



# ERM

APPENDIX K

LANDSCAPE AND VISUAL IMPACT  
ASSESSMENT





## Canyonleigh BESS

Landscape Character and Visual Impact Assessment





We at Moir Studio acknowledge the traditional custodians of the lands and waters of Australia - most notably the Awabakal Nation in which our office resides and the Gundungurra Nation, on whose traditional land this Project resides. As a practice, we recognise First Nations' ongoing contribution to Country and deep spiritual connection to Place. We pay our respects to Elders both past and present.



# Canyonleigh BESS

## Landscape Character and Visual Impact Assessment

Prepared for  
ERM

Project Number  
2468

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# Glossary of Terms

## Associated Dwelling

A landholder who has reached an agreement with the Proponent.

## Bioregion

An ecologically and geographically defined area characterised by its combination of geological features, climate, flora and fauna.

## Landscape Character and Visual Impact Assessment

A technical assessment to identify and assess the potential visual effects resulting from the Project on the landscape, individual receivers and on the overall visual amenity of the region in which the Project is sited.

## Landscape

All the visible features, including landform, vegetation, buildings and infrastructure contained within a holistic area.

## Landscape Character

Landscape character refers to the distinct and recognisable pattern of physical elements that occur consistently in a particular landscape. The landscape character of an area is generally defined by the most dominant landscape element or unique combination of elements that occur within that landscape. It reflects how particular combinations of geology, landforms, soils, vegetation, land use and human settlements create a particular sense of place for different areas within the landscape

## Landscape Character Zones

An area of landscape with similar properties or strongly defined spatial qualities that are distinct from areas immediately nearby within the Study Area.

## Non-Associated Dwelling

A dwelling owned by a non-associated landholder.

## The Project

The proposed development that is the subject of the LCVIA assessment.

## Project Area

The site where the Project is proposed.

## Secretary's Environmental Assessment Requirements

Outlines the environmental assessment requirements for State Significant projects. The SEARs will include specific requirements for landscape character and visual impact assessments.

## Study Area

The geographical region or area under consideration in the preparation in the LCVIA.

## Viewpoint

A specific location from which a view or landscape is observed. A viewpoint location is the geographic location or physical position (in GPS format) where the viewpoint was captured.

## Visual Baseline

A desktop assessment and onsite photographic surveys/fieldwork that describes and captures the existing environmental conditions in which any future changes can be measured against.

## Viewshed

The geographical area from which a particular view can be observed.

## Visual Impact

The observable and measurable change in the visual catchment caused by the Project. This is determined by considering the visual sensitivity and magnitude of change.

## Visual Magnitude

The degree of visual change resulting from the Project, including but not limited to the size, scale, compatibility and duration of effect.

## Visual Sensitivity

The susceptibility of a landscape or visual resource to absorb impacts from a Project, land use change or the introduction of a new element into the landscape.

## Zone of Visual Influence

The extent of landscape area from which the Project can potentially be theoretically viewed based on topography alone.

# Abbreviations

## BESS

Battery Energy Storage System

## DPHI

Department of Planning, Housing and Infrastructure

## EIS

Environmental Impact System

## IBRA

Interim Biogeographic Regionalisation of Australia

## kV

Kilovolt

## LALC

Local Aboriginal Land Council

## LCVIA

Landscape Character and Visual Impact Assessment

## LCZ

Landscape Character Zone

## LEP

Local Environmental Plan

## LGA

Local Government Area

## NPWS

National Parks and Wildlife Service

## NSW

New South Wales

## SEARs

Secretary's Environmental Assessment Requirements

## SSD

State Significant Development

## ZVI

Zone of Visual Influence



# 01 Introduction





# 1.0 Introduction

## 1.1 Introduction

ERM has commissioned Moir Landscape Architecture Pty Ltd (trading as Moir Studio) to prepare a Landscape Character and Visual Impact Assessment (LCVIA) for the Canyonleigh Battery Energy Storage System (BESS) (the Project) for X-Elio Aus2 Pty Ltd (the Proponent).

This report supports a State Significant Development (SSD) Consent application under Part 4, Division 4.7 of the Environmental Planning and Assessment Act 1979 (EP&A Act) (SSD- 78247462) which will form part of the Environmental Impact Statement (EIS) for the Project.

The Proponent is proposing the construction, operation and decommissioning of a BESS, and associated infrastructure with a 300 Megawatt (MW) / 1,200 MW hours (MWh) storage capacity.

## 1.2 Professional Experience

Moir Studio is a professional design practice and consultancy specialising in Landscape Architecture, Urban Design and Landscape Character and Visual Impact Assessment. Our team has extensive experience undertaking LCVIA's for large-scale infrastructure and renewable energy projects. Drawing on this experience in conducting LCVIA's, we have developed methodologies to ensure a comprehensive and qualitative assessment of the Project. Our relevant experience includes:

- Wagga Wagga North BESS
- Deniliquin BESS
- Armidale East BESS
- Kingswood BESS

## 1.3 Report Structure

The Secretary's Environmental Assessment Requirements (SEARs) for the Project, issued on the 12th December 2024, states that the EIS must address specific issues for the BESS and associated infrastructure relating to potential visual impacts. **Table 01** provides an overview of the SEARs requirements and where these have been addressed in the LCVIA.

| SEARs REQUIREMENT REFERENCE                                                                                                                                                                                                                                                                                |                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SEARs Requirements                                                                                                                                                                                                                                                                                         | Relevant Section of LCVIA                                                                                                                                  |
| <i>A detailed assessment of the likely visual impacts of all components of the project on surrounding residences (including approved developments, lodged development applications and dwelling entitlements), and key locations, scenic or significant vistas and road corridors in the public domain</i> | Landscape Character Assessment<br>Zone of Visual Influence<br>Viewpoint Analysis<br>Photomontages<br>Visual Impact Assessment<br>Cumulative Visual Impacts |
| <i>Details of measures to mitigate and/or manage potential impacts (including a draft landscaping plan for on-site perimeter planting, with evidence it has been developed in consultation with affected landowners)</i>                                                                                   | Mitigation Recommendations                                                                                                                                 |

**Table 01** Overview of SEARs



# 02 Study Method

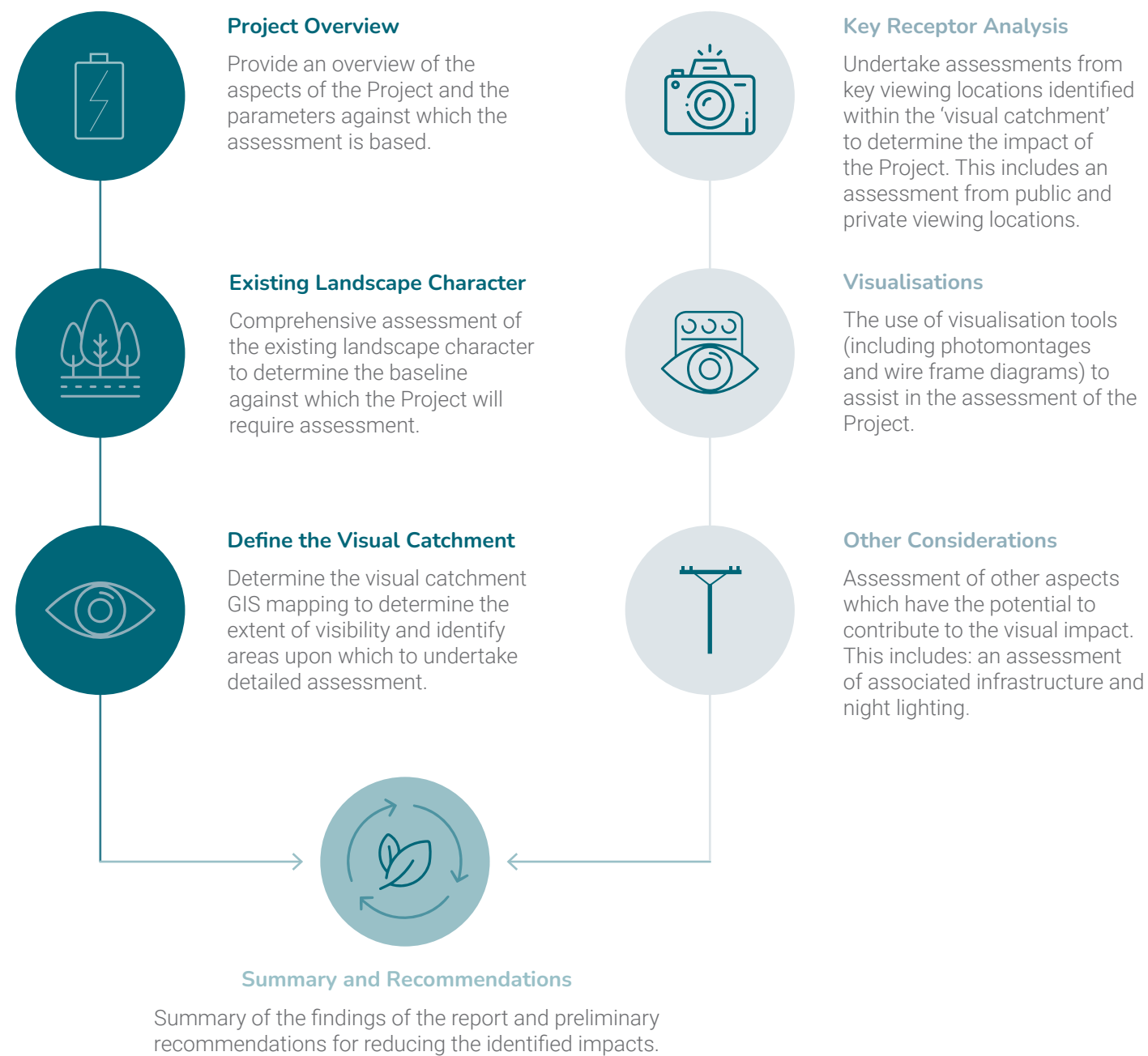




# 2.0 Study Method

## 2.1 Overview of Study Method

The fundamental steps in undertaking an LCVIA for a BESS are outlined in **Figure 01**.



**Figure 01** LCVIA Process

## 2.2 Relevant Guidelines & Framework

NSW does not have defined LCVIA guidelines specifically for the assessment of BESS proposals. The following provides an overview of the relevant frameworks and considerations of authorities utilised to form the methodology for this LCVIA.

### 2.2.1 AILA Guidance Note for Landscape & Visual Impact Assessment 2018

The Australian Institute of Landscape Architects (AILA) developed Guidance Notes for preparing LCVIAs. This document provides a practical framework for the practice of LCVIA among Registered Landscape Architects. The LCVIA process follows the best practice guidelines outlined in the Guidance Notes, which cover terminology, principles, and methodology.

### 2.2.2 Transport for NSW (TfNSW) - Guideline for Landscape Character & Visual Impact Assessment 2023

This document provides guidance for preparing landscape character and visual impact assessments for road and maritime projects in accordance with TfNSW's *Beyond the Pavement* policy for urban design. It supports planning, design, and environmental assessments to inform project teams and environmental approvals under the EP&A Act. The document establishes terminology, processes, and methodologies to ensure consistent, high-quality assessments that are integrated with environmental, design, and project management efforts outlined in the Infrastructure Life Cycle Management System (TfNSW, 2023).

### 2.2.3 Department of Planning, Housing and Infrastructure - Large Scale Solar Energy Guideline 2024

While the Project does not specifically fall under these guidelines, the scale and unit size of a BESS are similar to those of a solar development. Therefore, terminology and methodologies from this guideline have been incorporated into this LCVIA.



# 03 Project Overview





# 3.0 Project Overview

## 3.1 Regional Context

The Project is located approximately 8 kilometres (km) northeast of Brayton, 410 metres (m) south of Wollondilly River on Canyonleigh Road. The Project is located within the Goulburn Mulwaree Council and the Pejar Local Aboriginal Land Council (LALC).

The land use within the Study Area (2.5km from Disturbance Area) is predominately native grazing and modified pasture grazing. The Project site is zoned RU2 Rural Landscape in the Goulburn Mulwaree Local Environmental Plan (LEP) 2009. The site to the south of Canyonleigh Road is currently occupied by a single dwelling, and the site to the north of Canyonleigh Road is owned by Electricity Transmission Ministerial Holding Corporation and is leased by Transgrid, where the existing Marulan Substation is located.

## 3.2 The Project

The Project involves the construction, operation, maintenance and decommissioning of a BESS and associated infrastructure, including:

- Large-scale BESS with a storage capacity of up to 300 MW / 1,200 MWh;
- Electrical reticulation infrastructure, including an onsite substation, switching station, and internal transmission and feeder lines.
- Permanent associated and ancillary infrastructure; and
- Temporary construction facilities.

The Project proposes to connect to the national grid via the existing Transgrid Marulan Substation, which sits at the junction of several 330 kV and 132 kV transmission lines. **Table 02** and **Figure 03 - Figure 09** summarise the key indicative Project components and specifications.



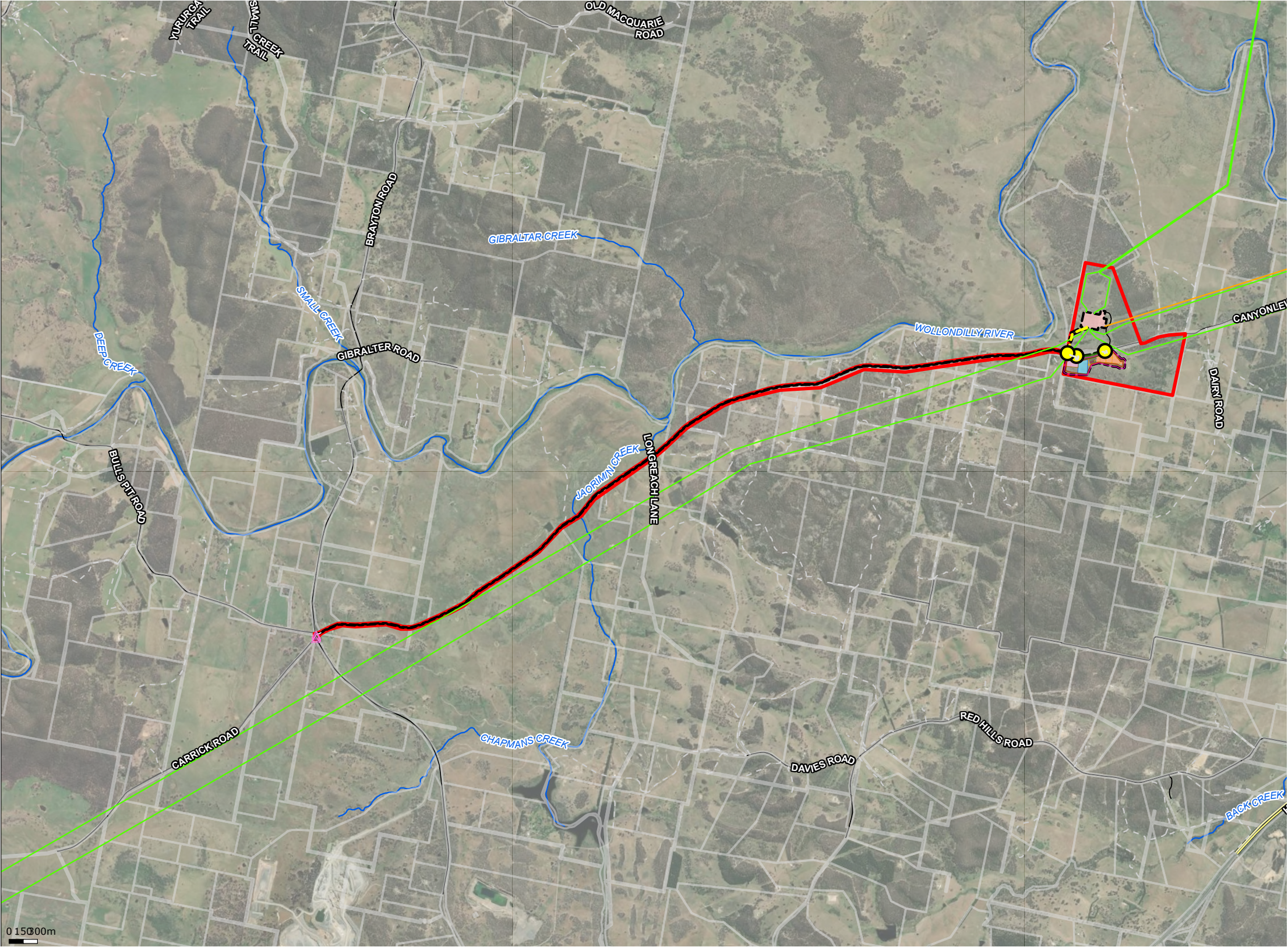
**Figure 02** Regional Context  
Basemap Source - ESRI, 2025



| Component                              | Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BESS                                   | <ul style="list-style-type: none"><li>One BESS with 300 MW / 1,200 MWh storage capacity.</li><li>Located on Lot 2341 DP 622834 and Lot 12 DP 727493.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Electrical Reticulation Infrastructure | <ul style="list-style-type: none"><li>The Project will connect to the existing Transgrid 330 kV Marulan Substation located on Lot 2341 DP 622834.</li><li>New proposed step-up substation will connect from 33 kV to 330 kV underground feeder/connection line, which leads to existing Marulan substation.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Access                                 | <ul style="list-style-type: none"><li>The Project will be accessed via three site access points, located on Canyonleigh Road.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| On-site Supporting Infrastructure      | <ul style="list-style-type: none"><li>Temporary construction and laydown area;</li><li>Permanent Operations &amp; Maintenance (O&amp;M) facility including:<ul style="list-style-type: none"><li>- A control room;</li><li>- Storage facilities;</li><li>- Supervisory Control and Data Acquisition (SCADA) facilities;</li><li>- Car parking;</li><li>- Basic office and associated amenities; and</li></ul></li><li>Utilities and waste facilities.</li><li>New and/or upgraded internal access roads;</li><li>New and/or upgraded drainage system; and</li><li>Security fencing and lighting.</li></ul>                                                                                                                                                                                                                                    |
| Off-site Supporting Infrastructure     | <ul style="list-style-type: none"><li>Waste and wastewater disposal facilities</li><li>Existing communications network</li><li>Existing transport network and minor roadworks, including:<ul style="list-style-type: none"><li>- Canyonleigh Road between the intersection with Brayton Road and the site access will be resurfaced where required and in consultation with Goulburn Mulwaree Council;</li><li>- Brayton Road / Canyonleigh Road intersection will require a Basic Right Turn treatment to access Canyonleigh Road from Brayton Road, including a temporary hardstand and temporary signage relocation;</li><li>- Installation of sealed hardstand and mountable kerb at the intersection of Botany Road / Bunnerong Road (Matrville, NSW); and</li></ul></li><li>Quarries for construction material (as required).</li></ul> |

Table 02 Project Components





# Project Layout (1 of 7)

Refer to Section 3.2

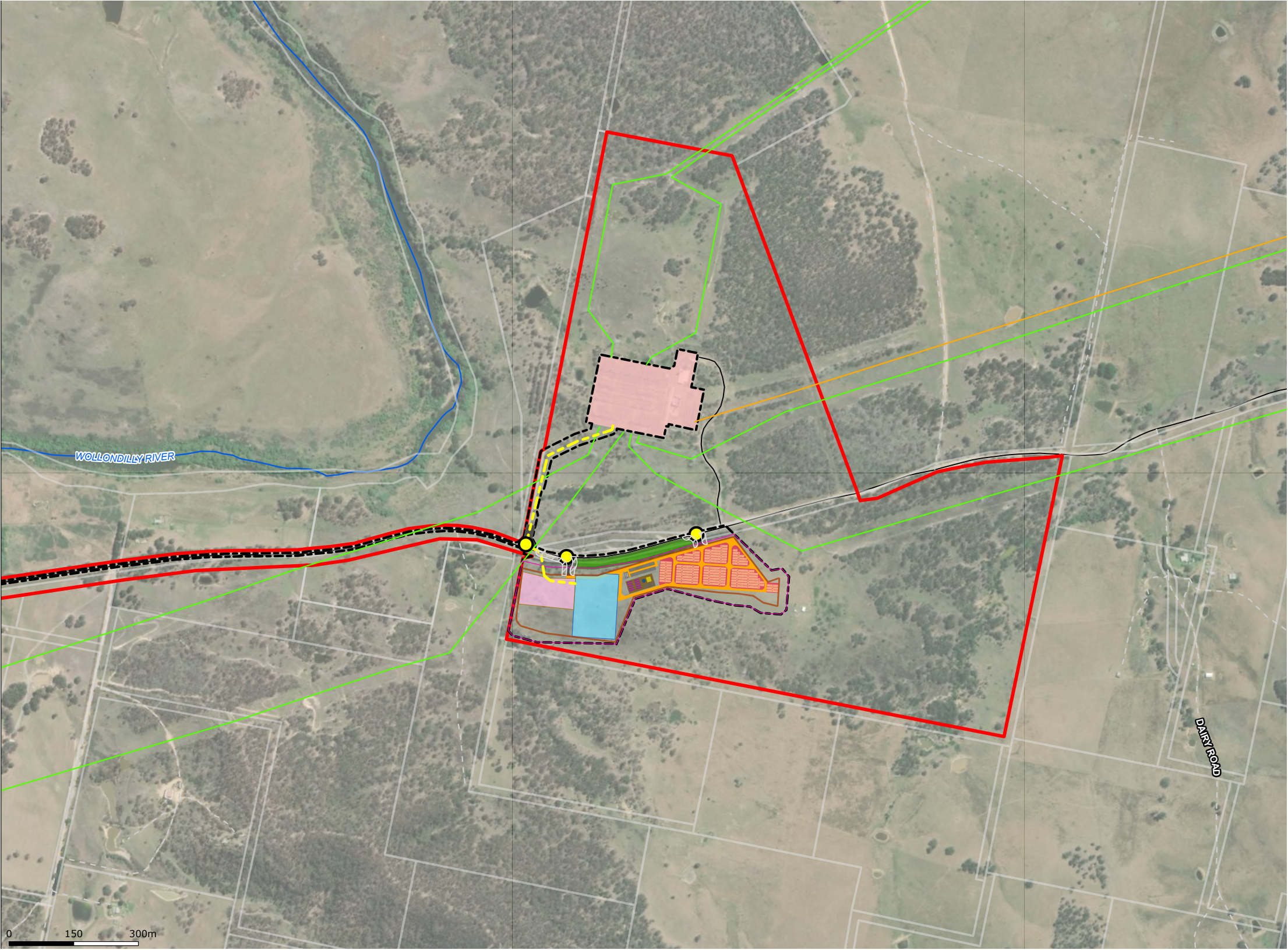
## LEGEND

- [ ] Development Footprint
- [ ] Project Area
- BESS Battery Containers
- BESS Area
- Site Access
- Site Access Roads
- ▨ Access Roads - Earthworks
- [ ] Platform
- Tree Protection Area
- Water Tank
- Laydown Area
- O&M Control Building
- [ ] Parking Slots
- Storage Containers
- [ ] Substation
- Internal Roads
- Existing Substation
- O&M Facility
- △ Traffic Sign
- Indicative 330kV Connection
- Fence
- 330kV
- 132kV
- Roads
- Major Watercourse
- Roads

