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Griffith BESS

DA number SSD-85372970

Landscape and Visual Impact and Visual Assessment Report

13 November 2025

THIS REPORT HAS BEEN PREPARED FOR EKU ENERGY ON BEHALF OF GRIFFITH BESS CO PTY LTD

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Quality Assurance

File Name	Version	Version Date	Details	Reviewed and Approved	
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1 INTRODUCTION

The Proponent, EKU Energy Australia (EKU Energy) on behalf of Griffith BESS Co Pty Ltd, intends to submit a Development Application (DA) for the development of a utility-scale Battery Energy Storage System (BESS), the Griffith BESS (the Project), located in Yoogali, to the southeast of Griffith in NSW (refer to ***Figure 1***).

The Griffith BESS will be located alongside Yoogali Solar Farm that is currently being developed by EDP Renewables. The site includes an approximately 6 hectare (ha) utility-scale BESS on the project property which fronts at Bob Irvin Road. The property is made up of two lots currently addressed as 41 Bob Irwin Road, Yoogali and 15 Bob Irwin Road, Yoogali (refer to ***Figure 2***).

Yoogali is a farming district 7km southeast from the rural city of Griffith, within Griffith City Council. Griffith is a major city in the Riverina region, located approximately halfway between Canberra and Mildura.

The Griffith BESS will be on land commonly owned by, but separate to, that of the co-located on the same land as the Yoogali Solar Farm and is a related but independent project currently being developed by EDP Renewables. Yoogali Solar Farm was approved in 2019.

This report assesses the impact of the Project in the context of the Yoogali Solar Farm as well as in isolation, assuming the solar farm does not proceed.

This report has been prepared by Peter Haack Consulting to provide a landscape and visual impact assessment (LVIA) for inclusion in the Development Application.

Figure 1 - Project location (Source: Google Maps).

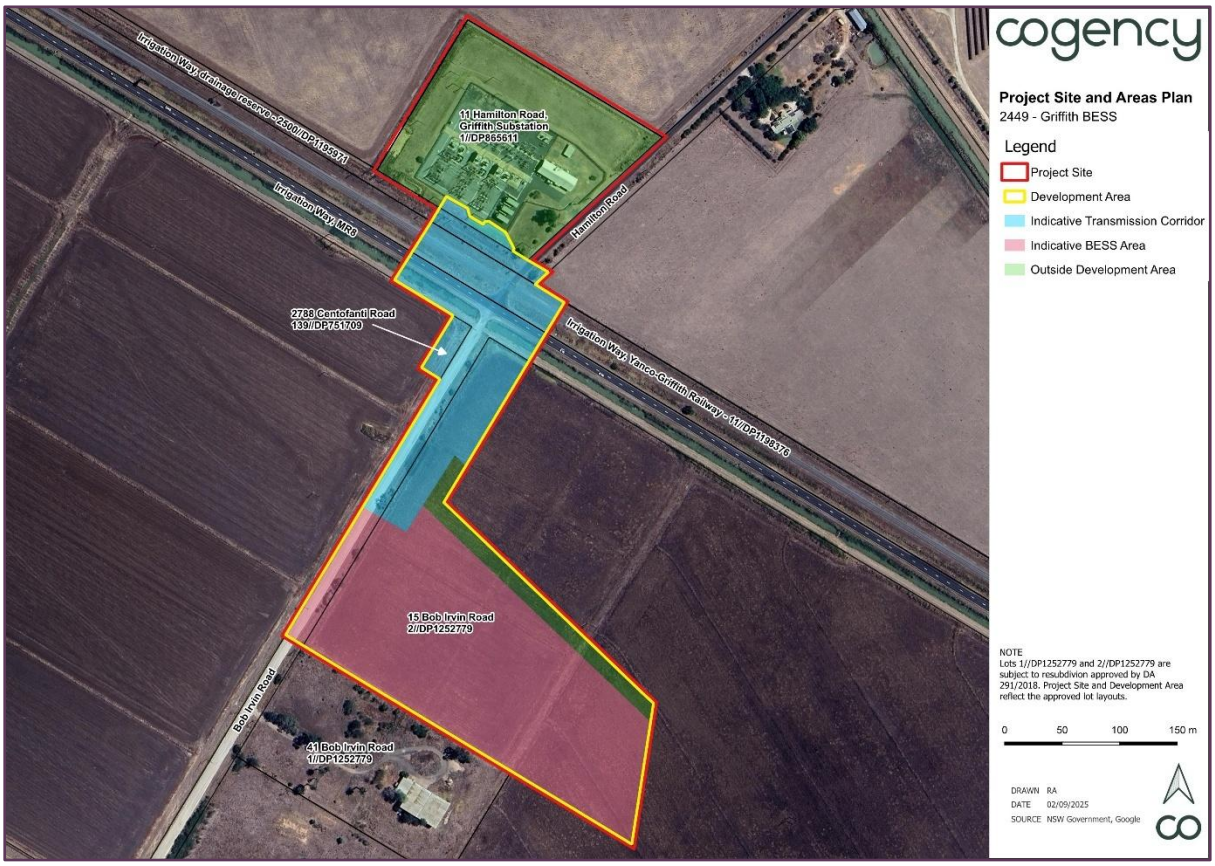

Figure 2 – The Project site and land ownership (Source: Cogency).

1.1 Assessment requirements

The Planning Secretary's Environmental Assessment Requirements (SEARS) for the Project relating to landscape and visual matters are contained under Key Issues – Land, and require:

- 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 of significant vistas and road corridors in the public domain; and
- 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).

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2 METHODOLOGY

2.1 Approach

While there are no specific legislative requirements for the methodology of an assessment such as this in NSW, the profession typically refers to the guidance offered by:

- Guidance for Landscape and Visual Impact Assessment (GLVIA), Third Edition, Landscape Institute and Institute of Environmental Management & Assessment (2013).
- Guidance Note for Landscape and Visual Assessment, Australian Institute of Landscape Architects (AILA) (2018).
- Guideline for Landscape Character and Visual Impact Assessment - Environmental Impact Assessment Practice Note EIA-N04, NSW Transport (2023).
- Landscape Aesthetics – A Handbook for Scenery Management, Agricultural Handbook No. 701. United States Department of Agriculture Forest Service (USDAFS) (1995).

The methodology used for this Project, described below, conforms generally to the direction offered by the above guidelines as well as other proven assessment methodologies.

This preliminary assessment report assesses the landscape and visual impact of the Project, that is the day-to-day visual effects on people's views.

The method to measure visual impacts is based on the combination of the sensitivity of viewers to the proposed change and the magnitude of the Project on that visual setting or view.

The following study components were included as part of this assessment:

- Review the Project with regard to potential visual impacts.
- Characterisation of the existing landscape and visual setting.
- Qualitatively assess:
    - Visual modification at key viewpoints – How would the Project contrast with the landscape character of the surrounding setting?
    - Visual sensitivity at key viewpoints – How sensitive would viewers be to the Project?
    - Potential night-lighting impacts.
- Propose visual impact mitigation and management measures.

2.2 Assessment of landscape and visual impacts

The landscape and visual impact assessment is based on a detailed analysis of the landscape and visual setting and an assessment of the potential impacts of the Project on its viewshed.

The critical issues considered for this LVIA were:

- The number and location of sensitive viewing locations;

- The duration of the view – either static (generally long term - > 1 hour) and mobile (generally short term continually moving and static for no longer than 5 minutes);
- The degree to which the proposed works would be visible;
- The quality of the landscape setting; and
- The degree to which the Project contrasts or is compatible with the visual character of the setting – the visual modification level.

The assessment method assumed that if the Project would not be seen, there is no impact (refer to ***Table 1***).

VISUAL IMPACT	Visual/Viewer Sensitivity		
	High	Moderate	Low
High	High	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Low
Very Low	Low	Very Low	Very Low
Not Visible	No Impact	Not Impact	No Impact

Level of Visual Modification to the Setting

Table 1 - Visual impact determination matrix.

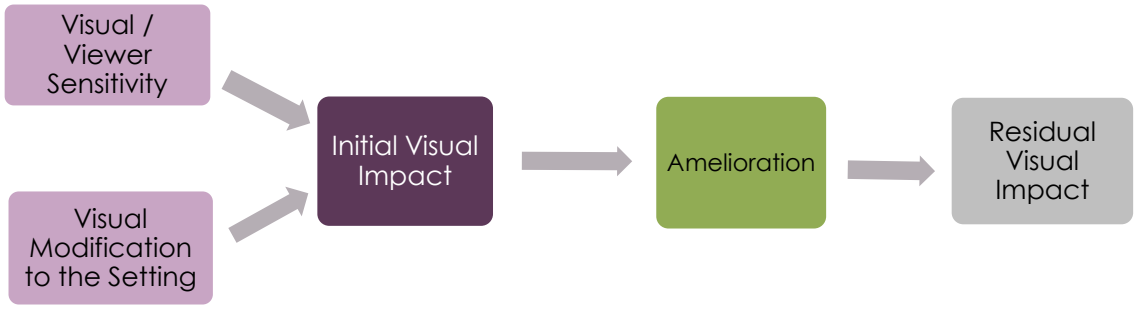

Diagram 1 - Visual impact assessment process.

2.2.1 Visual sensitivity

In this report, the approach to the visual sensitivity is consistent with the USDAFS visual management system.

The visual sensitivity of development depends on a range of viewer characteristics. The primary characteristics used in this report include:

- Land use;

- Distance of the development from viewers; and
- Visibility from sensitive land use areas.

Visual sensitivity is a measure of how critically a change to the existing environment would be viewed from various land uses (refer to ***Table 2***). Different activities have different sensitivity levels. For example, tourists on holiday would generally view changes to a landscape more critically than industrial workers in the same area. Similarly, individuals would view changes to the visual setting of their homes more critically than changes to the broader area in which they travel or work.

The next critical component to rating the visual sensitivity is the distance of the development from the identified visual use area. There are three viewing situations to consider:

- foreground (0 - 1 km);
- midground (1 km – 4 km); and
- background (> 4 km).

As the distance increases from a proposed development to a sensitive land use area, the level of viewer sensitivity decreases based on a perceptual dis-association based on a reduction in relative proximity.

Visual Use Area	**Foreground** Local Setting		**Midground** Sub–Regional Setting		**Background** Regional Setting
	0 – 0.5 km	0.5 – 1 km	1 – 2 km	2 – 4 km	> 4 km
Residences	H	H	H	M	L
Tourism	H	H	H	M	L
"B" Category Roads *(Burley Griffin Way)*	M	L	L	L	VL
Sporting Reserves	M	L	L	L	VL
Entry Road – Irrigation Way	L-M	L	L	L	VL
Local Roads	L	L	L	VL	VL
Rail – Freight & Passenger	L	L	L	VL	VL
Agricultural/Horticultural Areas	L	L	L	VL	VL
Energy Infrastructure	VL	VL	VL	VL	VL

Legend - H = High, M = Moderate, L = Low, VL = Very Low
**Sensitivity reduces to low in distances greater than 10kms*

Table 2 - Typical Viewer (visual) Sensitivity.

Another consideration in defining the level of sensitivity in situations where a development is proposed adjacent to an existing development of a similar form and scale, is that of de-sensitisation. In this scenario, those residing adjacent to the existing development may have become accustomed to its presence and may be less sensitive to an extension with a similar character.

Conversely, the additional development may result in a cumulative impact, with some becoming hyper-sensitised. Given the potential for varying reactions, the methodology takes a cautionary approach and defines all uses at the same sensitivity level as a "greenfields" site.

2.2.2 Visual modification to the existing setting

The level of visual modification resulting to a setting from a proposed development, or the degree to which the setting is modified, can be best measured as an expression of the visual interaction, or the level of visual contrast between the project and the existing visual environment.

A high level of magnitude, or a high degree of visual modification, will result if the major components of the project contrast strongly with the existing landscape.

A low level of magnitude, or a low degree of visual modification, will occur if there is little or minimal visual contrast and a high level of integration of form, line, shape, pattern, colour or texture values between the proposed development and the environment in which it sits. In this situation, the proposed development may be noticeable, but does not markedly contrast with the existing, already modified landscape (refer to ***Table 3***).

The presence of the existing power related infrastructure, including the terminal station and surrounding powerlines, provides the Project with a significant degree of visual fit within the already modified landscape setting.

The degree of magnitude or modification would generally decrease as the distance from the Project to various viewing locations increases.

Modification Level	Description
High	The proposal is highly visible and intrusive regarding the size, scale and geographical extent, and would disrupt views currently experienced from sensitive land use areas and/or strongly contrasts with the existing landscape setting which has limited capacity for change.
Moderate	The proposal partially intrudes regarding the size, scale and geographical extent or somewhat obstructs current views from sensitive land use areas and/or a noticeable compositional change to the existing landscape setting in which there is moderate capacity for change.
Low	The proposal is barely perceptible resulting in minor deterioration to the view currently experienced from sensitive land use areas; and/or results in a small change to the existing landscape setting in which change is possible without harm.
Very Low	There is minimal compositional contrast and a high level of integration of form, line, shape, pattern, colour or texture values between the proposal and the environment in which it sits. In this situation, the proposal may be noticeable but does not markedly contrast with the existing landscape setting.
Not Visible	There are no views of the proposal components and as such, there is no impact.

Table 3 - Typical scenarios for determining the visual modification level.

2.2.3 Occupied field of view – Visual prominence

To assist with the assessment of visual prominence, this report defines several viewsheds which are based on distance from the project. The methodology is based on the reduction of impact with an increase in distance between a given viewpoint and the project. The potential visual impact of the project will also, to a large extent, depend on how much of the central field of vision it occupies (refer to ***Table 4***, ***Table 5*** and **Figure 3**).

Throughout the visual catchment, the degree of visual prominence will generally decrease as the distance from the development site to various viewing locations increases.

The quantitative assessment of visual prominence, i.e., how much is potentially visible, is intertwined with the distribution, height and density of vegetation as well as topography throughout the visual catchment, elements which can screen views of a development from a particular viewpoint. Visual prominence helps inform the process of determining the visual modification level as previously outlined in the above section.

In areas of flat topography, the vertical field of view of a BESS unit with a height of 3m will be less than 0.5 degrees, or of low visual prominence in distances beyond approximately 350m, and less than 0.25 degrees, or of very low visual prominence in distances beyond 700m.

As a result of the rapid reduction in vertical visual prominence with distance, this assessment only considers sensitive viewpoints within 2km of the Project.

Degrees of Field of View Occupied	Potential Visual Prominence – Horizontal Field of View
Less than 5°	***Insignificant – Low Visual Prominence*** The development may not be highly visible in the view unless it contrasts strongly with the background.
5° – 30°	***Potentially Noticeable – Moderate Visual Prominence*** The development may be noticeable. The degree that it intrudes on the view will be dependent on how well it integrates with the landscape setting.
Greater than 30°	***Potentially Dominant – High Visual Prominence*** The development will be highly noticeable.

Table 4 - Horizontal line of sight – Visual impact / visual prominence.

Degrees of Field of View Occupied	Potential Visual Prominence – Vertical Field of View
0 ° - 0.25 °	***Barely Discernible – Very Low Visual Prominence*** A very thin line in the landscape.
0.25 ° - 0.5 °	***Insignificant - Low Visual Prominence*** A thin line in the landscape.
0.5 ° – 2.5 °	***Potentially Noticeable – Moderate Visual Prominence*** The development may be noticeable. The degree that it intrudes on the view will be dependent on how well it integrates with the landscape setting.
Greater than 2.5 °	***Potentially Dominant – High Visual Prominence*** The development will be highly noticeable, although the degree of visual intrusion will depend on the landscape setting and the width/spread of the object.

Table 5 - Vertical line of sight – Visual impact / visual prominence.

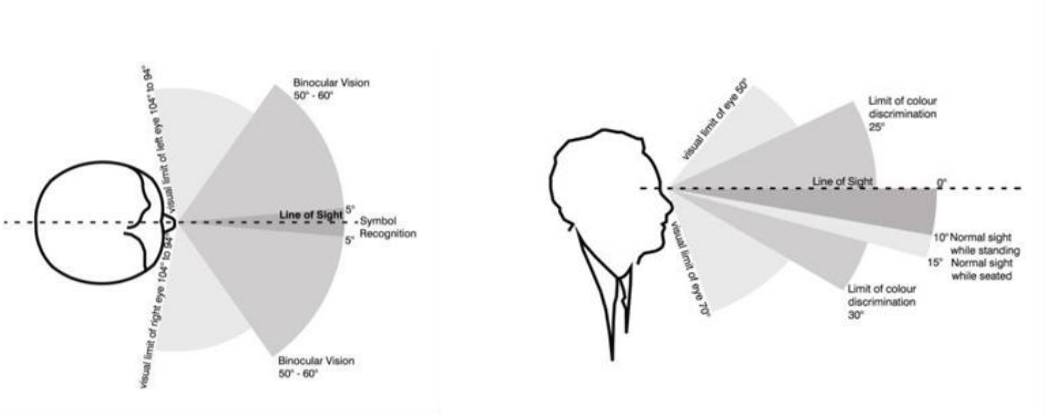

Figure 3 – Horizontal and vertical field of view.

2.2.4 Residual impacts

The effectiveness of the measures proposed in mitigating the landscape and visual impacts resulting from the Project is demonstrated by comparing the visual impact during initial operation with the residual impact when the proposed landscape measures have mostly matured, which is typically ten (10) years following initial establishment.

Generally, residual impacts would be reduced by at least one level where landscape measures have been proposed and have matured, as a result of the filtering of, or inhibiting views to the Project.

2.2.5 Cumulative impact

The landscape and visual impact of the project cannot be considered in isolation, as the site is located within a regional setting that includes a number of projects currently operating and approved or lodged projects that may commence construction in the near future.

In the definition of what projects are included in a cumulative impact assessment, the question of 'reasonable foreseeable future actions' should be considered in defining which projects are included in the cumulative impact assessment. That is, some approved projects could be shown to have little or no prospect of being developed and could be excluded from the assessment process.

2.2.5.1 Simultaneous cumulative impact

Simultaneous cumulative impact refers to occurrences where an impact may result from several potential visual intrusions being visible from an individual location at the one time.

2.2.5.2 Sequential cumulative impact

Sequential cumulative impact refers to occurrences when the viewer must move to another viewpoint to see different developments. Sequential cumulative impacts most typically apply to road users as they traverse the landscape along major roads.

2.3 Lighting impacts

AS-NZS-4282-2019 Control of the obtrusive effects of outdoor lighting provides standards for the assessment and limitation of lighting impacts. The standard identifies four environmental zones for exterior lighting which are categorised by the degree of artificial lighting within an area. For example, national parks would be categorised as an intrinsically dark landscape (Category A1), whereas a city centre with high levels of night-time activity would be categorised as a high district brightness area (Category A4).

The standard is aimed at the minimisation of light spill. Regardless of the existing brightness of a particular setting, it is a widely accepted principle that light spill, particularly upward light spill, be minimised wherever possible.

2.3.1 Lighting impact scenarios

Glow
Light glow is typically an upward projection of light that results in illumination of the night sky above a lighting source. It is intensified, or more visually apparent when foggy or cloudy as the light reflects or disperses of water droplets in the atmosphere. Glow is visible over significant distances.

Spill
Spill is light that falls on adjacent sensitive surfaces, both vertical and horizontal, and is most intrusive where it illuminates private open spaces or spills through windows.

Hot spots
Hot spots relate to concentrated areas of bright light in an otherwise less well illuminated setting. Hot spots will be most visible where are elevated.

Kinetic / movement
Lights that change colour or flash can draw the attention of a viewer. As the speed of the colour change or blink increases in speed, so too will its prominence of ability to draw attention.

2.4 Limitations of the assessment

There are these following limitations associated with this assessment:

- The LVIA process aims to be objective and, as such, seeks to describe any changes factually. Potential changes resulting from the project have been defined. However, the significance of these changes requires qualitative (subjective) judgements to be made. Therefore, the conclusions to this assessment combine both objective measurement and subjective professional interpretation. This assessment has attempted to be objective, however, it is recognised that visual assessment can be highly subjective, and individuals are likely to associate different visual experiences to the study area;
- The impact assessment is focused on the current land uses and zoning; and
- Methodology of the construction works are currently unknown and dependent upon planning approvals. However, we have assumed that the impacts during construction would result in a similar degree of visual impact to that of the operational phase assessment findings, pre-amelioration.

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3 COMPONENTS OF THE PROJECT

3.1 Key features

As illustrated in ***Figure 4*** and ***Figure 5*** the Project involves the development of a 4ha BESS facility. The works and components associated with the Project include:

- Hardstand area for battery units and inverters, including inverters.
- BESS units with a storage capacity of 100 MW / 800 MWh.
- Inverters.
- Switchroom.
- Main transformer.
- Auxiliary transformers
- Harmonic filters.
- Control building and site office.
- Underground transmission cables to the Griffith Substation.
- Firefighting water storage pond and detention basin.
- Protection and control equipment.
- Spare parts warehouse.
- Workshop.
- Diesel generator.
- 2 water storage tanks.
- Security fencing and monitoring systems.
- Internal maintenance tracks and carparking.
- Temporary layout areas for the construction period.
- Retention basin.
- Landscaping / 5m wide screen planting to the north, west and south, to be coordinated in conjunction with the Yagooli Solar Farm.
- Security lighting is required around the BESS, inverter and HV switchroom.

