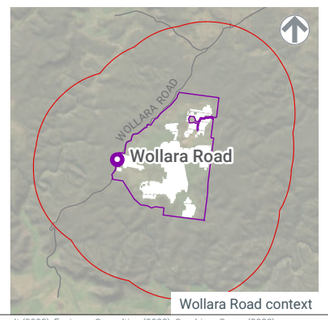
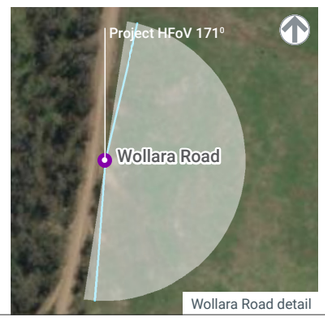
Figure 6-12

Wollara Road photomontage - Mitigation

Viewpoint ID	Distance to development	Viewpoint type	Viewpoint sensitivity	Scenic quality	Visual sensitivity	Occupied cells	Magnitude rating	Impact rating
Wollara Road	32m	Public	Low	Low	Low	3	Very low	Very low





Date	07/02/23
Time	12:09
Camera level	332mAHD
Camera coordinates	E224256.m, N6424587m
Camera	Canon EOS 6D Mark II (full frame DLSR)
Panorama type	50mm portrait
Bearing	99°
Vertical field of view	39.6° (cropped to 27°)
Horizontal field of view	180°
Geodetic datum	GDA2020
Projection	MGA
Zone	56
Photography	Envisage Consulting

CAMBIUM GROUP
Visual communication science

Source: NSW Government Department of Planning and Environment, Technical Supplement - Landscape and Visual Impact Assessment (2022), Esri, Maxar, Geoeye (2023), Commonwealth of Australia (Geoscience Australia) (2023), Elvis Elevation and Depth - Foundation Spatial Data (2023), lightsource BP (2023), Umwelt (2023), Envisage Consulting (2023), Cambium Group (2023).

Figure 6-13

Wollara Road photomontage - Mitigation (inset)

Commentary

This single frame photograph was captured using a full frame camera with a 50mm focal length and is presented with a 39.6^0 horizontal field of view (HFoV). It is regarded as providing a depth of field that is closet to human eyesight, albeit that we typically have wider peripheral vision.

Accurate representation of this photomontage is acheived when viewed at a comfortable arm's length with 100% zoom.

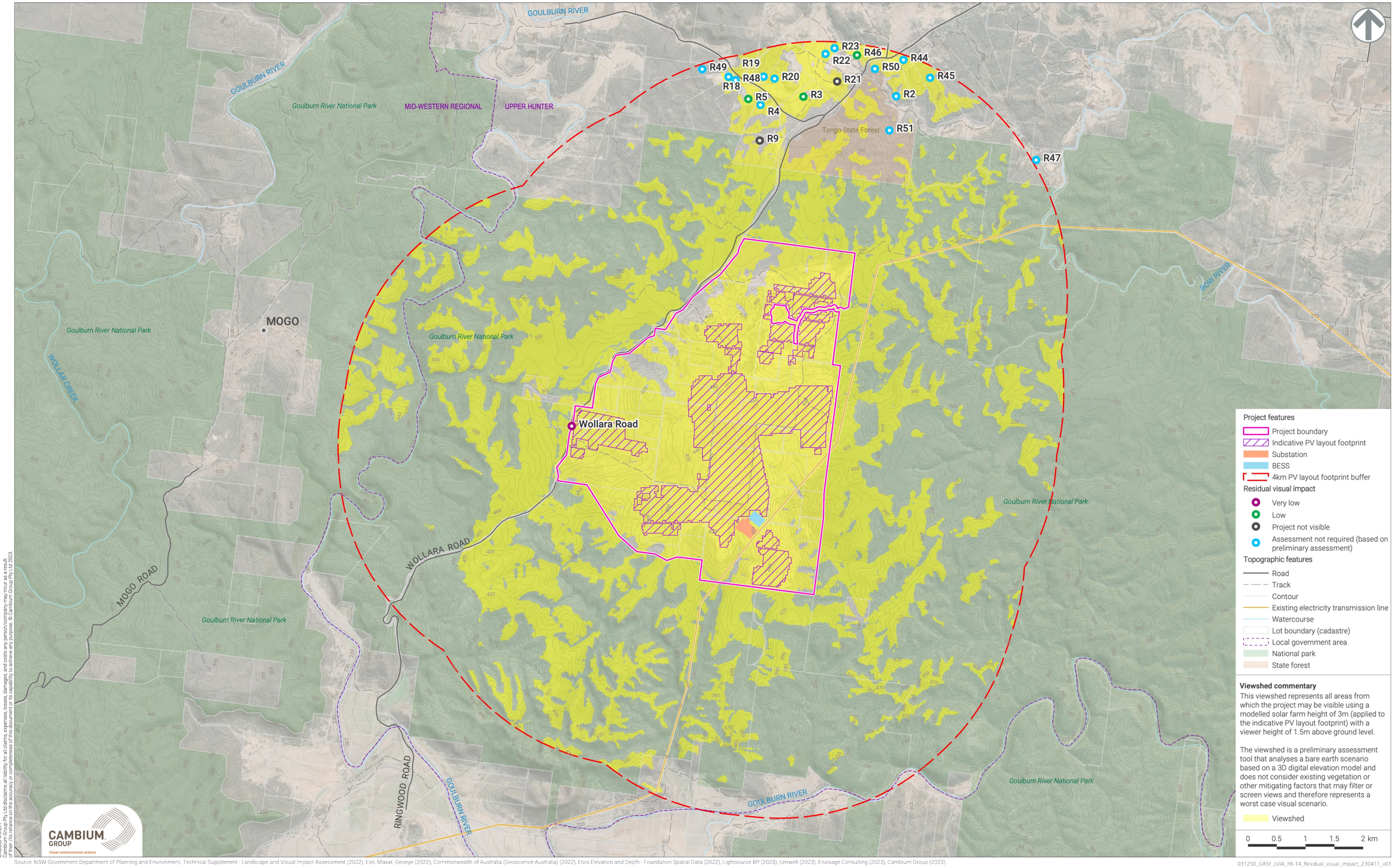
(Source: Landscape Institute Technical Guidance Note) 06/19)

