

## Appendix B – LVIA addendum report

# **Landscape and Visual Impact Assessment Response to Submissions Addendum Report**

**Springdale Solar Farm  
RES**

**Quality information**

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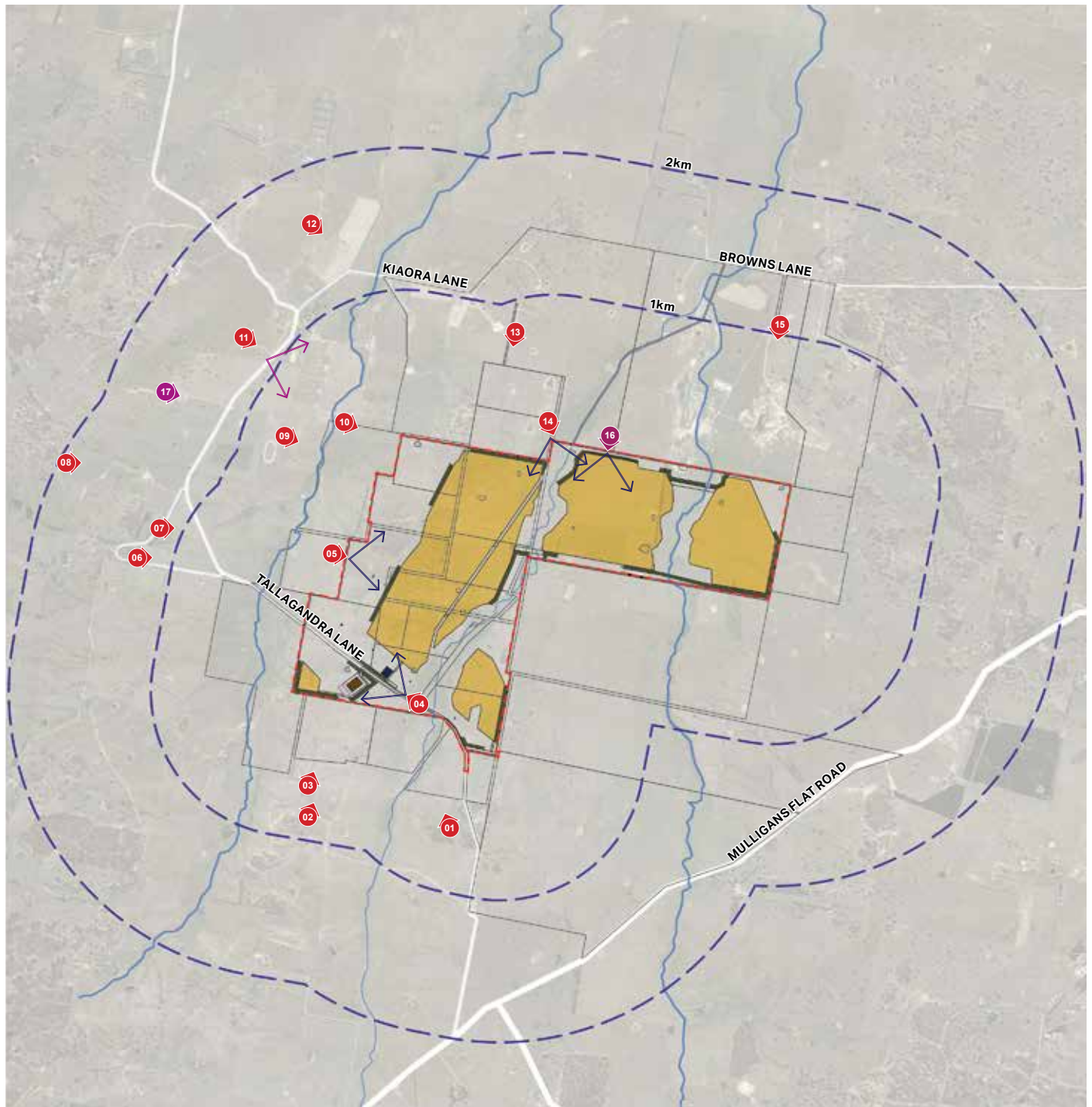
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# LEGEND

- PROJECT SITE
- VISUAL RECEPTOR LOCATION
- NEW VISUAL RECEPTOR LOCATION
- ↗ PHOTOMONTAGE LOCATION
- ↗ ARTIST'S IMPRESSION LOCATION

- SOLAR FIELD AREA INCLUDING INTERNAL ROADS
- SCREEN PLANTING
- SUBSTATION AREA
- ◆ CONTROL BUILDING AREA



**Figure 1: Visual receptor locations**

# 1. Introduction

## 1.1. Overview

This addendum report is prepared to support a Response to Submissions for the Environmental Impact Statement (EIS) associated with the Springdale Solar Farm (the Project), concerning landscape and visual impacts.

