



Liverpool Range Wind Farm

Biodiversity Management Plan – Pre-construction Minor Works

Final

May 2026



Liverpool Range Wind Farm

Biodiversity Management Plan – Pre-construction Minor Works

Final

Prepared by
Umwelt (Australia) Pty Limited

On behalf of
Liverpool Range Wind Farm Pty Ltd

Project Director: Bill Wallach
Project Manager: Corey Deverell
Report No.: 31700_R03
Date: May 2026



This report was prepared using
Umwelt's ISO 9001 certified
Quality Management System.

Acknowledgement of Country

Umwelt acknowledges the Traditional Owners of Country throughout Australia and their continuing values, culture and connection to the land, waters and sky.

We pay our respects to Elders past and present.

The below image is from the artwork *Yapung Maryiyang* (Pathway Forward) by Saretta Fielding.



Disclaimer

This document has been prepared for the sole use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Umwelt (Australia) Pty Ltd (Umwelt). No other party should rely on this document without the prior written consent of Umwelt.

Umwelt undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. Umwelt assumes no liability to a third party for any inaccuracies in or omissions to that information. Where this document indicates that information has been provided by third parties, Umwelt has made no independent verification of this information except as expressly stated.

©Umwelt (Australia) Pty Ltd

Document Status

Rev No.	Reviewer Name	Date	Approved for Issue Name	Date
V1	Corey Deverell	6 February 2025	Bill Wallach	6 February 2025
V1.1	Corey Deverell	20 February 2025	Bill Wallach	20 February 2025
V2	Corey Deverell	28 February 2025	Bill Wallach	20 February 2025
V3	Corey Deverell	1 April 2026	Bill Wallach	1 April 2026
V3.1	Corey Deverell	1 May 2026	Bill Wallach	1 May 2026

Abbreviations

Abbreviation	Definition
AG DCCEEW	Australian Government Department of Climate Change, Energy, the Environment and Water
AGL	Above ground level
AS	Australian Standard
BC Act	Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
CEEC	Critically Endangered Ecological Community
CPHR	NSW Conservation Programs, Heritage and Regulation Group
CPO	NSW Conservation Programs and Offsets
CWO REZ	Central-West Orana Renewable Energy Zone
DECC	Department of Environment and Climate Change
DNG	Derived Native Grassland
DPE	Department of Planning and Environment
DPHI	Department of Planning, Housing and Infrastructure
DPI	Department of Primary Industries
DPIE	Department of Planning, Industry and Environment
EEC	Endangered Ecological Community
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
ha	Hectares
IBRA	Interim Biogeographic Rationalisation for Australia
km	Kilometres
kV	Kilovolts
LGA	Local Government Area
MOD	Modification
NDD	Non-destructive digging
NSW	New South Wales
O&M	Operation and Maintenance
PCT	Plant Community Type
RFS	Rural Fire Service
RTS	Response to Submissions
SSD	State Significant Development
TEC	Threatened Ecological Community
VDP	Vegetation Disturbance Permit

Glossary

Term	Definition
Development Consent	Development Consent SSD 6696 granted under Section 4.38 of the <i>NSW Environmental Planning and Assessment Act 1979</i> (EP&A Act) on 27 March 2018 and as modified on 23 October 2024 (MOD1) and 31 October 2025 (MOD 2).
Development Corridor	Includes the Development Footprint – Wind Farm and Development Footprint – External Transmission Line in its entirety as well as areas of adjoining land and the corridor and road upgrade locations shown in the figures in Appendix 2 of the Development Consent.
Indicative Development Footprints	This is a combination of the Indicative Development Footprint – Wind Farm, Development Footprint – External Transmission Line and the Indicative Development Footprint – Public Road Upgrades and comprises the entirety of the temporary and permanent ground disturbance and vegetation removal required for the construction and operation of the Liverpool Range Wind Farm project.
Indicative Development Footprint – Public Road Upgrades	The total impact area associated with the construction of the anticipated public road upgrades/repairs required as part of the Project. It is a realistic estimate of temporary and permanent ground disturbance and vegetation removal required to construct the anticipated public road upgrades/repairs, and will be refined further during detailed design once contractor(s) are engaged.
Indicative Development Footprint – Wind Farm	The total impact area within the Wind Farm Site associated with the construction of the wind farm, and includes all temporary and permanent ground disturbance and vegetation removal required to construct wind turbines, internal access tracks and ancillary infrastructure, internal portion of the transmission line and vegetation removal required within the balance of easement required in accordance with Transgrid vegetation management guidelines. It excludes the public road upgrades and external portion of the transmission line. It is a realistic estimate of ground disturbance and vegetation removal and will be refined further during detailed design once contractor(s) are engaged.
Ecosystem Credit	A measurement of the value of threatened ecological communities and threatened species habitat for species that can be reliably predicted to occur with a PCT, and PCTs generally. Ecosystem credits measure the loss in biodiversity value at a development site and the gain in biodiversity value at an offset site.
External transmission line	The portion of the transmission line extending from the southern-most collector substation near Rotherwood Road, Cassilis, south to the connection substation at Ulan, consisting of overhead powerline of up to 330 kV, supported by poles or towers and located within a 60 m wide easement. The Proponent is not authorised to construct unless Planning Secretary’s agreement is given (refer to Schedule 2, Condition 8A of Development Consent).
Internal transmission line	The portion of the transmission line extending from the northwest of the Project site to the southernmost collector substation near Rotherwood Road, Cassilis, consisting of overhead powerline of up to 330 kV, supported by poles or towers and located within a 60 m wide easement.
Proposed Works	Reference to proposed works throughout this BMP refers to the pre-construction minor works stage of the Project to which this BMP applies.

Term	Definition
Species credit	The class of biodiversity credits created or required for the impact on threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the Threatened Biodiversity Data Collection database.
The Project	Liverpool Range Wind Farm Project.
Wind Farm Site	Refers to the portion of land within the Site Boundary generally located north of Rotherwood Road, Cassilis, where wind farm infrastructure including the internal portion of the transmission line is located. The portion of land generally south of Rotherwood Road is referred to as the External Transmission Line Site.

Contents

Abbreviations	i
Glossary	ii
1.0 Introduction	1
1.1 Background	1
1.2 Project Overview	1
1.3 Staging	6
1.3.1 Overview	6
1.3.2 Applicability of this BMP	7
1.4 Purpose and Aim	8
1.4.1 Pre-Construction Minor Works Scopes 2026	9
2.0 Statutory Context	10
2.1 NSW Development Consent	10
2.2 EPBC Act Approval	12
2.3 Legislation, Standards and Guidelines	12
3.0 Stakeholder Consultation	13
3.1 Agency Consultation	13
4.0 Existing Environment	15
4.1 Land Use	15
4.2 Flora and Vegetation Communities	15
4.2.1 Plant Community Types	15
4.2.2 Threatened Ecological Communities	19
4.2.3 Threatened Flora	21
4.2.4 High Threat Weeds	21
4.3 Fauna	21
4.3.1 Fauna Habitat	21
4.3.2 Threatened Fauna and Migratory Species	21
5.0 Project Activities and Biodiversity Impacts	22
5.1 Approved Biodiversity Impacts	22
5.2 Potential Biodiversity Impacts for this BMP	23

6.0	Biodiversity Impact Avoidance, Mitigation and Management	24
6.1	Minimising Vegetation Disturbance during Vegetation Clearance	27
6.1.1	Approved Clearing Limits	27
6.1.2	Minimising Loss of Hollow-bearing Trees	27
6.1.3	Demarcation of Disturbance Boundaries	27
6.1.4	Vegetation Disturbance Permit	27
6.1.5	Pre-clearance Survey	28
6.1.6	Salvage of Habitat Features	28
6.2	Protection of Remnant Vegetation	28
6.3	Minimising Impacts on Native Fauna	29
6.4	Unexpected or Incidental Flora and Fauna Finds	29
6.5	Biosecurity (Weeds, Pathogens and Vertebrate Pests)	29
6.5.1	Weeds and Pathogens	29
6.5.2	Vertebrate Pests	31
6.6	Bushfire	31
6.7	Soil and Water	32
6.7.1	Erosion and Sedimentation	32
6.7.2	Contamination of Soils and Waterways	33
6.8	Noise, Dust and Light	33
6.9	Rehabilitation of Temporary Disturbance Areas	34
6.9.1	Stockpiling of Soils	34
6.9.2	Land Preparation and Vegetation Establishment	34
6.10	Biodiversity Offsetting	35
7.0	Roles, Responsibilities and Training	37
7.1	Roles and Responsibilities	37
7.2	Training, Competence and Awareness	38
7.2.1	Site Inductions	38
7.2.2	Toolbox Talks	38
8.0	Monitoring, Reporting and Corrective Actions	39
8.1	Cumulative Disturbance Register	39
8.2	Inspections	39
8.3	Auditing	39
8.4	Management Triggers and Corrective Actions	40

9.0	Incident and Non-Compliance Management	41
9.1	Incident Notification and Reporting	41
9.1.1	Development Consent	41
9.2	Non-Compliance Notification and Reporting	42
10.0	Review and Revision	43
10.1	Triggers for Review and Revision	43
10.2	Matters to be Considered During BMP Review	43
10.3	Distribution and Publication of Revised BMP	44
11.0	References	45

Figures

Figure 1.1	Project Locality	4
Figure 1.2	Liverpool Range Wind Farm Project	5
Figure 4.1	PCTs and Condition Zones (Vegetation Zones)	20

Tables

Table 1.1	Staging Approach Overview	6
Table 2.1	Relevant Development Consent Conditions	10
Table 3.1	Agency Consultation during the Development of the BMP	13
Table 4.1	Plant Community Types Identified within the Approved Indicative Wind Farm and Public Road Upgrades Development Footprints – Excluding External Transmission Line	16
Table 5.1	PCT Clearing Extents (within the Indicative Wind Farm and Public Road Upgrades Development Footprints)	22
Table 5.2	Identified Threatened Fauna Habitat Clearing Limits within the Indicative Wind Farm and Public Road Upgrades Development Footprints	23
Table 6.1	Summary of Biodiversity Management and Monitoring Measures	25
Table 6.2	Calculated Credit Liability (2026 Scope)	35
Table 7.1	Key Roles and Responsibilities	37

Appendices

Appendix A PCMW Scoping Report – Letter dated 1 April 2026

Appendix B Agency Consultation

1.0 Introduction

1.1 Background

Liverpool Range Wind Farm (the Project) is an approved large scale renewable energy project that is owned by Tilt Renewables Australia Pty Ltd (Tilt Renewables) as trustee for Liverpool Range Wind Farm Project Trust. The Project is located approximately six kilometres (km) east of the township of Coolah, New South Wales (NSW) within the Local Government Areas (LGAs) of Warrumbungle Shire, Upper Hunter and Mid-Western (**Figure 1.1**). The Project is also located within the Central-West Orana Renewable Energy Zone (CWO REZ).

State Significant Development (SSD) Consent 6696 (the Development Consent) was originally granted on 27 March 2018 and subsequently modified (MOD 1) on 23 October 2024 for the construction and commissioning, operation, maintenance, and decommissioning of the Project. Tilt Renewables lodged an application with Department of Planning and Environment (DPE) to modify the Development Consent in September 2022. MOD 1 proposed a decrease to the maximum number of turbines to 185 (reduction of 82), an increase to the maximum blade tip height to 215 metres (m) above ground level (AGL) (increase of 50 m), and various changes to the site layout, ancillary infrastructure, and connection works.

Tilt Renewables lodged an application with the Department of Planning, Housing and Infrastructure (DPHI) for a further modification (MOD 2) which allows for an additional 16 hectares (ha) of Development Corridor. This Development Corridor resulted in no additional impacts from those previously approved under the Development Consent and therefore the Development Consent conditions related to this BMP (refer to **Section 2.1**) remain consistent for SSD-6696-Mod-2, approved on 31 October 2025.

An additional modification application (MOD 3) was submitted to DPHI in March 2026 and this (if approved) will result in a net reduction in Indicative Development Footprint. This Biodiversity Management Plan (BMP) does not include the MOD 3 layout calculations of proposed impacts areas per Plant Community Type (PCT). However, this BMP has referenced updated vegetation mapping to ensure all proposed pre-construction minor works are within the Development Corridor.

The Project initially received approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) issued by the Department of the Environment and Energy in June 2018. Due to the changes to the design and layout associated with MOD 1 (approved by DPHI on 23 October 2024), the Project required a new approval (EPBC 2022/09416) from the Australian Government Department of Climate Change, Energy, the Environment and Water (AG DCCEEW) to reflect these changes. The AG DCCEEW approved this application on 4 March 2025 (refer to **Section 2.2**).

1.2 Project Overview

The approved Project includes the construction and commissioning, operation, maintenance, and decommissioning of a wind farm, including transmission line and ancillary infrastructure, consisting of the key components outlined below:

Wind Turbines: up to 185 wind turbines with a maximum blade tip height of 215 m, including an adjacent hardstand area for lift cranes and a material laydown.

Collector Substations: up to seven collection substations that step-up the voltage of the reticulation cabling (typically 33 kilovolts (kV)) to the transmission line voltage (anticipated to be 330 kV).

Connection Substation: located off Rotherwood Road, Cassilis, to facilitate connection into the CWO REZ transmission project.

Internal Transmission Line: overhead powerline of up to 330 kV, supported by poles or towers and located within a 60 m wide easement that extends from the north-west of the Development Corridor to the connection substation proposed near Rotherwood Road, Cassilis. Steel poles and towers are anticipated to have an indicative height of approximately 40 – 50 m.

Reticulation Cabling: underground electrical reticulation cabling, and potentially some overhead powerlines, that provide an electrical connection between the wind turbines and the collector substations.

Access Tracks: access tracks, typically with a trafficable width of 5.5 – 6 m, to provide access from the public road network to wind farm and transmission line infrastructure and meteorological masts, and include required cut/fill batters and drainage infrastructure.

Site Access Points: provision of up to 34 site access points from nearby public roads to facilitate construction and ongoing maintenance of the wind farm components located north of the Golden Highway.

Operation and Maintenance (O&M) Facilities: up to three O&M facilities incorporating a control room, maintenance and equipment storage facilities. The O&M facility is anticipated to occupy a 3D envelope approximately 45 m long x 30 m wide x 15 m high.

Temporary Construction Compound/Laydown Area/Concrete Batch Plants: up to nine temporary construction facilities, including temporary concrete batching plants, rock crushing equipment, temporary laydown facilities, and construction compounds.

Accommodation Camp¹ : an ancillary Project-specific accommodation camp to accommodate a peak of approximately 550 construction staff over a four-year period. The Accommodation Camp would be approximately 9 ha in area and would be comprised of prefabricated accommodation building modules, kitchen and dining facilities, administrative and maintenance buildings, recreational facilities and wastewater treatment facilities. Upon completion of construction of the Project, the Accommodation Camp will be decommissioned and the site rehabilitated in accordance with the relevant landholder's requirements.

Public Road Upgrades/Repairs: upgrades/repairs to Local and Regional public roads, intersections and associated structures, in proximity to the Project required for the delivery, installation and maintenance of wind turbines, transmission lines, and related infrastructure, in accordance with upgrade/repair standards as agreed with relevant roads authorities.

Permanent Wind Monitoring Masts (Met Masts): up to 10 permanent Power Curve Validation (PCV) met masts to the final hub height, and associated access tracks.

¹ Note this is referred to in the Mod-1 Application assessment documentation as 'Temporary Workforce Accommodation Facility (TWA Facility)'

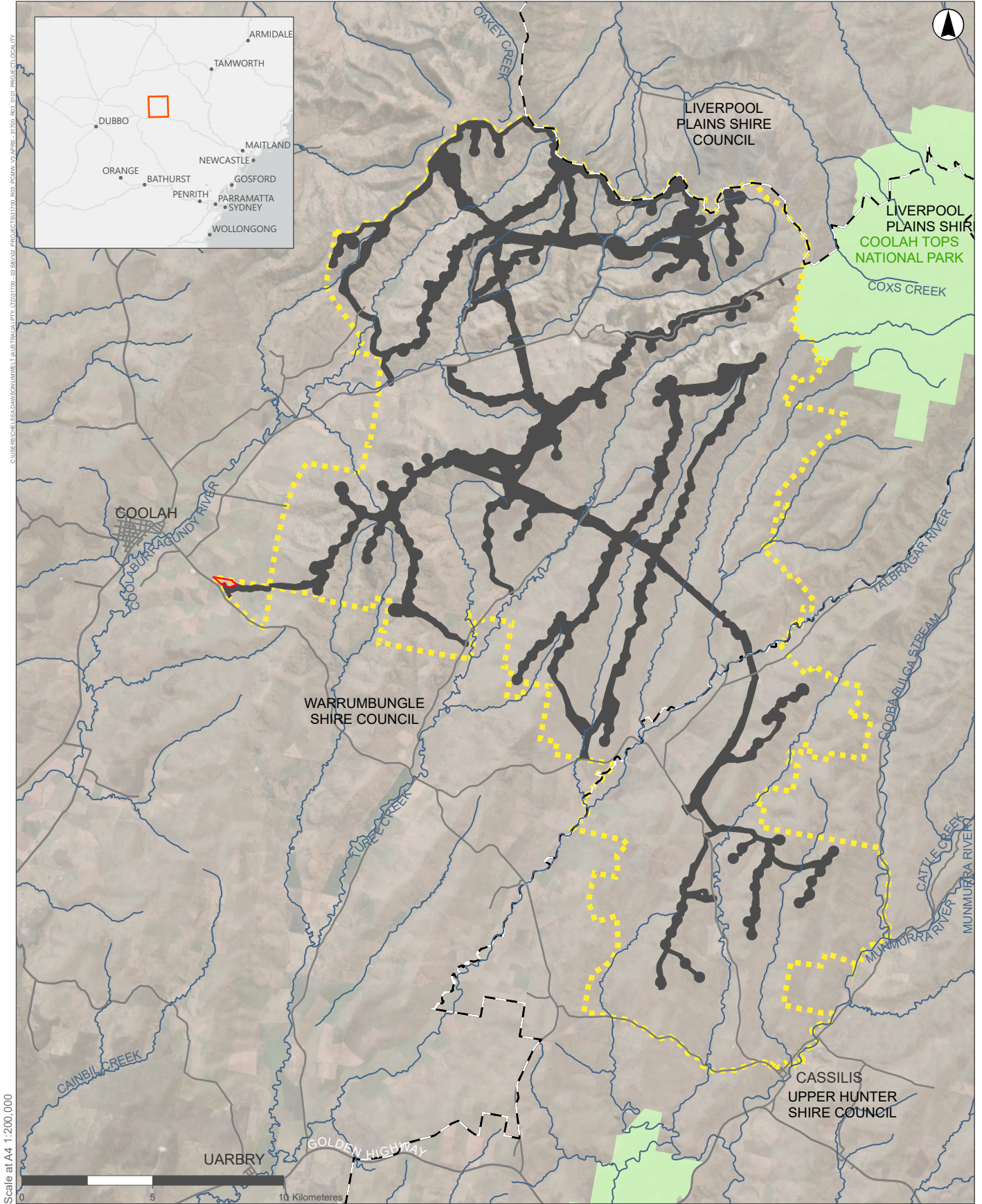
Temporary Site Calibration Met Masts: up to 10 temporary site calibration met masts to the final hub height, to be located at a subset of the turbine locations and removed prior to erection of each relevant turbine.