Date	07/02/23
Time	12:09
Camera level	332mAHD
Camera coordinates	E224256.m, N6424587m
Camera	Canon EOS 6D Mark II (full frame DLSR)
Panorama type	50mm portrait
Bearing	99^0
Vertical field of view	39.6^0 (cropped to 27^0)
Horizontal field of view	39.6^0
Geodetic datum	GDA2020
Projection	MGA
Zone	56
Photography	Envisage Consulting

Source: NSW Government Department of Planning and Environment, Technical Supplement - Landscape and Visual Impact Assessment (2022), Esri, Maxar, Geoeye (2023), Commonwealth of Australia (Geoscience Australia) (2023), Elvis Elevation and Depth - Foundation Spatial Data (2023), lightsource BP (2023), Umwelt (2023), Envisage Consulting (2023), Cambium Group (2023).

Figure 6-14
Residual visual impact rating

GOULBURN RIVER SOLAR FARM
LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT



Source: NSW Government Department of Planning and Environment, Technical Supplement - Landscape and Visual Impact Assessment (2022), Esri, Maxar, Geoeye (2022), Commonwealth of Australia (Geoscience Australia) (2022), Elvis Elevation and Depth - Foundation Spatial Data (2022), Lightsource BP (2023), Umwelt (2023), Envisage Consulting (2023), Cambium Group (2023).

7 Lighting

7.1 Dark Sky Planning Guidelines

The Dark Sky Region in NSW is centred upon the site of Australia's most important visible-light Observatory at Siding Spring, located on the edge of the Warrumbungle National Park. The Siding Spring Observatory is around 146 km to the north-west of the Project. Operation of the Observatory is dependent on the dark night sky being free from light pollution.

The *NSW Dark Sky Planning Guideline* (Department of Planning and Environment, 2016) provides guidance to manage light in the Dark Sky Region and reduce impacts on the operation of the Observatory. The Guideline applies to all significant development within 200 km of the Observatory.

The Guideline provides technical information on good lighting design, use of shielded, downward facing and site appropriate lighting. Lighting design principles that are applicable to the Project are included in mitigation measures in SECTION 6.5.2.

7.2 Lighting associated with the Project

There is minimal lighting associated with the Project. All permanent external lighting would be low intensity lighting (except where required for safety or emergency purposes); would not shine above the horizontal; and would comply with Australian/New Zealand Standard *AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting* and principles of *the Dark Sky Planning Guideline*.

During commissioning of the inverters, targeted lighting would be used at the location of specific inverters. It would not light the whole site. This temporary lighting would be shielded and directed toward the work area.

During operation:

- *Solar array*

  The solar farm would not be lit at night, and workers would not attend the site at night except in emergency or security situations. There would be no permanent night lighting installed within the solar array.

- *Inverters*

  Lighting would be installed at each inverter station but would not be in use at night, unless required for emergency purposes. Inverter maintenance would occur during the day.

- *Substation*

  Lighting would be installed at the substation for security and maintenance purposes. The lighting is expected to only be used during emergencies, or for security purposes.

Lighting design principles based on the *Dark Sky Planning Guideline*, are included in mitigation measures in SECTION 6.5.