**Figure 03** Project Layout (1 of 7)  
Basemap Source - ESRI, 2025; Image Source - ERM, 2025







# Project Layout (2 of 7)

Refer to Section 3.2

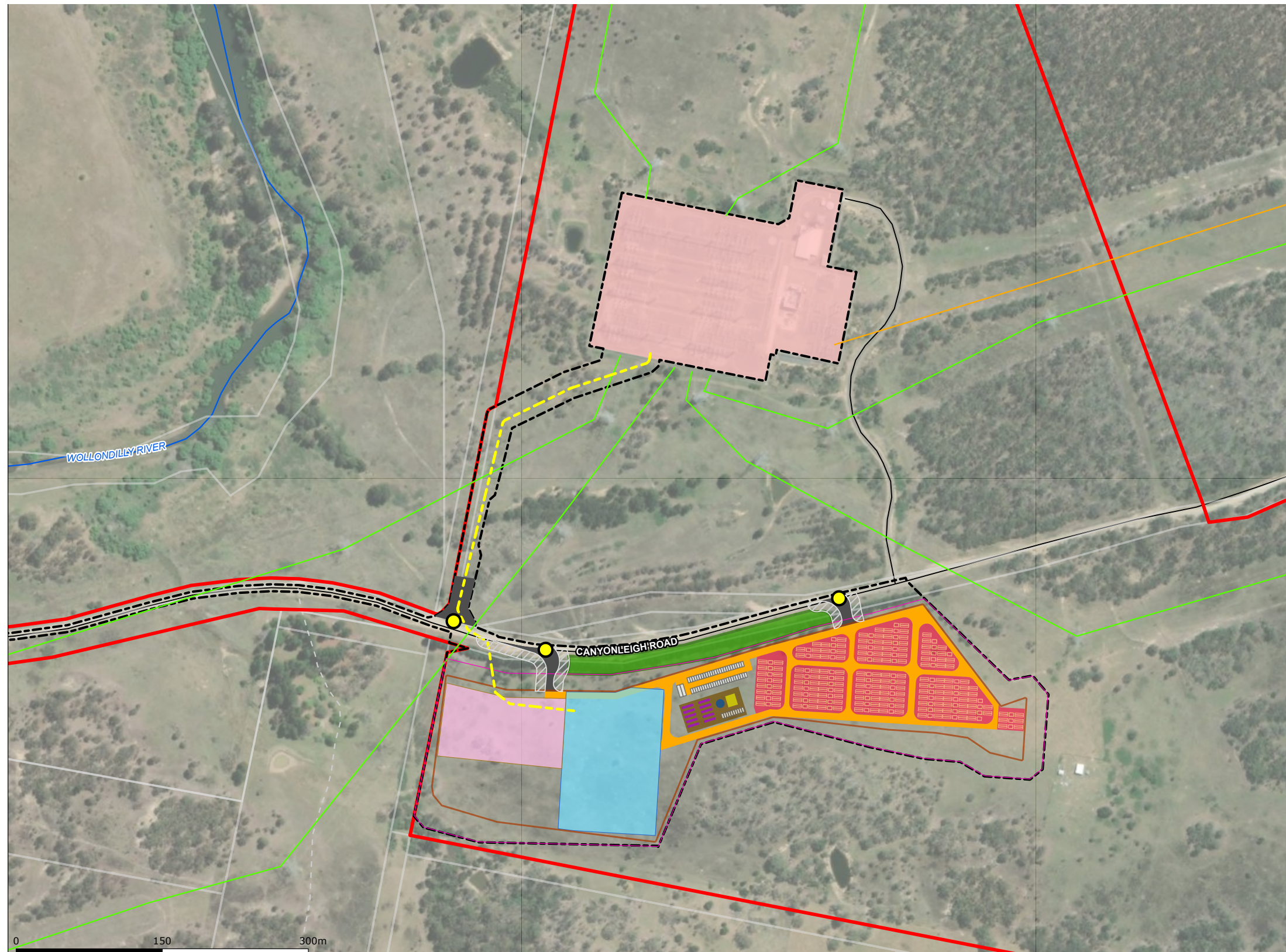
## LEGEND

- [ - - ] Development Footprint
- [ ] Project Area
- BESS Battery Containers
- BESS Area
- Site Access
- Site Access Roads
- ▨ Access Roads - Earthworks
- [ ] Platform
- Tree Protection Area
- Water Tank
- Laydown Area
- O&M Control Building
- [ ] Parking Slots
- Storage Containers
- Substation
- Internal Roads
- Existing Substation
- O&M Facility
- - - Indicative 330kV Connection
- Fence
- 330kV
- 132kV
- Roads
- Major Watercourse

**Figure 04** Project Layout (2 of 7)  
Basemap Source - ESRI, 2025; Image Source - ERM, 2025







## Project Layout (3 of 7)

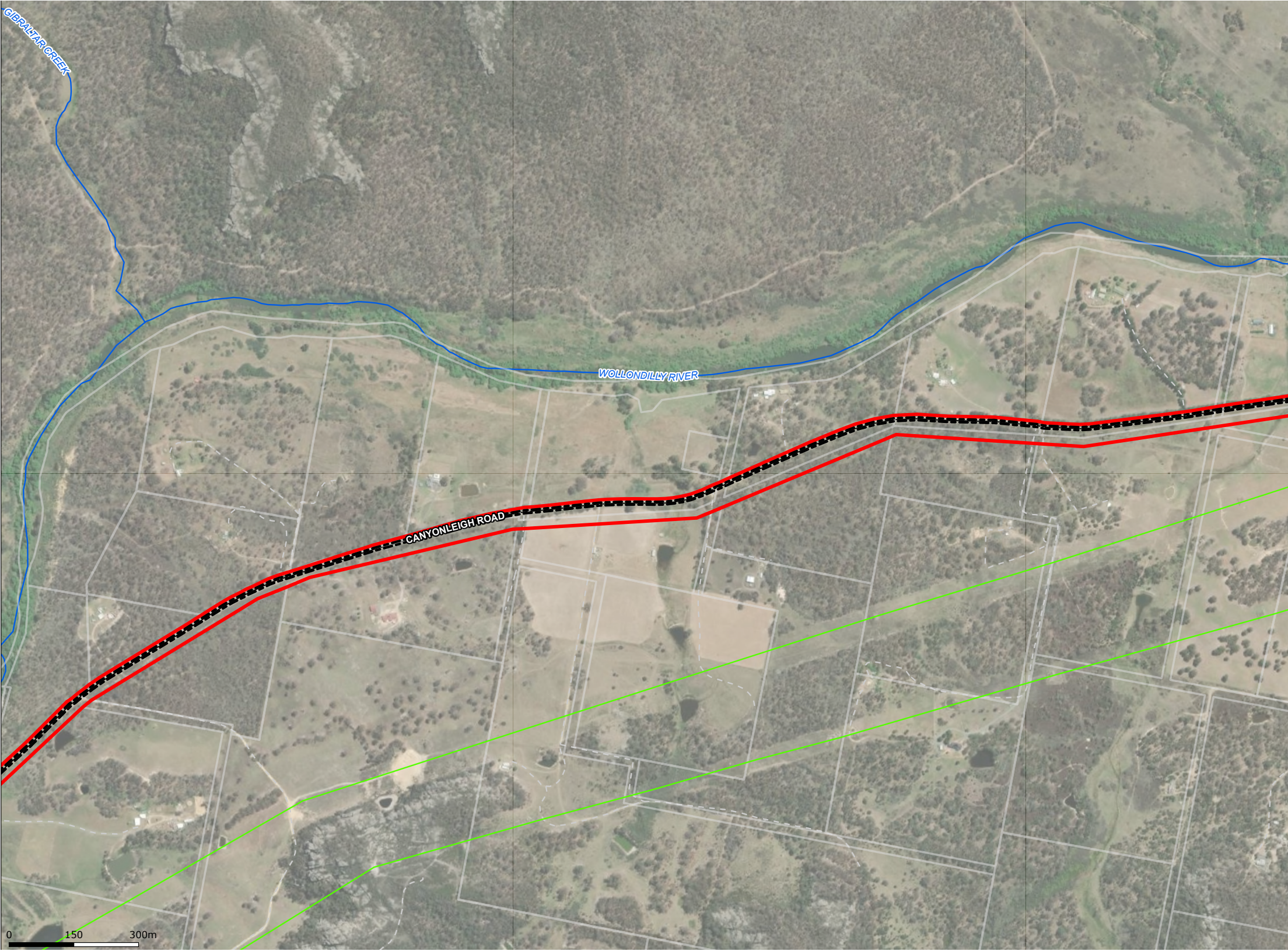
Refer to Section 3.2

### LEGEND

- Development Footprint
- Project Area
- BESS Battery Containers
- BESS Area
- Site Access
- Site Access Roads
- Access Roads - Earthworks
- Platform
- Tree Protection Area
- Water Tank
- Laydown Area
- O&M Control Building
- Parking Slots
- Storage Containers
- Substation
- Internal Roads
- Existing Substation
- O&M Facility
- Indicative 330kV Connection
- Fence
- 330kV
- 132kV
- Roads
- Major Watercourse

**Figure 05** Project Layout (3 of 7)  
 Basemap Source - ESRI, 2025; Image Source - ERM, 2025





# Project Layout (4 of 7)

Refer to Section 3.2

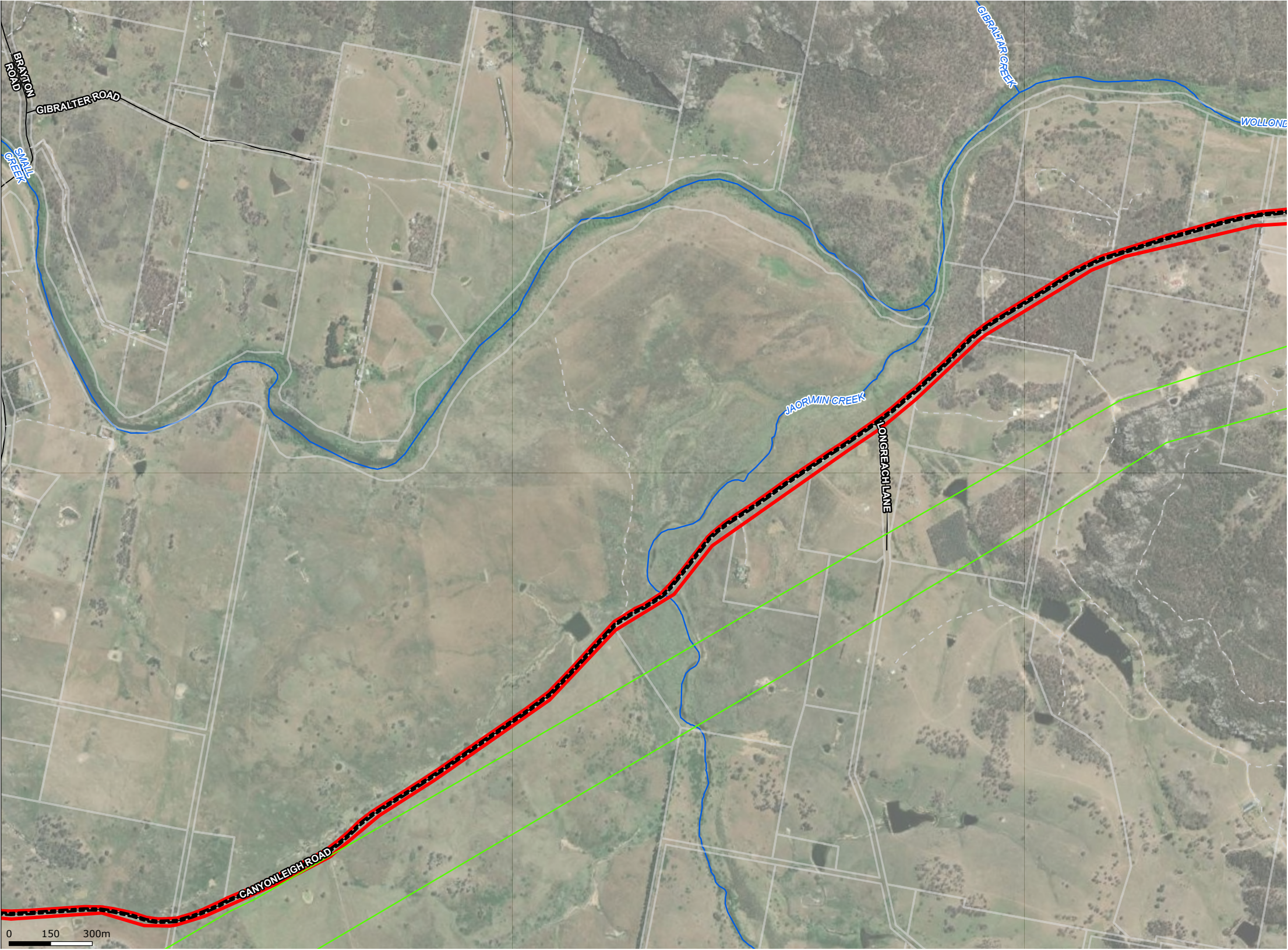
LEGEND

- [ - - ] Development Footprint
- [ ] Project Area
- [ / / ] Access Roads - Earthworks
- 330kV
- Major Watercourse
- Roads

**Figure 06** Project Layout (4 of 7)  
Basemap Source - ESRI, 2025; Image Source - ERM, 2025







# Project Layout (5 of 7)

Refer to Section 3.2

## LEGEND

- [ - - ] Development Footprint
- [ ] Project Area
- [ / / ] Access Roads - Earthworks
- [ ] 330kV
- [ ] Major Watercourse
- [ ] Roads

**Figure 07** Project Layout (5 of 7)  
Basemap Source - ESRI, 2025; Image Source - ERM, 2025







# Project Layout (6 of 7)

Refer to Section 3.2

## LEGEND

- [ - - ] Development Footprint
- [ ] Project Area
- [ / / ] Access Roads - Earthworks
- [ ] Tree Protection Area
- [ ] Traffic Sign
- [ ] 330kV
- [ ] Roads
- [ ] Major Watercourse

**Figure 08** Project Layout (6 of 7)  
Basemap Source - ESRI, 2025; Image Source - ERM, 2025







# Project Layout (7 of 7)

Refer to Section 3.2

## LEGEND

- [ - - ] Development Footprint
- [ ] Project Area
- [ / / ] Access Roads - Earthworks
- [ ] Tree Protection Area
- [ ] Traffic Sign
- [ ] 330kV
- [ ] Roads

**Figure 09** Project Layout (7 of 7)  
Basemap Source - ESRI, 2025; Image Source - ERM, 2025





# 04 Landscape Character Assessment





# 4.0 Landscape Character Assessment

## 4.1 Landscape Character Assessment Overview

Landscape Character refers to the distinct and recognisable pattern of elements that occur consistently in a particular landscape. The Landscape Character of an area is generally defined by the most dominant landscape element or unique combination of elements that occur within that landscape. It *'reflects how particular combinations of geology, landforms, soils, vegetation, land use and human settlements create a particular sense of place for different areas within the landscape'* (Landscape Institute, 2013).

The following provides an overview of the requirements of the landscape character assessment.

### 4.1.1 Step 1 - Baseline Analysis

A baseline study must be conducted to assess the landscape character of the area and its sensitivity. This study should be based on both desktop research and field visits, providing a descriptive and visual analysis of the site's qualities, key values, and potential challenges associated with the Project. An on-site field study was conducted in February 2025 using key viewpoints within the localised region defined as the Study Area in **Section 4.2**.

### 4.1.2 Step 2 - Identify Landscape Character Zones

Where the landscape has distinct areas of differing qualities, the landscape should be divided into different Landscape Character Zones (LCZs).

### Step 3 - Assess Landscape Character Impact

The identified LCZs are assessed to determine the sensitivity of the landscape in each zone and the magnitude of the Project's visual impact on the landscape.

## 4.2 Landscape Character Study Area

The Landscape Character surrounding the Project has been assessed at a regional, local and site scale. This assessment will utilise existing topographic maps, site imagery and land use maps using 2.5 km as the defined 'Study Area' from the Disturbance Area.

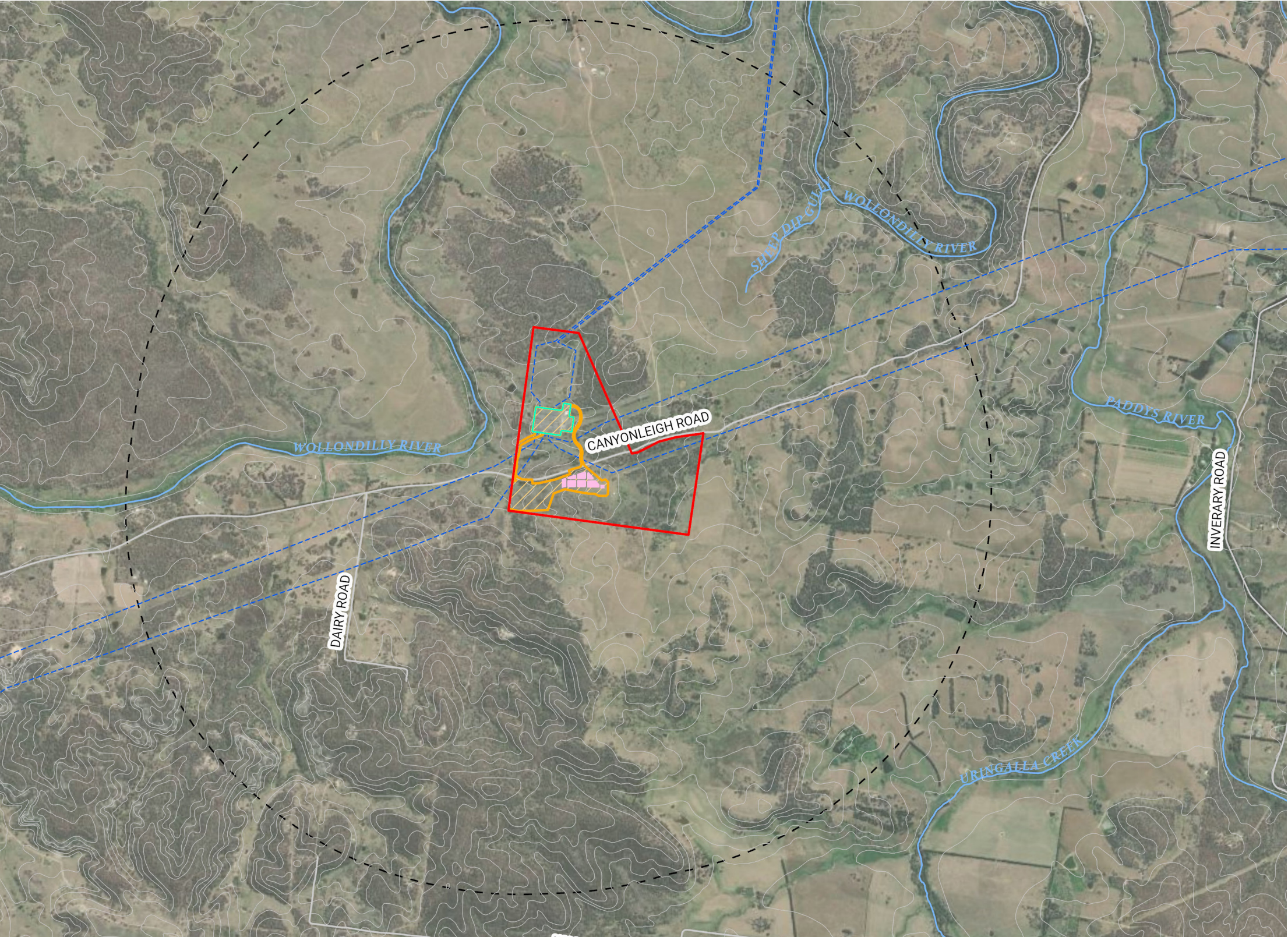


# Study Area

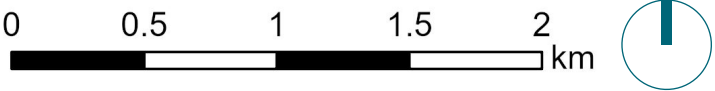
Refer to Section 4.2

## LEGEND

-  Project Boundary
-  Visual Impact Study Area (2.5km from Disturbance Area)
-  Disturbance Area
-  BESS Area
-  Existing Substation
-  Existing Transmission Lines
-  Watercourses
-  Roads
-  Contours



**Figure 10** Study Area  
Basemap Source - ESRI, 2025





### 4.3 Bioregion

The Project is located in the South Eastern Highlands bioregion. The South Eastern Highlands Bioregion lies just inland from the coastal bioregions of the South East Corner and the Sydney Basin, bounded by the Australian Alps and South Western Slopes bioregions to the south and west. The bioregion includes most of the ACT and extends south into Victoria, covering approximately 8,375,961 hectares (ha) in total. The bioregion includes the towns of Orange, Bathurst and Lithgow in the north, Goulburn, Queanbeyan and Yass in the centre and Cooma, Jindabyne and Bombala in the south.

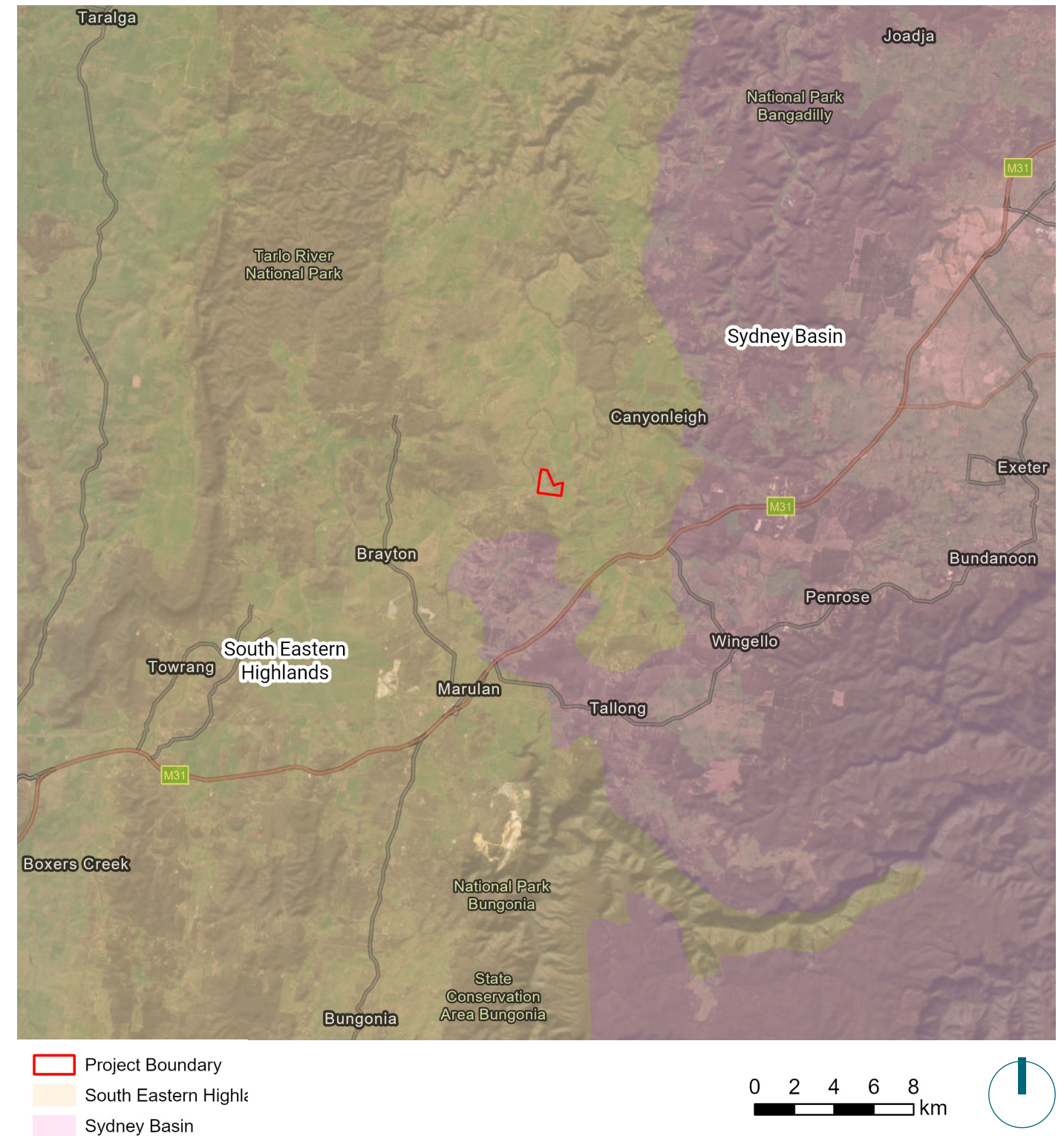
The South Eastern Highlands Bioregion covers the dissected ranges and plateau of the Great Dividing Range that are topographically lower than the Australian Alps, which lie to the southwest. It extends to the Great Escarpment in the east and to the western slopes of the inland drainage basins.

