of the project, to: • minimise prescribed impacts and impacts to native vegetation, where possible including cut and fill • design and micro-siting of new access tracks will seek to avoid or minimise impacts to breeding and sheltering habitat for fauna, including habitat trees and rocky habitats (i.e. rock outcrops, large boulders, piled rock, and rock features that provide potential sheltering • avoid impacts to groundwater dependent ecosystems (GDEs), aquatic habitats and aquifers • prioritize restoration of disturbed areas within lands of high biodiversity significance including connectivity corridors, intact vegetation remnants and breeding habitat for fauna, including threatened species and ecological communities). Access track corridors will be established with consideration to terrain to minimise cut/fill and vegetation clearing.	Detailed design and construction	Transmission line corridor, construction compounds, accommodation facilities	Detailed design is guided by the ecological constraints mapping detailed in Section 6.1, including hollow-bearing trees, threatened species and their habitats, and native vegetation. Following completion of detailed design, Annexure A will be updated to include ecological constraints mapping to demonstrate minimisation of such impacts. Annexure F (Section 4.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B29	Access tracks will be used as necessary for the construction work and as far as is practicable. Track construction will be carried out to cause minimum disturbance to soil and vegetation both on and adjacent to the track. Tracks will be routed to follow the natural contour of the land as far as practicable to minimise the amount of cut and fill and soil disturbance. For any temporary access tracks, the disturbed surfaces and formed areas will be revegetated in accordance with the approved CEMP or *Managing Urban Stormwater: Soils and Construction - Volume 2C Unsealed Roads* (DECC, 2008a). In addition, other erosion control mechanisms will be put in place during the initial track construction work to contain any sediment that may erode from the disturbed surfaces.	Construction	Access tracks	Section 6.1, with rehabilitation of temporary access tracks detailed in Annexure G.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B30	The following factors will be considered during the detailed design and micro siting process for waterway crossings to minimise potential impacts to aquatic environments, wherever practicable: • Any existing crossings will be re-used or upgraded in preference to establishing new crossings. • Disturbance to waterways (bed, banks and associated riparian zones), will be avoided or minimised. • The crossing design and construction work sites will minimise disturbance to any native vegetation, including native instream, fringing, and riparian vegetation within the access track alignment. • Waterway crossings will be constructed perpendicular to the flow of the water and be positioned away from channel bends (where erosive forces are typically greatest). Preferably crossings will be located in straight stream sections with well-defined channel geometries and shallow stream gradients, in stable dry reaches. • Micro-siting will avoid direct and indirect (erosion or sedimentation) impacts to riverine features such as riffles and rapids and sensitive habitat features (i.e. snags, coarse woody debris, instream macrophytes, boulders). Where instream structures are required, considerations to potential flooding and erosive effects will be made in the design and construction of the crossing.	Detailed design and construction	Transmission line corridor - access track waterway crossing	Section 6.1 and 6.7.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
B31	Crossing structures will be designed so that the existing nominal flow velocity, low flow conditions and fish passage are maintained wherever possible. This will include the following considerations: • Minimise the impact of essential instream structures by mimicking natural flows (DPI, 2005b). • Following Fairfull (2013), for waterway crossings incorporating culverts, a minimum of 300 mm of water should pool through the structure, with a centrally placed low-flow cell being preferable. In line with Cotterell (1998), it is recommended that flow over or through instream crossing structures are designed such that they maintain water velocity of 0.3 m/s or less, which is likely to facilitate passage for native species of fish (velocities exceeding 1 m/s, are likely to prevent upstream migration of native fish).	Detailed design	Transmission line corridor - access track waterway crossing	Section 6.1 and 6.7.
B32	Any sections of stream or waterway banks that are impacted or modified by the project will be reformed or remediated to resemble the pre-work condition and form wherever possible or alternatively to a stable design form, as appropriate following the completion of construction work. This may include revegetation to stabilise bank sediments. Waterway banks impacted by the project will be reinstated such that bank stability at the crossing location is the same or better than prior to construction. Stabilising materials such as rock armouring, hydro mulch, jute matting, or other suitable geotextile materials may be utilised where necessary.	Construction and operation	Transmission line corridor - access track waterway crossing	Section 6.7, 7.11 and Annexure G (Section 4.2 & 4.3.2.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	Any temporary stream crossings will be removed and rehabilitated at the completion of their operational use.			
B33	CLASS 1 KFH streams include larger streams supporting more sensitive aquatic habitats, with important function in the landscape and potential habitats for threatened species. As such CLASS 1 streams require additional consideration: • The need for and location of waterway crossings at identified CLASS 1 locations would be confirmed during detailed design by the construction contractors. • Crossing design would preference a single span bridge structure where practicable (aligning with the recommended crossing types identified by NSW DPI Fisheries for CLASS 1 streams) to avoid instream impacts, particularly within threatened species potential distributions as identified in Table 13-29 of *Technical Report 1 – Revised Biodiversity Development Assessment Report*. • Consultation should be undertaken with NSW DPI Fisheries (and Commonwealth DCCEEW for Riek's Crayfish, as required) as to crossing designs and the potential occurrence of threatened aquatic species to inform detailed design and survey. Pre-construction survey would be completed at those CLASS 1 streams identified as supporting potential habitats for threatened species at the site of proposed new tracks or upgraded tracks (Table 13-29) to determine: • the presence/absence or likelihood of threated aquatic species occurring	Detailed design and construction	CLASS 1 streams identified in Table 13-29 of *Technical Report 1 – Revised Biodiversity Development Assessment Report*	Section 7.11.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	• completion of an updated 7-part test or SIA assessment, as relevant • determine any additional mitigation measures e.g. timing of works outside the breeding season where possible • recommendations as to micro-siting and design in order to minimise potential impacts to threatened aquatic species. The survey requirements, procedures for consultation with DPI Fisheries and Commonwealth DCCEEW and processes for reporting and consideration of recommendations into design and construction methods, as relevant, will be included in the BMP (mitigation measure B3).			
B34	In the event that any further or alternative waterway crossings are required in areas mapped as Key Fish Habitat (KFH) or indicative threatened species distribution mapping (DPI 2023a), an aquatic ecological assessment will be undertaken at the proposed crossing location. The assessment approach will be consistent with that used for the EIS and will address any potential impacts to threatened aquatic species or KFH. This assessment may be desktop based if suitable levels of information are available but may also recommend a field inspection if threatened aquatic species or sensitive aquatic habitat features are considered to have a moderate or higher likelihood of occurring, in order to guide micro-siting and design/mitigation measures to minimise impacts to aquatic environments. Further to this, if a waterway crossing at Oolong Creek is required, the waterway crossing will incorporate a fish	Detailed design and construction	Access track waterway crossing	Section 7.11.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	passage barrier to prevent the upstream incursion of European Carp and Redfin Perch to protect the Endangered Southern Pygmy Perch Population. If the design cannot incorporate an appropriate fish passage barrier, further engagement will be undertaken with DPI Fisheries to confirm alternate measures for implementation.			
B35	In addition to standard erosion and sediment control measures, the following procedures and considerations will be incorporated into construction methodologies for waterway crossings, where appropriate and practicable: • Minimise disturbance to native vegetation, including instream, fringing and riparian vegetation within the updated indicative disturbance area. This may include the demarcation of areas of native vegetation to be retained during work.	Construction	Transmission line corridor - access track waterway crossing	Section 7.11.
	• Any coarse woody debris or boulders located within instream work sites will be temporarily stockpiled during construction and then returned to the watercourse, at locations where scour risk can be avoided and risk of dislodgment and downstream damage.			Annexure G (Section 4.2 & 4.3.2.1).
	• Waterway crossing work will be constructed during no or low flow conditions and under calm weather conditions. Work will also be timed to occur outside of any locally high flow periods.			Section 7.11.
	• Silt curtains or coffer dams will be deployed around instream work sites where required, to protect against any impacts to water quality or indirect impacts to			Section 7.11.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	retained vegetation. These measures will be situated so to avoid blocking fish passage wherever practical and removed as soon as they are no longer required.			
	• Flow diversion measures will be installed on bunded waterway crossings as appropriate or where construction during no or low flow conditions is not feasible. Flow diversion measures may include pumps to ensure that water can be moved from one side of blockages to the other, with screened inlets to prevent the entrapment of aquatic fauna and outlet structures that are designed to avoid scouring of the channel. Where waterways are bunded or flow obstructed, all obstructions to flow will need to be removed as soon as practical after watercourse crossing construction has been completed.			Section 7.11.
	• Appropriate erosion and sediment controls that take into account potentially flood prone areas will be employed to manage water quality impacts and indirect impacts to retained vegetation.			Section 7.11.
	• Waterway bed and bank material excavated during construction will be stockpiled outside of the active channel and avoid riparian vegetation. Any material excavated from the bed of waterways will be stockpiled separately from other materials and returned to the waterway bed following the completion of construction work.			Annexure G (Section 4.2 & 4.3.2.1).
	• If the stockpiling of sediment or soil is required, it will be located as far away from waterways as practicable and managed so that it is secure against flooding and			Annexure G (Section 4.2 & 4.3.2.1).

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	runoff to prevent any sediment entering waterways. Adequate erosion and sediment control measures will be in place to protect stockpiled sediment against runoff during rainfall or flooding.			
	• Only excavated natural materials (ENM) or virgin excavated natural materials (VENM) will be used as fill during reclamation work, i.e. no contaminated material, building or demolition rubble will be used as fill in any stream crossings.			Annexure G (Section 4.2 & 4.3.2.1).
	• Chemicals will be stored in adequate bunding (in accordance with *Australia Standard 1940 – The storage and handling of flammable and combustible liquids*) as far away from streams as practicable and appropriately protected against flooding or runoff. Spill kits will be made available, and a spill response plan developed.			Annexure G (Section 4.2 & 4.3.2.1).
	• Plant refuelling will occur as far away from streams as possible and appropriate spill prevention measures (such as diversion bunds/cut off drains upslope and drip trays and spill kits) will be implemented when refuelling.			Annexure G (Section 4.2 & 4.3.2.1).
B36	Regular monitoring/inspections of waterway crossing and access track conditions will be undertaken during operation. Consideration of the maintenance and inspection recommendations detailed in *Fish passage in streams: Fisheries guidelines for design of stream crossings* (Cotterell, 1998) to inform the monitoring/inspection details are	Operation	Transmission line corridor - access track waterway crossing	N/A – will be included in the Operational Environmental Management Plan.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	recommended. This may include monitoring/inspections following random events, e.g. flooding. This will review: • the crossing structures, access tracks and associated erosion and sediment control measures to determine if they are continuing to operate satisfactorily • any maintenance requirements in order to prevent impacts to aquatic environments • any issues that require intervention or rehabilitation e.g. bank erosion as a result of, or in proximity to, crossing locations.			
B37	A Biodiversity Offset Package will be prepared in consultation with NSW DCCEEW Environment and Heritage and must include, but not necessarily be limited to: • the specific biodiversity offset measures required to be implemented and delivered • specific biodiversity offset measures that have been implemented and delivered • the cost for each specific biodiversity offset measure, which would be required to be paid into the Biodiversity Conservation Fund if the relevant measure is not implemented and delivered • a Supplementary Biodiversity Assessment Strategy which outlines how impacts to biodiversity will be assessed and reported, and the process for credit reduction requests • the timing and responsibilities for the implementation and delivery of the measures required in the Package. The approved Biodiversity Offset Package may, in consultation with NSW DCCEEW Environment and Heritage,	Detailed design and construction	All locations	Section 1.4.1.

UMM No.	Condition Requirements	HLW Stage	Applicable location(s)	Document Reference
	be periodically updated to reflect changes to the biodiversity offset liability.			
B38	Unless otherwise agreed by the Planning Secretary, in consultation with NSW DCCEEW Environment and Heritage: • no construction work will occur within the existing horse exclusion fencing at McPhersons Plain • transmission line structures will be located outside a 30 m buffer area applied to the existing horse exclusion fencing at McPhersons Plain • construction benches will be oriented away from McPhersons Plain and will not encroach into the 30 m buffer area.	Detailed design and construction	McPherson s Plain	Section 6.2.

4. Existing environment

The following sections summarise existing ecological conditions within and adjacent to the approved HLW project footprint, hereafter referred to as the 'HLW Area'. Data presented within this BMP is based on information contained in the Revised BDAR of the EIS.

4.1. Location and landscape context

The HLW Area comprises the approved disturbance area for approximately 152 km of the HLW alignment. It is situated on historically cleared farmland and State Forest (SF), including the Green Hills SF, Bago SF and Maragle SF (Figure 5-1). These State Forests abut Kosciuszko National Park which occurs approximately 15 m east of the HLW Area (at its closest location).

4.2. IBRA region and subregion

The HLW Area intersects with three Interim Biogeographic Regionalisation for Australia (IBRA) bioregions and three associated IBRA subregions (Figure 5-1).

4.2.1. Inland Slopes subregion (NSW South Western Slopes bioregion)

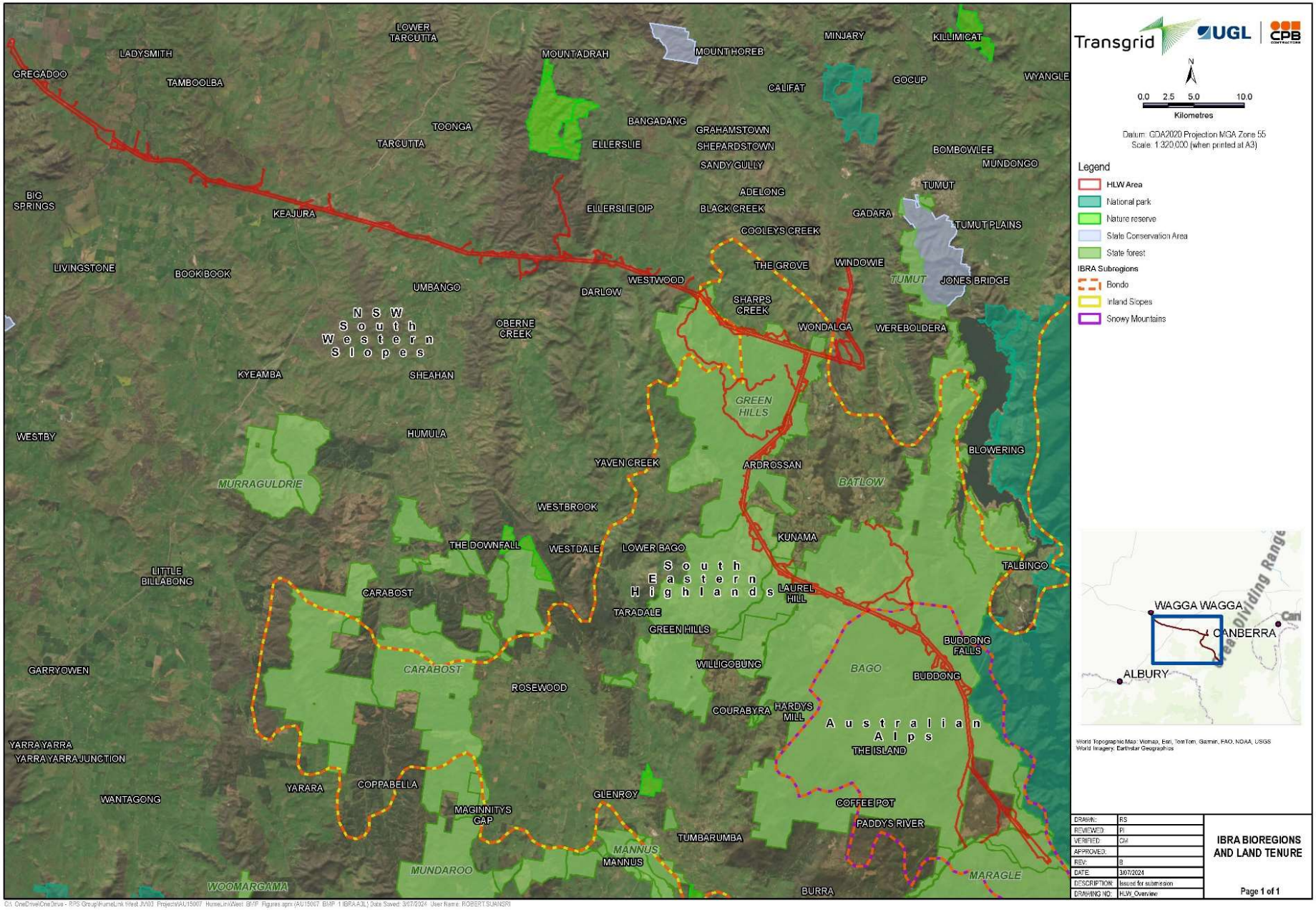
Approximately 43 km of the HLW alignment occurs on the Inland Slopes subregion of the South Western Slopes bioregion. The South Western Slopes Bioregion is a large area of foothills and ranges comprising the western fall of the Great Dividing Range to the edge of the Riverina Bioregion. A very wide range of rock types is found across the bioregion, which is also affected by topographic and rainfall gradients that decrease toward the west. These physical differences have an impact on the nature of the soils and vegetation found across the bioregion. Inland streams pass across the slopes in confined valleys with terraces and local areas of sedimentation. Geology, soils, and vegetation are complex and diverse but typified by granites and meta-sediments, texture contrast soils and a variety of eucalypt woodlands, making this bioregion the southern equivalent of the Nandewar Bioregion (NPWS, 2003).

4.2.2. Bondo subregion (South Eastern Highlands bioregion)

Approximately 81 km of the HLW alignment is located in the Bondo subregion of the South Eastern Highlands bioregion. The South Eastern Highlands Bioregion covers the dissected ranges and plateau of the Great Dividing Range that are topographically lower in elevation than the Australian Alps, which lie to the southwest. The highlands are part of the Lachlan fold belt that runs through the eastern states as a complex series of metamorphosed Ordovician to Devonian sandstones, shales and volcanic rocks intruded by numerous granite bodies (NPWS, 2003).

4.2.3. Snowy Mountains subregion (Australian Alps bioregion)

Approximately 28 km of the HLW alignment occurs in the Snowy Mountains subregion of the Australian Alps bioregion. In NSW, the Australian Alps Bioregion is entirely surrounded by the South Eastern Highlands Bioregion. The alpine area comprises granites that have formed and faulted, stepped ranges at the point where the South Eastern Highlands in NSW turn west into Victoria. More recent volcanic activity produced basalts and, in the Pleistocene, the cold climate superimposed glacial features on the landscape. The bioregion was the only part of the mainland to have been affected by Pleistocene glaciation and contains a variety of unique glacial and periglacial landforms above 1,100 m altitude (NPWS, 2003).



A MEMBER OF THE CIMIC GROUP
CIMIC

4.3. Bushfire impacts

The Dunn's Road bushfire occurred within the HLW Area and surrounds during the 2019/2020 summer bushfire season. Areas of the HLW Area were moderately to severely burnt according to field observations during the Revised BDAR and Fire Extent and Severity Mapping (DCCEEW – NSW, 2020). The severity of the fire would have significantly influenced the ability of these areas to support threatened flora and fauna habitat within the Revised BDAR survey period.

Large hollow-dwelling fauna are considered most sensitive to severely bushfire-burnt landscapes as they rely on large, old-growth trees with hollows that are typically destroyed by intense fires. Loss of such breeding habitat can cause severe population decline, particularly for assumed or known HLW species such as the Gang-gang Cockatoo, gliders and owls.

4.4. Vegetation

Approximately 1,877.03 ha of native vegetation has been recorded within the HLW Area. An additional 1,422.91 ha comprises non-native vegetation, 13.87 ha comprises planted vegetation, 251.69 ha of roads and 12.15 ha of surface water (i.e., streams and waterbodies).

4.4.1.1. Plant Community Types (PCTs)

Twenty-seven Plant Community Types (PCTs) were identified within the HLW Area (Annexure K), a number of which are associated with locally occurring Threatened Ecological Communities (TECs). These communities are detailed in Table 5-1.

Table 4-1 PCTs within the HLW Area

PCT ID	PCT name	Associated TEC
5	River Red Gum herbaceous-grassy very tall open forest wetland on inner floodplains in the lower slopes sub-region of the NSW South Western Slopes Bioregion and the eastern Riverina Bioregion	N/A
266	White Box grassy woodland in the upper slopes sub- region of the NSW South-Western Slopes Bioregion	Part BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered Ecological Community [CEEC]) Part EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)
268	White Box - Blakely's Red Gum - Long-leaved Box - Nortons Box - Red Stringybark grass-shrub woodland on shallow soils on hills in the NSW South Western Slopes Bioregion	Part BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC) Part EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)

Official

PCT ID	PCT name	Associated TEC
277	Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	Part BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC) Part EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)
278	Riparian Blakely's Red Gum - box - shrub - sedge - grass tall open forest of the central NSW South Western Slopes Bioregion	Part BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC) Part EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)
280	Red Stringybark - Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland of the NSW South Western Slopes Bioregion	Part BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC) Part EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)
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	N/A
287	Long-leaved Box - Red Box - Red Stringybark mixed open forest on hills and hillslopes in the NSW South Western Slopes Bioregion	N/A
290	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills in the southern part of the NSW South Western Slopes Bioregion	N/A
295	Robertsons Peppermint - Broad-leaved Peppermint - Nortons Box - stringybark shrub-fern open forest of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion	N/A
297	Broad-leaved Peppermint - Nortons Box - Red Stringybark tall open forest on red clay on hills in the southern part of the	N/A

PCT ID	PCT name	Associated TEC
	NSW South Western Slopes Bioregion	
299	Riparian Ribbon Gum - Robertsons Peppermint - Apple Box riverine very tall open forest of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion	N/A
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	N/A
306	Red Box - Red Stringybark – Norton's Box hill heath shrub - tussock grass open forest of the Tumut region	N/A
314	Apple Box - Red Stringybark basalt scree open forest in the upper Murray River region	N/A
316	Nortons Box - Red Box - Red Stringybark +/- Nodding Flax Lily forb-grass open forest mainly on the Tumut region	N/A
319	Tumbledown Red Gum - White Cypress Pine hill woodland in the southern part of the NSW South Western Slopes Bioregion	N/A
343	Mugga Ironbark - Red Box - Red Stringybark - Western Grey Box grass/shrub woodland on metamorphic substrates in the Tarcutta - Gundagai region, NSW South Western Slopes Bioregion	N/A
352	Red Stringybark - Blakely's Red Gum hillslope open forest on meta-sediments in the Yass - Boorowa - Crookwell region of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)
637	Alpine and sub-alpine peatlands, damp	BC Act: Montane Peatlands and Swamps

PCT ID	PCT name	Associated TEC
	herbfields and fens, South Eastern Highlands Bioregion and Australian Alps Bioregion	(Endangered Ecological Community [EEC]) EPBC Act: Alpine Sphagnum Bogs and Associated Fens (EEC)
638	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas, southern South Eastern Highlands Bioregion and Australian Alps Bioregion	N/A
679	Black Sallee - Snow Gum low woodland of montane valleys, South Eastern Highlands Bioregion and Australian Alps Bioregion	N/A
731	Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills, South Eastern Highlands Bioregion	N/A
939	Montane wet heath and bog of the eastern tablelands, South Eastern Highlands Bioregion	BC Act: Montane Peatlands and Swamps (EEC) EPBC Act: Alpine Sphagnum Bogs and Associated Fens (EEC)
953	Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges, South Eastern Highlands Bioregion and Australian Alps Bioregion	Part BC Act: Part Tableland Basalt Forest (EEC)
1196	Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion	N/A
1224	Sub-alpine dry grasslands and heathlands of valley slopes, southern South Eastern Highlands Bioregion and Australian Alps Bioregion	N/A

4.4.2. Threatened Ecological Communities (TECs)

Three BC Act listed and two EPBC Act listed TECs were identified within the HLW Area, as summarised in Table 5-2 and displayed in Annexure K.

Table 4-2 TECs within the HLW Area

TEC Name	Status	SAII
Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions	EEC (BC Act)	False
Alpine Sphagnum Bogs and Associated Fens	EEC (EPBC Act)	False
Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions	EEC (BC Act)	True
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions	CEEC (BC Act)	True
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CEEC (EPBC Act)	True

4.5. Threatened flora

Thirty threatened flora species were identified, or are assumed to be present, within the HLW Area. Threatened flora are listed in Table 5-3 and records are displayed in Annexure K.

Table 4-3 Threatened flora occurrence within the HLW Area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Occurrence
Acacia ausfeldii	Ausfeld's Wattle	V	-	Identified
Ammobium craspedioides	Yass Daisy	V	V	Identified
Bossiaea fragrans	-	CE	CE	Identified
Caesia parviflora var. *minor*	Small Pale Grass- lily	E	-	Identified
Caladenia concolor	Crimson Spider Orchid	E	V	Assumed present
Caladenia montana	-	V	-	Assumed present

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Occurrence
Calotis glandulosa	Mauve Burr-daisy	V	V	Identified
Calotis pubescens	Max Mueller's Burr-daisy	E	-	Identified
Cullen parvum	Small Scurf-pea	E	-	Assumed present
Diuris tricolor	Pine Donkey Orchid	E	-	Assumed present
Glycine latrobeana	Clover Glycine	CE	V	Identified
Grevillea wilkinsonii	Tumut Grevillea	CE	CE	Identified
Leucochrysum albicans subsp. *tricolor*	Hoary Sunray	E	E	Identified
Persoonia marginata	Clandulla Geebung	V	V	Assumed present
Pimelea bracteata	-	CE	CE	Identified
Pomaderris cotoneaster	Cotoneaster Pomaderris	E	E	Assumed present
Prasophyllum bagoense	Bago Leek Orchid	CE	CE	Identified
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	CE	Assumed present
Prasophyllum keltonii	Kelton's Leek Orchid	CE	CE	Identified
Prasophyllum petilum	Tarengo Leek Orchid	E	E	Identified
Pterostylis alpina	Alpine Greenhood	V	-	Identified
Pterostylis foliata	Slender Greenhood	V	-	Identified
Pterostylis oreophila	Blue-tongued Greenhood	CE	CE	Identified
Pultenaea humilis	Dwarf Bush-pea	V	-	Identified
Senecio garlandii	Woolly Ragwort	V	-	Identified
Swainsona recta	Small purple-pea	E	E	Identified
Swainsona sericea	Silky Swainson-pea	V	-	Identified
Thelymitra alpicola	Alpine Sun-orchid	V	-	Identified
Thesium australe	Austral Toadflax	V	V	Identified
Xerochrysum palustre	Swamp Everlasting	-	V	Identified

V = Vulnerable; E = Endangered; CE = Critically Endangered; - = not listed

4.6. Threatened fauna

Sixty-one threatened fauna species were identified, or assumed to be present, within the HLW Area. Threatened fauna are listed in Table 4-4 and records are displayed in Annexure K.