The approved Project also included the development of an External Transmission Line and connection substation at the southern end of the Project site boundary at Ulan; however this will no longer be constructed due to the Project connecting into the CWO REZ transmission line project, being developed by the Energy Corporation of NSW. Should an alternate connection be required using the External Transmission Line, agreement of the Planning Secretary is required in accordance with Schedule 2, Condition 8A of the Development Consent.

The approved Project layout, excluding the External Transmission Line connection, is shown on **Figure 1.2**. This layout will be further refined throughout detailed design and a Final Layout Plan will be prepared and submitted to the DPHI in accordance with Schedule 2, Condition 10 of the Development Consent.

An additional modification (MOD 3) was lodged by Tilt Renewables in March 2026. MOD 3 proposes (inter alia) to reduce the maximum number of turbines from 185 to 173 and provides for optimisation of ancillary infrastructure. It removes the Approved External Transmission Line to Ulan, and confirms a direct connection to the CWO REZ Transmission Line, for which access rights have been granted by the NSW Government.

The MOD 3 Layout reduces the total Proposed Indicative Development Footprint by approximately 222 ha, updates the Internal Transmission Line alignment, consolidates site access points from 74 to 25, introduces up to seven communication towers, and incorporates refined public road upgrades within a dedicated Proposed Development Corridor for the Public Road Upgrades.



Legend

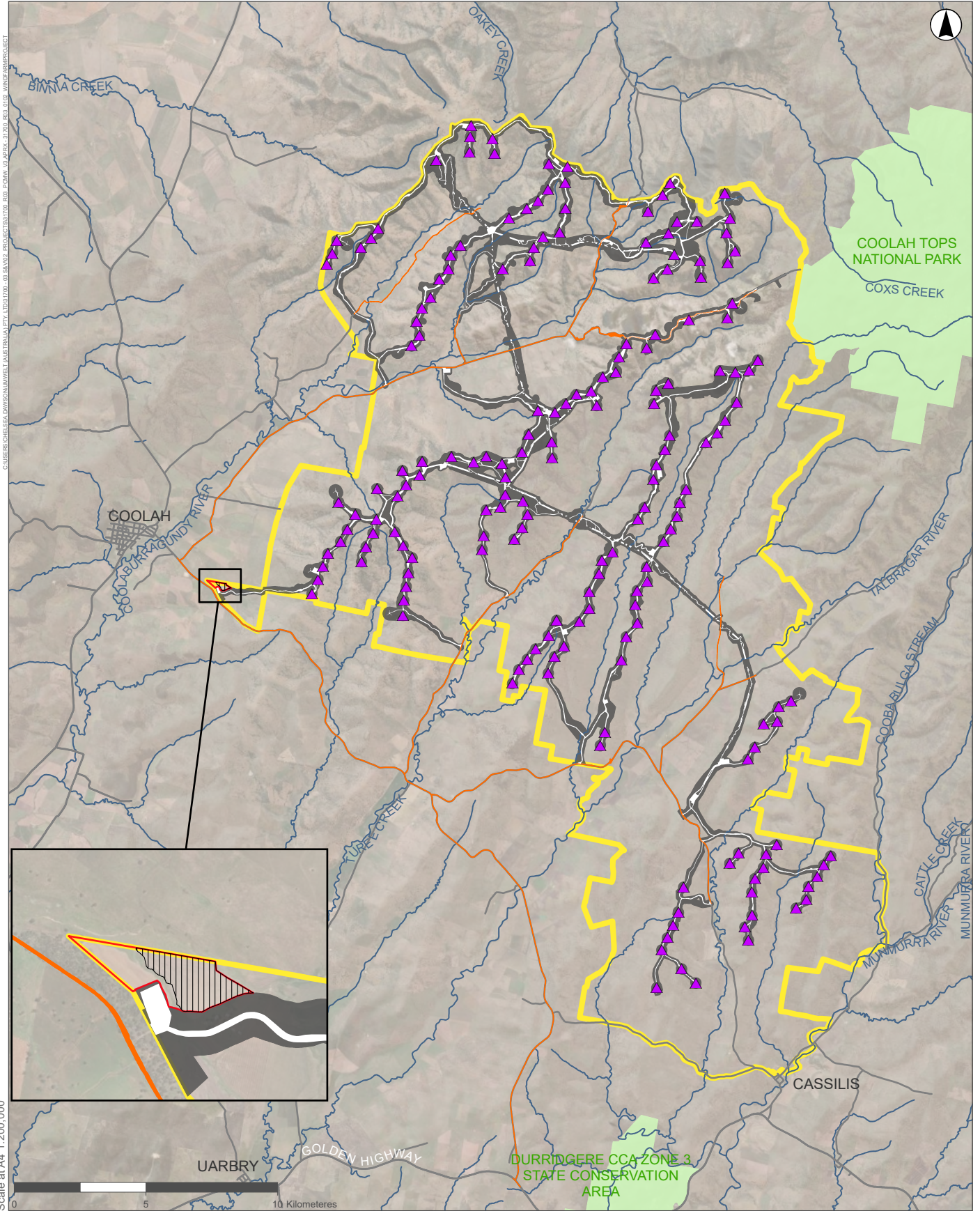
- Project Site (Wind Farm)
- Development Corridor – Wind Farm
- Development Corridor – TWA Facility
- National Parks (NPWS Estate)
- Local Government Boundary
- Road
- Watercourse



FIGURE 1.1
Project Locality

Image Source: ESRI Basemap (2023) | Data Source: NSW DFSI (2022)

The External Transmission Line component of the Project has been excluded from this Figure as Tilt Renewables does not intend to construct this component of the Project.



Legend

- Project Site
- ▲ Wind Turbines
- National Parks (NPWS Estate)
- Road
- Development Corridor – Wind Farm
- Development Corridor – TWA Facility
- Indicative Development Footprints**
- Indicative Development Footprint – Wind Farm
- Indicative Development Footprint – Public Road Upgrades
- Indicative Development Footprint – TWA Facility
- Watercourse



FIGURE 1.2
Liverpool Range Wind Farm Project

1.3 Staging

1.3.1 Overview

Tilt Renewables is proposing to develop the Project using a staged approach, consistent with Schedule 2, Condition 9 of the Development Consent. Where staging of the Project is proposed, the conditions of the Development Consent are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stages.

An overview of the proposed staging of the Project is provided in **Table 1.1** below.

Table 1.1 Staging Approach Overview

Indicative Staging	Sub-Stage / Scope of Works
Stage 0a – Pre-construction Minor Works	<ul style="list-style-type: none"> Geotechnical investigation campaign #1 (completed). Geotechnical investigation campaign #2. <p><i>Note: This scope of works is subject to this current request to stage the retirement of relevant biodiversity credits.</i></p>
Stage 0b – Public Road Upgrades	<ul style="list-style-type: none"> Public road upgrades as necessary to facilitate light and heavy vehicle movements, constructed separately to provide access to Stage 1 and Stage 2 of the Wind Farm. Public road upgrades as necessary to facilitate over-size/over-mass vehicle movements, constructed separately to provide access to Stage 1 and Stage 2 of the Wind Farm.
Stage 1a – Stage 1 Wind Farm Construction	<ul style="list-style-type: none"> Construction and commissioning of the Stage 1 Project: first 100 turbines.
Stage 1b – Stage 1 Wind Farm Operations	<ul style="list-style-type: none"> Operation and maintenance of the Project.
Stage 2a – Stage 2 Wind Farm Construction	<ul style="list-style-type: none"> Operation and maintenance of the Stage 2 Project – remaining turbines.
Stage 2b – Stage 2 Wind Farm Operations	<ul style="list-style-type: none"> Operation and maintenance of the Project.
Stage 3 – Decommissioning and Rehabilitation	<ul style="list-style-type: none"> Decommissioning of Project infrastructure and subsequent rehabilitation.

The strategies, plans or programs required by the Development Consent will be prepared and implemented relevant to the specific stage of the Project, consistent with the requirements of Schedule 2, Condition 16 of the Development Consent. As required, Tilt Renewables will submit revised strategies, plans or programs for the consideration of the Planning Secretary prior to commencing the relevant stage of the Project. For the avoidance of doubt, Tilt Renewables will ensure that all development being carried out on site is covered by endorsed strategies, plans or programs at all times.

Tilt Renewables does not intend to construct the Project’s External Transmission Line. Tilt Renewables has connection agreements with EnergyCo to connect to the CWO REZ Transmission Project. However, until the March 2026 modification application (MOD 3) to remove it has been assessed and approved by DPHI, the External Transmission Line is still included in the Development Consent as noted in Schedule 2, Condition 8A, being:

“Note: this consent includes the approval of the external transmission line, however the development is expected to connect to the Central-West Orana REZ Transmission line and construction of the external transmission line is unlikely to be required.”

Schedule 2, Condition 8A requires the Project to receive Planning Secretary agreement if the development is not connected into the CWO REZ Transmission Project. The Project continues to propose connection into the CWO REZ and the External Transmission Line has not been included in the BMP assessment. This clarification has been further illustrated in **Figure 1.3**, which has also been updated with revision to the current BMP.

The specific stage to which this BMP applies, the relationship of the BMP to any future stages of the Project and the trigger for updating the BMP is further described in **Section 1.3.2**.

1.3.2 Applicability of this BMP

This BMP has been prepared to reflect the pre-construction minor works stage of the Project. Key activities that will be undertaken during this stage of the Project, relevant to Schedule 3, Condition 21, and covered by this BMP, are limited to activities which fall within the definition of ‘pre-construction minor works’ within the Development Consent as follows:

Includes:

- i. the following activities:*
 - *building/road dilapidation surveys*
 - *geotechnical investigative drilling*
 - *artefact survey and/or salvage*
 - *establishing temporary site office (in locations meeting the criteria identified in the conditions of this approval)*
 - *installation of environmental impact mitigation measures, fencing, enabling works*
- ii. construction of minor access roads and minor adjustments to services/utilities, etc. for the activities identified in (i) above*
- iii. minor clearing or translocation of native vegetation for the activities identified in (i) and (ii) above.*

This stage of the Project is critical to allow for the progression of detailed project design and planning activities to finalise the location of the relevant infrastructure components prior to the formal commencement of construction of the Project.

These activities will directly input into the development of the Final Layout Plans for the project, which are required to be submitted to the Planning Secretary prior to the commencement of construction in accordance with Schedule 2, Condition 10 of the Development Consent. The action subject to EPBC 2022/09416 (the EPBC Approval) is not triggered as part of this scope of works subject to this BMP. As a result, the conditions of the EPBC Approval are not applicable to this BMP and have not been considered further. Refer to **Section 2.2** and **Section 3.1** for further details.

A detailed Staging Plan addressing the whole project will be submitted for the Planning Secretary’s consideration however this BMP relates to pre-construction minor works only. A request specific to

staging of this BMP and to the retirement of offset credit retirement will be further documented in separate correspondence with DPHI.

1.3.2.1 Potential Impacts as a Result of Pre-Construction Minor Works

The scope of the pre-construction minor works program has been designed to minimise native vegetation clearing, including avoiding the removal of shrub and treed vegetation. Although some of the works locations are located within the habitat polygons for threatened flora and fauna species and identified Threatened Ecological Communities (TECs) mapped as part of Project assessment documents (refer to **Section 1.4**), these works will be low impact (minimal disturbance footprints) and low intensity (works limited to borehole drilling, test pit excavation and surveys).

No trees, shrubs, or any other woody vegetation is permitted to be impacted as part of the proposed works applicable to this BMP.

Where disturbance is required, disturbance footprints will be small and predominately located within existing cleared environments such as road corridors or agricultural land and therefore native shrub and tree clearing will not be required. Potential impacts resulting from the completion of the pre-construction minor works stage are summarised in **Section 5.0**. Mitigation and management measures to be implemented generally throughout disturbance activities associated with the Project are identified in **Section 6.0**, noting that not all these identified measures may be applicable during the pre-construction minor work stage due to the low intensity nature of these works.

Vehicles and machinery (limited to 4x4 vehicles with rear-mounted equipment) required for the works will utilise existing farm tracks and will avoid any further impacts from vehicles or equipment to native vegetation or biodiversity values. In the event there are no existing farm tracks leading to a work area, Construction Contractors will be required to utilise access through areas with no native shrub/treed vegetation and only where agreed with Tilt Renewables and the landowner (i.e. no vegetation clearing is permitted).

1.4 Purpose and Aim

This BMP has been prepared to meet the requirements of Schedule 3, Condition 21 of the Development Consent and other relevant statutory requirements (refer to **Section 2.0**). Following approval by the NSW Planning Secretary, Tilt Renewables will implement the BMP.

Although the Project is an ‘approved Action’ under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the EPBC Approval is not considered to be applicable to this BMP due to the nature of pre-construction works being completed. Further discussion on this matter is provided in **Section 2.2**.

The aim of this BMP is to avoid, minimise or mitigate Project impacts to biodiversity values during the pre-construction minor works. Project-specific management measures for implementation throughout this stage of the Project are provided in **Section 6.0**.

Whilst the BMP provides the overarching biodiversity management framework for the pre-construction minor works stage of the Project, a briefing note which outlines the location, nature and potential biodiversity constraints (including offset liabilities) of each separate geotechnical works campaign/scope has been provided in **Appendix A** of this BMP. An excerpt is also included below:

This BMP has been informed by the following assessment reports:

- Liverpool Range Wind Farm – MOD-1 Submissions Report (Umwelt, 2023).
- Liverpool Range Wind Farm – MOD-1 – Amendment Report – Temporary Project-specific Workers Accommodation Facility (Umwelt, 2024).
- Response to Submissions Biodiversity Development Assessment Report (RTS BDAR) (Umwelt, 2023a).
- Addendum to Biodiversity Development Assessment Report (BDAR Addendum) (Umwelt, 2024a).
- Liverpool Range Wind Farm – MOD 2 – Application Report (Tilt Renewables, 2025).
- Liverpool Range Wind Farm Modification 2 Application – Biodiversity Constraints (Umwelt, 2025).
- Liverpool Range Wind Farm Modification 3 (SSD6696) – Biodiversity Development Assessment Report (Umwelt, 2026).

Once approved by the Planning Secretary, in accordance with Schedule 3, Condition 21 of the Development Consent, this BMP will be published and made publicly available on the Tilt Renewables website: <https://www.tiltrenewables.com/assets-and-projects/liverpool-range-wind-farm/>.

1.4.1 Pre-Construction Minor Works Scopes 2026

Tilt Renewables is proposing to undertake the follow scopes:

- Geotechnical investigative drilling, with specific details of the works illustrated in **Figure 1 of Appendix A** and being as follows:
 - a. Eight (8) boreholes (~15 cm diameter and ~20 m depth) at a subset of wind turbine foundation locations. Installation of standpipes in each of the borehole locations.
 - b. 71 test pit locations (approximately 1 m wide by 2 m long, to a depth of 3.5 m) at a subset of wind turbine foundations, access tracks and ancillary infrastructure locations.
- Bathymetric surveys (use of flotation device) in one location on the Talbragar River and associated light vehicle access.
- 47 pavement dipping locations along Vinegaroy Road and Rotherwood Road involving drilling of existing road pavement to sub-base material. Vehicle and testing activities will be contained to existing roadway.
- Waterway survey (Talbragar River) involving two (2) test borehole locations on waterfront land and one (1) test bore location on the existing road pavement and associated light vehicle access. Disturbance limited to vehicle access (rear mounted auger from standard light vehicle) and borehole diameter of 10-15 cm.
- Potential Aboriginal cultural heritage artifact survey and/or salvage in locations of borehole works in the Potential Archaeological Deposit (Talbragar River 1).
- 48 utility survey locations along Vinegaroy Road and Rotherwood Road using non-destructive digging (NDD) and ground penetrating radar techniques. Vehicle use is limited to a light vehicle and vacuum truck to remove excavated material from 20-30 cm deep excavation (~0.25 m²). NDD should be limited to road edges at points where the utility crosses under the carriageway or through intersections.