The purpose of this addendum is to update the assessment to account for:

- community submissions;
- the revised site layout (see below);
- new receptors since the original assessment was undertaken.

This addendum has also assessed a revised layout of the solar field area for the Project. The layout of the solar farm has been adjusted slightly based on site optimisation as part of the engineering design. This has included the removal of a portion of the solar field area in the south west corner of the Project (south of Tallagandra Lane), refer to Figure 1. The northern solar field area has also been adjusted to allow for additional screen planting and avoidance of Golden Sun Moth habitat.

This addendum includes the following:

- Supplementary photomontages;
- Visual receptor locations and assessment;
- Landscape Screen Planting.

This addendum should be read in conjunction with the Landscape and Visual Impact Assessment (LVIA) prepared by AECOM, dated 23 April 2018;

# 2. Visual Impact Assessment

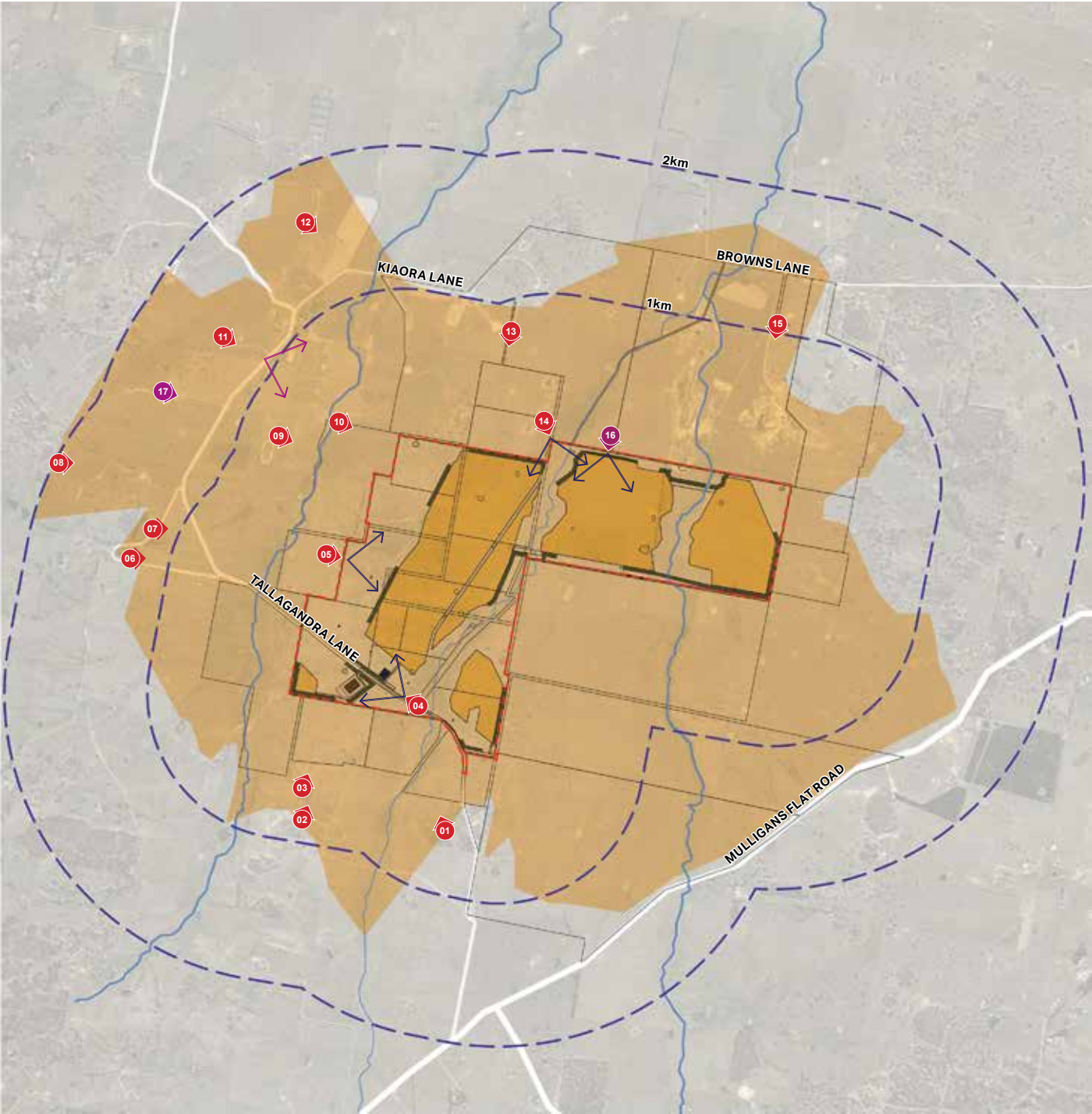
## 2.1. Supplementary photomontages

Photomontages that illustrated views of the Project site from private residences were not included in the original LVIA report at the residents' request, due to privacy and confidentiality (except for one photograph which was consented to for inclusion).

Supplementary photomontages have been prepared as part of this addendum for the most affected receptors to illustrate the likely visual changes as a result of the Project. Figure 1 illustrates the location of the photomontages assessed as part of this addendum. The locations of photomontages were taken from either publicly accessible locations or from within the Project boundary. Photographs were taken using a single lens, digital camera using a 28-millimetre full-frame lens with no parallax error. The photographs were taken during a site visit on 19 May 2020.

The new photomontages focus on viewing the Project in its wider setting, at a receptor's view level at a nominal eye height of 1.7 metres. The materials and finishes used are indicative only and would be further investigated during detailed design.

To prepare the photomontages, a 3D model of the Proposal was developed and confirmed against survey information, architectural plans, elevations and sections. Photographs were corrected for distortion using specific camera and lens profiles, and camera coordinates were then merged with



LEGEND

- PROJECT SITE
- VISUAL RECEPTOR LOCATION
- NEW VISUAL RECEPTOR LOCATION
- PHOTOMONTAGE LOCATION
- ARTIST'S IMPRESSION LOCATION

- POTENTIAL VISUALLY IMPACTED AREA
- SUBSTATION AREA
- CONTROL BUILDING AREA



Figure 2: Visual envelope map