Table 4-4 Threatened fauna occurrence within the HLW Area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Occurrence
Amphibians				
Crinia sloanei	Sloane's Froglet	E	E	Assumed present
Litoria booroolongensis	Booroolong Frog	E	E	Assumed present
Litoria castanea	Yellow-spotted Tree Frog	CE	E	Assumed present
Birds				
Anthochaera phrygia	Regent Honeyeater	CE	CE	Assumed present (foraging habitat only)
Artamus cyanopterus	Dusky Woodswallow	V	-	Assumed present
Burhinus grallarius	Bush Stone-curlew	E	-	Identified
Callocephalon fimbriatum	Gang-gang Cockatoo	E	E	Identified
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	Assumed present
Chthonicola sagittata	Speckled Warbler	V	-	Assumed present
Circus assimilis	Spotted Harrier	V	-	Assumed present
Climacteris picumnus	Brown Treecreeper (eastern subspecies)	V	-	Identified
Daphoenositta chrysoptera	Varied Sittella	V	-	Identified
Falco subniger	Black Falcon	V	-	Assumed present
Glossopsitta porphyrocephala	Purple-crowned Lorikeet	V	-	Assumed present
Glossopsitta pusilla	Little Lorikeet	V	-	Assumed present
Grantiella picta	Painted Honeyeater	V	V	Assumed present

Official

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Occurrence
Haliaeetus leucogaster	White-bellied Sea Eagle	V	MAR	Assumed present
Hieraaetus morphnoides	Little Eagle	V	-	Identified
Hirundapus caudacutus	White-throated Needletail	V	V, M, MAR	Assumed present
Lathamus discolor	Swift Parrot	E	CE, MAR	Assumed present
Leipoa ocellata	Malleefowl	E	V	Assumed present
Lophoictinia isura	Square-tailed Kite	V	-	Identified
Melanodryas cucullata cucullata	Hooded Robin	E	E	Assumed present
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V	-	Assumed present
Neophema pulchella	Turquoise Parrot	V	-	Assumed present
Ninox connivens	Barking Owl	V	-	Assumed present
Ninox strenua	Powerful Owl	V	-	Assumed present
Pachycephala inornata	Gilbert's Whistler	V	-	Assumed present
Pachycephala olivacea	Olive Whistler	V	-	Identified
Petroica boodang	Scarlet Robin	V	-	Identified
Petroica phoenicea	Flame Robin	V	-	Identified
Petroica rodinogaster	Pink Robin	V	MAR	Identified
Polytelis swainsonii	Superb Parrot	V	V	Identified
Pomatostomus temporalis temporalis	Grey-crowned Babbler	V	-	Identified
Rostratula australis	Australian Painted Snipe	E	E, MAR	Assumed present
Stagonopleura guttata	Diamond Firetail	V	V	Identified
Stictonetta naevosa	Freckled Duck	V	-	Assumed present
Tyto novaehollandiae	Masked Owl	V	-	Assumed present

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Occurrence
Tyto tenebricosa	Sooty Owl	V	-	Assumed present
Invertebrates				
Keyacris scurra	Key's Matchstick Grasshopper	E	E	Assumed present (expert report)
Bats				
Chalinolobus dwyeri	Large-eared Pied Bat	E	E	Identified
Chalinolobus picatus	Little Pied Bat	V	-	Assumed present
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	-	Identified
Miniopterus orianae oceanensis	Large Bent-winged Bat	V	-	Identified
Myotis macropus	Southern Myotis	V	-	Identified
Nyctophilus corbeni	Corben's Long-eared Bat	V	V	Assumed present
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	-	Assumed present
Scoteanax rueppellii	Greater Broad-nosed Bat	V	-	Identified
Mammals				
Cercartetus nanus	Eastern Pygmy-possum	V	-	Identified
Dasyurus maculatus	Spotted-tailed Quoll	V	E	Assumed present
Mastacomys fuscus	Broad-toothed Rat	E	E	Identified
Petaurus australis	Yellow-bellied Glider	V	V	Identified
Petauroides volans	Greater Glider	E	E	Identified
Petaurus norfolcensis	Squirrel Glider	V	-	Identified
Phascogale tapoatafa	Brush-tailed Phascogale	V	-	Assumed present
Phascolarctos cinereus	Koala	E	E	Assumed present
Pseudomys fumeus	Smoky Mouse	CE	E	Identified
Reptiles				

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Occurrence
Aprasia parapulchella	Pink-tailed Legless Lizard	V	V	Identified
Cyclodomorphus praealtus	Alpine She-oak Skink	E	E	Assumed present
Delma impar	Striped Legless Lizard	V	V	Assumed present (expert report)
Varanus rosenbergi	Rosenberg's Goanna	V	-	Identified

V = Vulnerable; E = Endangered; CE = Critically Endangered; M = Migratory; - = not listed

4.7. Entities at risk of Serious and Irreversible Impact (SAII)

As previously detailed in Section 5.4.2, two BC Act listed TECs are at risk of an SAII:

- Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions.
- White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions.

HLW threatened species at risk of an SAII include:

- Flora species:
  - *Bossiaea fragrans.*
  - *Caladenia concolor* (Crimson Spider Orchid).
  - *Calotis glandulosa* (Mauve Burr-daisy).
  - *Diuris ochroma* (Pale Golden Moths).
  - *Euphrasia scabra* (Rough Eyebright).
  - *Glycine latrobeana* (Clover Glycine).
  - *Grevillea wilkinsonii* (Tumut Grevillea).
  - *Pimelea bracteata.*
  - *Prasophyllum bagoense.*
  - *Prasophyllum innubum.*
  - *Prasophyllum keltonii* (Kelton's Leek Orchid).
  - *Pterostylis oreophila* (Blue-tongued Greenhood).
- Fauna species:
  - Large-eared Pied Bat (*Chalinolobus dwyeri*).
  - Smoky Mouse (*Pseudomys fumeus*).
  - Sooty Owl (*Tyto tenebricosa*).
  - Yellow-spotted Tree Frog (*Litoria castanea*).

4.8. Fauna habitat

Nine broad habitat types were identified within the HLW Area, ranging from open grassland to aquatic and artificial habitats. General habitat types and key fauna resources are detailed in Table 5-5.

Annexure K includes habitat features identified within the HLW Area, as well as species polygons created for species credit species in the Revised BDAR.

Table 4-5 Fauna habitat types within the HLW Area

Fauna habitat type	Associated PCT	Description
Grassland habitat	Grassy woodland Derived Native Grasslands PCTs: 266, 268, 277, 278, 280, 316, 679, 731 and 1196	The grassland habitats within the HLW Area are typically dominated by moderately tall to tall dense to open native tussock grasses. The community is often treeless, or sparsely treed. The community supports a range of fauna species, some of which are unique to grassland communities or derived native grasslands e.g., Pink-tailed Legless Lizard, Stripped Legless Lizard.
Tall wet sclerophyll forest (old growth)	PCTs 295, 300 and 638	Wet sclerophyll forest habitat supports a diverse range of birds (for nesting and foraging [nectar, blossom, and insectivorous feeders]), mammals (arboreal, terrestrial, and flying), amphibians, reptiles, and invertebrates.
Dry sclerophyll open woodland	PCTs 285, 287, 290, 297, 299, 306, 314, 343, 352 and 953	This habitat type provides a wide range of food and shelter for vertebrate fauna. Trees from the family Myrtaceae generally dominate the upper canopy in these areas and direct (foliage, nectar, exudates) and indirect food (arthropods) for a range of vertebrates, particularly birds and arboreal mammals. Tree hollows (formed in dead trees [stags] and mature trees) provide nesting and roosting habitat for hollow-dwelling fauna. The connectivity of open woodland habitats within the HLW Area varies in scale from scattered, isolated patches to highly connected landscapes facilitating fauna dispersal.
Alpine fen habitat	PCT 637	Alpine wetland habitat comprises either dense to open patches of or more open and shorter communities of herbs and sedges (fens). The habitat type is interspersed with woodland habitat within a small portion of the HLW Area.
Aquatic and riparian habitat (wetlands, creeks, and floodplains)	PCTs 5, 939	There are many floodplains, freshwater wetlands and streams that intersect the HLW Area.

Fauna habitat type	Associated PCT	Description
Rocky habitat (outcrops, karsts, and overhangs)	All PCTs support rocky habitats to varying degrees	Rocky habitats are important in providing habitat for a variety of fauna. Steep cliffs, and overhangs are likely to support microhabitats for several fauna species (especially microchiropteran bats and reptiles). The HLW Area also supports rocky landscape features in the form of sandstone and/or granite and outcrops, granite boulders and cobbles.
Artificial habitats (including existing road culverts and bridges)	N/A	Culverts, bridges, and dilapidated buildings identified within the HLW Area are considered potential habitat for roosting bats at different times of the year.
Grassland habitat	Grassy woodland Derived Native Grasslands PCTs: 266, 268, 277, 278, 280, 316, 679, 731 and 1196	The grassland habitats within the HLW Area are typically dominated by moderately tall to tall dense to open native tussock grasses. The community is often treeless, or sparsely treed. The community supports a range of fauna species, some of which are unique to grassland communities or derived native grasslands e.g., Pink-tailed Legless Lizard, Stripped Legless Lizard, Key's Matchstick Grasshopper.
Tall wet sclerophyll forest (old growth)	PCTs 295, 300 and 638	Wet sclerophyll forest habitat supports a diverse range of birds (for nesting and foraging [nectar, blossom, and insectivorous feeders]), mammals (arboreal, terrestrial, and flying), amphibians, reptiles, and invertebrates.

4.9. Aquatic habitat

A total of 344 streams intersect with the HLW Area. The streams are in the Hawkesbury-Nepean, Lachlan, and Murrumbidgee catchments. 90% of these waterways are non-perennial, reflecting the dominance of smaller streams within the HLW Area. Several streams are listed as KFH, as displayed in Annexure K.

4.9.1. Threatened aquatic entities

Six threatened aquatic species and one threatened aquatic ecological community listed under the FM Act and/or EPBC Act have potential to occur within the HLW Area:

- Lowland Murray River Endangered Ecological Community (Aquatic Ecological Community in the Natural Drainage System of the Lower Murray River Catchment).
- Silver Perch (*Bidyanus bidyanus*).
- Murray Crayfish (*Euastacus armatus*).
- Flatheaded Galaxias (*Galaxias rostratus*).
- Southern Pygmy Perch (*Nannoperca australis*).
- Trout Cod (*Maccullochella macquariensis*).
- Macquarie Perch (*Macquaria australasica*).

A MEMBER OF THE CIMIC GROUP
Official

4.10. Groundwater Dependent Ecosystems (GDEs)

A total of 10 PCTs within the HLW Area were identified as potential terrestrial GDEs as detailed in Table 5-6. The location of GDEs within the HLW Area can be determined by cross-referencing the PCTs listed in Table 5-6 with the mapped PCTs displayed in Annexure K. The HLW does not involve activities (i.e., deep excavations or significant grouting) likely to pose a risk to groundwater flow and quality.

Table 4-6 Potential GDEs within the HLW Area

Groundwater-dependent PCT	GDE Potential	Extent (ha)
PCT 5: River Red Gum herbaceous-grassy very tall open forest wetland on inner floodplains in the lower slopes sub-region of the NSW South-Western Slopes Bioregion and the eastern Riverina Bioregion	Moderate potential GDE - from regional studies	2.49
PCT 266: White Box grassy woodland in the upper slopes sub-region of the NSW South-Western Slopes Bioregion	Moderate potential GDE - from regional studies	1.55
PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland	Moderate potential GDE - from regional studies	43.49
PCT 280: Red Stringybark – Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland	High potential GDE - from national assessment	2.71
PCT 287: Long-leaved Box - Red Box - Red Stringybark mixed open forest on hills and hillslopes	Moderate and high potential GDE – from national assessment	8.87
PCT 300: Ribbon Gum - Narrow- leaved (Robertson's) Peppermint montane fern - grass tall open forest on deep clay loam soils	Moderate potential GDE - from regional studies	22.59
PCT 638: Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas	High potential GDE - from national assessment	71.59
PCT 679: Black Sallee - Snow Gum low woodland of montane valleys	Moderate and high potential GDE – from regional studies	4.32
PCT 939: Montane wet heath and bog of the eastern tablelands	High potential GDE - from regional studies	0.65
PCT 953: Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges	Moderate and high potential GDE – from regional studies	101.53

4.11. Weeds and pathogens

A total of 21 Priority Weeds and Weeds of National Significant (WoNS) were recorded within the HLW Area as detailed in Table 5-7. Priority Weed are required to be managed under the *Biosecurity Act 2015.* This includes plants that are regulated with a general biosecurity duty to prevent, eliminate, or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated, or minimised, so far as is reasonably practicable. It also includes prohibition on certain dealings, including plants that must not be imported into the state, sold, bartered, exchanged, or offered for sale. WoNS are regarded as a current priority and future weed threat to Australia because of their invasiveness, potential for spread, and economic and environmental impacts.

No evidence of pathogens such as Root Rot (*Phytophthora cinnamomi*) and Myrtle Rust (*Austropuccinia psidii*) was recorded within the HLW Area. However, these have potential to occur. Chytrid Fungus (*Batrachochytrium dendrobatidis*) has been detected within the vicinity.

Table 4-7 Weeds identified within the HLW Area

Scientific name	Common name	Priority Weed	WoNS
Carthamus lanatus	Saffron Thistle	Yes - General Biosecurity Duty	No
Centaurea solstitialis	St Barnabys Thistle	Yes - General Biosecurity Duty	No
Cirsium arvense	Perennial Thistle	Yes - General Biosecurity Duty	No
Cirsium vulgare	Spear Thistle	Yes - General Biosecurity Duty	No
Conyza bonariensis	Flaxleaf Fleabane	Yes - General Biosecurity Duty	No
Conyza sumatrensis	Tall fleabane	Yes - General Biosecurity Duty	No
Echium plantagineum	Patterson's Curse	Yes - General Biosecurity Duty	No
Echium vulgare	Viper's Bugloss	Yes - General Biosecurity Duty	No
Eragrostis curvula	African Lovegrass	Yes - General Biosecurity Duty	No
Hypericum perforatum	St. John’s Wort	Yes - General Biosecurity Duty	No
Marrubium vulgare	White Horehound	Yes - General Biosecurity Duty	No
Nassella neesiana	Chilean Needle Grass	Yes - General Biosecurity Duty & Prohibition on Certain Dealings	Yes
Onopordum acanthium	Scotch Thistle	Yes - General Biosecurity Duty	No
Proboscidea louisianica	Purple-flowered Devil's Claw	Yes - General Biosecurity Duty	No
Rosa rubiginosa	Sweet Briar	Yes - General Biosecurity Duty	No
Rubus fruticosus sp. agg.	Blackberry complex	Yes - General Biosecurity Duty & Prohibition on Certain	Yes

Scientific name	Common name	Priority Weed	WoNS
		Dealings	
Senecio madagascariensis	Fireweed	Yes - General Biosecurity Duty & Prohibition on Certain Dealings	Yes
Xanthium italicum	Hunter Burr	Yes - General Biosecurity Duty	No
Xanthium occidentale	Noogoora Burr	Yes - General Biosecurity Duty	No
Xanthium orientale	Californian Burr	Yes - General Biosecurity Duty	No
Xanthium spinosum	Bathurst Burr	Yes - General Biosecurity Duty	No

4.12. Predator and pest species

The HLW Area consists of large areas of agricultural lands, which provides suitable habitat for and attracts a variety of predator and pest species. The following predator and pest species have been recorded within the HLW Area:

- Goat (*Capra hircus*).
- Deer (*Cervus* sp.).
- Horse (*Equus caballus*).
- Cat (*Felis catus*).
- House Mouse (*Mus musculus*).
- Rabbit (*Oryctolagus cuniculus*).
- Black Rat (*Rattus rattus*).
- Spotted Dove (*Spilopelia chinensis*).
- Common Starling (*Sturnus vulgaris*).
- Pig (*Sus scrofa*).
- Eurasian Blackbird (*Turdus merula*).
- Fox (*Vulpes vulpes*).

Observations of predator and pest species were not limited to any one habitat type and it is possible that they occur throughout the HLW Area.

5. Environmental aspects and impacts

The relationship between environmental aspects and impacts can be best explained as cause and effect. Details of the biodiversity-specific aspects as well as known and potential biodiversity impacts are summarised below. Refer to Appendix 9 of the CEMP for the full HLW Aspects and Impacts Register.

5.1. Aspects

Key aspects of the HLW that could result in impacts to terrestrial and aquatic biodiversity include:

- Vegetation clearing and topsoil stripping.
- Earthwork, including:
  - Construction of tower footings and foundations.
  - Construction of benches and brake and winch sites.
  - Access tracks.
  - Compounds and laydowns.
- Noise, dust and light generating works.
- Watercourse crossings.
- Demolition.
- Site access.
- Material stockpiles.
- Road improvement works including paving activities.
- Generator use.
- Fuel and chemical storage, concrete batching, refuelling and chemical handling.
- Combustion emissions from use of plant and machinery.
- Piling and concreting.
- Establishment and use of construction support sites including potential impacts on flood behaviour and vehicle wash down.

5.2. Potential impacts

The potential for impacts on biodiversity will depend on a number of factors. Impacts will be dependent on the nature, extent and magnitude of construction activities and their interaction with the natural environment. Potential impacts attributable to construction are discussed in the sections below. The environmental management measures described in Section 7 have been developed to minimise and mitigate the impacts on biodiversity.

5.2.1. Native vegetation and TECs

5.2.1.1. Direct impacts

Avoidance and minimisation of native vegetation have been considered during the EIS process, however complete avoidance of native vegetation removal is not practicable. The Revised BDAR identifies that direct impacts of HLW on native vegetation would include direct impacts up to 368.55 ha of native vegetation. Total direct impact on native vegetation is outlined in Table 5-1 below, including direct impacts to BC and EPBC Act listed TECs, and constitute native vegetation clearing limits.

Table 5-1 Direct impacts to native vegetation and TECs

PCT ID	PCT name	Associated TEC	Area (ha)		
			Full impact	Partial impact	Total
5	River Red Gum herbaceous- grassy very tall open forest wetland on inner floodplains	N/A	0.52	1.97	2.49
266	White Box grassy woodland in the upper slopes sub- region of the NSW South- Western Slopes Bioregion	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered Ecological Community [CEEC])	0.86	0.69	1.55
		EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	0.03	0.48	
268	White Box – Blakely's Red Gum - Long-leaved Box – Norton's Box - Red Stringybark grass-shrub woodland on shallow soils on hills	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	14.59	2.00	16.59
		EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	7.58	1.84	
277	Blakely's Red Gum - Yellow Box grassy tall woodland	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	33.71	5.14	38.85
		EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	0.90	2.86	

PCT ID	PCT name	Associated TEC	Area (ha)		
			Full impact	Partial impact	Total
278	Riparian Blakely's Red Gum - box - shrub - sedge - grass tall open forest	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	2.48	0.94	3.41
		EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	0.00	0.94	
280	Red Stringybark – Blakely's Red Gum +/- Long-leaved Box shrub/grass hill woodland	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	2.50	0.21	2.71
		EPBC Act: part White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	1.00	0.00	
285	Broad-leaved Sally grass - sedge woodland on valley flats and swamps	N/A	2.85	8.31	11.16
287	Long-leaved Box - Red Box - Red Stringybark mixed open forest on hills and hillslopes	N/A	2.57	3.27	5.84
290	Red Stringybark - Red Box - Long-leaved Box - Inland Scribbly Gum tussock grass - shrub low open forest on hills	N/A	9.13	1.99	11.12
295	Robertson's Peppermint - Broad- leaved Peppermint – Norton's Box - stringybark shrub-fern open forest	N/A	0.07	0.00	0.07

PCT ID	PCT name	Associated TEC	Area (ha)		
			Full impact	Partial impact	Total
297	Broad-leaved Peppermint – Norton's Box - Red Stringybark tall open forest on red clay on hills	N/A	1.54	0.66	2.20
299	Riparian Ribbon Gum – Robertson's Peppermint - Apple Box riverine very tall open forest	N/A	4.30	10.54	14.84
300	Ribbon Gum - Narrow- leaved (Robertson's) Peppermint montane fern - grass tall open forest on deep clay loam soils	N/A	6.43	16.15	22.58
306	Red Box - Red Stringybark – Norton's Box hill heath shrub - tussock grass open forest of the Tumut region	N/A	3.66	0.22	3.88
314	Apple Box - Red Stringybark basalt scree open forest in the upper Murray River region	N/A	1.88	0.18	2.06
316	Norton's Box - Red Box - Red Stringybark +/- Nodding Flax Lily forb-grass open forest	N/A	0.18	0.00	0.18
319	Tumbledown Red Gum - White Cypress Pine hill woodland	N/A	1.40	0.08	1.48
343	Mugga Ironbark - Red Box - Red Stringybark - Western Grey Box grass/shrub woodland on metamorphic substrates	N/A	5.16	1.07	6.23
352	Red Stringybark – Blakely's Red Gum hillslope open forest on meta-sediments	BC Act: White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived	7.79	0.14	7.93

PCT ID	PCT name	Associated TEC	Area (ha)		
			Full impact	Partial impact	Total
		Native Grassland (CEEC)			
637	Alpine and sub-alpine peatlands, damp herbfields and fens, South Eastern Highlands Bioregion and Australian Alps Bioregion	BC Act: Montane Peatlands and Swamps (Endangered Ecological Community [EEC]) EPBC Act: Alpine Sphagnum Bogs and Associated Fens (EEC)	0.02	0.00	0.02
638	Alpine Ash - Mountain Gum moist shrubby tall open forest of montane areas	N/A	21.88	50.06	71.95
679	Black Sallee - Snow Gum low woodland of montane valleys	N/A	1.82	2.50	4.32
731	Broad-leaved Peppermint - Red Stringybark grassy open forest on undulating hills	N/A	1.13	0.48	1.61
939	Montane wet heath and bog of the eastern tablelands	BC Act: Montane Peatlands and Swamps (EEC) EPBC Act: Alpine Sphagnum Bogs and Associated Fens (EEC)	0.07	0.58	0.65
953	Mountain Gum - Snow Gum - Broad-leaved Peppermint shrubby open forest of montane ranges	BC Act: Part Tableland Basalt Forest (EEC)	0.12	0.51	0.63
		N/A	39.47	61.40	100.87
1196	Snow Gum - Mountain Gum shrubby open forest of montane areas, South Eastern Highlands Bioregion and Australian Alps Bioregion	N/A	7.09	26.18	33.27

PCT ID	PCT name	Associated TEC	Area (ha)		
			Full impact	Partial impact	Total
1224	Sub-alpine dry grasslands and heathlands of valley slopes, southern South Eastern Highlands Bioregion and Australian Alps Bioregion	N/A	0.02	0.00	0.02

5.2.1.2. Indirect impacts

Indirect impacts to native vegetation may involve the following:

- Inadvertent impacts on adjacent habitat or vegetation (e.g. soil disturbance, erosion, sedimentation, enriched run-off and water quality).
- Reduced viability of adjacent habitat due to light, noise, dust, vibration and blasting.
- Transport of weeds and pathogens from the site to adjacent vegetation.
- Reduced viability of adjacent habitat due to edge effects.
- Changed fire regimes.

5.2.2. Threatened flora

5.2.2.1. Direct impacts

Total direct impact on threatened flora is outlined in Table 6-2 below, including direct impacts to BC and EPBC Act listed species, and constitute threatened flora clearing limits.

Table 5-2 Direct impacts to threatened flora

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Total clearing (ha)
Acacia ausfeldii	Ausfeld's Wattle	V	-	3.47
Ammobium craspedioides	Yass Daisy	V	V	72.54
Bossiaea fragrans		CE	CE	2.46
Caesia parviflora var. *minor*	Small Pale Grass-lily	E	-	0.99
Caladenia concolor	Crimson Spider Orchid	E	V	16.00
Caladenia montana		V	-	233.62
Cullen parvum	Small Scurf-pea	E	-	7.87
Diuris tricolor	Pine Donkey Orchid	E	-	1.61
Grevillea wilkinsonii	Tumut Grevillea	CE	CE	1.73
Leucochrysum albicans var. *tricolor*	Hoary Sunray	E	E	49.93
Persoonia marginata	Clandulla Geebung	V	V	5.04
Pimelea bracteata	Pimelea bracteata	CE	CE	4.76
Pomaderris cotoneaster	Cotoneaster Pomaderris	E	E	1.41
Prasophyllum bagoense	Bago Leek-orchid	CE	CE	0.04

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Total clearing (ha)
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	CE	0.02
Prasophyllum keltonii	Kelton's Leek Orchid	CE	CE	0.03
Prasophyllum petilum	Tarengo Leek Orchid	E	E	8.61
Pterostylis alpina	Alpine Greenhood	V	-	2.76
Pterostylis foliata	Slender Greenhood	V	-	54.09
Pterostylis oreophila	Blue-tongued Greenhood	CE	CE	0.56
Pultenaea humilis	Dwarf Bush-pea	V	-	16.21
Senecio garlandii	Woolly Ragwort	V	-	11.41
Swainsona recta	Small Purple-pea	E	E	14.25
Swainsona sericea	Silky Swainson-pea	V	-	21.62
Thelymitra alpicola	Alpine Sun-orchid	V	-	0.63
Thesium australe	Austral Toadflax	V	V	0.01
Xerochrysum palustre	Swamp Everlasting	-	V	0.77

V = Vulnerable; E = Endangered; CE = Critically Endangered; - = not listed

5.2.2.2. Indirect impacts

Indirect impacts to threatened flora may involve the following:

- Inadvertent impacts on adjacent habitat or vegetation (e.g. soil disturbance, erosion, sedimentation, enriched run-off and water quality).
- Transport of weeds and pathogens from the HLW Area to adjacent vegetation.
- Trampling of threatened flora species.
- Reduced viability of adjacent habitat due to light, noise, dust, vibration and blasting.
- Reduced viability of adjacent habitat due to edge effects.
- Changed fire regimes.

5.2.3. Threatened fauna

5.2.3.1. Direct impacts

Total direct impact on threatened fauna is outlined in Table 5-3 below, including direct impacts to BC and EPBC Act listed species, and constitute threatened fauna clearing limits.

Table 5-3 Direct impacts to threatened fauna

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Total clearing (ha)
Aprasia parapulchella	Pink-tailed Legless Lizard	V	V	8.36
Burhinus grallarius	Bush Stone-curlew	E	-	14.25
Callocephalon fimbriatum	Gang-gang Cockatoo	E	E	277.27
Calyptorhynchus lathami	Glossy Black-Cockatoo	V	V	1.10
Cercartetus nanus	Eastern Pygmy-possum	V	-	142.04
Chalinolobus dwyeri	Large-eared Pied Bat	E	E	0.71
Crinia sloanei	Sloane's Froglet	E	E	0.75
Cyclodomorphus praealtus	Alpine She-oak Skink	E	E	35.17
Delma impar	Striped Legless Lizard	V	V	0.90
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	MAR	2.05
Hieraaetus morphnoides	Little Eagle	V	-	91.32
Keyacris scurra	Key's Matchstick Grasshopper	E	E	1.51
Litoria castanea	Yellow-spotted Tree Frog	CE	E	0.63
Lophoictinia isura	Square-tailed Kite	V	-	37.98
Mastacomys fuscus	Broad-toothed Rat	E	E	0.03
Myotis macropus	Southern Myotis	V	-	15.54
Ninox connivens	Barking Owl	V	-	185.54
Ninox strenua	Powerful Owl	V	-	191.89
Petauroides volans	Greater Glider	E	E	135.88
Petaurus australis – endangered population	Yellow-bellied Glider population on the Bago Plateau	EP	-	134.84

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Total clearing (ha)
Petaurus norfolcensis – endangered population	Squirrel Glider	EP	-	11.53
Petaurus norfolcensis	Squirrel Glider	V	-	47.41
Petroica rodinogaster	Pink Robin	V	-	36.54
Phascogale tapoatafa	Brush-tailed Phascogale	V	-	157.81
Phascolarctos cinereus	Koala	E	E	284.51
Polytelis swainsonii	Superb Parrot	V	V	17.92
Pseudomys fumeus	Smoky Mouse	CE	E	5.79
Tyto novaehollandiae	Masked Owl	V	-	170.97
Tyto tenebricosa	Sooty Owl	V	-	68.84

V = Vulnerable; E = Endangered; CE = Critically Endangered; - = not listed

5.2.3.2. Indirect impacts

Indirect impacts to threatened fauna may involve the following:

- Inadvertent impacts on adjacent habitat or vegetation (e.g. soil disturbance, erosion, sedimentation, enriched run-off and water quality).
- Reduced viability of adjacent habitat due to light, noise, dust, vibration and blasting.
- Increased risk of starvation or exposure, and loss of shade or shelter.
- Removal and disturbance of rocks, including bush rock.
- Increase in pest animal populations and predation of native fauna.
- Reduced viability of adjacent habitat due to edge effects.
- Changed fire regimes.
- Electric and magnetic field exposure.
- Fauna collision and/or electrocution with transmission lines.
- Removal of specialist breeding habitat such as hollow-bearing trees.
- Fragmentation of connected habitats.