8 Cumulative impact

8.1 Methodology

Cumulative visual effects are those that:

> *result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future*[19].

Cumulative impacts can occur to stationary viewpoints if the view is impacted by multiple developments of a similar type, within a single field of view; and can occur as we move through the landscape if views are impacted by multiple similar projects (in type or scale) over the length of a journey.

The methodology for this cumulative impact assessment is based on the NSW *Cumulative Impact Assessment Guidelines for State Significant Projects* (October 2022), and the UK Landscape Institute's *Guidelines for Landscape and Visual Impact Assessment* (3rd Edition)[20].

The combined effects of the Project with other similar existing, approved, and proposed projects have been assessed by:

- Identifying an appropriate study area for cumulative visual impacts to be assessed
- Identifying existing, approved (yet to be constructed), and planned (known and application lodged) renewable energy developments, and developments of a similar scale within the study area
- Determining the visual characteristics of those developments
- Considering the combined effects of the combined developments on landscape character
- Identifying viewpoints potentially affected and considering the combined effects of the combined developments on views.

8.2 Cumulative visual impact study area

The NSW *Cumulative Impact Assessment Guidelines* refer to a distance of 8 km from a dwelling or public viewpoint to apply the cumulative tool. We have used a greater distance (35 km) in this assessment, to account for the visual experience of short journeys and travel through the landscape, beyond a stationary viewpoint. On rural roads, a 35 km distance would take around half an hour to drive - a relatively short, local, journey – with changing visual experiences along the route.

8.3 Renewable energy developments in the wider area

Renewable energy developments (existing, approved or planned) and other large-scale projects within about 100 km of the Project, are identified in Table 8-1.

Identified renewable energy projects within 35 km of the study area are Wollar Solar Farm, the Merriwa energy hub, and the TransGrid Central West Transmission Line (which will support renewable energy projects throughout the central west of NSW). The only existing (supporting) infrastructure within 35 km of the Project is the 500 kV line that traverses through the Project Area.

There is also a local, small mine/quarry (around 0.5 ha) on Wollara Road, around 4 km north of the Project Area.

[19] p120. Landscape Institute and IEMA, 2013, *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition, Routledge.
[20] Chapter 7, *Assessing cumulative landscape and visual effects*, Landscape Institute and IEMA, 2013.

Table 8-1: Renewable energy and large-scale projects within 100 km of the Project[21]

Status	Type of renewable energy project		Transmission line	Other large-scale project	Approximate location from Project
	Solar	Wind			
Existing			500 KV line across the Project Area		Traverses the Project Area
	Beryl Solar Farm				57 km to the west
Approved		Liverpool Range Wind Farm			55 km to the north
	Stubbo Solar Farm				48km to the north
				Mangoola Coal Mine Continued Operations	55 km to the east
	Wollar Solar Farm				Around 30 km to the south-west
In planning	Merriwa Energy Hub (solar farm and battery)				Around 28 km to the east
			Central West Orana REZ Transmission Line		Around 18 km south-west of the Project Area at its closest
		Valley of the Winds Wind Farm			57 km to the north-west
	Dunedoo Solar Farm				70 km to the north-west
		Barneys Reef Windfarm			50km to the west
	Tallawang Solar Farm				55 km to the west
				Bowdens Silver (open cut silver mine)	45km to the south-east
				Dalswinton Sand and Gravel Quarry	60 km to the east
		Spicers Creek Wind Farm			80 km to the west
	Sandy Creek Solar Farm				80 km to the west

8.4 Visual characteristics of other (planned or existing) renewable energy projects

The following projects are located within 35 km of the Project. A general description of their visual characteristics follows.

Wollar Solar Farm (approved)

Wollar Solar Farm was approved February 2020 and will be located on the western side of Barigan Road, around 7 km south of Wollar. It will be located on around 500 ha, have an approximate 289 MW capacity, and include around 600,000 solar modules and a substation.

Around the time of this report, construction work has started with an upgrade to Barigan Road, the access road into the project site, and commencement of the substation. The visual characteristics of the Wollar Solar Farm would be similar to the Project.

Merriwa energy hub (proposed)

The Merriwa energy hub[22] would be located around 12 km south of the Merriwa town centre at 868 - 1244 Flaggs Road Merriwa. It would involve a 550 MW solar farm and BESS with a power output of up to 400 MW, and substation. SEARs have been issued for the project and completion is targeted in 2025, assuming an 18-month construction period.

[21] Identified in Goulburn River Solar Farm Scoping Report, December 2021, Umwelt
[22] Information about the proposal has been obtained from https://merriwaenergyhub.com.au/#mMap accessed 14 June 2022, and *Scoping Report, Merriwa Solar Farm*, 15 December 2021, Accent Environmental.