the 3D model to allow a 'virtual camera' to be set up using these coordinates. Camera matching was undertaken using reference points common to the 3D model and physical features in the photographs. The model was then rendered with the photographs and edits to the foreground and background elements made as necessary.

An artist's impression was also prepared to represent one visual receptor location. The artist's impression is an indicative representation illustrating the appearance of the Project from an elevated view. This has developed using drone photography undertaken on the 21 May 2020.

## **2.2. Visual Receptor Locations and Impact Assessment**

A total of fifteen visual receptor locations were originally identified to represent viewpoints for assessing potential impacts on views as a result of the Project. Figure 1 illustrates the visual receptors assessed in the LVIA and two new receptors constructed during the SSD planning process for the Springdale Solar Farm.

The visual receptors are identified as those located within a two kilometre offset from the Project. The likely visibility of the proposed elements of the Project during operation from surrounding areas has been broadly mapped to define a visual envelope (refer to Figure 2). This provides an indication of where the Project is potentially visible from. Beyond this area, it is anticipated that the combined impacts of intervening landform and vegetation will combine to substantially limit landscape and visual impacts of the Project.

A revised assessment has been prepared for the visual receptors that have supplementary photomontages prepared. A revised assessment and photomontage for the visual receptor that is impacted by the revised layout of the solar field area has also been prepared. The assessment is provided in Table 1 to Table 6 on the following pages.

## **2.3. Draft Landscape Plan**

Landscape mitigation can be effective at managing visual impacts for solar farms. The Project has committed to the early establishment of landscape plantings at strategic locations to minimise the visual impact to the neighbouring residential receptors.

The landscape screen planting has not been designed to screen views of the entire Project, instead, to filter views from key sensitive receptor locations. Screen planting could not be placed in some locations due to conflicts with the location of the Golden Sun Moth and potential Striped Legless Lizard habitat.

All screen planting would be undertaken using species from local plant communities. This would seek to maintain a consistent landscape character, facilitate more rapid growth of vegetation and provide consistency with biodiversity outcomes for the project site and the region, including habitat connectivity.

The Draft Landscape Plan is updated to reflect the revised layout of the solar field area for the Project (refer to Appendix A). A third photomontage has been prepared to show the screen planting after 3 years of operation.