5.2.4. Threatened aquatic entities

5.2.4.1. Direct impacts

A total of seven threatened aquatic species and one threatened aquatic ecological community listed under the FM Act and/or EPBC Act have been identified as potentially occurring within the HLW Area (refer to Section 5.9.1). The potential for direct impacts to waterways associated with HLW is primarily from waterway crossing construction. Access track construction is required to accommodate safe access of construction machinery and materials to each transmission line structure and substation

site, which in places requires the construction of waterway crossings. Waterway crossings would only be established where waterways cannot be crossed under normal weather conditions and where alternatives are impractical.

It is anticipated that any upgraded waterway crossings associated with HLW would contribute to overall improvements to aquatic conditions and be more sensitive than any existing informal crossings and would not result in any additional deleterious processes. The establishment of new tracks would be necessary in a minority of cases. While this would result in impacts through vegetation clearing and direct modification to establish crossings, this would occur within the context of similar modifications through the locality and would be small-scale and localised in the context of surrounding available habitat.

Any impacts that may occur are anticipated to be localised and temporary in nature (e.g., disturbance to instream habitats during the construction of waterway crossings for access tracks or trimming of riparian trees to facilitate transmission line installation).

Major watercourses that will require stream crossing works as part of HLW area detailed in Table 6-4.

Table 5-4 Stream crossing works as part of HLW

Waterway	Stream order	Description
Honeysuckle Creek	4	CLASS 1 Stream, Key Fish Habitat
McGregors Gully	3	CLASS 1 Stream, Key Fish Habitat
Nacki Nacki Creek	4	CLASS 1 Stream
Sharps Creek	3	CLASS 1 Stream
Sharps Creek	3	CLASS 1 Stream
Stockmans Creek	4	CLASS 1 Stream, Key Fish Habitat
Tomneys Plain Creek	3	CLASS 1 Stream
Tywong Creek	3	CLASS 1 Stream
Uncles Creek	4	CLASS 1 Stream
Yaven Yaven Creek	3	CLASS 1 Stream, Key Fish Habitat
Unnamed Watercourse 148.262884°, -35.743303°	3	CLASS 1 Stream
Unnamed Watercourse 148.245343°, -35.690698°	3	CLASS 1 Stream
Unnamed Watercourse 147.928712°, -35.362025°	3	CLASS 1 Stream
Unnamed Watercourse 147.749336°, -35.342852°	3	CLASS 1 Stream

Official

5.2.4.2. Indirect impacts

Indirect impacts to threatened aquatic entities may involve the following:

- Erosion and sedimentation impacts (pulse events).
- Removal/reduction in riparian vegetation (reduced habitat features e.g. large woody debris, organic matter, stream shading, bank stabilisation).
- Introduced pests and diseases.

5.3. Key Threatening Processes (KTPs)

Many of the potential impacts associated with HLW are listed as Key Threatening Processes (KTPs) under the EPBC Act, BC Act, and/or FM Act. These KTPs and their relevance to HLW are outlined in Table 6-5.

Table 5-5 Key Threatening Processes relevant to HLW

KTP	Relevance to HLW	Impact reduction methods
EPBC Act and BC Act		
Bush rock removal	Rocky habitats within the HLW Area would be impacted where they are situated within the Total Clearing Zone and Easement Clearing Zone. Bush rock serves many purposes in the natural environment. It provides habitat for many plants and animals, some of which are threatened. Many animals use rocks and rock environments for shelter, to hide from predators, find food, avoid extreme weather conditions, and escape bushfires. Bush rock is also known to provide egg-laying sites for reptiles. Bush rock removal may impact reptiles including the Pink-tailed Legless Lizard and Striped Legless Lizard, where intersecting with habitat for these threatened species.	Appropriate clearing protocol (Annexure B).
Clearing of native vegetation	368.55 ha of native vegetation would be cleared (fully or partially) as a result of HLW. There is a risk of disturbance and/or destruction of adjacent habitats and vegetation through accidental clearing and unauthorised vehicle movements during the construction stage.	Detailed design to minimise impacts to native vegetation (Section 6.1). Appropriate clearing protocols (Annexure B).

KTP	Relevance to HLW	Impact reduction methods
High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition	Fire regimes within the locality are already subject to considerable alteration as a result of the agricultural and forestry land uses which dominate the landscape. Climate change may result in further change. There would be an increased risk of bushfire during construction due to several potential ignition sources, e.g., hot works, equipment or services failure, or accidental ignitions. There would be an increased risk of bushfire during operation where the transmission lines become damaged from storm activity or fallen vegetation.	Section 6.5. HLW CEMP and Operational Environmental Management Plan.
Infection of frogs by amphibian chytrid causing the disease *chytridiomycosis*	There is the potential for the introduction or spread of pathogens by means of imported materials, machinery movements and increased foot traffic during the construction phase. No evidence of pathogens such as Root Rot *Phytophthora cinnamomi*, Myrtle Rust *Austropuccinia psidii* and Chytrid Fungus *Batrachochytrium dendrobatidis* was recorded within the HLW Area. However, these have potential to occur, and have potential to be imported onto site.	Implementation of the Biosecurity Management Plan (Annexure E).
Infection of native plants by *Phytophthora cinnamomi*		
Introduction and establishment of exotic rust fungi of the order Pucciniales pathogenic on plants of the family *Myrtaceae*		
Invasion and establishment of exotic vines and scramblers	Refer to Table 4-7 for a list of weeds identified within the HLW Area. There is the potential for the introduction or spread of weeds by means of imported materials, machinery movements and increased foot traffic during the construction phase. Vegetated fragments remaining within the	
Invasion of native plant communities by exotic perennial grasses		

KTP	Relevance to HLW	Impact reduction methods
Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants	landscape are generally small, isolated and already likely to be subject to considerable edge effects such as weed invasion and altered floristic composition and structure. Despite this, increased clearing and fragmentation as a result of HLW may further intensify these pressures within remaining fragments and has the potential to impact habitat viability for some threatened flora and fauna species generally reliant on the availability of larger contiguous habitats.	
Loss of hollow-bearing trees Removal of dead wood and dead trees	The loss of habitat such as, hollows, stick nests, drays, dead trees and fallen timber has the potential to affect native animals such as: • Hollow-dependent bats. • Hollow-nesting and canopy-nesting birds. • Arboreal mammals. • Reptiles. The loss of habitats is unlikely to extend beyond the HLW Area.	Appropriate clearing protocols (Annexure B). Implementation of the Supplementary Hollow and Nest Strategy (Annexure C).
Predation and hybridisation by Feral Dogs, *Canis lupus familiaris* Predation by the European red Fox *Vulpes vulpes* Predation by Feral Cat *Felis catus* Aggressive exclusion of birds from woodland and forest habitat by abundant Noisy Miners *Manorina melanocephala* Competition and grazing by the feral European rabbit	Refer to Section 5.12 for a list of pest species identified within the HLW Area. It is unlikely that work associated with HLW would result in the introduction or spread of pest species within the HLW Area. Despite this, it is possible that native fauna may be more susceptible to predation as a result of vegetation clearing and increased levels of fragmentation within the locality.	Implementation of the Biosecurity Management Plan (Annexure E).

KTP	Relevance to HLW	Impact reduction methods
Competition and habitat degradation by Feral Goats, Capra hircus		
Herbivory and environmental degradation caused by feral deer		
Predation, habitat degradation, competition and disease transmission by Feral Pigs *Sus scrofa*		
FM Act		
Degradation of native riparian vegetation along New South Wales water courses	These KTPs have been observed within the existing aquatic environments at significant levels. It is considered unlikely that HLW would significantly increase the operation of any of these KTPs beyond those levels encountered in the existing landscape.	Appropriate clearing protocol (Annexure B) and implementation of Rehabilitation Plan (Annexure G).
Installation and operation of instream structures and other mechanisms that alter natural flow regimes of rivers and streams		
Removal of large woody debris from New South Wales rivers and streams		

6. Environmental control measures

Environmental controls apply to the HLW Area and will be carried out during pre-construction, construction and post-construction phases of HLW. The biodiversity strategies are designed to ameliorate impacts on biodiversity values and are based on relevant MCoA (Section 3.7), CoMA (Section 3.8) and UMMs (Section 3.9). All measures relevant to the BMP are listed below in Section 6.1 through 6.14, with a summary provided in Section 6.16 including applicable resources, timing and responsibilities.

6.1. Detailed design

Biodiversity constraints mapping was developed by Niche (2024) as part of the Revised BDAR works which has been displayed in the HLWJV GIS spatial portal, used to guide detailed design presented in Annexure A. A summary of biodiversity constraint levels is provided in Table 6-1 below. Spatial data, threatened species locations and constraints mapping will be provided to the design and construction teams and considered in detailed design. Associated mapping will be included on sensitive area plans and provided to the construction workforce. The biodiversity constraints mapping will be revised based on the results of the approved Conditions 29 BAVR within three months of approval by the Secretary.

Table 6-1 Biodiversity constraint levels summary

Constraint	Constraint level	Criteria
Connectivity corridors	High	Connectivity corridor locations for all threatened Gliders; OR Important riparian corridors for other threatened fauna in degraded landscapes.
	Moderate	Connectivity corridor locations for threatened fauna linking two areas of high quality landscapes and habitats.
	Low	Connectivity corridor locations for threatened fauna linking two areas of high quality landscapes and habitats.
Booroolong frog habitat	Very high	All DPE streams mapped where the occur outside the project footprint. For habitats within the project footprint, please refer to the species polygon layer.
Conservation sites	Very high	All mapped sites.
Actively managed conservation areas	No-go	All fenced areas.
	Very high	All fenced areas with a 50m buffer.
Hollow bearing trees	Low	All Hollow bearing trees with 100m buffer.
Native vegetation and TECs	Very high	Very High or High condition of SAII; OR Very High or High condition CEEC; OR Limited extent TECs: (Alpine Sphagnum Bogs and Associated Fens).

A MEMBER OF THE CIMIC GROUP
Official

Constraint	Constraint level	Criteria
	High	Moderate or Low condition woody CEEC listed TECs; OR Moderate or Low condition woody SAII TECs; OR Very High and High woody condition EEC (V or E).
	Moderate	Any woody TEC in moderate or low condition; OR Woody vegetation in Very high and High condition.
	Low	All non-woody TECs and very low condition woody TECs.
Species polygons	Very high	SAII species polygons in very high or high condition vegetation; OR CE in very high or high condition vegetation; OR SAII species in known habitat.
	High	SAII moderate and low condition vegetation; OR CE in moderate and low condition vegetation; OR Endangered and Vulnerable species in high or very high condition; OR Threatened species (not SAII) in known habitat.
	Moderate	Endangered species in moderate or low condition; OR Vulnerable species in moderate or low condition.
Streams	Very high	Streams that are Key Fish Habitat AND Threatened aquatic species; OR Rieks Crayfish predicted habitat AND Threatened aquatic species; OR Rieks Crayfish predicted habitat AND Class 1 to 3 KFH; OR Rieks Crayfish predicted habitat AND KFH. Stream areas within 10m buffer of a Class 1 KFH assessment. Stream areas within 100m buffer of a Class 1 KFH assessment.
	High	Streams that are Rieks Crayfish predicted habitat only. Stream areas within 10m buffer of a Class 2 KFH assessment. Stream areas within 100m buffer of a Class 2 KFH assessment.
	Moderate	Streams that are Key Fish Habitat only. Stream areas within 10m buffer of a Class 3 KFH assessment. Stream areas within 100m buffer of a Class 3 KFH assessment.
	Low	All other streams (≤ Strahler order 2).
Existing tracks	No significant biodiversity constraints	Existing roads and tracks – PCT 9996 extracted from vegetation layer.

In addition to designing around constraint mapping detailed above, detailed design has had regard for the following:

Protected areas and conservation lands

- Design and micro-siting of HLW infrastructure including transmission line structure benches and access tracks will avoid and/or minimise impacts within protected areas (i.e., nature refuges) and conservation lands (i.e., established BioBank and Biodiversity Stewardship sites and Conservation Agreement sites) occurring within the HLW Area.

Lighting

- Directional lighting should be used for any permanent lighting (i.e., substations) or temporary lighting (i.e., worker's accommodation) required to minimise light spill in accordance with *Australian Standard AS4282:2019*.
- Artificial lighting required during construction will be directed towards the work site and minimise light spill, to the furthest extent practicable. Permanent lighting will be erected at least 50 m from remnant vegetation where practicable.

Waterway crossings and riparian habitats

- Transmission line structures will be located and constructed to minimise impact to vegetated riparian zones (VRZs).
- The final transmission line easement will target narrow crossing points of waterways and riparian areas clear of vegetation.
- Any existing crossings will be re-used or upgraded in preference to establishing new crossings.
- Disturbance to waterways (bed, banks and associated riparian zones), will be avoided or minimised.
- The crossing design and construction work sites will minimise disturbance to any native vegetation, including native instream, fringing, and riparian vegetation within the access track alignment.
- Waterway crossings will be constructed perpendicular to the flow of the water and be positioned away from channel bends (where erosive forces are typically greatest). Preferably crossings will be located in straight stream sections with well-defined channel geometries and shallow stream gradients, in stable dry reaches.
- Avoid direct and indirect (erosion or sedimentation) impacts to riverine features such as riffles and rapids and sensitive habitat features (i.e., snags, coarse woody debris, instream macrophytes, boulders).
- Disturbance of bush rock in riparian areas will be avoided wherever practicable.
- Where instream structures are required, considerations to potential flooding and erosive effects will be made in the design and construction of the crossing.
- Crossing structures will be designed so that the existing nominal flow velocity, low flow conditions and fish passage are maintained wherever possible, including:
    - Minimise the impact of essential instream structures by mimicking natural flows.
    - For waterway crossings incorporating culverts, a minimum of 300 mm of water should pool through the structure, with a centrally placed low-flow cell being preferable.
- Flow over or through instream crossing structures are designed such that they maintain water velocity of 0.3 m/s or less, which is likely to facilitate passage for native species of fish (velocities exceeding 1 m/s, are likely to prevent upstream migration of native fish).
- Shrub or ground stratum native vegetation within vegetated riparian zones will be protected to the greatest extent practicable, with vegetation clearing ideally limited to the tree stratum only, with trunk bases being retained in-situ.

- All activities on waterfront land will be constructed in accordance with the *Guidelines for Controlled Activities on Waterfront Land* (DPE 2022), *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (NSW Fisheries 2003) and the *Policy and Guidelines for Fish Habitat and Conservation and Management* (NSW Fisheries, 2013), unless Water Group and DPIRD Fisheries agrees otherwise.

Threatened species

- Consider opportunities to avoid and minimise impacts to Key's Matchstick Grasshopper habitat within transmission line easements to be implemented during construction.
- Where threatened frog habitats have been identified (refer to Annexure H for locations), the following avoidance measures will be implemented, where practicable:
    - Avoid installing waterway crossings.
    - Avoid disturbance within 50 m of the top of bank of the waterway (including riparian vegetation).
- Where avoidance is not possible in threatened frog habitats:
- Waterway crossing designs should avoid instream structures to minimise the potential for hydrological change, erosion and sedimentation impacts of downstream environments.
- Location of waterway crossings will be determined in consultation with a suitably qualified Ecologist to avoid or minimise impacts to potential habitats or ecological features (as detailed in the Clearing Protocol provided in Annexure B).
- Develop site specific erosion and sedimentation control plans to ensure the potential for erosion and sedimentation impacts are minimised as far as practicable, including monitoring the success of erosion and sediment control measures.
- Develop and implement site-specific hygiene protocols (e.g., cleaning of plant machinery), to minimise the spread of pathogens and exotic weeds during and post-construction (in line with the Biosecurity Management Plan provided in Annexure E).

6.1.1. Disturbance zones

The HLW Area is made up of several 'disturbance zones' subject to specific clearing requirements as part of the construction of HLW and ongoing operational maintenance of the assets, as detailed in the *HumeLink Vegetation Clearing Method and Management Memorandum* (Transgrid, 2023). The zones include:

- Total Clearing Zone (TCZ), comprised of:
    - Transmission line structure zone (including brake and winch sites).
    - Access track zone.
    - Substation zone.
    - Construction compounds and temporary worker accommodation facilities.
    - Other ancillary facilities such as the underground fibre connections for telecommunications and intersections where an access track meets a road.
- Easement Clearing Zone (ECZ).
- Hazard Tree Zone (HTZ).

Disturbance zones will be applied to the detailed design and will be implemented onsite during clearing and construction, as outlined in the *HumeLink Vegetation Clearing Method and Management Memorandum* (Transgrid. 2023) and replicated in the Clearing Protocol (Annexure B). Disturbance zones are indicative and will need to be revised during detailed design and validated prior to construction commencing. During detailed design and construction, every effort will be made to minimise clearing requirements.

6.1.2. Micro-siting

During construction, further micro-siting of transmission line infrastructure, associated work sites and other areas of disturbance (e.g. blasting and rock crushing sites) will avoid or minimise impacts to the biodiversity values. The following provides a hierarchy of considerations listed in order of importance:

1. SAII entities.
2. Threatened ecological communities (ranked in order of threatened listing).
3. Recorded threatened species (ranked in order of threatened listing).
4. Threatened species habitat, including:
    a. Habitat trees.
    b. Rocky habitats (i.e., rock outcrops, large boulders, piled rock, and rock features).
    c. Course woody debris.
5. Waterways (particularly KFH) vegetated riparian zones and instream vegetation.
6. Nature refuges and existing conservation lands (i.e., established BioBank and Biodiversity Stewardship sites and Conservation Agreement sites).
7. Artificial threatened species habitats.
8. Prescribed impacts:
    a. Areas of significant habitat connectivity.
    b. Karst, caves, crevices, cliffs, rocks, and other geological features of significance.
    c. Human-made structures.
    d. Non-native vegetation offering habitat for threatened species.
    e. Hydrological processes including Groundwater dependent ecosystems (GDEs) and supporting aquifers.

Micro-siting of infrastructure requiring sub-surface work, such as transmission line structure footings, will be undertaken as part of the detailed design stage of HLW to minimise prescribed impacts where possible (i.e., avoiding impact to breeding habitat features, groundwater dependent ecosystems (GDEs), aquatic habitats and supporting aquifers). Micro-siting for minimising of potential blast impacts would be managed per the Fauna Impact Assessment (appendix to the Blast Management Plan) with site specific constraints incorporated into blast designs per location.

Training will be provided to all HLW personnel, including relevant sub-contractors on biodiversity management practices and the requirements from this BMP through inductions, toolbox talks and activity specific training (refer to Section 6.3). Unexpected finds procedures are detailed in Annexure D. Post-construction reporting will be completed (including mapping where appropriate) to detail what biodiversity impacts have been avoided or minimised.

The Proponent will maintain a revision register of the detailed design to ensure the design is still meeting offset obligations (i.e., vegetation and habitat impact areas). The procedure for updating the BMP is outlined in Section 9.

6.2. No-go zones

No-go zones are summarised in Table 6-2 below, and will be established prior to vegetation clearing in accordance with the Clearing Protocol (Annexure B).

In addition, all assumed/predicted habitats for *Prasophyllum bagoense*, *Prasophyllum keltonni* and *Pterostylis oreophila* will be deemed a **temporary no-go zone**, with no works allowed, until provision and approval by DCCEEW – Cwth of the Orchid Management Plan or updated spatial data from

BAVR has been provided confirming absence.

Table 6-2 No-go zones

No-go zone	Controls
Outside of clearing limit boundary	• The edge of the clearing limit boundary will be clearly marked on-site by a surveyor to protect retained vegetation. Outside of the approved clearing limit boundary is a no-go zone. • Highly visible fencing will constitute rope, flagging, bunting or other similarly robust and durable material. • Signage will be clear and simple in nature, for example 'No-Go Zone', and adequately sized so it can be seen from a distance of at least 20 m. Signs adjoining Threatened Ecological Communities (TECs) will specify the area is a TEC. • Ensure fencing is maintained (inspected as part of weekly environmental inspections and repaired as needed). • Access and any damage to vegetation outside of this boundary will be prohibited.
PCT 637 + 50 m buffer	• Highly visible fencing will constitute rope, flagging, bunting or other similarly robust and durable material • Signage will be clear and simple in nature, for example '"Environmentally Sensitive Area – No Entry', and adequately sized so it can be seen from a distance of at least 20 m. • Ensure fencing is maintained (inspected as part of weekly environmental inspections and repaired as needed). • No works that result in ground disturbance will occur. • Avoid any machinery use within this zone to prevent compaction and water flow interruption. • No water diverting, trenching, draining or culverts will occur. • Sediment barriers will be installed upslope and along buffers to prevent sediment-laden runoff entering the peatland. • Jute matting or hydroseeding will occur on bare adjacent areas to avoid leaving exposed soils near this zone. • Temporary matting or bridging will be used for foot access if absolutely necessary (i.e., monitoring). • Washdown zones for personnel will be mandatory for entry (refer Annexure E). • Manual weeding will be undertaken to manage edge weeds (refer Annexure E). No herbicide will be used. Prioritized early removal of *Cirsium vulgare, Holcus lanatus, Juncus acutus, Eragrostis curvula* and *Rubus* spp.
Known *Prasophyllum bagoense*, *Prasophyllum keltonni* and *Pterostylis oreophila*, + 30 m buffer	• Works in this zone will not commence until the provision and approval of the Orchid Management Plan by DCCEEW – Cwth. Construction works will then be implemented in accordance with this plan. • Highly visible fencing will constitute rope, flagging, bunting or other similarly robust and durable material • Signage will be clear and simple in nature, for example 'Environmentally Sensitive Area – No Entry', and adequately sized so it can be seen from a distance of at least 20 m.

No-go zone	Controls
	• Ensure fencing is maintained (inspected as part of weekly environmental inspections and repaired as needed). • Entry, machinery, stockpiling, and/or material storage is prohibited. • If access is unavoidable (i.e., monitoring), this will be restricted to foot traffic on designated mats. • No topsoil stripping will occur. If soil must be moved elsewhere, it will be stored separately and clearly labelled for reuse. • Buffer soils will be maintained to moist conditions (i.e., light misting) during dry extremes to prevent fungal networks. • Washdown zones for personnel are mandatory for entry (refer Annexure E). • Invasive grasses (e.g., Phalaris, *Poa annua*) will be hand-weeded rom within 5 m of each exclusion zone fortnightly (refer Annexure E).
McPhersons Plain + 30 m buffer	• Highly visible fencing will constitute rope, flagging, bunting or other similarly robust and durable material • Signage will be clear and simple in nature, for example 'Environmentally Sensitive Area – No Entry', and adequately sized so it can be seen from a distance of at least 20 m. • Ensure fencing is maintained (inspected as part of weekly environmental inspections and repaired as needed). • The horse-exclusion fencing around the central portion of McPhersons Plain (to prevent impacts to threatened flora species) will be maintained. • Some clearing of tall-growing vegetation would be required within the 30 m buffer to meet the vegetation clearing requirements for the transmission line easement and transmission line structures. Clearing methods that minimise ground disturbance will be used (i.e., hand clearing). Fell away from sensitive vegetation and remove material manually or with low-ground-pressure machinery. • Natural flow patterns will be maintained by avoiding draining modifications. • Avoid any excavation, soil stripping, or vehicle access in seasonally waterlogged or frost hollow areas. • Sediment barriers will be installed upslope and along buffers to prevent sediment-laden runoff entering the plain. • Washdown zones for personnel will be mandatory for entry (refer Annexure E). • Manual weeding will be undertaken to manage edge weeds. No herbicide will be used (refer Annexure E).

6.3. Biodiversity management training

All relevant employees, contractors and utility staff, including sub-contractors, will be trained on biodiversity management protocols and the requirements outlined within this BMP and provided with sensitive area maps (showing clearing boundaries and exclusion zones) and updates as required. Minimum training requirements are detailed below. Evidence of training delivery and attendance must be documented and reported (refer to Section 8.6 for more details).

6.3.1. Induction

Prior to commencement of works on HLW, all staff will undergo a biodiversity induction be led by the relevant Environmental Manager. This is to include a high-level overview of the following:

- Existence and requirements of this BMP.
- Relevant legislation.
- Roles and responsibilities for biodiversity management.
- Key biodiversity aspects (refer to Section 6.1).
- Biodiversity mitigation and management measures.
- Clearing zone requirements.
- Requirements of micro-siting.

Short-term visitors to site undertaking inspections/entering the site (such as regulators) will be required to undertake a visitor's induction and be accompanied by inducted personnel at all times. Temporary visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

Construction work hours are to be communicated to all staff in accordance with the Construction Noise and Vibration Management Sub-Plan to minimise impacts associated with noise and vibration on resident fauna (particularly early in the morning and late in the afternoon):

- Standard construction hours:
  - 7:00 am to 6:00 pm Mondays to Fridays.
  - 8:00am to 6:00pm Saturdays.
  - At no time on Sundays or public holidays.
- Helicopter hours of operation:
  - Between 9 am to 5 pm Monday to Friday.
  - Between 9 am to 1 pm Saturdays.
  - No helicopter use is allowed on Sunday or NSW public holidays.

Speed limits are to be implemented in accordance with the Traffic and Transport Management Plan, with abidance communicated to all staff to minimise fauna collisions risks.

Locations and requirements for where access road upgrades will occur will be addressed in a future revision of the BMP.

6.3.2. Toolbox talks

Targeted training in the form of toolbox talks will also be provided to personnel with a key role in biodiversity management, prior to the commencement of each stage of HLW. To be led by environmental manager or construction managers well educated in this BMP. Must detail relevant biodiversity values in the upcoming landscape, clearing zones encountered and relevant environmental control measures. Examples of toolbox talk topics include, but are not limited to:

- Importance of the clearing zones.
- Requirements of micro-siting.
- Threatened species recorded within the HLW Area, including what threatened species may be encountered at particular sections of the site based on mapping provided in Annexure K, as well as any emerging results of the Unexpected Finds Procedure (Annexure D) and pre-clearing procedures (Annexure B).
- Relevant environmental control measures detailed in this BMP.

6.4. Clearing protocols

Clearing protocols are outlined in Annexure B. This protocol describes the HLWJV protocol for vegetation clearing and aquatic works during construction of HLW, in order to mitigate potential impacts caused to flora, fauna and aquatic entities. The protocol involves a staged vegetation clearing approach – clearing of non-habitat trees, or other relevant habitat, first and allowing at least 24 hours for fauna to vacate habitat before removing habitat trees. It also provides protocols for works within Class 1 KFH. The protocol includes the following:

- Demarcation of clearing boundaries and exclusion zones, including applicable controls within exclusion zones.
- Pre-clearing Scoping Assessment, including desktop study to identify areas of ecological sensitivity, recent bushfire history and relevant species (such as those assumed or known).
- Pre-clearing survey process, including identification and demarcation of vegetation and habitats (flagging, refer Section 6.4)
- Final Pre-clearing Check, to be undertaken daily during clearance activities
- Clearing supervision process, including details on fauna rescue and relocation.
- Recommended methods for works within waterways.
- Fauna handling procedures.

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

Where gaps in ecological survey data exist (i.e., Revised BDAR or BAVR data is lacking) due to site access, severely burnt lands or other reasons, the full suite of mitigation measures outlined in Annexure B will be applied. This includes Pre-clearing Scoping Assessments, Pre-clearing Surveys and species-specific survey methods. Furthermore, demonstrated minimisation of impacts to hollow-bearing trees and threatened species will be reported in Post-clearing Reports (i.e., against biodiversity conditions MCoA 25 and 30).