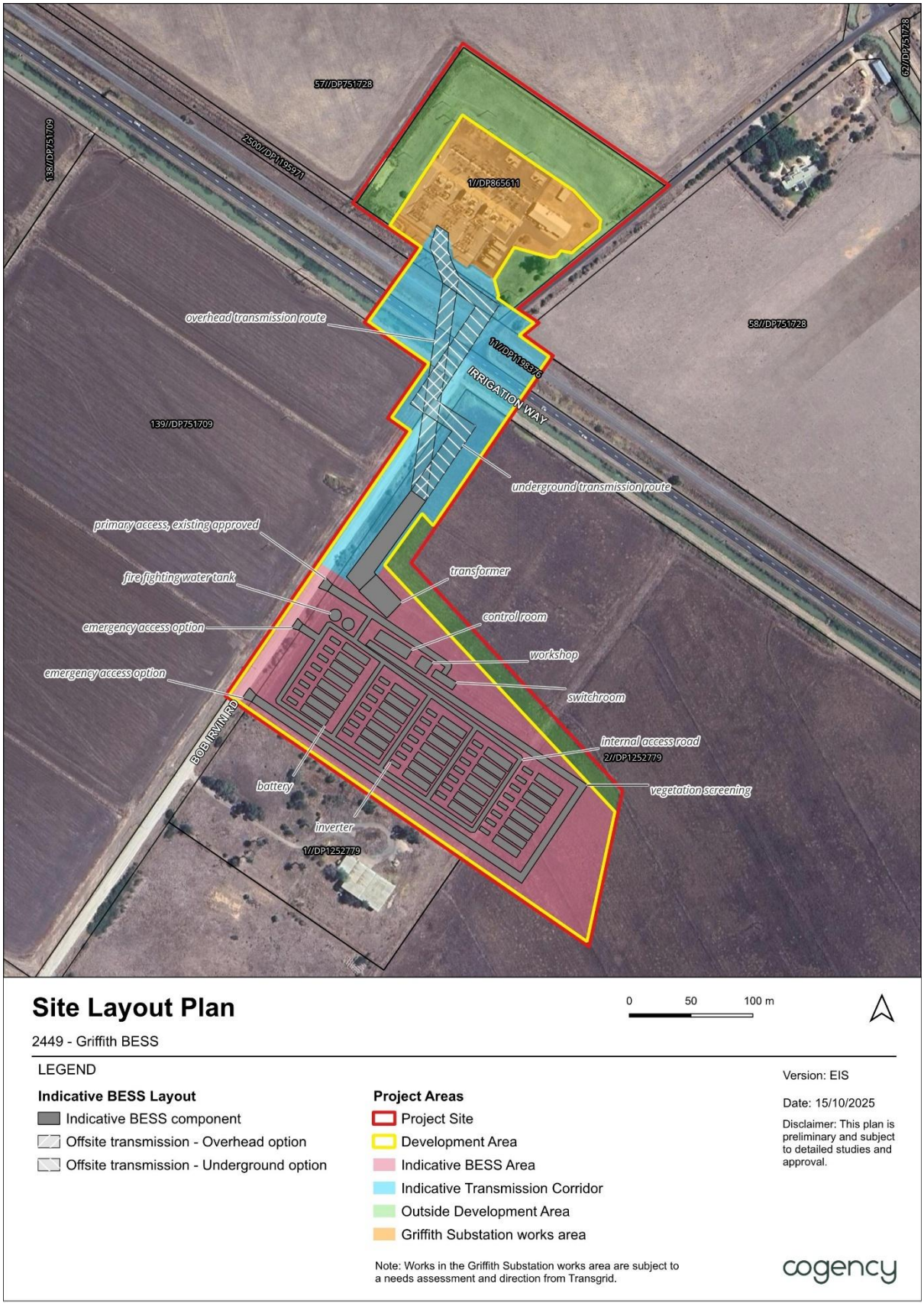

Figure 4 – General arrangement plan of the Project (Source: Cogency)

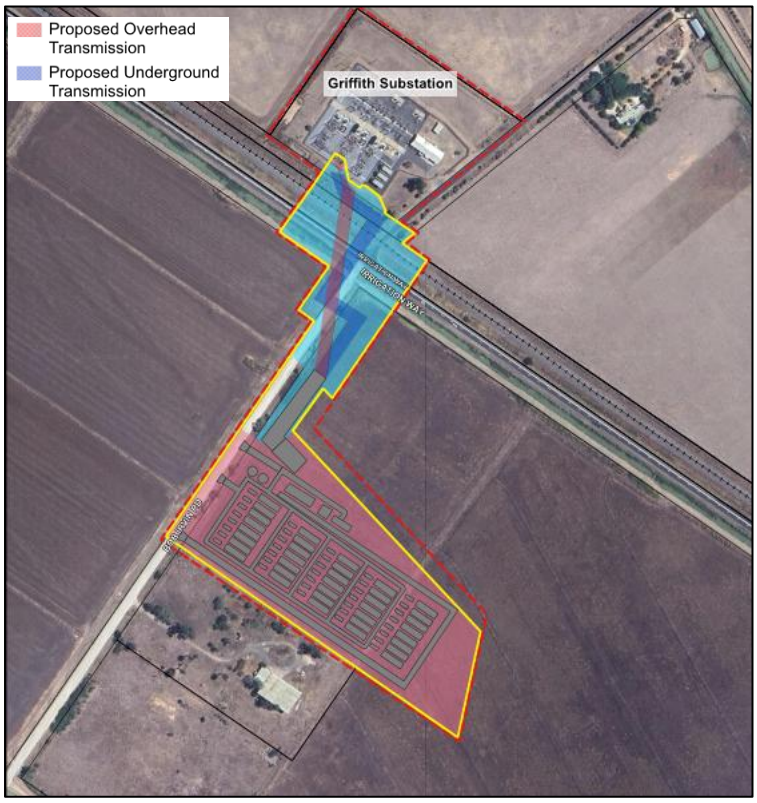

Figure 5 – Alignment of proposed connecting powerline (Source: Cogency).

3.2 Detail of project components

The most visible components of the Project that may result in visual impacts to surrounding sensitive receptors are outlined below.

3.2.1 BESS Blocks

Installation of batteries housed inside 276 BESS containers constructed of steel, with indicative dimensions of 6.1m (length) x 1.7m (width) x 2.9m (height) (refer to ***Figure 6***).

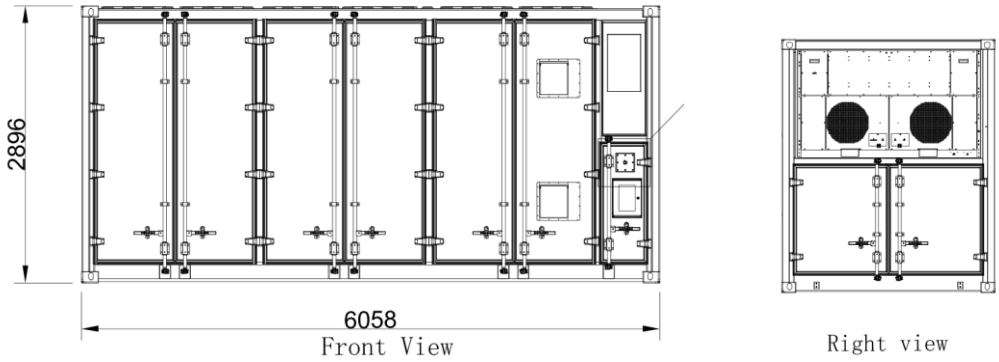

Figure 6 – Proposed BESS module.

3.2.2 Switching station

The switching station and associated hardstand areas will have a footprint of approximately 160m x 120m, an average height of 8m and a maximum height of approximately 15m (refer to ***Figure 8*** and ***Figure 8***).

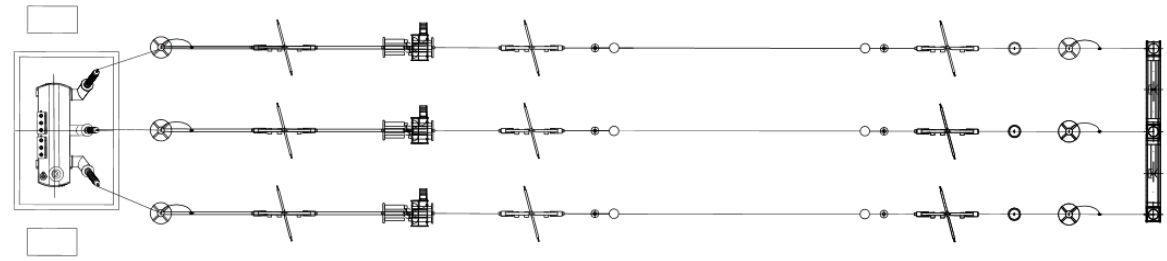

Figure 7 - Switching station – plan.

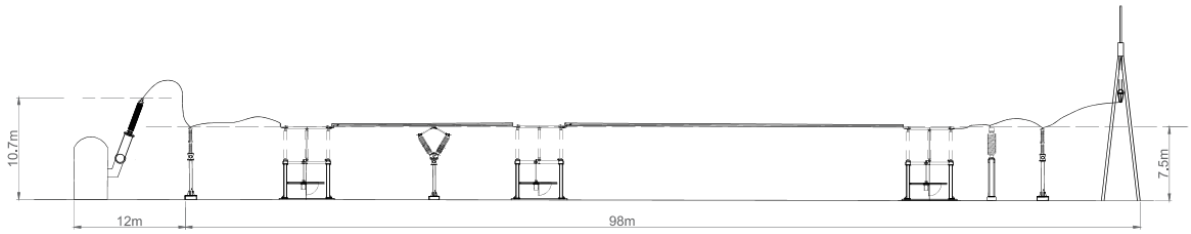

Figure 8 – Proposed switching station – elevation.

3.2.3 HV Switchroom

The HV switchroom will have a footprint of 31.1m x 4.7m and a maximum height of 6.2m (refer to ***Figure 9***).

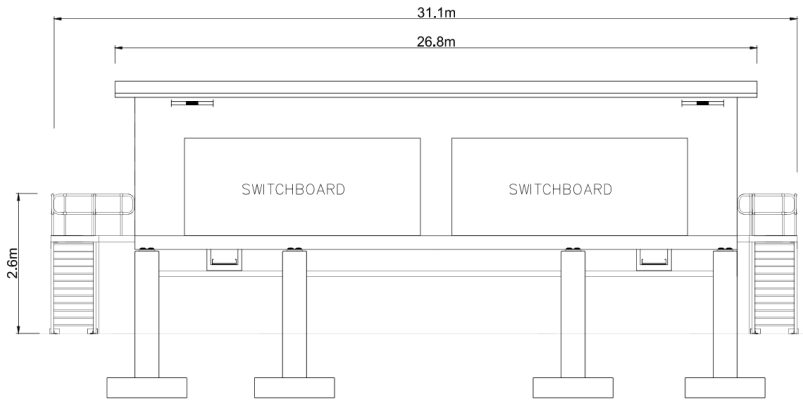

Figure 9 – Proposed HV switchroom – rear elevation.

3.2.4 132kV connecting powerline

Connection to the National Energy Market (NEM) will be via a mixed underground and overhead 132kV cable from the on-site transformer to the Griffith Substation approximately 300 m from the site's northwestern corner.

A trenched cable will pass underground beneath the existing 132 kV overhead transmission line within the 15 Bob Irvin Road property, emerging north of the transmission easement. From this point, and subject to further detailed design, the cable will be carried either:

- In a single span across Bob Irvin Road, Irrigation Way, and the Yanco-Griffith Railway to connect into the Griffith Substation, or
- Underground via a bored connection to the Griffith Substation, emerging to a pylon to connect into a bay.

3.2.5 Inverter

The panels generate Direct Current (DC) electricity which must be converted into Alternating Current (AC) before being fed into the local electricity grid network.

The transformer in the inverter transforms electrical energy from one circuit to another and allows for the energy generated to be fed into the local grid network.

The each inverter is housed in a cabin-like structure mounted on a concrete base, and is 3m long, 2.08m wide and 2.3m high (refer to ***Figure 10***).

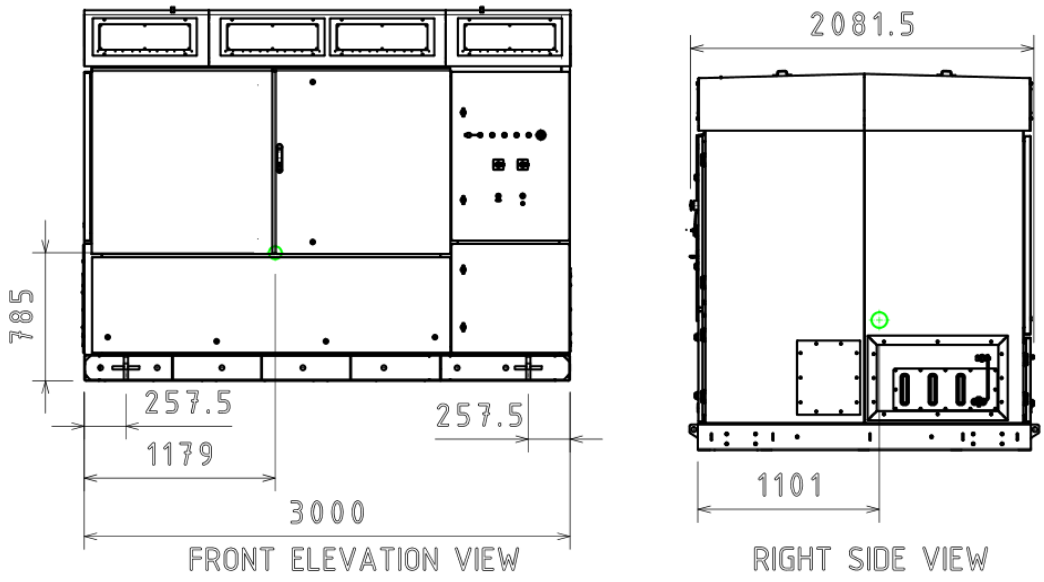

Figure 10 – Typical inverter – Front and side elevation.

3.2.6 Operations and maintenance building

The operations and maintenance building will be a relatively simple, low-profile structure, approximately 12m long, 4m wide and 3.6m high (refer to ***Figure 11***).

Figure 11 – Concept for onsite maintenance building.

3.2.7 Perimeter Fence

A 2.35 m high chainmesh fence will be installed around the Project (refer to ***Figure 12***). The purpose of the fence is to deter theft or vandalism and prevent unauthorised access to equipment.

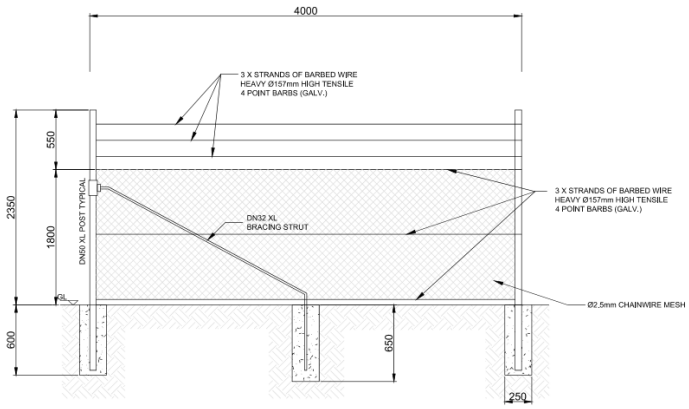

Figure 12 – Typical security fence detail.

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4 PROJECT CONTEXT AND SETTING APPRAISAL

4.1 Project context

The Project is located in Yoogali, NSW, a farming district 7km southeast from the rural city of Griffith, within the Griffith City Council.

Griffith is a major city in the Riverina region, located approximately halfway between Canberra and Mildura. The area is known for a strong agricultural industry, particularly wine.

There are three nearby solar development projects (refer to ***Figure 13***):

- the Griffith Solar Farm was completed in 2018. It is located 7km southeast of Griffith. It sits on 210 hectares, connects to a 33kV transmission line via a 450m underground cable to TransGrid Yoogali substation and consists of 12 SMA Inverters and has 112,320 solar modules;
- the Riverina Solar Farm, located at Yoogali, is approved and has commenced construction, however the current status of the project is not known;
- the Yoogali Solar Farm was approved in 2019, is in pre-construction. It is a related project to the Griffith BESS (refer to ***Figure 14***); and
- the solar farm 293 Hawkins Road Yoogali, was approved in 2024 and is yet to commence construction.

All projects, including the Griffith BESS, will connect to the Griffith Substation. The Griffith Substation is located southeast of Yoogali and Griffith. It is located on Irrigation Way next to the Griffith Solar Farm.

The Griffith BESS will be co-located on the same land as the proposed Yoogali Solar Farm and is a related project that will be delivered independent of each other. The property is made up of two lots currently titled as 41 Bob Irwin Road, Yoogali (1//DP1252779) and 15 Bob Irwin Road, Yoogali (2// DP1252779).

A Transgrid transmission easement containing overhead 132 kV power lines runs northwest to southeast through the site's extension to the Bob Irvin Road and Irrigation Way intersection, opposite the Griffith Substation.

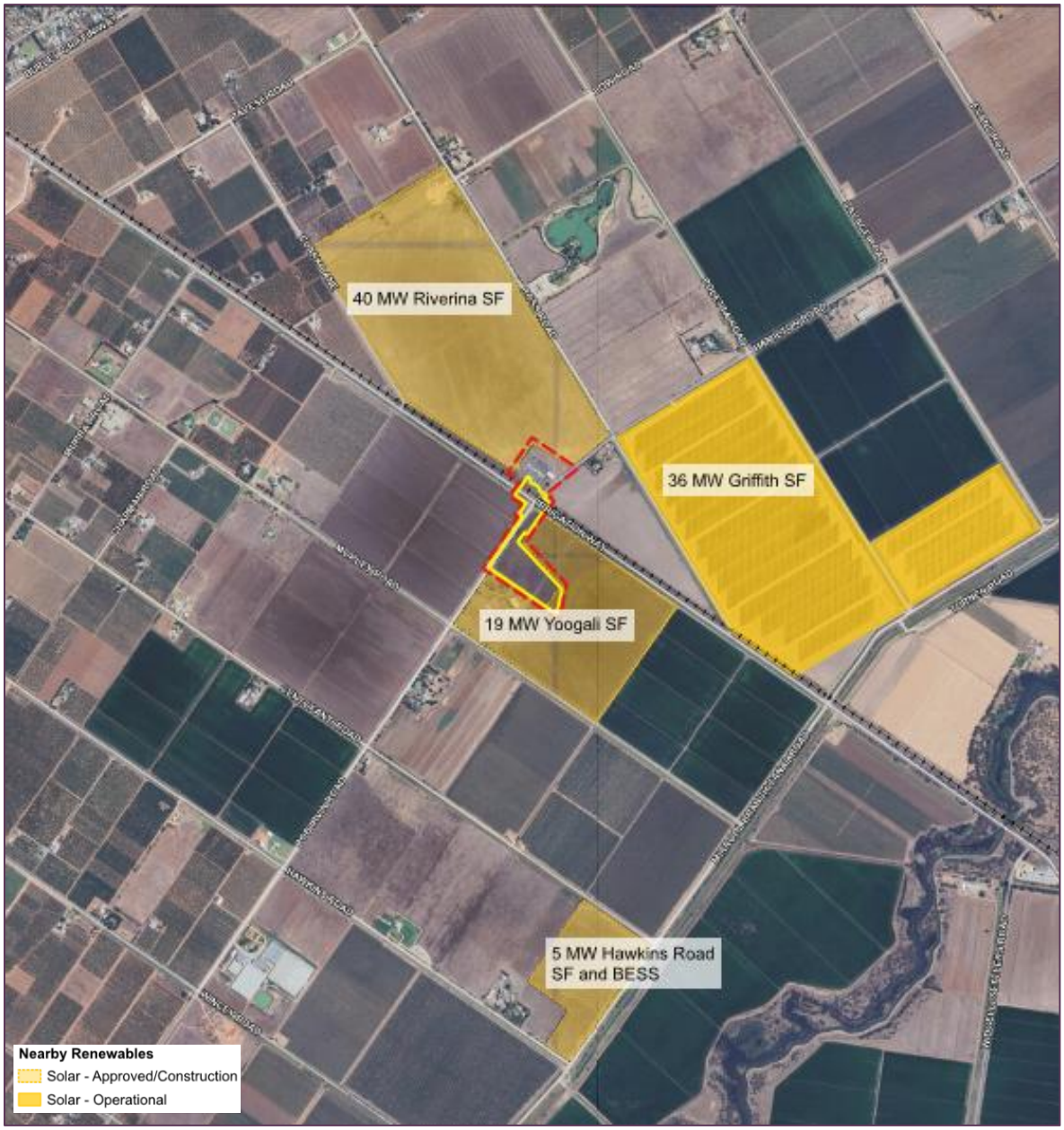

Figure 13 – Adjacent operating and approved renewable energy projects (Source: Cogency).

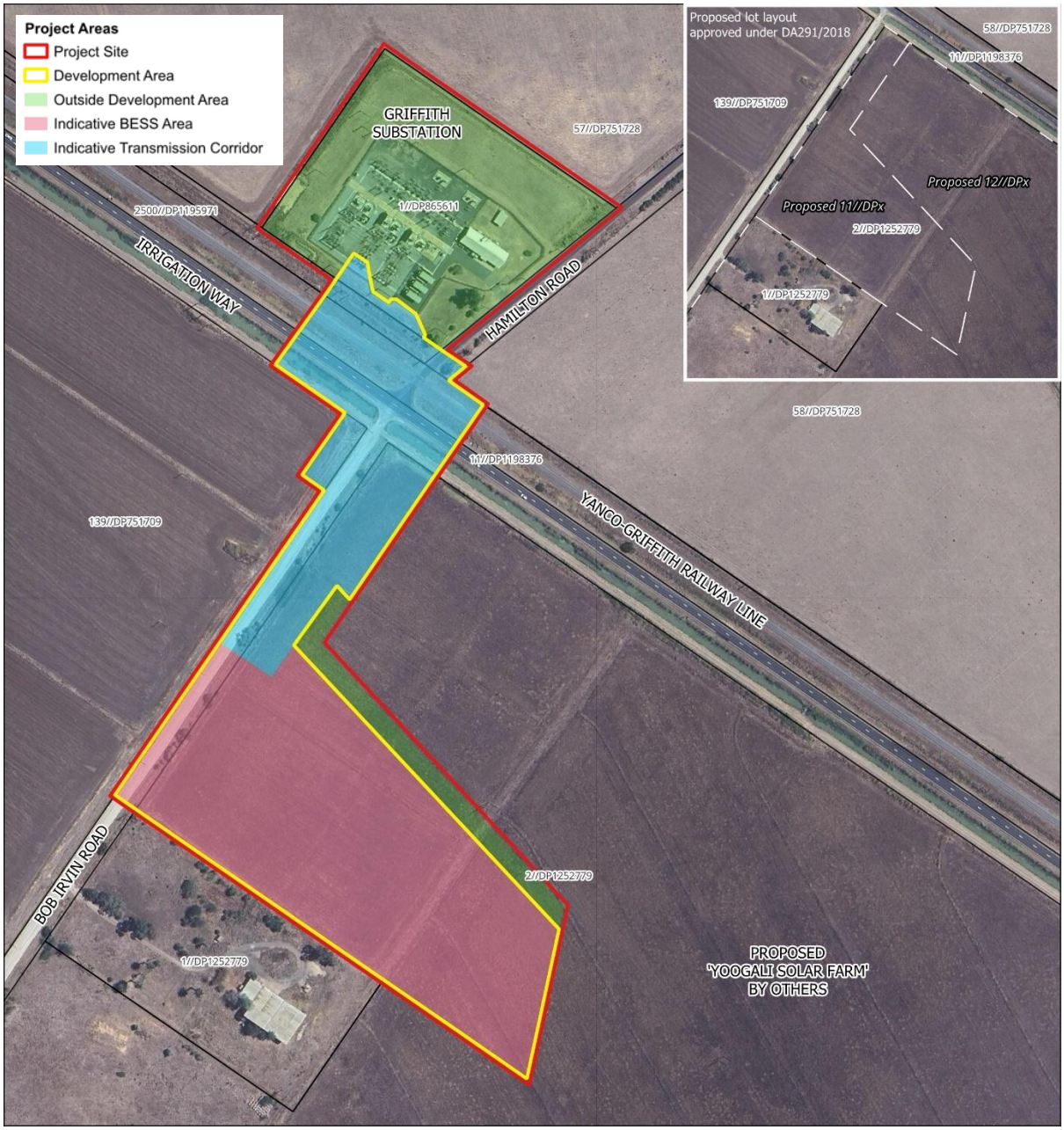

Figure 14 – Site plan and relationship to approved Yoogali Solar Farm (Source: Cogency).