The solar farm would comprise about 1.3 million PV solar modules covering around 780 ha. The visual characteristics of the Merriwa energy hub would be similar to the Project.

Central-West Orana Transmission Line (proposed)

The 330 kV Central-West Transmission Line would be located within a 3 – 6 km wide indicative corridor commencing at the Wollar substation, and run between TransGrid substations located at Mount Piper and Wallerang. The transmission line would be at least around 18 km from the Project Area.

Transmission lines have a different visual typology to solar farms. The proposed Central-West Transmission Line would comprise intermittent tall towers (possibly around 65 m high), supporting long spans of wires (each span possibly around 400 m long).

500 kV transmission line (existing)

The only other relevant development which occurs within the landscape of the study area is the existing 500 kV transmission line within the Project Area. The Project would not connect to the 500 kV line.

Transmission lines are common in the landscape, crossing the rural countryside and the ranges.

8.5 Cumulative impact to landscape character

Landscape character establishes our visual experience as we travel through the landscape. Cumulative changes to landscape character affect our experience of the rural landscape and visual amenity. The cumulative effects of the Project, together with existing, approved and planned renewable energy projects within 35 km of the Project Area, are considered below in terms of consequences for the key characteristics of the landscape[23].

Approved and proposed solar farms

The approved Wollar Solar Farm and proposed Merriwa energy hub are quite distant from the Project Area (Wollar Solar Farm is around 30 km to the south-west, while Merriwa energy hub is around 28 km to the east). As well as being visually separated by distance, all three projects are relatively visually isolated, being located on small, local roads (Wollar Solar Farm on Barigan Road; Merriwa energy hub on Flaggs Road, and the Project on Wollara Road). These local roads would most likely only be accessed by local residents and have little broader exposure to viewers.

It is expected that most tourists, recreational, and other road users would travel via the Golden Highway (B84) (which is located around 5 km or so from Merriwa energy hub), or the Castlereagh Highway (B55) (which is around 30 km or so south-west of Wollar Solar Farm), and not encounter the Flaggs Road or Barigan Road sites. Although Wollara Road passes through the Goulburn River National Park, it is very lightly trafficked.

It is unlikely that a resident or other road user would see multiple solar farms in the area surrounding the Project on a single journey during a regular route. It would be even less likely that a tourist would encounter multiple solar farms in a single day.

If all three proposals were to proceed, the cumulative impact would not alter the existing, dominant rural/agricultural and native forest characteristics of the landscape.

Proposed and existing transmission lines

The Project does not include additional powerline construction. It would connect to the existing 500 kV transmission line which traverses the east of the Project Area. The Project would not increase or intensify the presence of tall towers and transmission lines in the landscape, or affect the patterning of transmission lines across the landscape.

[23] The existing characteristics of the landscape are described at Section 4.1 and the impact of the Project on the landscape is described at Section 4.3.

8.6 Cumulative impact to identified viewpoints

Wollar Solar Farm would be around 30 km to the south-west of, and Merriwa energy hub would be over 25 km to the east of, the three representative Project viewpoints assessed in this report. Solar modules and other elements associated with the Wollar Solar Farm or Merriwa energy hub would not be visible from these viewpoints.

None of the viewpoints identified for Wollar Solar Farm or Merriwa energy hub would view the proposed Goulburn River Solar Farm due to distance, intervening existing vegetation and landform.

If all solar farm proposals were to proceed, the cumulative visual impact to viewpoints is unlikely to compound the impact from each single proposal.

9 Summary of key findings

Location

The Project Area is visually isolated, surrounded by the dense native forest of Goulburn River National Park. The Park currently attracts relatively few visitors. There is only one publicly accessible road past the Project Area (Wollara Road - an unsealed local road) which receives low traffic loads and does not provide access to the National Park's facilities (campground and picnic area).

Main visible changes

On completion of construction, the main visible changes would be:

- One of three proposed distinct solar array areas within the Project Area would be visible. The visible area would cover around 80 ha of pasture adjacent to Wollara Road. Most modules (that is, the other two distinct (and larger) solar array areas) would be located on visually isolated parts of the Project Area and not visible from receivers including from Wollara Road.
- On average, the solar modules would be between 2.6 - 2.98 m above ground level. Occasionally, to accommodate undulating topography, module height may be raised to a maximum full-tilt height of 4 m above ground level.
- The visible area of solar modules would be located on mostly cleared, lower-lying land and surrounding vegetation on hills would be retained.
- A 2.3 m high perimeter fence would surround the three distinct array areas within the Project Area, and would be visible around the solar modules located closest to Wollara Road
- The primary solar farm entrance would be from Wollara Road.
- Internal access roads would lead from the Project entrance.
- Project components, such as the BESS, inverters, site office and substation would be located in visually isolated parts of the Project Area, and not visible from outside the Project Area.
- Minimal lighting would be installed for security and maintenance purposes. Lighting at the substation is expected to only be used during emergencies, or for security purposes.
- Night lighting would not be required except for in an emergency.
- Ongoing access for operation and maintenance workers.
- Occasional access by heavy vehicles (for replacement of solar modules and other Project components over time).

