



Solar Renewable Energy Facility

1268 Oxley Bridge Road, Uranquinty, NSW

Visual Impact Assessment and Landscape Buffer
Planting

Date: 24 February 2022

Revision: B

Prepared for Bison Energy by

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Project: Uranquinty Solar Farm - Visual Impact Assessment and Landscape Buffer Plan

Commissioned by: Bison Energy

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STATUS	DATE	BY	REVISION
Client review	30.11.21	FS	A
Approval	24.02.22	FS	B

Introduction

Purpose

Yonder Landscape Architecture has been commissioned by Bison Energy to undertake a visual impact assessment for a proposed 5 megawatt (MW) Solar Photo Voltaic Generation (SPVG) facility, at 1268 Oxley Bridge Road Uranquinty. The proposal covers an area of approximately 24 hectares (Ha), in the Local Government Area (LGA) of Wagga Wagga City Council in Uranquinty NSW.

This visual impact assessment delivers an objective statement of the probable impacts on the visual environment resulting from the construction of the proposed development. The report outlines the results from site assessment, describing the present landscape character. It documents the assessment of visual impact resulting from the proposal and provides an indication for suitable mitigation measures.

Methodology

The methodology adopted in this Landscape Character and Visual Impact Assessment is based on the Roads and Maritime Service Environmental Impact Assessment Guidance Note (2013): Guidelines for landscape character and visual impact assessment. The methodology has been modified to align with the features and requirements of this particular proposal. The visual impact assessment involved the following activities:

- ▶ Desktop review using aerial photography to confirm the extents of the proposed development on the site and check for any prominent land features and vegetation in and around the site.
- ▶ Investigation of possible viewsheds along Oxley Bridge Road and from Uranquinty where the proposed development may be seen from and document the views with photos as well as descriptions. Documenting the view according to the sensitivity and review if any of the proposed development is visible along with the nature of the visual impact and rating will also be carried out.
- ▶ Describing and evaluating the existing landscape character and visual environment in order to establish a baseline for the visual assessment.

- ▶ Mapping the visual envelope based on field studies & data while identifying sensitive visual receivers. Sensitive visual receivers are individuals or people who have the potential to be visually affected by the proposal.
- ▶ Undertaking a visual impact assessment using the grading matrix, considering visual sensitivity and the magnitude of the visual change. This report considers the visual impact of the development from Oxley Bridge road and public roads within Uranquinty township.

The method to measure impact is based on:

- ▶ combination of the sensitivity of the existing area or view to change.
- ▶ magnitude (scale, contrast, quality, distance) of the proposal on that area or view.

Sensitivity

Sensitivity refers to the qualities of an area, the number and type of receivers and how sensitive the existing character of the setting is to the proposed nature of change. The design quality of the proposed development does not make the area less sensitive to change but instead affects the magnitude of the impact as described following.

Magnitude

Magnitude refers to the physical scale of the project, how distant it is and the contrast it presents to the existing condition. Magnitude will also need to consider cumulative impact, which is a consideration of the result of the incremental impact of the proposal when added to other past, current and known likely future activity.