The Project is located on an irregular shaped parcel of land situated on the eastern side of Bob Irvin Road. It is surrounded on its northern, eastern and southern sides by the approved Yoogali Solar Farm. Agricultural land is located to the west of the Project site across Bob Irvin Road.

A 33kV powerline traverses the northern boundary of the Project site, connecting to the Griffith Substation which is located approximately 100m to the north over Irrigation Way.

The Griffith Solar Farm is located approximately 450m to the northeast.

The boundary of Griffith/Yoogali residential area is located approximately 2.8km to the northwest (refer to ***Figure 15***).

Figure 15 - Project context (Source: Google Earth).

4.2 Land use and zoning

4.2.1 Land use

The Project site sits within the Murrumbidgee Irrigation Area and is defined by its flat, fertile terrain known for its agricultural outputs of rice, citrus fruits, grapes, and a variety of other fruits and vegetables (refer to ***Figure 16***).

The energy generation uses cover an extensive area and comprise the following activities (refer to ***Figure 17***):

- Griffith Solar Farm (~ 7km southeast of Griffith) (refer to ***Figure 18***).
- Griffith Substation (refer to ***Figure 19***).
- 33kV transmission line to TransGrid Yoolagi substation (refer to ***Figure 20*** and **Figure 21**).
- Riverina Solar Farm, located at Yoogali, is approved and has commenced construction, however the current status of the project is not known.
- Yoogali Solar Farm was approved in 2019 and is in pre-construction. It is a related but independent project to the Griffith BESS, currently being developed by EDP Renewables.

In addition to the crops grown in open fields, expansive greenhouses for intensive horticulture also exist within the setting (refer to

Figure 16 – Typical horticultural land use in the study area.

Figure 17 – Adjacent existing infrastructure (Source: Google Earth).

Figure 18 – The Griffith Solar Farm, as viewed from Irrigation Way to the northeast of the Project site.

Figure 19 – The Griffith Substation, as viewed from Irrigation Way near the corner of Bob Irvin Road.

Figure 20 - HV Powerlines traverse the landscape to the north of the Project site as well as adjacent to Irrigation Way from the substation to Yoogali.

Figure 21 - Existing 33kV power lines run between the Project site and the Yoogali Solar Farm.

Figure 22 – Expansive greenhouses are located on Bob Irvin Road, approximately 1.8km to the southwest of the Project.

4.2.2 Zoning

The Project is located within the Griffith Rural Council area. The entirety of the subject site is zoned Primary Production (RU1) (refer to ***Figure 23***). There are no specific landscape and visual related objectives for the zone.

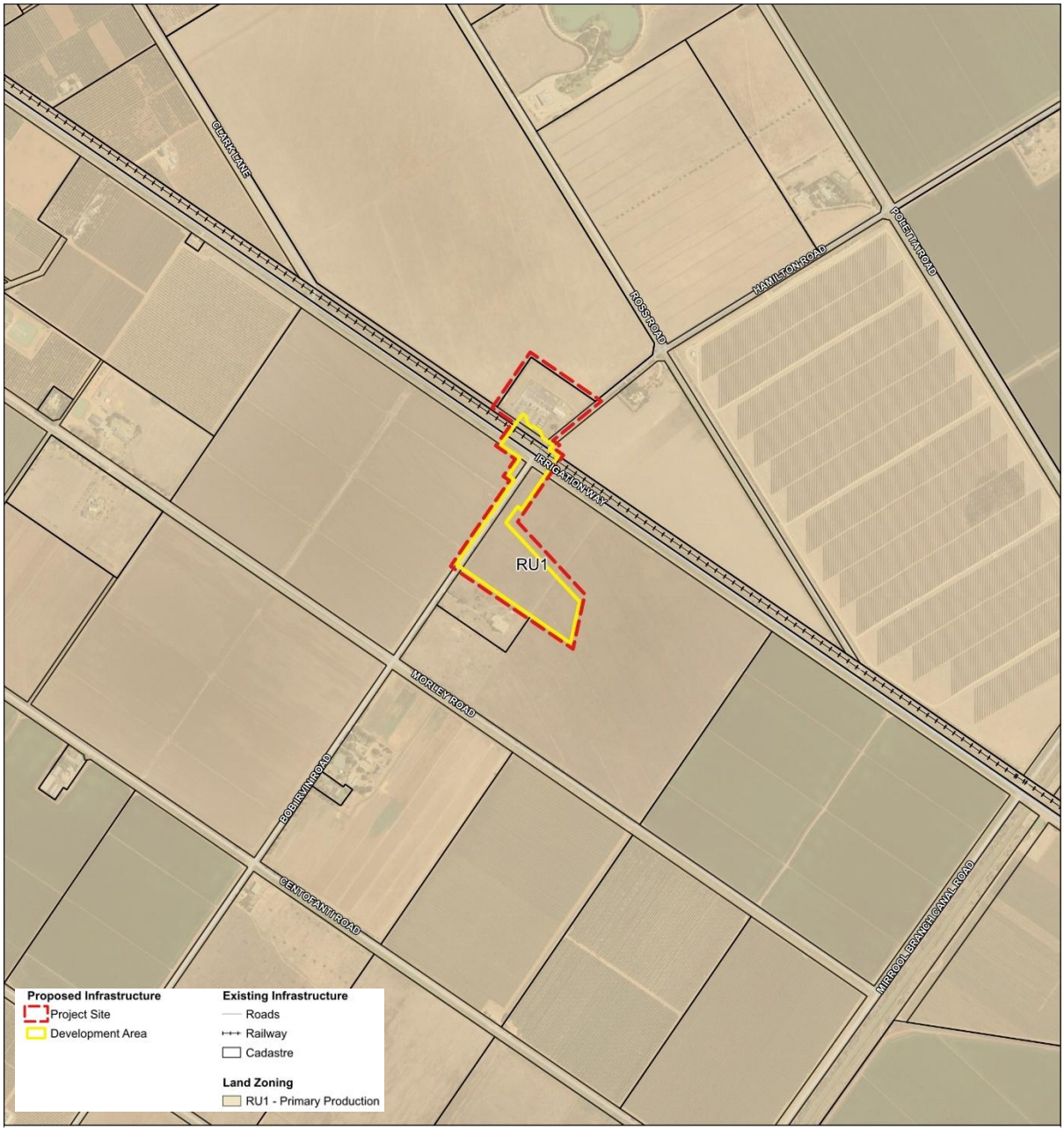

Figure 23 - Zoning Map (Source: Cogency).

4.3 Vegetation and landscape form

The Project is located in the NSW South Western Slopes – Lower Slopes Interim Biogeographic Regionalisation for Australia (IBRA).

The South Western Slopes bioregion spans a vast expanse of foothills and scattered ranges, stretching from the Riverina plains all the way to the Great Dividing Range. This region experiences a sub-humid climate marked by hot summers and consistent rainfall throughout the year—ranging from around 1,200 mm in the east to just 400 mm in the west. It's divided into two distinct sub-regions: the Upper Slopes and the Lower Slopes. The Lower Slopes are primarily shaped by floodplains, alluvial deposits, and terrace plains, giving the landscape its unique character.

4.3.1 Vegetation

Although much of the original native vegetation has been cleared to make way for farming, in the surrounding landscape, patches still persist along rocky ridges, low-lying zones, and roadside corridors. The landscape also comprises a network of wetlands and waterways, including the Murrumbidgee River, Mirrool Creek, and Fivebough and Tuckerbil Swamps.

The Project site is flat with little substantive vegetation (refer to ***Figure 24***). Where there is vegetation, it is concentrated outside of the site along the Bob Irwin Road reservation and includes a mixture of native trees and shrubs (refer to ***Figure 25***). Refer also to the Ecology Report for further details on the site's vegetation.

The most substantive existing vegetation proximate to the Project site is located on the Yoogali Solar Farm site to the southwest (refer to ***Figure 26***).

The surrounding area is comprised of a patchwork of intensive agricultural and horticultural activities arranges in blocks, with crops ranging in size from low growing forms to vineyards and citrus orchards. Although the citrus trees are not of a significant height, they still provide effective screening of views from residences and roads (refer to ***Figure 27***).

Rural residences in the area surrounding the subject site are typically set within a well treed setting, that often contains shrubs in the "home yard" adjacent to the residence itself as well as a number of instances where the residence is set within an orchard (refer to ***Figure 28*** and ***Section 5.1.2***).

The lack of nearby elevated topography, which reduces opportunities for overlooking, combined with the blocks of dense orchards and vegetation surrounding residences, results in views to the Project site being often filtered or screened.

Figure 24 – The Project site lacks substantive vegetation.

Figure 25 – Scattered roadside vegetation on Bob Irvin Road to the north of the Project site.

Figure 26 - Vegetation on the Yoogali Solar Farm site to the southwest of the Project site provides screening of views into the site.

Figure 27 – Orchards throughout the landscape setting, although containing tall vegetation, provide effective screening of views from roads and residences.

Figure 28 – Typical dense vegetation surrounding a rural residence that provides a high degree of screening.

4.3.2 Landscape form

The subject site is located in the broader valley of the Murrumbidgee River and its tributaries, including Mirrool Creek which is located approximately 1.9km to the southeast (refer to ***Figure 15***).

The topography of the valley floor is mostly flat, with elevation ranging from approximately 120m AHD along the waterways and deeper drainage lines, to approximately 130m AHD.

The town of Griffith is located at approximately 130m AHD and sits to the south of Scenic Hill, an elevated landform that rises to approximately 70m above the town to an elevation of approximately 200m AHD (refer to ***Figure 29***).

The suburb of Yoogali sits between Griffith and the Project site.

The elevation of the Project site is very flat and sits at an elevation similar to that of the town of Griffith, ranging from approximately 128m to 129m AHD, with minimal gradients.

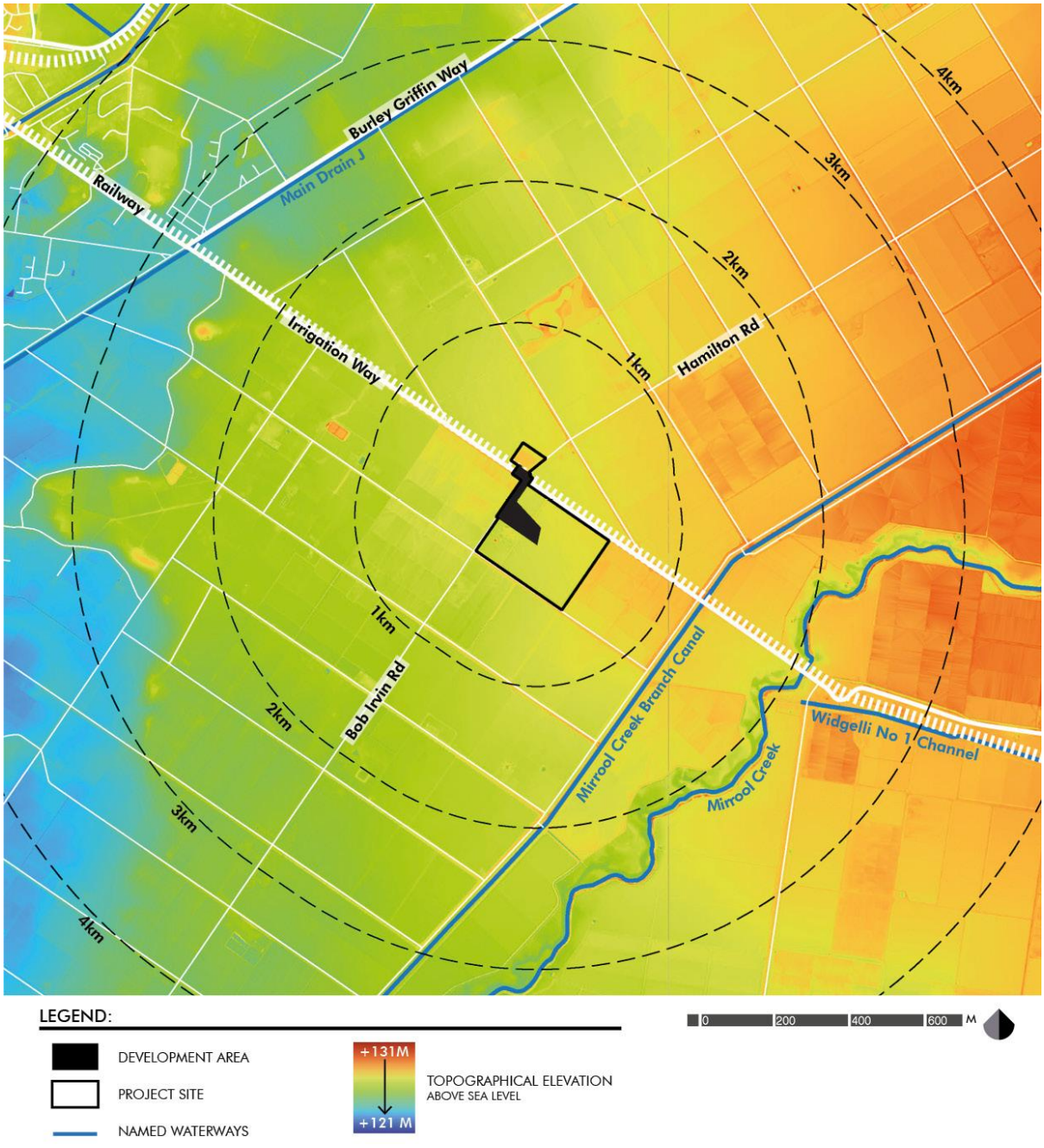

Figure 29 - Topographical elevation of the subject site and surrounds.

4.4 Landscape Character Units (LCUs)

Griffith, NSW, is characterized by a flat, fertile landscape within the Murrumbidgee Irrigation Area, known for its agricultural production, particularly in rice, citrus, grapes, and other fruits and vegetables. While much of the native vegetation has been cleared for agriculture, remnants can be found on rocky ridges, low-lying areas, and roadsides. The area also features wetlands and waterways, including the Murrumbidgee River, Mirrool Creek, and Fivebough and Tuckerbil Swamps.

Landscape Character Units (LCUs) are defined by distinct features such as topography, vegetation, land use, and other visual elements. They help differentiate areas within the broader environment and are essential for assessing how the proposed solar farm might visually impact various locations. Within a 5 km radius of the Project site, one primary LCU was identified:

4.4.1 Agricultural LCU

This unit dominates the study area and is characterised by low scenic quality. The landscape is largely uniform in both colour and form, offering minimal visual diversity. Land use is focused on production, with typical infrastructure including powerlines, irrigation canals, roads, residential dwellings, and farm buildings including polyhouses and produce processing facilities.

4.5 Scenic Quality

Scenic quality is somewhat subjective but typically is a combination of a range of factors that have been found to contribute to the human appreciation of landscape. These factors are:

- Topographic variation and ruggedness;
- Strong patterning of vegetation; and
- The presence of water.

Agricultural landscapes are particularly subject to divergent opinions as to what constitutes scenic values. However, basic principles relating to diversity of topography, patterning of vegetation and the presence of water remain contributing factors to a higher level of scenic quality.

The scenic quality of the area surrounding the Project, has been assessed as outlined in ***Table 6***.

Description	Low Scenic Quality
Contrast	Edge contrast with surrounding vegetation severe and abrupt appearing as a straight rigid line.
Pattern	Few patterns evident with the area of introduced vegetation which borrow form and/or line form the natural surrounding landscape.
Scale	Introduced vegetation dominant with very little native vegetation evident.
Line	Line effects visually dominant appearing as straight, parallel, or geometric grid lines in sharp contrast to the line found commonly within the surrounding landscape.

Table 6 – Scenic quality of agricultural altered landscapes (Source: Leonard and Hammond).

4.6 Absorptive Capability

The definition of landscape absorptive quality is closely related to that of visual modification levels. It is generally applied at a broader scale than visual modification and is an assessment of how well a landscape setting can accommodate change or a development.

The key factors considered in determining absorptive capability are topography and vegetation. In areas of flatter topography, overlooking is not possible and even a low and thin band of vegetation is able to screen views to a development from a given viewpoint. In areas of undulating or elevated topography, overlooking can occur and vegetation needs to be higher and denser to achieve effective screening. Intervening undulating topography also has the potential to block views in certain landscapes.

The landscape setting of the Project and immediate surrounds (up to 2km distant) is flat to slightly undulating with vegetation confined to a rectilinear pattern reflecting property boundaries and roads. Within this landscape, overlooking is generally not possible from most sensitive viewpoints, and even relatively low vegetation (up to eye-height) is effective at screening views.

Topography – High capability due to flat to slightly undulating topography, with minimal potential for overlooking within a 2km radius.

Existing Vegetation – Generally low for highly cleared agricultural areas. Moderate to high capability where vegetation exists, particularly roadside plantings.

The overall absorptive capability is high given the limited vertical scale of the Project.

5 VISUAL IMPACT ASSESSMENT

5.1 Visibility of the Project

5.1.1 Theoretical zone of visual influence (TZVI)

The viewshed is the area from which views of a proposed development may be possible. Given the relatively low profile of the more extensive BESS components of the Project above ground level, the visual catchment will be limited and partially confined by vegetation throughout the landscape of the setting.

A viewshed or TZVI analysis was prepared to identify locations within 5km from where the components of the Project may be seen, based on the potential screening effects of topography (refer to ***Figure 30***). However, the TZVI does not show the effect that the Yoogali Solar Farm would have on the screening of views to the north, east or south.

In this instance, given the very flat topography, with many forms in the landscape being subtle, it is clear that the Project components, even at a relatively short 3-8m in height, will be visible up to 5km distant.

Therefore, the assessment process assumes that there will be theoretical visibility based on topography and focuses on the screening effects of landscape for higher sensitivity viewpoints within 2km.

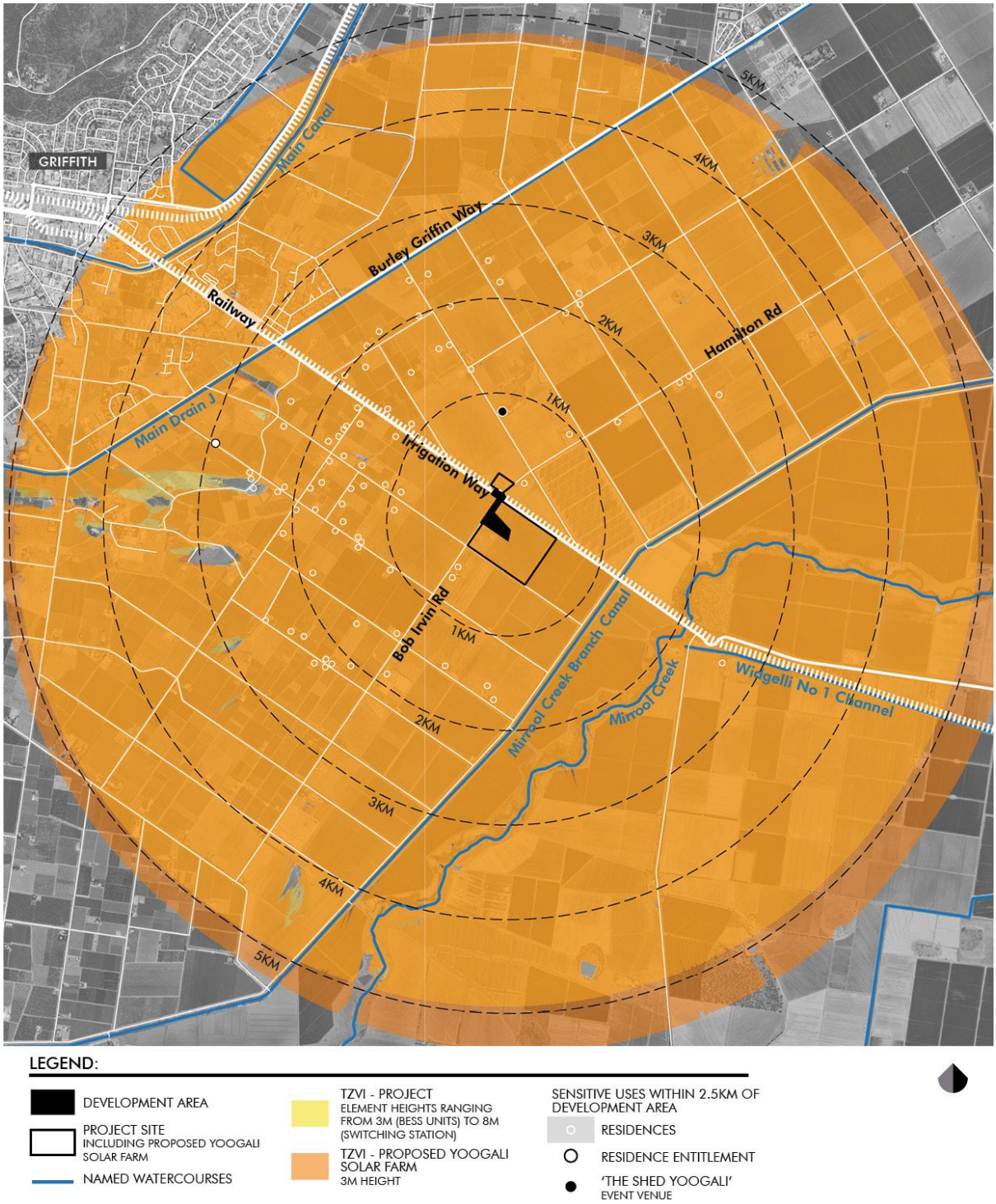

Figure 30 – TZVI – The Project and Yoogali Solar Farm.