Impact on landscape character

The overall assessed impact of the Project on landscape character is **low.** The solar farm would change the character of the landscape by introducing somewhat uncharacteristic, dark, linear, built elements across cleared parts of the open, agricultural landscape. However, the Project is generally low in height, would not cause noticeable landform change, retains most existing vegetation and additional native vegetation would be established alongside Wollara Road to reduce visibility and integrate the Project with the existing landscape character.

Impact to views

The Project Area's location limits its potential visibility. The preliminary assessment determined that six viewpoints required detailed assessment – five private viewpoints (R3, R5, R9, R21, R46) and a single public viewpoint (Wollara Road). Two of these viewpoints (R9 and R21), were eliminated during the field inspection as there were existing site features obstructing the view toward the Project Area, and thus further assessment was not required.

Modelling was used to visualise views from the four remaining viewpoints. The highest visual impact (**moderate**) would occur at Wollara Road, which with perimeter landscaping in 3-5 years would

reduce to **very low** as a residual rating. Remaining private viewpoints were rated as having a **low** visual impact. A summary of the visual impact to viewpoints is shown in Table 9-1.

Proposed landscaping is shown in the draft landscape plan and is intended to screen views of the solar modules from Wollara Road (for road users travelling through Goulburn River National Park) and would be located along Wollara Road frontage within the site. A detailed landscape plan would be prepared in consultation with NP&WS during the engineering and procurement phase of the Project.

Table 9-1: Summary of visual impact ratings

Viewpoint	Detailed visual assessment results			Residual impact rating		
	Visual magnitude rating (as per Table 6-1)	Visual sensitivity rating (as per Table 6-2)	Visual impact rating on construction	Visual magnitude rating	Visual sensitivity rating (as per Table 6-2)	Residual impact rating (3-5 years following implementation of mitigation
Wollara Road	Very High	Low	**Moderate**	Very low	Low	**Very low**
R3	Very Low	Moderate	**Low**	-	-	-
R5	Very Low	Moderate	**Low**	-	-	-
R46	Very Low	Moderate	**Low**	-	-	-

Lighting

Lighting associated with the Project is minimal. The solar farm would not be lit at night, and workers would not attend the site at night except in emergency or security situations. Mitigation measures are included to reduce potential night sky impacts.

Cumulative impact

Within 28 km of the Project there are two solar farm projects (one approved – Wollar Solar Farm, and one proposed – Merriwa energy hub); the planned TransGrid Central-West Transmission Line (around 18 km from the Project); and the existing 500 kV transmission line (that is part of the Project).

Viewpoints

Neither the Wollar Solar Farm, Merriwa energy hub or proposed Central-West Transmission Line would be visible from the three representative viewpoints identified for the Project. Likewise, none of the viewpoints identified for the Wollar Solar Farm or Merriwa energy hub would view the proposed Goulburn River Solar Farm due to distance, intervening existing vegetation and landform.

Landscape character

The Project, Wollar Solar Farm and the Merriwa energy hub are all located on local roads. It is unlikely that a resident road user would see multiple solar farms on a single journey. It would be even less likely that a tourist would encounter multiple solar farms. If all three solar proposals were to proceed, the cumulative impact would not alter the existing, dominant rural/agricultural and native forest characteristics of the landscape. The Project would not include powerline construction and would not increase or intensify the presence of tall towers or affect the patterning of transmission lines across the landscape.

Conclusion

Overall, the Project has low visual impact, and would be visible from just one public viewpoint – Wollara Road. Mitigation measures, including perimeter landscaping, are recommended to reduce views from Wollara Road, reduce visual contrast and visual change to landscape character.

10 References

Accent Environmental, 15 December 2021, *Scoping Report, Merriwa Solar Farm*.

Australian Government, Department of the Environment and Energy, *National Light Pollution Guidelines for Wildlife*, January 2020.

Blakley, J. A., Franks, D. M. 2021, *Handbook of Cumulative Impact Assessment,* Edward Elgar Publishing.