Figure 3: V04 - Existing View



Figure 4: V04 - Photomontage of proposed view at project completion (day one of operation)



Figure 5: V04 - Photomontage of proposed view at project completion (3 years after operation)

**Table 1: Visual impact assessment - V04**

<b>V04: Road user</b>
<b>Anticipated change to view</b>
Views north-west across Tallagandra Lane towards the Project would comprise immediate views of the proposed screen planting, control building area and solar field areas north of Tallagandra Lane. To the south of Tallagandra Lane views would comprise screen planting, with the substation in the background (Refer to Figure 2 for road user location V04).
<b>Sensitivity to change: Moderate</b>
<b>Susceptibility of road user to proposed change</b>
The susceptibility of motorists travelling on Tallagandra Lane is low due to the transient nature of the view and infrequent number of motorists that would be likely impacted by both day and night time views of the Project.
<b>Value attached to view</b>
The value attached to the view for motorists travelling along Tallagandra Lane is considered moderate, given the proprietary interest they could be expected to have with regard to changes in their rural views, seen across a relatively quiet road with minimal screening.
<b>Magnitude of change: Low</b>
<b>Size/scale</b>
The scale of change from this receptor is low given the extent of screen planting provided to new elements including the control building, substation, and solar field areas.
<b>Geographical extent</b>
The viewpoint is located within the immediate surrounds of the development envelope, with a broad portion of the view north of Tallagandra Lane occupied by new elements.
<b>Duration/reversibility</b>
The duration of impacts would be expected to be long term. However, the formation of the screen planting would be openly visible in the short term for a period of short duration. Once established, the screen planting would partially screen views of the control building and substation and contribute to reducing the effects on visual amenity in the long term.
<b>Significance of visual impact: Moderate - Low</b>





Figure 6: V05 - Existing View



Figure 7: V05 - Photomontage of proposed view at project completion (day one of operation)



Figure 8: V05 - Photomontage of proposed view at project completion (3 years after operation)

**Table 2: Visual impact assessment - V05: Resident**

<b>V05: Resident</b>
<b>Anticipated change to view</b>
Views to the east towards the Project would comprise long distance views of the solar field areas and would be partially screened by the intervening landform and proposed screen planting (Refer to Figure 2 for resident location V05).
<b>Sensitivity to change: Moderate</b>
<b>Susceptibility of resident to proposed change</b>
The susceptibility of the resident to the proposed change in their view and visual amenity is moderate. The rear of the property faces east, directly onto a shed located in the rear yard rather than facing out onto the Project. Indirect views would occur while travelling throughout their rear yard.
<b>Value attached to view</b>
The value attached to the view is considered moderate, given the sense of proprietary interest the resident is expected to have within the environment of their rear yard.
<b>Magnitude of change: Moderate</b>
<b>Size/scale</b>
The size and scale of change is considered to be moderate, within the context of the visually incongruent scale, mass, form, line, and materials of the Project, which would interrupt the existing moderate distance views across the rural landscape.
<b>Geographical extent</b>
The receptor is located approximately 40 metres from the site boundary; however, Project elements are viewed at a distance of 410 metres minimum and extend for up to 1,250 metres.
<b>Duration/reversibility</b>
The duration of impacts would be expected to be long term. However, the formation of the screen planting along the western boundary would be openly visible in the short term for a period of short duration. Once established, the screen planting would partially screen views of the solar field area and contribute to reducing the effects on visual amenity in the long term.
<b>Significance of visual impact: Moderate</b>