5.1.2 The effect of rural residential vegetation on visual screening

In order to provide protection from the influences of the environment, particularly sun and wind, Australian rural residential gardens have traditionally developed a dense band of vegetation to surround an intimate and protected home yard. The effect of this in many instances has been to effectively contain the viewshed from the house and surrounding yard itself, screening distant views. The presence of foreground vegetation has a direct impact on the visibility of the Project and the context in which it will be viewed.

Vegetation within the landscape more distant from the residence that may provide additional screening of views is not considered at this time. However, it is considered as part of the detailed viewpoint assessment.

5.1.2.1 Rural residential viewpoint landscape setting typologies

Throughout the visual catchment, the majority of residences sit within a landscape that is comprised of medium to tall vegetation, with varying levels of density depending on either the extent of clearing or extent of planting.

The height and density of vegetation have a direct relationship to the visual exposure of the residence to the proposed development.

The following three setting typologies have been developed to assist the understanding of the influence of vegetation on the screening of views from residences.

The assessment has considered the overall screening effect of vegetation as it relates to the direction of views towards the Project. For example, if the vegetation at the perimeter of the residence is sparse on the side away from the direction of views to the Project and dense on the side where there may be potential views, the effect of screening vegetation reflects the side with views. The same applies for the converse situation.

5.1.2.1.1 Typology 1 – Minimally screened

Views to external areas are minimally to partially filtered by scattered vegetation.

Influence on visibility and potential impact
Partial to open views of the proposed development will be possible over open pasture or below and between tall, scattered trees. The potential exists for visual impact (refer to ***Figure 31***).

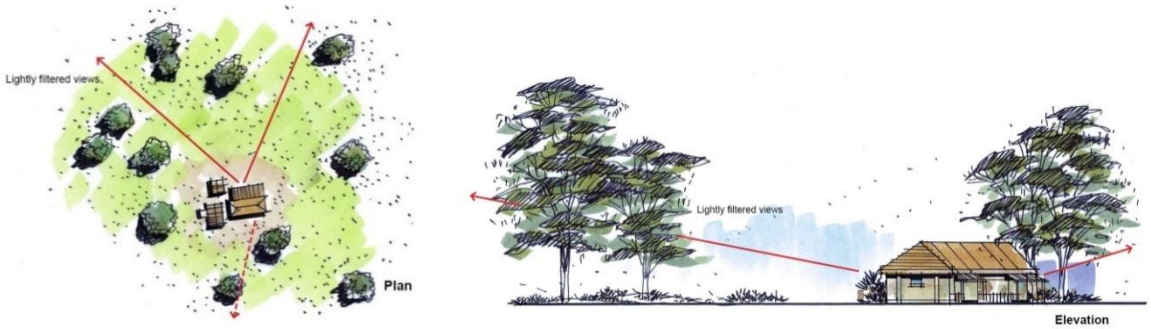

Figure 31 - Typology 1 – Minimally screened. Typical plan and elevation.

5.1.2.1.2 Typology 2 – Partially screened

Views to external areas are partially to heavily screened by vegetation.

Influence on visibility and potential impact
Partial to fully screened views of the proposed development will only be possible where limited breaks in vegetation occur. The potential for visual impact is significantly reduced (refer to ***Figure 32)*.**

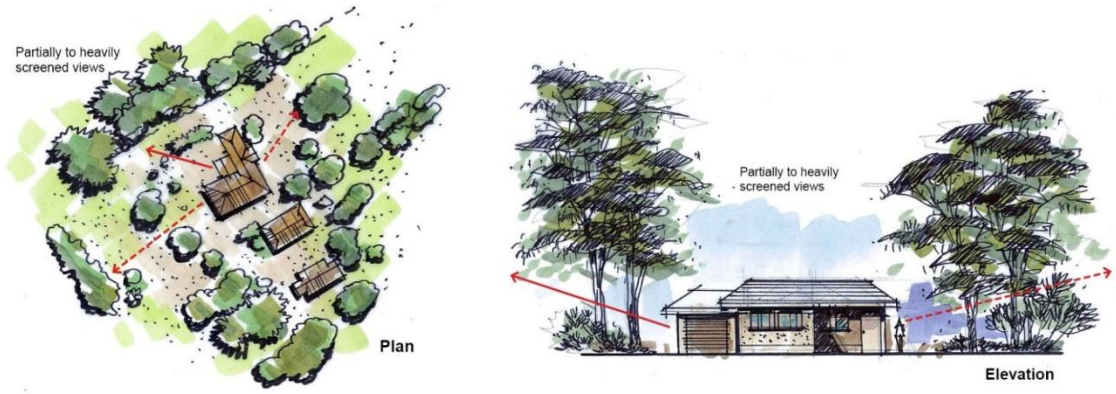

Figure 32 - Typology 2 – Partially screened. Typical plan and elevation.

5.1.2.1.3 Typology 3 – Heavily screened

Views to external areas heavily to fully screened by dense vegetation.

Influence on visibility and potential impact
Views of the proposed development will not be possible and therefore any impacts are highly unlikely (refer to ***Figure 33***).

Figure 33 - Typology 3 – Heavily screened. Typical plan and elevation.

5.1.2.2 Overview assessment of the effects of vegetation screening on views from residences

A desktop assessment was undertaken based on aerial photography and Google Earth and Streetview imagery (2025 data) as well as a field survey, of the potential degree of visibility from residences surrounding the Project, considering the following factors:

- Proximity to the Project:
  - Within 0-2 km of the Project boundary.
- Degree of vegetation present around the residence, either:
  - Heavily screened,
  - Partially screened, or
  - Minimally screening.

The effect of vegetation screening is shown in ***Figure 34*** and is considered in the detailed viewpoint assessments in ***Section 5.3.1***.

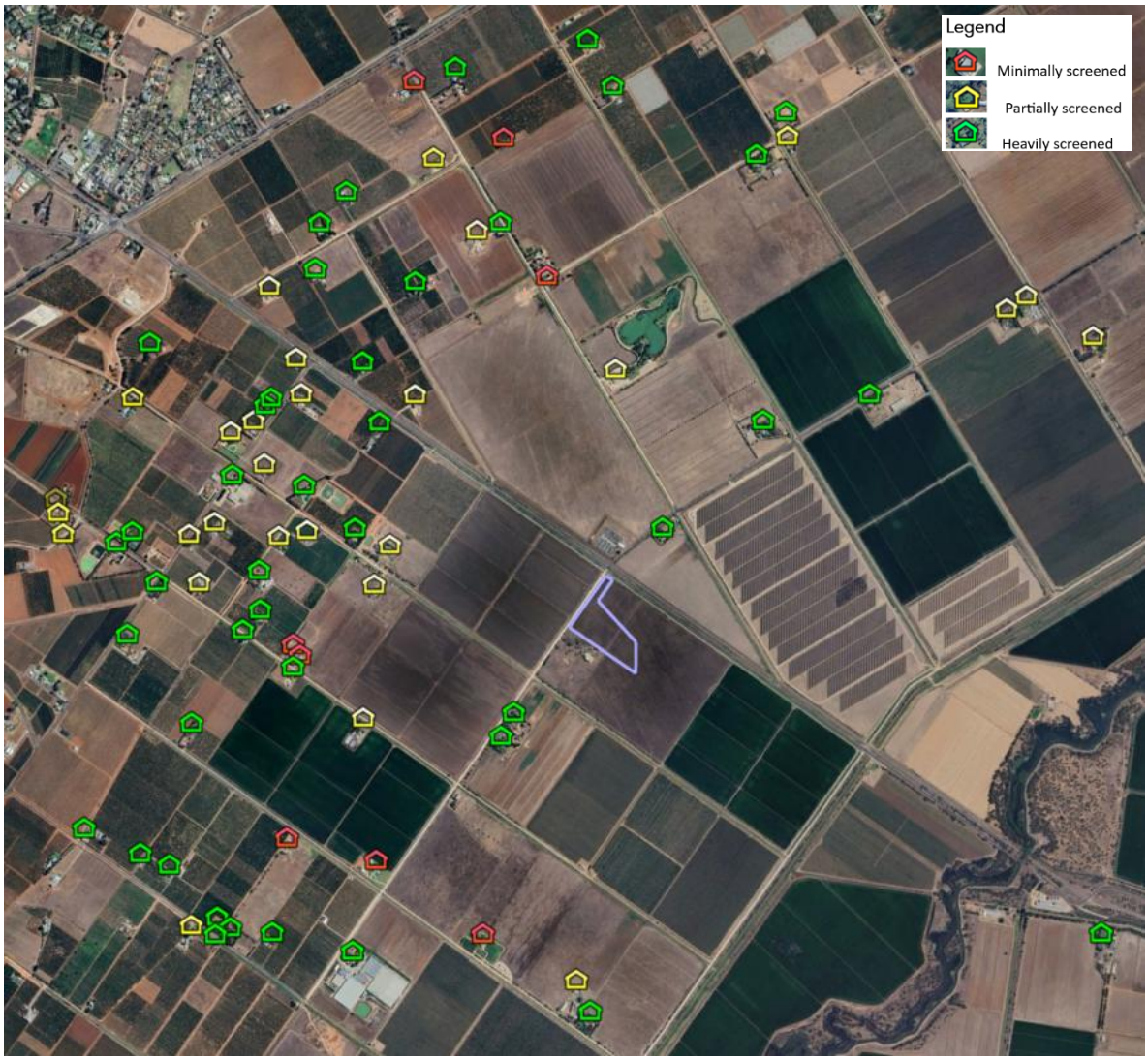

Figure 34 – Screening effect of vegetation on views from residences - <2.5km (Source: Google Earth).

5.1.2.3 Summary

The assessment findings for the level of potential visual impact, based on vegetation screening around rural residences are presented in ***Table 7***. It should be noted that this assessment is conservative and only considers the screening around the residential viewpoint and not intervening vegetation in the landscape, between the viewpoint and the Project site.

Visual Setting	Residences – Highly screened	Potential Visual impact	Residences – Partially screened	Potential Visual impact	Residences – Minimal screening	Potential Visual impact
Local (0-1 km)	4	No impact to Low	2	Moderate to High	1	High
Near Sub-Regional (1-2 km)	22	No Impact to Very Low	12	Moderate	6	Moderate to High

Note: The visual sensitivity levels are based on those outlined in ***Table 2***.
Note: Based on distance from Project site boundary.

Table 7 - Potential visual impact for residences based on presence of existing vegetation.

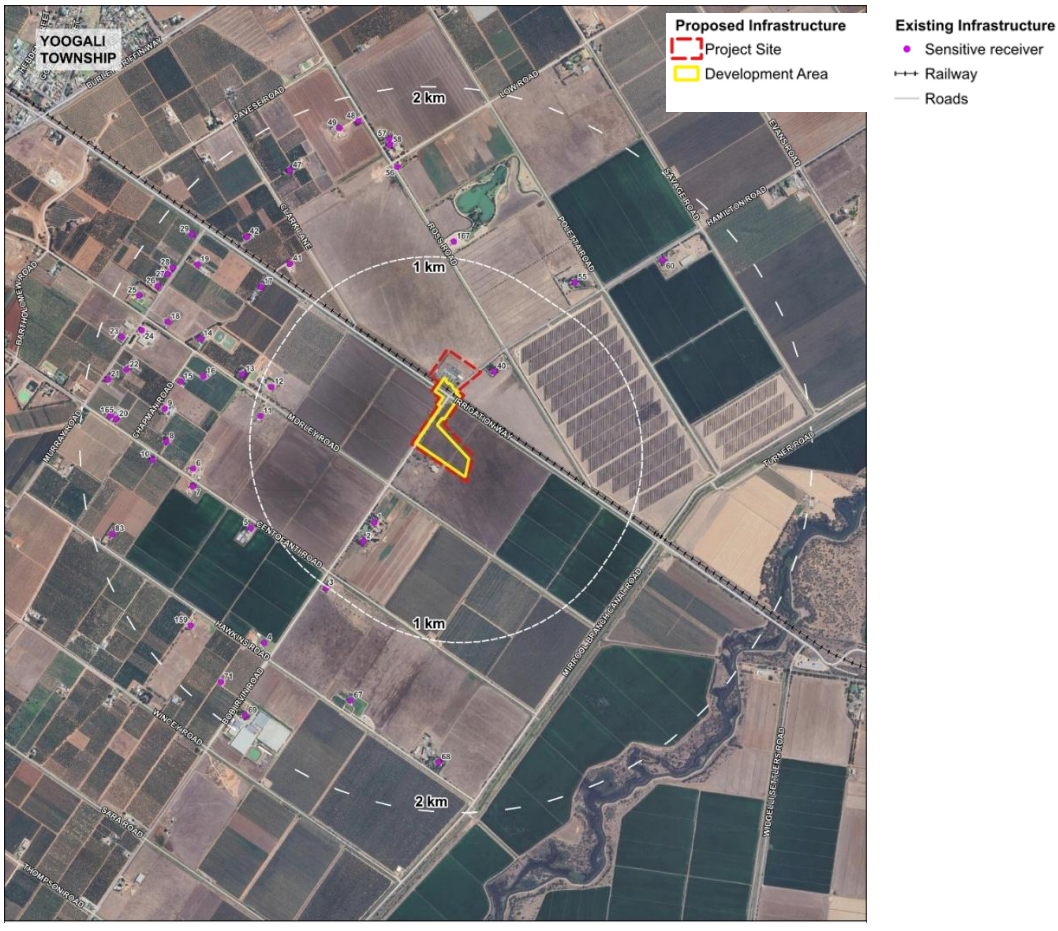

Figure 35 – Receptor numbers of residences within 2km of the centre of the Subject site (Source: Cogency).

5.1.3 Visual prominence

In areas of flat topography, the vertical field of view of a BESS unit with a height of 3m will be less than 2.5 degrees, or of moderate visual prominence in viewing distances beyond 70m, less than 0.5 degrees, or of low visual prominence in distances beyond approximately 350m, and less than 0.25 degrees, or of very low visual prominence in distances beyond 700m.

The vertical field of view of the typical components of the switching station, with a height of 10m, will be less than 2.5 degrees, or of moderate visual prominence in distances beyond 230m, will be less than 0.5 degrees, or of low visual prominence in distances beyond 1.1km, and less than 0.25 degrees, or of very low visual prominence in distances beyond 2.2km

The horizontal field of view is not considered relevant given the relatively small footprint of the Project, and the distance from sensitive viewpoints, resulting in an angle of less than 30 degrees, or no greater than a moderate level of visual prominence.

5.2 Sensitive viewpoints

The viewpoint (VP) locations that are included in this assessment are from uses considered to be of higher sensitivity (refer to ***Table 2*** and ***Figure 36***). Due to the relatively low-profile form of the Project, the detailed assessment of viewpoints has been confined to sensitive locations that are within 2 km of the Project and also fall within the viewshed, the area within which the Project will be most visible.

The locations selected for photography and assessment are within the public realm and proximate to the sensitive, privately owned visual use area.

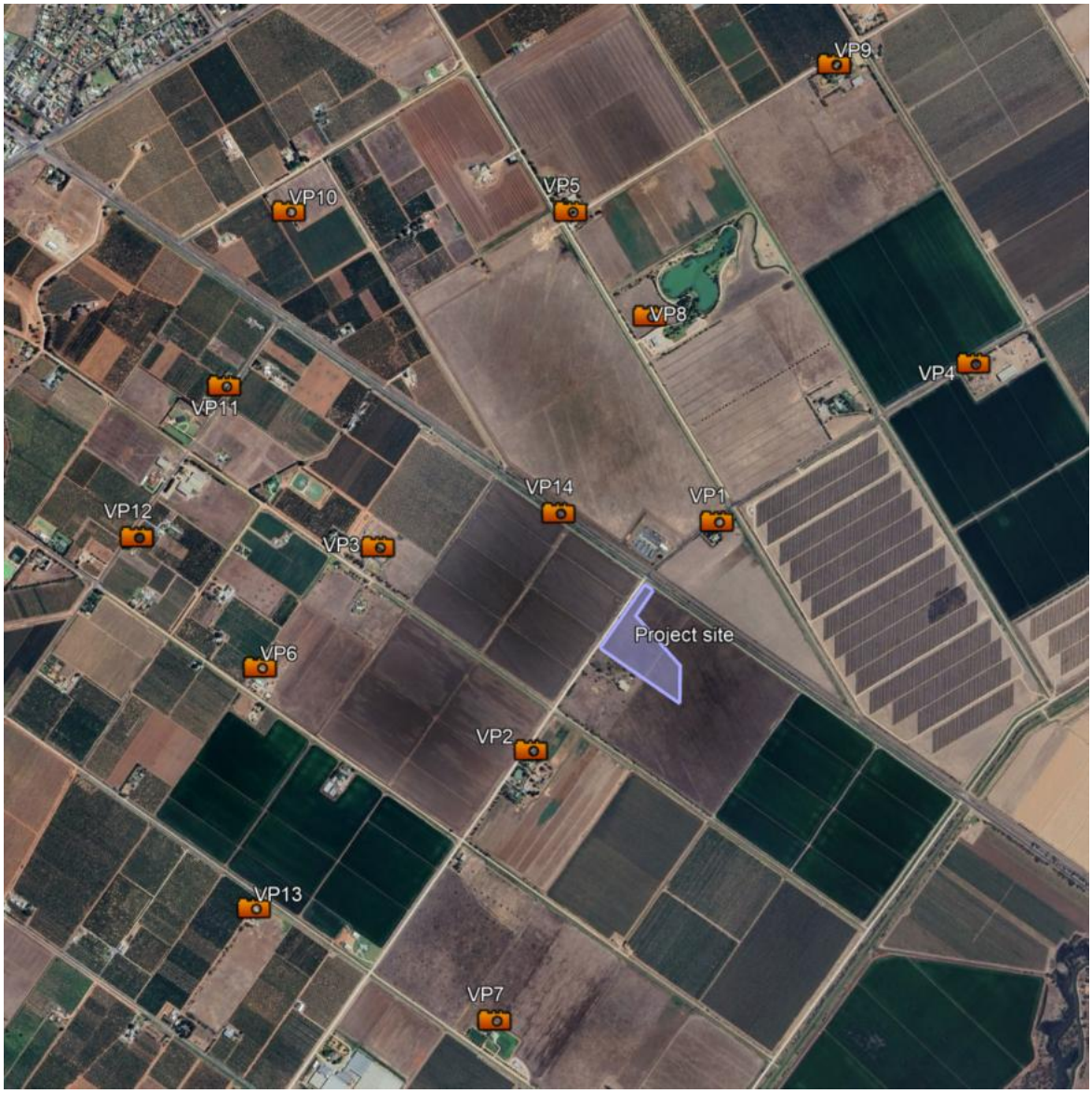

Figure 36 – Assessed viewpoint (VP) locations (Source: Google Earth - 2025).

5.3 Visual impact assessment

This section includes a detailed assessment of the Project from the selected, highest sensitivity viewpoints, with a rating given for the level of visual modification and sensitivity which, when combined, result in a determination of the degree of overall visual impact for each viewing location.

The selected viewpoints are representative of other locations not assessed in detail. However, all residential viewpoints within 2km of the Project have been assessed conservatively in ***Table 7***.

Given the reduction in visual sensitivity in distances beyond 2km, as well as the visual prominence based of the vertical of view occupied reducing to very low in distances beyond 600m, the assessment only considers the most sensitive viewpoints within 2km of the Project.

Refer to ***Section 5.6*** for the assessment of cumulative impact.

5.3.1 Detailed assessment of representative sensitive viewpoints

VIEWPOINT 1 – RESIDENCE AT 751 HAMILTON ROAD	
Photo Location	Hamilton Road approx. 75m southwest of the driveway to the residence (refer to ***Figure 37 -left***).
Viewing Distance	290m to the Project (powerline) and 460m to the Project (switching substation) from the from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – Partially screened setting (refer to ***Figure 37 –right*** and ***Figure 38***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**Not Visible - VERY LOW** – From this viewpoint, the Project and Yoogali SF would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 38*** and ***Figure 39***).
Project only	**Not Visible - VERY LOW** – From this viewpoint, the Project would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 38*** and ***Figure 39***).
Visual Impact	
Project with Yoogali SF	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Project only	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**No Impact – LOW** – The residual visual impact would remain as no impact to low.

Figure 37 – Location of residence (VP1) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 38 – VP1 – View from Hamilton Road to the landscape setting of the residence.

Figure 39 - VP1 – View from Hamiton Road at the southern boundary of the home yard to the dense planting which screens views of the Project from the residence.

VIEWPOINT 2 – RESIDENCE AT 83 BOB IRVIN ROAD	
Photo Location	Bob Irvin Road, approx. 80m from the driveway to the residence (refer to ***Figure 40-left***)
Viewing Distance	540m to the Project (BESS) from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – heavily screened setting (refer to ***Figure 40– right*** and ***Figure 41***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**Not Visible - VERY LOW** – From this viewpoint, the Project and Yoogali SF would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 41*** and ***Figure 43***).
Project only	**Not Visible - VERY LOW** – From this viewpoint, the Project would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 41*** and ***Figure 44***).
Visual Impact	
Project with Yoogali SF	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Project only	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**No Impact – LOW** – The residual visual impact would remain as no impact to low.

Figure 40 – Location of residence (VP2) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 41 – VP2 - View of the landscape setting of the residence from Bob Irvin Road to the north.

Figure 42 – VP2 – View to the Project from Bob Irvin Road, 130m north of the driveway to the residence.

Figure 43 – VP2 – Photosimulation view towards the Project and Yoogali SF from Bob Irvin Road, 130m north of the driveway to the residence, at completion of construction.

Figure 44 – VP2 - Photosimulation view towards the Project only from Bob Irvin Road, 130m north of the driveway to the residence, at completion of construction.