6.5. Bushfire management

In addition to standard bushfire management measures per the HLW Bushfire Management Plan, the following measures aim to prevent the ignition of fires, protect sensitive ecological features and reduce indirect biodiversity impacts of bushfire in such a fire-prone landscape:

- High-risk activities (e.g., grinding, welding, use of machinery with exposed heat sources) will be restricted during periods of Total Fire Ban or extreme fire danger.
- Works will cease during declared Catastrophic fire danger rating days, unless specific controls are approved by the relevant authority.
- Spark arrestors will be used and maintained on all machinery and vehicles operating off-road to prevent ignition in grassy groundcovers – critical for threatened forbs and native seedbank.
- Firebreaks or low-fuel zones will be maintained around key infrastructure and work areas to prevent spread into adjacent habitats.
- Vegetation slashing/clearing that may create windrows or flammable debris will be avoided unless mulched or removed immediately.
- Work zones will be equipped with mobile firefighting equipment (e.g., fire units, shovels, rakes, water tanks, extinguishers).
- Bushfire awareness and response training will be provided to all personnel during site inductions, including refreshers during fire season.
- Natural fire refugia (e.g., rocky outcrops, wet gullies, riparian areas) will be retained within and

adjacent to work areas to support fauna survival in the event of a bushfire.

- Flammable materials (e.g., timber, weed loads, fuel containers) will be stocked a minimum of 30 m away from retained native vegetation.
- Introduction of highly flammable weeds will be controlled via Annexure E.
- In the event of a fire, ecological values will be inspected and monitored for damage, including weed emergence, erosion risk and habitat loss. Targeted rehabilitation may be required.
- Where practicable, hot works will be limited to locations where fire breaks and low fuel zones are in place.

6.6. Noise and vibration assessment for crushing and blasting

At least 4 weeks prior to blasting and/or crushing activities taking place at a location, an Ecologist will be engaged to determine potential impacts on Bats, Owls, Cockatoos, Raptors and the Superb Parrot. Target species for HLW activities are included in Table 6-3 below. HLW engaged WSP to complete a Fauna Impact Assessment in April 2026 for the planned commencement of blasting in May 2026.

A noise and vibration assessment for crushing and blasting has been incorporated into the Fauna Impact Assessment including recommended mitigation measures and has been provided to CPHR., Mitigation measures considered in the Impact Assessment are provided in Table 6-3. Any further impact assessments conducted will be provided to CPHR. In the unlikely event that impacts are unavoidable, offsetting requirements will be discussed with CPHR.

The Fauna Impact Assessment is appended to the HLW Blast Management Plan.

Table 6-3 Noise and vibration assessment for crushing and blasting – target species

Group	Species relevant to HLW	Potential mitigation measures
Bats	• Large-eared Pied Bat. • Little Pied Bat. • Eastern False Pipistrelle. • Large Bent-winged Bat. • Southern Myotis. • Corben's Long-eared Bat. • Yellow-bellied Sheathtail-bat. • Greater Broad-nosed Bat.	Pre-construction: • Roost surveys. • 100 m no-go buffer zones around confirmed maternity or day roosts during sensitive periods (e.g., breeding, lactation). Construction: • Schedule high impact activities outside breeding and roosting seasons (species-specific). • Gradual ramp up of noise / vibration activities to allow bats to vacate the area. • Acoustic barriers. • Low-noise equipment. • Avoid night works. Ongoing monitoring.
Owls	• Barking Owl. • Powerful Owl. • Masked Owl. • Sooty Owl.	Pre-construction: • Roost surveys. • 100 m no-go buffer zones around confirmed roosts during sensitive periods during breeding periods: Barking Owl = Oct-Jan

Group	Species relevant to HLW	Potential mitigation measures
		Masked Owl = Apr-Nov Powerful Owl = May-Oct Sooty Owl = Mar-Sep Construction: • Schedule high impact activities outside breeding seasons (refer above). • Gradual ramp up of noise / vibration activities to allow owls to vacate the area. • Acoustic barriers. • Low-noise equipment. • Avoid night works. Ongoing monitoring.
Cockatoos	• Gang-gang Cockatoo. • South-eastern Glossy Black-Cockatoo.	Pre-construction: • Nest and roost tree surveys. • 100 m no-go buffer zones around confirmed nest or roost trees during breeding: Gang-gang Cockatoo = Oct-Jan. Glossy Black-Cockatoo = Mar-Sep. Construction: • Schedule high impact activities outside breeding and roosting seasons (refer above). • Gradual ramp up of noise / vibration activities to allow bats to vacate the area. • Acoustic barriers. • Low-noise equipment. Ongoing monitoring.
Raptors	• Spotted Harrier. • Black Falcon. • White-bellied Sea Eagle. • Little Eagle. • Square-tailed Kite.	Pre-construction: • Raptor nest surveys. • 300 m no-go buffer zones around confirmed raptor nests during breeding: Spotted Harrier = Aug-Dec Black Falcon = Jun-Dec White-bellied Sea Eagle = Jun-Sep Little Eagle = Aug-Oct Square-tailed Kite = Jul-Feb Construction: • Schedule high impact activities outside breeding and roosting seasons (refer above).

Group	Species relevant to HLW	Potential mitigation measures
		• Gradual ramp up of noise / vibration activities to allow raptors to vacate the area. • Acoustic barriers. • Low-noise equipment. • Avoid night works. Ongoing monitoring.
Parrots	• Superb Parrot.	Pre-construction: • Nest surveys. • 100 m no-go buffer zones around confirmed nests during breeding period (Oct-Jan). Construction: • Schedule high impact activities outside breeding period (Oct-Jan). • Gradual ramp up of noise / vibration activities to allow parrots to vacate the area. • Acoustic barriers. • Low-noise equipment. Ongoing monitoring.

6.7. Aquatic works

6.7.1. Waterway crossing controls

In addition to standard erosion and sediment control measures per the HLW Soil and Water Management Plan, the following procedures and considerations will be incorporated into construction methodologies for waterway crossings, where practicable (pending property management plans):

- Opportunities to retain felled trees as habitat on-easement will be considered in select areas (i.e., connectivity corridors and riparian lands). The opportunity to stockpile and supply felled trees for waterway rehabilitation or improvement work will be discussed with DPI Fisheries.
- Waterway crossing work will be constructed during no or low flow conditions and under calm weather conditions. Work will also be timed to occur outside of any local high flow periods.
- Silt curtains or coffer dams will be deployed around instream work sites where required, to protect against any impacts to water quality or indirect impacts to retained vegetation. These measures will be situated so to avoid blocking fish passage wherever practical and removed as soon as they are no longer required.
- Flow diversion measures will be installed on bunded waterway crossings as appropriate or where construction during no or low flow conditions is not feasible. Flow diversion measures may include pumps to ensure that water can be moved from one side of blockages to the other, with screened inlets to prevent the entrapment of aquatic fauna and outlet structures that are designed to avoid scouring of the channel. Where waterways are bunded or flow obstructed, all obstructions to flow will need to be removed as soon as practical after watercourse crossing construction has been completed.
- Appropriate erosion and sediment controls that take into account potentially flood prone areas will be employed to manage water quality impacts and indirect impacts to retained vegetation.

- Waterway bed and bank material excavated during construction will be stockpiled outside of the active channel and avoid riparian vegetation. Any material excavated from the bed of waterways will be stockpiled separately from other materials and returned to the waterway bed following the completion of construction work at a location.
- If the stockpiling of sediment or soil is required, it will be located as far away from waterways as practicable and managed so that it is secure against flooding and runoff to prevent any sediment entering waterways. Adequate erosion and sediment control measures will be in place to protect stockpiled sediment against runoff during rainfall or flooding.
- Only excavated natural materials (ENM) or virgin excavated natural materials (VENM) will be used as fill during reclamation work (i.e., no contaminated material, building or demolition rubble will be used as fill in any stream crossings).
- Chemicals will be stored in adequate bunding (in accordance with Australia Standard 1940 – The storage and handling of flammable and combustible liquids) as far away from streams as practicable and appropriately protected against flooding or runoff. Spill kits will be made available, and a spill response plan developed.
- Plant refuelling will occur as far away from streams as possible and appropriate spill prevention measures (such as diversion bunds/cut off drains upslope and drip trays and spill kits) will be implemented when refuelling.
- Relocation of any impacted aquatic or riparian-dependant species as per Annexure B.

6.8. Supplementary hollow and nest strategy

A Supplementary Hollow and Nest Strategy has been developed and is provided in Annexure C. This strategy is to assist in mitigating the impacts of clearing required for HLW by identifying target species and prescribing the necessary processes required to manage nests and install/manage fauna habitats (artificial hollows) for threatened species. The scope of this strategy is to identify threatened fauna species that are likely to be adversely impacted by the removal of hollow-bearing trees and nests, and to provide methods for the following:

- Identifying hollow-bearing trees and nests, including characterisation of such habitat resources.
- Identify hollows suitable for salvage and re-installation.
- Identifying target locations (i.e., Hollow Replacement Zones) for nest box, hollow hog or salvaged hollow installation.
- Identifying number, type, size and location of artificial hollows (specific to each target species) for compensatory installation.
- Nest box installation, hollow salvage installation and hollow hogs.
- Managing nests prior to and during clearing.
- Annual monitoring program to assess the efficacy of hollow replacement.
- Addressing incidents and non-compliances, including a Trigger Action Response Plan (TARP).
- Reporting including pre/post-clearing reports, installation reports and monitoring reports.

Monitoring during construction will determine the use of artificial hollows during the construction phase and will occur on an annual basis. Any deteriorating artificial hollows will be replaced and any fallen hollows will be reinstalled. Where longer term use is considered unviable, consideration and assessment will be made to determine if nest box replacement is required.

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

6.9. Unexpected finds procedure

An Unexpected Finds Procedure is provided in Annexure D and must be implemented following the sighting of any known or suspected threatened entities within the HLW Area. Any emerging results of the Unexpected Finds Procedure will be communicated to HLW personnel via toolbox talks (refer to Section 6.3.2).

6.10. Soil and water management

Soil and water management is inherently linked to the protection of local waterways, aquatic habitat and threatened aquatic entities, as well as indirect impacts on adjacent terrestrial habitats. Erosion and Sediment Control Plans (ESCPs) and Water Quality Monitoring Program (WQMP) are provided in the Soil and Surface Water Management Sub Plan of the HLW CEMP (Annexure 1 of the HLW CEMP). To minimise and manage biodiversity impacts of stockpiles, fill, sediment controls and sediment basins, all direct impacts associated with such features will be limited to the Total Clearing Zone. These features will be outside of No-go Zones detailed in Section 6.2, and be subject to rehabilitation as necessary in accordance with the Rehabilitation Plan provided in Annexure G.

6.11. Biosecurity management plan

A Biosecurity Management Plan for weeds, predators/pests and diseases is provided in Annexure E which is to be followed prior to and during construction works. This plan includes:

- Protocols for the identification of weeds, predators/pests and diseases of concern.
- Management/control methods.
- Monitoring requirements.
- Mandatory reporting obligations.
- Weed hygiene protocols for all vehicles and machinery.
- A Trigger Action Response Plan.

Management of weeds, pests and pathogens throughout the construction phase of HLW would follow the mitigation measures outlined in the Biosecurity Management Plan and will be subject to ongoing consultation with species experts in accordance with requirements from regulators. The management plan will be reviewed and updated throughout construction (as required).

6.12. Connectivity strategy

A Connectivity Strategy has been developed and is provided in Annexure F. This strategy has been developed based on current best practices to minimise and manage the potential fauna connectivity impacts and collision risk as a result of HLW. Species of concern include woodland birds; terrestrial and arboreal mammals; microbats; forest owls; cockatoos; raptors; migratory birds; reptiles; and amphibians. The Connectivity Strategy has been prepared to meet the following objectives:

- Specifying existing habitat connectivity condition, proposed impacts on such features, and identifying connectivity and fauna movement corridors.
- Identifying the entities that require habitat connectivity and collision-risk mitigation measures.
- Identifying the location and nature of proposed mitigation measures to address prescribed impacts associated with habitat connectivity impaired or severed as a result of HLW. This includes retention of connectivity along the HLW alignment and establishment of connectivity corridors.
- Adopting project design elements that minimise interactions with threatened entities such as conductor line-markers as fauna deterrents.

- Detailing compliance management measures and procedures.
- Prescribing threshold triggers for the implementation of adaptive management measures..

6.13. Rehabilitation

The HLW project involves sites of temporary disturbance required for construction compounds, ancillary facilities and earthwork material sites. As such, a Rehabilitation Plan has been prepared based on current best practices to guide the rehabilitation of temporarily disturbed areas during the construction of HLW, provided in Annexure G. The Rehabilitation Plan provides a framework for the construction team to incorporate management actions to facilitate rehabilitation of temporarily disturbed areas to such a point that the disturbed ecosystem will have high resilience and the ability to rely on natural process to recover from any later disturbances. This includes rehabilitation of *Keyacris scurra* (Key's Matchstick Grasshopper) habitat. The scope of the plan is to:

- Identifies temporary disturbance areas associated with the enabling and construction works of HLW, including areas of Key's Matchstick Grasshopper habitat.
- Outlines pre-disturbance biodiversity conditions.
- Details rehabilitation measures including:
    - Site preparation.
    - Seed collection.
    - Salvage, storage and reuse of resources.
- Details compliance management measures and procedures through monitoring.
- Prescribes threshold triggers for the implementation of adaptive management measures.

Rehabilitation efforts must be completed within 6 months of the completion of construction, upgrading or decommissioning of HLW.

6.14. Additional and Appropriate Measures for Serious and Irreversible Impact Entities

Transgrid is responsible for delivering Additional and Appropriate Measures (A&AMs) under Condition B30(d)(xiii) of the HumeLink State Approval to mitigate impacts on entities at risk of SAII. These include the CEEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Box Gum Woodland), *Pimelea bracteata* (Rice Flower), and *Tyto tenebricosa* (Sooty Owl). These measures must be implemented within three years of project approval and are in addition to standard biodiversity offset obligations.

To meet this requirement, Transgrid developed an A&AM proposal (dated 2 September 2024; provided in Annexure J) outlining targeted conservation actions. The scope of these measures will be reviewed following supplementary surveys to confirm known presence and impacts, and the preparation of the BAVR required under Condition B29. A final A&AM proposal will be submitted to CPHR within three months of the initial BAVR's approval and may be revised if necessary.

Key commitments in the current A&AM proposal include:

- A landscape-scale Local Action Management Program (LAMP) focused on the restoration and conservation of Box Gum Woodland.
- A program in collaboration with the Botanic Gardens of Sydney to undertake seed and vegetative material collection and propagation of *Pimelea bracteata*, followed by genetic analysis to determine if planting of propagated individuals is suitable, and if so, how a translocation plan would be designed to maximise genetic diversity.
- Restoration of Sooty Owl habitat on Biodiversity Stewardship or Conservation Agreement sites.

The LAMP, developed in partnership with DCCEEW – NSW, is a community-driven framework for

landscape-scale ecological restoration. Its goals include increasing the extent, condition, and connectivity of Box Gum Woodland, informed by data and supported by local engagement. Through establishing ongoing funding mechanisms and increased community awareness, the program aims to deliver enduring ecological outcomes beyond regulatory compliance.

The LAMP will be funded by Transgrid for the initial 10 years, with intensive activity during the first three years (2025–2027), supported by 2.5 full-time equivalent roles across Transgrid, NSW BCS (now CPHR), and Landcare Australia. From 2028 to the end of 2034, a further 0.5 full-time equivalent Landcare resources will support ongoing delivery. Program components include landholder engagement, baseline ecological monitoring, on-ground restoration (e.g., planting up to 55,000 provenance tubestock), and regular reporting.

A Steering Committee comprising representatives from all delivery partners (including Transgrid and CPHR as well as other organisations as they become involved) will oversee the program, confirm the project area, and lead development of the detailed LAMP. The plan will set out restoration priorities, performance indicators, a monitoring framework, and a model for long-term funding.

Through this initiative, Transgrid aims to deliver meaningful biodiversity gains and foster strong, lasting partnerships with landholders and local communities.

6.15. Biodiversity monitoring program

HLW may have indirect impacts (including prescribed and uncertain impacts) on threatened flora and fauna, native Plant Community Types (PCTs) within and adjacent to the HLW Area and aquatic species and their habitats.

While direct impacts are easily quantified and controlled by managing the extent of clearing within the disturbance area, indirect impacts are subject to the efficacy of the implemented environmental controls. As such, direct impacts are defined during project design, whereas indirect impacts are mitigated through the effective environmental management of construction. As a result, a Biodiversity Monitoring Program has been developed (Annexure H), focused on monitoring those entities which have been identified within the HLW Area with potential to experience indirect impacts during construction. This program also includes progressive monitoring of the Easement Clearing Zone (ECZ) per MCoA B30(d)(viii), and monitoring/reporting requirements for all annexures associated with this BMP.

The objective of this program is to provide early warning of ineffective measures and/or uncertain impacts that may compromise the mitigation measures and threaten exceedance of the predicted impacts of HLW construction. The scope includes the following:

- Identify entities that require monitoring during construction.
- Specify the existing extent of monitoring entities.
- Detail the monitoring methods including performance criteria.
- Provide measurable thresholds to identify when remedial action is triggered.
- Provide adaptive management response/actions.

6.16. Summary of biodiversity management and mitigation strategies

All biodiversity management and mitigation strategies outlined have been summarised in Table 6-4 below. These will be implemented to minimise construction impacts from HLW and ensure all commitments and requirements of approval will be adhered to. These specific management and mitigation measures have been developed to address the requirements of applicable legislation, the MCoA, the CoMA, the UMM and all Planning Approval Documentation, particularly the Revised BDAR.

Table 6-4 Biodiversity management and mitigation measures

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
General					
BMP1	All relevant HLW personnel involved in vegetation clearance, including relevant sub-contractors will be trained on biodiversity management protocols and the requirements outlined within this BMP, through inductions, toolbox talks and targeted training. Updates will be provided as acquired. The importance of the clearing zones and requirements of micro-siting will be presented to all personnel during the site induction and during construction and operation through toolbox talks.	Pre-construction	Environmental Manager	UMM B14	Induction records

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP2	No works will occur outside the approved disturbance footprint without prior approval from relevant regulators.	Pre-construction and construction	Environmental Manager	MCoA B25 and B30 CoMA 2 UMM B4	Detailed design confirmation
BMP3	No-go zones will be established at the following locations: • Outside of clearing limit boundary. • PCT 637 + 50 m buffer. • Known *Prasophyllum bagoense, Prasophyllum keltonni* and *Pterostylis oreophila*, + 30 m buffer. • McPhersons Plain + 30 m buffer. Delineation will follow that outlined in Annexure B. All assumed/predicted habitats for *Prasophyllum bagoense*, *Prasophyllum keltonni* and *Pterostylis oreophila* will be deemed a temporary no-go zone, with no works allowed, until provision and approval of the Orchid Management Plan by DCCEEW – Cwth OR updated spatial data from BAVR has been approved confirming absence.	Prior to clearing at a location.	Environmental Manager Project Ecologist Construction Manager	MCoA B25, B30 CoMA 1, 2, 7 UMM B3, B6, B13, B38	Pre-clearing Survey Reports and Final pre-clearing Checks Orchid Management Plan by DCCEEW – Cwth OR updated spatial data from BAVR

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
Design					
BMP4	Detailed design considerations follow those specified in Section 6.1, where practicable.	Detailed design	Environmental Manager Design Manager Construction Manager Supervisor Engineer	MCoA B25 and B30 UMM B1, B2, B6, B9, B24, B27, B29, B30, B31	Detailed design confirmation
BMP5	Micro-siting will focus on the retention of measures listed in Section 6.1.2 to the extent possible. Spatial data, threatened species locations and constraints mapping will be provided to the design and construction teams for consideration. Associated mapping will be included on sensitive area plans and provided to the construction workforce.	Detailed design	Environmental Manager Design Manager Construction Manager Supervisor Engineer	MCoA B25 and B30 UMM B1, B2, B3, B4, B28, B30	HLWJV Spatial Portal and site audits
BMP6	Detailed design will follow disturbance zone clearing methods described in the *HumeLink Vegetation Clearing Method and Management Memorandum* (Transgrid, 2023)	Detailed design	Environmental Manager Construction Manager Supervisor	MCoA B25 and B30 UMM B27	Detailed design confirmation

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
Pre-clearing and clearing					
BMP7	Where gaps in ecological survey data exist (i.e., Revised BDAR or BAVR data is lacking) due to site access, severely burnt lands or other reasons, the full suite of mitigation measures outlined in Annexure B will be applied.	Pre-construction and construction	Environmental Manager Project Ecologist Construction Manager	MCoA B25, B30 CoMA 2, 7 UMM B1, B20, B27, B30	Pre-clearing Survey Report
BMP8	In the event that any further or alternative waterway crossings are required in areas mapped as KFH or indicative threatened species distribution mapping, a KFH Assessment will be undertaken in accordance with Annexure B.	Pre-construction	Environmental Manager Suitably qualified ecologist	UMM B34	Aquatic Biodiversity Survey Report
BMP9	A Pre-clearing Scoping Assessment will be undertaken by the Project Ecologist prior to pre-clearing surveys in accordance with Annexure B. Information obtained will be used to inform pre-clearing survey methods within a clearing permit area.	Pre-construction	Environmental Manager Project Ecologist Construction Manager	MCoA B25, B30 CoMA 2, 7 UMM B1, B20, B27, B30	Pre-clearing scoping assessmen checklist.

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP10	Pre-clearing surveys will be undertaken to a minimum distance of 100 m (or to the outer boundary of the HTZ) in accordance with Annexure B, including species-specific pre-clearing methods in areas of assumed or known threatened species presence and delineation of associated temporary exclusion buffers for breeding habitats.	Pre-construction and construction	Environmental Manager Project Ecologist Construction Manager	MCoA B25, B30 CoMA 2, 7 UMM B1, B20, B27, B30	Pre-clearing Survey Report
BMP11	All clearing permit areas (whether containing habitat features / threatened flora or not) will be subject to final pre-clearing checks. Final pre-clearing checks will be undertaken by the Project Ecologist within 24 hours of clearing commencing within the daily clearing limits in accordance with Annexure B.	Pre-construction and construction	Environmental Manager Project Ecologist Construction Manager	MCoA B25, B30 CoMA 2, 7 UMM B1, B20, B27, B30	Final pre-clearing checklist
BMP12	Two-stage (habitat) removal will be supervised by a Project Ecologist in accordance with Annexure B. The fauna handling procedure provided within will be followed at all times.	Construction	Environmental Manager Project Ecologist Construction Manager	MCoA B25, B30 CoMA 2, 7 UMM B1, B20, B27, B30	Post-clearing Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
Habitat retention					
BMP13	Pre-clearing surveys to include a confirmation of all hollows lost, updated artificial hollows required, and finalised Hollow Replacement Zones to be detailed in Pre-clearing Reports as per Annexure B.	Construction	Environmental Manager Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B12	Pre-clearing Reports
BMP14	Artificial hollow installation to occur within finalised Hollow Replacement Zones at a 1:1 ratio for all hollows showing evidence of occupation or fauna use: 30% to be installed prior to clearing and all remaining to be installed within 2 months of clearing. Artificial hollows to include salvaged hollows, hollow hogs or nest boxes (including 3D-printed boxed) as applicable per Annexure C. No hollow hog installation to occur within State Forests.	Pre-construction and Construction	Environmental Manager Project Ecologist Construction Manager Arborist Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B12	Post-clearing Reports Nest Box Installation Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP15	Nest impact management will be undertaken during Pre-clearing Surveys and Clearing Supervision, including avoidance of breeding threatened nest trees. Simple nests may be relocated during clearing procedures under direct supervision of the Project Ecologist, however raptor (stick) nests will be dismantled to minimise collision risk in accordance with Annexure C.	Pre-construction and Construction	Environmental Manager Project Ecologist Construction Manager Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B12	Pre-clearing Reports Post-clearing Reports
BMP16	Post-clearing Reports to confirm the type and number of additional artificial hollow replacements necessary following final hollow clearing data, and preliminary hollow replacement installations. Confirmation of all hollows cleared, hollow size, location, and final artificial hollow installation requirements is required per Annexure C.	Construction	Environmental Manager Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B12	Post-clearing Reports
BMP17	Habisure system used for all artificial hollow installations, nest box dimensions and design considerations to be followed per this strategy. Hollow Hog installation/ creation procedure to be followed per Annexure C.	Construction	Environmental Manager Project Ecologist Construction Manager Arborist	MCoA B25, B30 CoMA 2, 7 UMM B3, B12	Nest Box Installation Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP18	Any re-built nests will be managed in accordance with Annexure C including detection, assessment of nest activity, temporary buffers and/or dismantling, and potential bird deterrent devices.	Pre-construction and Construction	Environmental Manager Project Ecologist Construction Manager Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B12	Fauna handling record sheet
BMP19	Where threatened species are unexpectedly identified during pre-construction or construction, follow the Unexpected Finds Procedure outlined in Annexure D. Fauna handling record sheets will be completed of all fauna interactions (including vehicle collisions) per Attachment 3 of Annexure B.	Pre-construction and construction	All staff	MCoA B25 and B30 UMM B3, B20	Fauna handling record sheet
BMP20	Retention of ground, shrub and habitat resources will be prioritised in areas of partial clearing (ECZ & HTZ) as per Annexure F.	Pre-construction and Construction	Environmental Manager Design Manager Construction Manager Supervisor Engineer	MCoA B25, B30 CoMA 2, 7 UMM B3, B6, B10, B11, B28	Post-clearing Reports

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP21	Desktop review of connectivity corridors (Ground Corridors & Glider Crossings) to be followed by field surveys. Corridor Inspection Report prepared prior to clearing commencing, and is to include an assessment of assumptions made in this strategy and the desktop review, final corridor locations/dimensions and any associated recommendations as per Annexure F.	Pre-construction	Environmental Representative Suitably qualified ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B6, B10, B11, B28	Corridor Inspection Report
BMP22	As many Ground Corridors that can be successfully retained/established will be identified and protected via delineation and clearing restrictions, as per Annexure F.	Pre-construction and construction	Environmental Representative Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B6, B10, B11, B28	Corridor Inspection Report Post-clearing Reports
BMP23	As many Glider Crossings that can be successfully retained/established will be identified locations, pole heights and the required number of poles based on documented glide performance including glide angles, distances and heights. Glider pole arrays to be installed within 3 months of clearing as per Annexure F.	Pre-construction and construction	Environmental Representative Construction Manager Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B6, B10, B11, B28	Corridor Inspection Report Glider Pole Installation Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP24	Conductor line-markers to be installed at select locations following detailed design as per Annexure F and areas identified as higher strike risk following detailed design.	Detailed design and construction	Environmental Representative Construction Manager Project Ecologist	MCoA B25, B30 CoMA 2, 7 UMM B3, B6, B10, B11, B28	Detailed design and Project Ecologist confirmation
Biosecurity					
BMP25	Baseline weed surveys will be complete during pre-clearing surveys, including the identification of weed species present, density and location of weeds, and physical demarcation of weed restricted areas.	Pre-construction	Environmental Manager Project Ecologist	MCoA B30 UMM B3, B8, B9 and B22	Project Ecologist confirmation Updated sensitive area maps and HLW GIS Pre-clearing Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP26	A soil sampling program be undertaken prior to construction by a suitably qualified person(s) to test for presence/absence of *Phytophthora* within the HLW Area. Soil sampling will be undertaken within the HLW Area, including key areas such as at vehicle washdown (to ensure that hygiene measures are effective) and around key infrastructure areas and roads where there is movement of vehicles, vessels, plant and machinery. Methods to follow those outlined in the Annexure E.	Pre-construction	Environmental Manager Project Ecologist	MCoA B30 UMM B3, B8, B9 and B22	Soil sampling results
BMP27	All suppliers of plant and equipment, HLWJV and contractors will be informed of their general obligation under the *Biosecurity Act 2015* to prevent the introduction and spread of diseases, weeds and contaminants. The suppliers will be expected to present their materials and equipment clean and free of dirt, mud, seed and biological materials including weeds, seeds, pathogen and other organisms. Suppliers will complete the Hygiene Declaration Form provided in Annexure E prior to entry onsite.	Pre-construction and construction	All staff	MCoA B30 UMM B3, B8, B9 and B22	Hygiene Declaration Form records