Within the Bungonia subregion, the bioregion's features are defined as:

**Geology:** Primarily fine-grained Palaeozoic sedimentary and meta-sedimentary rocks, with minor areas of acid volcanics and limestone. Areas of Tertiary river terrestrial sediments and low sandsheets in the south with very limited basalt.

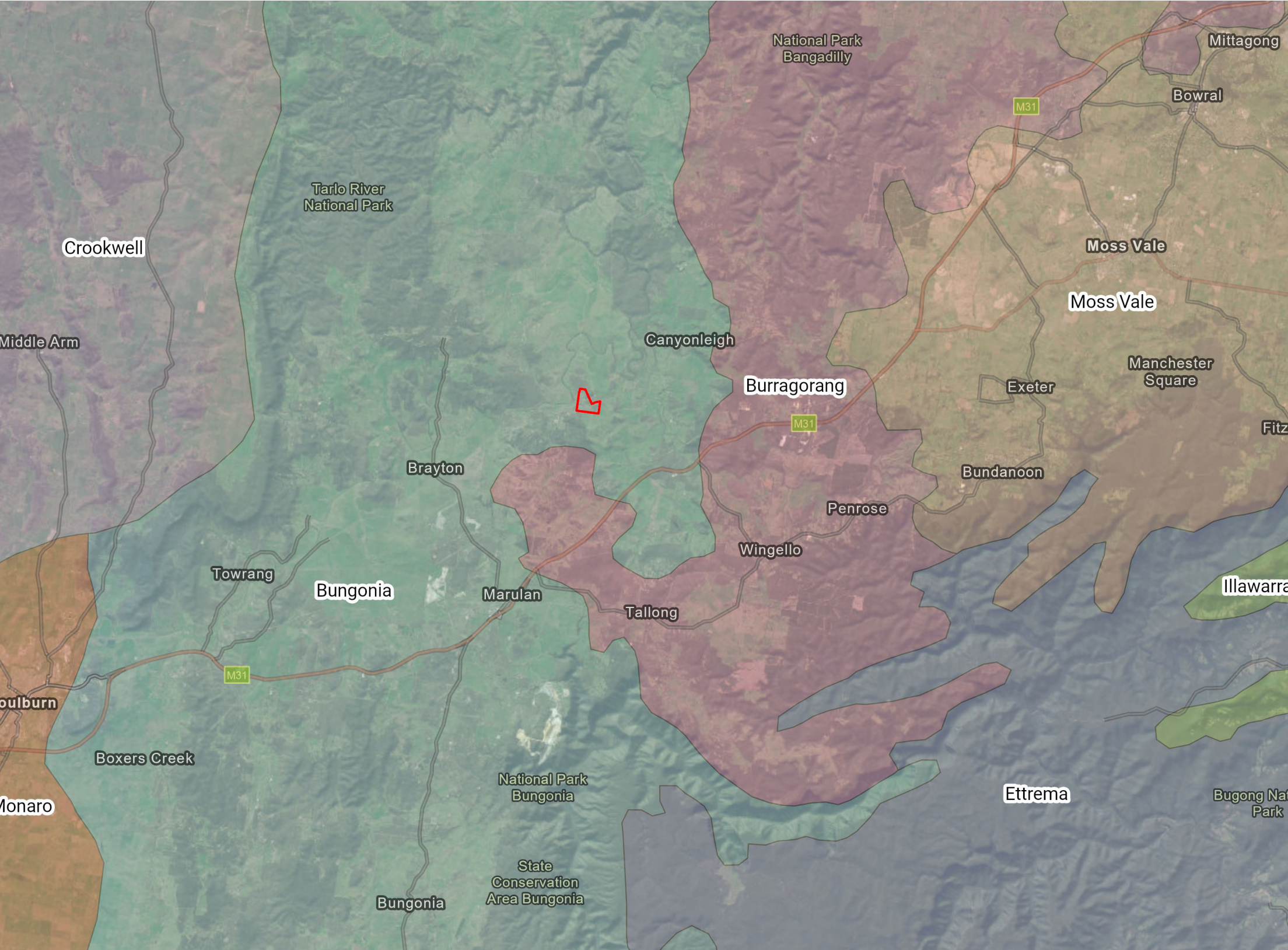
**Characteristic Landforms:** Distinct plateau with very steep, deep margins on the Great Escarpment dropping into the Shoalhaven River. Strong Linear ridges on restraint sandstones and volcanics, wide valleys with some cold air drainage and inverted tree lines.

**Vegetation:** Mottled gum, broad-leaved peppermint, white gum, red stringybark and black ash forests and woodlands. Snow gum with snow grass in cold pockets. Black she-oak common as understorey and in regeneration areas. Limited distribution of argyle apple (NPWS, 2003).



**Figure 11** Bioregion  
Basemap Source - ESRI, 2025





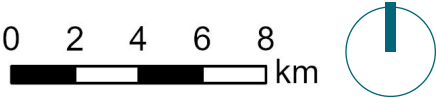
# Sub Bioregion

Refer to Section 4.3

LEGEND

- Project Boundary
- Bungonia
- Burragorang
- Crookwell
- Ettrema
- Illawarra
- Monaro
- Moss Vale

Figure 12 Sub Bioregion  
Basemap Source - ESRI, 2025





## 4.4 Land Zoning

The Project is located within the Goulburn Mulwaree Council Local Government Area (LGA) where the Goulburn Mulwaree LEP 2009 applies. The following provides an overview of the land zoning within the immediate surrounds of The Project as shown in **Figure 13**.

### 4.4.1 RU1 - Primary Production

Land located to the east of The Project, outside of the 2.5 km extent as shown in **Figure 13**, is zoned as RU1 Primary Production. One objective identified in the LEP relating to visual impact for this zoning type is *“To minimise the visual impact of development on the rural landscape.”*

### 4.4.2 RU2 - Rural Landscape

The Project Area and adjoining lots are zoned as RU2 Rural Landscape as shown in **Figure 13**. One objective identified in the LEP relating to visual impact for this zoning type is *“To maintain the rural landscape character of the land.”*

### 4.4.3 C2 – Environmental Conservation

Small pockets of land to the Southeast of The Project, outside of the 2.5 km extent as shown in **Figure 13**, are zoned as C2 Environmental Conservation. No visual objectives are outlined under this LEP for this zoning type.

### 4.4.4 C3 - Environmental Management

Land located to the south of The Project, outside of the 2.5 km extent as shown in **Figure 13**, is zoned as C3 Environmental Management. No visual objectives are outlined under this LEP for this zoning type.

### 4.4.5 SP2 – Infrastructure

Land located to the southeast of The Project, outside of the 2.5 km extent as shown in **Figure 13**, is zoned as SP2 Infrastructure. No visual objectives are outlined under this LEP for this zoning type.

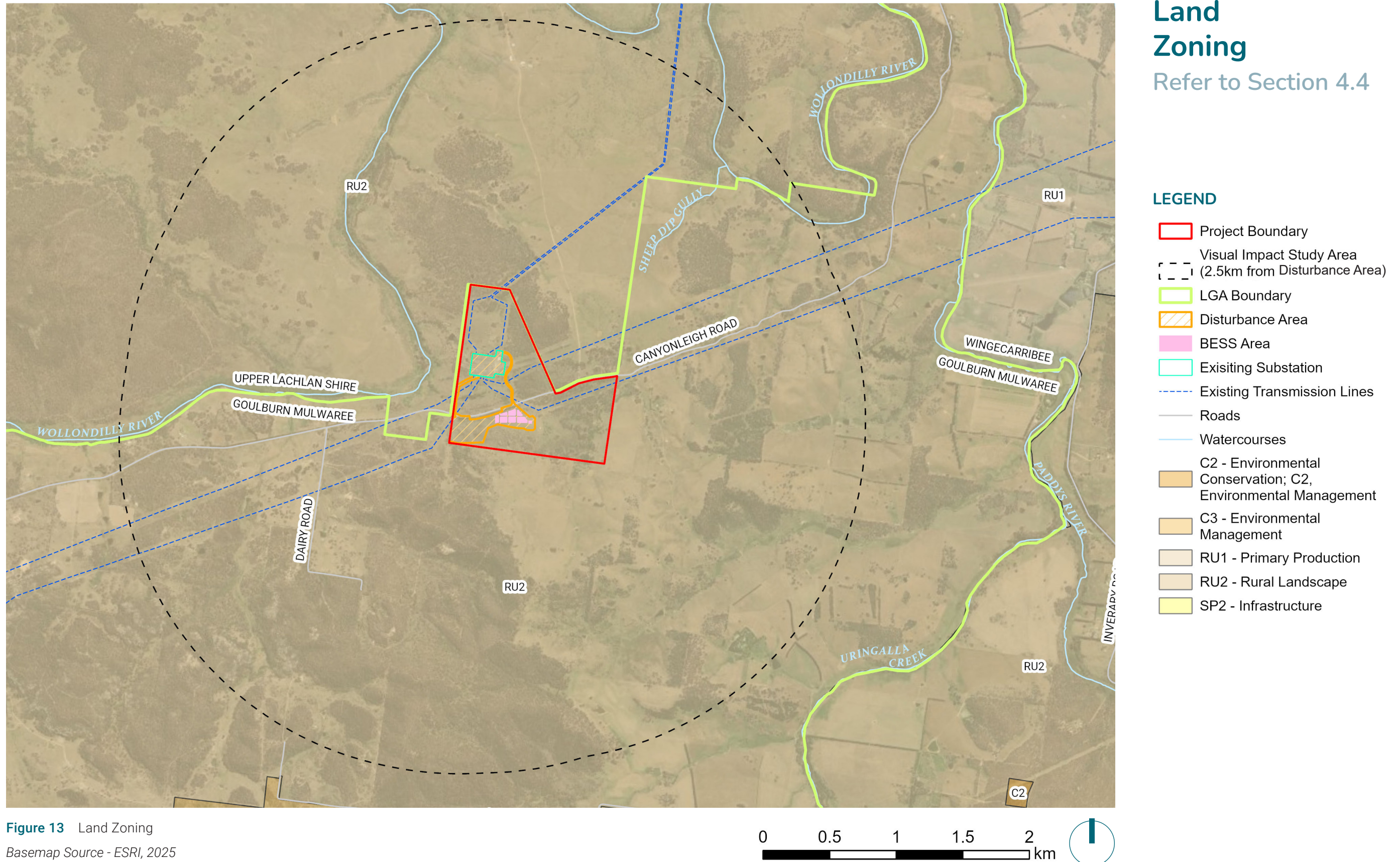


**Image 01** Typical agricultural landscape within the Study Area



**Image 02** Forested areas within the Study Area to the southwest







## 4.5 Land Use

Land Use within the Study Area as shown in **Figure 14**, as defined by land use mapping published by the NSW Government in 2017 (SEED, 2019), predominantly comprises:

- 2.1.0 Grazing Native Vegetation
- 3.2.0 Grazing modified pastures
- 3.1.0 Plantation forests
- 3.3.0 Cropping

The Project Site and immediate surrounds comprise of agricultural practices including grazing native vegetation, grazing modified pastures, some plantation forests, and cropping and irrigated cropping. Rural residential properties are dotted throughout agricultural lands.

Utility services, which includes the Marulan Substation and associated transmission lines and infrastructure is located approximately 0.26 km north from The Project.

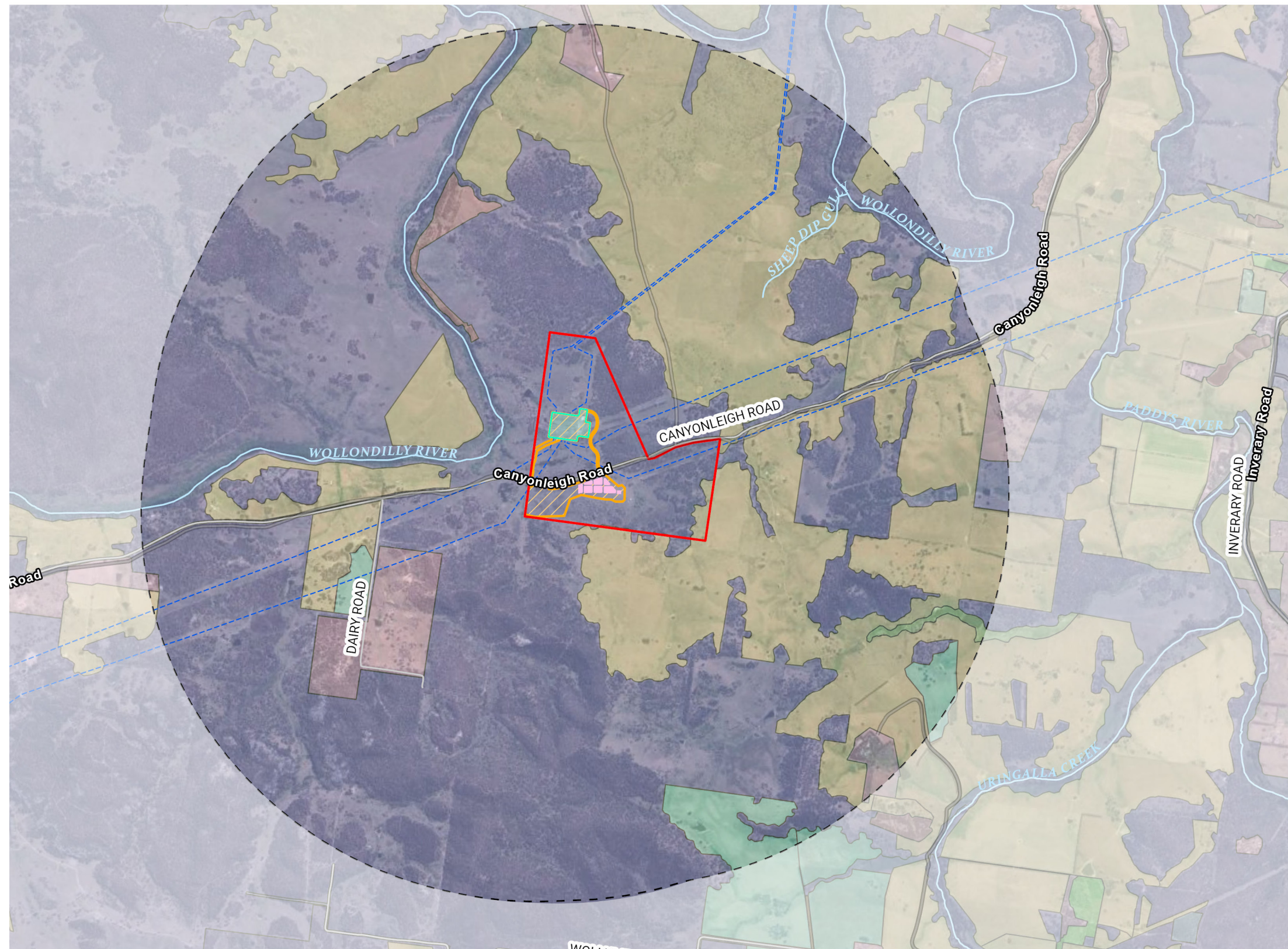


**Image 03** Marulan Substation to the north of the Project



**Image 04** Partially cleared native grazing pastures in the Study Area





## Land Use

Refer to Section 4.5

### LEGEND

- Project Boundary
- Visual Impact Study Area (2.5km from Disturbance Area)
- Disturbance Area
- BESS Area
- Existing Substation
- Existing Transmission Lines
- Roads
- Watercourses
- 2.1.0 Grazing native vegetation
- 3.2.0 Grazing modified pastures
- 3.3.0 Cropping
- 5.4.0 Residential and farm infrastructure
- 5.6.0 Utilities
- 5.7.0 Transport and communication
- 6.5.0 Marsh/wetland

**Figure 14** Land Use

Basemap Source - ESRI, 2025





## 4.6 Key Landscape Features

### 4.6.1 Topographical Character

The topographical character of the landscape within the Study Area typically consists of undulating hills in areas of cleared agricultural land and pockets of dense, dry sclerophyll forests within the range of 590 - 670 Australian Height Datum (AHD). Located to the southwest of the Project Site is the high point (at 670 AHD) of the Study Area, identified as a vegetated hill. Vegetated ranges associated with the South Eastern Highlands are visible through the Study Area to the southwest and northwest, adding to the visual landform (refer to **Image 02**).

Within the Project Boundary, the terrain is typical of the surrounding Study Area. Located on a northeast-facing slope, the Project Site has an elevation range between 646 - 608 AHD.

### 4.6.2 Hydrological Character

Man-made dams are dotted throughout the surrounding farmland to aid in agricultural practices. Within the 2.5 km Study Area, the identified water bodies include:

- Wollondilly River - located approximately 0.36 km northwest from the Project Site (refer to **Image 06**).
- Sheep Dip Gully - running roughly northeast to Wollondilly River and located approximately 1.60 km to the northwest of the Project Site.

### 4.6.3 Vegetation Character

Vegetation within the Study Area is typical of the Bungonia subregion as outlined in **Section 4.3**, with predominantly scattered vegetation within extensive pasture areas and large pockets of dense native bushland. Dominant vegetation communities consist of eucalyptus varieties, including Mottled gum, broad-leaved peppermint, white gum, red stringybark and black ash forests and woodlands (refer to **Image 05** and **Image 06**).

Within the Project Site, vegetation is characterised by dense native vegetation pockets to the south, east and north/northwest, as well as a row of densely spaced *pinus radiata* trees along the southern border of Canyonleigh Road, to the full extent of the Project Site. In the immediate surroundings, vegetation is mainly associated with native forests in the form of dry sclerophyll forests, along with vegetation associated with agricultural practices, specifically in the form of windbreaks, screening elements and lone trees dispersed in surrounding fields.



**Image 05** Dense areas of sclerophyll forests typical of the Study Area



**Image 06** Wollondilly River



#### 4.6.4 Roads

The Project is bordered by Canyonleigh Road to the north, a low use, unsealed road used by the surrounding residences.

The M31 Hume Highway is located approximately 4.83 km to the southeast of The Project and is a major inland road that forms part of the route connecting Sydney to Canberra.

The only other low-use road servicing nearby rural properties and residential receptors identified within the Study Area is Dairy Road, located to the west of The Project.

#### 4.6.5 Infrastructure

Within the agricultural pastures, energy infrastructure is present to the north of the Project Site (approx. 270 m). The Marulan Substation is located to the north of Canyonleigh Road, and the associated infrastructure, including transmission lines, run southeast-northwest through the Project Site. Whilst surrounding topography and screening vegetation restrict the visibility of the substation from the eastern, southern and western sides, the associated transmission lines are a prominent existing feature in the landscape (refer to **Image 07** and **Image 08**).



**Image 07** Canyonleigh Road



**Image 08** View of Marulan Substation from Canyonleigh Road



#### 4.7 Identify Landscape Character Zones

Landscape character zones (LCZs) should be defined based on shared visual characteristics, such as landforms and dominant land cover patterns. These patterns emerge from the interplay of vegetation, waterbodies, landforms, and land use, enabling the identification of key landscape features. **Figure 15** provides a schematic representation of what defines a LCZ.

The Study Area has been categorised into two LCZs; LCZ01 Agricultural Pastures & Rural Properties, and; LCZ02 Vegetated Hills. The general extent of these LCZs is shown in **Figure 16**.

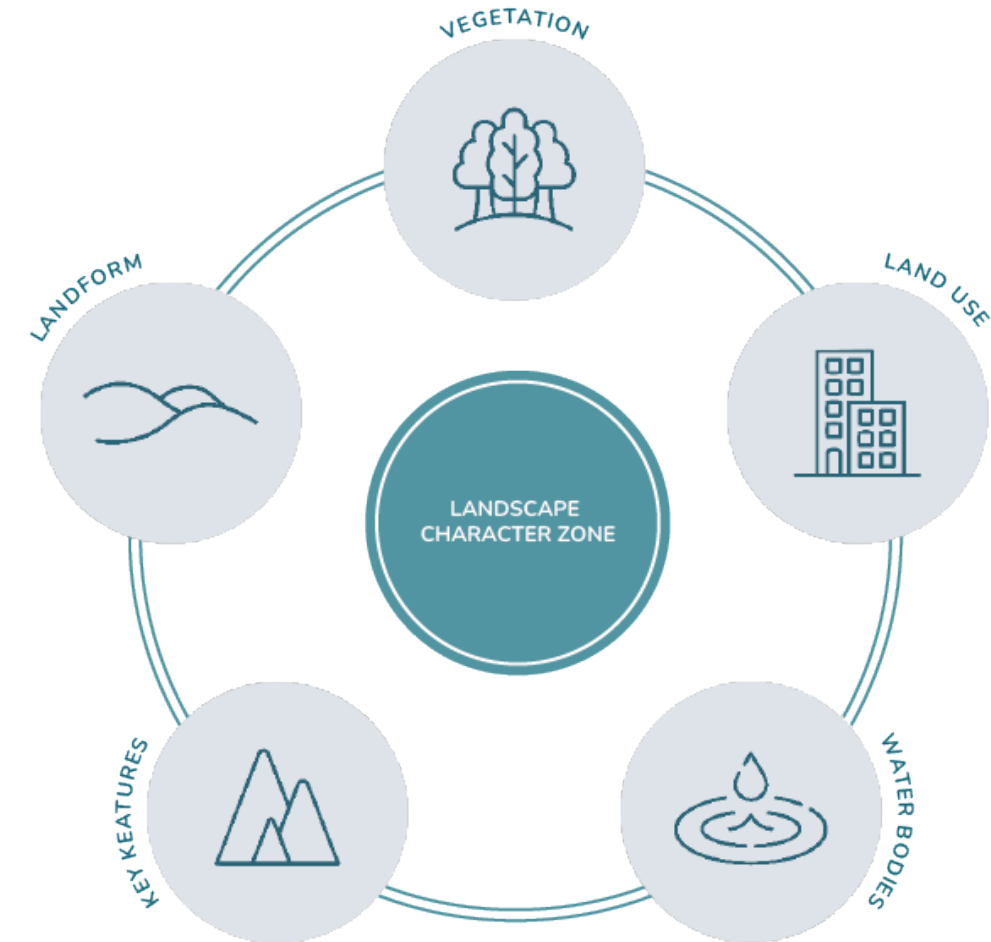
The visual sensitivity of each LCZ has been assessed using the scenic quality frame of reference, from the Department of Planning, Housing and Infrastructure (DPHI) Large Scale Solar Guideline Technical Supplement.