VIEWPOINT 3 – RESIDENCE AT 101A MORLEY ROAD	
Photo Location	Morley Road, approx. 210m southeast of the driveway to the residence (refer to ***Figure 45 -left***).
Viewing Distance	930m to the Project (BESS) from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – partially screened setting (refer to ***Figure 45 – right*** and ***Figure 46***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion in the northwestern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by scattered vegetation near the residence and the in the intervening landscape (refer to ***Figure 45*** and ***Figure 48***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW to LOW**– From this viewpoint, views of the Project would be partially filtered by scattered vegetation near the residence and the in the intervening landscape. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 45*** and ***Figure 49***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW to MODERATE** – The residual visual impact would remain as low to moderate.

Figure 45 – Location of residence (VP3) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 46 – VP3 – View of the landscape setting of the residence from Morley Road.

Figure 47 – VP3 – View east northeast to the Project from Morley Road to the south of the residence.

Figure 48 – VP3 – Photosimulation view towards the Project and Yoogali SF from Morley Road, adjacent to the residence, at completion of construction.

Figure 49 – VP3 – Photosimulation view towards the Project only from Morley Road, adjacent to the residence, at completion of construction.

VIEWPOINT 4 – RESIDENCE AT 150 HAMILTON ROAD	
Photo Location	Hamilton Road, approx. 50m to the west of the residence (refer to ***Figure 50 -left***)
Viewing Distance	1.5km to the Project (powerline) and 1.6km to the Project (switching substation) from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – heavily screened setting (refer to ***Figure 50 –right*** and ***Figure 51***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**Not Visible - VERY LOW** – From this viewpoint, the Project and Yoogali SF would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 51*** and ***Figure 53***).
Project only	**Not Visible - VERY LOW** – From this viewpoint, the Project would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 51*** and ***Figure 54***).
Visual Impact	
Project with Yoogali SF	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Project only	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**No Impact – LOW** – The residual visual impact would remain as no impact to low.

Figure 50 – Location of residence (VP4) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 51 – VP4 - View of the landscape setting of the residence from Hamilton Road to the southwest.

Figure 52 – VP4 – View to the Project from Hamilton Road, 45m south southwest of the driveway to the residence (VP4-1).

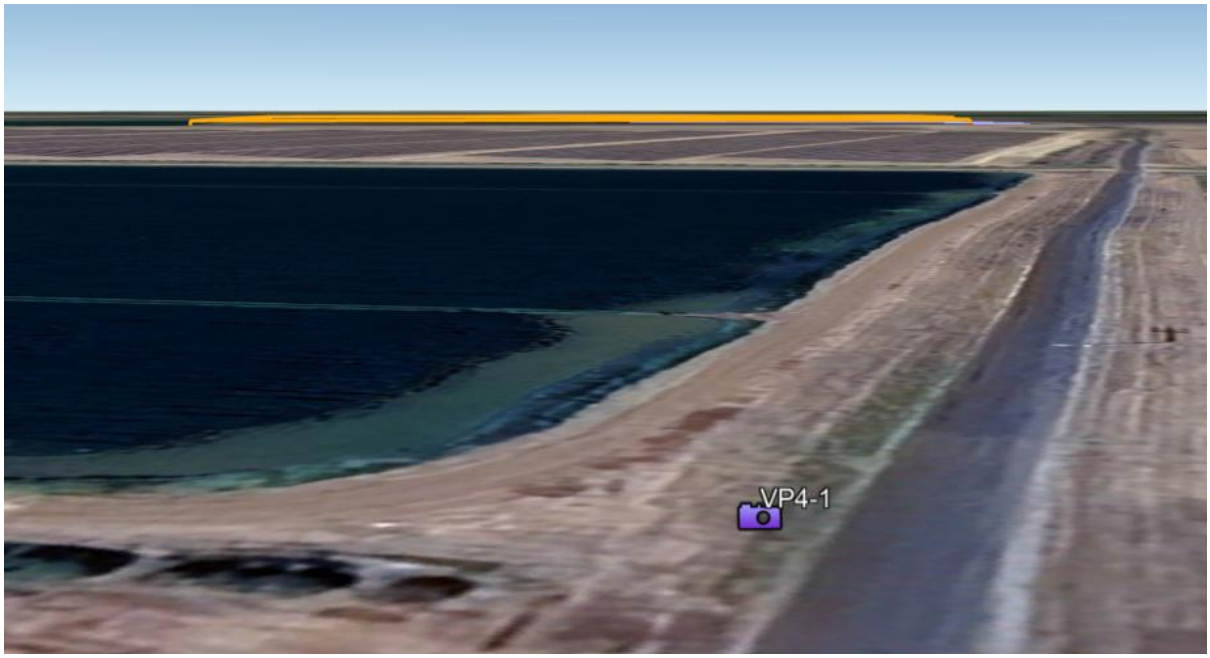

Figure 53 – VP4 – Wireframe Aerial oblique wireframe view towards the Project and Yoogali SF from Hamilton Road, adjacent to the residence (Source: Google Earth Pro).

Figure 54 – VP4 – Wireframe Aerial oblique wireframe view towards the Project only from Morley Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 5 – RESIDENCE AT 4 LEW ROAD	
Photo Location	Ross Road to the southeast of the residence (refer to ***Figure 55 - left***).
Viewing Distance	1.4km to the Project (powerline) and 1.5km to the Project (switching substation).
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – minimally screened setting (refer to ***Figure 55 - right*** and ***Figure 56***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion in the northwestern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by scattered vegetation in the intervening landscape (refer to ***Figure 38*** and ***Figure 57***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW - LOW** – From this viewpoint, views of the Project would appear as a thin and distant horizontal thread in the landscape, partially filtered by scattered vegetation in the intervening landscape. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 55*** and ***Figure 58***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 55 – Location of residences (VP5) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 56 – VP5 - View to the landscape setting of the residence from Ross Road.

Figure 57 – VP5 - View northwest to the Project from Ross Road adjacent to the residence.

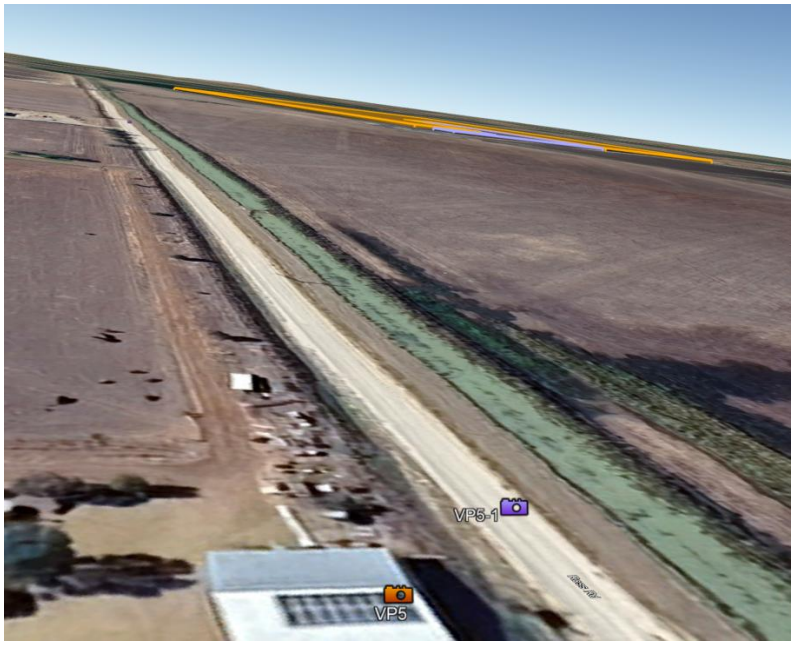

Figure 58 – VP5 – Aerial oblique wireframe view towards the Project and Yoogali SF from Ross Road (Source: Google Earth Pro).

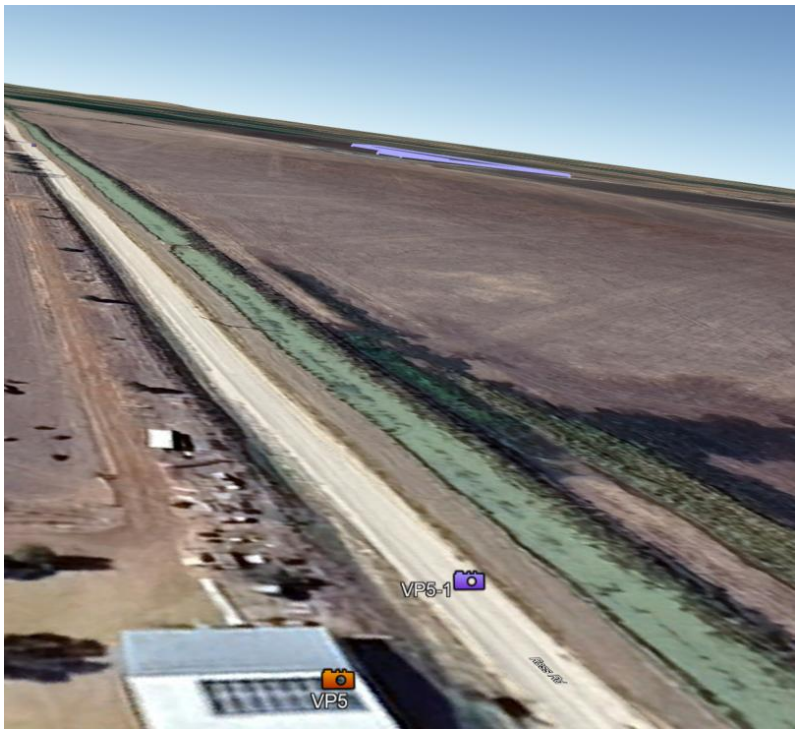

Figure 59 – VP5 – Aerial oblique wireframe view towards the Project only from Ross Road (Source: Google Earth Pro).

VIEWPOINT 6 – RESIDENCES AT 247 CENTOFANTI ROAD	
Photo Location	Centofanti Road, 25m southeast of the driveway to the residences (refer to ***Figure 60 -left***)
Viewing Distance	1.5km to the Project (BESS).
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Residential – minimally screened setting for vegetation but outbuildings block views from much of the private open space (refer to ***Figure 60 –right***, ***Figure 61*** and ***Figure 62***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, where views may be possible between outbuildings, the Project would appear as an insertion to the northern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by scattered vegetation in the intervening landscape. (refer to ***Figure 62***, ***Figure 63*** and ***Figure 64***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW - LOW** – From this viewpoint, views of the Project would appear as a thin and distant horizontal thread in the landscape, partially filtered by scattered vegetation in the intervening landscape. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 63*** and ***Figure 65***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration (Project only)	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact (Project only)	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 60 – Location of residence (VP6) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 61 – VP6 – View of the landscape setting of the western residence.

Figure 62 – VP6 - View of the landscape setting of the eastern residence.

Figure 63 – VP6 – View east northeast to the Project from Centofanti Road, 25m southeast of the driveway to the residences. The existing terminal station is visible to the centre left of the image.

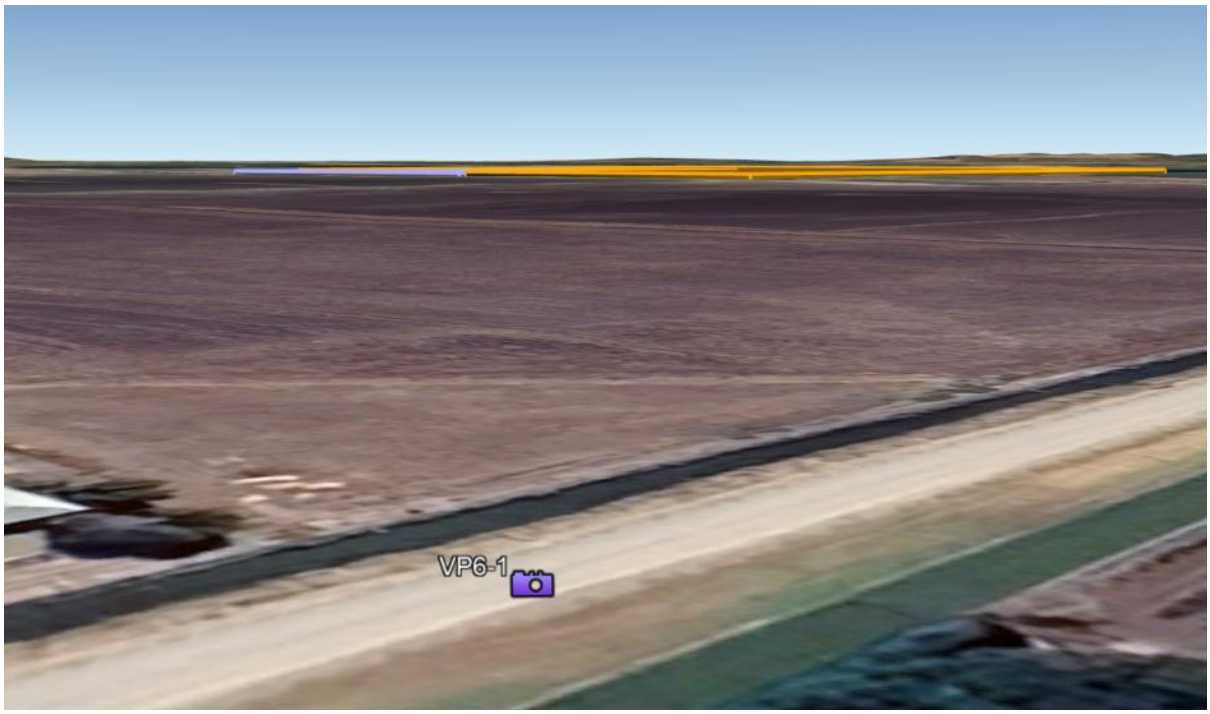

Figure 64 – VP6 – Aerial oblique wireframe view towards the Project and Yoogali SF from Centofanti Road, adjacent to the residence (Source: Google Earth Pro).

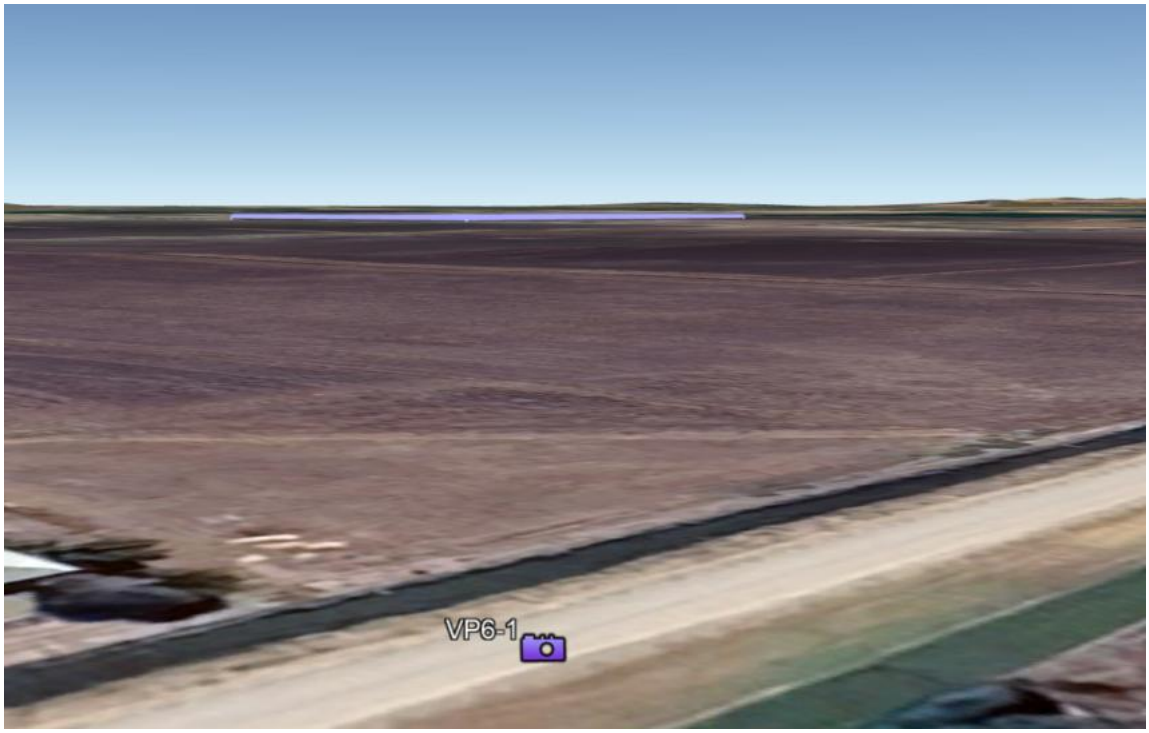

Figure 65 – VP6 – Aerial oblique wireframe view towards the Project only from Centofanti Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 7 – RESIDENCE AT 231 HAWKINS ROAD	
Photo Location	Hawkins Road, 25m west northwest of the driveway to the residence (refer to ***Figure 66-left***)
Viewing Distance	1.5km to the Project (BESS) from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – minimally screened setting (refer to ***Figure 66–right*** and ***Figure 67***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**Not Visible** – The Project would be fully concealed by the southern edge of Yoogali SF (refer to ***Figure 69***).
Project only	**VERY LOW - LOW** – From this viewpoint, views of the Project would appear as a thin and distant horizontal thread in the landscape, partially filtered by scattered vegetation in the intervening landscape. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 70***).
Visual Impact	
Project with Yoogali SF	**No Impact** – As the project is not visible, there would be no resulting visual impact.
Project only	**LOW to MODERATE** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration (Project only)	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact (Project only)	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 66 – Location of residence (VP7) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 67 – VP7 - View of the landscape setting of the residence.

Figure 68 – VP7 – View towards the Project and the residence from Hawkins Road.

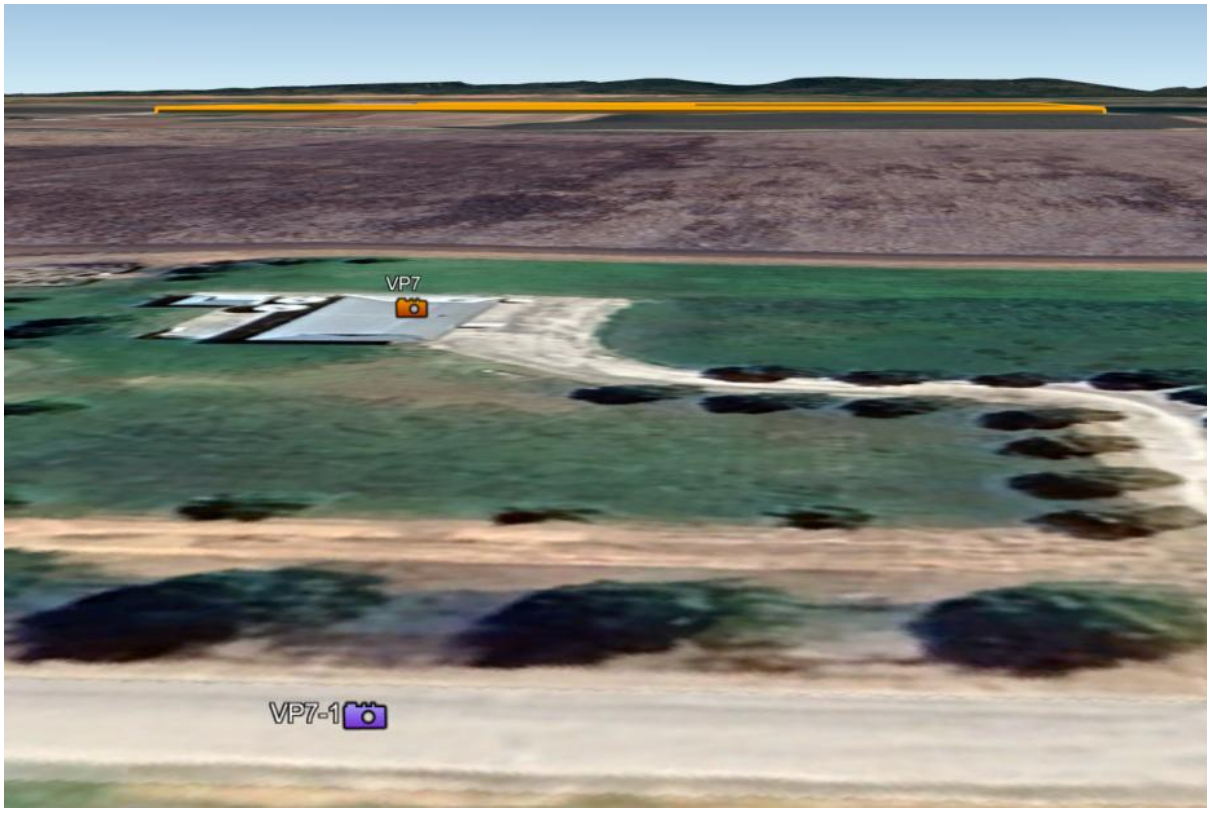

Figure 69 – VP7 – Aerial oblique wireframe view towards the Project and Yoogali SF from Hawkins Road, adjacent to the residence (Source: Google Earth Pro).

Figure 70 – VP7 – Aerial oblique wireframe view towards the Project only from Hawkins Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 8 – "THE SHED" FUNCTION CENTRE AT 189 ROSS ROAD	
Photo Location	Ross Road adjacent to the building (refer to ***Figure 71 -left***)
Viewing Distance	925m to the powerline and 1.1km to the switching substation from the main building.
Duration of View and Frequency of View	Duration: Static. Frequency: Moderate.
Visual Use Area	Tourism/entertainment use – minimally screened setting (refer to ***Figure 71 –right*** and ***Figure 72***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the tourism/entertainment use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion to the northern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by scattered vegetation in the intervening landscape. (refer to ***Figure 74***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW - LOW** – From this viewpoint, views of the Project would appear as a thin and distant horizontal thread in the landscape, partially filtered by scattered vegetation in the intervening landscape. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 75***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 71 – Location of VP8 in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 72 – VP8 – Character of landscape setting of the function centre.

Figure 73 – VP8 – View east southeast from Ross Road to the Project.

Figure 74 – VP8 – Streetview wireframe view towards the Project and Yoogali SF from Ross Road, adjacent to the function centre (Source: Google Earth Pro).

Figure 75 – VP8 – Streetview wireframe view towards the Project only from Ross Road, adjacent to the function centre (Source: Google Earth Pro).