Figure 9: V11 - Existing View

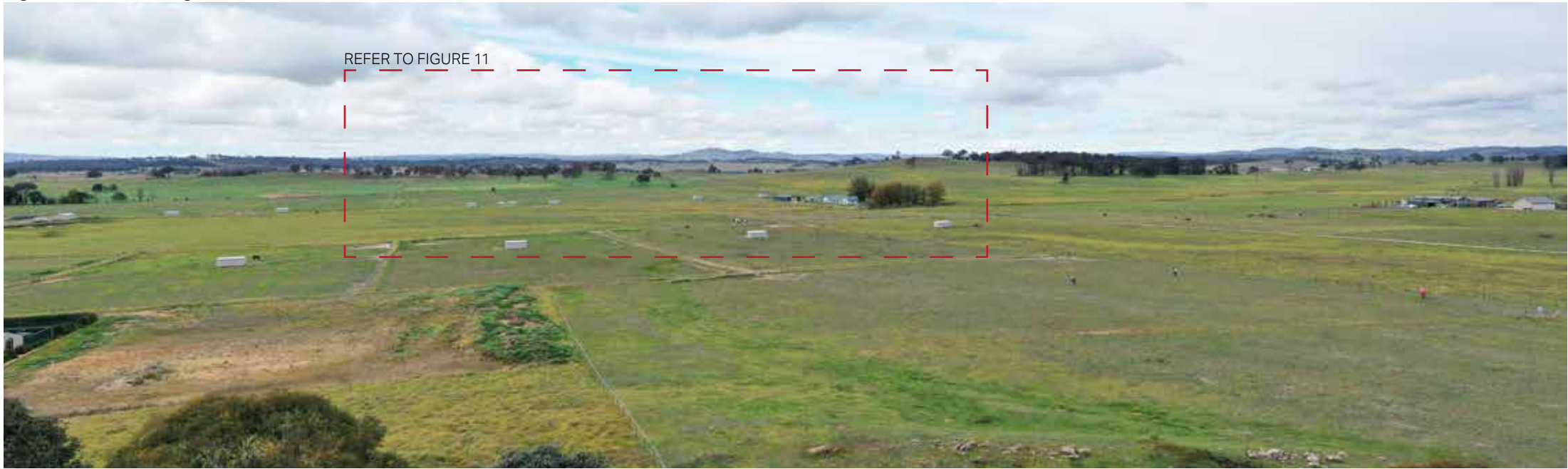


Figure 10: V11 - Artist's Impression of proposed view at project completion (day one of operation)



Figure 11: V11 - Zoomed in detail of Artist's Impression

**Table 3: Visual impact assessment - V11: Resident**

<b>V11: Resident</b>
<b>Anticipated change to view</b>
The anticipated change from this elevated location would comprise two small areas that form part of a much more comprehensive view of the existing landscape. (Refer to Figure 2 for resident location V11).
<b>Sensitivity to change: Moderate</b>
<b>Susceptibility of resident to proposed change</b>
The susceptibility of the resident to the proposed change in their view and visual amenity is Moderate given the high level of proprietary interest they would be expected to have with regards to changes in their rural view.
<b>Value attached to view</b>
The view is considered to be of high value due to the elevated rural setting within which the resident is located.
<b>Magnitude of change: Low</b>
<b>Size/scale</b>
The scale of change is considered to be low due to the relatively small area of change within the context of the broader view.
<b>Geographical extent</b>
The viewing distance is approximately 1,700 metres, with two small areas of the Project being seen within the context of an extensive view across the open rural landscape.
<b>Duration/reversibility</b>
The duration of impacts would be expected to be long term. However, the formation of the screen planting along the western boundary would be openly visible in the short term for a period of short duration. Once established, the screen planting would partially screen views of the solar field area and contribute to reducing the effects on visual amenity in the long term.
<b>Significance of visual impact: Moderate - Low</b>





Figure 12: V14 - Existing View



Figure 13: V14 - Photomontage of proposed view at project completion (day one of operation)



Figure 14: V14 - Photomontage of proposed view at project completion (3 years after operation)

**Table 4: Visual impact assessment - V14: Resident**

<b>V14: Resident</b>
<b>Anticipated change to view</b>
Views to the south towards the Project would comprise distant views of the solar field areas and would be partially screened by the proposed screen planting (Refer to Figure 2 for resident location V14).
<b>Sensitivity to change: High</b>
<b>Susceptibility of resident to proposed change</b>
The susceptibility of the resident to the proposed change in their view and visual amenity is high due to the close proximity of the Project.
<b>Value attached to view</b>
The value attached to the view is considered high, given the sense of proprietary interest they would be expected to have within the environment of their residential property.
<b>Magnitude of change: High</b>
<b>Size/scale</b>
The size and scale of change are considered to be high, within the context of the visually incongruent scale, mass, form, line, and materials of the Project, which would be seen in great levels of detail, and significantly interrupt the existing moderate distance views across the rural landscape.
<b>Geographical extent</b>
The viewing distance is approximately 300 metres, with views of the Project being seen within the context of an extensive view across the open rural landscape.
<b>Duration/reversibility</b>
The duration of impacts would be expected to be long term. However, the formation of the screen planting along the northern boundary would be openly visible in the short term for a period of short duration. Once established, the screen planting would partially screen views of the solar field area and contribute to reducing the effects on visual amenity in the long term.
<b>Significance of visual impact: High</b>