#### 4.8 Determining Scenic Quality

Scenic quality reflects the overall and relative scenic, cultural, or aesthetic value of the landscape within the viewshed. This assessment is based on the presence or absence of key landscape features that influence community perceptions of scenic quality, ranging from very low to high.

The baseline analysis and landscape character assessment have been used to inform the classification of scenic quality values. A scenic quality rating has been applied to each LCZ based on the Scenic Quality Frame of Reference and the visual reference for scenic quality values provided in the Technical Supplement (as presented in **Table 04** and **Table 05**).

The scenic quality has assisted in determining the sensitivity of each LCZ, results are shown in **Table 10**.



**Figure 15** Defining Landscape Character Zones



| Scenic Quality Frame of Reference |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feature                           | Very Low<br>Scenic Quality                                                                                                                                                                                                                                          | Low<br>Scenic Quality                                                                                                                                                                                                             | Moderate<br>Scenic Quality                                                                                                                                                                                                                                                                                                          | High<br>Scenic Quality                                                                                                                                                                                                                                                                                                         |
| Landform                          | <ul style="list-style-type: none"><li>Large expanses of flat or gently undulating terrain</li><li>Indistinct, dissected or unbroken landforms that provide little illusion of spatial definition or landmarks with which to orient</li></ul>                        | <ul style="list-style-type: none"><li>Mostly flat or gently undulating terrain with isolated areas of undulating topography</li></ul>                                                                                             | <ul style="list-style-type: none"><li>Steep, hilly and undulating ranges that are not visually dominant</li><li>Broad shallow valleys</li><li>Moderately deep gorges or moderately steep valley walls</li><li>Minor rock outcrops</li></ul>                                                                                         | <ul style="list-style-type: none"><li>Isolated peaks, steep rocky ridges, cones or escarpments with distinctive form and/or colour contrast that become focal points</li><li>Large areas of distinctive rock outcrops or boulders</li><li>Well defined, steep sided valley gorges</li></ul>                                    |
| Vegetation                        | <ul style="list-style-type: none"><li>Extensively cleared and cropped areas with very limited variation in colour and texture</li><li>Pastoral areas, human created paddocks, pastures or grasslands and associated buildings typical of grazing lands</li></ul>    | <ul style="list-style-type: none"><li>Predominantly cleared and cropped areas with small areas of variation in colour and texture</li><li>Mostly pastures or grasslands with small blocks of distinct native vegetation</li></ul> | <ul style="list-style-type: none"><li>Predominantly open forest or woodland combined with some natural openings in patterns that offer some visual relief</li><li>Vegetative stands that exhibit a range of size, form, colour, texture and spacing including human influenced vegetation such as vineyards, and orchards</li></ul> | <ul style="list-style-type: none"><li>Strongly defined patterns with combinations of native forest, naturally appearing openings, streamside vegetation and/or scattered exotics</li><li>Distinctive stands of vegetation that may create unusual forms, colours or textures in comparison to surrounding vegetation</li></ul> |
| Waterform                         | <ul style="list-style-type: none"><li>Absence of natural waterbody</li><li>Farm dams, irrigation canals or stormwater infrastructure</li></ul>                                                                                                                      | <ul style="list-style-type: none"><li>Minor waterforms such as creeks and streams</li></ul>                                                                                                                                       | <ul style="list-style-type: none"><li>Intermittent streams, lakes, rivers, swamps and reservoirs</li></ul>                                                                                                                                                                                                                          | <ul style="list-style-type: none"><li>Visually prominent lakes, reservoirs, rivers, streams, wetlands and swamps</li><li>Presence of harbour, inlet, bay or open ocean</li></ul>                                                                                                                                               |
| Social & Cultural                 | <ul style="list-style-type: none"><li>Places of worship, cemeteries/memorial parks, private open spaces</li></ul>                                                                                                                                                   | <ul style="list-style-type: none"><li>Places of worship, cemeteries/memorial parks, private open spaces</li><li>Local heritage sites</li></ul>                                                                                    | <ul style="list-style-type: none"><li>Local or state heritage sites</li><li>Distinguishable entry ways to a regional city identified in the Transport and Infrastructure SEPP</li></ul>                                                                                                                                             | <ul style="list-style-type: none"><li>Culturally important sites, world heritage areas, national parks/reserves,</li><li>World, national and state heritage sites</li></ul>                                                                                                                                                    |
| Human Presence                    | <ul style="list-style-type: none"><li>Dominating presence of infrastructure, human settlements, highly modified landscapes and higher density populations such as regional cities, industrial areas, agricultural transport or electricity infrastructure</li></ul> | <ul style="list-style-type: none"><li>Highly modified landscapes with visible infrastructure such as transmission lines and railway corridors</li></ul>                                                                           | <ul style="list-style-type: none"><li>Dispersed yet evident presence of human settlement such as villages, small towns, isolated pockets of production and industry, lower scale and trafficked transport infrastructure</li></ul>                                                                                                  | <ul style="list-style-type: none"><li>Natural/undisturbed landscape</li><li>Minimal evidence of human presence and production</li></ul>                                                                                                                                                                                        |

Table 03 Scenic Quality Frame of Reference



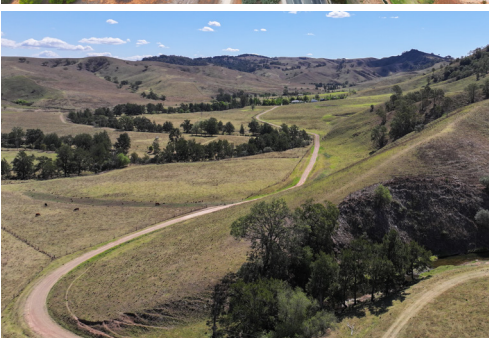
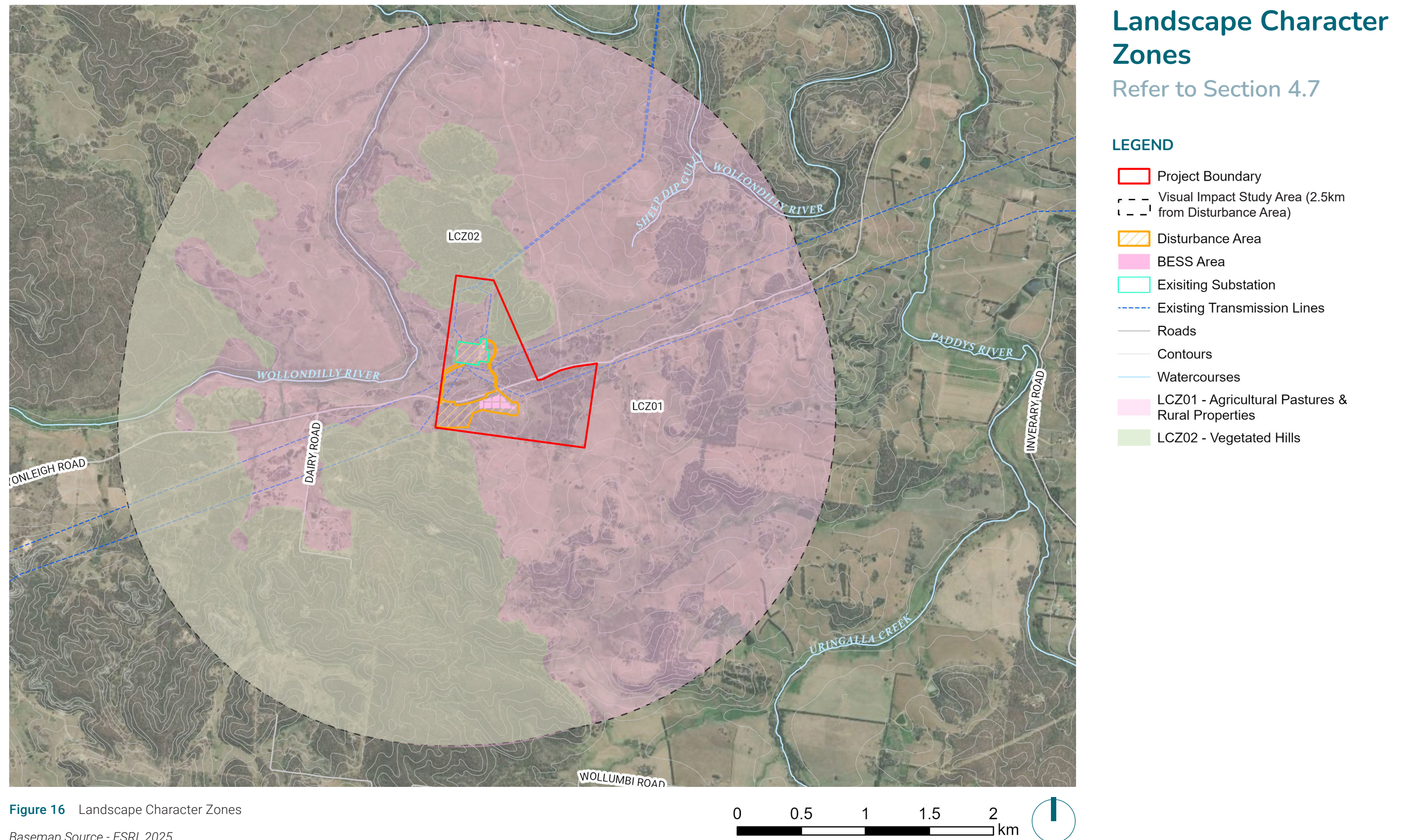
| Visual Scenic Quality Frame of Reference |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Feature                                  | Very Low<br>Scenic Quality                                                          | Low<br>Scenic Quality                                                                | Moderate<br>Scenic Quality                                                            | High<br>Scenic Quality                                                                |
| Landform                                 |    |    |    |    |
| Vegetation                               |    |    |    |    |
| Waterforms                               |   |   |   |   |
| Social & Cultural                        |  |  |  |  |
| Human Presence                           |  |  |  |  |

Table 04 Visual Reference of Scenic Quality







4.8.1 LCZ01 - Agricultural Pastures & Rural Properties

Land within this LCZ is predominately zoned as RU2 Rural Landscape. Characterised by gently undulating hills of cleared pastures. The land has been modified for agricultural production, specifically for grazing and cropping (as shown in land use mapping), with low-density rural residential properties dispersed throughout. Scattered remnants of vegetation are typically in the form of lone trees, windbreaks and residential vegetation associated with receptors, with a few small patches of woodlands near the creeks and ridgelines. Waterbodies are generally in the form of man-made farm dams or seasonal creeks. The Marulan Substation and associated transmission line infrastructure are viewed as a key landscape feature in the area.

The overall scenic quality of this LCZ is rated as **Low**.



Image 09 Undulating cleared pastures in LCZ01



Image 10 Pastures with views toward vegetated hills

| LANDSCAPE CHARACTER UNIT                        | KEY LANDSCAPE FEATURES<br>(dominant features within this zone)                    | KEY VIEWPOINTS   | Application of Scenic Quality Rating Frame of Reference |           |            |                |                   | SCENIC QUALITY RATING |
|-------------------------------------------------|-----------------------------------------------------------------------------------|------------------|---------------------------------------------------------|-----------|------------|----------------|-------------------|-----------------------|
|                                                 |                                                                                   |                  | Landform                                                | Waterform | Vegetation | Human Presence | Social & Cultural |                       |
| LCZ01 -Agricultural Pastures & rural Properties | Cleared pastures with scattered vegetation, transmission lines, Wollondilly River | Canyonleigh Road | H                                                       |           |            |                |                   | LOW                   |
|                                                 |                                                                                   |                  | M                                                       |           |            |                |                   |                       |
|                                                 |                                                                                   |                  | L                                                       |           |            |                |                   |                       |
|                                                 |                                                                                   |                  | VL                                                      |           |            |                |                   |                       |

Table 05 LCZ01 - Agricultural Pastures & Rural Properties



4.8.2 LCZ02 - Vegetated Hills

Land within this LCZ is predominately zoned as RU2 Rural Landscape. Characterised by densely vegetated undulating topography forming hills and valleys, this land consists of endemic forests in the form of dry sclerophyll forests. Dominant vegetation communities consist of eucalyptus varieties, including Mottled gum, broad-leaved peppermint, white gum, red stringybark and black ash forests and woodlands. Wide corridors of cleared vegetation associated with the transmission line infrastructure of the Marulan Substation break apart the character of these densely vegetated communities.

The overall scenic quality of this LCZ is rated as **Moderate**.



Image 11 Riparian corridor vegetation in LCZ02



Image 12 Dense endemic forest in LCZ02

| LANDSCAPE CHARACTER UNIT       | KEY LANDSCAPE FEATURES<br>(dominant features within this zone)     | KEY VIEWPOINTS              | Application of Scenic Quality Rating Frame of Reference |           |            |                |                   | SCENIC QUALITY RATING |
|--------------------------------|--------------------------------------------------------------------|-----------------------------|---------------------------------------------------------|-----------|------------|----------------|-------------------|-----------------------|
|                                |                                                                    |                             | Landform                                                | Waterform | Vegetation | Human Presence | Social & Cultural |                       |
| LCZ02 - Vegetated Watercourses | Dense endemic forests, steeper undulating hills, Wollondilly River | Denman Road & Mangoola Road | H                                                       |           |            |                |                   | MODERATE              |
|                                |                                                                    |                             | M                                                       |           |            |                |                   |                       |
|                                |                                                                    |                             | L                                                       |           |            |                |                   |                       |
|                                |                                                                    |                             | VL                                                      |           |            |                |                   |                       |

Table 06 LCZ02 - Vegetated Watercourses



| Landscape Character Assessment |                                          |                        |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |
|--------------------------------|------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| LCZ:                           | Name:                                    | Scenic Quality Rating: | Sensitivity:                                                                                                                                                                                                                                                                                                                                    | Magnitude:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Landscape Character Impact Rating: |
| LCZ01                          | Agricultural Pastures & Rural Properties | LOW                    | <p><b>VERY LOW</b></p> <p>The LCZ is a modified environment defined by land predominantly cleared to support agricultural activities such as grazing and cropping.</p> <p>Existing transmission lines also form a key feature of this LCZ, and as such, it is considered to have capacity to absorb the change associated with the Project.</p> | <p><b>LOW</b></p> <p>The Project is located within this LCZ and as a result, views toward the Project will be available at close range along Canyonleigh Road.</p> <p>The Project will be a visible element in the landscape from areas at close range, however the existing vegetation lining Canyonleigh Road for the length of the Project Area will fragment majority of the views toward the Project. The extent of this change is considered minor due to the modified nature of the existing landscape and the fragmented views.</p> | LOW                                |
| LCZ02                          | Vegetated Hills                          | MODERATE               | <p><b>MODERATE</b></p> <p>This LCZ is predominantly intact with minor evidence of human intervention. The lack of nature reserves, public open spaces or lookouts limits the use of this LCZ by the general public.</p>                                                                                                                         | <p><b>LOW</b></p> <p>Opportunities to view the Project from within the LCZ are limited due to lack of public use and the dense vegetation associated with this LCZ which screens or fragments views toward the Project.</p>                                                                                                                                                                                                                                                                                                                 | LOW                                |

Table 07 Overview of Landscape Character Assessment



# 05 Visual Impact Assessment





# 5.0 Visual Impact Assessment

## 5.1 Visual Impact Assessment Methodology

A Visual Impact Assessment evaluates the everyday visual effects of a project on both private and public views. Assessing the potential impacts of a project requires an understanding of an area's or viewpoint's sensitivity to change, as well as the scale and magnitude of the proposed project. The Visual Impact Assessment process should be proportionate to the anticipated impacts of the project.

### 5.1.1 Determining Visual Sensitivity

Visual Sensitivity refers to the quality of the existing view and how sensitive the view is to the proposed change. The visual sensitivity is determined through the following three steps:

**Step 1.** Determine Viewpoint Sensitivity

**Step 2.** Determine Scenic Quality

**Step 3.** Calculate Overall Visual Sensitivity

### 5.1.2 Viewpoint Sensitivity

Viewpoint sensitivity relates to the relative importance of viewpoints and the value that the community or visitors may place on landscapes viewed from public use areas and public travelways and non-associated residences such as dwellings. The sensitivity of each viewpoint has been assigned as one of four sensitivity ratings (very low, low, moderate, high) considering the examples in **Table 08**.

### 5.1.3 Scenic Quality

Scenic quality refers to the relative scenic, cultural or aesthetic value of the landscape within the viewshed based on the presence or absence of key landscape features known to be associated with community perceptions of very low, low, moderate, or high scenic quality. It is typically a complex process undertaken by experts in Visual Impact Assessment and considers community values. The methodology for determining scenic quality is outlined in **Section 4.8**.

### 5.1.4 Overall Visual Sensitivity

Once the viewpoint sensitivity and scenic quality are determined, these can be combined using the visual sensitivity matrix in **Table 09** to determine the overall visual sensitivity of each identified viewpoint.

| Viewpoint Type   | Very Low sensitivity                                                                      | Low sensitivity                                                                                                                                                | Moderate sensitivity                                                                                                                                                                                                                                                                      | High sensitivity                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Private receptor | Private recreation areas and sporting fields (land zoned RE2)                             | Secondary dwelling view from dwelling rural area (zoned RU1, RU2, RU3, RU4 and RU6), large lot residential (zoned R5) and environmental and conservation zones | Primary view from dwellings in rural areas (zoned RU1, RU2, RU3, RU4 and RU6), large lot residential areas (zoned R5) and environmental or conservation areas (zoned C2, C3 and C4)<br><br>Tourist and visitor accommodation (bedand-breakfasts, motels and hotels) and places of worship | Dwellings in residential and rural villages (zoned R1, R2, R3, R4 and RU5) Historic rural homesteads/ residences on the national, state or local heritage list |
| Public viewpoint | State highways, freeways and classified main roads<br><br>Local sealed and unsealed roads | Cemeteries, memorial parks Tourist roads and scenic drives. Significant entry ways to regional towns and cities.<br><br>Walking tracks and navigable waterways | Tourist uses in tourist areas (zoned SP3)<br><br>Publicly accessible green and open spaces, including picnic areas, parks, public recreation areas and lookouts<br><br>Town centres and central business districts                                                                        | n/a                                                                                                                                                            |

Table 08 Viewpoint Sensitivity Levels and Examples

| VISUAL SENSITIVITY MATRIX   |                     |                         |                    |                         |
|-----------------------------|---------------------|-------------------------|--------------------|-------------------------|
| Viewpoint Sensitivity Level | High Scenic Quality | Moderate Scenic Quality | Low Scenic Quality | Very Low Scenic Quality |
| HIGH                        | HIGH                | HIGH                    | MODERATE           | LOW                     |
| MODERATE                    | HIGH                | MODERATE                | MODERATE           | LOW                     |
| LOW                         | MODERATE            | LOW                     | LOW                | VERY LOW                |
| VERY LOW                    | VERY LOW            | VERY LOW                | VERY LOW           | VERY LOW                |

Table 09 Visual Sensitivity Matrix



5.1.5 Determining Visual Magnitude

Visual magnitude refers to the extent of change that will be experienced by receptors. Factors that are considered when assessing the magnitude of change include: (AILA, 2018):

- The proportion of the view / landscape affected;
- Extent of the area over which the change occurs;
- The size and scale of the change;
- The rate and duration of the change; and
- The level of contrast and compatibility.

The visual magnitude is assigned one of four magnitude ratings (very low, low, moderate, high).

5.1.6 Determining Overall Visual Impact

Once visual magnitude and visual sensitivity have been established for each viewpoint, the overall visual impact is determined by combining the magnitude and sensitivity ratings according to the matrix in **Table 10**.

Viewpoints with very low or low visual impact do not require mitigation. Viewpoints that have a moderate or high visual impact will require mitigation to reduce the visual impacts associated with the Project.

|                  |           | VISUAL SENSITIVITY RATING |          |          |          |
|------------------|-----------|---------------------------|----------|----------|----------|
|                  |           | HIGH                      | MODERATE | LOW      | VERY LOW |
| MAGNITUDE RATING | VERY HIGH | HIGH                      | HIGH     | MODERATE | MODERATE |
|                  | HIGH      | HIGH                      | MODERATE | MODERATE | LOW      |
|                  | MODERATE  | MODERATE                  | MODERATE | LOW      | LOW      |
|                  | LOW       | MODERATE                  | LOW      | LOW      | VERY LOW |
|                  | VERY LOW  | LOW                       | LOW      | VERY LOW | VERY LOW |

Table 10 Visual Impact Matrix



## 5.2 Zone of Visual Influence

An initial visibility assessment was undertaken utilising Zone of Visual Influence (ZVI) mapping. This tool assists in defining the 'Visual Catchment' for the Project.

The ZVI represents the area over which a development can theoretically be seen, and is based on a Digital Terrain Model (DTM). The ZVI is a desktop tool intended to make the fieldwork and assessment more efficient by clearly excluding areas that are screened by topography. Fieldwork assessments are then undertaken predominantly within the areas with the potential for visual impacts.

The ZVI presents a bare ground scenario - ie. A landscape without screening, structures or vegetation, and is usually presented on a base map. It is also referred to as a zone of theoretical visibility (LIIEMA, 2002). As accurate information on the height and coverage of vegetation and buildings is unavailable, it is important to note the ZVI is based solely on topographic information. This form of mapping is acknowledged as providing a worst case scenario and is used purely as a desktop assessment tool to determine areas for further investigation.

### 5.2.1 Zone of Visual Influence Summary

The ZVI for the Project has been prepared based on a the maximum height of the BESS modules at 3 m, which occupy the majority of the Disturbance Area. Results are shown in **Figure 17**.