VIEWPOINT 9 – RESIDENCE AT 130 LOW ROAD	
Photo Location	Low Road, 105m from the driveway to the residence (refer to ***Figure 76 -left***).
Viewing Distance	2km to the powerline and 2.1km to the switching station from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Residential – highly screened setting (refer to ***Figure 76 –right*** and ***Figure 77***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high but is at the threshold for reducing to moderate (>2km).
Visual Modification	
Project with Yoogali SF	**Not Visible - VERY LOW** – From this viewpoint, the Project and Yoogali SF would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 79***).
Project only	**Not Visible - VERY LOW** – From this viewpoint, the Project would be fully or almost fully screened by dense, existing planting around the residence (refer to ***Figure 80***).
Visual Impact	
Project with Yoogali SF	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Project only	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**No Impact – LOW** – The residual visual impact would remain as no impact to low.

Figure 76 – Location of VP9 in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 77 – VP9 – Landscape character of the setting of the residence.

Figure 78 – VP9 – View to the Project site from Low Road 105m from the driveway to the residence.

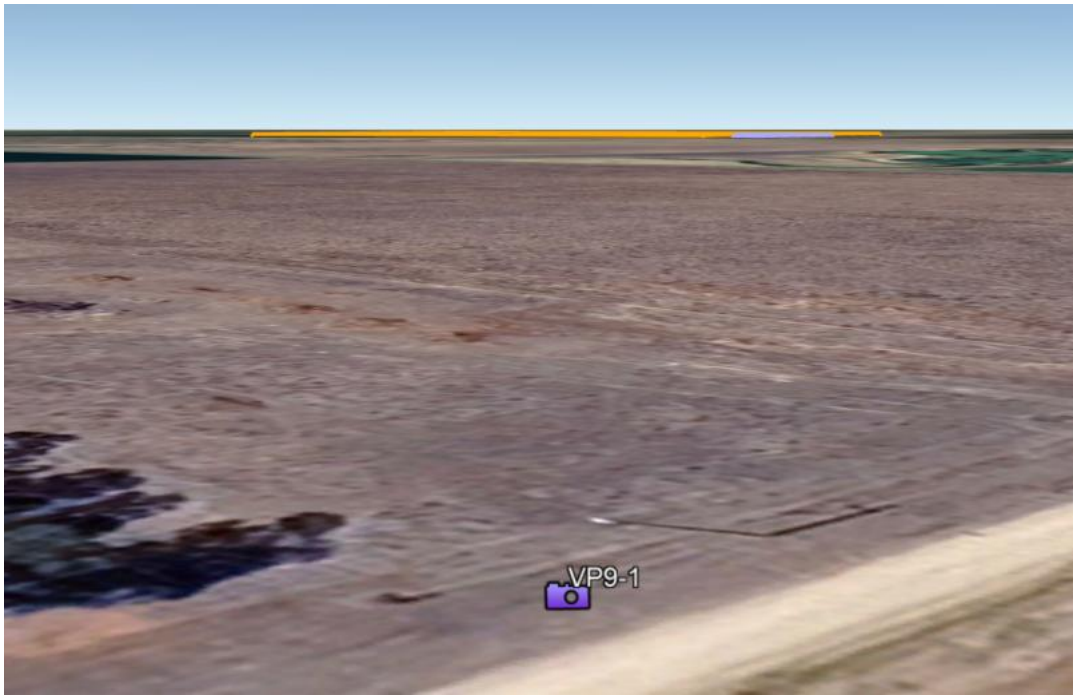

Figure 79 – VP9 – Aerial oblique wireframe view towards the Project and Yoogali SF from Low Road, adjacent to the residence (Source: Google Earth Pro).

Figure 80 – VP9 – Aerial oblique wireframe view towards the Project only from Low Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 10 – RESIDENCE AT 40 PAVESE RPAD	
Photo Location	Pavese Road at the driveway to the residence (refer to ***Figure 81 - left***).
Viewing Distance	2km to the powerline and 2.1km to the BESS from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Residential – heavily screened setting by both vegetation and outbuildings (refer to ***Figure 81 -right*** and ***Figure 82***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high but is at the threshold for reducing to moderate (>2km).
Visual Modification	
Project with Yoogali SF	**Not Visible - VERY LOW** – From this viewpoint, the Project and Yoogali SF would be fully or almost fully screened by dense, existing planting around the residence as well as intervening vegetation, including citrus orchards (refer to ***Figure 83*** and ***Figure 84***).
Project only	**Not Visible - VERY LOW** – From this viewpoint, the Project would be fully or almost fully screened by dense, existing planting around the residence as well as intervening vegetation, including citrus orchards (refer to ***Figure 83*** and ***Figure 85***).
Visual Impact	
Project with Yoogali SF	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Project only	**No Impact - LOW** – The high level of visual sensitivity combined with a not visible to very low level of visual modification results in no impact to a very low level of visual impact.
Proposed Amelioration (Project only)	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact (Project only)	**No Impact – LOW** – The residual visual impact would remain as no impact to low.

Figure 81 – Location of residences (VP10) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 82 – VP10 - View of the landscape setting of the residence.

Figure 83 – VP10 – View southeast to the Project from Pavese Road, near the driveway to the residence.

Figure 84 – VP10 – Aerial oblique wireframe view towards the Project and Yoogali SF from Pavese Road, adjacent to the residence (Source: Google Earth Pro).

Figure 85 - VP10 – Aerial oblique wireframe view towards the Project only from Pavese Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 11 – RESIDENCE AT 44 MURRAYS ROAD	
Photo Location	Murrays Road at the driveway to the residence (refer to Figure 86 - ***left***).
Viewing Distance	1.7km to the BESS from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – partially screened setting (refer to Figure 86 ***-right*** and ***Figure 56***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion to the northwestern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by vegetation around the residence, as well as in the in the intervening landscape, particularly the citrus orchards. (refer to ***Figure 89***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW - LOW** – From this viewpoint, views of the Project would appear as a thin and distant horizontal thread in the landscape, be partially filtered by vegetation around the residence, as well as in the in the intervening landscape, particularly the citrus orchards. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 90***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 86 – Location of residence (VP11) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 87 – VP11 - View of the landscape setting of the residence.

Figure 88 – VP11 - View southeast to the Project from Murrays Road, directly in line with the view from the residence.

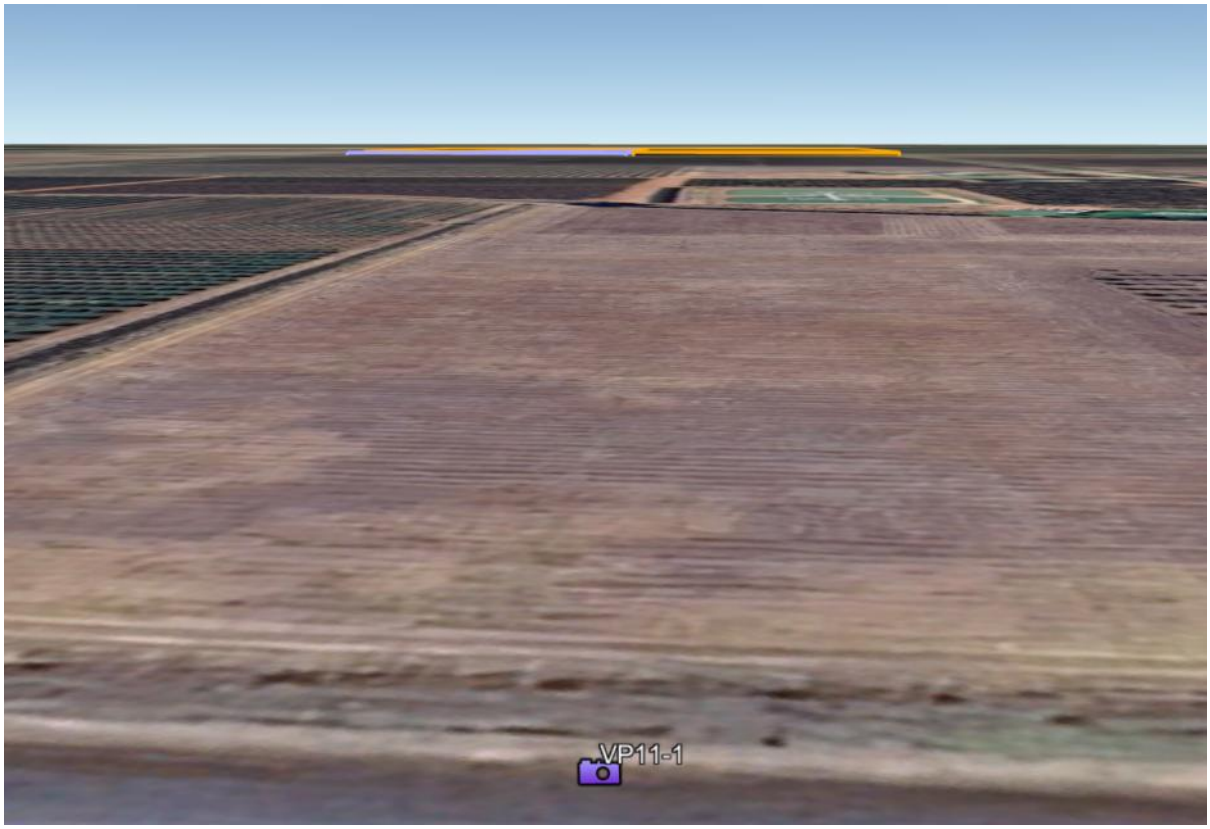

Figure 89 – VP11 – Aerial oblique wireframe view towards the Project and Yoogali SF from Murrays Road, adjacent to the residence (Source: Google Earth Pro).

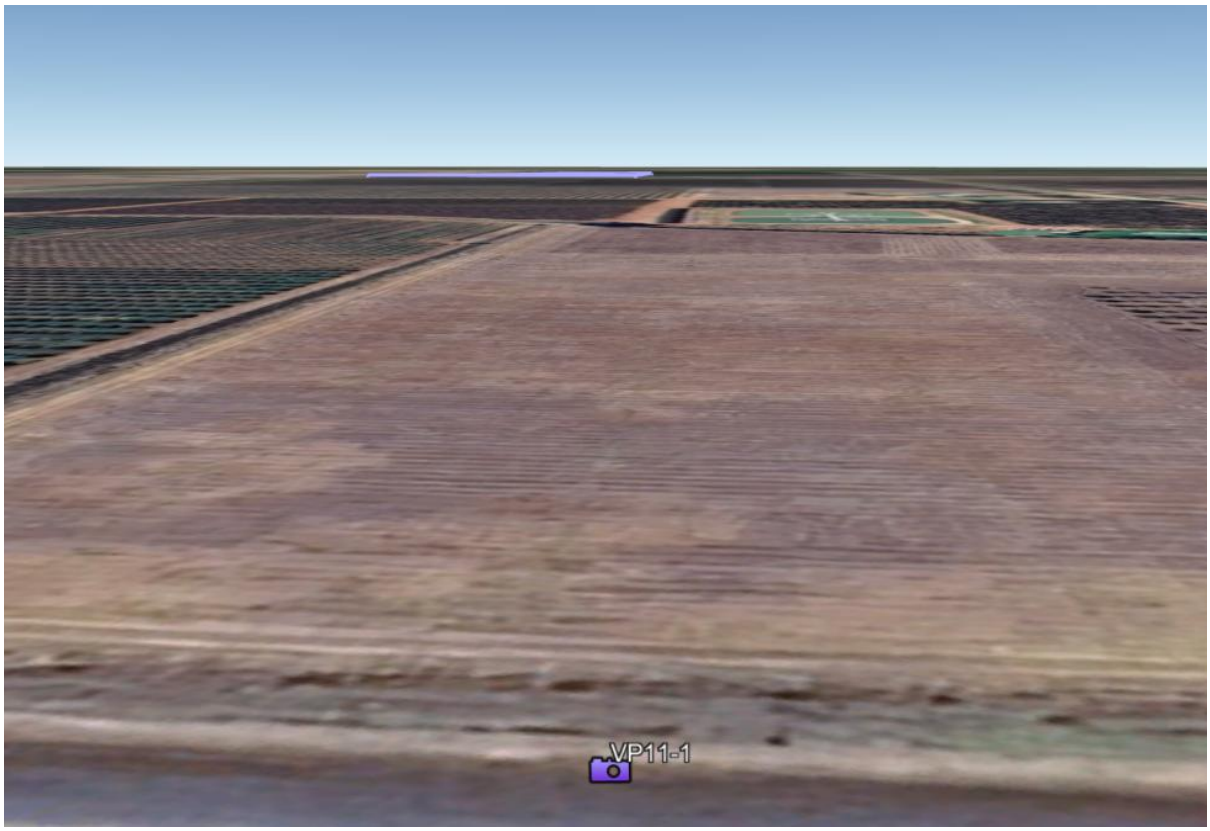

Figure 90 – VP11 - Aerial oblique wireframe view towards the Project only from Murrays Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 12 – RESIDENCE AT 662 MURRAYS ROAD	
Photo Location	Murrays Road, 40m to the southwest of the driveway to the residence (refer to ***Figure 91 -left***).
Viewing Distance	1.8km to the BESS from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – minimally to partially screened setting (refer to ***Figure 91 -right*** and ***Figure 92***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion to the northern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by vegetation in the intervening landscape, particularly the citrus orchards (refer to ***Figure 94***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW - LOW** – From this viewpoint, the Project would appear as a thin and distant horizontal thread in the landscape and views would be partially filtered by vegetation in the intervening landscape, particularly the citrus orchards. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 95***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 91 – Location of residence (VP12) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 92 – VP12 - View of the landscape setting of the residence.

Figure 93 – VP12 - View east to the Project from Murrays Road 40m to the southwest of the driveway to the residence.

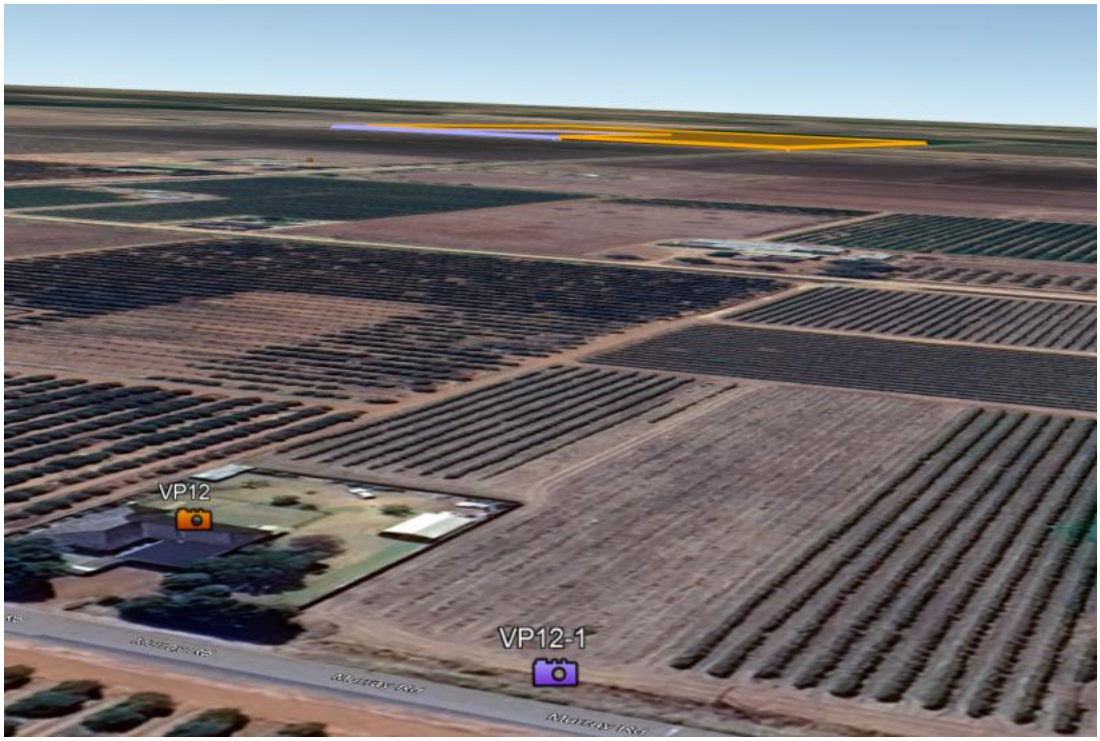

Figure 94 - VP12 – Aerial oblique wireframe view towards the Project and Yoogali SF from Murrays Road, adjacent to the residence (Source: Google Earth Pro).

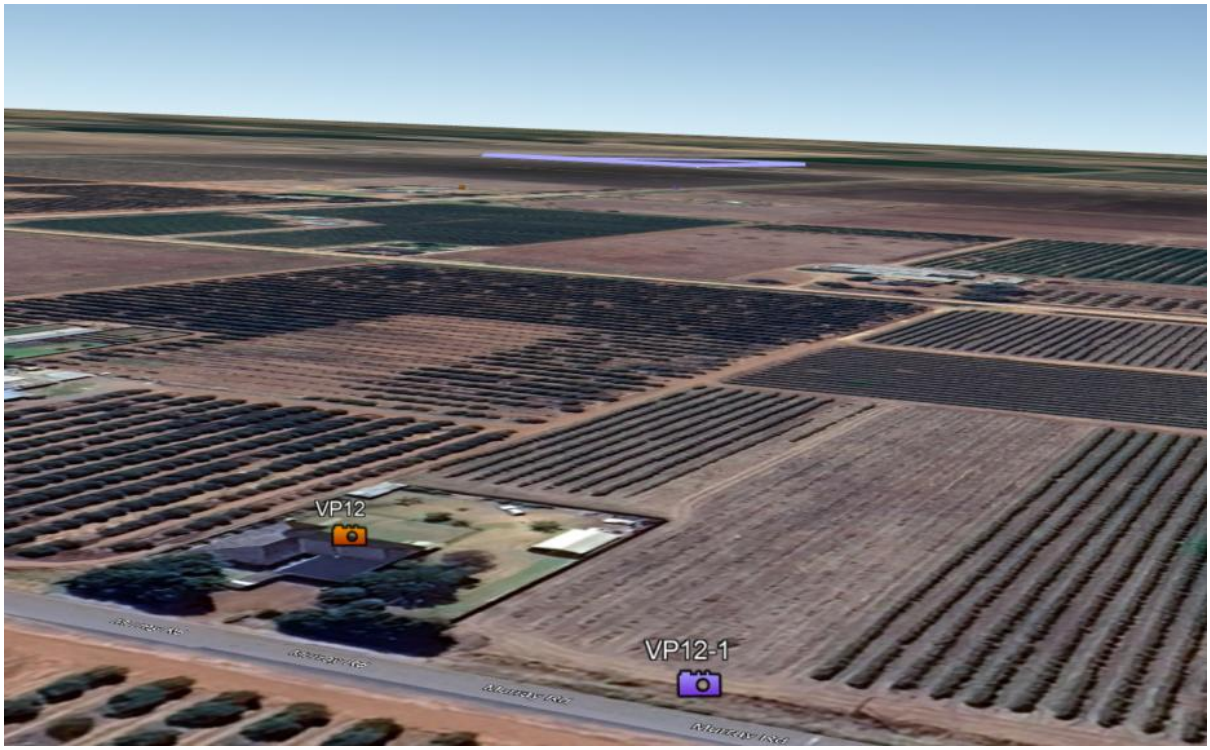

Figure 95 – VP12 – Aerial oblique wireframe view towards the Project only from Murrays Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 13 – RESIDENCE AT 12 HAWKINS ROAD	
Photo Location	Hawkins Road, 90m to the northeast of the residence (refer to ***Figure 96 -left***).
Viewing Distance	1.7km to the BESS from the residence.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Rural Residential – minimally screened setting (refer to ***Figure 96 - right*** and ***Figure 97***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the residential use.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion to the northern edge of Yoogali SF, with most of the eastern part of the BESS area obscured from view by the solar panels (refer to ***Figure 99***). Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be partially filtered by vegetation in the intervening landscape, particularly taller vegetation along roadsides (refer to ***Figure 98***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**VERY LOW - LOW** – From this viewpoint, the Project would appear as a thin and distant horizontal thread in the landscape and views would be partially filtered by vegetation in the intervening landscape, particularly taller vegetation along roadsides. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 100***).
Visual Impact	
Project with Yoogali SF	**LOW** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low level of visual impact.
Project only	**LOW to MODERATE**– The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 96 – Location of residence (VP13) and photo in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 97 – VP13 - View of the landscape setting of the residence.

Figure 98 – VP13 – View northeast to the Project from a point on Hawkins Road directly between the viewpoint and the Project.

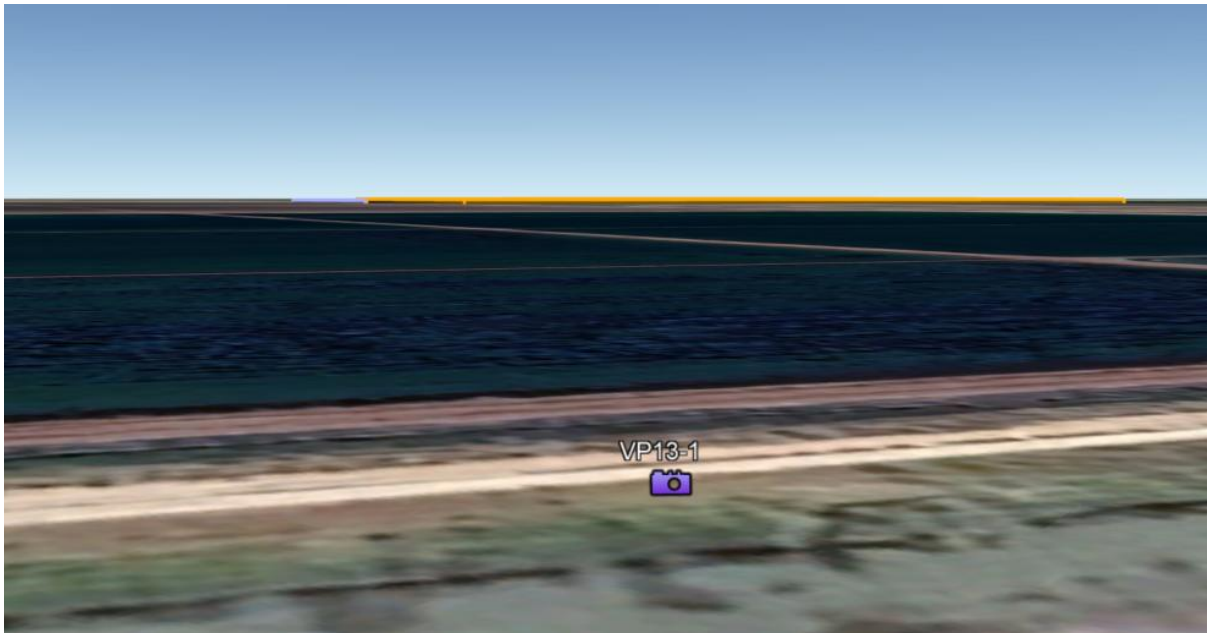

Figure 99 – VP13 - Aerial oblique wireframe view towards the Project and Yoogali SF from Hawkins Road, adjacent to the residence (Source: Google Earth Pro).