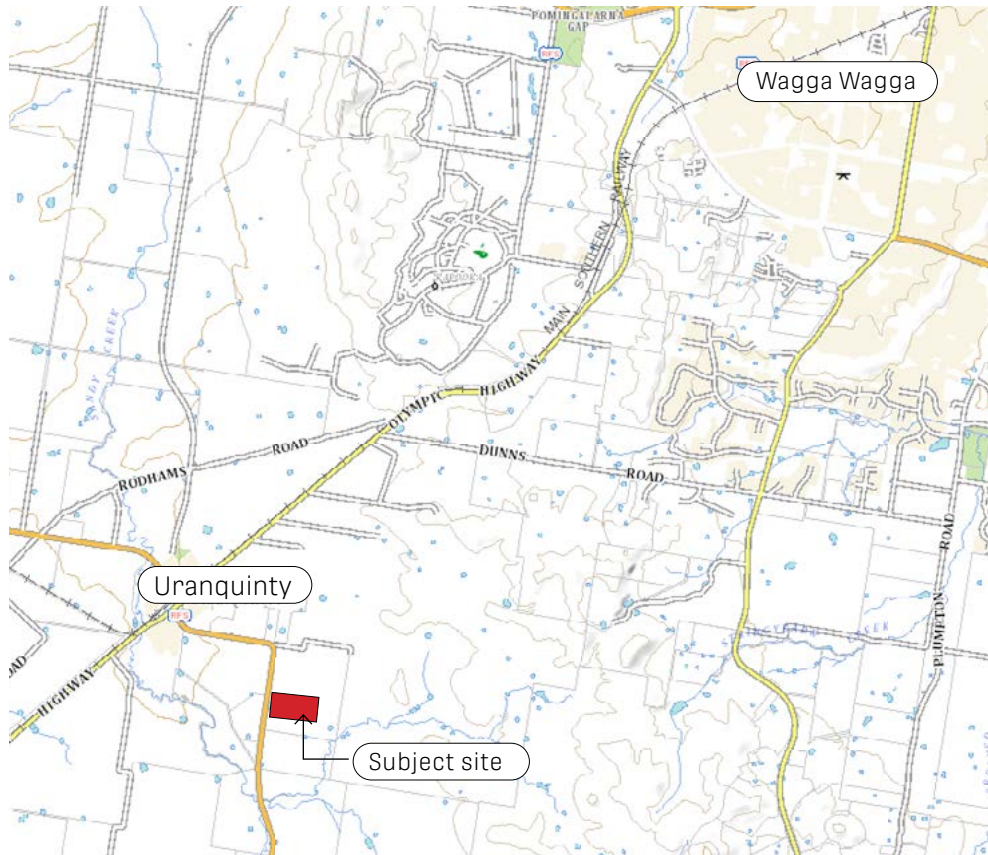
		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-low	Negligible
	Low	Moderate	Moderate-low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Grading matrix

Source: Roads and Maritime Service Environmental Impact Assessment Guidance Note (2013): Guidelines for landscape character and visual impact assessment

The site

The development site is located approximately 2km south-east from the township of Uranquinty, and approximately 15km from Wagga Wagga.



Landscape character

Key site characteristics of the regional and local landscape character include:

- ▶ Gently undulating landform with a mix of open and lightly wooded areas.
- ▶ Rural land-use, mainly cropping and livestock grazing defined by unsealed roads, landscape buffers or tree plantings and fencing.
- ▶ Houses, sheds and other rural buildings.
- ▶ Vegetated creek-lines and wind-breaks.
- ▶ Water treatment plant with its landscape buffer directly opposite the site on Oxley Bridge Road.
- ▶ Residential development on Coronation and Deane Streets within Uranquinty township.