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP28	Hygiene checkpoints will be established at or prior to access points onsite to carry out visual inspections of plant and equipment to ensure compliance with the Hygiene Declaration Form. Where cleanliness standards are not met, site entry will be refused, and thorough off-site wash down at an appropriate facility will be required prior to site access being granted	Pre-construction and construction	Environmental Manager Construction Manager	MCoA B30 UMM B3, B8, B9 and B22	Site audit records
BMP29	Onsite washdown stations will accompany restricted areas and be contained, Transgrid approved, and away from production and other sensitive areas. Washdown areas will be located at major access points and HLW compound sites, as permitted per Property Management Plans. Washdown procedure detailed in Annexure E will be followed.	Pre-construction and construction	Environmental Manager Construction Manager	MCoA B30 UMM B3, B8, B9 and B22	Site audit records

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP30	Restricted areas (i.e., weed/ pathogen dominated areas, weed/ pathogen topsoil stockpiles) will be demarcated and signposted. These areas will be subject to weekly inspection to ensure the flagging/geofencing, signage and washdown areas are in place and functioning	Pre-construction and construction	Environmental Manager Construction Manager	MCoA B30 UMM B3, B8, B9 and B22	Site audit records

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP31	To minimise the risk of increased predator and pest activity, the following controls will be implemented as per Annexure E: • The horse-exclusion fencing around the central portion of McPhersons Plain (to prevent impacts to threatened flora species) will be maintained. • Stock-proof fencing of laydown areas, spoil sites and erosion controls where horse entry may cause damage. Fencing is to include gates that remain closed when not in active use, including signage to inform staff of requirement. • No feeding or interactions with feral horses or any other fauna. • Staff inductions will include awareness training on avoiding conflict or attraction (e.g., leaving food waste accessible) and reporting sightings or damage.	Pre-construction and Construction	All staff	MCoA B30 UMM B3, B8, B9 and B22	Site audit records

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP32	Weed control program within the HLW Area will involve physical and chemical methods (as detailed in Annexure E): • A weed control contractor will be employed to implement chemical weed control for HLW as the primary means of eradicating or mitigating against the spread of weeds. • Topsoil from areas identified as dominated by weeds will be stockpiled separately from 'clean' topsoil. • Appropriate weeds are to be physically removed and disposed of at a licensed waste management facility.	Construction	Environmental Manager Weed Control Contractor Project Ecologist	MCoA B30 UMM B3, B8, B9 and B22	BMP Monitoring Report
BMP33	Annual weed monitoring will be conducted to determine weed cover for the HLW Area, inform the location and extent of controls and monitor cycles of weed growth and novel weed establishment. Annual pathogen monitoring will occur to test for presence/absence of *Phytophthora* within the HLW Area. Monitoring methods to follow those detailed in Annexure E.	Construction	Environmental Manager Project Ecologist	MCoA B30 UMM B3, B8, B9 and B22	BMP Monitoring Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP34	All HLW personnel must report suspected emerging weeds, pest or pathogens immediately to the Environmental Manager or Construction Manager. Suspected sightings are to be reported to DPI's Invasive Plants and Animals department on 1800 680 244.	Pre-construction and Construction	All staff Environmental Manager Construction Manager	MCoA B30 UMM B3, B8, B9 and B22	Site audit records
Rehabilitation					
BMP35	Topsoil stripping zones will be clearing marked prior to works commencing at a temporary disturbance site, with priority given to topsoil and root ball retention where practicable, in accordance with Annexure G. If deemed necessary, seed collection will occur. Storage of salvaged soil and seeds will follow guidelines.	Pre-construction	Environmental Manager Construction Manager Suitable qualified specialist	MCoA B30, B62, B63 CoMA 7 UMM B3, B18	Environmental Control Map Erosion and Sediment Control Plan

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP36	Habitat features such as rocky outcrops, surface rock, dead wood, logs and course woody debris will be salvaged and relocated to adjacent and/or suitable woodland locations, pending consultation with the Project Ecologist. Relocation will prioritise areas of connectivity corridors per Annexure F, then areas of partial impact (i.e., Easement Clearing Zone, Hazard Tree Zone) and rehabilitated temporary disturbance areas. Placement will have regard for relevant bushfire controls.	Pre-construction and construction	Environmental Manager Construction Manager Project Ecologist	MCoA B25, B30, B62, B63 CoMA 2, 7 UMM B3, B18, B19	Pre-clearing Reports BMP Monitoring Report
BMP37	The restoration of land to pre-existing use will occur progressively following completion of constructions works at a location, in accordance with Annexure G. This would include waterway works, the removal/remediation of the construction compounds and camp sites, removal of temporary facilities and site buildings and temporary environmental controls.	Construction	Environmental Manager Construction Manager	MCoA B30, B62, B63 CoMA 7 UMM B3, B18	BMP Monitoring Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP38	Soil preparation, fauna exclusion fencing and weed management must be completed within 6 months of the completion of construction, upgrading or decommissioning of HLW, in accordance with Annexure G.	Construction	Environmental Manager Construction Manager Suitable qualified specialist	MCoA B30, B62, B63 CoMA 7 UMM B3, B18	BMP Monitoring Report
BMP39	Rehabilitation is to include the reuse of natural resources including topsoil and mulch as well as seed collection (where relevant). This will be followed by maintenance such as watering and weeding to achieve targets detailed in Annexure G.	Construction	Environmental Manager Construction Manager Suitable qualified specialist	MCoA B30, B62, B63 CoMA 7 UMM B3, B18	BMP Monitoring Report
BMP40	Direct seeding will be used in temporarily disturbed areas that are associated with Keys Matchstick Grasshopper habitats (Annexure G). Seeding will be followed by maintenance to achieve appropriate survival rates.	Construction	Environmental Manager Construction Manager Suitable qualified specialist	MCoA B30 CoMA 7 UMM B3, B9	BMP Monitoring Report
Biodiversity monitoring					
BMP41	Partial clearing zone monitoring and tracking of clearing limits to occur in accordance with Annexure H.	Pre-construction and construction	Project Ecologist	MCoA B30 UMM B3, B8	Partial Clearing Validation Report

ID	Measure/Requirement	When to implement	Responsibility	Reference	Evidence
BMP42	Artificial hollow monitoring to occur in accordance with Annexure H.	Construction	Project Ecologist	MCoA B30 UMM B3, B8	Artificial Hollow Monitoring Report
BMP43	Weed and pathogen monitoring to occur in accordance with Annexure H.	Construction	Project Ecologist	MCoA B30 UMM B3, B8	Post-clearing Reports BMP Monitoring Report
BMP44	Connectivity corridor monitoring to occur in accordance with Annexure H.	Construction	Project Ecologist	MCoA B30 UMM B3, B8	Connectivity Monitoring Report
BMP45	Rehabilitation monitoring to occur in accordance with Annexure H.	Construction	Project Ecologist	MCoA B30 UMM B3, B8	BMP Monitoring Report
BMP46	Threatened flora, cockatoo, owl, parrot, frog and TEC monitoring to occur in accordance with Annexure H.	Construction	Project Ecologist	MCoA B30 UMM B3, B8	BMP Monitoring Report

7. Compliance management

7.1. Roles and responsibilities

HLWJV must obtain approval for this report, after which HLWJV will implement this BMP.

The HLWJV Team's organisational structure and overall roles and responsibilities are outlined in Section 3.5 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Section 6.16 of this BMP.

All Project Ecologists must, at a minimum, hold a Scientific Licence under Part 2 of the BC Act (including Animal Ethics Approval) for fauna handling, rescue and all additional survey works. The Project Ecologist will demonstrate that they hold appropriate qualifications and all licenses relevant to the work being undertaken, in addition to specific experience with working in environmentally sensitive areas of a similar nature to HLW. All Project Ecologists must be supervised by a suitably qualified ecologist (i.e., minimum two-years' experience).

The Project Ecologist will be reviewed and approved by Transgrid, including their role, qualifications and responsibilities.

7.2. Training

As previously outlined in Section 7.4, all relevant employees, contractors and utility staff, including sub-contractors, will be trained on biodiversity management protocols and the requirements outlined within this BMP. Minimum training requirements include inductions prior to the commencement of works on HLW for a high-level overview of this BMP, and targeted training in the form of toolbox talks prior to the commencement of each stage of HLW. Evidence of training delivery and attendance must be documented and reported (i.e., induction records). Further details regarding staff induction and training are outlined in Section 3.5 of the CEMP.

7.3. Monitoring

This BMP will be subject to monitoring in accordance with the Biodiversity Monitoring Program provided in Annexure H. This includes monitoring of mitigation measures outlined in this BMP and all annexures, as well as partial clearing zones and threatened entities at risk of indirect or prescribed impacts. Each monitoring scope includes:

- Objective and targets.
- Location and sampling units.
- Methods.
- Timing, effort and frequency.
- Data analysis.
- Reporting.
- Adaptive management.

7.4. Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this BMP, MCoA and other relevant approvals, licences and guidelines. Audit requirements are detailed in Section 3.9.3 of the CEMP.

7.5. Incidents and non-compliances

Non-conformances, incident reporting and subsequent investigation will be undertaken as required in accordance with Section 8 of the CEMP. Non-conformances, incident reporting and subsequent investigation will be undertaken as required in accordance with the Trigger Action Response Plan (TARP) outlined in the appropriate Annexures and summarised in Table 8-2 below.

HLWJV will promptly advise Transgrid on events that are non-conforming with the MCoA, HLW permits and licences, standards or best practice processes. Transgrid will advise DPHI accordingly for any notifiable non-conformances.

Table 7-1 TARP

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
Clearing of vegetation and associated habitats						
Minimise disturbance to threatened species.	Minimise the risk of fauna injury/ mortality	No fauna injured as a result of procedures not being adhered to.	Fauna Handling Record Sheet	As required	Fauna injured/killed as a result of procedures not being adhered to (including vehicle strikes).	Cease works and investigate the event. Determine if an incident or non-compliance has occurred in accordance with Section 8 of the CEMP. Works can only resume following Environmental Management approval (following appropriate measures taken to limit reoccurrence).
Habitat retention of hollow/s and nest/s						
Avoid disturbance to active nests during clearing works.	No active nests disturbed or destroyed.	Pre-clearing Surveys to confirm no active nests in clearing permit areas. Clearing records to document nest status.	Pre-clearing surveys & reports. Post-clearing surveys & reports.	Once per clearing permit area.	Active nest (e.g., raptor, woodland bird) found in proposed clearing zone.	100 m temporary buffer (minimal disturbance zone) established until follow up surveys confirm the individuals (adults and chicks) have left the nest. Activity in the buffer would be limited to low impact works such as use of existing tracks.
Avoid disturbance to breeding fauna	No clearing during breeding period without pre-	Pre-clearing Surveys completed.	Pre-clearing Survey Report.	Once per clearing permit area.	Clearing within known breeding season without pre-	Halt works. Conduct immediate fauna

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
during critical periods.	clearing surveys.				clearing fauna surveys.	survey. Notify Environmental Manager, Transgrid and CPHR if disturbance occurred.
Prevent unintentional nest disturbance during works.	Zero disturbance to active nests.	No incidents to active nests. Pre-clearing Surveys to confirm no active nests in clearing permit areas. Clearing records to document nest status.	Incident reports. Pre-clearing surveys & reports. Post-clearing surveys & reports.	As necessary.	Disturbance or destruction of active nests.	Establish temporary buffers. Notify Project Ecologist, Environmental Manager, Transgrid and CPHR. Apply noise/vibration dampening measures.
Maintain safe temporary buffers around active nests.	100% of active nests with 100 m temporary buffer where applicable.	Pre-clearing surveys completed for nests within appropriate breeding seasons. 100 m temporary disturbance buffers erected until adults/chicks have left.	Pre-clearing surveys & reports.	Once per clearing permit area.	Inadequate buffer zones maintained around active nesting habitat during works. Works within buffer exceed low impact works (i.e., use of existing tracks).	Halt works. Re-establish buffer and monitor for impacts. Notify Environmental Manager, Transgrid and CPHR if any impacts are recorded. Provide toolbox talks to relevant crew.
Ensure compliance with clearing protocols.	100% of applicable trees underwent two-stage clearing.	Pre-clearing Surveys completed. Ecological clearing supervision	Pre-clearing surveys & reports. Post-clearing	Once per clearing permit area.	Failure to implement pre-clearing surveys or clearing protocols	Suspend clearing works. Retrain staff on appropriate procedures. Conduct retrospective ecological

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
		completed.	surveys & reports.			surveys. Update clearing schedule with compliance controls.
Protect important habitat features from unplanned removal.	Zero unauthorised tree actions.	Clearing permits adhered to. Final Pre-clearing Check confirm no unauthorised clearing. Clearing supervision completed for all habitat clearing works.	Clearing permit cross-checks. Final Pre-clearing Checklist. Post-clearing Report.	Once per clearing permit area.	Unapproved felling or pruning of trees with known fauna use or habitat potential.	Report and investigate impacts of unauthorised clearing. Notify Project Ecologist, Environmental Manager, Transgrid and CPHR. Retraining of staff including machinery operators.
Offset hollow loss with appropriate artificial hollows.	1:1 replacement ratio for all hollows showing evidence of occupation or fauna use.	30% of required artificial hollows installed prior to clearing at a particular location. All remaining required artificial hollows to be installed within 2 months of clearing at a particular location.	Post-clearing surveys & reports. Nest box installation & reports.	Once per clearing permit area.	<30% of required artificial hollows installed prior to clearing. Remaining hollows not installed within 2 months of clearing.	Suspend clearing in the area. Install required artificial hollows. Document locations and update tracking register.
Ensure ecological suitability and	100% of installed artificial hollows meet location,	Artificial hollow installation completed in	Nest Box Installation Report.	Once per installation.	Artificial hollows installed in unsuitable location.	Review Annexure C and conduct staff training. Rectify installation to appropriate

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
uptake of artificial hollows.	design and species specifications.	accordance with this strategy.			Use of unapproved artificial hollow designs.	location, design and/or species specifications.
Ensure long-term functionality and safety of installed hollows.	100% of boxes inspected within agreed timeframe.	Artificial hollow monitoring conducted of all installed hollows.	Artificial hollow monitoring report.	Biannually (spring and autumn).	Artificial hollows not inspected or maintained within required intervals.	Conduct catch-up monitoring of any hollows missing inspection. Rectify any barriers to monitoring (i.e., access, staff availability). Revise monitoring schedule if necessary.
Achieve replacement ratio for all damaged/lost hollows.	All lost/ damaged hollows replaced within 30 days.	100% of installed hollows are maintained in safe and working condition in accordance with this strategy.	Artificial hollow monitoring & report.	Biannually (spring and autumn).	Failure to maintain 'no net loss' of hollow capacity.	Install replacements immediately. Notify Environmental Manager, Transgrid and CPHR of delay. Reinspect within 6 months. Increase future buffer stock.
Reduce predator access and human disturbance.	100% of installed hollows sited in low-risk habitat areas.	No hollows installed near infrastructure that increases predation risk (e.g., close to roads, poles, open areas frequented by large raptors).	Nest box installation & reports.	Once per installation.	Installation of supplementary hollows near infrastructure that increases predation risk.	Relocate hollow into appropriate Hollow Replacement Zone. Avoid future installations in risky areas.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
Reduce collision/ electrocution risk from infrastructure attraction.	No artificial nest structures or stick nest relocation within 200 m of the alignment.	No evidence of stick nests or platforms placed near conductors. Pre-clearing surveys/clearing supervision to confirm nest removal.	Pre-clearing surveys & reports. Post-clearing surveys & reports.	Once per clearing location	Relocated raptor nest observed within 200 m of transmission line.	Remove nest outside of breeding period. Monitor for future nesting attempts. Increase education for field staff on nest strategy.
Ensure fauna incidents are reported and documented	100% of fauna incidents logged and reported within 24 hours.	Fauna handling record sheet completed, with incident reported to Environmental Manager, Transgrid and CPHR.	Incident reporting log & fauna handling record sheet.	As necessary	Failure to report fauna injury or mortality from clearing or artificial hollow failure.	Notify Environmental Manager, Transgrid and CPHR. Investigate incident and address any
Connectivity						
Maintain landscape connectivity for fauna.	Ground Corridors established and retained.	Retention of Ground Corridors within designated areas.	Pre-clearing Survey	Once, before clearing in an area.	Corridor cleared, narrowed or fragmented >10% of final Ground Corridor limits.	Stop works. Review vegetation clearing against GIS. Re-establish linkage via planting or adjust corridor route.
	Vegetation and habitat features support fauna movements.	Groundcover, shrubs and habitat resources present and connected.	Post-clearing Report Ground Corridor	Annually	Groundcover, shrub and habitat resource impacts >10% compared to	Rehabilitate native ground layer and shrubs. Monitor regrowth.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
			Monitoring		baseline. Evidence of pest use.	Undertake pest control.
	Glider poles installed at correct locations, heights and numbers.	Glider poles fit with remote cameras installed within 3 months of clearing at final Glider crossing zone locations.	Glider Pole Installation Report	Once, following the installation of necessary Glider poles.	Correct number of Glider poles not installed within 3 months of clearing works at that location. Remote cameras not installed at each glider pole.	Halt nearby works. Determine why poles and/or cameras cannot be installed, address any barriers and complete installation. Reinspect to confirm installation has been complete.
	Poles show evidence of use within 2 years.	Remote cameras show evidence of pole use by Gliders.	Glider pole camera monitoring.	Annually	No Glider evidence after 2 full breeding seasons.	Review pole spacing and height. Assess surrounding vegetation. Conduct additional Glider surveys in areas surrounding Glider Crossings to compare Glider activity. Development of a mitigation plan in consultation with NSW DCCEEW Environment and Heritage, addressing causes of decline as determined in initial investigation. This may include increased monitoring or additional construction related mitigation measures.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
Reduce collision risk for birds and bats.	Conductor line-markers installed at designated spans.	Visual diverters installed and visible.	Reported incidents in accordance with Annexure B: Clearing Protocol	Ongoing	Any collision of target threatened species.	Report incident, investigate cause (i.e., lighting, visibility). Revise converter type or span.
Biosecurity						
Minimise spread of weeds	Control weeds identified during baseline monitoring.	Weed densities are decreasing from baseline values.	Ongoing weed monitoring.	Annually (during construction).	Weed density increasing from baseline values.	Continue monitoring and implement weed control measures.
	Identify if previously unrecorded weed species are present and establish weed management measures or investigations.	No new weeds established.	Ongoing weed monitoring.	Annually (during construction).	New weed species/location identified within HLW Area.	Report new weed presence to Transgrid. Develop and implement weed management options to control new weeds. Investigate the source of weed spread and implement improvements to weed management measures. Transgrid will report any new weed presence to NSW DPI, if the species is a Prohibited Matter such as *Parthenium hysterophorus*.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
Prevent spread of pathogens	Identify previously unrecorded *Phytophthora* presence within the HLW Area.	No new records of *Phytophthora* within HLW Area. No evidence of vegetation dieback.	Soil monitoring Ongoing weed monitoring.	Annually (during construction) .	Soil sample returns a positive result for *Phytophthora.* *Phytophthora* die back identified.	Report new *Phytophthora* presence to Transgrid. Develop and implement pathogen management options. Investigate the source of pathogen spread and implement improvements to pathogen management measures.
		No spread of *Phytophthora* within HLW area.	Implementation of hygiene protocols for vehicles travelling into, through and exiting the any known areas of infestation.	Annually (during construction)	Hygiene protocols not followed correctly.	Re-train workers on hygiene protocols. Review and implement pathogen management options. Ensure vehicles are adequately disinfected. Report new potential *Phytophthora* location to TransGrid.
Prevent infectious disease impacting amphibians.	Known biosecurity threats to threatened species or populations result from activities in the HLW Area. Loss of amphibian species.	Infection of frogs by amphibian chytrid causing the disease *chytridiomycosis*	Monitoring of populations. Implementation of specific hygiene protocols for vehicles travelling into, through and exiting	Annually (during construction)	Hygiene protocols not followed correctly. Spread of target disease in amphibian populations (known or unknown source)	Re-train workers on hygiene protocols. Review and implement disease management options relating to amphibian species. Ensure vehicles are adequately disinfected. Report new potential *chytridiomycosis* location to TransGrid.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
			the any known areas of infestation.			
Prevent spread of infectious fungi through HLW.	Known biosecurity threats to threatened species or populations result from activities in the HLW Area. Loss of flora or infection of *Myrtaceae* species.	Introduction and establishment of exotic rust fungi of the order *Pucciniales* pathogenic on plants of the family *Myrtaceae*	Monitoring of populations. Implementation of specific hygiene protocols for vehicles travelling into, through and exiting the any known areas of infestation.	Annually (during construction)	Hygiene protocols not followed correctly. Spread of target disease in amphibian populations (known or unknown source) Loss of flora with symptoms of *Pucciniales*.	Re-train workers on hygiene protocols. Review and implement pathogen management options. Ensure vehicles are adequately disinfected. Report new potential *Pucciniales* location to TransGrid. If possible, prevent further vehicles travelling through known infected location.
Rehabilitation						
Rehabilitated Key's Matchstick Grasshopper habitats	Maintain 85% survival rate of target seedings. Maintain ≤10% cover of High Threat Weeds and ≤20% total weed cover.	Seedlings germinate at required rate. ≥85% survivorship of plantings.	Vegetation plots and photo monitoring points.	Annually	>15% target seedling mortality. >10% High Threat Weeds OR >20% total weed cover.	Implement supplementary seeding per Annexure G. Increase frequency of weed control per Annexure E. Reassess weed source pathways (e.g., vehicles, stockpiles) and address any barriers
Soil stability	Maintain a stable,	No rill or gully	Vegetation	Annually	Visible rill/gully	Install/repair erosion controls

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
	non-eroding soil surface across rehabilitated temporary disturbance areas.	erosion >5 cm deep or 1 m long in >95% of the site.	plots and photo monitoring points.		erosion in >5% of the site area.	(e.g., jute matting, coir logs). Regrade of contour site to slow runoff. Reapply topsoil or mulch as needed.
Groundcover re-establishment	Re-establish ≥80% total groundcover of which ≥80% is native.	Measured cover of live vegetation and abundance of native species.	Vegetation plots and photo monitoring points.	Annually	<70% native groundcover after 18 months OR total live vegetation cover <80%.	Infill with native mulch or topsoil. Targeted seeding with native grasses and forbs. Maintain fauna exclusion fencing and exclude human traffic.
Native species regeneration	Facilitate recruitment of ≥5 native species, including at least 2 functional groups (e.g., grass, forb, shrub).	Number and diversity of naturally regenerating native species.	Vegetation plots and photo monitoring points.	Annually	<5 native species detected after 2 growing seasons.	Evaluate seedbank condition. Targeted seeding with native species. Consider soil inoculation or scarification.
Weed suppression	Maintain ≤10% cover of High Threat Weeds and ≤20% total weed cover.	Weed cover and abundance.	Vegetation plots and photo monitoring points.	Annually	>10% High Threat Weeds OR >20% total weed cover.	Increase frequency of weed control per Annexure E: Biosecurity Plan of the HLW BMP. Reassess weed source pathways (e.g., vehicles, stockpiles) and address any barriers.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
Self-sustainability	Rehabilitated sites are stable and trending towards natural regeneration without further intervention.	No active management required beyond routine monitoring.	Vegetation plots and photo monitoring points.	Annually	Any site requiring re-intervention after year 2.	Reassess ecological function and soil-health. Implement secondary rehabilitation (e.g., deep ripping, re-mulching, seeding). Consider active revegetation. Extend monitoring and maintenance timeline.
Monitoring						
Minimise impacts within partial clearance areas	Consistent visual condition of each PCT compared to the baseline monitoring sessions and baseline data. Consistent vegetation integrity scores compared to control plots (<10% difference).	Track the extent (hectares) of partial and total clearing with reference to the current final layout plans to demonstrate adherence to the clearing limits. Verify the assumptions relating to vegetation impacts and retained vegetation integrity in the partial clearing zone.	Clearing limit and partial clearing monitoring per Annexure H.	Within 3 months of clearing, then quarterly.	Forecast exceedance of the clearing limits. Decline in vegetation integrity or negative changes in other metrics such as dieback, stress or disturbance.	Forecast exceedance of the clearing limits must be addressed by avoiding impact within the future clearing areas. If this is not possible, a request must be made in accordance with B25 to change the clearing limits. Unless otherwise explained by non-HLW associated impacts (e.g., extreme climate events, bushfires, etc.), corrective actions will be required should the triggers be met. Depending on the likely cause of visible condition decline, the decline in vegetation integrity or negative changes in other metrics such as dieback, stress or

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
						disturbance, the Project Ecologist and Environmental Manager will determine the best course of action in consultation with Transgrid. Corrective actions that would be discussed and confirmed between Transgrid and the Project Ecologist may include: • Identifying the cause of declines in vegetation condition. • A review of the areas identified as ECZ and HTZ. • A review of works occurring within partial clearance zones. • Review of this Biodiversity Monitoring Program and Annexure B: Clearing Protocol of the HLW BMP for any changes required. • Review if further Project training is required and implemented. Where the triggers are met, Transgrid will determine

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
						appropriate additional mitigation measures in consultation with CPHR.
Minimise indirect impacts on threatened entities	No measurable decline in abundance, condition, health, or population extent of threatened flora located within 30 m of disturbance zones. No increase in weed % compared to control sites.	No reduction in threatened flora at impact sites compared to control sites.	Threatened flora monitoring per Annexure H.	Prior to construction then annually	Observed decline in count, cover or recruitment ≥10% in impact vs control sites Increase in weed cover ≥10% compared to control sites OR Significant change from baseline ($p > 0.05$) with enough replicates for statistical analysis, in impact vs control sites.	Initial investigation to document potential causation between decline and HLW construction related impacts. Development of a mitigation plan, in consultation with NSW DCCEEW Environment and Heritage, addressing causes of decline as determined in initial investigation. If this is ineffective, undertake seed collection and propagation from in-situ populations (if appropriate) and try to re-establish local populations. This will be accompanied by additional monitoring. If this is ineffective, additional offsets may be required.
	Ensure minimal impacts and continued presence, breeding activity and habitat use of	Maintain evidence of occupancy, breeding activity, site fidelity, breeding success and disturbance response.	Threatened owl, cockatoo and parrot monitoring per Annexure H.	Annually during relevant breeding seasons.	Decline in occupancy, breeding activity, site fidelity, breeding success and disturbance response.	Initial investigation to document potential causation between decline and HLW construction related impacts. Development of a mitigation plan in consultation with NSW

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
	threatened cockatoos and parrots					DCCEEW Environment and Heritage, addressing causes of decline as determined in initial investigation. This may include increased monitoring or additional construction related mitigation measures. If this is ineffective, additional offsets may be required.
	Ensure minimal indirect impacts to threatened frog occupancy	Maintain evidence of threatened frog occupancy comparable to baseline (pre-construction) or control sites. No reduction greater than 20%.	Aural-visual surveys	Annually during construction during survey periods	Observed occupancy decline >20% in impact vs control sites, OR Significant change from baseline/control ($p > 0.05$), with enough replicates for statistical analysis, in impact vs control sites.	Initial investigation to document potential causation between decline and HLW construction related impacts. Development of a mitigation plan in consultation with NSW DCCEEW Environment and Heritage, addressing causes of decline as determined in initial investigation. This may include increased monitoring or additional construction related mitigation measures. If this is ineffective, additional offsets may be required.
	Ensure minimal indirect impacts to threatened frog habitat	Impact sites retain at least 80% of key microhabitat features (e.g., ground cover,	Frog habitat monitoring Rapid Aquatic	Once prior to construction, annually during	< 80% of key microhabitat features retained at impact sites (e.g.,	Initial investigation to document potential causation between decline and HLW construction related impacts.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
		vegetated edge, water retention, shelter objects) post-construction and compared to control sites. No measurable increase in sedimentation or loss of water-holding capacity in >10% of impact sites. No measurable increase in weed cover or decrease of native vegetation cover in >10% of impact sites.	Assessment (RAA)	construction	ground cover, vegetated edge, water retention, shelter objects) post-construction and compared to control sites. >10% of impact sites incur a measurable increase in sedimentation or loss of water-holding capacity in OR significant change from baseline (p >0.05) >10% of impact sites incur a measurable increase in weed cover or decrease of native vegetation cover Significant change from baseline/control (p > 0.05), with enough replicates for statistical analysis, in impact vs control sites OR significant change	If the result of a HLW related event, corrective actions to address further impacts, and an assessment of whether remediation of the waterway/riparian corridor is required, undertaken in consultation with NSW DCCEEW Environment and Heritage. Ongoing monitoring to determine if corrective actions have addressed the impact and avoided long-term impacts. If this is ineffective, additional offsets may be required.