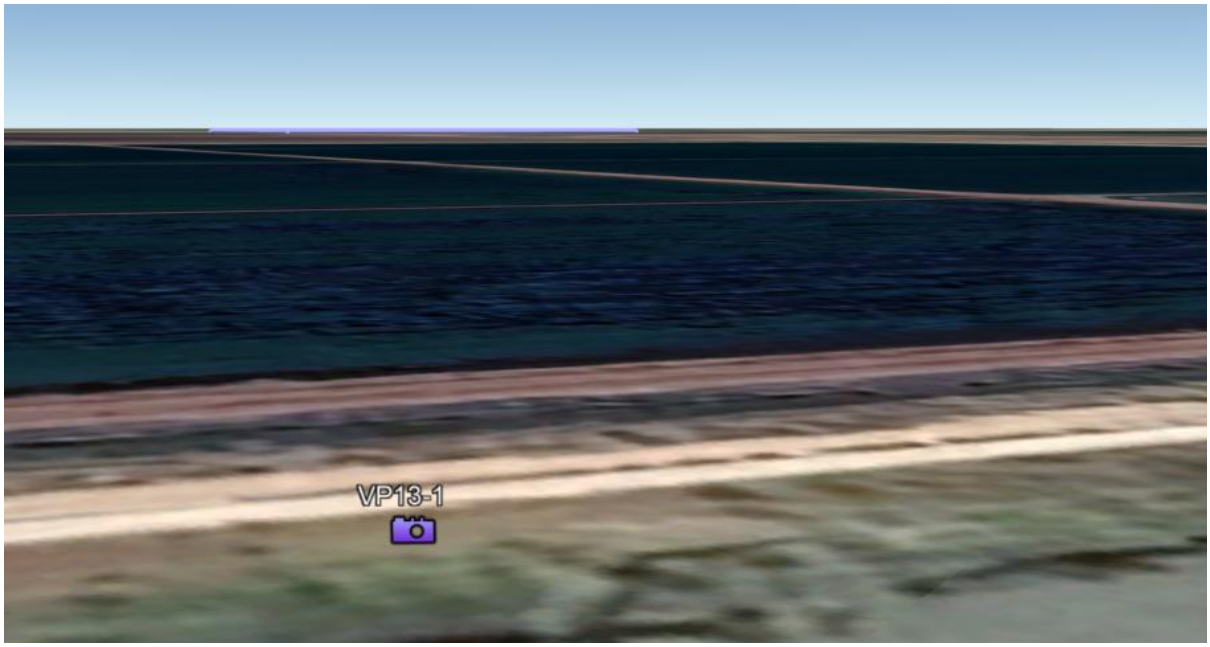

Figure 100 – VP13 – Aerial oblique wireframe view towards the Project only from Hawkins Road, adjacent to the residence (Source: Google Earth Pro).

VIEWPOINT 14 – IRRIGATION WAY - SOUTHBOUND	
Photo Location	Irrigation Way, southbound, 390 northeast of the Project (refer to ***Figure 101 -left***).
Viewing Distance	390m to the powerlines and 470m to the switching station.
Duration of View and Frequency of View	Duration: Dynamic. Frequency: Low.
Visual Use Area	Local Road – minimally screened setting (refer to ***Figure 101 –right***).
Visual Sensitivity	**LOW** - Sensitivity of users is low based on low level frequency of movements.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion to the northern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be mostly open, with only minor filtering of views provided by scattered vegetation along Bob Irvin Road adjacent to the Project (refer to ***Figure 103***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**MODERATE** – From this viewpoint, the Project would appear as a thin horizontal thread in the landscape, partially filtered by scattered vegetation in the intervening landscape. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 104***).
Visual Impact	
Project with Yoogali SF	**VERY LOW** – The low level of visual sensitivity combined with a very low visual modification level results in a very low level of visual impact.
Project only	**LOW** – The low level of visual sensitivity combined with a moderate visual modification level results in a low level of visual impact.
Proposed Amelioration (Project only)	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact (Project only)	**LOW** – The residual visual impact would remain low.

Figure 101 – Location of VP14 in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 102 – VP14 – Existing view to the Project from Irrigation Way and landscape character of the setting (Source: Google Earth Pro – Imagery 2025).

Figure 103 – VP14 – Wireframe view towards the Project and Yoogali SF from Irrigation Way (Source: Google Earth Pro).

Figure 104 – VP14 – Wireframe view towards the Project only from Irrigation Way. The connecting powerline would be the most visible component (Source: Google Earth Pro).

VIEWPOINT 14A – IRRIGATION WAY/BOB IRVIN ROAD INTERSECTION	
Photo Location	Irrigation Way southern verge (refer to ***Figure 105 -left***).
Viewing Distance	0m to the powerlines and 200m to the switching station.
Duration of View and Frequency of View	Duration: Dynamic. Frequency: Low.
Visual Use Area	Local Road – minimally screened setting (refer to ***Figure 105 –right***).
Visual Sensitivity	**LOW** - Sensitivity of users is low based on low level frequency of movements.
Visual Modification	
Project with Yoogali SF	**VERY LOW** – From this viewpoint, the Project would appear as an insertion to the northwestern edge of Yoogali SF. Additionally, the 33kV powerlines would be viewed in the context of the existing transmission lines running to the Griffith Substation. Views of the Project and Yoogali SF from this viewpoint would be mostly open, with only minor filtering of views provided by scattered vegetation along Bob Irvin Road adjacent to the Project (refer to ***Figure 107***). Despite some visibility, the high degree of visual compatibility of the components will result in a very low visual modification level.
Project only	**MODERATE to HIGH**– From this viewpoint, the Project would be highly visible, with existing vegetation only providing partial screening or filtering of views. While the 3m high BESS units will be mostly screened by vegetation, the taller switching substation and proposed 33kV powerlines will have a degree of visual compatibility with the existing Griffith Substation and transmission lines (refer to ***Figure 108***).
Visual Impact	
Project with Yoogali SF	**LOW** – The low level of visual sensitivity combined with a very low to low level of visual modification results in a low to very low level of visual impact.
Project only	**LOW to MODERATE**– The low level of visual sensitivity combined with a low to moderate level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration (Project only)	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact (Project only)	**LOW - MODERATE** – The residual visual impact would remain as low to moderate.

Figure 105 – Location of VP14 in relation to Project (left aerial view) and immediate landscape setting (right aerial view) (Source: Google Earth).

Figure 106 – VP14 – Existing view to the Project from Bob Irvin Road near Irrigation Way and landscape character of the setting.

Figure 107 – VP14A – Photosimulation view towards the Project and Yoogali SF from Bob Irvin Road near Irrigation Way, at completion of construction.

Figure 108 – VP14A – Photosimulation view towards the Project only from Bob Irvin Road near Irrigation Way, at completion of construction.

VIEWPOINT 15 – LOTS WITH ENTITLEMENTs AT MORELY ROAD	
Photo Location	Morely Road, southeast of the Project (refer to ***Figure 109-left***)
Viewing Distance	450m to the Project (BESS) from the roadway.
Duration of View and Frequency of View	Duration: Static. Frequency: Low.
Visual Use Area	Future Rural Residential – minimally screened setting (refer to Figure 109 ***– right*** and ***Figure 110***).
Visual Sensitivity	**HIGH** - Sensitivity of users is high based on the future residential use.
Visual Modification	
Project with Yoogali SF	**Not Visible** – The Project would be fully concealed by the southern edge of Yoogali SF (refer to ***Figure 111***, ***Figure 112 and Figure 113***).
Project only	**VERY LOW - LOW** – From this viewpoint, the Project would appear as a relatively narrow band in the landscape, partially filtered by scattered vegetation in the intervening landscape, particularly that located along the road and the irrigation channel. The eastern part of the Project would be located in front of the existing Griffith Substation and solar farm, resulting in a high degree of visual compatibility with the existing modified setting (refer to ***Figure 111*** and ***Figure 114***).
Visual Impact	
Project with Yoogali SF	**No Impact** – As the project is not visible, there would be no resulting visual impact.
Project only	**LOW - MODERATE** – The high level of visual sensitivity combined with a very low to low level of visual modification results in a low to moderate level of visual impact.
Proposed Amelioration ***(Project only)***	**None Required** – Amelioration is not required to mitigate views from this viewpoint.
Residual Impact ***(Project only)***	**LOW - MODERATE** – The residual visual impact would remain low to moderate.

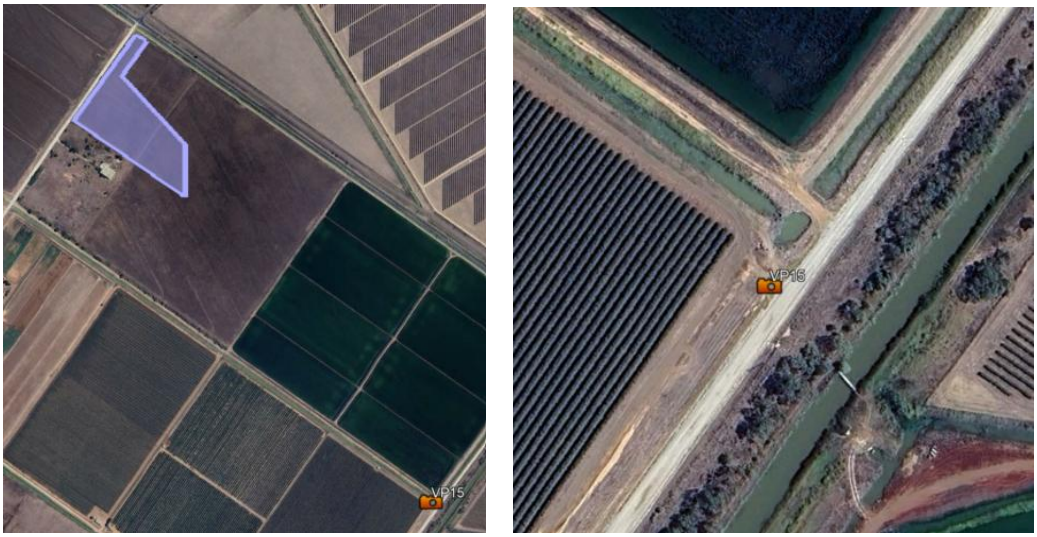

Figure 109 – Location of VP15 in relation to Project (left aerial view) and landscape setting of the road frontage of the lots (right aerial view) (Source: Google Earth).

Figure 110 – V15 - View of the landscape setting of the entitled lots.

Figure 111 – VP15 – View towards the Project from the corner of Morely Road and Mirrool Branch Canal Road.

Figure 112 - VP14 – Streetview wireframe view towards the Project and Yoogali SF from Mirrool Branch Canal Road. (Source: Google Earth Pro).

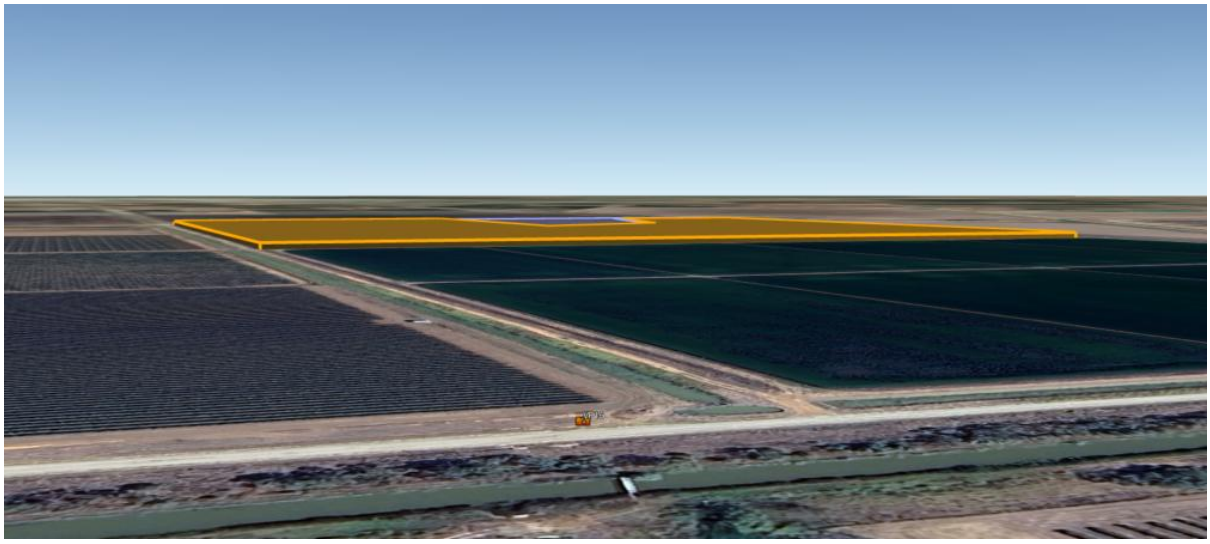

Figure 113 - VP14 – Aerial oblique wireframe view towards the Project and Yoogali SF from Mirrool Branch Canal Road. (Source: Google Earth Pro).

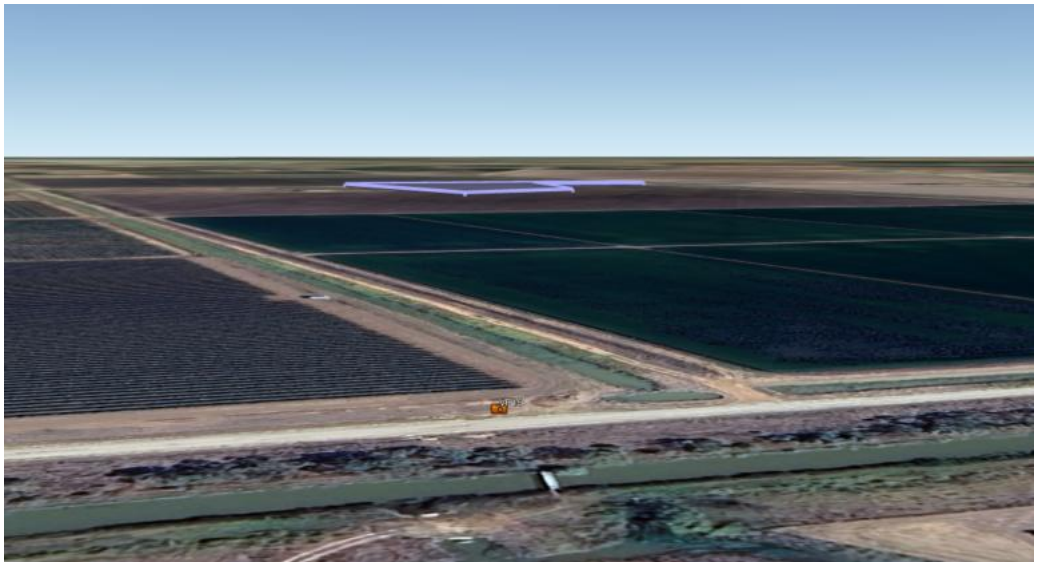

Figure 114 - VP14 – Aerial oblique wireframe view towards the Project only from Mirrool Branch Canal Road. (Source: Google Earth Pro).

5.3.2 Lots with an entitlement for a dwelling

The SEARS require the identification and assessment of any dwelling entitlements as well as any approved or lodged development applications.

The Project planners identified lots that fell completely or partially within a 2km radius of the Project, and which were not located on land that was part of an approved solar farm (refer to ***Figure 115***).

Additionally, lodged or approved residential development applications with a 2km radius were also reviewed. Of the three identified, all were located on land which was part of an approved solar farm.

Figure 115 shows the location of sensitive viewpoints that were assessed in detail. These locations provide an indication of the likely visual impact that may be experienced should a residence be developed on the lots.

Figure 115 – Lots with an entitlement to build a dwelling and lodged or approved permits and detailed assessment viewpoints (Source: Google Earth Pro).

5.4 Connecting powerline/grid connection

A powerline is proposed to connect the Project to the main grid at the Griffith Substation. This will be via a mixed underground and overhead 132kV cable from the on-site transformer to the Griffith Substation, approximately 300m from the site's northwestern corner.

A trenched cable will pass underground beneath the existing 132 kV overhead transmission line within the 15 Bob Irvin Road property, emerging north of the transmission easement. From this point, and subject to further detailed design, the cable will be carried either:

a) In a single span across Bob Irvin Road, Irrigation Way, and the Yanco-Griffith Railway to connect into the Griffith Substation, or

b) Underground via a bored connection to the Griffith Substation, emerging to a pylon to connect into a bay (refer to ***Figure 116***).

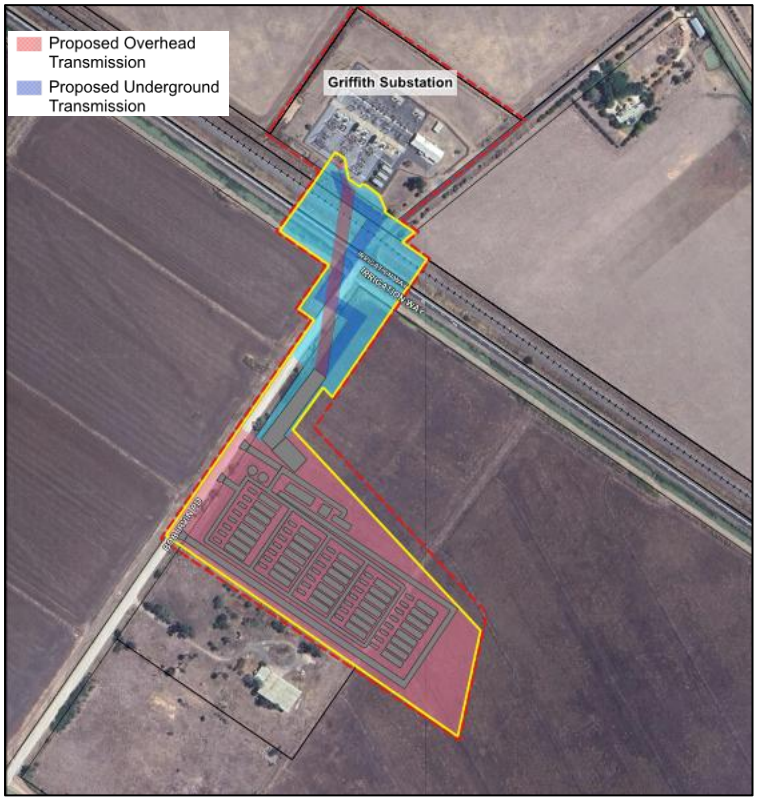

Figure 116 - Location of connecting powerline and adjacent sensitive viewpoints (Source: Google Earth).

The closest sensitive viewpoints to the powerline are:

- VP1 – Residence at Hamilton Road (high visual sensitivity) 720m east northeast of the powerline.
- VP2 – Residence at Bob Irvin Road (high visual sensitivity) 830m east of the powerline.

Views of the powerline will not be possible from either of these residences due to them being surrounded by dense vegetation.

With regard to the relative level of visual impact, the underground option would only result in short term impacts associated with ground surface disturbance, whereas the overhead options would be visible, albeit in the context of numerous existing HV lines.

5.5 Lighting impacts

The applicable environmental lighting zone for the Project site based on AS-NZS-4282-2023 is Category A2, which is a low district lighting area, which applies to rural residential areas and areas with higher order local roads, such as Irrigation Way.

The environmental lighting zone of the existing substation is Category A3, medium district lighting area.

It is likely that the batteries, switch room and switching substation will require security lighting. However, typically this will be shielded and directional. As a result, hot spots and light spill are likely to be minimised.

Within the Category A2 area the Project will result in a localised area of increased light intensity, but this will not result in adverse impacts to surrounding residential viewpoints.

The establishment of perimeter landscaping will further ameliorate views to already low levels of lighting.

5.6 Cumulative impact

5.6.1 Guidance on assessment.

With regards to what is included in the assessment of visual and landscape cumulative impacts, the typical approach for visual impacts is based on what Scottish National Heritage (2005) identified it considered was appropriate to include in the assessment of cumulative impact.

This includes existing projects, projects being built, projects approved and projects going through the planning and positioning phase. Typically, anything in the planning or positioning phases would be excluded given the lack of certainty.

Other United Kingdom jurisdictions often rely on this report as the starting point for their assessments. North American jurisdictions also follow similar approaches.

In the definition of what projects are included in a cumulative impact assessment, the question of 'reasonable foreseeable future actions' should be considered in defining which projects are included in the cumulative impact assessment. That is, some approved projects could be shown to have little or no prospect of being developed and could be excluded from the assessment process.

The NSW Guidelines require that past changes to the environment need to be considered:

Standard EIA practice considers the impact of a proposed project on the existing environment, including past changes to the environment and the combined effects of other developments currently in operation.

As well as the impacts of past and present projects:

The approach to assessment also includes assessing the specific impacts of the project in the context of the existing baseline condition, including the impacts of past and present projects, as well as the combined impacts of the project with other relevant future projects.

Approved, under construction or operation projects in the vicinity of the Project are shown in ***Figure 117***. These include:

- The Griffith Solar Farm – 36MW (existing).
- The Yoogali Solar Farm – 19MW (approved).
- The Riverina Solar Farm – 40MW (under construction).
- 293 Hawkins Road Solar Farm and BESS 5MW (approved).

Announced, under construction and operational energy projects in the Riverina Region are shown in ***Figure 118***, ***Figure 119*** and ***Table 8***). These are considered to be located such a distance from the Project that there would be no intervisibility between the closet at Yanco, approximately 40km to the southeast, and the Project.

The footprint of the Project is relatively small by comparison with the existing Griffith and approved Yoogali solar farms.

In both instances outlined below, should the Yoogali Solar Farm not proceed, the relatively small footprint of the Project will result in an overall low level of both sequential and simultaneous impact.

A TZVI was prepared for the Project as well as other operating and approved projects in the surrounding area (refer to ***Figure 120***). The analysis shows the overlap of visual catchments resulting from the very flat topography. It should be noted that the TZVI does not consider the screening effects of the projects that surround the Project and would significantly reduce its visibility

5.6.2 Sequential cumulative impacts

Sequential cumulative impacts for users of Irrigation Way are expected to be limited with the Project appearing as an extension of the existing Griffith Substation and the Griffith and approved Yoogali and Riverina solar farms.