2.0 Statutory Context

2.1 NSW Development Consent

Table 2.1 lists the relevant biodiversity conditions of the Development Consent and provides a reference to the relevant sections of the BMP where the conditions have been addressed in this document.

Table 2.1 Relevant Development Consent Conditions

Condition of Approval	Requirements	Section Addressed
Schedule 3, Condition 17A	The Applicant must not clear any native vegetation or fauna habitat located outside the development corridor.	Section 6.1.3
Schedule 3, Condition 18	Unless the Planning Secretary agrees otherwise, the Applicant must:	Section 6.1.1
	<ul style="list-style-type: none"> c. ensure that the vegetation and habitat clearing limits specified in Tables 8-1 and 8-2 of Appendix 8 are not exceeded; and 	
	<ul style="list-style-type: none"> d. minimise: <ul style="list-style-type: none"> i. the clearing of native vegetation and key habitat; 	Section 6.1
	<ul style="list-style-type: none"> ii. the impacts of the development on hollow-bearing trees; and 	Not applicable to this stage of the Project (refer to Section 5.2).
	<ul style="list-style-type: none"> iii. the impacts of the development on threatened bird and bat populations. 	Not applicable to this stage of the Project (refer to Section 5.2).
Schedule 3, Condition 18A	Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must retire biodiversity credits of a number and class specified in Table 8-1 and 8-2 of Appendix 8, unless the Planning Secretary agrees otherwise.	Section 6.10
Schedule 3, Condition 19	The retirement of the credits must be carried out in accordance with the NSW Biodiversity Offsets Scheme, and can be achieved by:	
	<ul style="list-style-type: none"> a. acquiring or retiring 'biodiversity credits' within the meaning of the Biodiversity Conservation Act 2016; 	
	<ul style="list-style-type: none"> b. making payments into an offset fund that has been established by the NSW Government; or 	
	<ul style="list-style-type: none"> c. funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme. 	
Schedule 3, Condition 21	Prior to carrying out any development that could impact biodiversity values, unless the Planning Secretary agrees otherwise, the Applicant must prepare a Biodiversity Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	This plan.
	<ul style="list-style-type: none"> a. be prepared in consultation with CPHR and AG DCCEEW; and 	Section 3.1
	<ul style="list-style-type: none"> b. be prepared in accordance with the Biodiversity Development Assessment Report (dated 14 August 2023); 	Section 1.4

Condition of Approval	Requirements	Section Addressed
	<p>c. include a description of the measures that would be implemented to:</p> <p>i. ensure the development does not adversely affect the native vegetation and habitat outside the development corridor and ensure the restrictions on clearing in condition 18 above, are met;</p>	<p>Section 6.1.1 Section 6.1.3</p>
	<p>ii. minimise the clearing of native vegetation and habitat within the development footprint;</p>	Section 6.1
	<p>iii. securing land comprising 300.6 ha of Box Gum Woodland (or, with agreement from the Planning Secretary, a lesser area of Box Gum Woodland) for the purpose of restoring, enhancing and protecting, in perpetuity, this vegetation to condition state commensurate with Box Gum Woodland;</p>	Not applicable to this stage of the Project.
	<p>iv. minimise the impacts of the development on threatened flora and fauna species within the development footprint and its surrounds, including the:</p> <ul style="list-style-type: none"> • Ausfeld’s wattle • Silky Swainson-pea • Glossy black-cockatoo • Large-eared pied bat • Square-tailed kite • Squirrel glider • Southern greater glider • Eastern cave bat 	<p>Section 5.2 Section 6.3</p>
	<p>v. rehabilitating and revegetating temporary disturbance areas;</p>	Section 6.9
	<p>vi. protecting native vegetation and key fauna habitat outside the development footprint;</p>	<p>Section 6.1 Section 6.2</p>
	<p>vii. monitoring the areas of partial clearance within three months of the clearance occurring and provision of a verification report to confirm if any changes are required to this plan;</p>	Section 8.1
	<p>viii. maximising the salvage of resources within the approved development footprint – including vegetative and soil resources – for beneficial reuse (such as fauna habitat enhancement) during the rehabilitation and revegetation of the site;</p>	Section 6.1.6
	<p>ix. collecting and propagating seed (where relevant);</p>	Not applicable to this stage of the Project. (refer to Section 6.1.6)
	<p>x. controlling weeds and feral pests;</p>	Section 6.5
	<p>xi. controlling erosion; and</p>	Section 6.7
	<p>xii. bushfire management;</p>	Section 6.6
	<p>d. include a detailed program to monitor and report on the effectiveness of these measures; and</p>	Section 8.0
	<p>e. include details of who would be responsible for monitoring, reviewing and implementing the plan.</p>	Section 7.0
	<p>Following the Planning Secretary’s approval, the Applicant must implement the Biodiversity Management Plan.</p>	Section 7.1

2.2 EPBC Act Approval

The Project has received EPBC Approval (EPBC 2022/09416) to undertake the following action:

To install, operate and decommission a wind farm and associated ancillary infrastructure, located east of Coolah and northwest of Cassilis townships, within the Central West-Orana Renewable Energy Zone, NSW.

The EPBC Approval defines several activities which can be undertaken and do not trigger the commencement of the above action, including *pre-construction minor works as per the NSW Approval* (see **Section 1.3.2**). The physical activities associated with the action, but which do not commence the action, are as follows as defined by the EPBC Approval:

Minor physical disturbance necessary to:

- a) *Undertake pre-clearance surveys or monitoring programs.*
- b) *Install signage and/or temporary fencing to prevent unapproved access, so long as the signage and/or temporary fencing is located where it does not harm and protected matter.*
- c) *Protect environmental and property assets from fire, weeds, and feral animals, including use of existing surface access tracks.*
- d) *Install temporary site facilities for persons undertaking pre-commencement activities so long as these facilities are located where they do not harm any protected matter.*
- e) *Conduction pre-construction minor works as per the NSW Approval.*

The scope of works subject to this BMP are considered to meet the above definition of pre-construction minor works and therefore the action subject to the EPBC Approval is not considered to be triggered. As a result, the conditions of the EPBC Approval are not applicable to this BMP and have not been considered further.

2.3 Legislation, Standards and Guidelines

Other relevant legislation, standards and guidelines include:

- Central West Regional Strategic Pest Animal Management Plan (Local Land Services, 2018).
- Hunter Regional Strategic Pest Animal Management Plan (Local Land Services, 2018a).
- Central West Regional Strategic Weed Management Plan (Local Land Services, 2022).
- Hunter Regional Strategic Weed Management Plan (Local Land Services, 2022a).
- *NSW Biodiversity Conservation Act 2016* (BC Act).
- New South Wales Weed Control Handbook (DPI 2018).
- Saving our species - Hygiene guidelines – Protocols to protect priority biodiversity areas in NSW from *Phytophthora cinnamomi*, myrtle rust, amphibian chytrid fungus and invasive plants (NSW DPIE 2020) Hygiene guidelines (nsw.gov.au).
- Tree Protection Zone Australian Standard (AS 4970-2009).

3.0 Stakeholder Consultation

3.1 Agency Consultation

Preparation of this BMP has occurred in consultation with NSW Conservation Programs and Offsets (formerly Conservation Programs, Heritage and Regulation Group (CPHR)) as required by Schedule 3, Condition 21 of the Development Consent. A summary of NSW CPO consultation completed to date, and where this feedback has been addressed in this BMP, is documented in **Table 3.1**. Records of agency correspondence are included in **Appendix B**.

It is noted that these records include consultation completed for the previously approved PCMW BMP (Umwelt, 2025) and include section references which have changed in this current version.

As discussed in **Section 2.2**, the works subject to this BMP do not trigger the EPBC Approval and therefore consultation with AG DCCEEW is not required for this BMP. This BMP will be updated to include evidence of consultation with AG DCCEEW in subsequent iterations of this document once this consultation has been completed.

Note: this section will be updated following receipt of agency comments.

Table 3.1 Agency Consultation during the Development of the BMP

Agency	Consultation Date	Nature/Outcome of Consultation	Section Addressed
NSW BCS	6 January 2025	NSW BCS advised satisfaction that the BMP fulfils the requirements of the Development Consent regarding the work program proposed.	N/A – no changes required.
DPHI	31 January 2025	<p>DPHI requested further information be included within the BMP, including:</p> <ul style="list-style-type: none"> Further details regarding the proposed clearing and disturbance register, including when it will be updated. Clarification of language regarding the Development Corridor. Specify the frequency of routine inspections. Update Section 6.10 to include offset staging requirements as per separate correspondence with DPHI. Provide additional details on bushfire management. Timing commitment for reviews/revisions of the BMP. Update of Figure 1.4. 	<ul style="list-style-type: none"> Section 6.1, 8.1 Table 2.1 Table 6.1, Section 8.2 Section 6.10, Table 6.1 Section 6.6 Section 10.1 Figure 1.4
NSW CPHR	5 February 2025	NSW CPHR recommended Tilt Renewables provide evidence that the credits have been retired prior to commencement of the preconstruction minor works.	<ul style="list-style-type: none"> Section 6.10

Agency	Consultation Date	Nature/Outcome of Consultation	Section Addressed
	14 April 2026	NSW CPHR (North) requested that a separate Biodiversity Assessment Method Calculator (BAM-C) child case and credit report be prepared for each stage of the Project.	<ul style="list-style-type: none"> N/A
	20 April 2026	Upon further consultation with CPHR Renewable Energy and Biodiversity Services (REBS), it was confirmed that the current approach to credit retirement was suitable and is consistent with the methodology applied for the previous PCMW campaign for the Project. No further changes required.	<ul style="list-style-type: none"> N/A

4.0 Existing Environment

This BMP is limited to the pre-construction minor works stage of the Project (as described in **Section 1.3.2**). This section provides an overview of the existing environment relevant to the entire Indicative Development Footprint, which is not expected to be significantly impacted by the pre-construction minor works. Potential biodiversity impacts related to the pre-construction minor works are outlined in **Section 5.2**.

4.1 Land Use

The locality is dominated by primary agricultural land on the valley floor and low rises, with cropping being the dominant activity. While agricultural practices extend onto the steeper slopes and tabletops, cropping is replaced with stock grazing, including cattle, sheep, and goats. Large patches of remnant vegetation are predominantly restricted to public land (including road reserves and conservation areas), upper slopes and gullies. Agricultural land use has dominated the local region historically. These practises have resulted in the extensive clearing of native vegetation, and those patches that do persist have been permanently degraded.

4.2 Flora and Vegetation Communities

4.2.1 Plant Community Types

Approximately 1,408.6 ha of native vegetation is present within the 1,559.3 ha Indicative Development Footprint of the Project (excluding the External Transmission Line). Of the remaining area of the Indicative Development Footprint, approximately 89.5 ha is mapped as Nil (including roads, tracks and waterbodies) and 64.3 ha is mapped as Category 1 – Exempt Land (i.e. cleared land or water), comprising agricultural land and exotic vegetation. Further information regarding the clearance limits for the Project is included in **Section 5.1**.

Surveys identified several PCTs occurring within the Indicative Development Footprint, with condition ranging from moderate good to exotic.

Table 4.1 and **Figure 4.1** presents the PCTs identified within the Indicative Wind Farm and Indicative Public Road Upgrade Development Footprints and are not specific to the proposed works to be undertaken as part of pre-construction minor work activities (refer to **Section 1.3.1**). PCTs associated with the Indicative External Transmission Line Development Footprint have been excluded from **Table 4.1** as the External Transmission Line will not be constructed by Tilt Renewables as part of the Project, should the approved CWO-REZ Transmission Line Project be constructed. Detailed descriptions of each PCT are provided in the Response to Submissions Biodiversity Development Assessment Report (RTS BDAR) (Umwelt, 2023a).

Table 4.1 Plant Community Types Identified within the Approved Indicative Wind Farm and Public Road Upgrades Development Footprints – Excluding External Transmission Line

Vegetation Zone	Current PCT and Condition	Condition Class	BC Act	EPBC Act	Area in Indicative Development Footprint – Wind Farm (ha)	Area in Indicative Development Footprint – Public Road Upgrades (ha)	Total Area in Indicative Development Footprint (ha)
1	PCT 84 – River Oak - Rough-barked Apple - red gum - box riparian tall woodland (wetland) of the Brigalow Belt South Bioregion and Nandewar Bioregion	Moderate/Good	N/A	N/A	7.9	1.6	9.5
2	PCT 281 – Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Moderate/Good	CEEC ¹	CEEC ²	0.7	0.7	1.4
4	PCT 479 – Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	Moderate/Good	N/A	N/A	0	0.7	0.7
6	PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Moderate/Good	CEEC ¹	CEEC ²	10.5	0	10.5
7	PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Low	CEEC ¹	N/A	205.5	10	215.5
8	PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Low Condition DNG	N/A	N/A	319.5	73	392.5

Vegetation Zone	Current PCT and Condition	Condition Class	BC Act	EPBC Act	Area in Indicative Development Footprint – Wind Farm (ha)	Area in Indicative Development Footprint – Public Road Upgrades (ha)	Total Area in Indicative Development Footprint (ha)
9	PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion	Moderate/Good	CEEC ^{1,3}	CEEC ^{2,3}	59.5	0	59.5
10	PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion	Moderate/Good-Shrubby	N/A	N/A	0.5	0	0.5
11	PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion	Low	CEEC ^{1,3}	N/A	198.4	5.7	204.1
12	PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion	Exotic	N/A	N/A	360.3	13.1	373.4
13	PCT 490 – Silvertop Stringybark - Forest Ribbon Gum very tall moist open forest on basalt plateau on the Liverpool Range, Brigalow Belt South Bioregion	Moderate/Good	N/A	N/A	15.2	0	15.2
14	PCT 495 – Brittle Gum - Silvertop Stringybark grassy open forest of the Liverpool Range, Brigalow Belt South Bioregion	Moderate/Good	N/A	N/A	23.7	0	23.7
15	PCT 1661 – Narrow-leaved Ironbark - Black Pine - Sifton Bush heathy open forest on	Moderate/Good	N/A	N/A	0	0.3	0.3

Vegetation Zone	Current PCT and Condition	Condition Class	BC Act	EPBC Act	Area in Indicative Development Footprint – Wind Farm (ha)	Area in Indicative Development Footprint – Public Road Upgrades (ha)	Total Area in Indicative Development Footprint (ha)
	sandstone ranges of the upper Hunter and Sydney Basin						
16	PCT 1675 – Scribbly Gum - Narrow-leaved Ironbark - <i>Bossiaea rhombifolia</i> heathy open forest on sandstone ranges of the Sydney Basin	Moderate/Good	N/A	N/A	0	0.5	0.5
17	PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	DNG	CEEC ¹	CEEC ²	101.1	0.2	101.3
Total Area					1,302.8	105.8	1,408.6

CEEC = Critically Endangered Ecological Community

¹ 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).

² White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland CEEC (EPBC Act).

³ Only a portion of this vegetation zone conforms with the TEC.

⁴ Areas and PCTs associated with the Indicative External Transmission Line Development Footprint have been excluded from this table as the External Transmission Line will not be constructed by Tilt Renewables as part of the Project, should the approved CWO-REZ Transmission Line Project be constructed.

Note: minor rounding discrepancies associated with area totals.

Note: For the avoidance of doubt, the table above refers to the existing approved Project. It does not refer to the revised Indicative Development Footprint proposed by the Mod-3 application, lodged in March 2026 and currently under assessment.

4.2.2 Threatened Ecological Communities

Analyses documented in the RTS BDAR (Umwelt, 2023a) compared surveyed PCTs with potential BC Act and EPBC Act listed TECs and found that six surveyed PCTs conform with TECs, either wholly or partially. While some pre-construction minor work locations are located in areas mapped as BC Act listed TECs, no treed vegetation will be removed as part of the pre-construction minor works covered by this BMP. Therefore, specific management measures are not relevant to this BMP (refer to **Section 6.1** for general native vegetation management measures). Mitigation measures related to unexpected or incidental finds are provided in **Section 6.4**.

4.2.3 Threatened Flora

Two threatened flora species-credit species (*Acacia ausfeldii* and *Swainsona sericea*) were recorded within the Indicative External Transmission Line Development Footprint, however as stated previously, this will not be constructed by Tilt Renewables as part of the Project. Therefore, management of these species is not relevant to this BMP (refer to **Section 6.4** for processes relating to unexpected finds).

4.2.4 High Threat Weeds

Due to the long history of intensive agricultural land use within the Indicative Development Footprint, weed species are already widespread in these areas. Therefore, it is unlikely that the Project will inadvertently introduce new weed species. However, the Project will implement measures to minimise the risk of introduction of weed species not already present in the landscape or the further spread of weeds within the landscape (refer to **Section 6.5**).

There is a risk that weed species may be introduced to areas of intact vegetation within the Indicative Development Footprint. This risk is considered low, as the proposed pre-construction minor works (refer to **Section 1.3.1**) will primarily occur in previously disturbed areas including previously cleared agricultural land, existing road corridors and farm access tracks. Mitigation measures outlined in **Section 6.5** will be implemented to minimise the potential for weed encroachment into surrounding areas.

4.3 Fauna

4.3.1 Fauna Habitat

Much of the Indicative Development Footprint occurs where the connectivity of native vegetation and habitat corridors has been previously compromised by historical agricultural land uses. However, there are specific locations within the Development Corridor where substantial areas of intact native vegetation and associated fauna habitat is recognised to occur. Primarily, this occurs to the north (private land) and east (Coolah Tops National Park) of the Project; and south (Durrigere State Conservation Areas, State Forest land, National Park Land – The Drip, Goulburn River National Park) of the Project.

