

Figure 2-2  
**Proposed vegetation clearance, Golden Highway / Ringwood Road intersection**

GOULBURN RIVER SOLAR FARM  
 ADDENDUM LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT



Figure 2-3  
**Proposed disturbance footprint, Ringwood Road**

GOULBURN RIVER SOLAR FARM  
 ADDENDUM LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT



Figure 2-4  
**Proposed disturbance footprint, Wollara Road**

GOULBURN RIVER SOLAR FARM  
 ADDENDUM LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT



## Landscape character impact with amendments

### 3.1 Amendments that may affect landscape character

As shown in Table 2-1, the following amendments to the EIS Project may affect landscape character:

- Golden Highway/Ringwood Road intersection upgrade.
- Upgrade to part of Ringwood Road (around 3.4 km).
- Upgrade to part of Wollara Road (around 4.7 km).

### 3.2 Landscape character zones

The LCVA identified two distinct landscape character zones<sup>3</sup>:

- Open, agricultural landscape, distinguished by grazing pastures, rural infrastructure, and agricultural land use, including the project site, and
- Dense, forested landscape distinguished by tall, native vegetation, including the Goulburn River National Park.

Photographs illustrating landscape character in the vicinity of the road upgrades are shown in Figure 3-1.



Figure 3-1: Photographs illustrating landscape character in the vicinity of proposed road upgrades

<sup>3</sup> The character of the landscape was described within approximately 5 km from the proposed development (as per the *Technical Supplement*).

The proposed Ringwood Road upgrade is located within the open, agricultural landscape, and the proposed Wollara Road upgrade is located wholly within the road corridor contained within the dense forested landscape character zone. However, the proposed Golden Highway intersection upgrade is located beyond the two originally described landscape character areas.

The Highway intersection is generally within an open, agricultural landscape, however, the character of the intersection is dominated by, the highway. Therefore, a new landscape character zone has been added to the assessment. This landscape character zone is typified by the two-lane, sealed highway, which carries comparatively higher-speed, greater-volume, heavier traffic than other roads within the study area. The terrain at the intersection is undulating, with cut and fill embankments. Individual tall native trees occur either side of the road within a grassed verge, and there are areas of dense shrubs and trees. For the purposes of this report, this character zone is called the 'Golden Highway' landscape character zone.

### 3.3 Assessment of landscape character impact

The assessment of impact to landscape character (of the Amended Project), is shown in [Table 3-1](#). In summary:

- Sensitivity: Landscape character sensitivity is presented in [Column A](#):
  - There is no change to the *low* rating of landscape sensitivity within the open, agricultural, or the dense forested landscape (determined in the LCVIA).
  - Landscape character sensitivity within the Golden Highway landscape is determined to be *low*.
- Magnitude: The assessment of magnitude of change is presented in [Column B](#):
  - There is no change to the *low* rating of landscape magnitude within the open, agricultural landscape.
  - Magnitude of change to the dense, forested landscape zone increases to *moderate* from very low in the LCVIA.
  - Magnitude of change to the Golden Highway landscape character zone is assessed as *low*.
- Landscape character impact: The overall impact to landscape character impact is shown in [Column C](#):
  - There is no change to the *low* rating of landscape character impact within the open, agricultural landscape.
  - Landscape character impact to the dense, forested landscape zone increases to *low* from very low in the LCVIA.
  - Landscape character impact to the Golden Highway landscape zone is assessed as *low*.