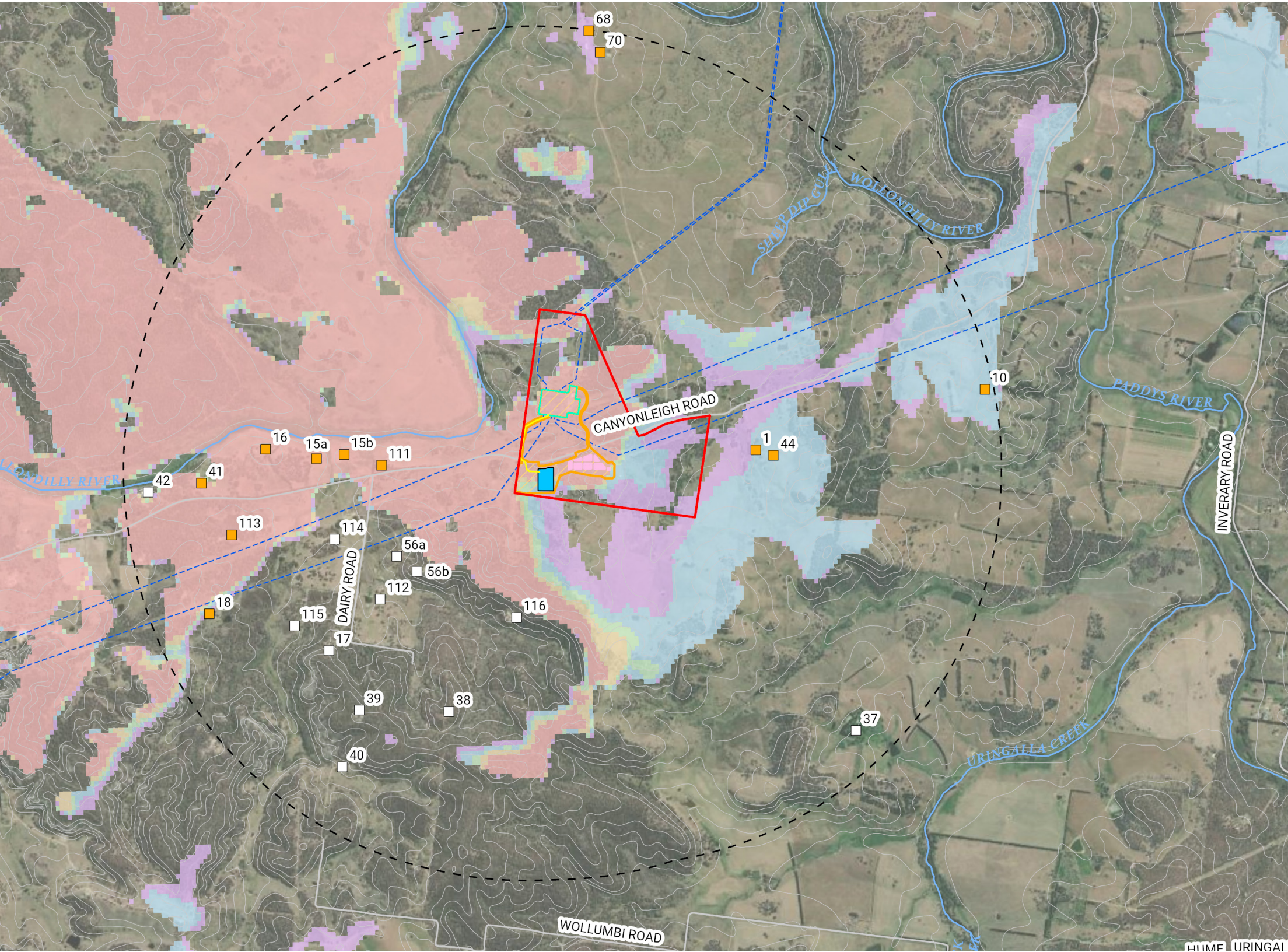
Summary of findings of the viewshed analysis:

- The majority of Canyonleigh Road has a potential theoretical view toward the Project.
- Areas to the south, southeast and southwest have no visibility of the Project due to intervening topography.
- 24 non-associated dwellings are located within 2.5 km of the Disturbance Area, of these, 12 non-associated dwellings have a theoretical line of sight to the Project.

The ZVI has been used to identify areas of potential high visibility, which informs the on-site fieldwork and viewpoint analysis to identify locations that require further detailed analysis.

It is noted that the ZVI analysis provides a worst-case scenario as existing screening elements such as structures or vegetation are not considered in the ZVI mapping. Further assessment and fieldwork is required to determine whether existing screening elements in the landscape are able to reduce visual impacts to an acceptable level, or if further mitigation strategies are required.





# Zone of Visual Influence

Refer to Section 5.2

## LEGEND

- Project Boundary
- Visual Impact Study Area (2.5 km from Disturbance Area)
- Non-Associated Dwelling with no visibility of the Project
- Non-Associated Dwelling
- Disturbance Area
- BESS Area
- Substation
- Existing Substation
- 330KV Connection Lines
- Existing Transmission Lines
- Roads
- Watercourses
- Contours
- Up to 20% Visibility
- 20 - 40% Visibility
- 40 - 60% Visibility
- 60 - 80% Visibility
- 80 - 100% Visibility

Figure 17 Zone of Visual Influence

Basemap Source - ESRI, 2025



5.3 Assessment Methodology for Public Viewpoints

The viewpoint analysis considers the likely visual impacts of the Project on the existing landscape character and visual amenity by selecting prominent sites, otherwise referred to as viewpoints.

Once the viewpoints were selected, panoramic photographs were taken on a level tripod at a height of 150 centimetres (cm) (to represent eye level). Photographs were taken with a Canon EOS R5 Mirrorless Camera through a 50 millimetres (mm) fixed focal lens which closely represents the central field of vision of the human eye.

The visual impact of the viewpoint are then assessed both on site and with the topographic and aerial information to ensure accuracy. For each viewpoint, the potential visual impacts are analysed through a combination of the 3D terrain modelling, topographic maps and on site analysis. Viewpoint photographs and analysis have been included in the following pages. The findings of the viewpoint analysis have been quantified and are summarised in **Table 11**.

5.4 Viewpoint Selection

The selection of public viewpoints has been informed by topographical maps, fieldwork observations and other relevant influences such as access, landscape character and the popularity and sensitivity of vantage points. Viewpoints are selected to illustrate the following:

- Areas of high scenic value, or community value
- Views from public areas such as camp grounds, rest stops, lookouts, parks, community halls etc.
- Views from public roads
- Range of distances from the Project
- Range of elevations in relation to the Project
- Range of extent of visibility of the Project

A total of six viewpoints were selected from publicly accessible locations to represent a range of views surrounding the Project Area, noting that there limited opportunities to view the Project within the local region with the exception of Canyonleigh Road. Locations of the viewpoints are outlined in **Figure 18**.

5.5 Summary of Visual Impacts from Public Viewpoints

The Project will result in a Low to Very Low visual impact on the existing landscape character. Due to the dense native vegetation, existing row planting along Canyonleigh Road and the undulating topography within the Study Area, there are minimal opportunities to view the Project from publicly accessible areas surrounding the Project.

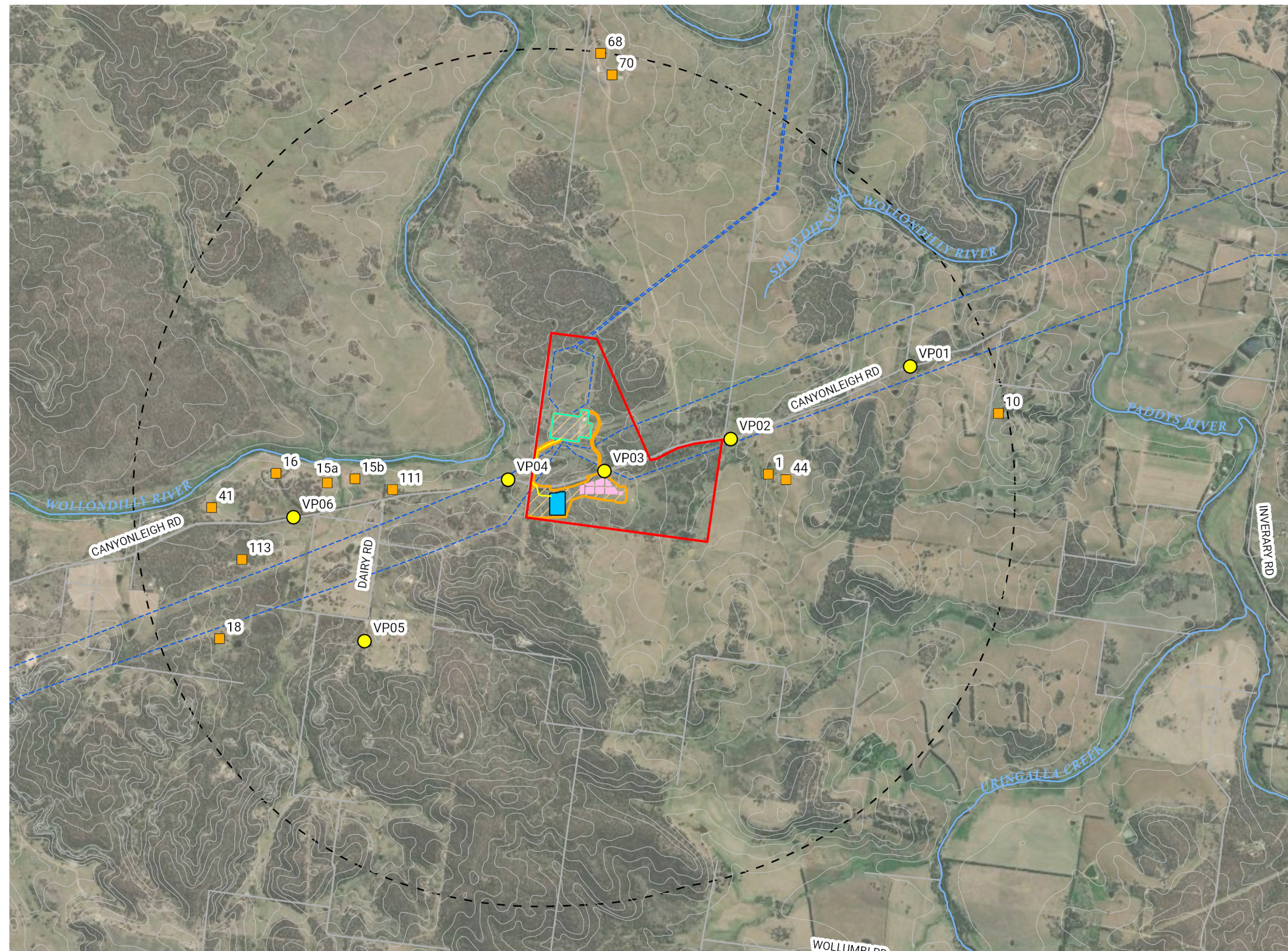
The only location where the Project can be partially viewed (VP03) is directly adjacent to the Project on Canyonleigh Road, and even then can only be seen through small breaks in the existing row planting lining the Project Area boundary. At this location (VP03) the existing Marulan Substation and associated transmission lines are visible and prominent in the view, therefore the introduction of the Project results in a Low contrast with the existing landscape character at this specific location.

The results from the visual impact assessment for public viewpoints are summarised in **Table 11**.

| Viewpoint | Location         | Visual Sensitivity | Visual Magnitude | Visual Impact |
|-----------|------------------|--------------------|------------------|---------------|
| VP01      | Canyonleigh Road | Very Low           | Very Low         | Very Low      |
| VP02      | Canyonleigh Road | Very Low           | Very Low         | Very Low      |
| VP03      | Canyonleigh Road | Very Low           | Moderate         | Low           |
| VP04      | Canyonleigh Road | Very Low           | Very Low         | Very Low      |
| VP05      | Dairy Road       | Moderate           | Very Low         | Low           |
| VP06      | Canyonleigh Road | Moderate           | Very Low         | Low           |

Table 11 Viewpoint Assessment Results





## Viewpoint Locations

Refer to Section 5.4

### LEGEND

- ▭ Project Boundary
- ▨ Disturbance Area
- Visual Impact Study Area (2.5 km from Disturbance Area)
- Non-Associated Dwellings
- Substation
- BESS Area
- ▭ Existing Substation
- 330KV Connection Lines
- Public Viewpoint Locations
- Existing Transmission Lines
- Roads
- Contours
- Watercourses

**Figure 18** Viewpoint Locations

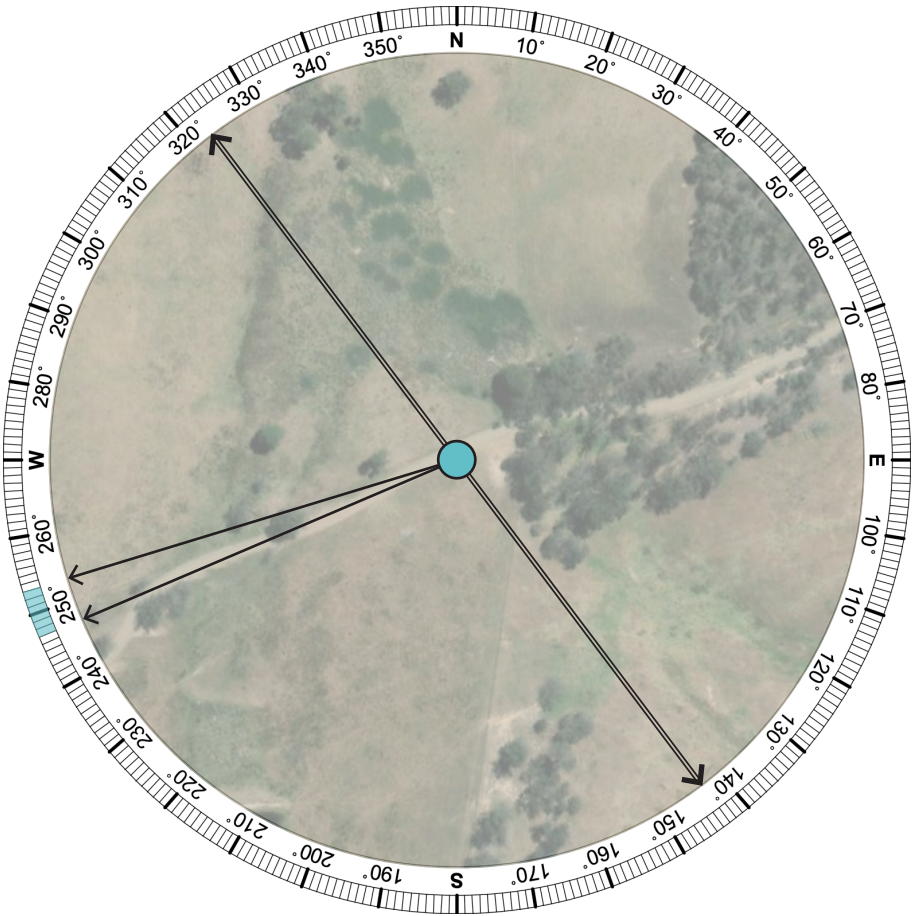
Basemap Source - ESRI, 2025



Viewpoint:  
**VP01** Canyonleigh Road, Brayton



Extent of Potential Visibility



Viewpoint Summary:

|                                 |                      |
|---------------------------------|----------------------|
| Location:                       | Elevation:           |
| Canyonleigh Road                | 598 m                |
| Coordinates:                    | Distance to Project: |
| 34°36'44.47"S<br>150°04'36.23"E | 2.03 km              |
| Viewing Direction:              |                      |
| Southwest                       |                      |
| Visual Sensitivity:             |                      |
| Low                             |                      |
| Visual Magnitude:               |                      |
| Very Low                        |                      |
| Visual Impact:                  |                      |
| Very Low                        |                      |

- Extent of Panorama
- Approximate Extent of Project

Aerial Source: Google Earth, 2025

Existing Landscape Character Description:

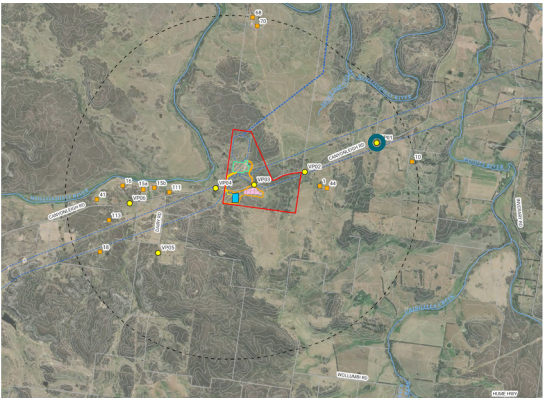
This viewpoint is located on Canyonleigh Road in Brayton. The viewpoint is taken on an unsealed road and oriented southwest towards the Project.

The surrounding landscape is characterised by cleared pastoral land with dense pockets of native, Dry Sclerophyll Forests in the background and electrical transmission lines and scattered vegetation in the foreground.

The visual sensitivity of this viewpoint has been rated as **Very Low**.

Potential Visual Impact:

Due to the distance to the Project, the extent of surrounding forest and the undulating topography, the Project will not be visible from this location. Therefore, the visual magnitude of change is **Very Low**, resulting in a **Very Low** visual impact.

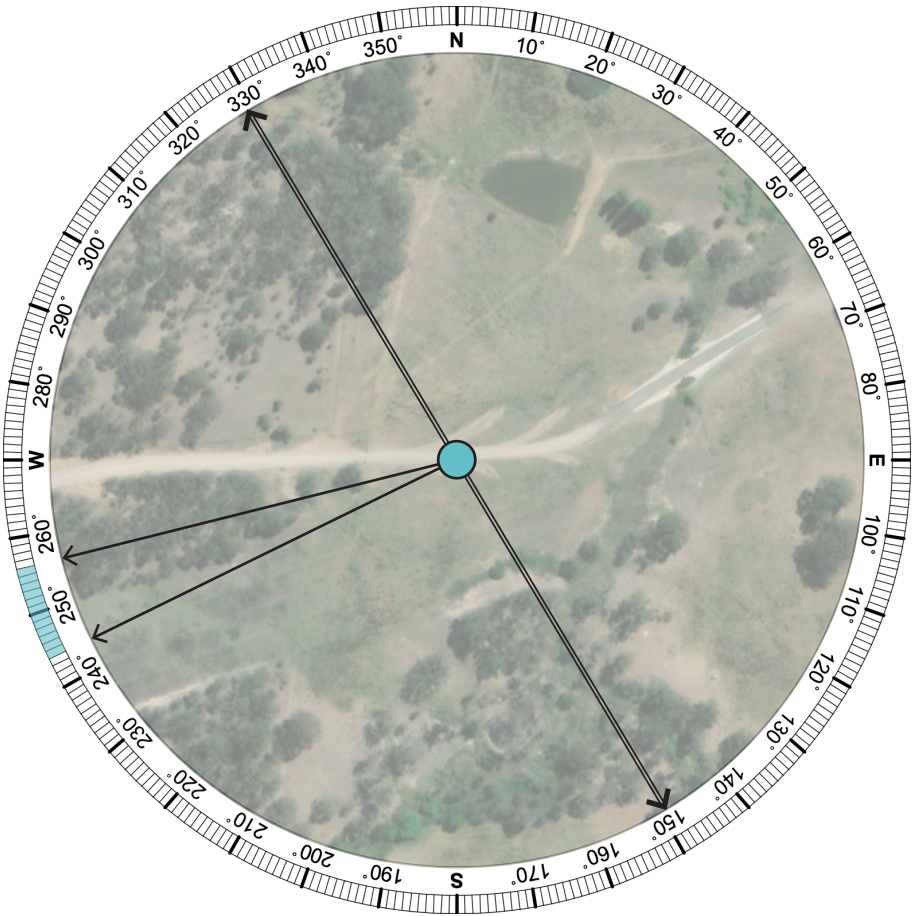


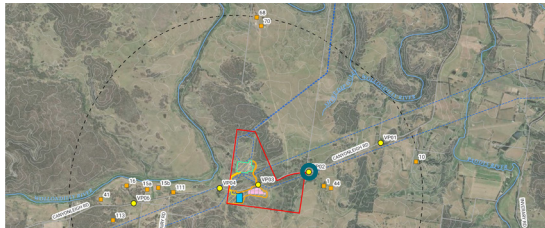


Viewpoint:  
**VP02** Canyonleigh Road, Brayton

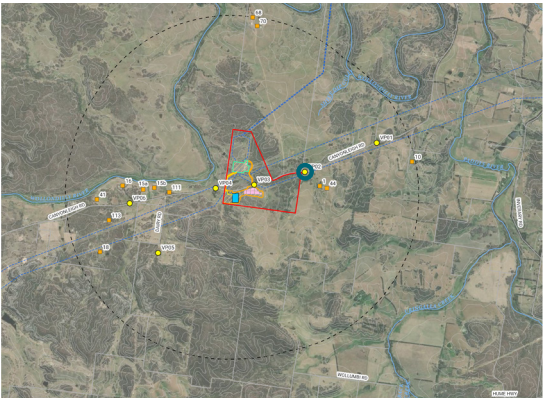


Extent of Potential Visibility



| Viewpoint Summary:              |                      | Existing Landscape Character Description:                                                                                                                                                             | Potential Visual Impact:                                                                                                                                                                                                                                             |
|---------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Location:                       | Elevation:           | This viewpoint is located on Canyonleigh Road in Brayton. The viewpoint is taken on an unsealed road and oriented southwest towards the Project.                                                      | Due to the distance to the Project, the extent of surrounding forest and the undulating topography, the Project will not be visible from this location. Therefore, the visual magnitude of change is <b>Very Low</b> , resulting in a <b>Very Low</b> visual impact. |
| Canyonleigh Road                | 600 m                |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Coordinates:                    | Distance to Project: | The surrounding landscape is characterised by cleared land used for the existing transmission line easement in the foreground with dense pockets of native, Dry Sclerophyll Forests in the midground. | The visual sensitivity of this viewpoint has been rated as <b>Very Low</b> .                                                                                                                                                                                         |
| 34°36'44.47"S<br>150°04'36.23"E | 1.99 km              |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Viewing Direction:              |                      |                                                                                                                  |                                                                                                                                                                                                                                                                      |
| Southwest                       |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Visual Sensitivity:             |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Very Low                        |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Visual Magnitude:               |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Very Low                        |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| Visual Impact:                  |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |
| <b>Very Low</b>                 |                      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                      |

→ Extent of Panorama  
→ Approximate Extent of Project  
Aerial Source: Google Earth, 2025