It is noted that the proposed pre-construction minor works will primarily occur in previously disturbed areas and are not expected to impact fauna species.

4.3.2 Threatened Fauna and Migratory Species

Six (6) threatened fauna and migratory species-credit species (glossy black-cockatoo, large-eared pied bat, square-tailed kite, squirrel glider, southern greater glider and eastern cave bat) have been recorded within the Indicative Development Footprint. However, only four (4) of these species (large-eared pied bat, squirrel glider, southern greater glider and eastern cave bat) were recorded within the Indicative Development Footprint to be disturbed as part of the Project (that is considering the removal of the external transmission line). While some pre-construction minor work locations are expected to be located within areas mapped as BC Act listed threatened fauna species polygons, no treed or shrub vegetation will be removed as part of the works. Therefore, management of these species is not relevant to this BMP (refer to **Section 6.4** for processes relating to unexpected finds).

5.0 Project Activities and Biodiversity Impacts

As this stage, the Project is restricted to pre-construction minor works, any clearing required will not exceed the clearing limits presented in **Table 5.1** and **Table 5.2**. The potential biodiversity impacts associated with this stage of the Project are outlined in **Section 5.2**. Project-specific management measures for implementation throughout this stage of the Project are provided in **Section 6.0**.

5.1 Approved Biodiversity Impacts

The approved vegetation clearing limits for the entire Project within the Indicative Wind Farm and Public Road Upgrades Development Footprints (i.e. excluding the Indicative External Transmission Line Development Footprint) as identified within Appendix 8 of the Development Consent are presented in **Table 5.1**. It is noted that minimal disturbance areas are required for completion of the pre-construction minor works program.

Table 5.1 PCT Clearing Extents (within the Indicative Wind Farm and Public Road Upgrades Development Footprints)

PCT	Condition Class	BC Act	EPBC Act	Wind Farm and Public Road Upgrades
PCT 84 – River Oak - Rough-barked Apple - red gum - box riparian tall woodland (wetland) of the Brigalow Belt South Bioregion and Nandewar Bioregion	Moderate/Good	-	-	9.5
PCT 281 – Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Moderate/Good	CEEC	CEEC	1.4
PCT 479 – Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	Moderate/Good	-	-	0.7
PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Moderate/Good	CEEC	CEEC	10.5
	Low	CEEC	-	215.5
	Low Condition DNG	-	-	392.5
	DNG	CEEC	-	101.3
PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion	Moderate/Good	CEEC	CEEC	2.0
	Moderate/Good	-	-	57.5
	Moderate/Good – Shrubby	-	-	0.5
	Low	CEEC	-	2.1
	Low	-	-	202.0
	Exotic	-	-	373.4
PCT 490 – Silvertop Stringybark - Forest Ribbon Gum very tall moist open forest on basalt	Moderate/Good	-	-	15.2

PCT	Condition Class	BC Act	EPBC Act	Wind Farm and Public Road Upgrades
plateau on the Liverpool Range, Brigalow Belt South Bioregion				
PCT 495 – Brittle Gum - Silvertop Stringybark grassy open forest of the Liverpool Range, Brigalow Belt South Bioregion	Moderate/Good	-	-	23.7
PCT 1661 – Narrow-leaved Ironbark - Black Pine - Sifton Bush heathy open forest on sandstone ranges of the upper Hunter and Sydney Basin	Moderate/Good	-	-	0.3
PCT 1675 – Scribbly Gum - Narrow-leaved Ironbark - <i>Bossiaea rhombifolia</i> heathy open forest on sandstone ranges of the Sydney Basin	Moderate/Good	-	-	0.5
Total (ha)¹				1,408.6

¹ Areas and PCTs associated with the Indicative External Transmission Line Development Footprint have been excluded from this table as the External Transmission Line will not be constructed by Tilt Renewables as part of the Project.

The approved threatened fauna habitat clearing limits for the entire Project within the Indicative Wind Farm and Public Road Upgrades Development Footprints (i.e. excluding the Indicative External Transmission Line Development Footprint) are presented in **Table 5.2**. It is noted that minimal disturbance areas are required for completion of the pre-construction minor works program.

Table 5.2 Identified Threatened Fauna Habitat Clearing Limits within the Indicative Wind Farm and Public Road Upgrades Development Footprints

Common Name	Scientific Name	BC Act	EPBC Act	Wind Farm and Public Road Upgrades ¹
Large-eared pied bat	<i>Chalinolobus dwyeri</i>	V	E	92.6
Squirrel glider	<i>Petaurus norfolcensis</i>	V	-	50.9
Southern greater glider	<i>Petauroides volans</i>	E	E	19.3
Eastern cave bat	<i>Vespadelus troughtoni</i>	V	-	94.3

¹ Areas and PCTs associated with the Indicative External Transmission Line Development Footprint have been excluded from this table as the External Transmission Line will not be constructed by Tilt Renewables as part of the Project, should the approved CWO-REZ Transmission Line Project be constructed.

5.2 Potential Biodiversity Impacts for this BMP

The scope of the pre-construction minor works program has been specifically designed to avoid native shrub and tree clearing by targeting existing cleared environments. The scale and nature of the pre-construction works is also low disturbance/intensity in the first instance. Disturbance from the pre-construction minor works program will be limited to activities consistent with the Development Consent definition of pre-construction minor works (see **Section 1.3.2**). Vehicle access will be along existing roads/tracks, or if none are present, through existing cleared environments. Light vehicles and equipment/machinery will park adjacent to work sites in existing cleared environments.

Disturbance footprints will be small and located within existing cleared environments and therefore no significant impacts to flora/fauna are expected.

As noted in **Section 1.4**, a description of each pre-construction minor works campaign/program will be provided to DPHI and NSW CPO including an overview of the location of any works within mapped native vegetation and BC Act-listed threatened species polygons.

6.0 Biodiversity Impact Avoidance, Mitigation and Management

The impact avoidance, mitigation and management measures applicable to this stage of the Project are summarised in **Table 6.1** below. The contents of this table summarise the detail provided throughout **Section 6.0** as it relates to pre-construction minor works. This table will be updated for subsequent stages / revisions of this BMP to reflect the changing biodiversity management requirements associated with each stage.

Implementation of biodiversity impact avoidance, mitigation and management measures are the responsibility of Tilt Renewables and the Construction Contractor engaged for the proposed works. Related roles and responsibilities for implementing these avoidance, mitigation and management measures are described in **Section 7.0**. Associated monitoring requirements are summarised in **Table 6.1** below.

Tilt Renewables will work with the Construction Contractor to ensure the mitigation and management measures outlined in this BMP are implemented. This will occur through contractual obligations, including formal environmental reporting requirements, and pre-start/induction material. This will include strict instructions to not clear any treed vegetation as part of the pre-construction minor works.

Tilt Renewables will also create a checklist of mitigation measures that will form part of a weekly environmental inspection report. This will be used in conjunction with the Vegetation Disturbance Permit and other forms of evidence such as before and after photos, where applicable. Incident and non-compliance management is described in **Section 9.0**.

Table 6.1 Summary of Biodiversity Management and Monitoring Measures

Topic	Impact Mitigation Measures	Monitoring Method	Timing/Frequency	Reporting Output	Responsibility	Performance Criteria
Minimising vegetation disturbance	Identification of disturbance boundaries. Section 6.1.1 and Section 6.1.3.	GIS mapping. Demarcation of work areas.	Prior to commencement of clearing at each new work area.	Before and after photographs.	Construction Contractor.	Vegetation clearing remains within the specified limits (refer to Section 6.1.1).
	Access and works restricted to previously disturbed areas and existing access tracks. No tree or shrub removal permitted	GIS mapping	Permitted areas defined prior to commencing works in each work area	Before and after photographs at each work location.	Construction Contractor.	Vegetation clearing remains within the specified limits (refer to Section 6.1.1).
Protecting remnant vegetation and key fauna habitat outside approved disturbance areas	Refer to 'Minimising vegetation disturbance' measures above in addition to below.					
	Project vehicles and machinery to remain within the Development Corridor (except for restricted access requirements that do not require any vegetation removal). Section 6.2.	Induction records. GIS mapping.	Ongoing.	Environmental inspection report / Weekly Inspection Checklist	Construction Contractor: Environmental Inspection Report: Tilt Renewables: Weekly Inspection Checklist.	Vegetation and habitat outside of the approved scope of works is not removed.
	Laydown and temporary disturbance areas in already disturbed areas where practicable and feasible. Section 6.2.	Weekly environmental inspections / checklist.	Ongoing.	Environmental inspection report / Weekly Inspection Checklist	Construction Contractor: Environmental Inspection Report Tilt Renewables: Weekly Inspection Checklist.	Vegetation and habitat outside of the approved scope of works is not removed.
Controlling weeds, feral pests and disease	Plant and equipment onboarding inspection. Section 6.5.1.	Visual inspections of areas all vehicles, plant and equipment.	Prior to arrival and being entry to the project.	Plant onboarding inspections. Weekly Inspection Checklist.	Construction Contractor: Environmental Inspection Report Tilt Renewables: Weekly Inspection Checklist.	High threat weed spread does not occur as a result of the Project.
	Following works (on any one landholding), all vehicles, plant and equipment will be brushed down to remove soil, mud,	Visual inspections of all vehicles, plant and equipment.	Following completion of works and departure from any one landholding (i.e. and prior to entry to	Environmental inspection report Weekly Inspection Checklist	Construction Contractor: Environmental Inspection Report Tilt Renewables: Weekly Inspection Checklist.	High threat weed spread does not occur as a result of the Project.

Topic	Impact Mitigation Measures	Monitoring Method	Timing/Frequency	Reporting Output	Responsibility	Performance Criteria
	vegetation debris and seeds.		any other landholding)			
	All vehicles and machinery will be sprayed (including chemical treatment) to minimise risk of spread of any stock / animal diseases. Chemical selection will be guided by industry codes of practice, state regulations and existing landholder practices.	Visual inspections of all vehicles, plant and equipment.	Following completion of works and departure from any one landholding (i.e. and prior to entry to any other landholding)	Environmental inspection report Weekly Inspection Checklist	Construction Contractor: Environmental Inspection Report Tilt Renewables: Weekly Inspection Checklist.	High threat weed spread does not occur as a result of the Project.
	Waste is managed to reduce opportunities for scavenging pest animals. Section 6.5.3.	Visual monitoring and inspections in accordance with the Construction Contractor's internal operating procedures.	Weekly during environmental inspections.	Environmental inspection report Weekly Inspection Checklist	Construction Contractor: Environmental Inspection Report Tilt Renewables: Weekly Inspection Checklist.	No signs of feral pest species scavenging around waste disposal areas (i.e. bins).
Controlling erosion	Implementation of erosion and sediment controls as per Managing Urban Stormwater – Soils and Construction Volume 2C Unsealed Roads (DECC, 2008). Section 6.7.1.	Visual monitoring of implementation during environmental inspections.	Weekly during environmental inspections.	Environmental inspection report Weekly Inspection Checklist	Construction Contractor: Environmental Inspection Report Tilt Renewables: Weekly Inspection Checklist.	Erosion is controlled and does not lead to impacts to biodiversity values.
Rehabilitating and revegetating temporary disturbance areas	Trenches, boreholes and pits will be backfilled using the soil removed and topsoil re-applied or spread.	Before and after photographs.	As soon as possible following completion of works at each location.	Confirmation of before and after photographs provided to Tilt Renewables.	Construction Contractor to undertake backfilling (rehabilitation activities and Tilt Renewables to verify rehabilitation completion.	Where practicable, disturbance areas to be rehabilitated to a land use commensurate with pre-disturbance condition.

6.1 Minimising Vegetation Disturbance during Vegetation Clearance

The pre-construction minor works program has been designed to avoid native tree and shrub clearing and therefore vegetation disturbance will be minimal during the completion of the pre-construction minor works program. Disturbance footprints will be small and targeted within existing cleared environments (e.g. gaps in native vegetation cover, road hardstands or agricultural land).

6.1.1 Approved Clearing Limits

To limit impacts to PCTs and potential threatened species habitat, maximum allowable clearing limits for the Project are listed in Appendix 8 of the Development Consent and **Section 5.1**. These have been considered during planning and design of the pre-construction works and will be adhered to through measures such as prior identification of appropriate areas for the pre-construction minor works to be undertaken and access to each work location.

Monitoring of works will be undertaken by Tilt Renewables on a weekly basis (refer to **Section 8.1**). Impacts and offset credit retirement is being maintained progressively. The calculation of impacts associated with this pre-construction minor works BMP has been conservatively applied, however given the nature of the proposed works and commitment that no treed vegetation will be impacted there is not considered to be a legitimate risk of approved clearing limits being compromised.

6.1.2 Minimising Loss of Hollow-bearing Trees

Clearing of hollow-bearing trees is not permitted during the proposed pre-construction minor works program. Work locations are mainly located within existing cleared environments and therefore interaction with hollow-bearing trees will be minimal. No trees are permitted to be removed as part of this BMP.

6.1.3 Demarcation of Disturbance Boundaries

The location of the proposed pre-construction minor works will be digitally captured and maintained within the Project survey and GIS databases. This data will be provided to the Construction Contractor digitally in an appropriate format to direct the location of, and access to, pre-construction minor works locations.

Work areas will be clearly demarcated prior to works commencing via taping/star pickets (or similar). Tilt Renewables will be responsible for digitally capturing the disturbance boundaries while the Contractor will be responsible for physically demarcating the work areas.

6.1.4 Vegetation Disturbance Permit

Due to the minor disturbance areas of the geotechnical works to be completed and the associated low impacts, Vegetation Disturbance Permits (VDPs) will not be completed for this specific scope of work subject to this BMP. VDPs will be required for any subsequent works during the pre-construction minor works stage that require larger disturbance footprints or require native vegetation disturbance.

As noted previously, the works program has been designed to only occur in areas with no trees or shrubs present (or areas that have been previously disturbed/cleared).

Throughout subsequent stages of the Project, prior to any proposed disturbance activity, the Construction Contractor will be responsible for completing a VDP which has been developed by Tilt Renewables.

The VDP would provide information on the following:

- Work details.
- Assessment of property-specific requirements.
- Environmental control checklist.
- Pre-start checklist.
- Incidental finds protocol.

6.1.5 Pre-clearance Survey

Pre-clearance surveys are not proposed to be implemented as part of this BMP as no treed or shrub vegetation will be cleared. Disturbance will be limited to minor areas (either borehole drilling or test excavations) and vehicle parking in immediately adjacent locations that are free of native trees and shrubs.

6.1.6 Salvage of Habitat Features

Salvage of habitat features is not expected to be applicable or required during the pre-construction minor works stage of the Project due to the location of the proposed works in predominately existing cleared land and the minor scale and nature of the works. As outlined in **Section 6.9.1**, topsoil will be retained for backfilling and respreading over the disturbance areas following completion of works as applicable.

6.2 Protection of Remnant Vegetation

For all works covered by this BMP, the Construction Contractor will be responsible for:

- Ensuring all native tree, hollow-bearing tree and shrub removal is avoided by the works.
- Ensure before and after photographs are taken of the disturbance areas in each location.
- Ensuring vehicles, mobile plant and personnel remain within the approved Development Corridor or existing disturbed areas (e.g. access tracks). No new access tracks will be created or developed by the Construction Contractor which require the clearing or removal of native treed/shrub vegetation as part of the pre-construction minor works program.
- Locating any laydown areas and other temporary disturbance activities in areas within the approved Development Corridor.
- Minimising further spread of weeds (refer **Section 6.5.1**) into adjacent remnant vegetation.

6.3 Minimising Impacts on Native Fauna

While some of the pre-construction minor work locations are situated within mapped threatened species polygons, impacts to native fauna are not expected as no native shrub/tree clearing will occur. The Construction Contractor will be required to report any interactions with native fauna to Tilt Renewables as part of the weekly reporting process.

In the unlikely event that fauna management is deemed necessary during works, the **Section 6.4** actions will be undertaken and further specific mitigation measures will be stipulated by Tilt Renewables.

6.4 Unexpected or Incidental Flora and Fauna Finds

If unexpected threatened flora or threatened/migratory fauna species are observed or suspected to be at risk, Tilt Renewables will proceed to:

- Arrange for a qualified ecologist, wildlife carer or animal handler for further assessment, relocation and/or advice as required.
- Notify Construction Contractor staff of the threatened species find via toolbox talks and advise of additional management measures to be adhered to (informed by the qualified ecologist), if required.

6.5 Biosecurity (Weeds, Pathogens and Vertebrate Pests)

The presence of weeds, pathogens and vertebrate pests are generally exacerbated by disturbance, and have the potential to substantially impact biodiversity values. A large portion of the Project has been subject to prior clearing and agricultural activity, such that the Project is unlikely to introduce any significant new threats. The site already supports a large number of weed flora species due to its long history of agricultural land use practices. However, ongoing management of these components, and prevention of further spread, remains a priority. The measures outlined in **Section 6.5.1** and **Section 6.5.2** are applicable to all stages of the Project.

It is noted that weeds and pests are not expected to be a significant threat during the pre-construction minor works stage of the Project due to the minor nature of the proposed works. However, weed and pest mitigation measures will be implemented where applicable to the proposed works.

6.5.1 Weeds and Pathogens

The Construction Contractor will be responsible for implementing biosecurity controls during the proposed works as directed and agreed by Tilt Renewables. Weeds are not expected to be a significant threat during the pre-construction minor works stage of the Project due to the minor nature of the proposed works and the general location of these works within previously disturbed environments. However, throughout subsequent stages of the Project, Tilt Renewables will work with relevant landowners to prevent the spread of weeds within the Project and neighbouring properties.