Wooded section of Oxley Bridge Road



Verge planting on Oxley Bridge Road



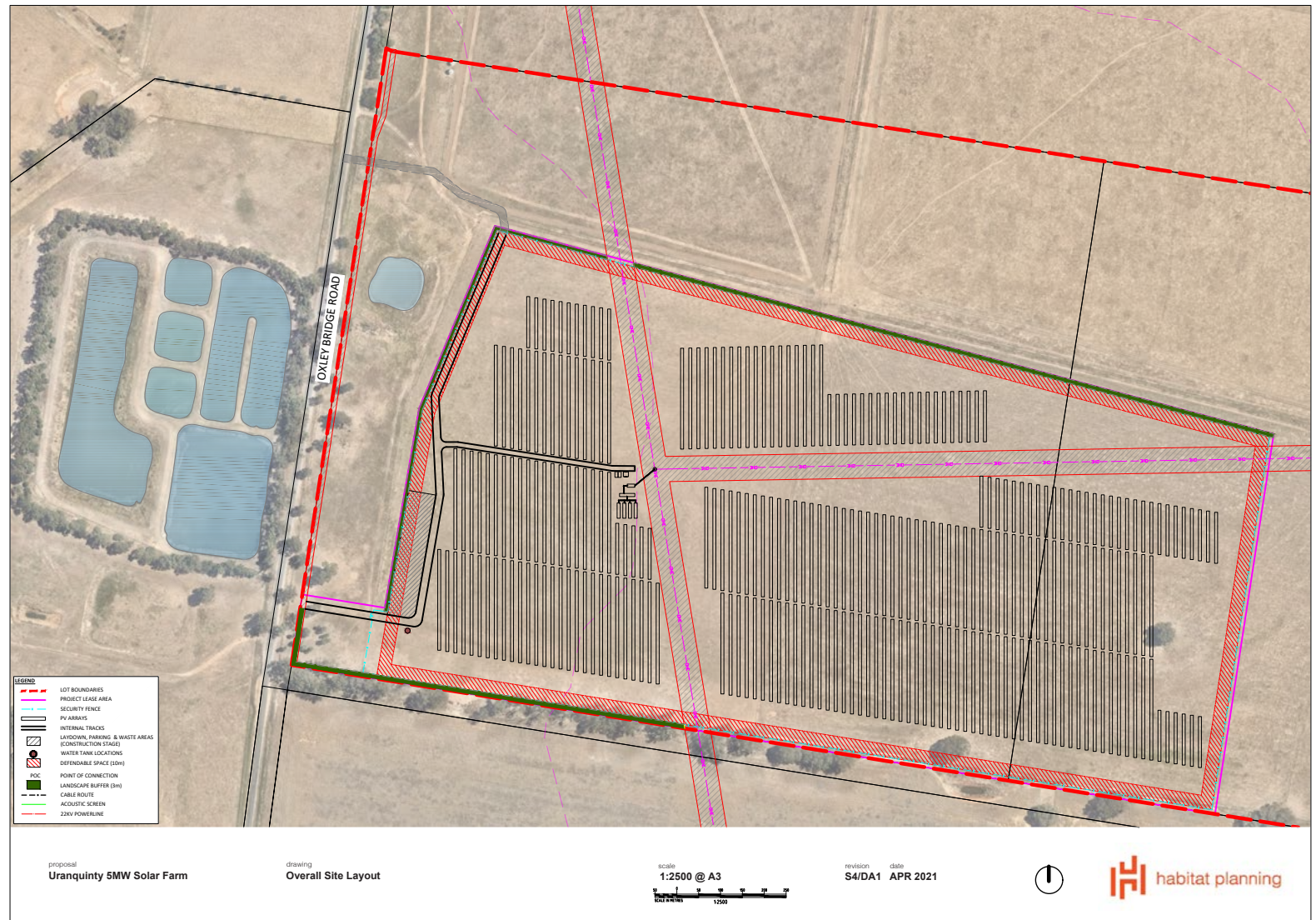
Open paddocks with occasional paddock trees



Vegetated creek-lines.

The Proposal

The Uranquinty Solar Farm is a proposed 5 megawatt (MW) solar photo voltaic generation (SPVG) facility.



Visual Impact Assessment

Viewshed 1	Sensitivity	Magnitude	Impact
1.4 km south of site.	Low	Low	Low



Vegetation of Cloboralli Creek screens the site.

Viewshed 2	Sensitivity	Magnitude	Impact
1.0 km south of site	Low	Low	Low

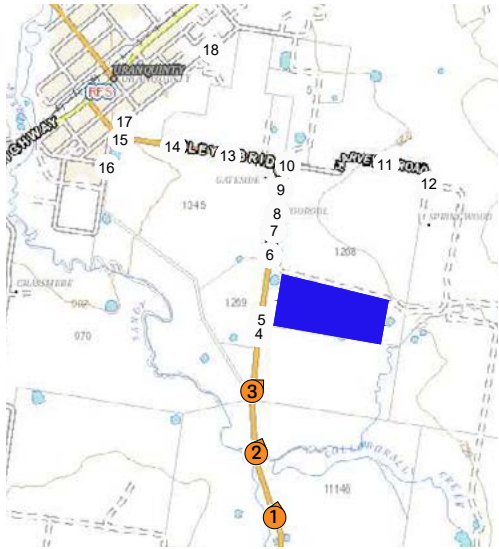


Vegetation of Cloboralli Creek and existing trees partially screen the western side of the site.