VP Location

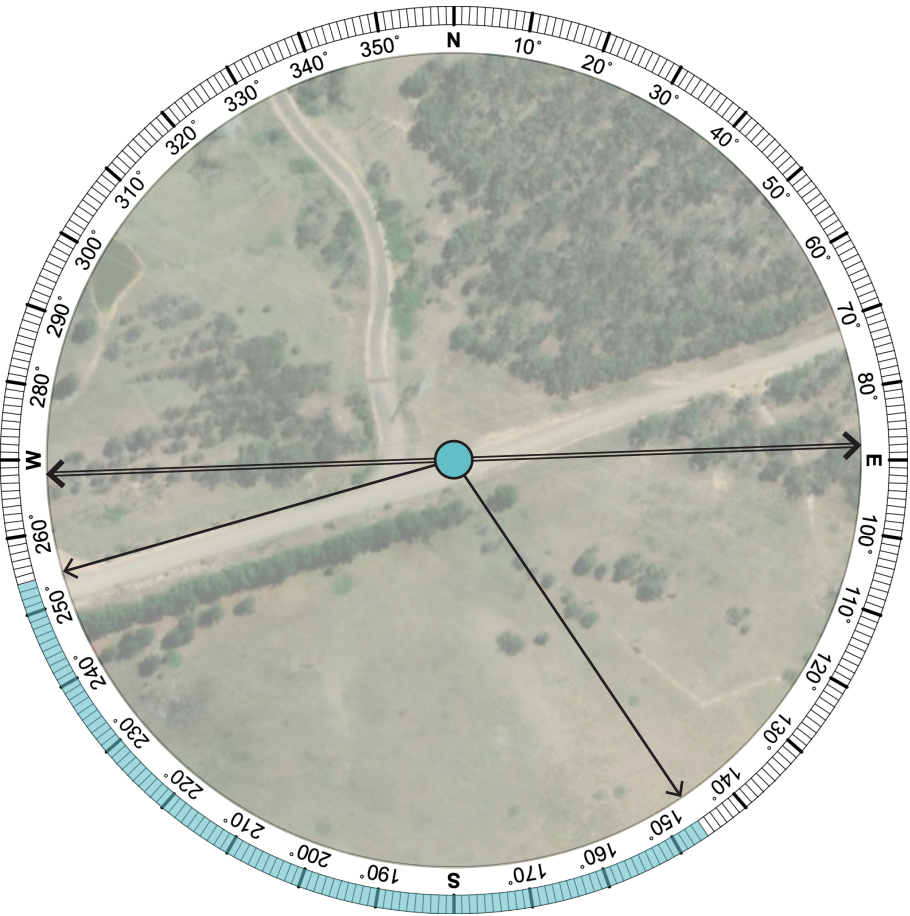


Viewpoint:  
**VP03** Canyonleigh Road, Brayton

Extent of BESS



Extent of Potential Visibility

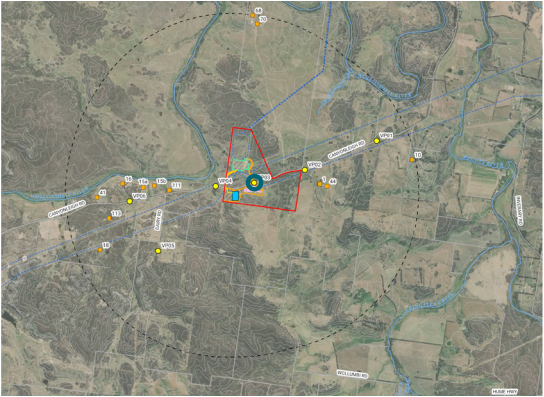


| Viewpoint Summary:              |                      |
|---------------------------------|----------------------|
| Location:                       | Elevation:           |
| Canyonleigh Road                | 636 m                |
| Coordinates:                    | Distance to Project: |
| 34°37'04.53"S<br>150°03'18.26"E | 0.05 km              |
| Viewing Direction:              |                      |
| South                           |                      |
| Visual Sensitivity:             |                      |
| Very Low                        |                      |
| Visual Magnitude:               |                      |
| Moderate                        |                      |
| Visual Impact:                  |                      |
| Low                             |                      |

- Extent of Panorama
- Approximate Extent of Project

Aerial Source: Google Earth, 2025

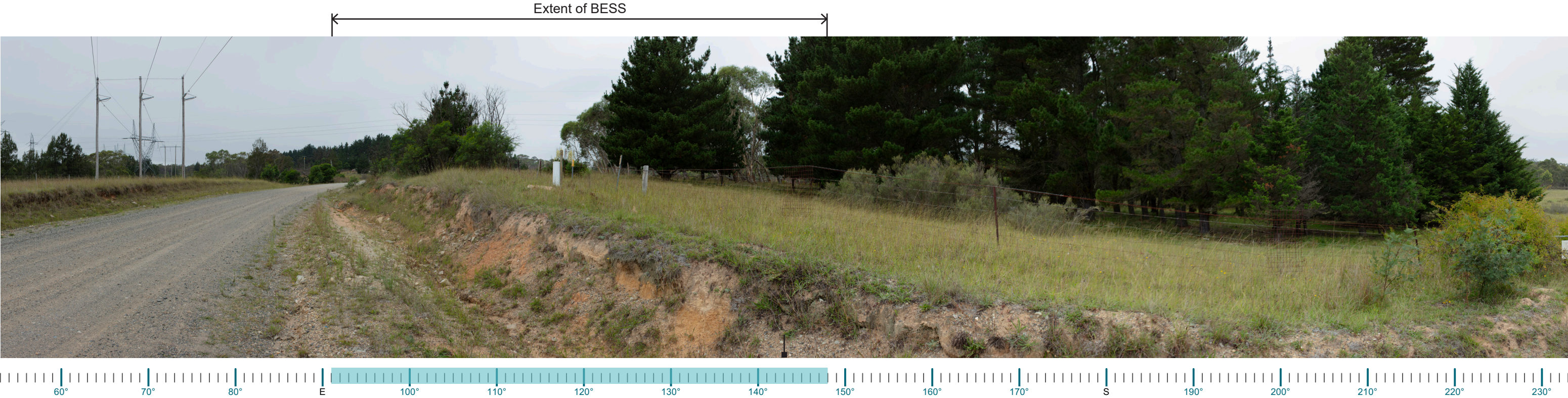
| Existing Landscape Character Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Potential Visual Impact:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>This viewpoint is located on Canyonleigh Road in Brayton, adjacent to the Project. The viewpoint is taken on an unsealed road and oriented south towards the Project.</p> <p>The surrounding landscape is characterised by cleared pastoral land with dense pockets of native, Dry Sclerophyll Forests in the background and electrical transmission lines and dense pine tree row planting in the foreground.</p> <p>The visual sensitivity of this viewpoint has been rated as <b>Very Low</b>.</p> | <p>From this location, the Project will be visible due to the close proximity. However, the view to the Project is fragmented by the existing row planting along the boundary of the Project Area, as well as the undulating topography of the site, which screens the majority of the Project from Canyonleigh Road. Furthermore, the viewpoint is a public road, where the speed of travel will reduce the time a viewer can experience views toward the Project.</p> <p>Therefore the visual magnitude of change is <b>Moderate</b>, resulting in a <b>Low</b> visual impact.</p> <p>Refer to <b>Photomontage 01</b> in <b>Section 5.6</b>.</p> |



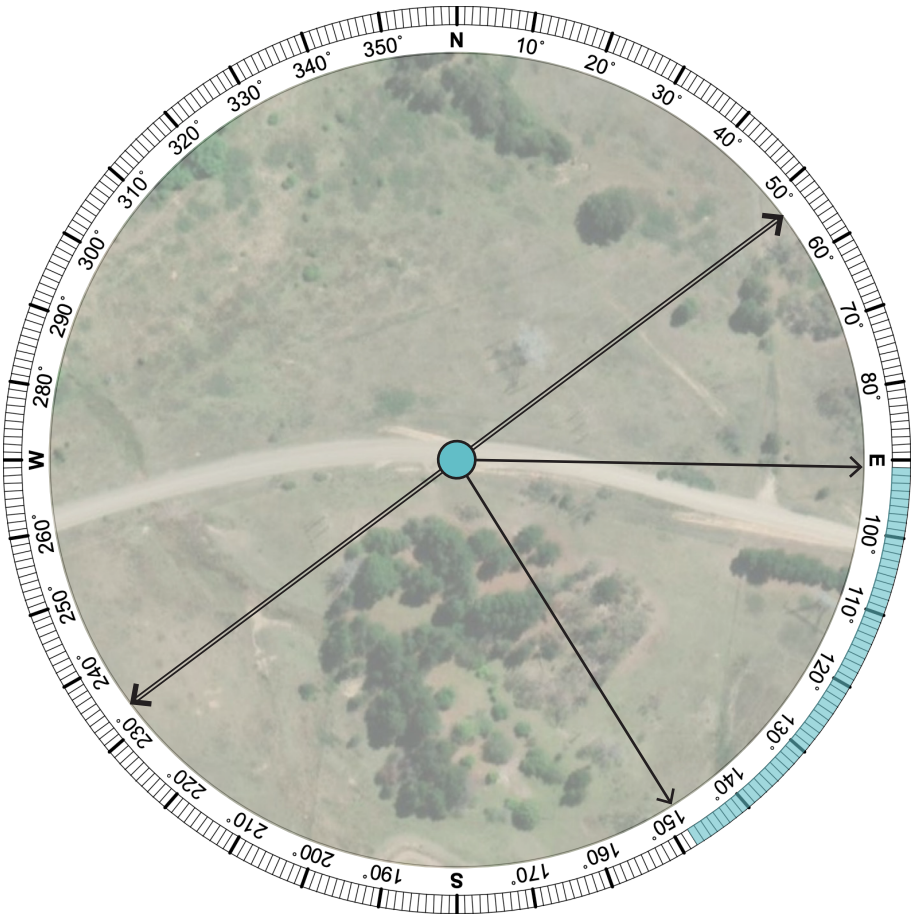
VP Location



Viewpoint:  
**VP04** Canyonleigh Road, Brayton



Extent of Potential Visibility

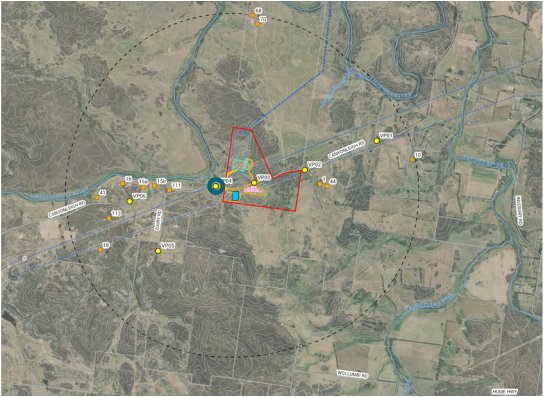


| Viewpoint Summary:              |                      |
|---------------------------------|----------------------|
| Location:                       | Elevation:           |
| Canyonleigh Road                | 601 m                |
| Coordinates:                    | Distance to Project: |
| 34°37'05.70"S<br>150°02'53.87"E | 0.17 km              |
| Viewing Direction:              |                      |
| Southeast                       |                      |
| Visual Sensitivity:             |                      |
| Very Low                        |                      |
| Visual Magnitude:               |                      |
| Very Low                        |                      |
| Visual Impact:                  |                      |
| Very Low                        |                      |

- Extent of Panorama
- Approximate Extent of Project

Aerial Source: Google Earth, 2025

| Existing Landscape Character Description:                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| This viewpoint is located on Canyonleigh Road in Brayton, adjacent to the Project. The viewpoint is taken on an unsealed road and oriented southeast towards the Project.                                                     |
| The surrounding landscape is characterised by cleared pastoral land with dense pockets of native, Dry Sclerophyll Forests in the background and electrical transmission lines and dense pine tree planting in the foreground. |
| The visual sensitivity of this viewpoint has been rated as <b>Low</b> .                                                                                                                                                       |

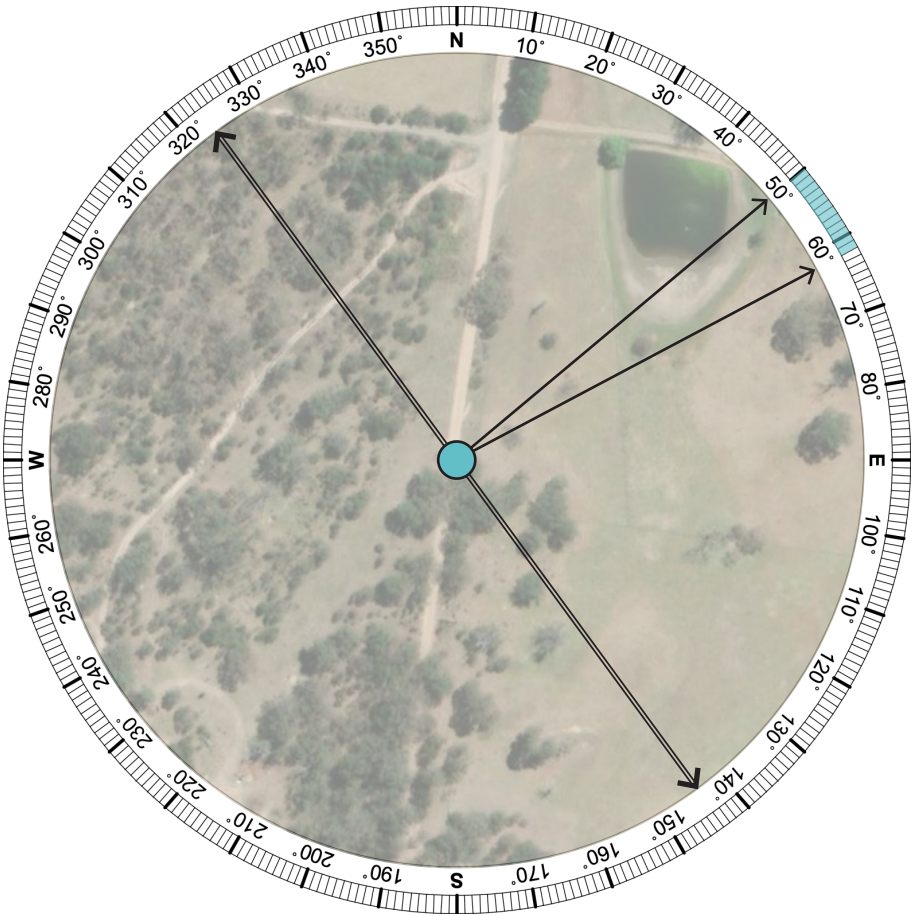
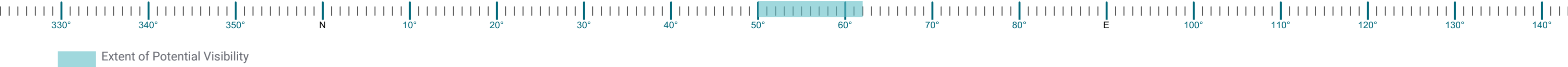
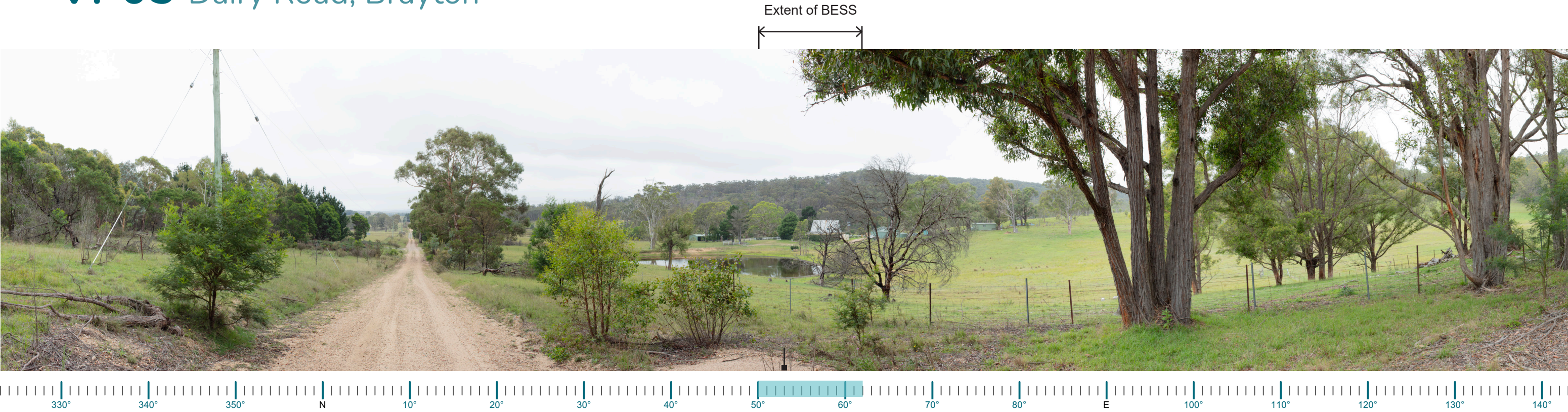


| Potential Visual Impact:                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Despite the close proximity to the Project, this viewpoint has no visibility to the Project due to undulating topography and dense vegetation screening the project. The visual magnitude of change is <b>Very Low</b> , resulting in a <b>Very Low</b> visual impact. |
| Refer to <b>Photomontage 02</b> in <b>Section 5.6</b> .                                                                                                                                                                                                                |

VP Location



Viewpoint:  
**VP05** Dairy Road, Brayton

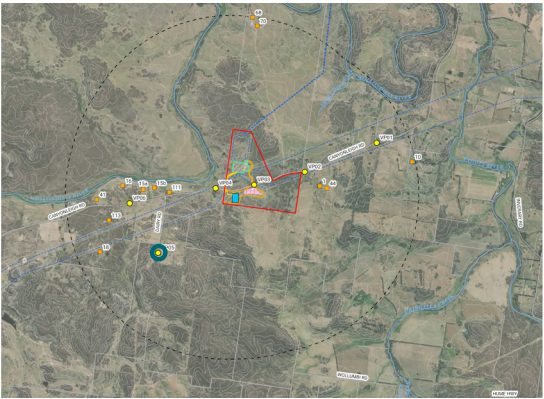


| Viewpoint Summary:              |                      |
|---------------------------------|----------------------|
| Location:                       | Elevation:           |
| Dairy Road                      | 625 m                |
| Coordinates:                    | Distance to Project: |
| 34°37'05.70"S<br>150°02'53.87"E | 1.35 km              |
| Viewing Direction:              |                      |
| Northeast                       |                      |
| Visual Sensitivity:             |                      |
| Moderate                        |                      |
| Visual Magnitude:               |                      |
| Very Low                        |                      |
| Visual Impact:                  |                      |
| Low                             |                      |

- Extent of Panorama
- Approximate Extent of Project

Aerial Source: Google Earth, 2025

| Existing Landscape Character Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Potential Visual Impact:                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>This viewpoint is located on Dairy Road in Brayton. The viewpoint is taken on an unsealed road and oriented Northeast towards the Project. The viewpoint aims to represent the views of the surrounding dwellings on Dairy Road.</p> <p>The surrounding landscape is characterised by cleared pastoral land and rural residential properties with dense pockets of native forest in the background. Electrical transmission lines and scattered vegetation are visible in the foreground.</p> <p>The visual sensitivity of this viewpoint has been rated as <b>Moderate</b>.</p> | <p>Due to the distance to the Project, the extent of surrounding vegetation and the undulating topography, the Project will not be visible from this location. Therefore, the visual magnitude of change is <b>Very Low</b>, resulting in a <b>Low</b> visual impact.</p> |



VP Location

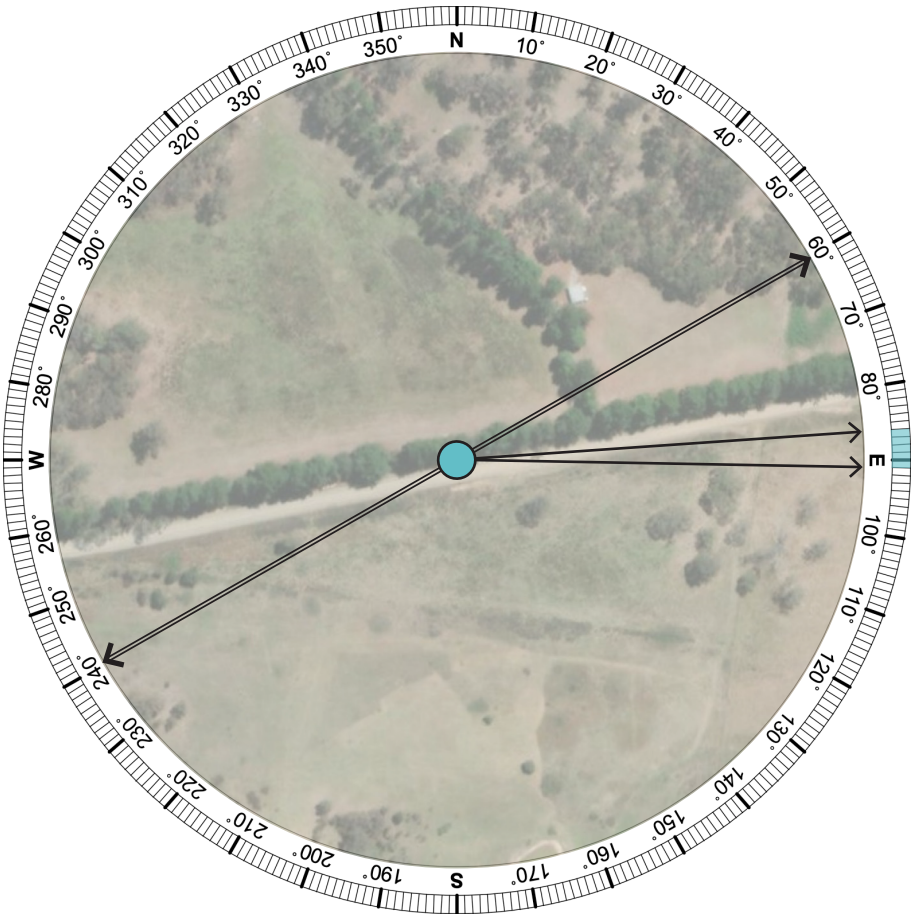


Viewpoint:  
**VP06** Canyonleigh Road, Brayton

Extent of BESS



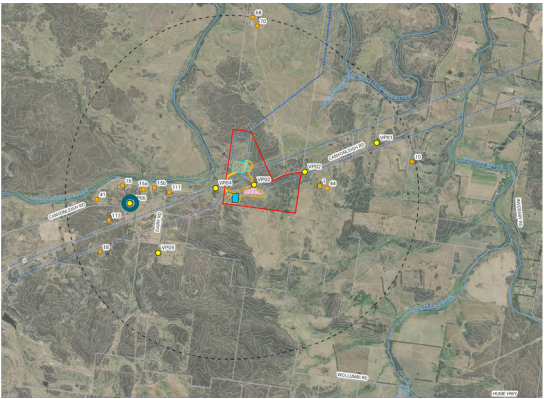
Extent of Potential Visibility



| Viewpoint Summary:  |                      | Existing Landscape Character Description:                                                                                                                                                                                                                                                                                          | Potential Visual Impact:                                                                                                                                                                                                                                            |
|---------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Location:           | Elevation:           | This viewpoint is located on Canyonleigh Road in Brayton. The viewpoint is taken on an unsealed road and is oriented East towards the Project. The viewpoint aims to represent the views of the surrounding dwellings on Canyonleigh Road.                                                                                         | Due to the distance to the Project, the extent of surrounding vegetation and the undulating topography, the Project will not be visible from this location. Therefore, the visual magnitude of change is <b>Very Low</b> , resulting in a <b>Low</b> visual impact. |
| Canyonleigh Road    | 603 m                |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Coordinates:        | Distance to Project: | The surrounding landscape is characterised by cleared pastoral land with dense native vegetation and electrical transmission lines in the background and midground. Scattered vegetation and pine tree row planting are visible in the foreground.<br>The visual sensitivity of this viewpoint has been rated as <b>Moderate</b> . |                                                                                                                                                                                                                                                                     |
| 34°37'12.26"S       | 1.52 km              |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| 150°01'59.50"E      |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Viewing Direction:  |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| East                |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Visual Sensitivity: |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Moderate            |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Visual Magnitude:   |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Very Low            |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Visual Impact:      |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |
| Low                 |                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                     |

- Extent of Panorama
- Approximate Extent of Project

Aerial Source: Google Earth, 2025



VP Location



## 5.6 Photomontages

A photomontage is a visualisation based on the superimposition of the Project onto a viewpoint photograph for the purpose of creating a realistic representation of proposed or potential changes to a view (Horner, 2006). Photomontages have been utilised in this LCVIA report to assist in the visual impact assessment of the Project.