Table 3-1: Assessment of landscape character impacts

Landscape character zone	Column A Sensitivity of existing landscape character to the Project		Column B Magnitude of change to landscape character		Column C Landscape Character Impact	
	LCVIA	Amended Project	LCVIA	Amended Project	LCVIA	Amended Project
Golden Highway landscape	Not applicable.  The EIS Project did not include changes to the Golden Highway.	Low The existing landscape is: <ul style="list-style-type: none"> <li>Not recognised as having national or regional landscape values, and the highway is not a designated tourist route or scenic drive.</li> <li>Zoned SP2 Infrastructure (classified road) under the <i>Upper Hunter Local Environmental Plan (LEP) 2013</i>. There are no visual or amenity-related objectives for the zone. The purpose of the zone is to provide for infrastructure and prevent development that is not compatible or may detract from provision of infrastructure.</li> <li>However, the road is a main route from the Hunter Valley / east coast of NSW to western NSW, and is used by tourists, residents and heavy transport.</li> <li>And although the road corridor has been modified from its natural state, it has a rural countryside character established by the presence of tall native trees either along many parts of the road.</li> </ul>	Not applicable.  The EIS Project did not include changes to the Golden Highway.	Low <ul style="list-style-type: none"> <li>Although apparent, particularly initially, the proposed removal of trees, road widening, and cut and fill are within the anticipated visual experience of a main road corridor, and overall would have a minor change on the visual environment of the intersection.</li> <li>The amendments are not uncharacteristic of the landscape character zone.</li> </ul>	Not applicable.  The EIS Project did not include changes to the Golden Highway.	Low
Open, agricultural landscape	Low  (As determined in the LCVIA).	Low (no change)	Low  (As determined in the LCVIA).	Low (no change) <ul style="list-style-type: none"> <li>Some trees to be removed are mature and contribute to the landscape character of the road.</li> <li>Most trees to be removed are single, isolated trees; some are grouped together. Tree removal would be apparent, particularly initially.</li> <li>The proposed road widening and associated realignment of the road are within the anticipated visual experience of a road corridor.</li> <li>Although tree removal would change the visual environment, the amendments are not uncharacteristic of a road corridor.</li> <li>Trees to be removed are near the existing road edge. Trees beyond the construction zone would be retained and maintain the overall character of the road corridor.</li> </ul>	Low  (As determined in the LCVIA).	Low (no change)
Dense forested landscape	Low  (As determined in the LCVIA).	Low (no change)	Very Low  (As determined in the LCVIA).	Moderate <ul style="list-style-type: none"> <li>There would be a noticeable change to the character of Wollara Road through the removal of tall native trees and shrubs within the road corridor for 4.7 km, and sealing of the road.</li> <li>Native vegetation would still flank both sides of the road, enclosing and restricting the view to the road corridor; however, the view within the road corridor would be wider, featuring more sky and less overhead canopy, and the new sealed road would be a prominent feature.</li> <li>The changes would be permanent.</li> </ul>	Very low  (As determined in the LCVIA).	Low  (Increases from Very Low)

#### 4.1 Amendments that may affect views

As shown in Table 2-1, the following amendments to the EIS Project may affect views:

- Golden Highway/Ringwood Road intersection upgrade.
- Upgrade to part of Ringwood Road (around 3.4 km).
- Upgrade to part of Wollara Road (around 4.7 km).
- Decentralised BESS
- Project layout modifications (removal and relocation of solar panels)
- Increased width to two internal roads

#### 4.2 Assessment viewpoints

##### Solar farm

The amendments associated with the decentralised BESS, layout modifications, and internal roads, would occur within the EIS Project Development Footprint (the solar farm). The LCVIA identified five residences (R3, R5, R9, R21, R46) and one public road (Wollara Road) within 4 km of the Development Footprint which required 'detailed assessment'<sup>4</sup>. Two of those viewpoints (R9 and R21) were subsequently eliminated from the detailed assessment, as vegetation obstructed views toward the Project.

As the Amended Project involves removal of trees between R9 and R21 residences and the Project Area, the potential impact to these viewpoints has been re-examined. Table 4-1 describes the changes:

- There was no change in the view of R9 and R21 toward the solar farm due to the Amended Project.
- However, R9 would view the Wollara Road upgrade, and has therefore been included in the assessment of the road upgrade.