The additional length of infrastructure of the combined projects, as experienced from Irrigation Way would not change. While, the Griffith Substation, Griffith Solar Farm and Riverina Solar Farm are located to the north of Irrigation Way, the Project and Yoogali Solar Farm are located to the south. However, this would only result in the road being surrounded by energy infrastructure for a length of approximately 750m, which at 100kmh, would be experienced in approximately 27 seconds. Additionally, ameliorative landscaping with even relatively low planting, would result in a visual character not dissimilar to the orchards which regularly line sections of the roadway.

5.6.3 Simultaneous cumulative impacts

The collocation of the Project and Yoogali Solar Farm with the substation and the Griffith and Riverina solar farms reduces the potential for sensitive viewpoints to be "surrounded" by scattered developments.

The positioning of the Project within an "indent" in the approved Yoogali Solar Farm, results in simultaneous cumulative impacts being minimised.

The approved solar farm at Hawkins Road is relatively small and located away from Irrigation Way and in an area with few residences.

5.6.4 Amelioration and residual impacts

It is recommended that the Project is appropriately ameliorated using appropriate colours. This measure will have an immediate effect.

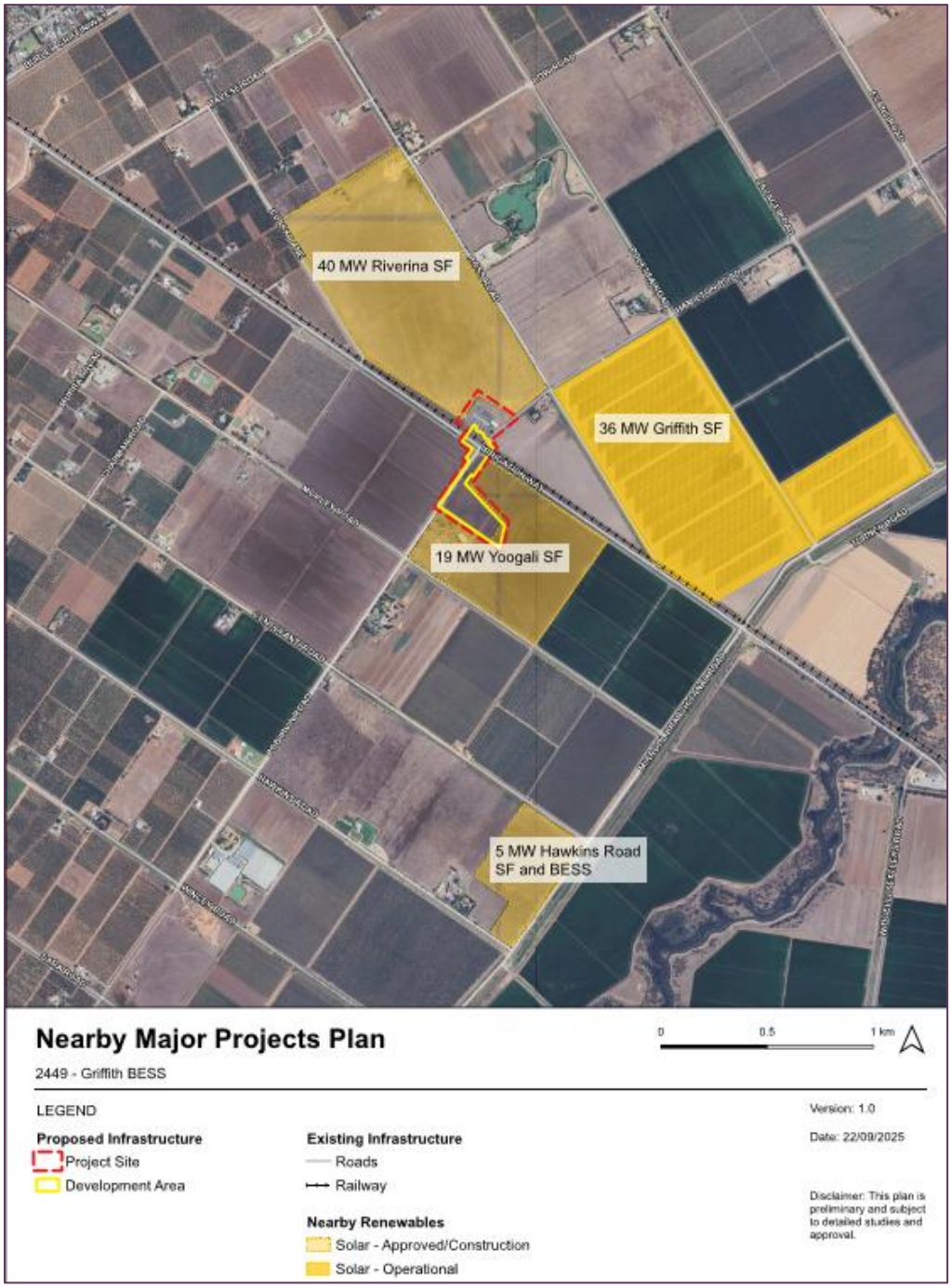

Figure 117 – Nearby major projects (Source: Cogency).

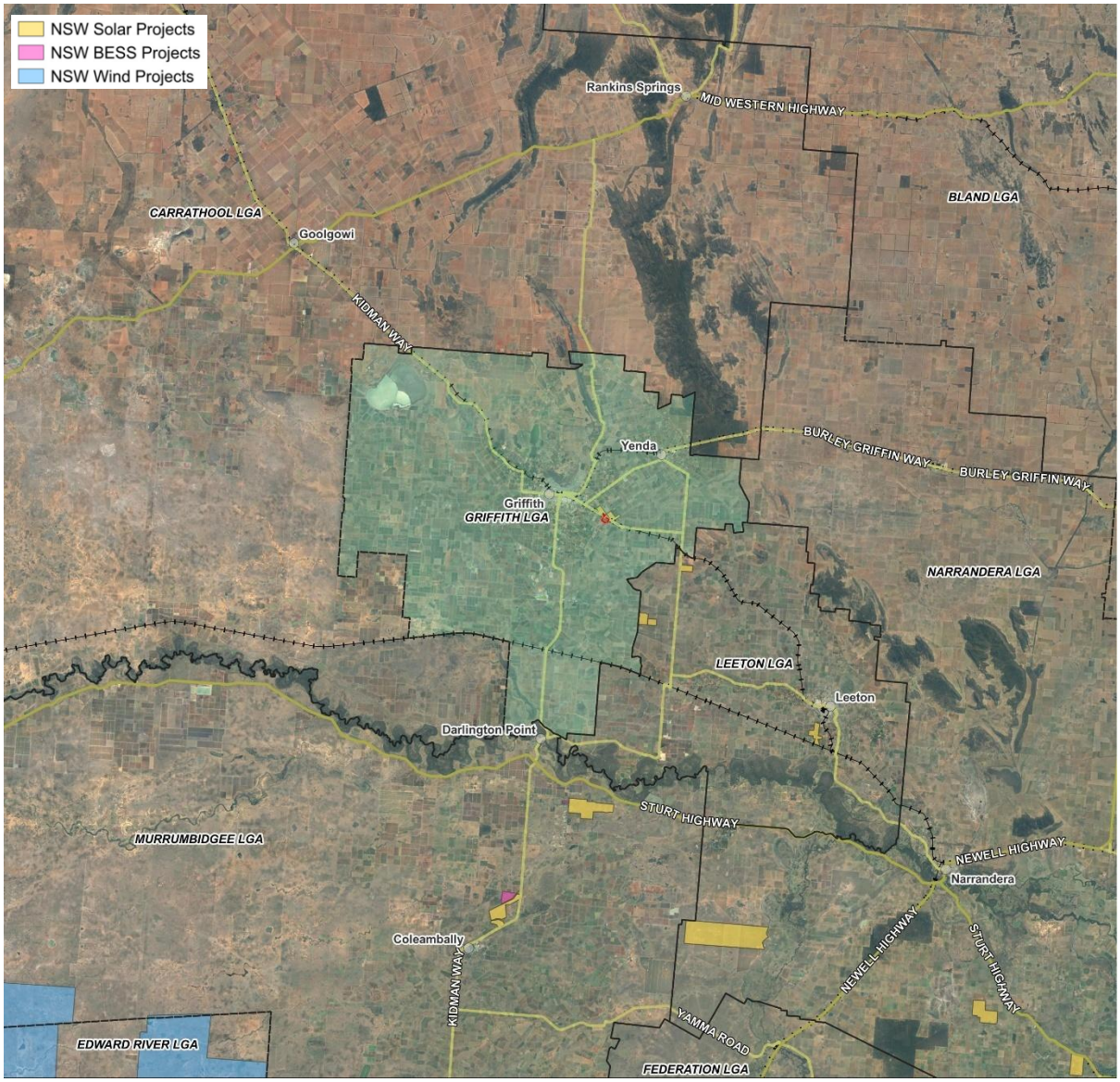

Figure 118 - Regional renewable energy projects (Source: Cogency).

Figure 119 – Announced, under construction and operational energy projects in the Riverina Region[1]

Table 8 - Announced, under construction and operational energy projects in the Riverina Region.

Project	Owner	Type	Capacity	Status
Hillston Solar Farm	Amp	Solar	120 MW	Operational
Griffith Solar Farm	Neoen	Solar	30 MW	Operational
Riverina Solar Farm		Solar	27 MW	Operational
Riverina and Darlington Point BESS	Edify Energy	BESS	150 MW	Operational
Darlington Point Solar Farm	Octopus Investments	Solar	275 MW	Operational
Yanco Solar Farm	Origin Energy	Solar	60 MW	Planning
Darlington Downs Solar Farm	APA Group	Solar	110 MW	Operational
Coleambally	Neoen	Solar	150 MW	Operational
Yarabee Solar Farm	Origin Energy	Solar	450 MW	Planning

[1] AEMO, 2024, NSW Generation Map. Available at: https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/participate-in-the-market/network-connections/nem-generation-maps.

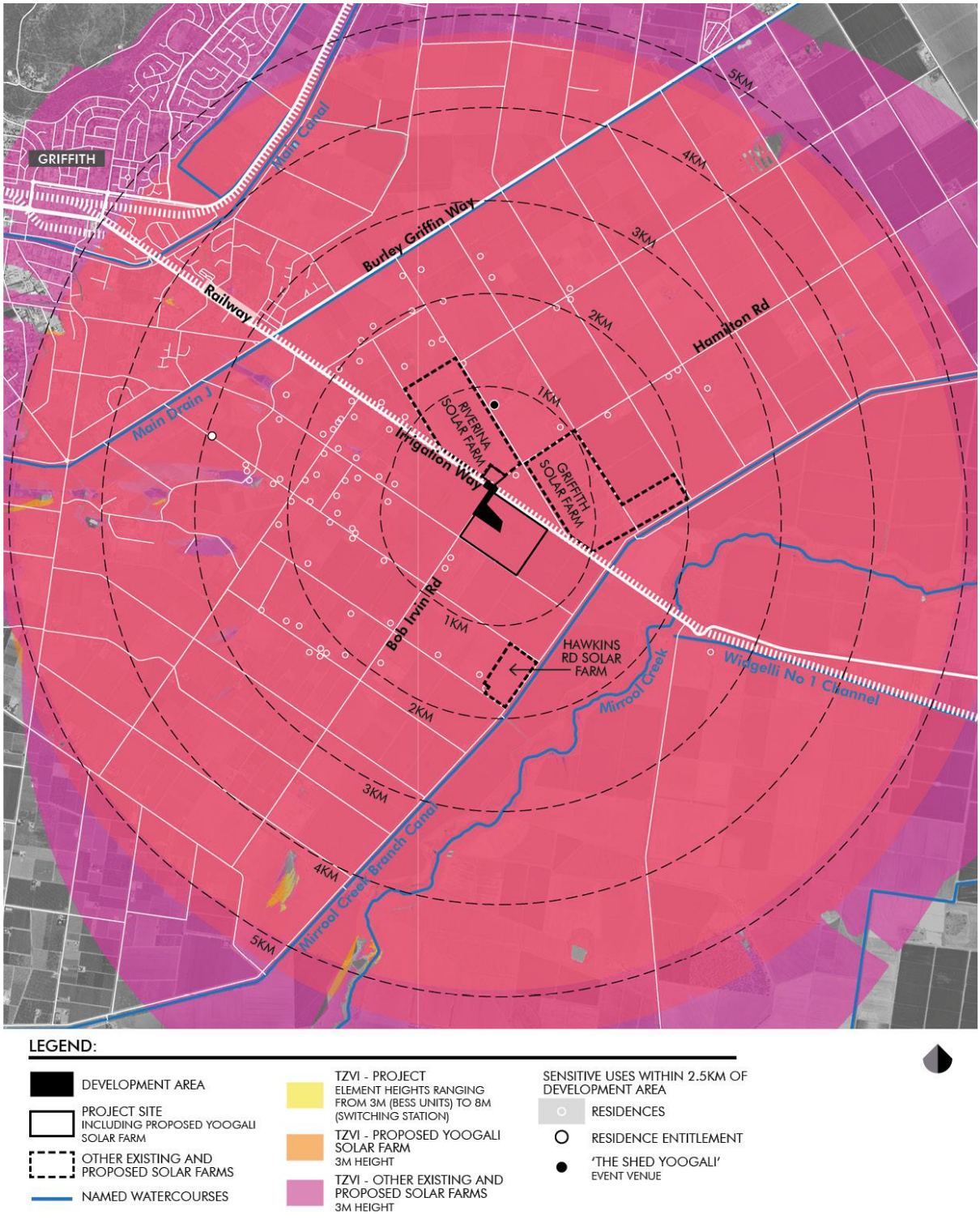

Figure 120 - TZVI - The Project, Yoogali Solar Farm and other existing and approved projects.

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6 AMELIORATION STRATEGIES

Actions exist to potentially ameliorate the landscape and visual impacts of the Project. These are outlined in the following sections.

However, given the Project does not result in any visual impacts greater than moderate, ameliorative planting should be discretionary, rather than mandatory.

6.1 On-Site Actions

On-site actions relate to initiatives which can be undertaken within the boundaries of the Project site and the Yagooli Solar Farm.

6.1.1 Project layout

The Project siting in an "indent" in the Yoogali Solar Farm, as well as proximate to existing HV powerlines, substation and Griffith Solar Farm, results in best practice collocation of alike infrastructure elements.

6.1.2 Perimeter screen planting

The most effective approach to screen planting is to establish a 5m wide buffer around the perimeter of the Project where existing vegetation is lacking. The proposed screen planting could comprise perimeters of varying densities, utilising a mixture of:

- shrubs to 2m in height;
- tall shrubs to 4m in height; and
- trees ranging in height from 6m-20m in height.

In the context of the Yoogali Solar Farm, the Project only has an exposed boundary along Bob Irvin Road. However, the visual impacts along this frontage are low to moderate and screening is not necessary.

Without Yoogali Solar Farm proceeding, all boundaries could be planted to assist the Project's integration with the landscape of the setting, as well as provide consistency with ameliorative planting at other projects.

6.1.3 Material selection

Additionally, the BESS units and buildings that result in an aggregated visual mass, should be ameliorated through the use of a non-reflective finish of a natural green/grey/brown colour, as found in the landscape of the setting. The standard white finish that has often been used on BESS units should not be used as it has a high level of visual contrast with natural settings.

The more slender and articulated form of the components of the switching substation do not require amelioration through the use of non-standard colours, as the standard "grey" finish is visually recessive against sky backdrops and is readily integrated though the use of only tall, sparse planting (refer to ***Figure 121***).

6.2 Off-Site Actions

These actions relate to initiatives which can be undertaken outside of the Project site and would require the consent of relevant landowners, utilities or authorities. However, given the relatively low levels of impact, off-site actions will not be required.

Figure 121 - Example of canopy vegetation providing visual integration of substation infrastructure.

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7 CONCLUSION

7.1 Landscape character impacts

The existing horticultural landscape character of the Project and surrounding area is of relatively low scenic quality and currently contains a substantial number of electrical infrastructure elements such as the substation, Griffith solar farm and multiple transmission lines and poles. The development of the Project would not constitute a large change to the existing character and in fact its proposed "co-location" near existing infrastructure is in accordance with best practice, constraining the cumulative visual impact of the infrastructure to a reasonably limited area.

The landscape of the Project setting has a generally high landscape absorptive capacity, with very flat topography and vegetation that is often arranged in dense blocks. Within this landscape, overlooking is generally not possible from most sensitive viewpoints, and even relatively low vegetation (up to eye-height) is effective at screening views.

7.2 Visual impacts

7.2.1 Visual prominence

In areas of flat topography, the vertical field of view of a BESS unit with a height of 3m will be less than 2.5 degrees, or of moderate visual prominence in viewing distances beyond 70m, less than 0.5 degrees, or of low visual prominence in distances beyond approximately 350m, and less than 0.25 degrees, or of very low visual prominence in distances beyond 700m.

The vertical field of view of the typical components of the switching station, with an average height of 8 to 10m, will be less than 2.5 degrees, or of moderate visual prominence in distances beyond 230m, will be less than 0.5 degrees, or of low visual prominence in distances beyond 1.1km, and less than 0.25 degrees, or of very low visual prominence in distances beyond 2.2km

The horizontal field of view is not considered relevant given the relatively small footprint of the Project, and the distance from sensitive viewpoints, resulting in an angle of less than 30 degrees, or no greater than a moderate level of visual prominence.

7.2.2 Consideration of visual fit within the setting

The presence of the existing energy infrastructure and the surrounding powerlines provide the Project a significant degree of visual fit within the landscape setting.

7.2.3 Initial visual impact

Prior to amelioration, there are no sensitive uses proximate to the Project will result in a high initial level of impact.

The Project in conjunction with the Yoogali Solar Farm would have the lower level of visual impact given the north, east and south aspects would be screened by the solar farm.

The Project in isolation is relatively small in comparison with the Griffith and Riverina solar farms, which backdrop the Project in views from the south and screen it in views from the north.

Overall, the visual impact of the Project is very low to low, primarily as a result of residences being surrounded by vegetation, as well as the occurrence of intervening vegetation in the landscape which screens or filters views of what are mostly low project components.

7.2.4 Residual impact

The residual visual impact of the Project for all viewpoints will reduce to no impact, or very low impact after the establishment of amelioration measures.

7.2.5 Impact of connecting powerline

The closest sensitive viewpoints to the powerline are:

- VP1 – Residence at Hamilton Road (high visual sensitivity) 720m east northeast of the powerline.
- VP2 – Residence at Bob Irvin Road (high visual sensitivity) 830m east of the powerline.
- VP14 - Users of Irrigation Way.

For the overhead option, views of the powerline will not be possible from either of the residences due to them being surrounded by dense vegetation.

For users of Irrigation Way, the powerlines will be viewed in the context of the existing powerlines and, as a result, the visual impact will be low die to the high degree of visual compatibility.

The underground option will result in short term impacts only.

7.2.6 Cumulative impact

The footprint of the Project is relatively small by comparison with the existing Griffith and approved Yoogali solar farms.

Should the Yoogali Solar Farm not proceed, the relatively small footprint of the Project will result in an overall low level of both sequential and simultaneous impact.

7.2.6.1 Sequential cumulative impacts

Sequential cumulative impacts for users of Irrigation Way are expected to be limited, with the Project appearing as an extension of the existing Griffith Substation and the Griffith and approved Yoogali and Riverina solar farms.

For users of Irrigation Way an approximately 750m long section of the journey would have energy infrastructure located on both the north and south side of the road. However, at 100kmh, this would be experienced in approximately 27 seconds.

7.2.6.2 Simultaneous cumulative impacts

The collocation of the Project and Yoogali Solar Farm with the substation and the Griffith and Riverina solar farms reduces the potential for sensitive viewpoints to be "surrounded" by scattered developments.

The positioning of the Project within an "indent" in the approved Yoogali Solar Farm, results in simultaneous cumulative impacts being minimised.

The approved solar farm at Hawkins Road is relatively small and located away from Irrigation Way and in an area with few residences.

7.2.6.3 Amelioration and cumulative residual impacts

It is recommended that both the Project and Yoogali Solar Farm be appropriately ameliorated using appropriate materials and colours, as well as perimeter landscaping.

Ameliorative landscaping of the existing and proposed project interfaces along Irrigation Way, with even relatively low planting, would result in a visual character not dissimilar to the orchards which regularly line sections of the roadway.

The above measures will ensure that the residual cumulative impacts reduce over time.

7.3 Lighting impacts

Within the Category A2 area the Project will result in a localised area of slightly increased light intensity. However, this will not result in adverse impacts to surrounding residential viewpoints as it will be of a lower level of intensity that the lighting at the existing substation to the north (Category A3).

The establishment of perimeter landscaping will further ameliorate views to already low levels of lighting.

7.4 Amelioration

In the context of the Yoogali Solar Farm, the Project only has an exposed boundary along Bob Irvin Road. However, this interface viewpoint results in a low to moderate visual impact and amelioration is not necessary.

Without Yoogali Solar Farm proceeding, all boundaries could be planted to assist the Project is well integrated with the landscape of the setting.

The BESS units and buildings should be ameliorated through the use of a non-reflective finish of a natural green/grey/brown colour, as found in the landscape of the setting. The standard white finish that has often been used on BESS units should not be used as it has a high level of visual contrast with natural settings.

The more slender and articulated form of the components of the switching substation do not require amelioration through the use of non-standard colours, as the standard "grey" finish is visually recessive against sky backdrops and is readily integrated though the use of only tall, sparse planting.

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APPENDIX A – Photomontages

VP2 - Photosimulation view towards the Project and Yoogali SF from Bob Irvin Road, 130m north of the driveway to the residence.
Griffith BESS

VP2 - Photosimulation view towards the Project only from Bob Irvin Road, 130m north of the driveway to the residence.
Griffith BESS

VP3 – Photosimulation view towards the Project and Yoogali SF from Morley Road, adjacent to the residence.
Griffith BESS

VP3 – Photosimulation view towards the Project only from Morley Road, adjacent to the residence.
Griffith BESS

VP14A – Photosimulation view towards the Project and Yoogali SF from Bob Irvin Road near Irrigation Way.
Griffith BESS

VP14A – Photosimulation view towards the Project only from Bob Irvin Road near Irrigation Way.
Griffith BESS

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