### 5.6.1 Photomontage Development Process

The process for generating these images involves computer generation of a wireframe perspective view of the Project. This process includes:

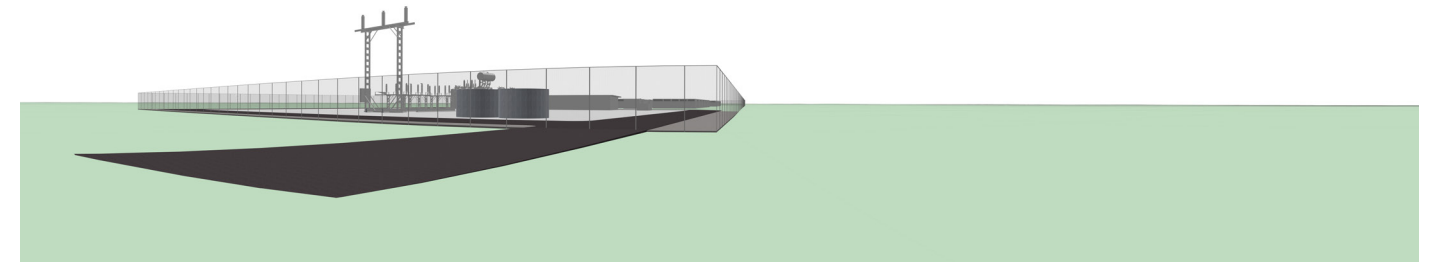
- Capturing viewpoints with a Canon EOS 5D Mark IV digital SLR through a 50mm fixed focal lens;
- Building a wireframe model of the Project;
- Matching the wireframe model to the viewpoint using rendering software; and
- Rendering the model into viewpoint to a realistic level.

These photomontages are based on photography from key public viewpoints that are included within **Section 5.4**. It is noted that a 50mm fixed focal lens closely represents the central field of vision of the human eye. The process for photomontage development is demonstrated in **Figure 19**.

### 5.7 Photomontage Viewpoint Selection

Two photomontages of the Project from VP03 and VP04 were selected as a key view and represent general visibility of the Project (refer to **Figure 20**). Viewpoints selected for the preparation of photomontages are generally those determined to have the greatest potential for visual magnitude change and overall visual impact. For this report, the two viewpoints selected are the closest to the Project and with the least intervening topography and vegetation as identified during the fieldwork study.

#### Step 1: Develop 3D Model



Detailed 3D model of the Site is developed in a modelling software. The Project is modelled and sited in the 3D model to scale.



#### Step 2: Align Photograph and Model



The digital panorama is imported into the modelling software. Topography, control points, obstacle objects that can be used as reference to calibrate the model camera very precisely.



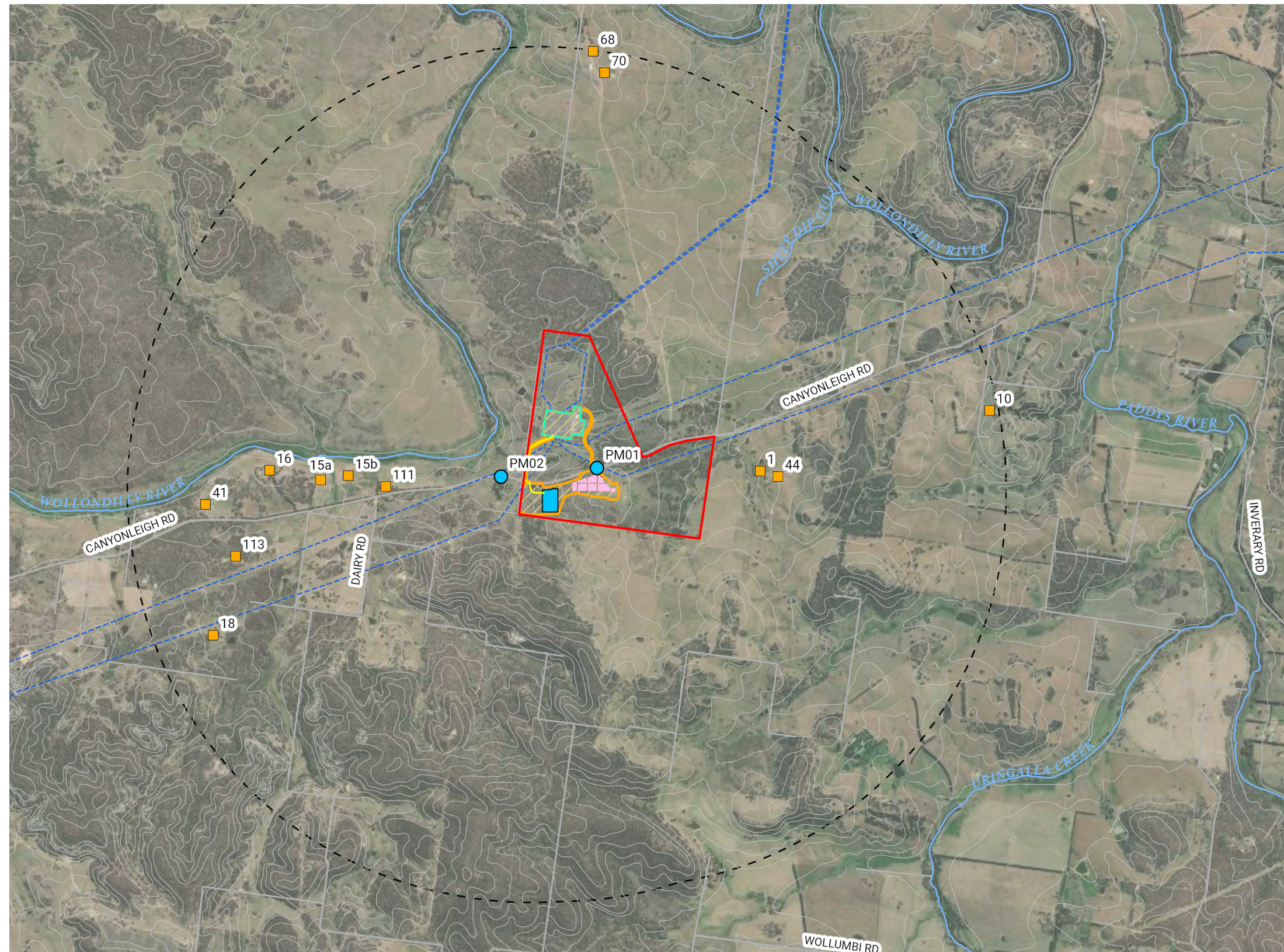
#### Step 3: Render Photomontage



The software calculates the position of the sun based on the time and date of photograph and renders the Project in accordance with the specific weather conditions and position of the sun. Once rendered, detailed removal of intervening elements (such as vegetation) is undertaken to provide an accurate representation of the Project.

**Figure 19** Photomontage Development Process





## Photomontage Locations

Refer to Section 5.7

### LEGEND

- Project Boundary
- Disturbance Area
- Visual Impact Study Area (2.5 km from Disturbance Area)
- Non-Associated Dwellings
- Substation
- BESS Area
- Existing Substation
- 330KV Connection Lines
- Photomontage Locations
- Existing Transmission Lines
- Roads
- Contours
- Watercourses

**Figure 20** Photomontage Locations

Basemap Source - ESRI, 2025





Photomontage:  
**PM01** Canyonleigh, Brayton



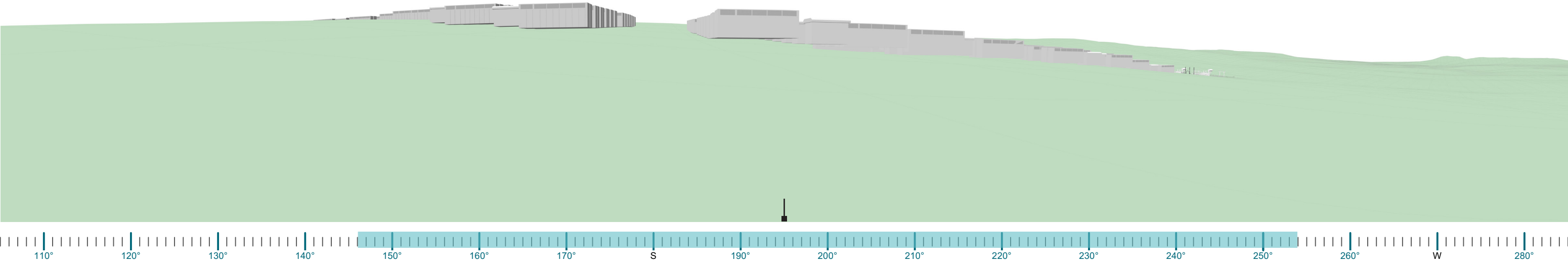
180° Existing View



180° Proposed View



Photomontage:  
**PM01** Canyonleigh, Brayton



180° Wireframe Diagram



180° Proposed View



Photomontage:  
**PM02** Canyonleigh, Brayton



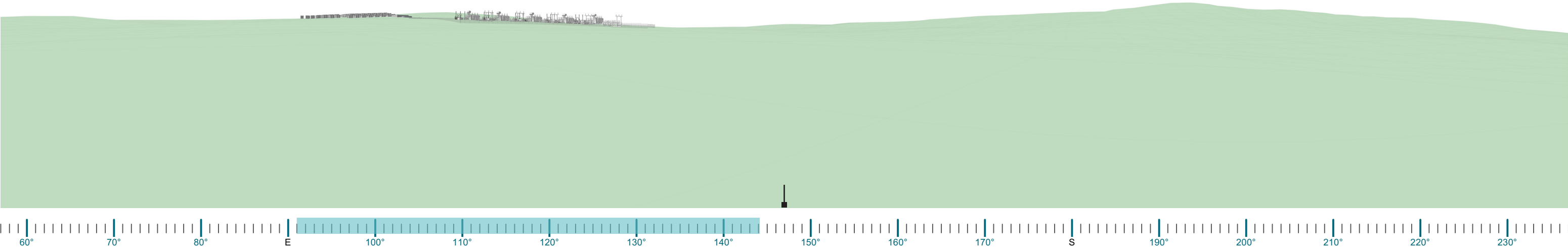
180° Existing View



180° Proposed View



Photomontage:  
**PM02** Canyonleigh, Brayton



180° Wireframe Diagram



180° Proposed View



## 5.8 Associated Infrastructure

In addition to the BESS, the associated infrastructure has the potential to contrast with the existing visual landscape. Due to a relatively low scale and siting of the Project, access roads, on-site substations, electrical reticulation and other ancillary infrastructure are unlikely to alter the existing visual landscape outside of the immediate vicinity.

An overview of the potential visual impact resulting from associated infrastructure and Project components is provided below. A summary of the proposed infrastructure associated with the Project can be found in **Section 3.2**. As outlined in the EIS, the ancillary infrastructure located within the Project Area includes the following items:

- On-site substation and associated switchgear;
- Electrical reticulation connecting the Project elements;
- Access roads; and
- Temporary construction facilities and amenities.

### 5.8.1 Substation

The Project will include one substation, approximately 3,850 square meters in size, located in the northwest corner of the Disturbance Area, adjacent to Canyonleigh Road. Due to the position of the substation, there is limited visibility from Canyonleigh Road due to intervening vegetation and undulating topography. The substation is effectively screened by existing landscape elements and therefore has a Very Low visual impact.

### 5.8.2 Electrical Reticulation

The Project includes overhead electrical reticulation to connect Project elements to the on-site substation. An underground transmission line is proposed to connect the proposed substation to the existing Marulan Substation.

Marulan Substation and associated transmission lines are already an existing feature in the landscape, and are significantly larger than any electrical reticulation proposed in the Project. It is likely that the electrical reticulation associated with the Project will integrate with the existing landscape, and will largely be screened by vegetation and topography from Canyonleigh Road and surrounding dwellings.

### 5.8.3 Site Access, Permanent & Temporary Facilities

Site access is proposed from Canyonleigh Road, utilising an existing access point to the property. Private internal roads are proposed to traverse the Disturbance Area and the access point. Facilities for the operation of the Project include a carpark, storage areas, site fencing, lighting and temporary construction site office and amenities. The appearance of these facilities would be similar to existing farm structures in the landscape. Therefore, these site facilities would have a Low visual impact.



5.9 Assessment Methodology for Private Viewpoints

Moir Studio have developed a framework for defining and rating the level of visual impact from each private receptor (i.e. non-associated dwellings).

The framework in **Table 12** has been prepared with regards to the third edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA3), Residential Visual Amenity Assessment (RVAA) and Moir Studio’s extensive professional experience in undertaking LCVIA’s. Published in 2013, the GLVIA3 is well established as providing ‘best practice guidance’ when undertaking a LCVIA. RVAA is a stage beyond LCVIA and focuses exclusively on private views and private visual amenity. Considerations outlined in the RVAA provide a framework for describing and evaluating the predicted magnitude of visual change and related visual amenity effects, which includes:

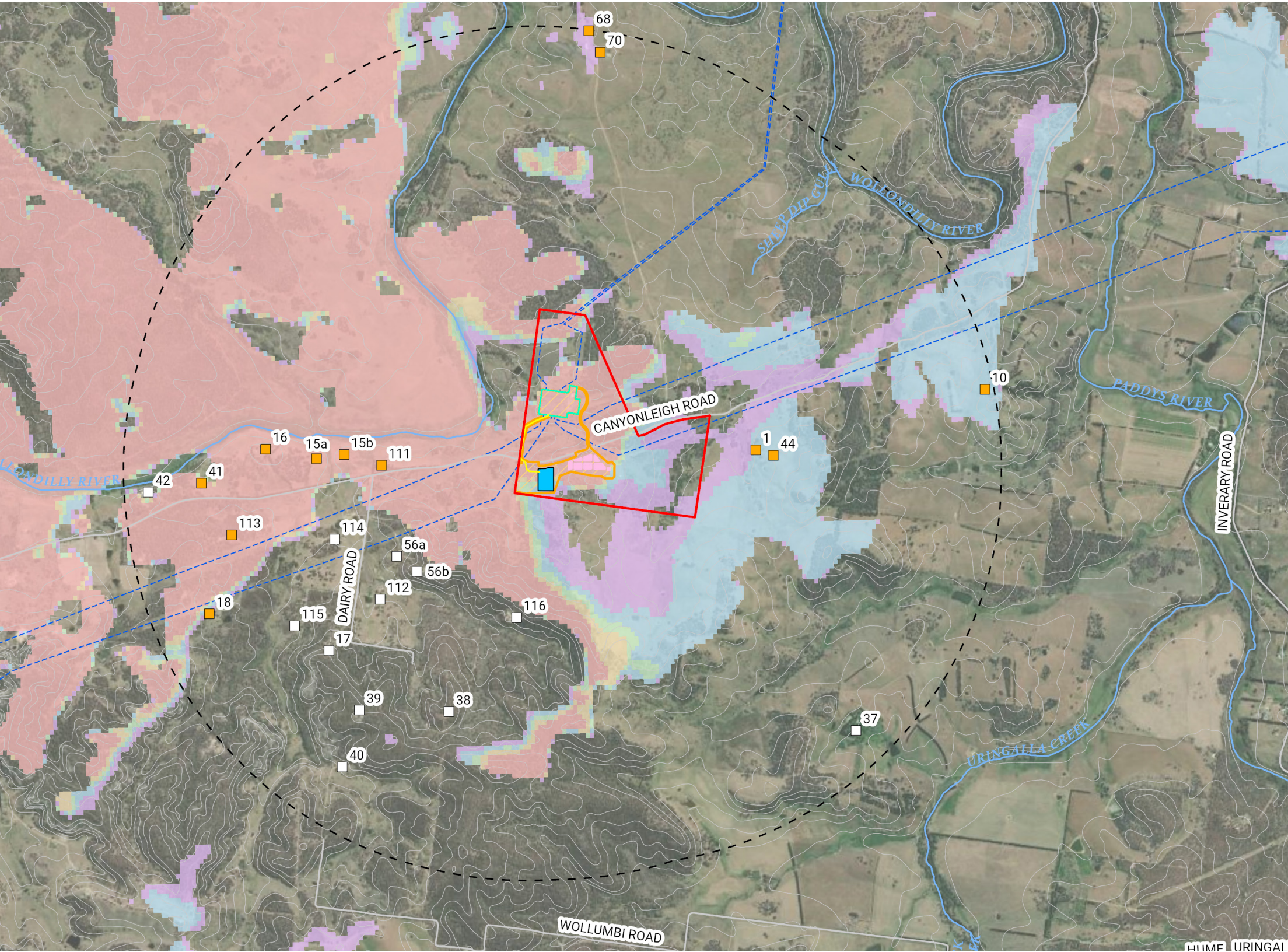
- Distance of property from the proposed development having regard to its size / scale and location relative to the property (e.g. on higher or lower ground);
- Type and nature of the available views (e.g. panoramic, open, framed, enclosed, focused etc.) and how they may be affected, having regard to seasonal and diurnal variations;
- Direction of view / aspect of property affected, having regard to both the main / primary and peripheral/secondary views from the property;
- Extent to which development / landscape changes would be visible from the property (or parts of) having regard to views from principal rooms, the domestic curtilage (i.e. garden) and the private access route, taking into account seasonal and diurnal variations;
- Scale of change in views having regard to such factors as the loss or addition of features and compositional changes including the proportion of view occupied by the development, taking account of seasonal and diurnal variations;
- Degree of contrast or integration of new features or changes in the landscape compared to the existing situation in terms of form, scale and mass, line, height, colour and texture, having regard to seasonal and diurnal variations;
- Duration and nature of the changes, whether temporary or permanent, intermittent or continuous, reversible or irreversible etc.; and
- Mitigation opportunities – consider implications of both embedded and potential further mitigation.

Nine private receptors were identified within 2.5 km of the Project with a theoretical line of sight to the Project, as identified in **Section 5.2**. These private viewpoints are shown in **Figure 21**.

| Private Viewpoint Magnitude Rating |                                  |                                                                                               |                                                                                                                                       |                                                                                                                       |
|------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|                                    | VERY LOW                         | LOW                                                                                           | MODERATE                                                                                                                              | HIGH                                                                                                                  |
|                                    |                                  | ←                                                                                             |                                                                                                                                       |                                                                                                                       |
| Distance                           | The Project will not be visible. | The Project may be visible in distance or very partially visible in the foreground.           | The Project maybe visible in the middle ground or a small extent may be visible in the near ground.                                   | The Project will be highly visible in the foreground.                                                                 |
| Type of views                      |                                  | Views from the receiver are not focused on the Project.                                       | Views from the receiver are not focused entirely on the Project.                                                                      | Views are focused directly towards the Project.                                                                       |
| Direction of view                  |                                  | The Project may be visible in peripheral views or form a very minor element in primary views. | The Project may be visible from, yet will not dominate primary views.                                                                 | The Project will be highly visible and has the potential to be a dominant element in primary views from the property. |
| Extent of visibility               |                                  | The Project may be partially visible or fragmented.                                           | The Project may be visible from the receiver yet will not significantly alter the existing visual character.                          | The Project has the potential to significantly alter the existing visual character when viewed from the receiver.     |
| Scale of change                    |                                  | The Project may be visible yet will not change to the existing visual character.              | The Project has the potential to become a noticeable element in the view, yet will not overly diminish the existing visual character. | The Project has the potential to alter the existing visual character.                                                 |
| Degree of contrast                 |                                  | The Project will have a low level of contrast with the existing landscape.                    | The Project will result in a moderate level of contrast with the existing landscape.                                                  | The scale of the Project will result in a high level of contrast with the existing landscape.                         |
| Duration of change                 |                                  | Changes are temporary.                                                                        | Changes to the landscape have the potential to be reduced over time (with the employment of mitigation methods).                      | Changes to the landscape are continuous and / or irreversible.                                                        |
| Mitigation Options                 |                                  | Existing screening factors contribute to reducing the potential visibility.                   | Some existing screening factors may contribute to fragmenting the Project or there is opportunity to screen the Project.              | Limited opportunities to screen the Project.                                                                          |

Table 12 Non-Associated Receiver Visual Impact Rating





# Private Viewpoint Locations

Refer to Section 5.10

## LEGEND

- Project Boundary
- Visual Impact Study Area (2.5km from Disturbance Area)
- Non-Associated Dwelling with no visibility of the Project
- Non-Associated Dwelling
- Disturbance Area
- BESS Area
- Substation
- Existing Substation
- 330KV Connection Lines
- Existing Transmission Lines
- Roads
- Watercourses
- Contours
- Up to 20% Visibility
- 20 - 40% Visibility
- 40 - 60% Visibility
- 60 - 80% Visibility
- 80 - 100% Visibility

Figure 21 Private Viewpoint Locations

Basemap Source - ESRI, 2025





5.10 Summary of Visual Impacts from Private Viewpoints

The Project will result in a Low visual impact on the surrounding dwellings. Due to the dense native vegetation and the undulating topography within the Study Area, there are minimal opportunities to view the Project from private viewpoints surrounding the Project.