Prevention of weed spread to or across the Project will substantially reduce costs for ongoing treatment, however the spread of weeds is difficult to avoid entirely and active treatment/removal is

likely to be required, particularly during the construction stage when disturbance activity and risk of spread is at a peak.

The spread of pathogens can also be exacerbated by disturbance activities, if unmanaged. The Project is considered unlikely to contribute to further spread of pathogens, however active management remains a priority.

Ongoing management of weeds and pathogens is the responsibility of Tilt Renewables and is addressed through Property Management Plans (PMPs) entered into by Tilt Renewables, landowners and contractors, and may include:

- Undertaking pre-mobilisation inspection of vehicles, machinery and plant for weeds and weed seeds.
- Ensure that vehicles, equipment, clothing, and shoes are thoroughly clean and free from pests, weed seeds, plant material, and soil before entering the site ('at the gate'). This will be conducted in line with NSW Department of Primary Industries (DPI) (now NSW Department of Primary Industries and Regional Development (DPIRD) 'Come Clean, Go Clean' guides.
- Awareness training for all personnel on identification of native flora species, high threat weeds, pathogens and prevention of further spread.
- Prevention of stock access to work areas where practicable and in consultation with host landowners.
- Keeping vehicles and machinery to dry surfaces and formed roads wherever possible.
- Daily inspection of vehicles and machinery for mud, weed debris matter and weed seeds and cleaning at locations specified by landowners when required moving between locations. Construction Contractor vehicles will also be required to arrive to each property free of mud, weed debris and weed seed.
- Minimisation of soil disturbance where practicable.
- Regular inspection of roadsides, laydown areas, buffer zones and stockpiles for presence of weeds (refer **Section 8.2**).
- Chemical and physical removal of invasive weed species in accordance with the New South Wales Control Handbook (DPI, 2018).
- Specific measures to ensure that adjacent agricultural land and native vegetation is not significantly impacted by herbicides (e.g. avoiding strong winds, consideration of waterways, adhering to product instructions etc.).
- Documentation of the above activities, including dates, locations, methods and monitoring outcomes.

6.5.1.1 High Threat Weeds and Disease

The Construction Contractor will implement vehicle and machinery hygiene measures prior to entering and leaving each property (i.e – a single landholding). All vehicles and plant will be subject to pre-entry inspection to ensure they are clean of any soil, mud, vegetation or seed material. Prior to leaving any property all vehicles and equipment will be thoroughly brushed down (in a suitable location agreed with relevant landholders) and prior to entry to any other property (i.e landholding). Furthermore, all vehicles and machinery will be sprayed (including chemical treatment / disinfectant)

to minimise risk of spread of any stock / animal diseases. Chemical selection will be guided by industry codes of practice, state regulations and existing landholder practices.

Brush-down and spray-downs will focus on all areas reasonably likely to harbour weed material, including tyres, wheel arches, tracks, undercarriages and trailers, to ensure that soil, seed or vegetative material is removed prior to relocation into a different landholding.

High threat weeds known to occur within or adjacent to the proposed work areas will also be included within mandatory induction material to be provided to the Construction Contractor. This will assist in identifying potential high threat weeds within work areas as well as raising awareness of the risk of high threat weed incursion and the importance of active management practices.

6.5.2 Vertebrate Pests

Feral animal species such as foxes, pigs, goat and rabbit are known to occur within the Project, however populations are not expected to increase as a result of the Project and management of pest fauna is unlikely to be required during the pre-construction minor works stage due to the minor nature of these works. During the construction stage of the Project, Tilt Renewables will work with relevant landowners regarding the management of vertebrate pests. Implementation of control measures is the responsibility of Tilt Renewables, and includes:

- Appropriate waste management, ensuring that waste materials do not attract pests.
- Documentation of vertebrate pest sightings including date, location and description of activity.
- Relative to documented activity and in accordance with the Central West Regional Strategic Pest Animal Management Plan (Local Land Services, 2018) and the Hunter Regional Strategic Pest Animal Management Plan (Local Land Services, 2018a), active control including baiting, trapping, shooting, exclusion fencing and harbour destruction, as approved.

6.6 Bushfire

The Project is identified as bushfire prone land by the NSW Rural Fire Service (RFS). Tilt Renewables is responsible for directing the Construction Contractor to implement bushfire management measures in accordance with the NSW RFS *Planning for Bush Fire Protection Guide* (RFS 2019), and in consultation with the RFS and NPWS, as required by Schedule 3, Condition 37 of the Development Consent.

Bushfire control measures to be implemented for the Project include:

- Provision of fire response and management training for all relevant personnel.
- Identification of fire related hazards, including accumulated rubbish and flammable substances.
- Establishment of appropriate asset protection zones, or buffers between relevant Project infrastructure and bush fire hazards (e.g. adjacent vegetation) of at least 10 m, comprising a maintainable fuel-reduced physical separation (e.g. cleared firebreak).
- Provision of fire suppression equipment and appropriate storage/maintenance of fuel and flammable liquids.
- Establishment of designated smoking areas that are clearly marked and located away from high-risk zones, such as vegetation or areas with flammable materials.

- Monitoring of daily weather forecasts to assess and manage bushfire risks, escalating to the Tilt Renewables Project Manager if temperatures are forecast to exceed 38 degrees (°C).
- Restrictions on hazardous work activities (e.g. hot works) during total fire bans.
- Established procedures for notification of fire (e.g. call 000) and remaining safe during an emergency.

6.7 Soil and Water

Measures for the protection of soil and water will ensure that impacts to biodiversity are minimised, particularly for riparian ecosystems. These are summarised in **Section 6.7.1** and **Section 6.7.2** below.

It is noted that impacts to soil and water are not expected to be significant during the pre-construction minor works stage of the Project. However, as some of the proposed work locations occur in or proximate to waterways, measures outlined in **Section 6.7.1** and **Section 6.7.2** will be implemented where applicable to the proposed works.

6.7.1 Erosion and Sedimentation

Erosion and sedimentation impacts during the pre-construction minor works stage are expected to be low due to the small scale and low intensity of the proposed works.

Appropriate management of erosion and sedimentation is the responsibility of the Construction Contractor and will be managed through the development and implementation of site-specific Erosion and Sediment Control Plans on an as required basis.

The predominant risk requiring control will be work locations situated on waterfront land (i.e. within 40 m of the high bank) and the measures identified below are considered to be adequate to mitigate potential impacts of stream sedimentation or bank erosion.

Management measures, where relevant, will have regard for *Managing Urban Stormwater – Soils and Construction Volume 2C Unsealed Roads* (DECC, 2008) and include:

- Scheduling to avoid works during periods of high rainfall in areas of high erosion risk (i.e. areas on steep hillsides or on waterfront land) and allow stabilisation prior to forecast rainfall.
- Use of temporary sediment controls such as sediment fencing and coir logs downslope of work areas where erosion risk is heightened, particularly on waterfront land.
- Minimisation of clearing extents and/or disturbance.
- Assessing suitability of works following heavy rainfall and postponing works where necessary.
- Where practicable, minimal excavation of subsoils.
- Appropriate maintenance of access tracks.
- Appropriate management of stockpiles to avoid potential dispersion and sediment transfer.
- Back-fill boreholes and test holes using the soil removed and compact the soil.
- Ensure early site stabilisation and rehabilitation of boreholes and test holes. Cover of disturbed areas is required as soon as practicable following completion of works.

- Engineering and establishment of site-specific, suitable erosion and sediment controls, including the use of salvaged logs where applicable.
- Weekly (or more frequently when applicable) inspection, monitoring and maintenance of erosion and sediment controls until site is stabilised (refer **Section 8.0**).

6.7.2 Contamination of Soils and Waterways

Waterway contamination is considered to be a minimal risk for pre-construction minor works associated with the Project, however potential impacts to aquatic fauna are to be managed appropriately. Specific risks, although considered low, relate to works proposed to occur on waterfront land (i.e. geotechnical investigative drilling, artefact survey and/or salvage) and within the waterways (e.g. – any bathymetric surveys). Relevant management measures, where relevant, include:

- Ensure appropriate transport, storage and handling of hazardous materials, including fuels.
- Provision and maintenance of spill kits for management of accidental spills.
- Develop and implement a spill plan to prevent chemical and pollutant run off.
- Avoiding works within waterways and on waterfront land when heavy rainfall is predicted to occur.
- Tilt Renewables will ensure any disturbance within or adjacent to the major waterways within the Development Corridor, being Gundare Creek, Coolaburragundy River, Turee Creek, Starkeys Creek, Talbragar River and Goulburn River mitigates impacts to fish habitat.
- Use of temporary sediment controls such as sediment fencing and coir logs downslope of work areas will always be utilised where works occur on waterfront land.
- The DPI-predicted distribution maps for threatened freshwater fish lists the following waterways within the Project site as being within the distribution range of the respective fish species:
 - Hardyhead population of the Hunter River Catchment: Turill Creek, Darling River.
 - Southern Purple Spotted Gudgeon: Coolaburragundy River, Turee Creek, Talbragar River, Gundare Creek,
 - Eel tailed catfish: Coolaburragundy River, Turee Creek, Talbragar River.

Prior to the commencement of works within or adjacent to major waterways, Tilt Renewables will, if required, liaise with DPIRD to ensure appropriate measures are implemented to mitigate potential impacts of the works. Consultation with DPIRD will only be undertaken where required, as potential impacts to waterways and aquatic fauna associated with the proposed pre-construction minor works are low and limited in scale. Potential impacts are further mitigated through the implementation of the management measures outlined above.

6.8 Noise, Dust and Light

Potential impacts to fauna from excessive noise and dust generation during the pre-construction minor works stage are expected to be negligible due to the low intensity of the proposed works.

The proposed works are restricted to daytime hours where practicable, to minimise required lighting at night and associated light spill to surrounding areas.

6.9 Rehabilitation of Temporary Disturbance Areas

Disturbance during the pre-construction minor works stage of the Project is expected to be minimal. Since the proposed works are preparatory for the construction stage of the Project, the disturbed areas are expected to be re-disturbed or utilised for subsequent stages of the Project, limiting opportunity for rehabilitation during the pre-construction minor works stage.

Rehabilitation activities during the pre-construction minor works stage will be limited to small and temporary disturbance areas and focused on backfilling test holes and boreholes and respreading topsoil. The Construction Contractor will be responsible for landform stabilisation and re-establishment of each area consistent with that which existed pre-disturbance under the guidance of Tilt Renewables. This approach will ensure that all areas are safe, stable, non-polluting and commensurate with pre-existing biodiversity values.

Given the minor nature and scale of the pre-construction works, reseeding with an appropriate grass species or alternate stabilisation techniques (e.g – staked biodegradable mats, coir, jute or straw, etc) will be applied on high-risk areas where adjacent to waterways or on steep slopes. Cleared areas such as road surfaces, road verges, etc. will not be reseeded given the existing cleared nature of these areas. Pavement dipping surveys located directly in the road surface will be backfilled with self-compacting road material².

6.9.1 Stockpiling of Soils

For temporary disturbance areas, topsoils and subsoils will be removed and stored separately for re-use. Appropriate measures for the management of stockpiles include:

- Placement within the same land parcel, reducing movement across landowner boundaries, as far as practical and as close as possible to the intended area of re-use.
- Ensuring that stockpiles are long and low with a height less than 1.5 m to preserve soil structure and avoid compaction.
- If stockpiled for a prolonged period of time, soils should be seeded with pasture grasses, and eventually re-spread in appropriate areas.
- It is noted that stockpiling of soils and vegetative materials will be minimal during the pre-construction stage of the Project due to the minor nature of the proposed works. Soils will typically be stockpiled for a short period during geotechnical works and utilised for backfilling on the same day. No boreholes or test pits will be exposed overnight.

6.9.2 Land Preparation and Vegetation Establishment

It is noted that significant land preparation is not expected to be required during the pre-construction minor works stage of the Project due to the minor disturbance areas required as part of the proposed works.

Following land preparation works, disturbed areas will be reseeded with an appropriate stabilising grass species. These works will be undertaken by the Construction Contractor under the guidance of Tilt Renewables and captured through the weekly environmental reports. Due to the pre-construction

² Or other material requested by relevant Councils.

minor works occurring in areas which will be re-disturbed during Construction, no further inspections for establishment will be required unless requested by the landowner.

6.10 Biodiversity Offsetting

Prior to the commencement of the pre-construction minor works program, Tilt Renewables will retire the appropriate credits in accordance with the NSW Biodiversity Offset Scheme and will be achieved by measures included in Schedule 3, Condition 19 of the Development Consent, including:

- a) *Acquiring or retiring 'biodiversity credits' within the meaning of the NSW Biodiversity Conservation Act 2016.*
- b) *Making payments into an offset fund that has been established by the NSW Government; or*
- c) *Funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme.*

The impact credits calculated for the scope of works outlined in **Appendix A** are summarised in **Table 6.2** below. It is noted that a significant round-up has been imposed to these calculations (rounding to one single credit per Interim Biogeographic Regionalisation for Australia (IBRA) region/sub-region).

Table 6.2 Calculated Credit Liability (2026 Scope)

IBRA Region / Sub-Region	PCT and Vegetation Zone	Offset Trading Group	Impact Area (ha)	Total Impact for the Project (ha) for the IBRA Region / Sub-Region	Total Credits/ha	Credit Liability for Pre-Construction Minor Works	Extrapolated Credit Liability for Pre-Construction Minor Works ¹	HBTs Present (Y/N)
Liverpool Range IBRA Subregion / Brigalow Belt South IBRA Region	VZ7 – PCT 483 – Low	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	0.003252	187.7	27.3	0.08877	1	Yes
	VZ8 – PCT 483 – DNG Low	Western Slopes Grassy Woodlands >=90%	0.005480	270.0	15.4	0.08440	1	No
	VZ11 – PCT 488 – Low	New England Grassy Woodlands >=50% and <70%	0.001204	199.3	25.4	0.03057	1	Yes
	VZ12 – PCT 488 – Exotic	New England Grassy Woodlands >=50% and <70%	0.002002	366.2	0	0.00000	0	No
	VZ17 – PCT 483 – DNG	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland (CEEC)	0.001802	104.3	17.7	0.03189	1	No

IBRA Region / Sub-Region	PCT and Vegetation Zone	Offset Trading Group	Impact Area (ha)	Total Impact for the Project (ha) for the IBRA Region / Sub-Region	Total Credits/ha	Credit Liability for Pre-Construction Minor Works	Extrapolated Credit Liability for Pre-Construction Minor Works ¹	HBTs Present (Y/N)
Pilliga IBRA Subregion / Brigalow Belt South IBRA Region	VZ7 – PCT 483 – Low	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CEEC)	0.000200	61.1	30.5	0.00610	1	Yes
	VZ8 – PCT 483 – DNG Low	Western Slopes Grassy Woodlands >=90%	0.000857	125.0	15.0	0.01285	1	No

Credit liabilities presented in **Table 6.2** above have been calculated based on a credits per hectare calculation for each vegetation zone and for each IBRA sub-region. The number of geotechnical works locations within each PCT and Vegetation Zone across the respective IBRA subregions was identified and then multiplied by the assumed disturbance areas associated with each work location (as identified in **Appendix A**) to calculate the total disturbance footprint. Using the approved biodiversity credit reports for the Project, the credits per hectare ratio was calculated for each vegetation zone in each IBRA subregion. The disturbance footprint (per IBRA/PCT and Vegetation Zone) was then multiplied by the credits/ha values.

Evidence of retirement will be provided to DPHI prior to impacts occurring.

The BMP will be updated to account for future stages of the Project where greater impacts to native vegetation and species-credit species polygons is expected and therefore additional offset liabilities will be required to be satisfied prior to the work occurring.

Offset liabilities will be calculated based on a credits per hectare basis as per the information presented in Table 8-1 and Table 8-2 of Appendix 8 of the Development Consent. That is, the BAM Credit Calculator will not be manipulated to enter the specific impacts of the future stages.

7.0 Roles, Responsibilities and Training

7.1 Roles and Responsibilities

In accordance with Schedule 3, Condition 21 of the Development Consent, following receipt of the NSW Planning Secretary's approval this BMP must be implemented for the Project. The roles and responsibilities applicable to the pre-construction minor works stage of the Project are provided in **Table 7.1**.

Table 7.1 Key Roles and Responsibilities

Role	Responsibility
Tilt Renewables Project Manager	<ul style="list-style-type: none"> • Oversee the implementation of the BMP. • Ensure appropriate approvals and licences are held. • Provide adequate resources to ensure compliance with the BMP. • Ensure that all personnel undertaking works are familiar with the BMP and have undertaken site inductions. • Coordinate and manage the Construction Coordinator. • Have a working knowledge of the BMP.
Tilt Renewables Health, Safety and Environment Manager (or delegate, e.g. Environmental Advisor)	<ul style="list-style-type: none"> • Oversee the implementation of the BMP. • Oversee monitoring and reporting compliance with the BMP including undertaking environmental inspection and checklist on weekly basis (minimum). • Undertake incident and non-compliance notification and investigation procedures as required. • Arrange the review and update of the BMP. • Ensure resources are made available to enable works to comply with this BMP. • Responsible for the implementation of this BMP (as appropriate) • Responsible for the induction of pre-construction minor works personnel. • Responsible for addressing corrective actions arising from environmental inspections. • Maintenance of cumulative disturbance and offset retirement register. • Implement the biodiversity management monitoring framework.
Construction Contractor	<ul style="list-style-type: none"> • Complete a site induction prior to commencing works. • Follow any instructions provided by Tilt Renewables Project Manager, Tilt Renewables Environmental Advisor, or an appropriately qualified and experienced ecologist. • Implement and work in accordance with the requirements of this BMP (as appropriate) • Installation and maintenance of environmental controls associated with pre- construction works. • Undertake and maintain records of appropriate routine inspections. • Report and raise any issues that arise that may have an environmental impact. • Report environmental incidents (actual/potential) to the Tilt Renewables Project Manager and assist in investigation and resolutions. • Provide Environmental Inspection Report including before and after photos at each work location

7.2 Training, Competence and Awareness

7.2.1 Site Inductions

A Project-wide online induction is required to be undertaken by all personnel who will be on site prior to arriving.