Christine Tudor Natural England, June 2019, *An approach to landscape sensitivity assessment – to inform spatial planning and land management.*

Civil Aviation Safety Authority, February 2019, *Agency response to Tamworth Regional Council DA2019/0304 Taminda Solar Farm.*

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Federal Aviation Administration. 2018. *Technical Guidance for Evaluating Selected Solar Technologies on Airports.*

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New South Department of Planning, Industry and Environment, October 2022, *Cumulative Impact Assessment Guidelines for State Significant Projects.*

NGH environmental, March 2019, *Environmental Impact Assessment, Wollar Solar Farm*

OzArk Environment and Heritage, March 2023, *Aboriginal Cultural Heritage Assessment Report, Goulburn River Solar Farm.*

Thorvaldson, F. 1996. *Characteristic Landscapes and Visual Landscape Regions of New South Wales,* in Landscape Australia 4/1996. P318-323.

TransGrid, December 2020 - September 2021, *Central-West Orana REZ Transmission | Community Engagement Feedback Report*

Umwelt, December 2021. *Goulburn River Solar Farm Scoping Report*

Umwelt, April 2023, *Goulburn River Solar Farm Biodiversity Development Assessment Report*

Umwelt, 2023, *Goulburn River Solar Farm Historical Heritage Assessment*

Upper Hunter Shire Council, *Community Strategic Plan 2032*

Upper Hunter Shire Council, *Local Environmental Plan* (LEP) 2013

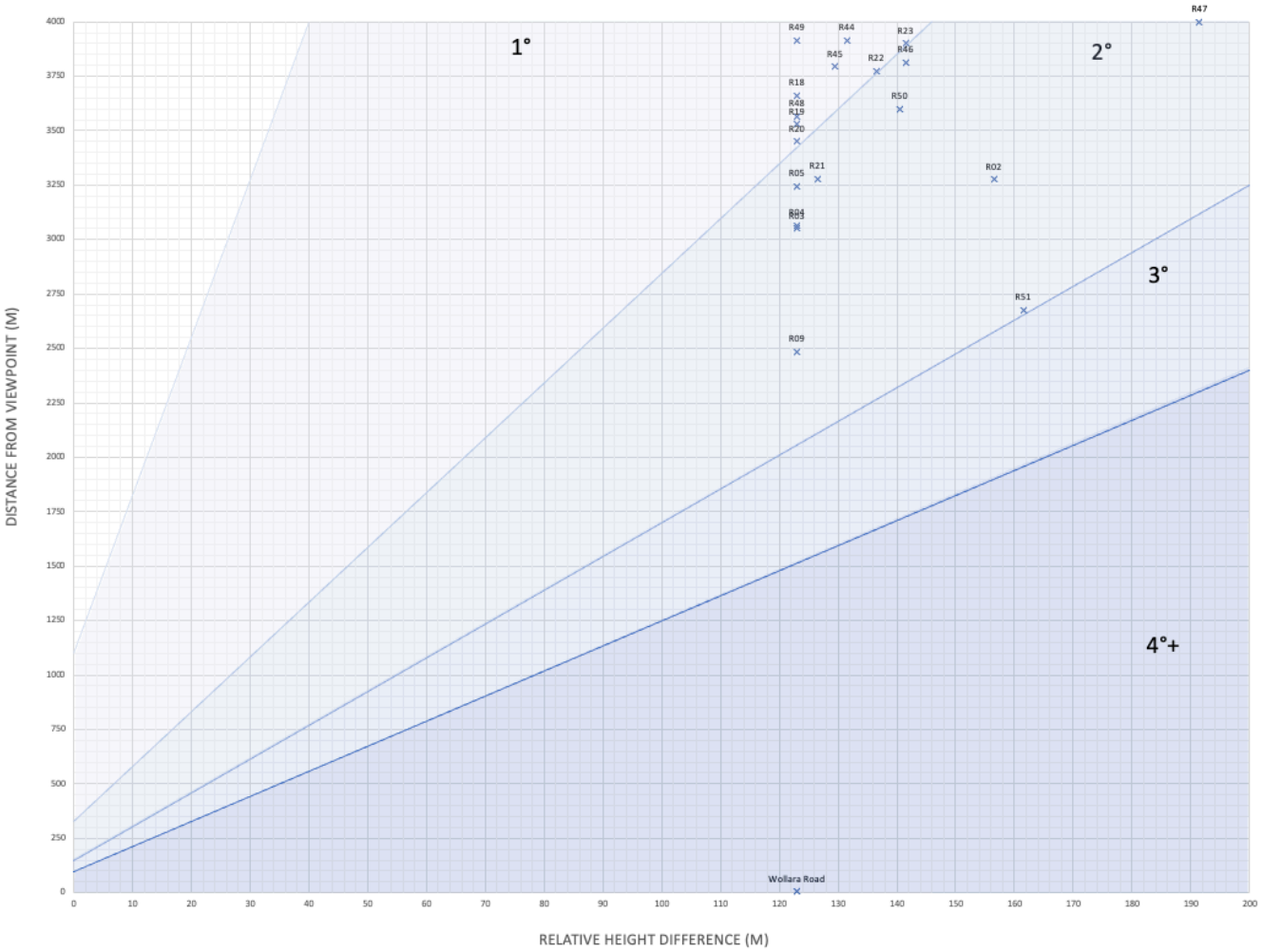
Upper Hunter Shire Council, *Development Control Plan* (DCP) 2015,