The results from the visual impact assessment for private viewpoints are summarised in **Table 13**.

| Receptor Number | Location                                | Visual Sensitivity | Visual Magnitude | Visual Impact |
|-----------------|-----------------------------------------|--------------------|------------------|---------------|
| 1               | 1054 Canyonleigh Road, Brayton NSW 2579 | Moderate           | Very Low         | Low           |
| 10              | 1238 Canyonleigh Road Brayton NSW 2579  | Moderate           | Very Low         | Low           |
| 15a             | 757 Canyonleigh Rd, Brayton NSW 2579    | Moderate           | Low              | Low           |
| 15b             | 757 Canyonleigh Rd, Brayton NSW 2579    | Moderate           | Low              | Low           |
| 16              | 747 Canyonleigh Rd, Brayton NSW 2579    | Moderate           | Very Low         | Low           |
| 18              | 716 Canyonleigh Rd, Brayton NSW 2579    | Moderate           | Very Low         | Low           |
| 41              | 701 Canyonleigh Rd, Brayton NSW 2579    | Moderate           | Very Low         | Low           |
| 44              | 1054 Canyonleigh Rd, Brayton NSW 2579   | Moderate           | Very Low         | Low           |
| 68              | 1001 Canyonleigh Road Brayton 2579      | Moderate           | Very Low         | Low           |
| 70              | 1001 Canyonleigh Road Brayton 2579      | Moderate           | Very Low         | Low           |
| 111             | 811 Canyonleigh Road Brayton 2579       | Moderate           | Low              | Low           |
| 113             | 714 Canyonleigh Road Brayton 2579       | Moderate           | Very Low         | Low           |

Table 13 Private Viewpoint Assessment Results



| DWELLING ASSESSMENT TABLE (non-associated dwellings within 2.5 kilometres of the Project) |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|-------------------------------------------------------------------------------------------|----------------------------------------|-----------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------------------------------|---------------------|----------------------------------------|
| I.D                                                                                       | ADDRESS                                | ELEVATION | DISTANCE TO PROJECT | VISUAL ASSESSMENT                                                                                                                                                                                                                                                                                                                       |    | Receptor Visual Impact Rating |             |             |             |             |             |             |             | VISUAL IMPACT RATING (without mitigation) | MITIGATION MEASURES | VISUAL IMPACT RATING (with mitigation) |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    | Distance                      | Views       | Direction   | Visibility  | Scale       | Contrast    | Duration    | Mitigation  |                                           |                     |                                        |
| 1                                                                                         | 1054 Canyonleigh Road Brayton NSW 2579 | 625 m     | 0.96 km             | Receptor is located approximately 0.96 km east of the Project. The receptor is oriented east-west, with views towards the east. Assessment of the aerial image indicated that dense vegetation surrounds the receptor, obstructing views to the west toward the Project.                                                                | H  |                               |             |             |             |             |             |             |             | Very Low                                  | NA                  | NA                                     |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | M  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | L  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | VL | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
| 10                                                                                        | 1238 Canyonleigh Road Brayton NSW 2579 | 646 m     | 2.50 km             | Receptor is located approximately 2.50 km east of the Project. The receptor is oriented east-west, with views towards the east and west. Assessment of the aerial image indicated that dense vegetation surrounds the receptor, obstructing views to the west toward the Project.                                                       | H  |                               |             |             |             |             |             |             |             | Very Low                                  | NA                  | NA                                     |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | M  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | L  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | VL | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
| 15a                                                                                       | 757 Canyonleigh Rd, Brayton NSW 2579   | 598 m     | 1.31 km             | Receptor is located approximately 1.31 km west of the Project. The receptor is oriented north-south, with views towards the north. Assessment of the aerial image indicated that scattered vegetation is present around the receptor and between the dwelling and the Project along Canyonleigh Road, fragmenting views to the Project. | H  |                               |             |             |             |             |             |             |             | Low                                       | NA                  | NA                                     |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | M  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | L  | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | VL | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
| 15b                                                                                       | 757 Canyonleigh Rd, Brayton NSW 2579   | 595 m     | 1.13 km             | Receptor is located approximately 1.13 km west of the Project. The receptor is oriented north-south, with views towards the north. Assessment of the aerial image indicated that scattered vegetation is present around the receptor and between the dwelling and the Project along Canyonleigh Road, fragmenting views to the Project. | H  |                               |             |             |             |             |             |             |             | Low                                       | NA                  | NA                                     |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | M  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | L  | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | VL | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
| 16                                                                                        | 747 Canyonleigh Rd, Brayton NSW 2579   | 603 m     | 1.64 km             | Receptor is located approximately 1.64 km west of the Project. The receptor is oriented northeast-southwest, with views towards the northeast. Assessment of the aerial image indicated that dense vegetation surrounds the receptor, obstructing views to the east.                                                                    | H  |                               |             |             |             |             |             |             |             | Very Low                                  | NA                  | NA                                     |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | M  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | L  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | VL | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
| 18                                                                                        | 716 Canyonleigh Rd, Brayton NSW 2579   | 621 m     | 2.16 km             | Receptor is located approximately 1.64 km southwest of the Project. The receptor is oriented north-south, with views towards the south. Assessment of the aerial image indicated that dense vegetation surrounds the receptor, obstructing views to the northeast.                                                                      | H  |                               |             |             |             |             |             |             |             | Very Low                                  | NA                  | NA                                     |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | M  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | L  |                               |             |             |             |             |             |             |             |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         | VL | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |                                           |                     |                                        |
|                                                                                           |                                        |           |                     |                                                                                                                                                                                                                                                                                                                                         |    |                               |             |             |             |             |             |             |             |                                           |                     |                                        |

Table 14 Private Viewpoint Assessment Results



| DWELLING ASSESSMENT TABLE (non-associated receptors within 2.5 kilometres of the Project) |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
|-------------------------------------------------------------------------------------------|---------------------------------------|-------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------------------------------------|---------------------|----------------------------------------|
| I.D                                                                                       | ADDRESS                               | ELEVATION   | DISTANCE TO PROJECT | VISUAL ASSESSMENT                                                                                                                                                                                                                                                                             |             | Receptor Visual Impact Rating |             |             |             |             |             |             |            | VISUAL IMPACT RATING (without mitigation) | MITIGATION MEASURES | VISUAL IMPACT RATING (with mitigation) |
|                                                                                           |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             | Distance                      | Views       | Direction   | Visibility  | Scale       | Contrast    | Duration    | Mitigation |                                           |                     |                                        |
| 41                                                                                        | 701 Canyonleigh Rd, Brayton NSW 2579  | 603 m       | 2.05 km             | Receptor is located approximately 2.05 km west of the Project. The receptor is oriented north-south with views towards the north. Assessment of the aerial image indicated that dense vegetation surrounds the receptor, obstructing views to the east.                                       | H           |                               |             |             |             |             |             |             |            | Very Low                                  | NA                  | NA                                     |
| M                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| L                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| VL                                                                                        | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |
| 44                                                                                        | 1054 Canyonleigh Rd, Brayton NSW 2579 | 633 m       | 1.06 km             | Receptor is located approximately 1.06 km east of the Project. The receptor is oriented east-west, with views towards the west. Assessment of the aerial image indicated that scattered vegetation surrounds the receptor, with dense vegetation between the receptor and the Project.        | H           |                               |             |             |             |             |             |             |            | Very Low                                  | NA                  | NA                                     |
| M                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| L                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| VL                                                                                        | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |
| 68                                                                                        | 1001 Canyonleigh Road Brayton 2579    | 621 m       | 2.55 km             | Receptor is located approximately 2.55 km north of the Project. The receptor is oriented north-south, with views toward the south. Assessment of the aerial image indicated that dense vegetation associated with Canyonleigh Road is present between the receptor and the Project.           | H           |                               |             |             |             |             |             |             |            | Very Low                                  | NA                  | NA                                     |
| M                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| L                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| VL                                                                                        | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |
| 70                                                                                        | 1001 Canyonleigh Road Brayton 2579    | 622 m       | 2.37 km             | Receptor is located approximately 2.37 km north of the Project. The receptor is oriented north-south, with views toward the south. Assessment of the aerial image indicated that an ancillary building will screen views to the Project, along with dense vegetation in front of the Project. | H           |                               |             |             |             |             |             |             |            | Very Low                                  | NA                  | NA                                     |
| M                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| L                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| VL                                                                                        | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |
| 111                                                                                       | 811 Canyonleigh Road Brayton 2579     | 600 m       | 0.84 km             | Receptor is located approximately 840 m west of the Project. The receptor is oriented north-south. Assessment of the aerial image indicated that dense vegetation is present around the receptor and between the dwelling and the Project, screening views to the Project.                    | H           |                               |             |             |             |             |             |             |            | Low                                       | NA                  | NA                                     |
| M                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| L                                                                                         | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |
| VL                                                                                        | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |
| 111                                                                                       | 714 Canyonleigh Road Brayton 2579     | 615 m       | 1.85 km             | Receptor is located approximately 1.85 km west of the Project. The receptor is oriented north-south. Assessment of the aerial image indicated that dense vegetation surrounds the receptor, screening views to the Project.                                                                   | H           |                               |             |             |             |             |             |             |            | Very Low                                  | NA                  | NA                                     |
| M                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| L                                                                                         |                                       |             |                     |                                                                                                                                                                                                                                                                                               |             |                               |             |             |             |             |             |             |            |                                           |                     |                                        |
| VL                                                                                        | <div></div>                           | <div></div> | <div></div>         | <div></div>                                                                                                                                                                                                                                                                                   | <div></div> | <div></div>                   | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |            |                                           |                     |                                        |

Table 14 continued. Private Viewpoint Assessment Results



5.11 Lots with Dwelling Entitlements

The SEARs issued for the Project outlines the following assessment requirements for the LCVIA: *"a detailed assessment of the likely visual impacts of all components of the project on surrounding residences (including approved developments, lodged development applications and dwelling entitlements)"*.

For the dwelling entitlement assessment, lots with identified non-associated dwellings, as shown in **Figure 21**, have been excluded from this assessment. These receptors are assessed in **Section 5.10**.

5.11.1 Lodged and Approved Developments

A search on the Goulburn Mulwaree Council website (accessed 12/05/2025) identified no lodged or approved dwellings within the Study Area that have not already been assessed in **Section 5.10**.

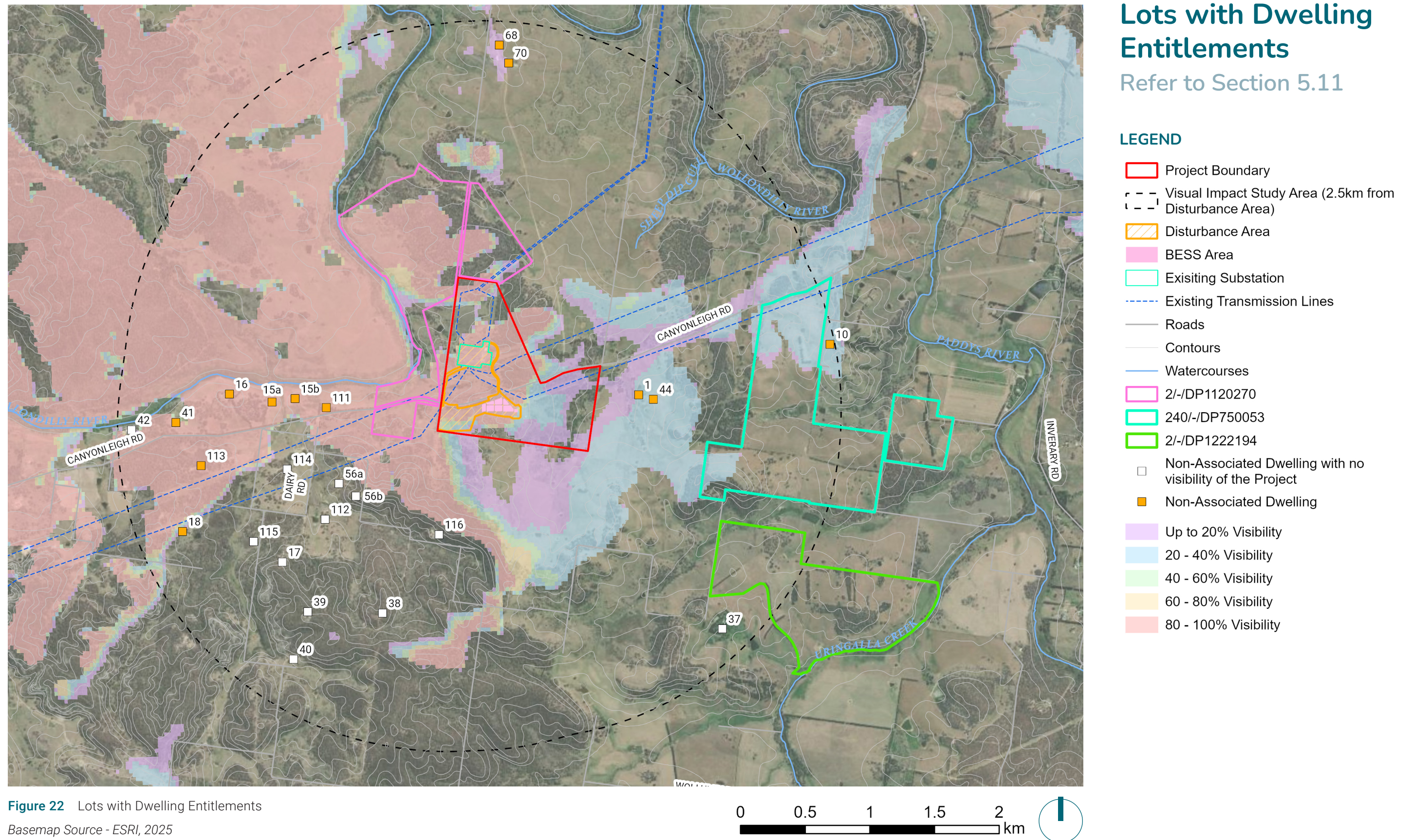
5.11.2 Dwelling Entitlements

There are up to three lots with dwelling entitlements or opportunities within 2.5 km of the Project (refer to **Figure 22**). An assessment has been undertaken to evaluate potential impacts on these lots using the viewshed analysis and the on-site landscape and visual assessments, the results are presented in **Table 15**.

| Lot/DP Number  | LGA                 | Impacts                                                                                                                                                                                                                                                                                                                                                                      | Evaluation                                                                                                                                                                                                                                                                                                       | Visual Impact |
|----------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 240/-/DP750053 | Goulburn Mulwaree   | <p>The subject lot is approximately 150 ha. The lot is located approximately 1.4 km east from the Disturbance Area at the closest point.</p> <p>The majority of the lot is cleared for pastoral uses, however dense vegetation is located on the neighbouring lots between the subject lot and the Project,</p>                                                              | Based on the viewshed analysis, majority of the subject lot has no line of site to the Project based on topography only. Combined with the dense vegetation nearby and the distance from the Project, the subject lot contains sufficient space to locate a dwelling that avoids any significant visual impacts. | Low           |
| 2/-/DP1120270  | Upper Lachlan Shire | <p>The subject lot is approximately 114 ha. The lot is located approximately 100m north west from the Disturbance Area at the closest point.</p> <p>The majority of the lot features dense vegetation.</p>                                                                                                                                                                   | <p>Based on the viewshed analysis, majority of the subject lot has a theoretical line of site to the Project based on topography alone.</p> <p>However due to the dense vegetation present on the lot, there is sufficient space to locate a dwelling that avoids any significant visual impacts.</p>            | Low           |
| 2/-/DP1222194  | Goulburn Mulwaree   | <p>The subject lot is approximately 102 ha. The lot is located approximately 1.7 km southeast from the Disturbance Area at the closest point.</p> <p>The majority of the lot is cleared for pastoral uses, however dense vegetation is located on the neighbouring lots between the subject lot and the Project, with some areas of dense vegetation on the subject lot.</p> | Based on the viewshed analysis, the subject lot has no theoretical line of site to the Project based on topography alone. Therefore the lot is not affected by visual impacts.                                                                                                                                   | Nil           |

Table 15 Dwelling Entitlement Assessment







## 5.12 Cumulative Visual Impact Assessment

The occurrence of large-scale renewable energy projects within a region has the potential to alter the perception of the overall landscape character irrespective of being viewed in a single viewshed, as these projects could become part of the existing landscape. It is essential to determine whether the effect of multiple projects and other major infrastructure within the region would combine to become the dominant visual element, altering the perception of the general landscape character. The Cumulative Impact Assessment Guidelines state: *"While the study area chosen for each matter must be broad enough to capture all relevant cumulative impacts, it should not be unnecessarily large or include areas where the cumulative impacts are likely to be negligible relative to the baseline condition of the relevant matter"* (DPIE, 2022).

The cumulative impact assessment for the Project is confined to the Study Area, as the public and private viewpoint analysis identified that visual impacts are not experienced beyond the immediate vicinity of the Project. **Figure 23** shows the locations of the surrounding developments within the Study Area.

### 5.12.1 Nearby Energy Projects within the Study Area

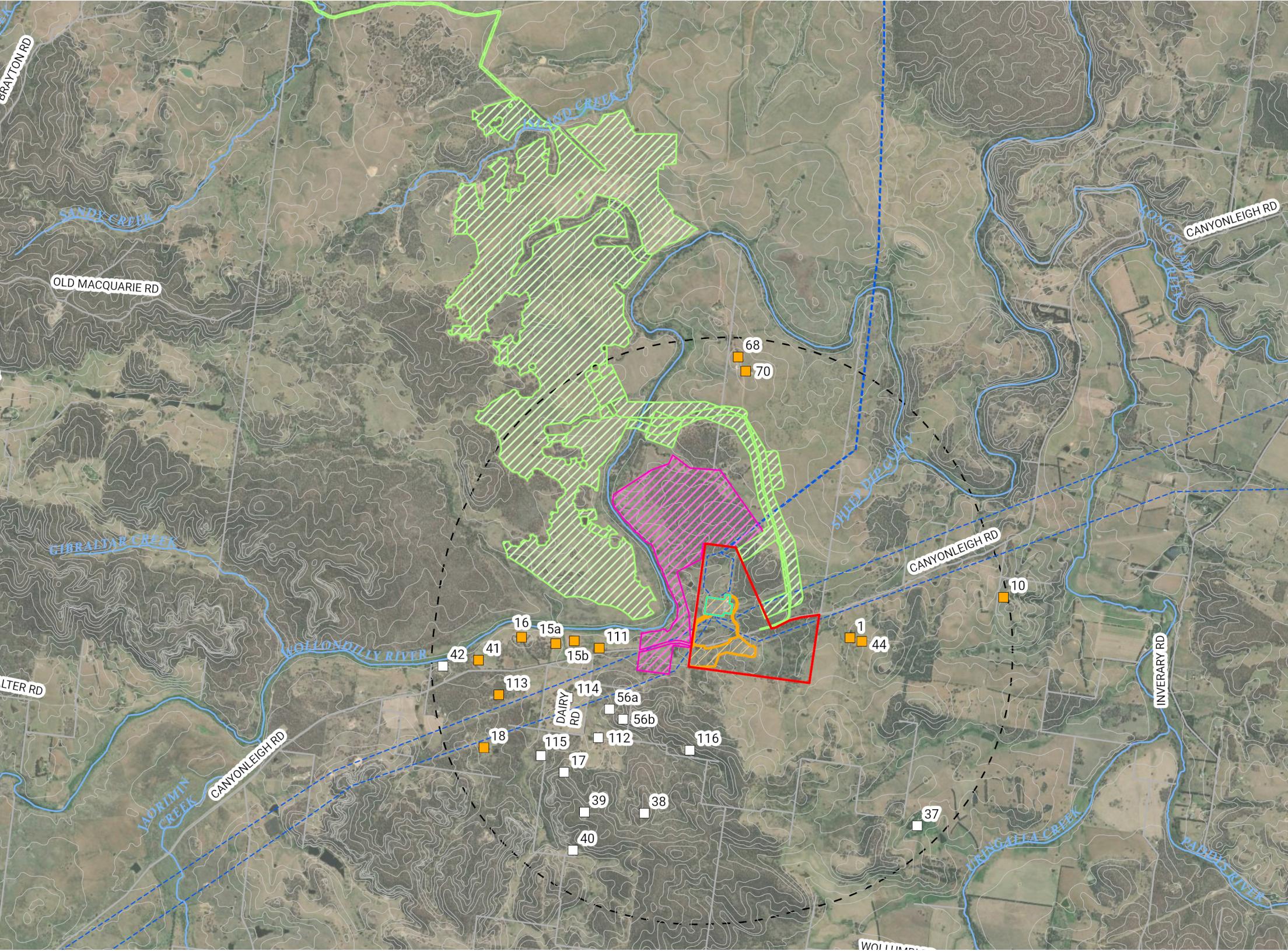
Within 2.5 km of the Project, there are three large scale energy projects:

- Marulan Substation (Existing)
- Marulan Gas Fired Power Station (Proposed, MP07\_0176)
- Wattle Creek Solar Farm (SSD-63344210) & Wattle Creek Energy Hub (SSD-63345458)

### 5.12.2 Cumulative Impacts

The results of the public and private viewpoint assessment revealed that visual impacts from the Project are limited to a small section of Canyonleigh Road directly adjacent to the Project. Due to the location of the nearby projects, the cumulative impacts are also localised in this small stretch of Canyonleigh Road. The dense vegetation and undulating topography assist in fragmenting or screening the energy projects from the majority of the surrounding private receptors and from the majority Canyonleigh Road. Due to these existing screening elements, the cumulative visual impacts are Low, beyond the small area of Canyonleigh Road immediately adjacent to the cluster of Projects.





# Nearby Energy Projects

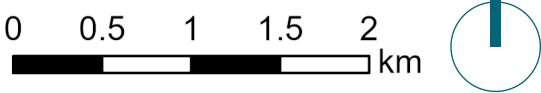
Refer to Section 5.12

LEGEND

- Project Boundary
- Visual Impact Study Area (2.5km from Disturbance Area)
- Disturbance Area
- Non-Associated Dwelling with no visibility of the Project
- Non-Associated Dwelling
- Existing Substation
- Wattle Creek Solar Farm Development Corridor
- Marluan Gas Fire Power Station Project Boundary
- Existing Transmission Lines
- Roads
- Contours
- Watercourses

Figure 23 Nearby Energy Projects

Basemap Source - ESRI, 2025





# 06 Mitigation Recommendations





# 6.0 Mitigation Recommendations

## 6.1 Mitigation Requirements

As discussed in **Section 5.0**, opportunities to view the Project are limited, with only a small section of Canyonleigh Road able to experience visual impacts from the Project. Due to the Low visual impact and presence of existing row planting lining the Project Area along Canyonleigh Road (refer to **Image 13**), no mitigation is required in the form of screen planting.

### 6.1.1 Design Considerations

While no mitigation is required as a result of the LCVIA findings, the following suggestions will assist in achieving a lower visual impact:

- Existing vegetation generally present around the Project Area will be retained and protected to maintain the existing level of screening to the Project.
- Consider the height of ancillary structures to ensure the Project does not contrast significantly with the surrounding landscape.
- The colours of the ancillary structures should be considered in the detail design phase to ensure minimal contrast with the surrounding landscape to the extent practicable.



**Image 13** Row Planting on Canyonleigh Road



# 7.0 Conclusion

## 7.1 Conclusion

With all visual impact assessments the objective is not to determine whether the Project is visible or not visible, it is to determine how the Project will impact on existing visual amenity, landscape character and scenic quality. The intent of the LCVIA report is to determine if there is a potential for a negative impact on these factors, and investigated if and how this impact can be mitigated to the extent that the impact is reduced to an acceptable level.

The viewpoint assessment determined that there are limited opportunities to view the Project from publicly accessible land and roads. Overall, one viewpoint, VP03 resulted in 'Low' visual impact, all other viewpoints resulted in a rating of 'Very Low' visual impact. No further assessment or mitigation is required from the public viewpoints, however, two photomontages have been included for community consultation to visualise the Project (refer to VP03/PM01 and VP04/PM02).

Further assessment using photomontages and wireframes demonstrate that generally where opportunity to view the Project may exist, a combination of existing vegetation and topography minimises the extent of view impacted.

An assessment was undertaken to determine the potential impacts to the existing landscape character within the Study Area. The assessment found that the dominant landscape character of the area includes modified pastures predominantly for grazing interspersed with intermittent vegetated hills and ridge lines. The assessment determined that due to the surrounding vegetation and undulating topography, views toward the Project are limited. As a result, the Project is not likely to impact the existing character of the Study Area or modify the key landscape features.

As a result of the low visibility toward the Project, no mitigation measures are required. However, to assist in further reducing any potential visual impacts associated with the Project in the surrounding area, a number of design considerations are outlined in **Section 6.0**.

The assessment determines that the Project can be undertaken without impacting the existing landscape character of the area and with little to no impact on nearby public and private viewing locations.



# References

Australian Institute of Landscape Architects (AILA) Guidance Note for Landscape and Visual Impact Assessment, June 2018 (AILA, 2018)

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