All personnel will be required to undergo a pre-construction minor works-specific induction, to be developed and administered by Tilt Renewables. The induction will include:

- Site information.
- Risk management.
- Emergency preparedness.
- Driving onsite.
- Biosecurity requirements.
- Environmental considerations.
- Information on how to access the Development Consent and this BMP.

An induction register will be maintained by Tilt Renewables, including the name, date, and confirmation of completion of induction of all personnel.

Additionally, Tilt Renewables will ensure all personnel are briefed on the Development Consent and this BMP, including:

- An overview of the Development Consent requirements and contractor obligations under this BMP.
- Locations of the Development Consent and this BMP.
- Awareness training for sensitive biodiversity issues and relevant impacts.
- An overview of the management measures detailed in this BMP.
- A clear communication of roles and responsibilities under this BMP, including any stop-work situations, incident, non-conformances and notification requirements.

7.2.2 Toolbox Talks

Targeted training in the form of toolbox talks will also be provided to personnel with a key role in biodiversity management, particularly in regard to the relevant management measures required to be implemented in accordance with this BMP.

8.0 Monitoring, Reporting and Corrective Actions

8.1 Cumulative Disturbance Register

Tilt Renewables will be responsible for the development of a suitable cumulative disturbance register. This must provide for the progressive tracking and recording of both planned and actual disturbance throughout the proposed works, to ensure that both planned and actual clearing is kept to within the approved clearing limits, and calculated offsetting requirements for each PCT and threatened fauna species polygon (refer **Section 6.10**). The register will be updated weekly to reflect the cumulative progress of clearing activities.

The register must be provided to DPHI within 3 months of concluding ground disturbance of each stage of the Project's development (refer **Section 1.3**) for validation of the pre-construction disturbance assumptions and confirmation that the works undertaken as part of each stage is within the approved clearing limits.

8.2 Inspections

During the proposed works, routine inspections of work areas will be undertaken by the Construction Contractor and will include the following components, as applicable during active works:

- Protection of remnant vegetation.
- Open pits and trenches for fauna.
- Hygiene procedures and documented weed and seed inspections.
- Material and vehicle movement.
- Erosion and sediment control measures.
- Implementation of progressive rehabilitation or stabilised areas for temporarily disturbed areas.
- Bushfire and other hazards.
- Dust generation.

8.3 Auditing

Tilt will undertake random inspections of the pre-construction minor works and an environmental checklist will be completed to ensure compliance with this BMP on a weekly basis (minimum).

Throughout the Project, auditing of the implementation of this BMP will be carried out in accordance with Schedule 4, Condition 6 of the Development Consent.

8.4 Management Triggers and Corrective Actions

The biodiversity management monitoring framework applicable to the pre-construction minor works stage is presented in **Table 6.1** and will be implemented by Tilt Renewables. For each biodiversity component and relevant management measures, monitoring methods include an indication of frequency, relevant documents, duration, relevant parameters and relevance to the pre-construction minor works stage of the Project.

The BMP will be revised and updated following completion of pre-construction minor works to include monitoring/reporting requirements relevant to the next stage of the Project.

In the event that the performance measures as detailed in **Table 6.1** are not met, corrective actions will be developed by Tilt Renewables.

9.0 Incident and Non-Compliance Management

9.1 Incident Notification and Reporting

9.1.1 Development Consent

Under the Development Consent, an ‘incident’ will be defined as an occurrence or set of circumstances that causes or threatens to cause material harm to the environment, and as a consequence of that harm, may cause harm to the health and safety of human beings and which may or may not be or cause a non-compliance. ‘Material harm’ is harm that:

“involves actual harm to the environment that may include (but not be limited to) a leak, spill, emission other escape or deposit of a substance, and as a consequence of that environmental harm (pollution), may cause harm to the health or safety of people; or

results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).”

Within 24 hours of becoming aware of an incident, Tilt Renewables will provide a detailed written notification via the Major Project website. This notification will include:

- Date, time and location.
- A brief description of what occurred and why it has been classified as an incident.
- A description of what immediate steps were taken in relation to the incident.
- Identifying a contact person for further communication regarding the incident.

Within 7 days of the date on which the incident occurred, or as otherwise agreed by the Planning Secretary, Tilt Renewables will provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident including the following information, as well as any further reports which may be requested by the Planning Secretary:

- Identifies how the incident was detected.
- Identifies when Tilt Renewables became aware of the incident.
- Identifies any actual or potential non-compliance with conditions of consent.
- Identifies further action(s) that will be taken in relation to the incident.
- A summary of the incident.
- Outcomes of an incident investigation, including identification of the cause of the incident.

- Details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence, including the period for implementing any corrective and/or preventative actions.
- Details of any communication with other stakeholders regarding the incident.

9.2 Non-Compliance Notification and Reporting

Tilt Renewables will notify DPHI in writing via the Major Projects website within seven days of becoming aware of any non-compliance with the conditions of the Development Consent. Any non-compliance notification will identify the development and the application number and name, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known). The notification will also identify what actions have been taken, or will be undertaken, to address the non-compliance.

Under the Development Consent, a non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

10.0 Review and Revision

10.1 Triggers for Review and Revision

As described in **Section 1.3**, this BMP has been prepared to apply to the pre-construction minor works stage of the Project and further revisions to the BMP will be developed prior to the commencement of any subsequent stages of the Project.

In accordance with Schedule 4, Condition 2 of the Development Consent, Tilt Renewables will review and revise (if necessary) the BMP to the satisfaction of the Planning Secretary within 3 months of the submission of:

- An incident report under Schedule 4, Condition 4 of the Development Consent (see **Section 9.1**).
- An independent environmental audit report under Schedule 4, Condition 4 of the Development Consent.
- Any modification to the conditions of the Development Consent.

Additional triggers for review and revision of this BMP include:

- Substantial changes in Project scope and design.
- At completion of the Operation and Maintenance phase / prior to commencement of the Decommissioning stage.
- Addressing the consequences of significant environmental incidents or findings of an audit of the performance of meeting relevant performance criteria.
- As directed by relevant agencies.

Where revisions to the BMP are required, Tilt Renewables must submit the revised BMP to the Planning Secretary for approval, within 4 weeks of the review.

10.2 Matters to be Considered During BMP Review

Review and revision of this BMP will consider:

- Environmental monitoring reports.
- Any reported non-compliances or incidents.
- Opportunities for improvement of:
 - Mitigation/management measures
 - Monitoring methods and appropriate triggers
 - Initial response and corrective actions
 - Relevant roles, responsibilities and training.

10.3 Distribution and Publication of Revised BMP

In accordance with Schedule 3, Condition 21(b) and Schedule 4, Condition 2 of the Development Consent, a copy of the updated BMP and changes will be distributed to all relevant stakeholders. Changes will also be communicated to relevant site personnel via relevant stakeholder consultation structures, site inductions and toolbox talks.

Once the revised BMP has been approved, and in accordance with Schedule 4, Condition 7 of the Development Consent, the revised BMP will be published and made publicly available on the Tilt Renewables website: <https://www.tiltrenewables.com/assets-and-projects/liverpool-range-wind-farm/>.

11.0 References

Committee EV-018. (2009). Protection of trees on development sites (AS 4970-2009). *Standards Australia*. <https://www.tcaa.com.au/wp-content/uploads/2018/11/AS-4970-2009-Protection-of-trees-on-development-sites.pdf>

Department of Environment and Climate Change (DECC). (2008). Managing Urban Stormwater: Soils and Construction: Volume 2C – Unsealed Roads. *Stormwater Trust*. <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Water-quality/managing-urban-stormwater-soils-construction-volume-2c-unsealed-roads-0802.pdf>

Department of Planning, Industry and Environment (DPIE). (2020). Saving our species: Hygiene Guidelines. *NSW Government*. <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Wildlife-management/saving-our-species-hygiene-guidelines-200164.pdf>

Department of Planning, Industry and Environment (DPIE) (2021). Threatened Biodiversity Data Collection (TBDC).

Department of Primary Industries (DPI). (2013). Policy and guidelines for fish habitat conservation and management. *NSW Government*. https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0009/468927/Policy-and-guidelines-for-fish-habitat.pdf

Department of Primary Industries (DPI). (2018). New South Wales Weed Control Handbook. *NSW Government*. https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0017/123317/weed-control-handbook.pdf

Local Land Services. (2018). Central West Regional Strategic Pest Animal Management Plan: 2018-2023. *NSW Government*. https://www.lls.nsw.gov.au/__data/assets/pdf_file/0006/820788/CW-RSPAMP-web-final.pdf

Local Land Services. (2018a). Hunter Regional Strategic Pest Animal Management Plan: 2018-2023. *NSW Government*. https://www.lls.nsw.gov.au/__data/assets/pdf_file/0004/820795/Hunter-Pest-Plan.pdf

Local Land Services. (2022). Central West Regional Strategic Weed Management Plan: 2023-2027. *NSW Government*. https://www.lls.nsw.gov.au/__data/assets/pdf_file/0011/722873/Central-West-Regional-Strategic-Weed-Management-Plan-2023-2027.pdf

Local Land Services. (2022a). Hunter Regional Strategic Weed Management Plan: 2023-2027. *NSW Government*. https://www.lls.nsw.gov.au/__data/assets/pdf_file/0010/806509/Hunter-Regional-Strategic-Weed-Management-Plan-2023-2027.pdf

Landcom. (2004). Soils and Construction: Managing Urban Stormwater. *NSW Government*. <https://landcom.nsw.gov.au/assets/Landcom-design-guidelines-and-fact-sheets-2008-2011/managing-urban-stormwater-soils-construction-volume-1-fourth-edition-compressed.pdf>

NGH Environmental (2013a). Biodiversity Assessment, Liverpool Range Wind Farm – Wind Farm Study Area.

NGH Environmental (2013b). Biodiversity Assessment, Liverpool Range Wind Farm – Transmission Line Study Area.

NGH Environmental (2017). Biodiversity Addendum Report: Liverpool Range Wind Farm and Transmission Line Project.

NSW Rural Fire Service (RFS). (2019). Planning for Bush Fire Protection Guide. *NSW Government*.
https://www.rfs.nsw.gov.au/__data/assets/pdf_file/0005/174272/Planning-for-Bush-Fire-Protection-2019.pdf

Umwelt. (2023). MOD-1 Submissions Report. *Prepared for Liverpool Range Wind Farm*.
<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=EXH-48360214%2120230914T022443.746%20GMT>

Umwelt. (2023a). Response to Submissions Biodiversity Development Assessment Report. *Prepared for Liverpool Range Wind Farm*. https://www.tiltrenewables.com/documents/1623/2022-09416_LRWF_PER_Appendix_D__BDAR_Part1.pdf

Umwelt. (2024). MOD-1 Amendment Report: Temporary Project-specific Workers Accommodation Facility. *Prepared for Liverpool Range Wind Farm*.
<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6696-MOD-1%2120240118T235822.672%20GMT>

Umwelt. (2024a). Addendum to Biodiversity Development Assessment Report. *Prepared for Liverpool Range Wind Farm*.
<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=EXH-67001459%2120240410T091640.266%20GMT> .

Umwelt. (2025). Liverpool Range Wind Farm Biodiversity Management Plan – Pre-construction Minor Works. <https://tiltwebsite.blob.core.windows.net/tiltwebsitecontainer/2025/04/Biodiversity-Management-Plan-%E2%80%93-Pre-construction-Minor-Works.pdf>

Umwelt. (2026). Liverpool Range Wind Farm Modification 3 (SSD6696) – Biodiversity Development Assessment Report.
<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6696-MOD-3%2120260327T035042.274%20GMT>

Appendix A

PCMW Scoping Report – Letter dated 1 April 2026



01 April 2026

Nicole Brewer
Director, Energy Assessments
Department of Planning, Housing and Infrastructure
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

Via: NSW Major Projects Portal

Dear Ms Brewer,

RE: Liverpool Range Wind Farm – SSD 6696 – PCMW BMP

Tilt Renewables Australia Pty Ltd as trustee for Liverpool Range Wind Farm Project Trust (Tilt Renewables), is developing the Liverpool Range Wind Farm project (the Project).

Tilt Renewables refers to State Significant Development Consent SSD-6696 (Development Consent) that was granted for the Project on 27 March 2018 and subsequently modified on 23 October 2024 (SSD-6696-Mod-1), and on 30 October 2025 (SSD-6696-Mod-2) (the Approved Development).

The existing Pre-construction Minor Works Biodiversity Management Plan (PCMW BMP) (Umwelt, 2025), approved 11 March 2025, was prepared to reflect the initial geotechnical investigation program relevant to the pre-construction minor works stage of the Project. The PCMW BMP has now been amended to capture the full PCMW stage of the Project, i.e. not specific to individual geotechnical investigation programs (Umwelt, 2026). This approach has been adopted to enable the continued, timely delivery of the pre-construction minor works program whilst also ensuring fit-for-purpose biodiversity avoidance, minimisation and mitigation measures are in place for the duration of this stage of the Project.

This letter has been prepared to provide additional information on the pre-construction minor works scopes proposed to be undertaken by Tilt Renewables and the associated potential biodiversity impacts and offsets which relate to the pre-construction minor works scope.

Pre-Construction Minor Works Scopes 2026

As per the works allowed under the definition of pre-construction minor works in the Development Consent, Tilt Renewables is proposing to undertake the follow scopes:

- Geotechnical investigative drilling, with specific details of the works illustrated in **Figure 1** (see **Attachment 1**) and being as follows:
 - Eight (8) boreholes (~15 cm diameter and ~20 m depth) at a subset of wind turbine foundation locations. Installation of standpipes in each of the borehole locations.
 - 71 test pit locations (approximately 1 m wide by 2 m long, to a depth of 3.5 m) at a subset of wind turbine foundations, access tracks and ancillary infrastructure locations.
- Bathymetric surveys (use of flotation device) in one location on the Talbragar River and associated light vehicle access.

- 47 pavement dipping locations along Vinegaroy Road and Rotherwood Road involving drilling of existing road pavement to sub-base material. Vehicle and testing activities will be contained to existing roadway.
- Waterway survey (Talbragar River) involving two (2) test borehole locations on waterfront land and one (1) test bore location on the existing road pavement and associated light vehicle access. Disturbance limited to vehicle access (rear mounted auger from standard light vehicle) and borehole diameter of 10-15 cm.
- Potential Aboriginal cultural heritage artifact survey and/or salvage in locations of borehole works in the Potential Archaeological Deposit (Talbragar River 1).
- 48 utility survey locations along Vinegaroy Road and Rotherwood Road using non-destructive digging (NDD) and ground penetrating radar techniques. Vehicle use is limited to a light vehicle and vacuum truck to remove excavated material from 20-30 cm deep excavation (~0.25 m²). NDD should be limited to road edges at points where the utility crosses under the carriageway or through intersections.

Biodiversity impacts

The above scopes of work are minimal in impact (i.e. low intensity and minimal disturbance footprints) and are located in areas which are either already disturbed, cleared or paved, or will be disturbed at a larger scale during the Public Road Upgrades and Construction stages of the Project. 38 work locations are within areas mapped as BC Act listed Threatened Ecological Communities (TEC) (Box Gum Woodland Critically Endangered Ecological Community (CEEC)) and approximately five (5) are located within areas mapped as BC Act listed threatened fauna species polygons (Squirrel glider habitat). However, no treed vegetation will be removed as part of the works.

Table 1 below provides a summary of the Land Category/PCTs associated with the pre-construction minor work locations.

All associated figures are included in **Attachment 1**. The Plant Community Types (PCTs) and TECs located within the extent of the pre-construction minor work locations have been mapped and are included in **Figure 2** and **Figure 3** (respectively), while the pre-construction minor works locations in proximity to mapped BC Act listed threatened species polygons have been included as **Figure 4** (Large-eared pied bat), **Figure 5** (Squirrel glider), **Figure 6** (Southern greater glider) and **Figure 7** (Eastern cave bat), although it is noted that only squirrel glider species polygons intersect the pre-construction minor works locations.

Table 1 Land Category/PCTs within the Pre-construction Minor Work Areas

Vegetation Zone	Land Category/PCT	Condition Class	BC Act	EPBC Act	PCMW Locations by Land Category
7	PCT-483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Low	CEEC ¹	N/A	20
8	PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Low Condition DNG	N/A	N/A	63
11	PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy	Low	CEEC ^{1,2}	N/A	8

Vegetation Zone	Land Category/PCT	Condition Class	BC Act	EPBC Act	PCMW Locations by Land Category
	woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion				
12	PCT 488 – Silvertop Stringybark - Yellow Box +/- Nortons Box grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion	Exotic	N/A	N/A	11
17	PCT 483 – Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	DNG	CEEC ¹	N/A	10
-	Land Category 1	Exempt Land	N/A	N/A	1
-	Disturbed Land	Disturbed	N/A	N/A	65

- CEEC = Critically Endangered Ecological Community
- ¹ 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).
- ² Only a portion of this vegetation zone conforms with the TEC.