Objective	Target	Performance indicator	Method of monitoring	Frequency	Trigger	Action/response plan
					from baseline ($p > 0.05$) with enough replicates. Observed decrease of >25% with RAA results	
	Ensure Montane Peatlands and Swamps / Alpine Sphagnum Bogs and Associated Fens TECs remain free of impacts and maintain ecological function throughout the construction phase	No observable changes in floristic composition, structure or condition. No increase in weed cover (>5%), physical disturbance or erosion indicators over baseline levels	Monitoring points	Once within 3 months of to construction, annually during construction	Observable changes in floristic composition, structure or condition OR significant change from baseline/control ($p \leq 0.05$), with enough replicates for statistical analysis. >5% increase in weed cover, physical disturbance or erosion indicators over baseline levels.	Initial investigation to document potential causation between decline and HLW construction related impacts. If the result of a HLW related event, corrective actions to address further impacts, and an assessment of whether remediation of the TEC is required, undertaken in consultation with NSW DCCEEW Environment and Heritage. Ongoing monitoring to determine if corrective actions have addressed the impact and avoided long-term impacts. If this is ineffective, additional offsets may be required.

7.6. Reporting

Reporting which will be undertaken for this BMP is detailed in each relevant Annexure and summarised in Table 8-3 below. Refer to Annexure H for further details on each monitoring report. All reports will be submitted to Transgrid, CPHR, NPWS and FCNSW as necessary.

Table 7-2 Reporting program

Report	Scope	Frequency
Reporting of Unexpected Finds (Biodiversity)	In accordance with Annexure D, threatened species detected as unexpected finds will be reported to Transgrid and CPHR within one month of incident. Project Ecologist and/or delegated other will outline appropriate management options such as avoidance, minimisation or mitigation measures, developed in consultation with Transgrid and relevant consent authorities. Update management plans (where relevant) to reflect minimisation and avoidance measures where necessary. Where the situation is unable to avoid, minimise, or mitigate the impact on the threatened entity, justification for why needs to be provided to Transgrid and relevant consent authorities (i.e., DCCEEW - NSW). Project Ecologist, Environment Team and/or Transgrid Representative to consult with relevant consent authorities regarding proposed measures, impacts and follow-up actions.	As necessary
Corridor Inspection Report	A Corridor Inspection Report will be prepared following desktop review and field surveys detailed in Annexure F. This will be prepared by a suitably qualified ecologist, and be submitted to CPHR for review and recommendations prior to clearing works for each separate clearing permit area. The report will involve an assessment of assumptions made in this strategy and the desktop review, and will determine site-specific recommendations requiring mitigation measures (where applicable). The report will outline Ground Corridor and Glider Crossing locations and dimensions based on revised clearing footprints and final layout plans.	Once, prior to clearing commencing

Report	Scope	Frequency
Pre-clearing Report	At the completion of pre-clearing surveys for a specific clearing permit area, a Pre-clearing Report will be compiled with all pre-clearing survey data and activities per Annexure B. This will include results of baseline weed surveys (in accordance with Annexure E), confirmations of no-go zone and connectivity corridor delineation (in accordance with Annexure F), and preliminary estimates of hollows lost and artificial hollow replacements necessary (in accordance with Annexure C).	Prior to vegetation clearing works for each separate clearing permit area
Post-clearing Report	Post-clearing Reports will document the results of clearing supervision, including staged clearing, clearing limit monitoring, final Ground Corridor establishment, and final confirmations of artificial hollow requirements post-clearing.	Following vegetation clearing works for each separate clearing permit area
Partial Clearing Validation Report	The Partial Clearing Validation Report will be undertaken in two parts, Part A: Clearing limit tracking and Part B: Partial Clearing Monitoring as detailed in Annexure H.	Quarterly
Glider Pole Installation Report	The Glider Pole Installation Report will detail all Glider pole arrays installed for HLW per Annexure F.	Following the installation of necessary Glider poles and may be prepared as multiple reports to suit the staged clearing of HLW
Nest Box Installation Report	The Nest Box Installation Report will detail all nest boxes or other artificial hollows installed for HLW per Annexure C	Following the installation of necessary artificial hollows and may be prepared as multiple reports to suit the staged clearing of HLW
Artificial Hollow Monitoring Report	Artificial Hollow Monitoring Reports will be prepared following artificial monitoring detailed in Annexure C and Annexure H.	Bi-annually (spring and autumn)
Connectivity Monitoring Reports	Connectivity Monitoring Reports will be prepared following connectivity monitoring of Ground Corridors and Glider Corridors detailed in Annexure F and Annexure H.	Bi-annually (spring and autumn)

Report	Scope	Frequency
BMP Monitoring Report	The BMP Monitoring Report will include a summary of all monitoring undertaken in that calendar year, including a summary of each report listed above. The BMP Monitoring Report will also include the following monitoring results per Annexure H: • Weed and pathogen monitoring. • Rehabilitation monitoring. • Threatened flora monitoring. • Threatened owl, cockatoo and parrot monitoring. • Threatened frog monitoring. • TEC monitoring.	Annually
Final BMP Monitoring Report	A final BMP Monitoring report will be prepared upon completion of HLW construction. It will provide review and evaluation of the BMP's performance against the stated objectives in UMM B7, B9, B12, B15 & B16 and provides clear recommendations against and the commitments in BMP 30, 33-38 for longer-term maintenance and monitoring (post-construction) requirements to be adopted by the Transgrid Operational Environmental Management Plan.	Once, upon completion of HLW construction.

8. Review and improvement

8.1. Continuous improvement

As outlined in Section 3.12 of the CEMP, management reviews will be undertaken as part of the continual improvement process. The reviews will be initiated by the Environmental Manager and include relevant HLW team members and stakeholders. Continuous improvement of this plan and of monitoring requirements detailed in Section 8 of this BMP will be achieved by the ongoing evaluation of environmental management performance against planning approval requirements, environmental policies, objectives, and targets for the purpose of identifying opportunities for improvement.

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.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets outlined in Section 8.

8.2. Plan update and amendment

Following approval of BAVR and associated data, this BMP will be updated within three months of BAVR approval, including updates to the following (as necessary):

- The Connectivity Strategy review process to describe connectivity corridor locations (Annexure F).
- Biodiversity Monitoring Program to identify monitoring locations (Annexure H).
- The known presence of threatened entities.
- Distribution of species beyond the species polygon, including identified measures to mitigate impacts to species (e.g., fauna collision).
- Identification of unsurveyed areas during the pre-clearing process.
- Mitigation measures.
- Mapping / spatial data as necessary, including ecological constraints (such as hollow bearing tree habitats).

The BMP will quantify the extent of survey coverage gaps, where the full suite of mitigation measures will be applied including Pre-clearing Surveys. Demonstrated minimisation of impacts to hollow-bearing trees and threatened species (in accordance with MCoA 25) will be reported.

The processes described in Section 3.9 to Section 3.12 of the CEMP may result in the need for additional updates or revisions of this BMP. Any revisions to this plan will be in accordance with the process outlined in Section 3.12 of the CEMP. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

As a minimum, the BMP should be updated annually. In the instance of an incident report or an audit report which notes non-compliance for biodiversity related matters, the BMP will be reviewed within 1 month.

If consultation with relevant stakeholders or regulators is required to assess the efficacy of mitigation strategies detailed in this report, these will be undertaken in accordance with the monitoring detailed in Section 8.3.

9. References

Biodiversity Conservation Trust [BCT] (2019). *Restoring Native Vegetation Guidelines*. Retrieved from: https://www.bct.nsw.gov.au/sites/default/files/2019-08/Restoring%20Native%20Vegetation%20Guidelines.pdf

Department of Climate Change, Energy, the Environment and Water, Commonwealth (DCCEEW – Cth). (2024). *Environmental management plan guidelines*. Retrieved from: https://www.dcceew.gov.au/sites/default/files/documents/environmental-management-plan-guidelines.pdf

Department of Environment and Climate Change [DEC] (2007). *Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park*. Retrieved from: https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Alpine-resorts/rehabilitation-guidelines-resort-areas-kosciuszko-national-park-070596.pdf

Department of Planning, Industry and Environment [DPIE] (2019). Translocation Operational Policy. Retrieved from: https://www.environment.nsw.gov.au/research-and-publications/publications-search/translocation-operational-policy

DPIE (2020). Hygiene guidelines. Protocols to protect priority biodiversity areas in NSW from Phytophthora cinnamomi, myrtle rust, amphibian chytrid fungus and invasive plants. Retrieved from: https://www.environment.nsw.gov.au/research-and-publications/publications-search/hygiene-guidelines

Department of Primary Industries [DPI] (2013). Policy and Guidelines for Fish Habitat Conservation and Management. Retrieved from: https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation

DPI (2025). Fisheries NSW Spatial Data Portal. Retrieved from: https://webmap.industry.nsw.gov.au/Html5Viewer/index.html?viewer=Fisheries_Data_Portal.

Department of the Environment [DoE] (2014). Environmental Management Plan Guidelines. Retrieved from: https://www.dcceew.gov.au/environment/epbc/publications/environmental-management-plan-guidelines

DoE (2015). Arrive Clean, Leave Clean – Guidelines to help prevent the spread of invasive plant diseases and weeds threatening our native plants, animals and ecosystems. Retrieved from: https://www.agriculture.gov.au/sites/default/files/documents/arrive-clean-leave-clean.pdf

Fairfull, S. and Witheridge, G. (2003). Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings. NSW Fisheries, Cronulla, 16 pp

Landcom (2004). Managing Urban Stormwater: Soils and Construction 4th Ed. The Blue Book. Retrieved from: https://www.environment.nsw.gov.au/research-and-publications/publications-search/managing-urban-stormwater-soils-and-construction-volume-1-4th-editon

Niche Environment and Heritage Pty Ltd (2023). HumeLink Biodiversity Development Assessment Report EIS Technical Report 1. Version: August 2023

NSW Department of Climate Change, Energy, the Environment and Water (2025). Public register of Saving our Species conservation strategies. Retrieved from: https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/saving-our-species-program/saving-our-species-database

Transport for NSW [TfNSW] (2023). Microbat management guidelines. Retrieved from: https://www.transport.nsw.gov.au/system/files/media/documents/2023/microbat-management-guidelines_0.pdf

Transgrid (2019). Electric Line Clearance Management Plan – 1 July 2021 to 30 June 2026. Revision 2 March 2021

UGL Pty Ltd (2025). HumeLink West, Construction Environmental Management Plan

Annexure A Detailed design (Final Layout Plan)

Official

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

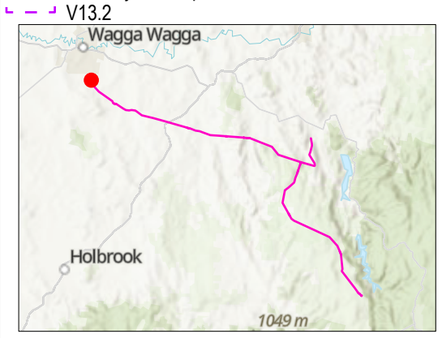
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 1 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

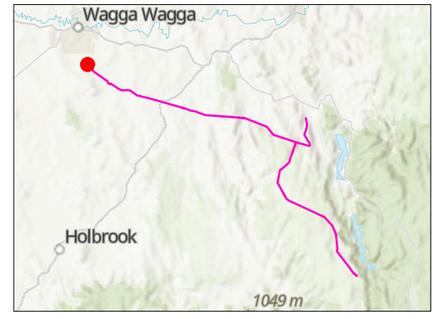
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 2 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

6R/6P-18
6R/6P-18
6R/6P-17
6R/6P-17
6R/6P-16
6R/6P-16
6R/6P-15
6R/6P-15
CRECADOO
CRECADOO EAST ROAD

Transgrid UGL CPB CONTRACTORS

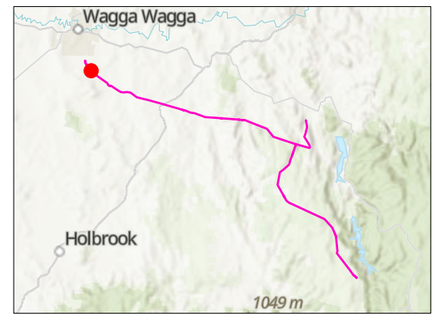
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 3 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

6R/6P-15
6R/6P-15
6R/6P-14
6R/6P-14
6R/6P-13
6R/6P-13
6R/6P-12
6R/6P-12
GREGADOO EASTROAD

Transgrid UGL CPB CONTRACTORS

N

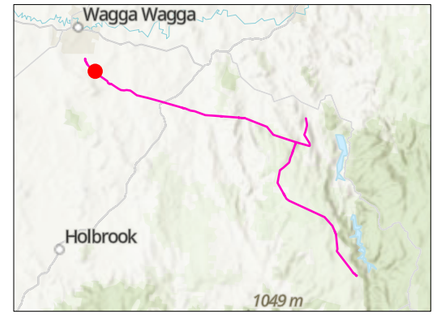
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 4 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

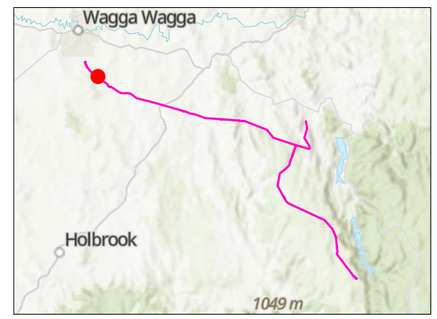
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 5 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

6R/6P-11
6R/6P-11
6R/6P-10
6R/6P-10
6R/6P-9
6R/6P-9
6R/6P-8
6R/6P-8
6R/6P-7
6R/6P-7
GREGADOO EAST ROAD
BIG SPRINGS ROAD

Transgrid UGL CPB CONTRACTORS

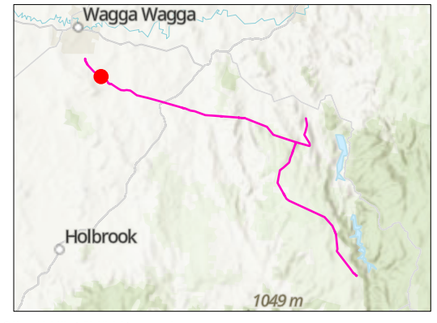
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



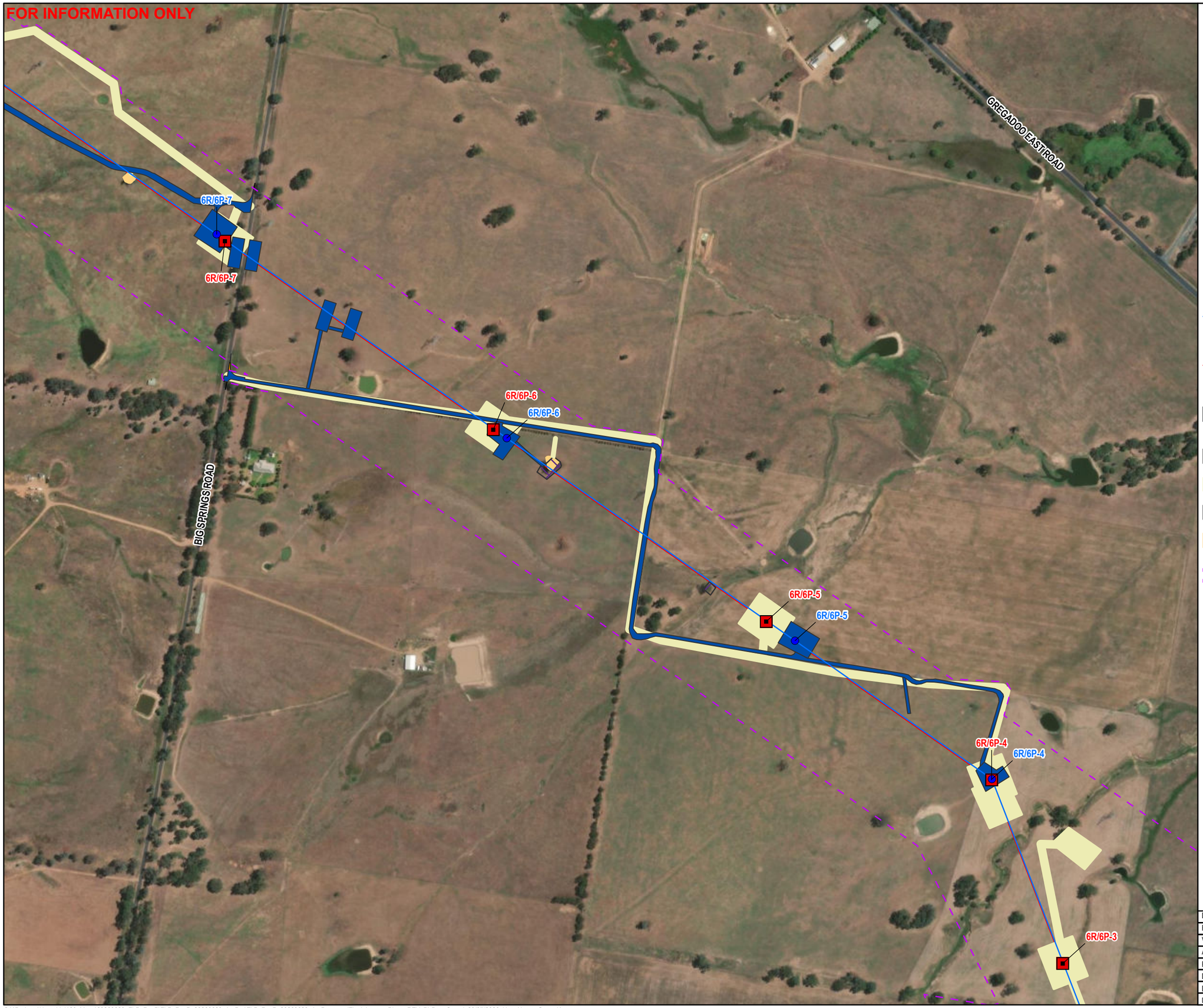
© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 6 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

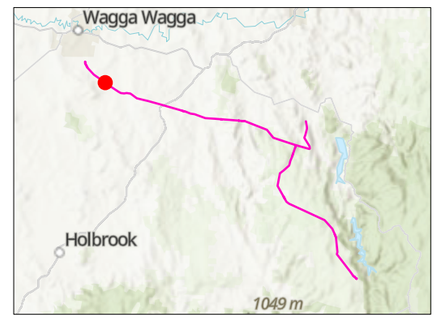
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 7 of 143

FOR INFORMATION ONLY

6R/6P-4
6R/6P-4
6R/6P-3
6R/6P-3
6R/6P-2
6R/6P-2
6R/6P-1
6R/6P-1
6P/6R-Gantry (G3)
6P/6R-026
6P/6R-Gantry (G6)
6P/6R-Gantry (G4)
6P/6R-Gantry (G7)
6P/6R-Gantry (G5)
6P/6R-027
5C3/5C2-141
5C3/5C2-141
5C3/5C2-140
5C3/5C2-140
5C3/5C2-142
5C3/5C2-142
5C3/5C2-139
5C3/5C2-139

Transgrid UGL CPB CONTRACTORS

N

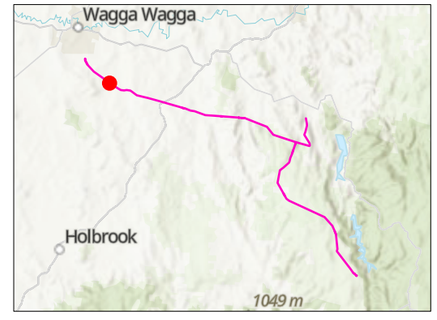
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Permanent Infrastructure(Gugga Substation)
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 8 of 143

FOR INFORMATION ONLY

6R/6P-1
6R/6P-1
6P/6R-Gantry (G3)
6P/6R-026
6P/6R-Gantry (G6)
6P/6R-Gantry (G4)
6P/6R-Gantry (G7)
6P/6R-Gantry (G5)
6P/6R-027
5C3/5C2-141
5C3/5C2-141
5C3/5C2-140
5C3/5C2-140
5C3/5C2-142
5C3/5C2-142
5C3/5C2-139
5C3/5C2-139
5C3/5C2-138
5C3/5C2-138
5C3/5C2-137
5C3/5C2-137

Transgrid UGL CPB CONTRACTORS

N

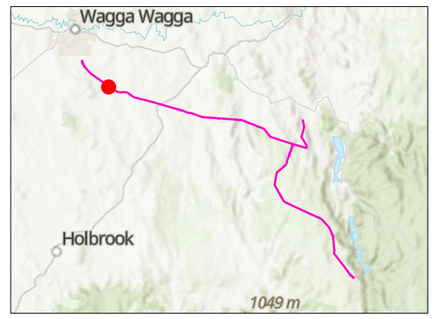
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Permanent Infrastructure(Gugga Substation)
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO.:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 9 of 143

FOR INFORMATION ONLY

5C3/5C2-138
5C3/5C2-138
5C3/5C2-137
5C3/5C2-137
5C3/5C2-136
5C3/5C2-136
5C3/5C2-135
5C3/5C2-135

Transgrid UGL CPB CONTRACTORS

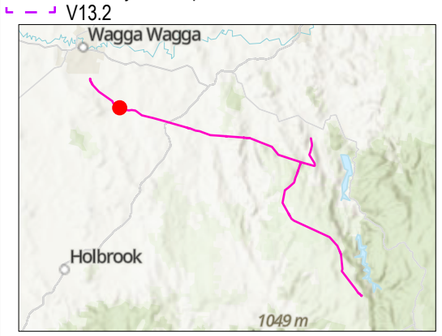
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 10 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

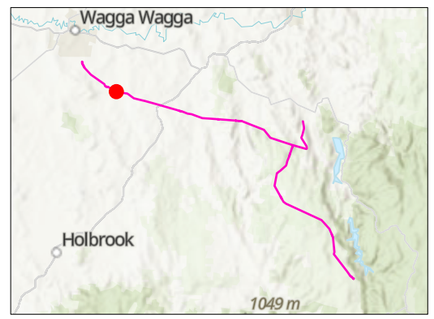
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 11 of 143

G:*\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

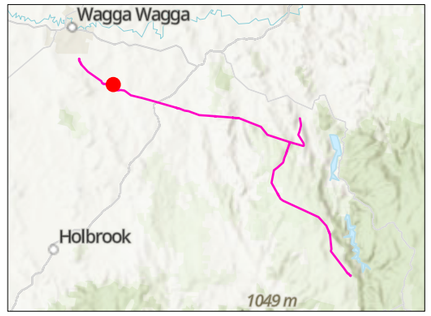
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO.:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 12 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

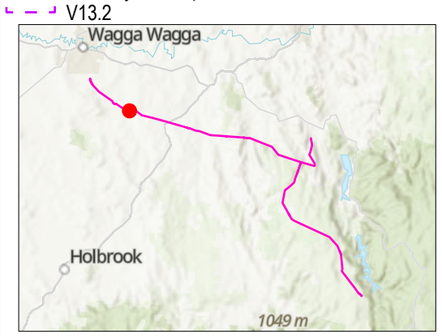
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 13 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

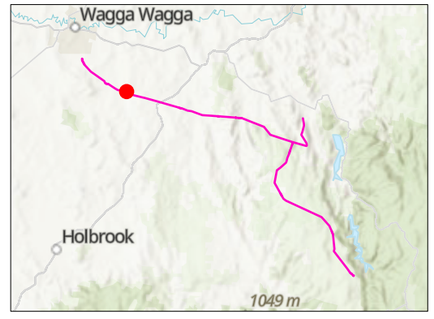
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[illegible].03

HLW
Final Layout Plans
Rev P
Map 14 of 143

FOR INFORMATION ONLY

5C3/5C2-124
5C3/5C2-124
5C3/5C2-123
5C3/5C2-123
5C3/5C2-122
5C3/5C2-122
5C3/5C2-121
5C3/5C2-121
5C3/5C2-120
5C3/5C2-120

Transgrid UGL CPB CONTRACTORS

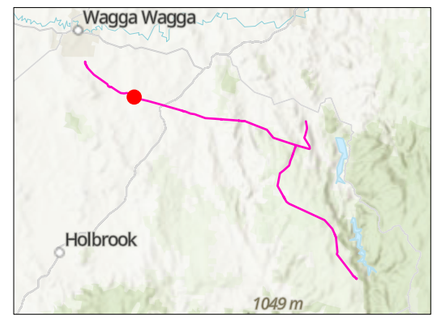
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 15 of 143

FOR INFORMATION ONLY

5C3/5C2-121
5C3/5C2-121
5C3/5C2-120
5C3/5C2-120
5C3/5C2-119
5C3/5C2-119
5C3/5C2-118
5C3/5C2-118
5C3/5C2-117
5C3/5C2-117

Transgrid UGL CPB CONTRACTORS

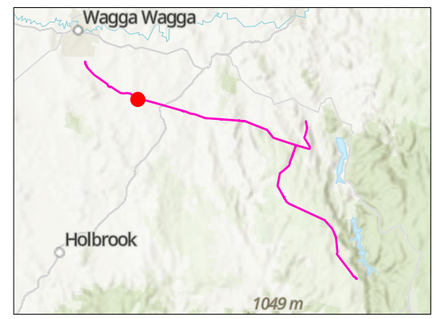
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 16 of 143

FOR INFORMATION ONLY

5C3/5C2-117
5C3/5C2-117
5C3/5C2-116
5C3/5C2-116
5C3/5C2-115
5C3/5C2-115

Transgrid UGL CPB CONTRACTORS

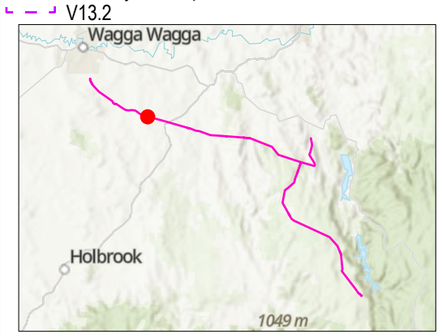
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO.:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 17 of 143

FOR INFORMATION ONLY

5C3/5C2-115
5C3/5C2-115
5C3/5C2-114
5C3/5C2-114
5C3/5C2-113
5C3/5C2-113
5C3/5C2-112
5C3/5C2-112
5C3/5C2-111
5C3/5C2-111
5C3/5C2-110
5C3/5C2-110