Viewshed 3	Sensitivity	Magnitude	Impact
600 m south of site	Moderate	Low	Moderate-low



Existing trees partially screen the western side of the site

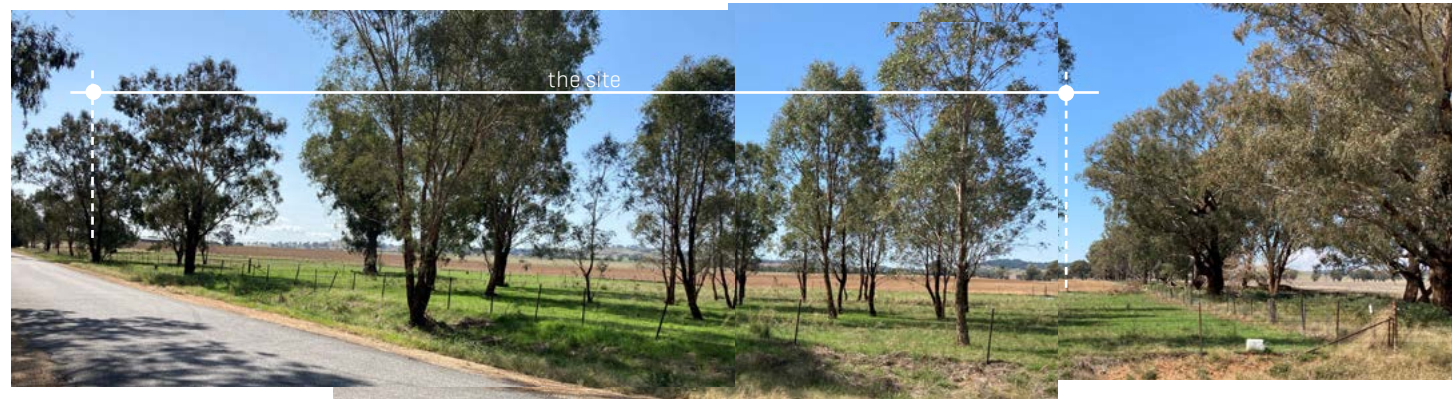


Viewshed 4	Sensitivity	Magnitude	Impact
150m south of site	Moderate	High	Moderate-high

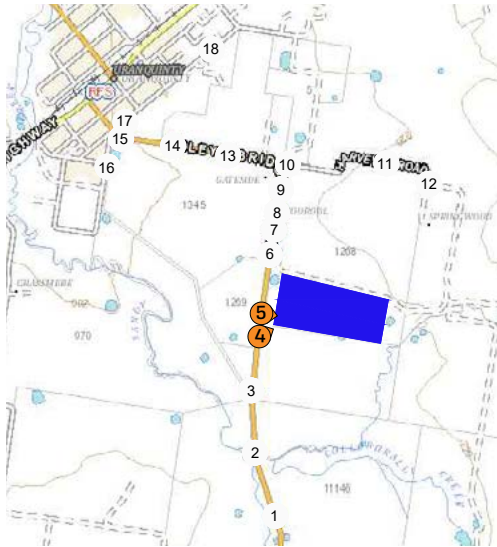


Obscured view to the site

Viewshed 5	Sensitivity	Magnitude	Impact
Directly west of southern portion of site	Moderate	High	Moderate-high



Partially obscured view to the site



Viewshed 6	Sensitivity	Magnitude	Impact
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Directly north-west of north western corner of site

High

High

High



Clear view to the site.

Viewshed 7	Sensitivity	Magnitude	Impact
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200m north-north-west of site

Moderate

High

Moderate-high



Partial views to the site.