Biodiversity Offsets

The impact credits calculated for the scope of works are summarised in **Table 2** below. It is noted that a significant round-up has been imposed to these calculations (rounding to one single credit per PCT and vegetation zone).

Table 2 Calculated Credit Liability

IBRA Region / Sub-Region	PCT and Vegetation Zone	Impact Area (ha)	Total Impact for the Project (ha) for the IBRA Region / Sub-Region	Total Credits/ha	Credit Liability for Pre-Construction Minor Works	Extrapolated Credit Liability for PCMW ¹
Liverpool Range IBRA	VZ7 – PCT 483 – Low	0.003252	187.7	27.3	0.08877	1

IBRA Region / Sub-Region	PCT and Vegetation Zone	Impact Area (ha)	Total Impact for the Project (ha) for the IBRA Region / Sub-Region	Total Credits/ha	Credit Liability for Pre-Construction Minor Works	Extrapolated Credit Liability for PCMW ¹
Subregion / Brigalow Belt South IBRA Region	VZ8 – PCT 483 – DNG Low	0.005480	270.0	15.4	0.08440	1
	VZ11 – PCT 488 – Low	0.001204	199.3	25.4	0.03057	1
	VZ12 – PCT 488 – Exotic	0.002002	366.2	0	0.00000	0
	VZ17 – PCT 483 – DNG	0.001802	104.3	17.7	0.03189	1
Pilliga IBRA Subregion / Brigalow Belt South IBRA Region	VZ7 – PCT 483 – Low	0.000200	61.1	30.5	0.00610	1
	VZ8 – PCT 483 – DNG Low	0.000857	125.0	15.0	0.01285	1

¹Rounded to the nearest whole number >0.

Evidence of retirement is provided in **Attachment 2** as required by Schedule 3, Condition 19 of the Development Consent.

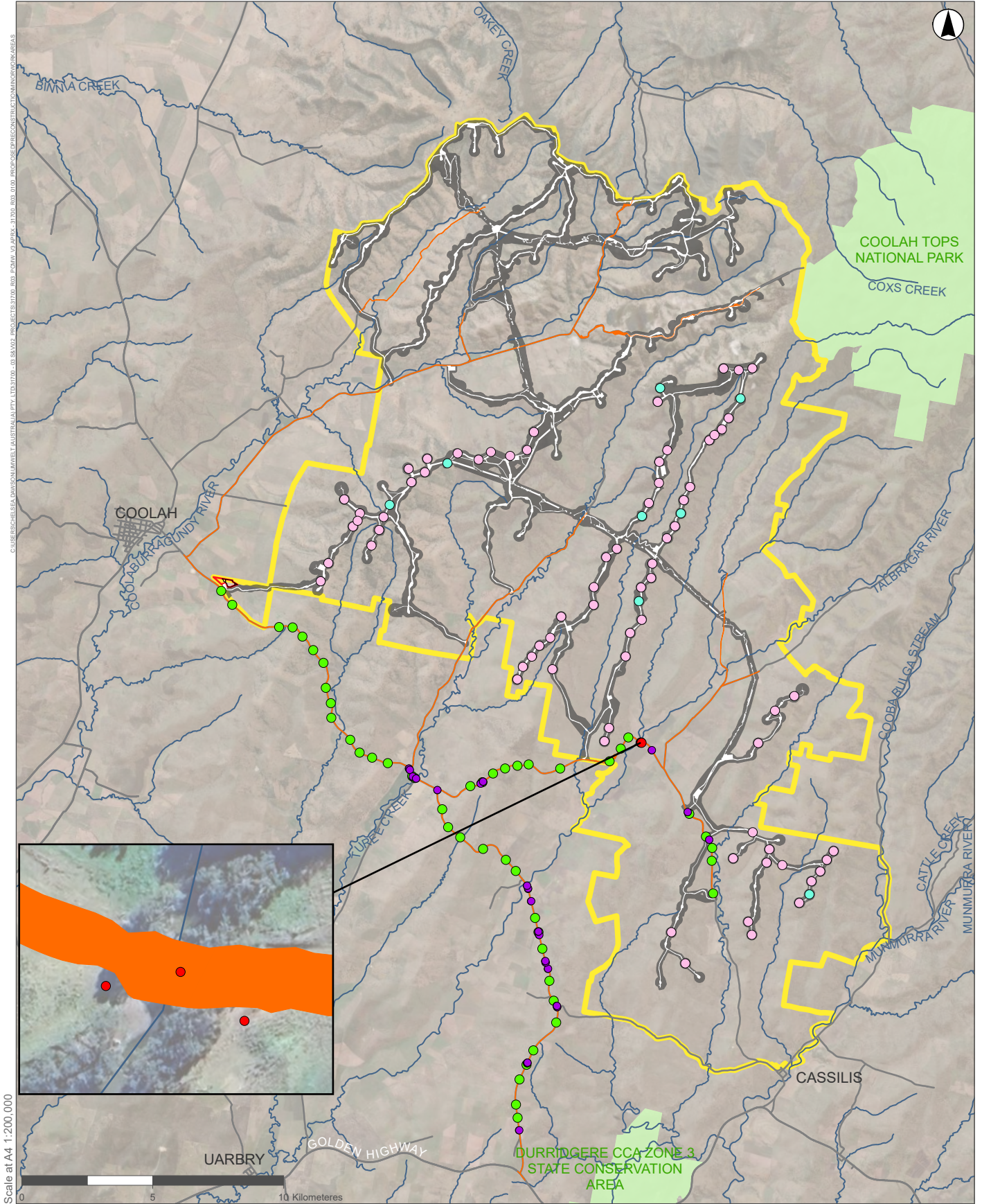
We look forward to working with the DPHI to progress the updated PCMW BMP through the approvals process in a timely manner and are happy to provide any further information as required. Should you require further information please contact me on mobile: 0424 091 295 or email lisa.simonsen@tiltrenewables.com.

Kind regards
Lisa Simonsen

A handwritten signature in black ink that reads 'Simonsen'.

Lisa Simonsen
Environment and Development Planner
P: 0424 091 295
E: lisa.simonsen@tiltrenewables.com

Attachment 1 – Figures



Legend

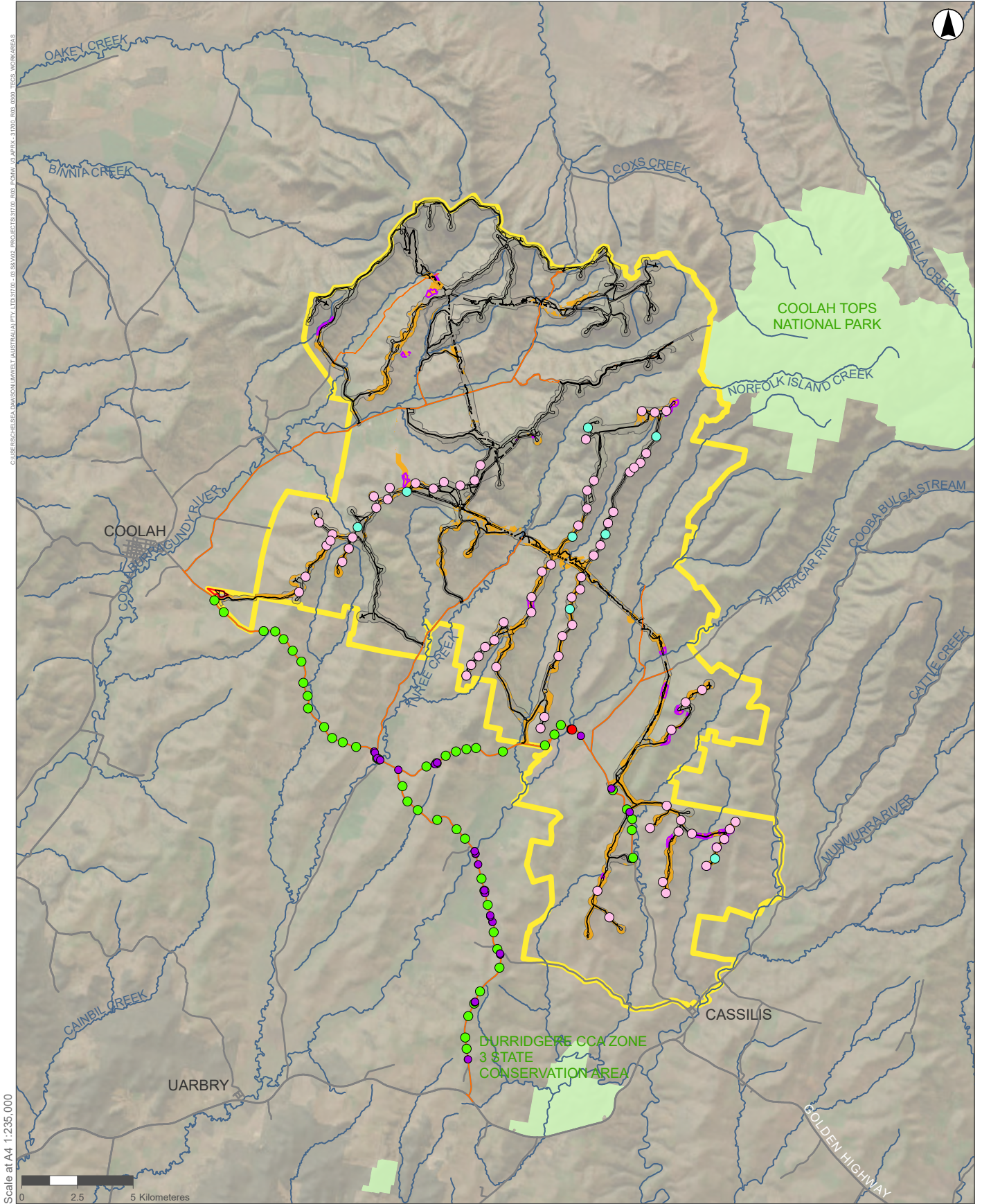
- | | | |
|------------------------------|---------------------------------------------------------|----------------------------------------------|
| Project Site | Development Corridor | Pre-construction Minor Work Locations |
| National Parks (NPWS Estate) | Development Corridor – Wind Farm | Geotechnical borehole sites |
| Road | Development Corridor – TWA Facility | Pavement Dipping Surveys |
| Watercourse | Indicative Development Footprints | Talbragar River borehole sites |
| | Indicative Development Footprint – Wind Farm | Test pits |
| | Indicative Development Footprint – Public Road Upgrades | Utility Survey Location |
| | Indicative Development Footprint – TWA Facility | |



FIGURE 1
Proposed Pre-construction Minor Work Areas

Image Source: ESRI Basemap (2023) | Data Source: NSW DFSI (2022), Umwelt (2024)

The External Transmission Line component of the Project has been excluded from this Figure as Tilt Renewables does not intend to construct this component of the Project.



C:\USER\RESCHERSEA\AWSON\MWELT_AUSTRALIA\PTV_LTD\31700_03_SAVO2_PROJECT\31700_03_P\AWN_V04.APRX_1700_000_TEC2.WORKMAPS

Scale at A4 1:235,000

GDA2020 MGA Zone 55

Legend

- Project Site
- National Parks (NPWS Estate)
- Road
- Watercourse
- Development Corridor – Wind Farm
- Development Corridor – TWA Facility
- Indicative Development Footprint – Wind Farm
- Indicative Development Footprint – TWA Facility

- Indicative Development Footprint – Public Road Upgrades
- Pre-construction Minor Work Locations**
- Geotechnical borehole sites
- Pavement Dipping Surveys
- Talbragar River borehole sites
- Test pits
- Utility Survey Location

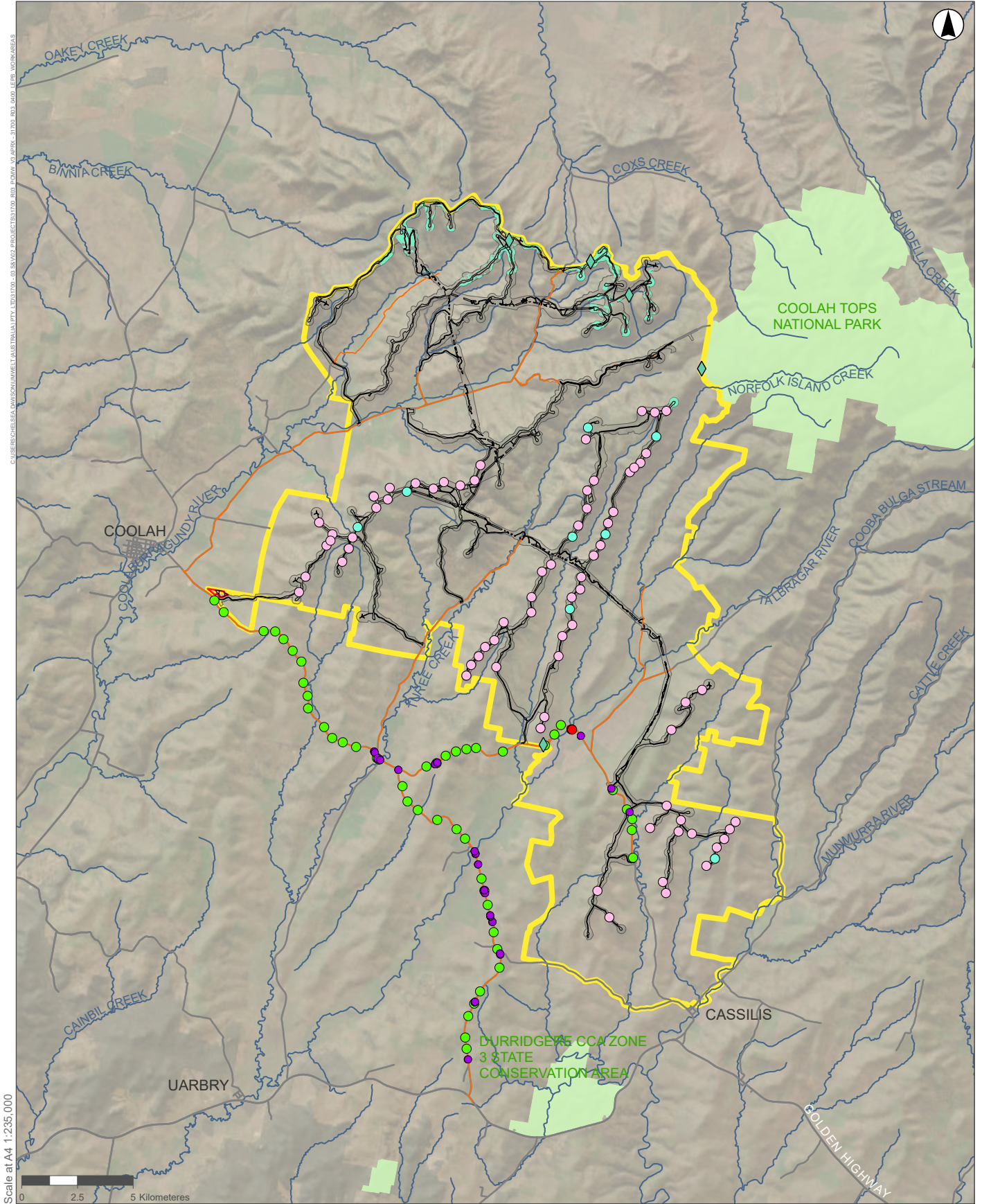
- Threatened Ecological Community**
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC (Commonwealth Box Gum Woodland CEEC)
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC (NSW Box Gum Woodland CEEC)



FIGURE 3
Threatened Ecological Communities (BC Act) within Pre-construction Minor Work Areas

Image Source: ESRI Basemap (2023) | Data Source: NSW DFSI (2025), Umwelt (2024)

The External Transmission Line component of the Project has been excluded from this Figure as Tilt Renewables does not intend to construct this component of the Project.