Table 4-1: Visibility of R9 and R21

Viewpoint	Original LVIA assessment	With proposed tree clearing on Wollara Road (Amended Project)	
		View of solar farm?	View of Wollara Road upgrade?
R9	Vegetation obstructs the view toward the solar farm. The view from R9 is shown in Figure A-1, Appendix A.	Proposed tree removal along Wollara Road would not affect the view south toward the solar farm.	Proposed tree removal may affect the view east, of Wollara Road at the entry to the property.
R21	Vegetation obstructs the view toward the solar farm. The view from R21 is shown in Figure A-2, Appendix A.	Existing trees in the foreground not affected by proposed tree removal would continue to limit the view toward the solar farm. There is over 2 km of dense trees south of Wollara Road (between Wollara Road and the Development Footprint) that would continue to screen the solar farm.	Proposed tree removal along Wollara Road would not affect the view south toward Wollara Road. Wollara Road is around 10 m or so lower in elevation than the residence, and there is an area of trees (around 150 m wide) between the residence and Wollara Road that would continue to screen Wollara Road.

##### Road upgrades

In addition to R9, two other viewpoints already identified (R46 and Wollara Road) would potentially have views of the proposed Wollara Road upgrade, and have been included in the assessment.

Other viewpoints in the vicinity of the proposed road upgrades (which did not require 'detailed assessment' in the LVIA) have been investigated to determine if they would have potential views. It was found that:

<sup>4</sup> Viewpoints were identified within 4 km from the proposed development (as per the *Technical Supplement*).

- There were no residences with a view of the proposed Golden Highway / Ringwood Road intersection.
- Road users travelling through the Golden Highway / Ringwood Road intersection would see the upgrade.
- There are five Ringwood Road residences (not previously identified in the LCVIA) with a potential view of the proposed Ringwood Road upgrade (R11, R12, R13, R14 and R15). These residences have similar characteristics and are assessed as a 'representative viewpoint'.
- Road users travelling along Ringwood Road would see the upgrade.
- In addition to R9, there are new Wollara Road residences (not previously identified in the LCVIA) which would have potential views of the Amended Project (being the Wollara Road upgrade): R22, R29, R32, R39, R41 and R44.

#### Consolidated viewpoints

As a result of the above investigations there are now a total of 14 viewpoints to be assessed: 10 private residential viewpoints along Wollara Road (three of which were previously assessed), one viewpoint representing residences along Ringwood Road, and three viewpoints representing users of public roads). A consolidated list of viewpoints is shown in [Table 4-2](#). Wollara Road residential receivers are mapped on [Figure 4-1](#) and [Figure 4-2](#).

Table 4-2: Consolidated viewpoints for assessment

Type of viewer	Receiver number	Aspect of Amended Project potentially in view			
		Solar Farm	Ringwood Road upgrade	Wollara Road upgrade	Golden Highway / Ringwood Road intersection
Private residential	R3	Originally assessed for views of solar farm	No	No	No
	R5	Originally assessed for views of solar farm	No	No	No
	R9	Previously identified, however, eliminated from detailed assessment	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R22	New viewpoint. Not previously assessed.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R29	New viewpoint. Not previously assessed.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R32	New viewpoint. Not previously assessed.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R39	New viewpoint. Not previously assessed.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R41	New viewpoint. Not previously assessed.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R44	New viewpoint. Not previously assessed.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	R46	Originally assessed for views of solar farm.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	Ringwood Rd residences (representative)	No. New viewpoint. Not previously assessed.	New viewpoint. Included in this addendum for impact of Ringwood Road upgrade.	No	No
Public	Ringwood Rd users	No. New viewpoint. Not previously assessed.	New viewpoint. Included in this addendum for impact of Ringwood Road upgrade.	No	No
	Wollara Road users	Originally assessed for views of solar farm.	No	Included in this addendum for impact of Wollara Road upgrade.	No
	Golden Hwy / Ringwood Rd intersection users	No. New viewpoint. Not previously assessed.	No	No	Included in this addendum for impact of Golden Hwy / Ringwood Rd upgrade.