Figure 15: V16 - Existing View



Figure 16: V16 - Photomontage of proposed view at project completion (day one of operation)



Figure 17: V16 - Photomontage of proposed view at project completion (3 years after operation)



**Table 5: Visual impact assessment - V16: Resident**

<b>V16: Resident</b>
<b>Anticipated change to view</b>
Views south towards the Project would comprise immediate views of the screen planting and solar field areas (Refer to Figure 2 for resident location V16).
<b>Sensitivity to change: High</b>
<b>Susceptibility of resident to proposed change</b>
The susceptibility of the resident to the proposed change in their view and visual amenity is high due to the close proximity of the Project.
<b>Value attached to view</b>
The value attached to the view is considered high given the sense of proprietary interest they would be expected to have within the environment of their residential property.
<b>Magnitude of change: High</b>
<b>Size/scale</b>
The size and scale of change are considered to be high, within the context of the visually incongruent scale, mass, form, line, and materials of the Project, which would be seen in great levels of detail, and significantly interrupt the existing moderate distance views across the rural landscape.
<b>Geographical extent</b>
The viewing distance is approximately 50 metres to edge of development area, with views of the Project being seen within the context of an extensive view across the open rural landscape.
<b>Duration/reversibility</b>
The duration of impacts would be expected to be long term. However, the formation of the screen planting along the northern boundary would be openly visible in the short term for a period of short duration. Once established, the screen planting would partially screen views of the solar field area and contribute to reducing the effects on visual amenity in the long term.
<b>Significance of visual impact: High</b>

**Table 6: Visual impact assessment - V17: Resident**

<b>V17: Resident</b>
<b>Anticipated change to view</b>
The anticipated change from this elevated location would comprise two small areas that form part of a much more comprehensive view of the existing landscape. (Refer to Figure 2 for resident location V17).
<b>Sensitivity to change: Moderate</b>
<b>Susceptibility of resident to proposed change</b>
The susceptibility of the resident to the proposed change in their view and visual amenity is Moderate given the high level of proprietary interest they would be expected to have with regards to changes in their rural view.
<b>Value attached to view</b>
The view is considered to be of high value due to the elevated rural setting within which the resident is located.
<b>Magnitude of change: Low</b>
<b>Size/scale</b>
The scale of change is considered to be low due to the relatively small area of change within the context of the broader view.
<b>Geographical extent</b>
The viewing distance is approximately 2,400 metres, with two small areas of the Project being seen within the context of an extensive view across the open rural landscape.
<b>Duration/reversibility</b>
The duration of impacts would be expected to be long term. However, the formation of the screen planting along the western boundary would be openly visible in the short term for a period of short duration. Once established, the screen planting would partially screen views of the solar field area and contribute to reducing the effects on visual amenity in the long term.
<b>Significance of visual impact: Moderate - Low</b>

## 2.4. Summary of Results

Based on their location and the proposed work, the visual impact has been assessed for the following view points highlighted in Table 7.

**Table 7: Visual Impact comparative table**

Visual Receptor No.	Visual Impact Rating	Visual Impact Rating
	LVIA	Addendum Report
V04	Moderate	<b>Moderate - Low</b>
V05	High - Moderate	<b>Moderate</b>
V11	Moderate	<b>Moderate - Low</b>
V14	High	<b>High</b>
V16	N/A	<b>High</b>
V17	N/A	<b>Moderate - Low</b>

## 3. Conclusion

The findings of this addendum produced results mostly consistent with the LVIA. The assessment associated with the visual receptors that have supplementary photomontages determined that the visual impacts of the Project are generally consistent with those identified and assessed as part of the LVIA. The assessment of the two additional visual receptors found that:

- V16 would be subject to High visual impacts due to the proximity of the Project and the degree of change to their view and visual amenity;
- V17 would be subject to Moderate - Low visual impacts due to its elevated location and long-distance views of only a small area of the Project.

The early establishment, long term maintenance, and replacement of screen planting will maintain visual filtering, screen views where appropriate and assist in mitigating the level of residual visual impacts for the Project.