Legend

- █ Project Site
- █ National Parks (NPWS Estate)
- Road
- Watercourse
- Development Corridor – Wind Farm
- Development Corridor – TWA Facility
- Indicative Development Footprint – Wind Farm
- Indicative Development Footprint – TWA Facility
- Indicative Development Footprint – Public Road Upgrades

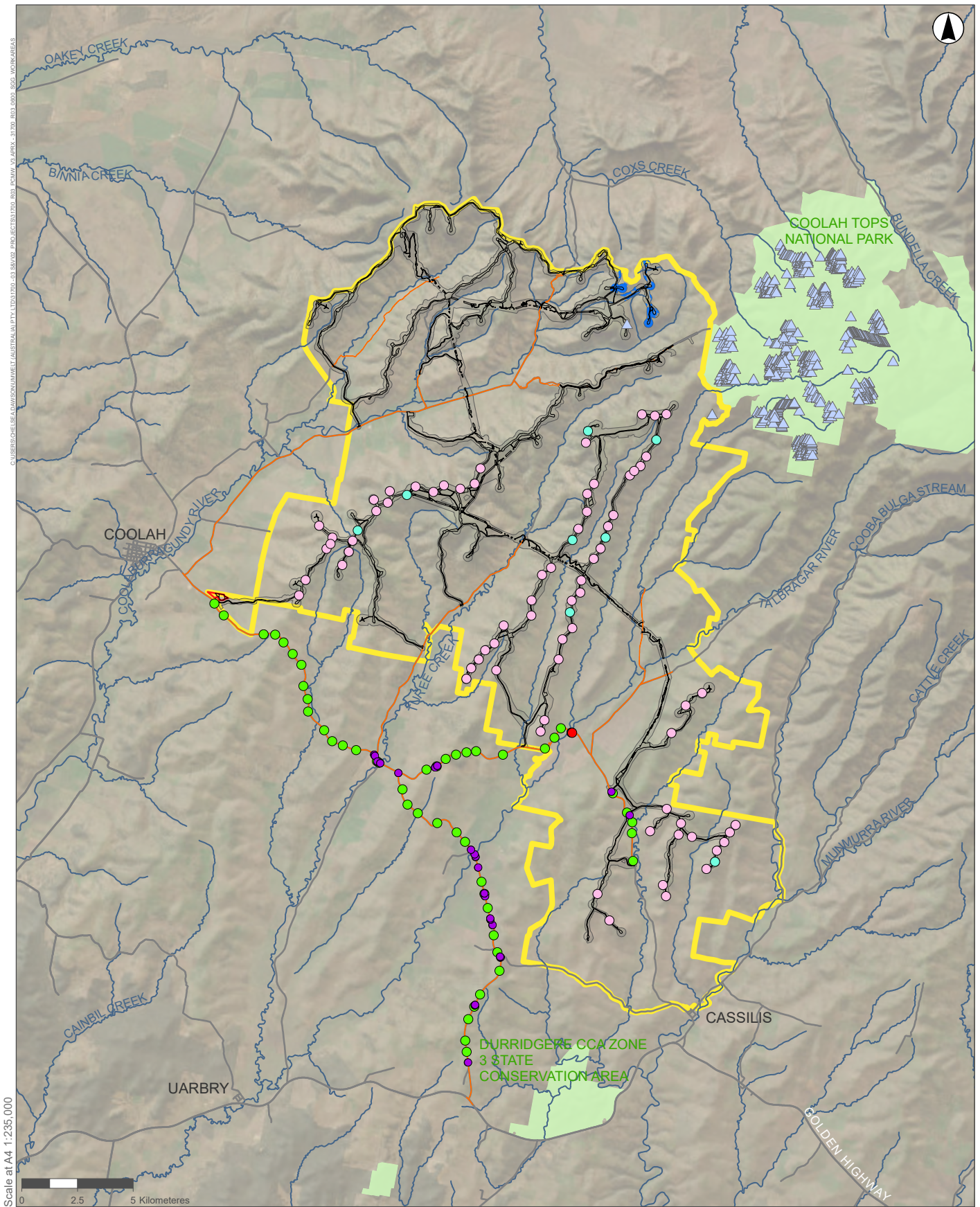
Umwelt Records (BBUS year 1)

- ◆ Large-eared pied bat
 - Large-eared Pied Bat Species Polygon
- Pre-construction Minor Work Locations**
- Geotechnical borehole sites
 - Pavement Dipping Surveys
 - Talbragar River borehole sites
 - Test pits
 - Utility Survey Location



FIGURE 4

**Liverpool Range Wind Farm
Large-eared Pied Bat Records
and Species Polygon within Pre-
construction Minor Work Areas**

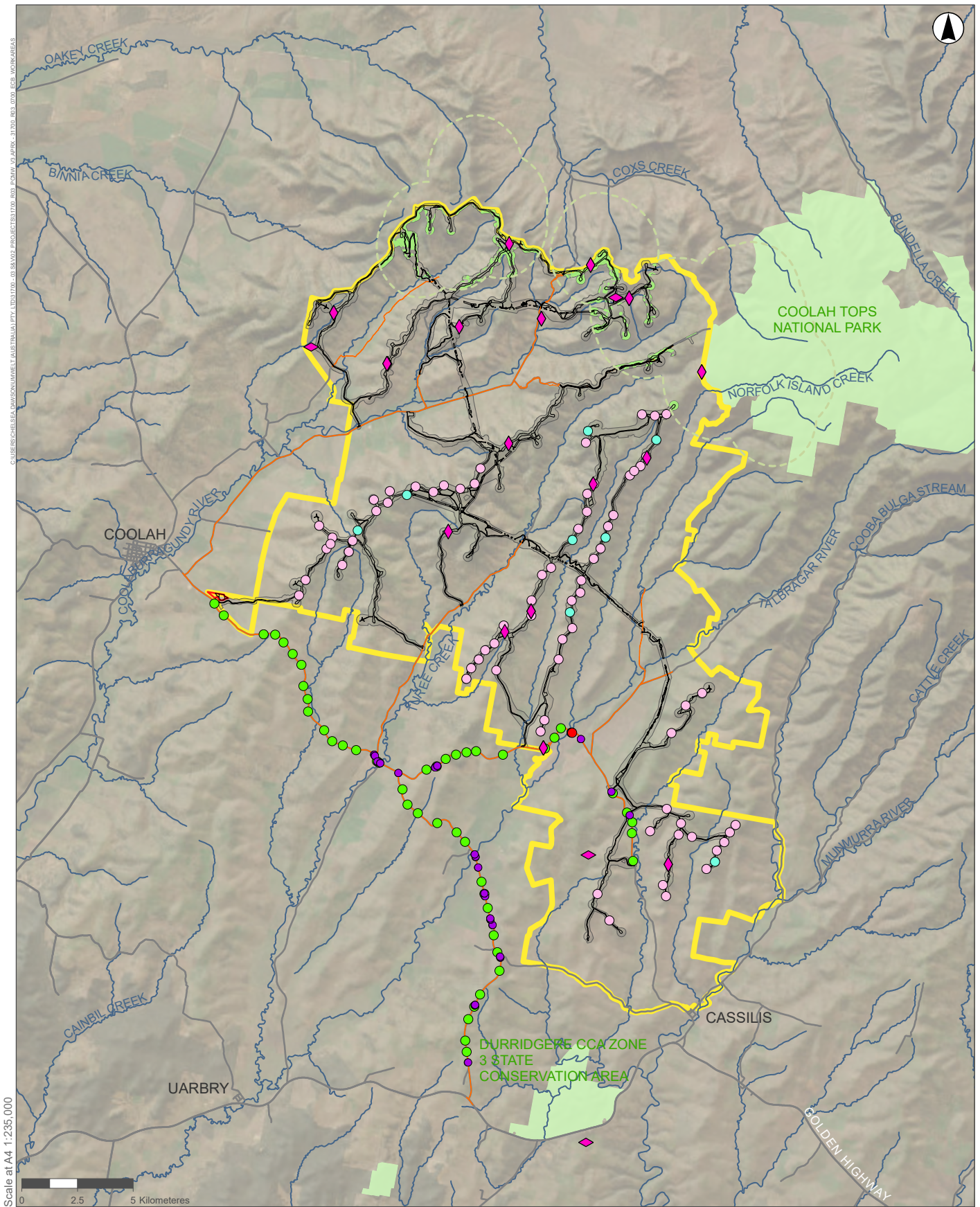


Legend

- Project Site
- National Parks (NPWS Estate)
- Road
- Watercourse
- Development Corridor – Wind Farm
- Development Corridor – TWA Facility
- Indicative Development Footprint – Wind Farm
- Indicative Development Footprint – TWA Facility
- Indicative Development Footprint – Public Road Upgrades
- Southern Greater Glider Species Polygon
- Bionet Records <10km**
- Southern Greater Glider
- Pre-construction Minor Work Locations**
- Geotechnical borehole sites
- Pavement Dipping Surveys
- Talbragar River borehole sites
- Test pits
- Utility Survey Locations



FIGURE 6.
Liverpool Range Wind Farm
Southern Greater Glider Records
and Species Polygon within Pre-
construction Minor Work Areas



Legend

- Project Site
- National Parks (NPWS Estate)
- Road
- Watercourse
- Development Corridor – Wind Farm
- Development Corridor – TWA Facility
- Indicative Development Footprint – Wind Farm
- Indicative Development Footprint – TWA Facility
- Indicative Development Footprint – Public Road Upgrades

- 2km buffer of rocky habitat
- Eastern Cave Bat Species Polygon
- Umwelt Records (BBUS year 1)**
- Eastern cave bat
- Umwelt and NGH Records (Approved Development)**
- Eastern Cave Bat

- Pre-construction Minor Work Locations**
- Geotechnical borehole sites
 - Pavement Dipping Surveys
 - Talbragar River borehole sites
 - Test pits
 - Utility Survey Location



FIGURE 7
Liverpool Range Wind Farm Eastern Cave Bat Records and Species Polygon within Pre-construction Minor Work Areas

Image Source: ESRI Basemap (2023) | Data Source: NSW DFSI (2025), Umwelt (2024)

The External Transmission Line component of the Project has been excluded from this Figure as Tilt Renewables does not intend to construct this component of the Project.



Attachment 2 – Biodiversity Offsets

Statement confirming payment into the Biodiversity Conservation Fund for an offset obligation

Pursuant to section 6.33 of the *Biodiversity Conservation Act 2016*, the NSW Biodiversity Conservation Trust confirms that the following payments have been made into the Biodiversity Conservation Fund under section 6.30(1) of the Act to satisfy an obligation to retire biodiversity credits.

Payment made by	Tilt Renewables Australia Pty Ltd as trustee for Liverpool Range Wind Farm Project				
Date received	11 May 2026				
NSW statutory obligation reference¹	SSD 6696				
Commonwealth EPBC Act controlled action reference (if applicable)²	EPBC 2022/09416				
BCT Reference	BCF01101				
Biodiversity credit retirement obligations satisfied by payment to the Biodiversity Conservation Fund:					
Biodiversity credit type (Credit ID and name)	Offset trading group	EPBC Act Controlled Action offset obligation (Y / N)	Number of credits	Cost per credit (Exc. GST)	Total payment per credit type (Exc. GST)
483 - Grey Box - White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	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	Y	1	\$5,513.10	\$5,513.10
483 - Grey Box - White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Western Slopes Grassy Woodlands >= 90% cleared	N	1	\$5,513.10	\$5,513.10
488 - Silvertop Stringybark - Yellow Box - Nortons Box	New England Grassy Woodlands >= 50% and < 70% cleared	N	1	\$5,513.10	\$5,513.10

¹ This refers to either; a development application number for a development consent under Part 4 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*, a State significant infrastructure approval under the previous Part 5.1 (now Part 5, Division 5.2) of the EP&A Act, a decision of a determining authority to carry out or approve the carrying out of an activity under Part 5 of the EP&A Act, or a biobank statement number or biodiversity certification number.

² This refers to a controlled action under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* for which a biodiversity offset obligation has been met through payment into the BCF.

grassy woodland on basalt hills mainly on northern aspects of the Liverpool Range, Brigalow Belt South Bioregion basalt hills in the Merriwa region, upper Hunter Valley					
483 - Grey Box - White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	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	Y	1	\$5,513.10	\$5,513.10
483 - Grey Box - White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	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	Y	1	\$5,278.50	\$5,278.50
483 - Grey Box - White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley	Western Slopes Grassy Woodlands >= 90% cleared	Y	1	\$5,278.50	\$5,278.50
Total (Exc. GST)					\$32,609.40
GST					\$3,260.94
Total (Inc. GST)					\$35,870.34



Teresa Myat Berg

Chief Financial Officer

18.05.2026

Appendix B

Agency Consultation



Department of Planning, Housing and Infrastructure

Reference: SSD-6696-PA-13

Lisa Simonsen
Environment and Development Planner
Liverpool Range Wind Farm Pty Ltd
Sent via Major Projects Portal
24/04/2026

Subject: Liverpool Range Wind Farm - Biodiversity Management Plan request for information

Dear Miss Simonsen,

I refer to the Biodiversity Management Plan for Pre-Construction Minor Works (Revision 3 dated 1 April 2026), submitted as required by Schedule 3, Condition 21 of SSD-6696 as modified (the consent) to the NSW Department of Planning, Housing and Infrastructure (the Department) on 14 April 2026.

After careful consideration, the Department is requesting that you provide additional information.

Please submit a revised Biodiversity Management Plan that addresses the requirements detailed in the attached management plan review table.

You are requested to provide the information to the Department by Friday 22nd May 2026. If you are unable to provide the information within this timeframe or wish to discuss the matter further, please contact Jasmine Walden on (02) 6773 7009 or by email to Jasmine.Walden@dpie.nsw.gov.au

Yours sincerely,



Katie Weekes
Team Leader - Post Approvals
Energy Assessments

As nominee of the Planning Secretary

Mr Kim Derriman
Principal Environment and Development Planner
Liverpool Range Wind Farm Pty Ltd
Sent via Major Projects Portal

12/05/2026

Subject: Liverpool Range Wind Farm - Staging Request for Retirement of Biodiversity Credits and Biodiversity Management Plan

Dear Mr Derriman,

I refer to your submission dated 5 May 2026, requesting the Planning Secretary's approval to stage the Liverpool Range Wind Farm Project and submit the Biodiversity Management Plan and retire biodiversity credits on a staged basis in accordance with Schedule 2, Condition 16 of the development consent (SSD-6696 as modified). I also refer to your response to the Department's request for additional information dated 11 May 2026.

Your submission identifies the following proposed project stages for the retirement of biodiversity credits and the Biodiversity Management Plan:

- Stage 0:
 - Stage 0a: Pre-Construction Minor Works
 - 2025 Geotechnical investigation campaign (completed).
 - 2026 Pre-Construction Minor Works program.
 - Stage 0b: Public Road Upgrades
 - Public road upgrades as necessary to facilitate light and heavy vehicle movements, constructed separately to provide access to Stage 1 and Stage 2 of the wind farm.
 - Public road upgrades as necessary to facilitate over-size/over-mass vehicle movements, constructed separately to provide access to Stage 1 and Stage 2.
- Stage 1:
 - Stage 1a: Construction of Stage 1 wind farm comprising 100 turbines.
 - Stage 1b: Operation of the Stage 1 Wind Farm.
- Stage 2:
 - Stage 2a: Construction of Stage 2 wind farm comprising the remaining turbines permitted by the development consent.
 - Stage 2b: Operation of the Stage 2 wind farm.
- Stage 3: Decommissioning and Rehabilitation of the wind farm.

The Department notes that you have committed to providing the Department with a detailed description of the scope of works for future project stages beyond Stage 0a prior to the Department commencing its assessment of any documentation associated with those stages.

You have further committed to consulting the Conservation Programs, Heritage and Regulation Group (CPHR) within the NSW Department of Climate Change, Energy, the Environment and Water on each future revision of the Biodiversity Management Plan and the retirement of any biodiversity credits associated with each project stage.

Approval to stage the retirement of biodiversity credits

Schedule 3, Condition 18A requires the retirement of biodiversity credits of a number and class specified in Table 8-1 and Table 8-2 of Appendix 8 prior to carrying out any development that could directly or indirectly impact biodiversity values.

Your submission identifies the total offset credit obligation for the 2026 Pre-Construction Minor Works program, with six (6) credits to be retired detailed in Table 2 of your submission. The Department understands you are currently in the process of securing biodiversity credits for the Stage 0a 2026 Pre-Construction Minor Works program from the NSW Biodiversity Conservation Trust (BCT), and the Biodiversity Conservation Fund Charge Quote (BCF Reference Q00961) was issued for this scope of works on 28 April 2026.

As nominee of the Planning Secretary, I conditionally approve the staging of the retirement of biodiversity credits (as described above and in your submissions dated 5 and 11 May 2026) in accordance with Schedule 2, Condition 16. It is noted that in accordance with Schedule 3, Condition 19, you will need to provide evidence demonstrating that the six (6) biodiversity credits detailed above have been retired prior to carrying out any development that could directly or indirectly impact biodiversity values requiring offset.

The number of credits requiring retirement during Stage 0b, Stage 1, Stage 2 and Stage 3 of the development is yet to be determined but the following information would be required in your future submissions:

- a detailed description of the scope of works for relevant stage of the development;
- the number and type of credits to be staged;
- the proposed credit liabilities allocated to each stage of the development;
- a methodology for calculating the impact area and the credit liabilities, including the supply of spatial files and calculations; and
- details of outcomes of consultation with CPHR.

Approval to stage the Biodiversity Management Plan

As nominee of the Planning Secretary, I conditionally approve the staging of the Biodiversity Management Plan (as described above and in your submissions dated 5 and 11 May 2026) in accordance with Schedule 2, Condition 16 of the development consent. Please ensure a revised Biodiversity Management Plan prepared in accordance with Schedule 3, Condition 21 is submitted and approved by the Planning Secretary prior to the commencement of each stage of the development.

If you wish to discuss the matter further, please contact Jasmine Walden on 6773 7009.

Yours sincerely,

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke extending to the right.

As nominee of the Planning Secretary

Our ref: SSD-6696-PA-13

Lisa Simonsen
Environment and Development Planner
Liverpool Range Wind Farm Pty Ltd
Sent via Major Projects Portal

12/05/2026

Subject: Liverpool Range Wind Farm – Biodiversity Management Plan (Revision 3.1)

Dear Ms Simonsen,

I refer to the updated Biodiversity Management Plan - Pre-construction Minor Works (Revision 3.1 dated 1 May 2026) submitted in accordance with Schedule 3, Condition 21 of the development consent for the Liverpool Range Wind Farm (SSD-6696, as modified). I also acknowledge your response to the Department's review comments and request for additional information.

The Department has carefully reviewed the document and is satisfied that it meets the requirements of the relevant conditions of consent.

Accordingly, as nominee of the Planning Secretary, I approve the updated Biodiversity Management Plan - Pre-construction Minor Works (Stage 0a) (Revision 3.1 dated 1 May 2026) under Schedule 3, Condition 21 of the development consent.

Please ensure you make the document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Jasmine Walden on 6773 7009.

Yours sincerely,



As nominee of the Planning Secretary



P 1300 793 267 **E** info@umwelt.com.au **W** umwelt.com.au
NSW | ACT | WA | QLD | VIC | SA **ABN** 18 059 519 041