Appendix A – Table 1, *Technical Supplement*

Horizontal field of view of project	1° vertical field of view	2° vertical field of view	3° vertical field of view	4°+ vertical field of view
1-10°	No assessment required	No assessment required	No assessment required	No assessment required
11-20°	No assessment required	No assessment required	No assessment required	Assessment required
21-30°	No assessment required	No assessment required	Assessment required for all viewpoints except road/rail	Assessment required
31-40°	No assessment required	Assessment required for all viewpoints except road/rail	Assessment required for all viewpoints except road/rail	Assessment required
41-50°	No assessment required	Assessment required for all viewpoints except road/rail	Assessment required	Assessment required
51-60°	No assessment required	Assessment required for all viewpoints except road/rail	Assessment required	Assessment required
61-70°	No assessment required	Assessment required	Assessment required	Assessment required
71-130°	Assessment required for all viewpoints except road/rail	Assessment required	Assessment required	Assessment required
130°+	Assessment required	Assessment required	Assessment required	Assessment required

Appendix B – Vertical field of view results

	X	Y	
Name/ID	Relative Height Difference (m)	Distance from viewpoint (m)	Sector
R02	156.48	3275	2°
R03	122.98	3060	2°
R04	122.98	3065	2°
R05	122.98	3240	2°
R09	122.98	2485	2°
R18	122.98	3660	1°
R19	122.98	3530	1°
R20	122.98	3450	1°
R21	126.48	3280	2°
R22	136.48	3775	1°
R23	141.48	3900	1°
R44	131.48	3915	1°
R45	129.48	3795	1°
R46	139.48	3820	2°
R47	191.48	4000	2°
R48	122.98	3565	1°
R49	122.98	3915	1°
R50	140.48	3600	2°
R51	161.48	2675	2°
Wollara Road	122.98	32	4°



Appendix C – Table 5, *Technical Supplement*

Table 5: Viewpoint sensitivity levels and examples

Viewpoint type	Very low viewpoint sensitivity	Low viewpoint sensitivity	Moderate viewpoint sensitivity	High viewpoint sensitivity
Residential	No place of residence present	Secondary view from dwellings in rural areas (zoned RU1, RU2, RU3, RU4 and RU6), large lot residential areas (zoned R5) and in environmental or conservation areas (zoned C2, C3 and C4)	Primary view from dwellings in rural areas (zoned RU1, RU2, RU3, RU4 and RU6), large lot residential areas (zoned R5) and in environmental or conservation areas (zoned C2, C3 and C4)	Dwellings in residential areas and rural villages (land zoned R1, R2, R3, R4 and RU5) Historic rural homesteads/ residences on the national, state or local heritage list
Transport / infrastructure	Local sealed and unsealed roads Passenger rail lines with daily daylight services State highways, freeways and classified main roads Walking tracks and navigable waterways	Tourist roads and scenic drives Walking tracks and navigable waterways	N/A	N/A
Social / cultural	Private recreation areas and sporting fields (defined as land zoned RE2)	Cemeteries, memorial parks	Tourist and visitor accommodation and places of worship (such as bed and breakfasts, motels, hotels) Tourist uses in tourist areas (zoned SP3) Publicly accessible green and open spaces including picnic areas, parks, public recreation areas Town centres and central business districts	N/A

Appendix D – Table 6, *Technical Supplement*

Table 6: Frame of reference for scenic quality values

Viewpoint type	Very low viewpoint sensitivity	Low viewpoint sensitivity	Moderate viewpoint sensitivity
Landform	Large expanses of flat or gently undulating terrain. Indistinct, dissected or unbroken landforms that provide little illusion of spatial definition or landmarks with which to orient	Steep, hilly and undulating ranges that are not visually dominant Broad shallow valleys Moderately deep gorges or moderately steep valley walls Minor rock outcrops	Isolated peaks, steep rocky ridges, cones or escarpments with distinctive form and/or colour contrast that become focal points Large areas of distinctive rock outcrops or boulders Well defined, steep sided valley gorges
Vegetation	Extensively cleared and cropped areas with very limited variation in colour and texture Pastoral areas, human created paddocks, pastures or grasslands and associated buildings typical of grazing lands	Predominantly open forest or woodland combined with some natural openings in patterns that offer some visual relief Vegetative stands that exhibit a range of size, form, colour, texture and spacing including human influenced vegetation such as vineyards, and orchards	Strongly defined patterns with combinations of native forest, naturally appearing openings, streamside vegetation and/or scattered exotics Distinctive stands of vegetation that may create unusual forms, colours or textures in comparison to surrounding vegetation
Waterbodies	Absence of natural waterbody Farm dams, irrigation canals or stormwater infrastructure	Intermittent streams, lakes, rivers, swamps and reservoirs	Visually prominent lakes, reservoirs, rivers, streams, wetlands and swamps Presence of harbour, inlet, bay or open ocean
Social / cultural	Places of worship, cemeteries/memorial parks, private open spaces	Local heritage sites Distinguishable entry ways to a regional city identified in the Transport and Infrastructure SEPP	Culturally important sites, world heritage areas, national parks/reserves, Commonwealth and state heritage sites
Human presence	Dominating presence of infrastructure, human settlements, highly modified landscapes and higher density populations such as regional cities, industrial areas, agricultural transport or electricity infrastructure	Dispersed yet evident presence of human settlement such as villages, small towns, isolated pockets of production and industry, lower scale and trafficked transport infrastructure	Natural/undisturbed landscape Minimal evidence of human presence and production