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## Appendix

# A



#### GENERAL NOTES

- Refer to L02 for indicative plant schedule. Plant species to be sourced from local suppliers and locally collected seed where possible.
- Refer to Detail 3 of L02 for typical planting procedure.
- Temporary stock proof fence to be provided around screen planting if grazing is to occur during planting establishment.
- Existing endemic vegetation and tree cover to be retained and protected
- During planting establishment period, provide continual weed control and apply approved non-residual herbicide if appropriate.
- All screen planting zones to be offset minimum 10 metres or greater to all Golden Sun Moth habitat.

#### KEY

- 20 metre wide screen planting zone
- Golden Sun Moth habitat (low quality) in improved paddocks to be retained and protected
- Golden Sun Moth habitat (moderate quality) in improved paddocks to be retained and protected
- Potential Striped Legless Lizard Habitat
- Aboriginal Site Boundary
- Solar field area including internal roads
- Internal road
- Project Site

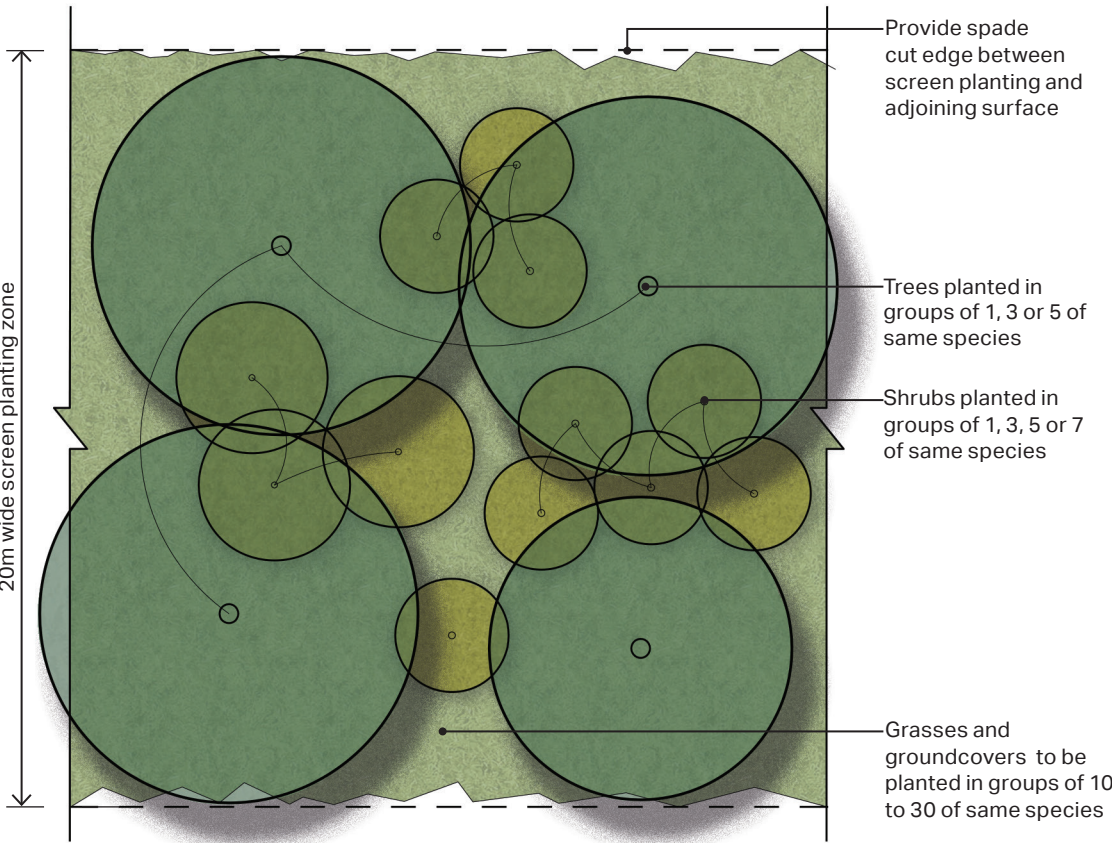




INDICATIVE SCREEN PLANTING SCHEDULE

BOTANICAL NAME	COMMON NAME	POT SIZE	MATURE HEIGHT (m)	MATURE SPREAD (m)
Trees				
<i>Allocasuarina verticillata</i>	Drooping Sheoak	100mm	8	7
<i>Eucalyptus albens</i>	White Box	5 Litre	20	10
<i>Eucalyptus mannifera</i>	Red Spotted Gum	5 Litre	20	10
<i>Eucalyptus melliodora</i>	Yellow Box	5 Litre	30	15
<i>Eucalyptus nortonii</i>	Bundy	5 Litre	15	10