Transgrid UGL CPB CONTRACTORS

N

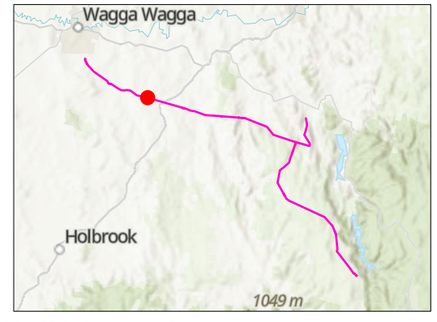
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3C(1)B.03

HLW
Final Layout Plans
Rev P
Map 18 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 19 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

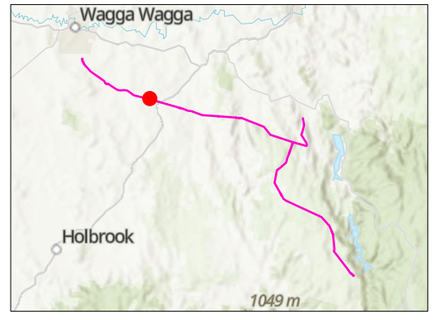
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3C(i)B.03

HLW
Final Layout Plans
Rev P
Map 20 of 143

FOR INFORMATION ONLY

5C3/5C2-107
5C3/5C2-107
5C3/5C2-106
5C3/5C2-106
5C3/5C2-105
5C3/5C2-105
5C3/5C2-104
5C3/5C2-104
KEAJURA ROAD
HUME HIGHWAY

Transgrid UGL CPB CONTRACTORS

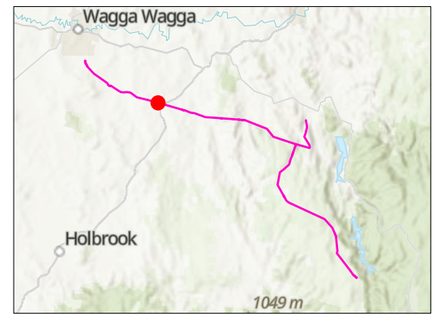
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[illegible]

HLW
Final Layout Plans
Rev P
Map 21 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

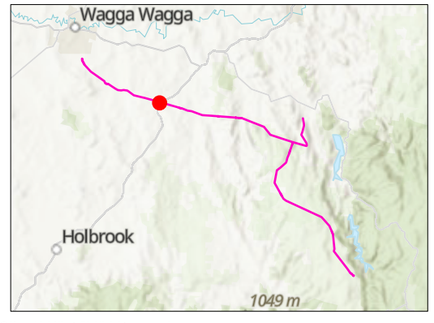
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 22 of 143

FOR INFORMATION ONLY

HUME HIGHWAY

5C3/5C2-100

5C3/5C2-100

5C3/5C2-99

5C3/5C2-099

5C3/5C2-098

5C3/5C2-98

5C3/5C2-097

5C3/5C2-97

Transgrid UGL CPB CONTRACTORS

N

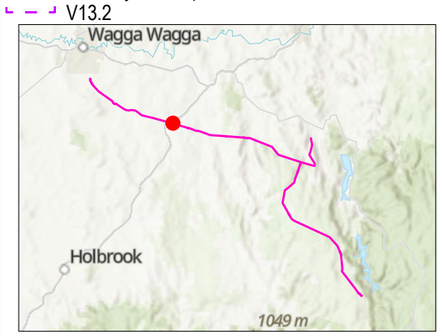
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 23 of 143

FOR INFORMATION ONLY

HUME HIGHWAY

5C3/5C2-100

5C3/5C2-100

5C3/5C2-99

5C3/5C2-099

5C3/5C2-098

5C3/5C2-98

Transgrid UGL CPB CONTRACTORS

N

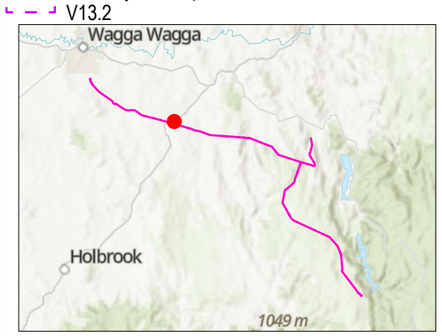
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[1]B.03

HLW Final Layout Plans Rev P Map 24 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-97
5C3/5C2-097
5C3/5C2-96
5C3/5C2-096
5C3/5C2-95
5C3/5C2-095
5C3/5C2-94
5C3/5C2-094

Transgrid UGL CPB CONTRACTORS

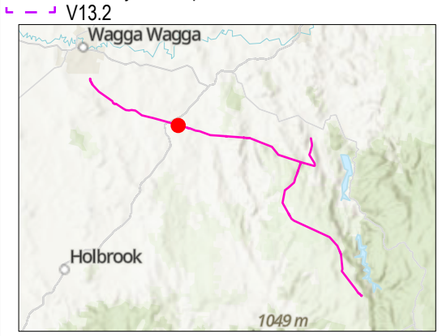
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO.:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 25 of 143

FOR INFORMATION ONLY

5C3/5C2-94
5C3/5C2-094
5C3/5C2-93
5C3/5C2-093
5C3/5C2-92
5C3/5C2-092
5C3/5C2-91
5C3/5C2-091
5C3/5C2-090
5C3/5C2-90

Transgrid UGL CPB CONTRACTORS

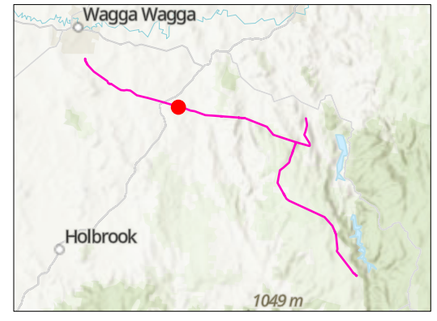
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 26 of 143

FOR INFORMATION ONLY

5C3/5C2-90
5C3/5C2-090
5C3/5C2-89A
5C3/5C2-089B
5C3/5C2-089A
5C3/5C2-89B
5C3/5C2-88A
5C3/5C2-088B
5C3/5C2-088A
5C3/5C2-88B
5C3/5C2-87
5C3/5C2-087
5C3/5C2-086
5C3/5C2-86

Transgrid UGL CPB CONTRACTORS

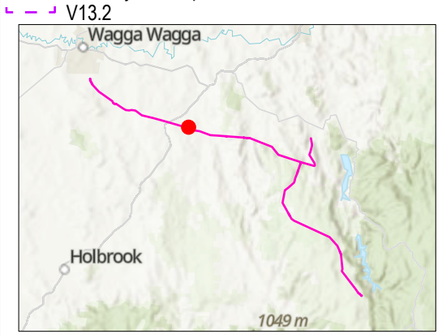
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[illegible].03

HLW
Final Layout Plans
Rev P
Map 27 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-086
5C3/5C2-86
5C3/5C2-085
5C3/5C2-85
5C3/5C2-084
5C3/5C2-84
5C3/5C2-083A
5C3/5C2-83
5C3/5C2-083
5C3/5C2-082
5C3/5C2-82

Transgrid UGL CPB CONTRACTORS

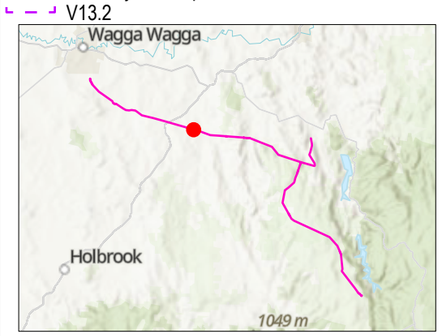
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[1]B.03

HLW
Final Layout Plans
Rev P
Map 28 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-83
5C3/5C2-083
5C3/5C2-82
5C3/5C2-082
5C3/5C2-81
5C3/5C2-081
5C3/5C2-80
5C3/5C2-080
5C3/5C2-79
5C3/5C2-079
HUMULA ROAD

Transgrid UGL CPB CONTRACTORS

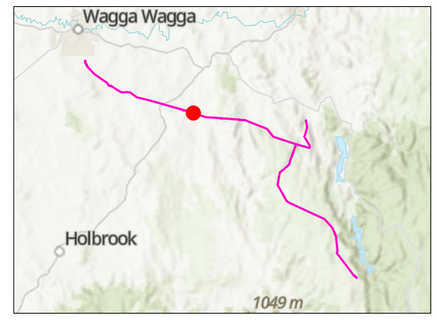
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 29 of 143

FOR INFORMATION ONLY

5C3/5C2-79
5C3/5C2-079
5C3/5C2-78
5C3/5C2-078
5C3/5C2-77
5C3/5C2-077
5C3/5C2-76
5C3/5C2-076
HUMULA ROAD

Transgrid UGL CPB CONTRACTORS

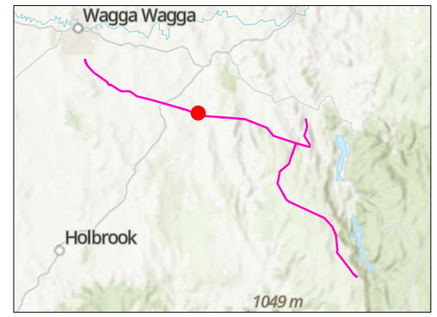
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 30 of 143

FOR INFORMATION ONLY

WESTBROOK ROAD

5C3/5C2-077
5C3/5C2-77
5C3/5C2-76
5C3/5C2-076
5C3/5C2-075
5C3/5C2-75
5C3/5C2-74
5C3/5C2-074
5C3/5C2-73
5C3/5C2-073

Transgrid UGL CPB CONTRACTORS

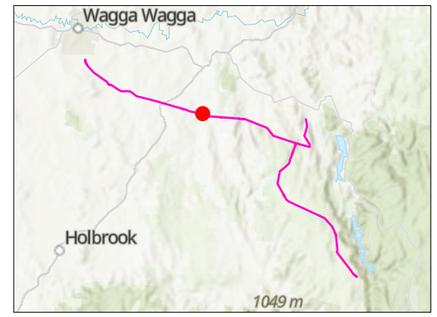
N

0 110 220 330
Metres

Datum: GDA2020 MGA55
Scale: 1:7,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 31 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

0 100 200 300

Metres

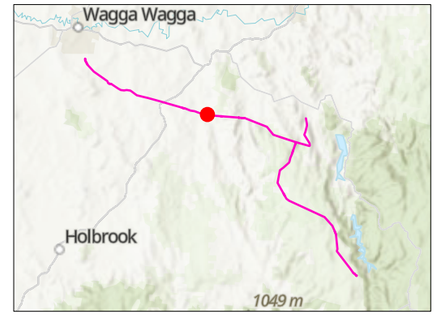
Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2

WESTBROOK ROAD

5C3/5C2-73
5C3/5C2-073
5C3/5C2-072
5C3/5C2-72
5C3/5C2-071
5C3/5C2-71
5C3/5C2-070
5C3/5C2-70



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[1]B.03

HLW
Final Layout Plans
Rev P
Map 32 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

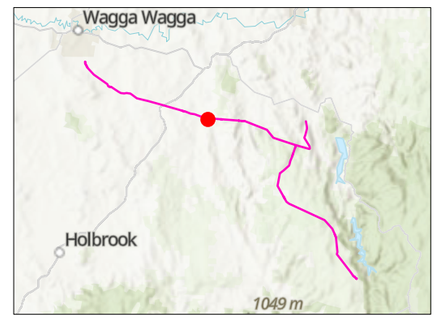
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 33 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-070
5C3/5C2-70
5C3/5C2-69
5C3/5C2-069
5C3/5C2-68
5C3/5C2-068

Transgrid UGL CPB CONTRACTORS

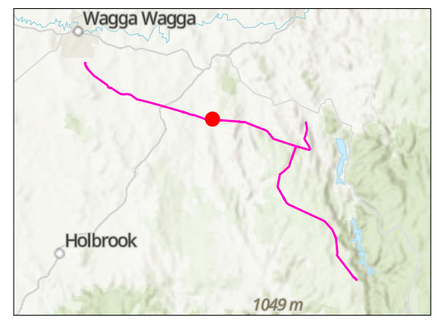
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 34 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

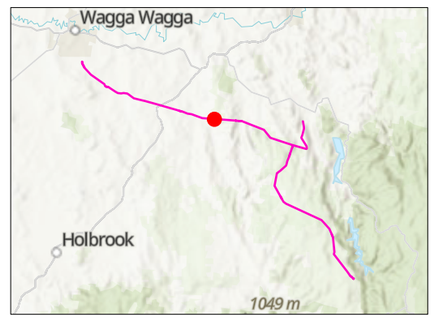
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 35 of 143

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

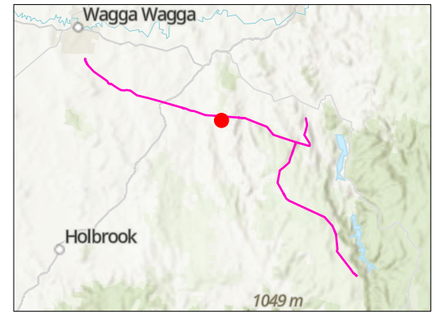
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 36 of 143

FOR INFORMATION ONLY

5C3/5C2-64
5C3/5C2-064
5C3/5C2-063
5C3/5C2-63
5C3/5C2-62
5C3/5C2-062
5C3/5C2-61
5C3/5C2-061

Transgrid UGL CPB CONTRACTORS

N

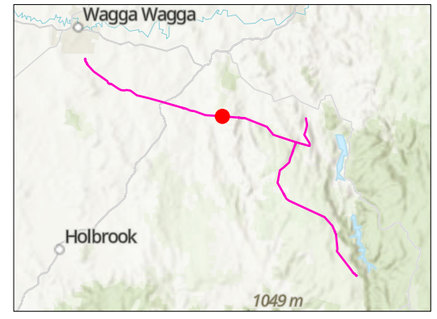
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3E(i)B.03

HLW
Final Layout Plans
Rev P
Map 37 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

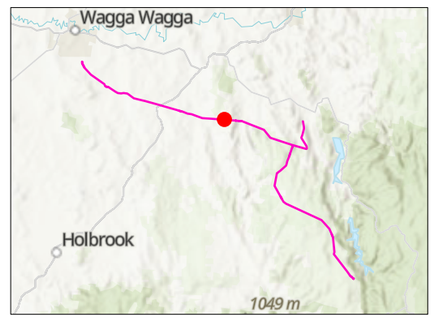
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3E(i)B.03

HLW
Final Layout Plans
Rev P
Map 38 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

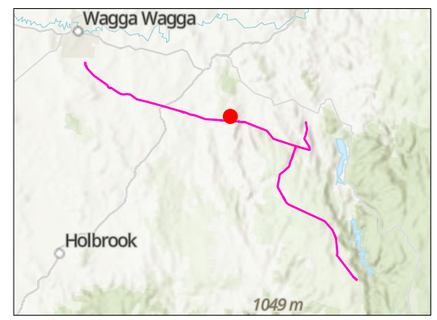
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 39 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

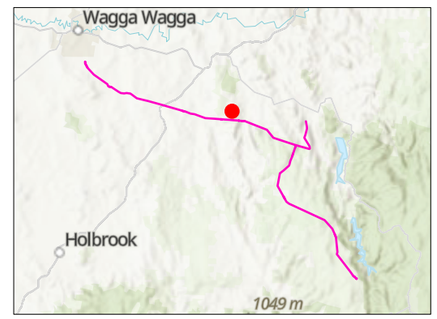
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 40 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

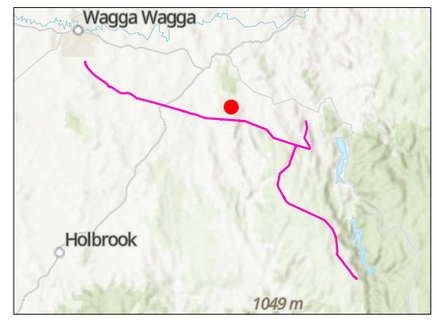
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 41 of 143

FOR INFORMATION ONLY

Transgrid UGL CPB CONTRACTORS

N

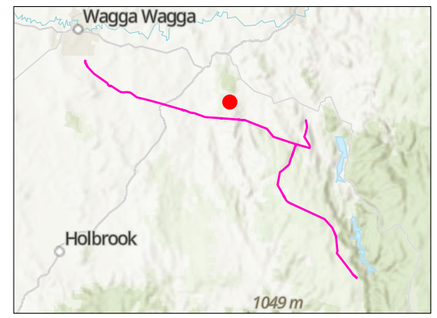
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 42 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

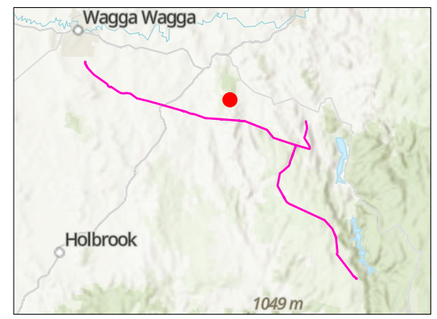
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 43 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-058
5C3/5C2-057
5C3/5C2-58
5C3/5C2-57
5C3/5C2-056A
5C3/5C2-56
5C3/5C2-056
5C3/5C2-55
5C3/5C2-055

Transgrid UGL CPB CONTRACTORS

N

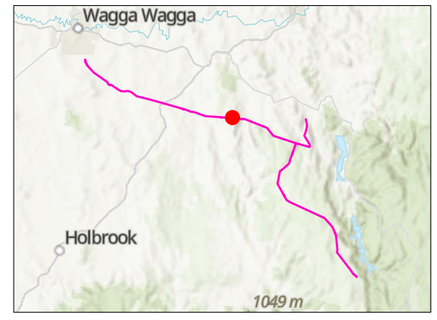
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 44 of 143

FOR INFORMATION ONLY

5C3/5C2-55
5C3/5C2-055
5C3/5C2-54
5C3/5C2-054
5C3/5C2-53
5C3/5C2-053
5C3/5C2-52
5C3/5C2-052
5C3/5C2-051
5C3/5C2-51

Transgrid UGL CPB CONTRACTORS

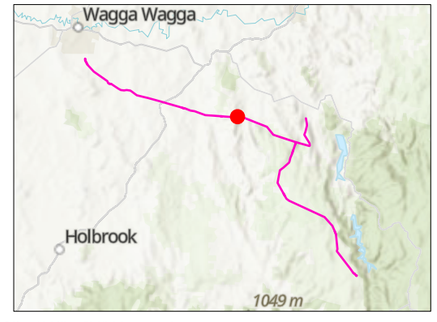
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3C(i)B.03

HLW
Final Layout Plans
Rev P
Map 45 of 143

FOR INFORMATION ONLY

5C3/5C2-52
5C3/5C2-052
5C3/5C2-051
5C3/5C2-51
5C3/5C2-50
5C3/5C2-050
5C3/5C2-49A
5C3/5C2-049A
5C3/5C2-049B
5C3/5C2-49B
5C3/5C2-48A
5C3/5C2-048A
5C3/5C2-048B
5C3/5C2-48B
YAVEN CREEK ROAD

Transgrid UGL CPB CONTRACTORS

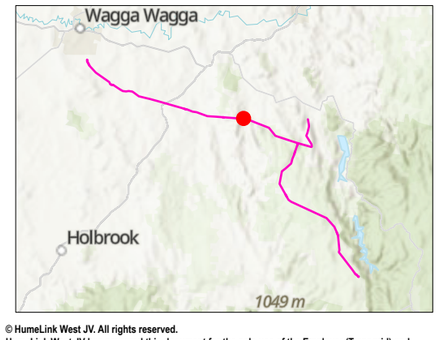
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 46 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

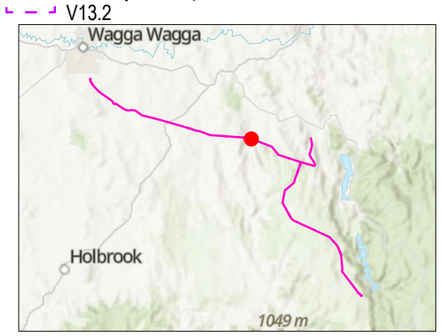
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 47 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-46
5C3/5C2-046
5C3/5C2-45
5C3/5C2-045
5C3/5C2-44
5C3/5C2-044
5C3/5C2-043
5C3/5C2-43
5C3/5C2-42
5C3/5C2-042
5C3/5C2-41
5C3/5C2-040

Transgrid UGL CPB CONTRACTORS

N

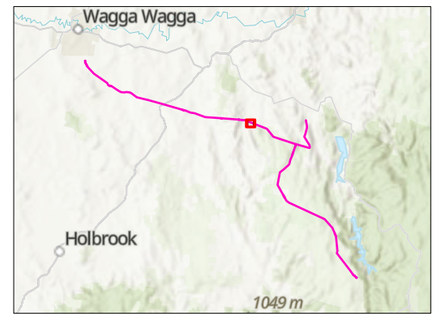
0 130 260 390

Metres

Datum: GDA2020 MGA55
Scale: 1:8,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3[illegible].03

HLW
Final Layout Plans
Rev P
Map 48 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

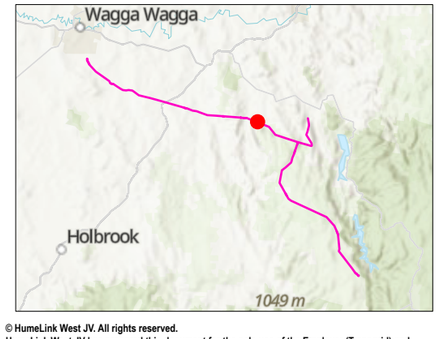
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 49 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

WESTWOOD

5C3/5C2-039
5C3/5C2-39
5C3/5C2-38
5C3/5C2-038
5C3/5C2-37
5C3/5C2-037
5C3/5C2-36
5C3/5C2-036
5C3/5C2-35
5C3/5C2-035
5C3/5C2-34
5C3/5C2-034

Transgrid UGL CPB CONTRACTORS

N

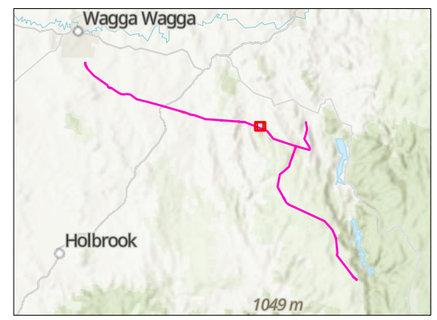
0 150 300 450

Metres

Datum: GDA2020 MGA55
Scale: 1:9,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 50 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

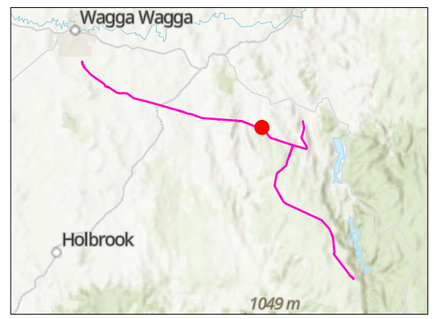
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 51 of 143

FOR INFORMATION ONLY

5C3/5C2-33
5C3/5C2-033
5C3/5C2-32
5C3/5C2-032
5C3/5C2-31
5C3/5C2-031
5C3/5C2-30
5C3/5C2-030
5C3/5C2-29

Transgrid UGL CPB CONTRACTORS

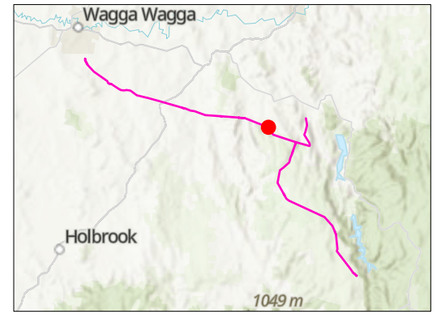
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3C(i)B.03

HLW
Final Layout Plans
Rev P
Map 52 of 143

FOR INFORMATION ONLY

Transgrid UGL CPB CONTRACTORS

N

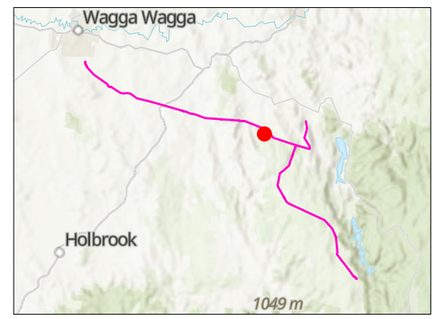
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 53 of 143

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

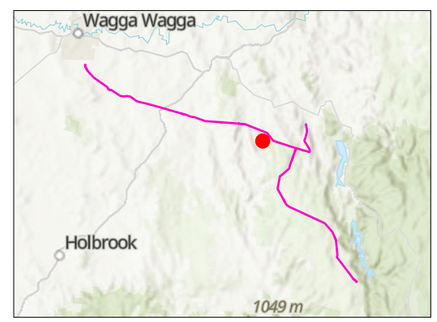
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 54 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

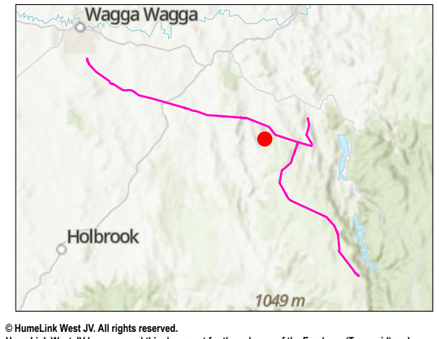
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 55 of 143

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

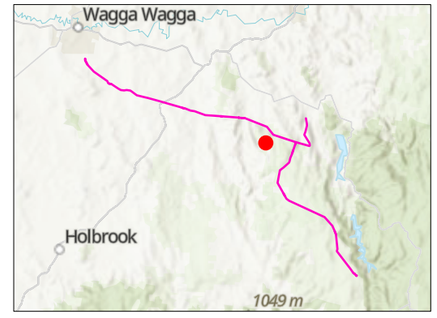
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 56 of 143

FOR INFORMATION ONLY

Transgrid UGL CPB CONTRACTORS

N

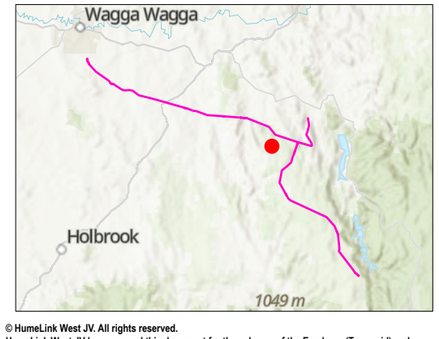
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 57 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

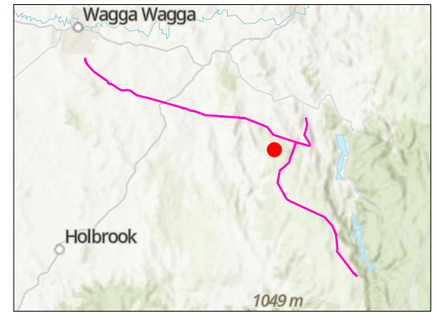
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 58 of 143

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

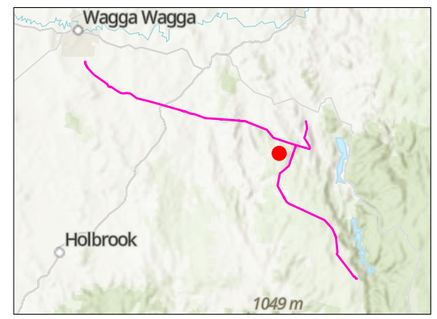
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO.:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 59 of 143