Appendix E – NPWS response to early draft landscape plan

Subject: RE: Landscape plan for proposed Goulburn River Solar Farm
Date: Thursday, 23 February 2023 at 4:05:13 pm Australian Eastern Daylight Time
From: Lisa Menke
To: Alison Dodds Envisage
CC: Grant Purcell
Attachments: image005.png, image004.png, image003.png

Hi Alison

Apologies for the delayed response. The early draft landscape plan looks appropriate from a NPWS perspective. I confirm that Goulburn River NP is on the western side of the road and none of the plantings will occur on the western side of Ringwood road. Species selection looks appropriate and should be propagated from local provenance sourced seed.

Regards

Lisa Menke
Manager, Mudgee Area
Blue Mountains Branch
NSW National Parks & Wildlife Service

27 Inglis street MUDGEE 2850
T 02 6370 9006
M 0429 687 331
W nationalparks.nsw.gov.au

From: Alison Dodds Envisage <alison@envisageconsulting.com.au>
Sent: Thursday, 23 February 2023 3:35 PM
To: Lisa Menke <Lisa.Menke@environment.nsw.gov.au>
Subject: Re: Landscape plan for proposed Goulburn River Solar Farm

Good afternoon Lisa

I spoke to Rob Smith following the email below. Rob advised that he is no longer the ranger at Goulburn River National Park, and that I am best to talk to you. I've tried your number a couple of times, however, have been unable to reach you. Please let me know if there is an alternative NPWS person I should contact regarding the proposed Goulburn River solar farm.

I have attached an early draft landscape plan for the proposed Goulburn River solar farm. I would appreciate it, if you could review the draft and provide any comment. We really want the landscape plan to be developed with NPWS if possible.

The early draft indicates:

- **Location for proposed landscaping**
- **species**
- **planting bed width**
- **bed preparation**
- **maintenance**

The early draft is just a basis for discussion. Please contact me if you have any questions or feedback.

Regards,

Alison

Alison Dodds
B.Plan, BLArch, PGCert Public Policy
Principal

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From: Alison Dodds Envisage <alison@envisageconsulting.com.au>
Date: Friday, 10 February 2023 at 11:02 am
To: Lisa.Menke@environment.nsw.gov.au <Lisa.Menke@environment.nsw.gov.au>, Robert.I.Smith@environment.nsw.gov.au <Robert.I.Smith@environment.nsw.gov.au>
Subject: Landscape plan for proposed Goulburn River Solar Farm

Hello Lisa and Rob

Envisage are preparing the visual impact assessment (including a landscape plan) for the proposed Goulburn River solar farm. I understand you are both aware of the project. We are seeking NPSW input regarding proposed planting along the Wollara Road frontage of the solar farm site.

Would you be available for a phone conversation, or alternatively, provide information via email? We would like to ensure that the landscape plan is been prepared in conjunction with National Parks as the primary landholder/neighbour.

The input we are seeking is, for example, if you have preferred plant species, sizing, spacing, width of planting area, requirements for planting (sourcing of plants, preparation of ground, maintenance) etc. We will incorporate your requirements into the landscape plan.

We generally include a landscape strategy to:

> **provide a quick growing, dense screen that would reduce views of the solar panels from public view, as well as providing additional ecological benefits, including plant species have been selected to:**
>
> 1. **provide effective visual screening**
> 2. **are locally native**
> 3. **provide ecological benefit to the site (such as a food source for birds, habitat etc)**
> 4. **are suitable for the site conditions (are hardy)**

However, we would tailor the landscape strategy to NPWS preferences.

I would be happy to arrange a phone conversation, or to respond to any email questions. Please let me know. I am seeking input by the 17 February 2023.

Regards,

Alison

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