<i>Eucalyptus polyanthemus</i>	Red Box	5 Litre	20	10
Shrubs				
<i>Acacia pravissima</i>	Oven's Wattle	Viro tube	5.0	3.0
<i>Acacia rubida</i>	Red-stemmed Wattle	Viro tube	5.0	5.0
<i>Callistemon linearis</i>	Narrow Leaved Bottlebrush	Viro tube	3.0	3.0
<i>Grevillea sericea</i>	Silk Spider Flower	Viro tube	2.0	1.5
<i>Kunzea ericoides</i>	Burgan	Viro tube	2.0	2.0
<i>Westringia fruticosa</i>	Coastal Rosemary	Viro tube	1.5	1.5
Grasses and Groundcovers				
<i>Austrodanthonia caespitosa</i>	Common Wallaby Grass	Viro tube	0.5	0.1
<i>Austrodanthonia tenuior</i>	Wallaby Grass	Viro tube	1.1	0.4
<i>Chrysocephalum apiculatum</i>	Yellow Buttons	Viro tube	0.6	0.5
<i>Dianella revoluta</i>	Blue Flax Lily	Viro tube	0.5	0.5
<i>Eragrostis brownii</i>	Browns Love Grass	Viro tube	0.8	0.6
<i>Grevillea rosmarinifolia</i>	Rosemary Grevillea	Viro tube	0.8	0.8
<i>Hardenbergia violacea</i>	False Sarsparilla	Viro tube	0.5	0.6
<i>Imperata cylindrica</i>	Blady grass	Viro tube	1.0	1.0
<i>Lomandra longifolia</i>	Mat Rush	Viro tube	0.5	0.6
<i>Poa labillardieri</i>	Tussock Grass	Viro tube	0.5	0.1
<i>Poa sieberiana</i> var. <i>sieberiana</i>	Snowgrass	Viro tube	1.0	0.5
<i>Stypandra glauca</i>	Nodding Blue Lily	Viro tube	0.3	0.4
<i>Themeda australis</i>	Kangaroo Grass	Viro tube	1.2	0.6

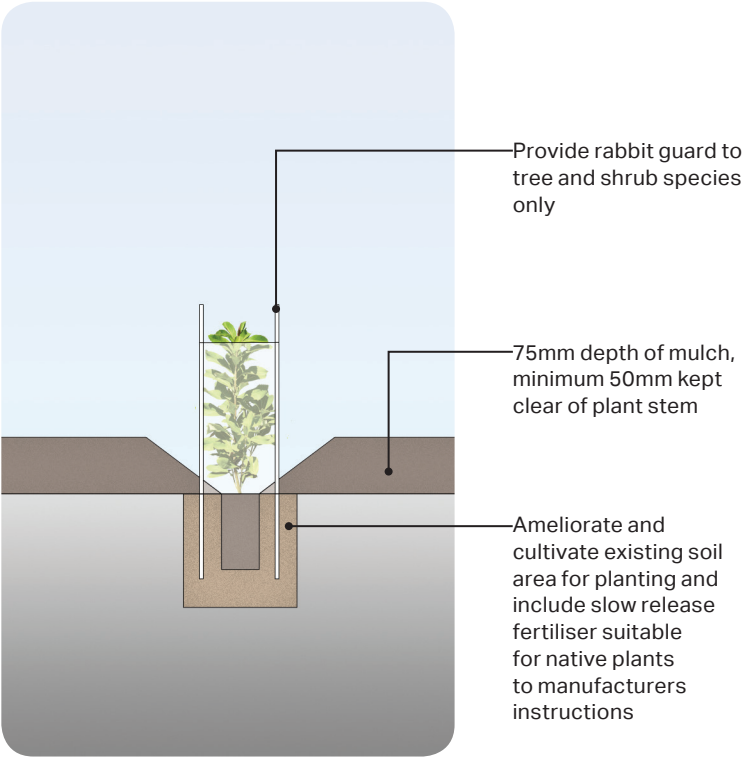
SCREEN PLANTING PALETTE



DETAIL 1: SCREEN PLANTING - TYPICAL PLAN 1:200



DETAIL 2: SCREEN PLANTING - TYPICAL SECTION 1:200



DETAIL 3: PLANTING DETAIL - VIRO TUBE 1:10



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