FOR INFORMATION ONLY

WONDALGA ROAD

Transgrid | UGL | CPB CONTRACTORS

N

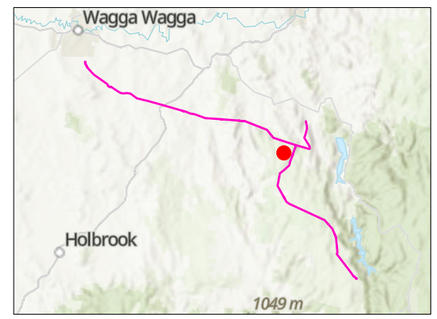
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 60 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

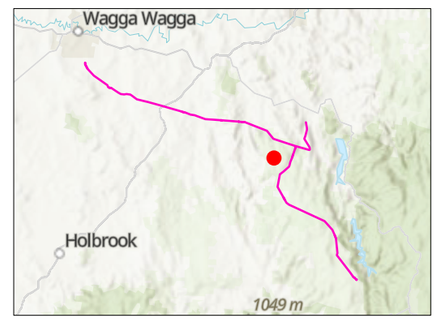
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 61 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

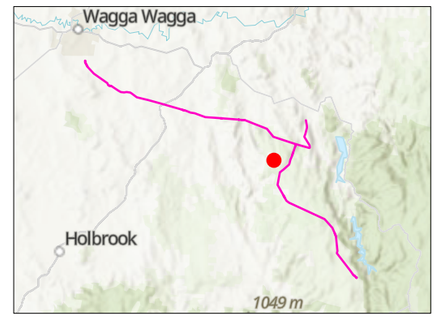
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 62 of 143

FOR INFORMATION ONLY



Transgrid | UGL | CPB CONTRACTORS

N

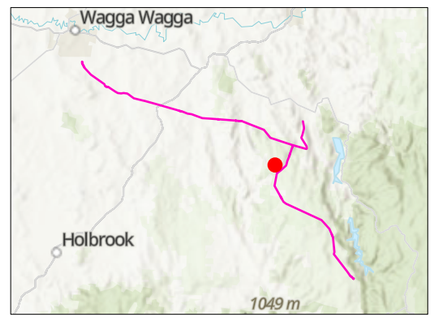
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

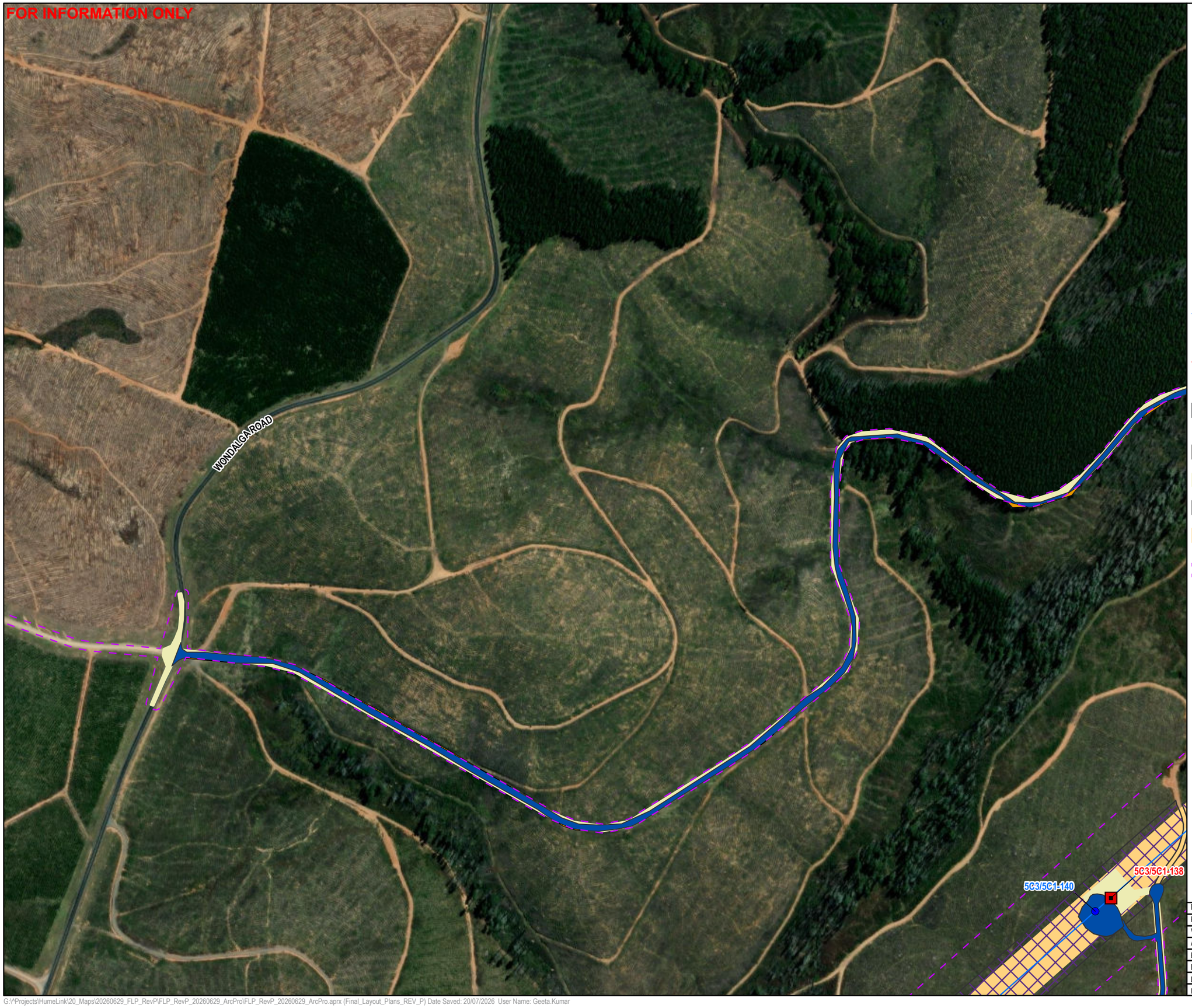
World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 63 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

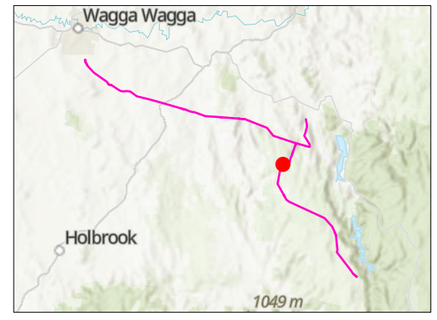
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 64 of 143

FOR INFORMATION ONLY

5C3/5C2-30
5C3/5C2-030
5C3/5C2-29
5C3/5C2-028
5C3/5C2-28
5C3/5C2-27
5C3/5C2-027
5C3/5C2-026
5C3/5C2-26

Transgrid UGL CPB CONTRACTORS

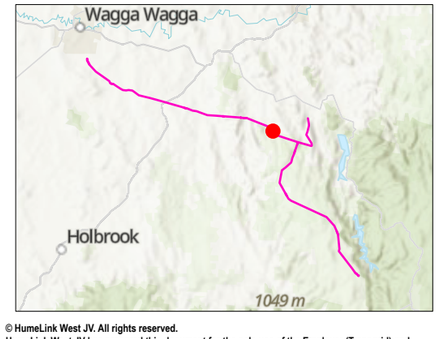
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 65 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-026
5C3/5C2-26
5C3/5C2-25
5C3/5C2-025
5C3/5C2-24
5C3/5C2-024
5C3/5C2-23
5C3/5C2-023

Transgrid UGL CPB CONTRACTORS

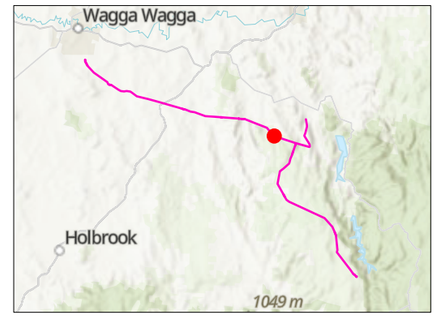
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 66 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-23
5C3/5C2-023
5C3/5C2-022
5C3/5C2-22
5C3/5C2-21
5C3/5C2-021
5C3/5C2-20
5C3/5C2-020
5C3/5C2-019
5C3/5C2-19

Transgrid UGL CPB CONTRACTORS

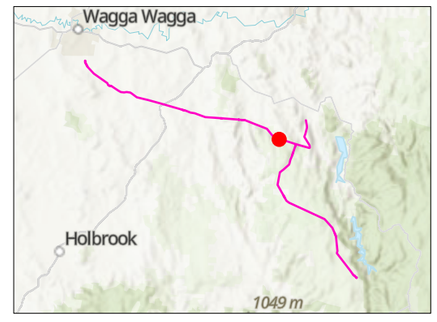
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 67 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-020
5C3/5C2-20
5C3/5C2-019
5C3/5C2-19
5C3/5C2-18
5C3/5C2-018
5C3/5C2-17
5C3/5C2-017
5C3/5C2-016
5C3/5C2-16

Transgrid UGL CPB CONTRACTORS

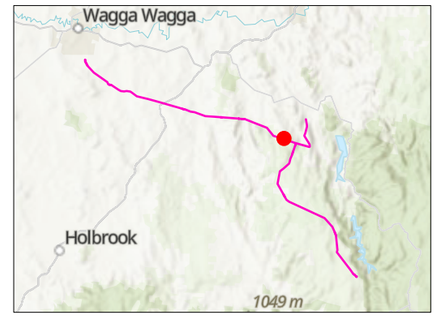
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 68 of 143

FOR INFORMATION ONLY

Transgrid | UGL | CPB CONTRACTORS

N

0 100 200 300

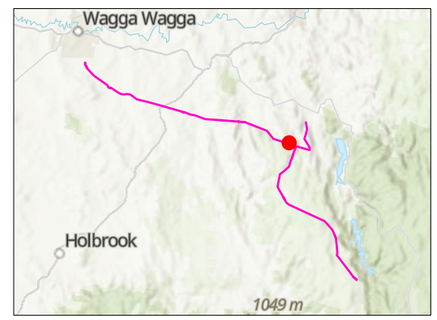
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2

5C3/5C2-016
5C3/5C2-16
5C3/5C2-015
5C3/5C2-15
5C3/5C2-14
5C3/5C2-014
5C3/5C2-13
5C3/5C2-013



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 69 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C3/5C2-13
5C3/5C2-013
5C3/5C2-12
5C3/5C2-012
5C3/5C2-11
5C3/5C2-011
5C3/5C2-10
5C3/5C2-010
5C3/5C1-162
5C3/5C2-9
5C3/5C1-161A
5C3/5C1-161A
5C3/5C1-161
5C3/5C1-161B
5C3/5C1-161B
WONDALGA ROAD
5C3/5C1-160
5C3/5C1-160
5C3/5C1-160

Transgrid UGL CPB CONTRACTORS

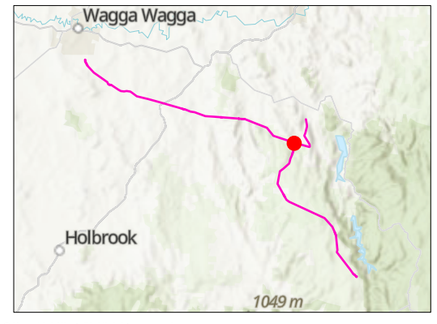
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 70 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 71 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

BATLOW ROAD

5C3/5C2-6
5C3/5C2-006
5C3/5C2-5
5C3/5C2-005
5C3/5C2-004
5C3/5C2-4

Transgrid UGL CPB CONTRACTORS

N

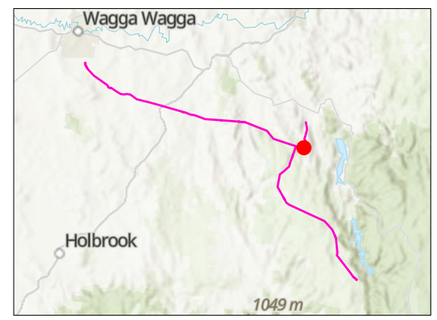
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 72 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

GREENHILLS ROAD

BATLOW ROAD

5C2/5C1-7

5C2/5C1-07

Transgrid | UGL | CPB CONTRACTORS

N

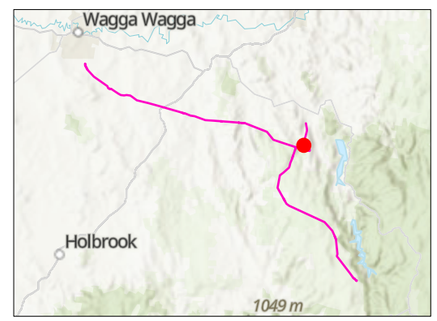
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

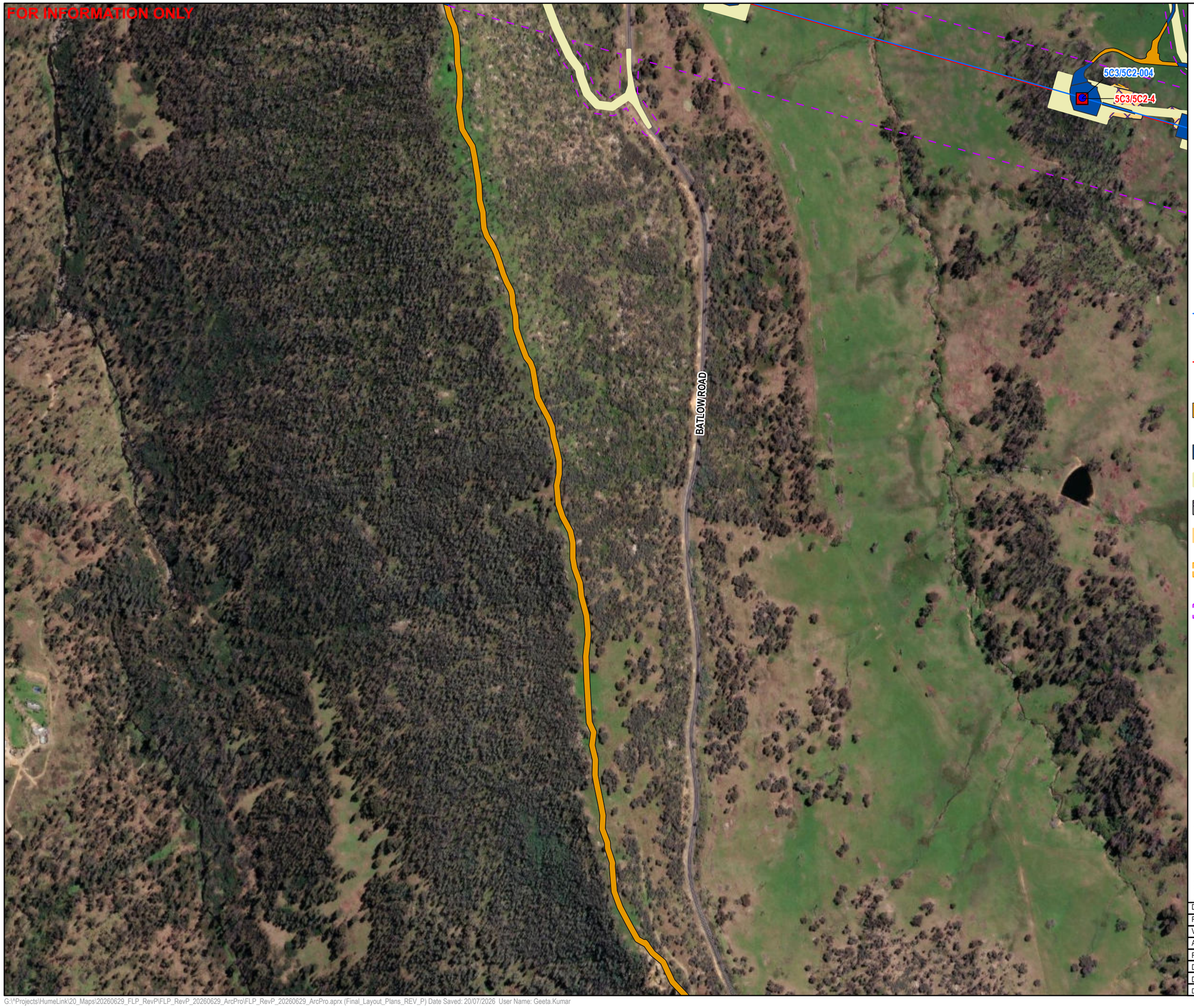
World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 73 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

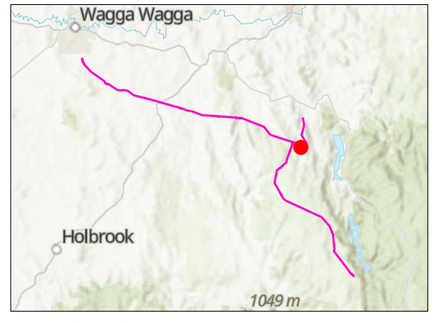
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 74 of 143

G:\Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

5C2/5C1-3
5C2/5C1-03
5C2/5C1-2
5C2/5C1-02
5C3/5C2-004
5C3/5C2-4
5C3/5C2-3
5C3/5C2-003
5C3/5C2-2
5C3/5C2-002
5C3/5C2-1
5C3/5C2-001
5C2/5C1-1
5C2/5C1-001
5C2/5C1-01

Transgrid UGL CPB CONTRACTORS

N

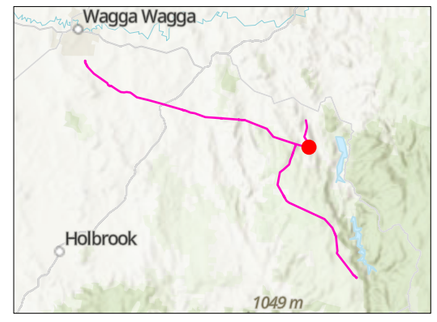
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 75 of 143

FOR INFORMATION ONLY

5C2/5C1-6
5C2/5C1-06
5C2/5C1-05
5C2/5C1-5
5C2/5C1-4
5C2/5C1-04
5C2/5C1-3
5C2/5C1-03

Transgrid UGL CPB CONTRACTORS

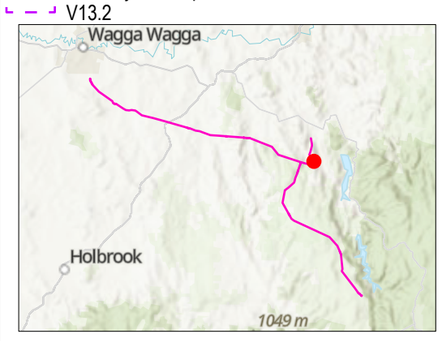
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO.:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 76 of 143

FOR INFORMATION ONLY

5C2/5C1-9
5C2/5C1-09
5C2/5C1-8
5C2/5C1-08
5C2/5C1-7
5C2/5C1-07
5C2/5C1-6
5C2/5C1-06
BATLOW ROAD

Transgrid | UGL | CPB CONTRACTORS

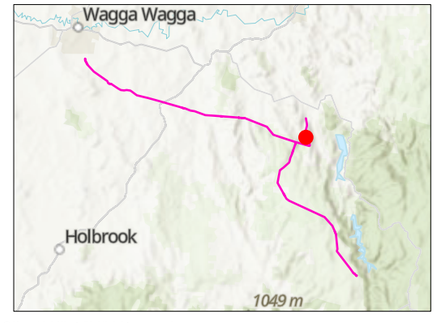
N

0 100 200 300
Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 77 of 143

FOR INFORMATION ONLY

5C2/5C1-11

5C2/5C1-11

5C2/5C1-10

Transgrid UGL CPB CONTRACTORS

N

0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 78 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY

WONDALGA ROAD

WONDALGA

BATLOW ROAD

GREENHILLS ROAD

5C2/5C1-10

5C2/5C1-10

5C2/5C1-9

5C2/5C1-09

5C2/5C1-8

5C2/5C1-08

Transgrid UGL CPB CONTRACTORS

N

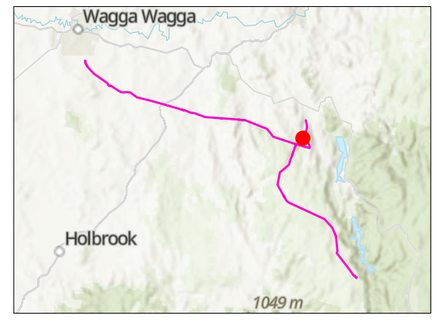
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 79 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

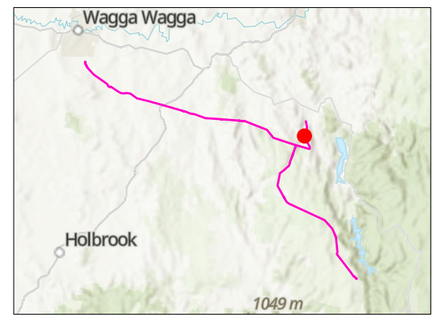
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 80 of 143

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

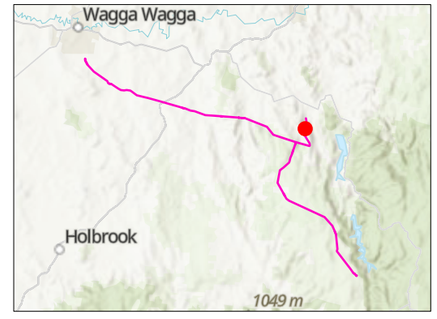
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 81 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Camps and Laydowns
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW Final Layout Plans Rev P Map 82 of 143

G:*Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

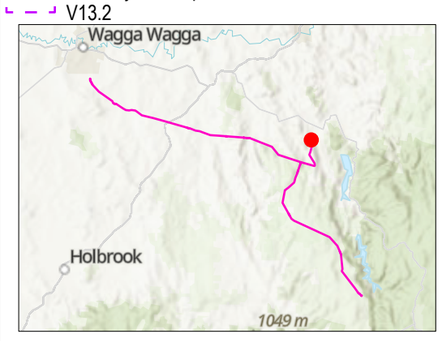
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- HLW HTZ
- EIS Approved Hazard Tree Zone(HTZ)
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

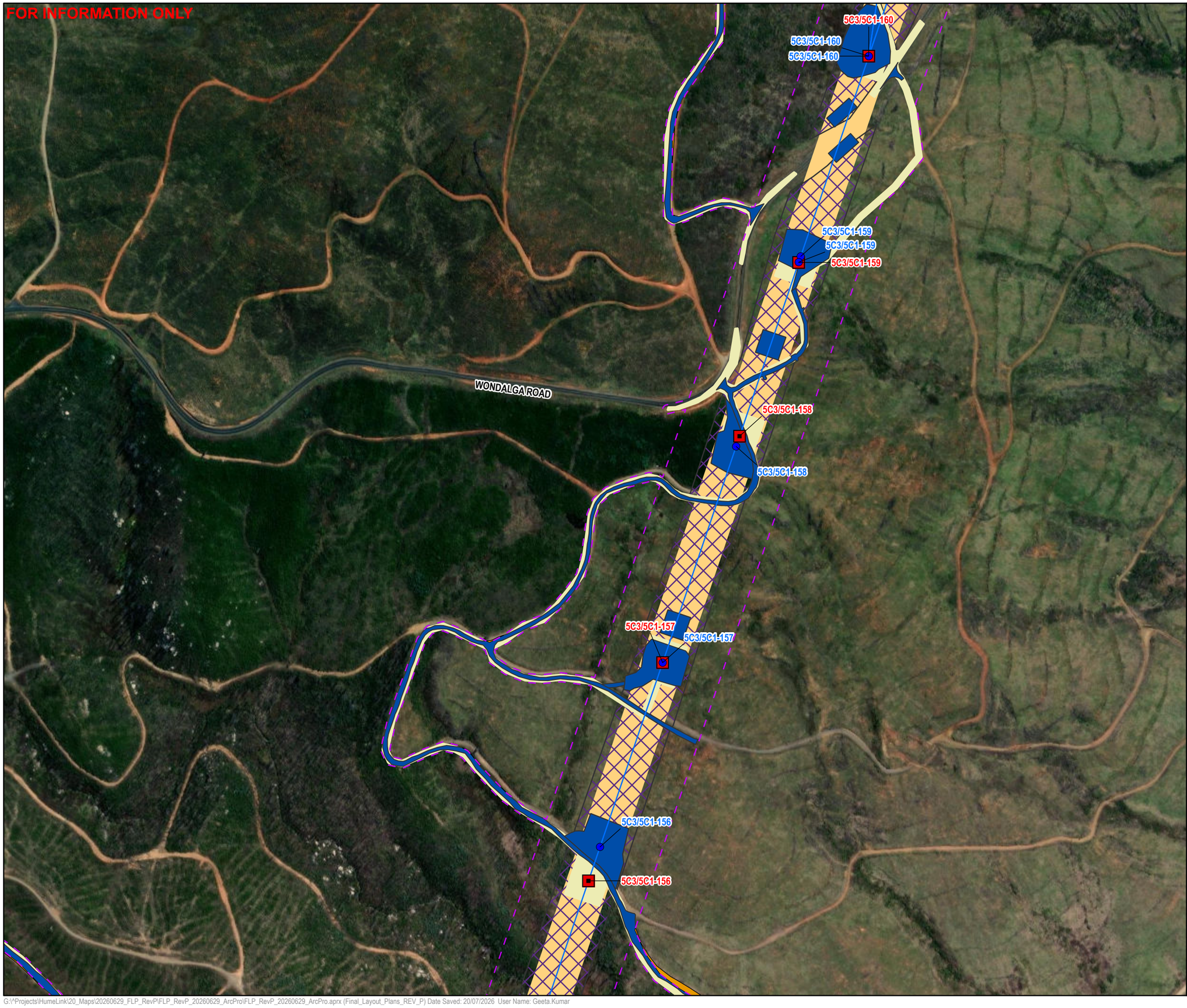
World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3B(i)B.03

HLW
Final Layout Plans
Rev P
Map 83 of 143

G:\^Projects\HumeLink\20_Maps\20260629_FLP_RevP\FLP_RevP_20260629_ArcPro\FLP_RevP_20260629_ArcPro.aprx (Final_Layout_Plans_REV_P) Date Saved: 20/07/2026 User Name: Geeta.Kumar

FOR INFORMATION ONLY



Transgrid UGL CPB CONTRACTORS

N

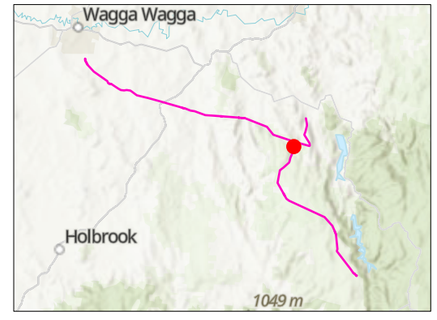
0 100 200 300

Metres

Datum: GDA2020 MGA55
Scale: 1:6,000 (when printed at A3)

Legend

- HLW Tower Centres - Final Layout (Blue Text)
- Tower Centres - EIS Approved Layout (Red Text)
- HLW Alignment Centreline - Final Layout
- Alignment Centreline - EIS Approved Layout
- Subject to Consistency assessment and further update
- HLW TCZ
- EIS Approved TCZ
- HLW ECZ
- EIS Approved ECZ
- EIS Project Footprint V13.2



© HumeLink West JV. All rights reserved.
HumeLink West JV has prepared this document for the sole use of the Employer (Transgrid) and specifically for use on HumeLink West Project. No other party should rely on this document without the prior written consent of HumeLink West JV. HumeLink West JV undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.

World Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

DRAWN:	GK
REVIEWED:	GJB
VERIFIED:	EK
APPROVED:	AS
REV:	P
DATE:	20/07/2026
DESCRIPTION:	Issued for Internal Review
DOCUMENT NO:	HLW Final Layout Plans Stage 3C(i)B.03

HLW
Final Layout Plans
Rev P
Map 84 of 143