Viewshed 8	Sensitivity	Magnitude	Impact
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400 metres north-north-west of site

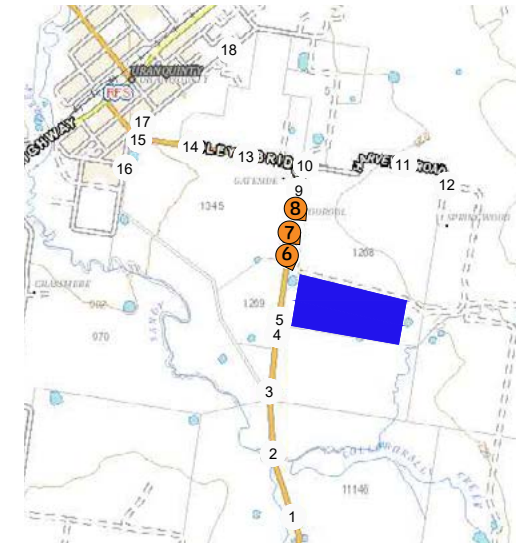
Moderate

High

Moderate-high



Partial views to the site.



Viewshed 9	Sensitivity	Magnitude	Impact
600m north-north-west of site.	Moderate	Low	Moderate-low



Potential visual impact.

Viewshed 11	Sensitivity	Magnitude	Impact
1.0 km north-east of site from Harvey's Road.	Negligible	Negligible	Negligible

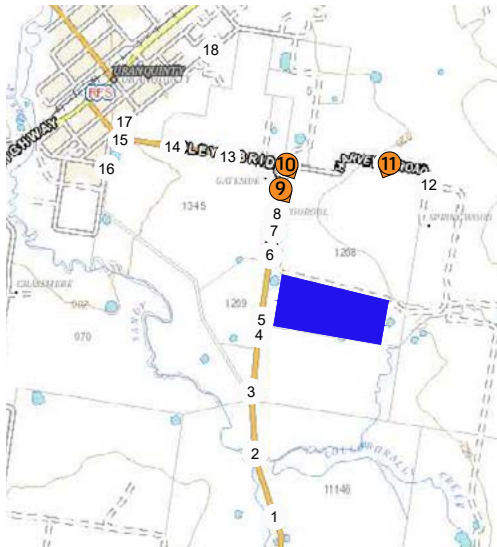


Site not visible.

Viewshed 10	Sensitivity	Magnitude	Impact
750m north-north-west of site	Negligible	Negligible	Negligible



Site not visible.



Viewshed 12	Sensitivity	Magnitude	Impact
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1.1km north-east of site from Harvey's Road



Site not visible.

Viewshed 13	Sensitivity	Magnitude	Impact
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1.0km north-west of site



Potential visual impact.



Viewshed 14	Sensitivity	Magnitude	Impact
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1.3km north-west of site



Potential low visual impact.

Viewshed 15	Sensitivity	Magnitude	Impact
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1.5km north-west of site



Potential low visual impact.

Viewshed 16	Sensitivity	Magnitude	Impact
1.5km north-west of site at Deane Street.	Negligible	Negligible	Negligible



Site is not visible.

Viewshed 18	Sensitivity	Magnitude	Impact
1.5km north-west of site at Connorton Street	Negligible	Negligible	Negligible

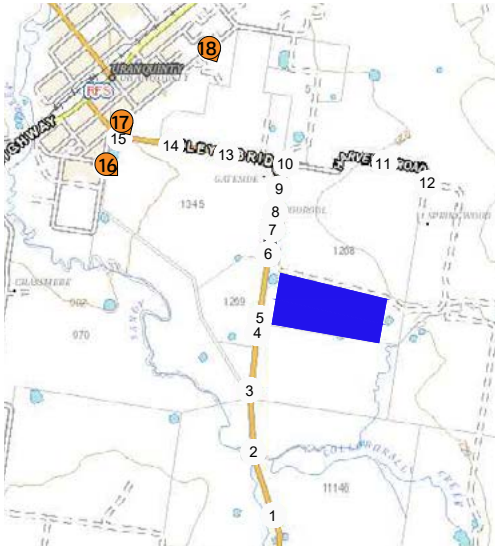


Site is not visible.

Viewshed 17	Sensitivity	Magnitude	Impact
1.6km north-west of site at Deane Street	Low	Low	Low



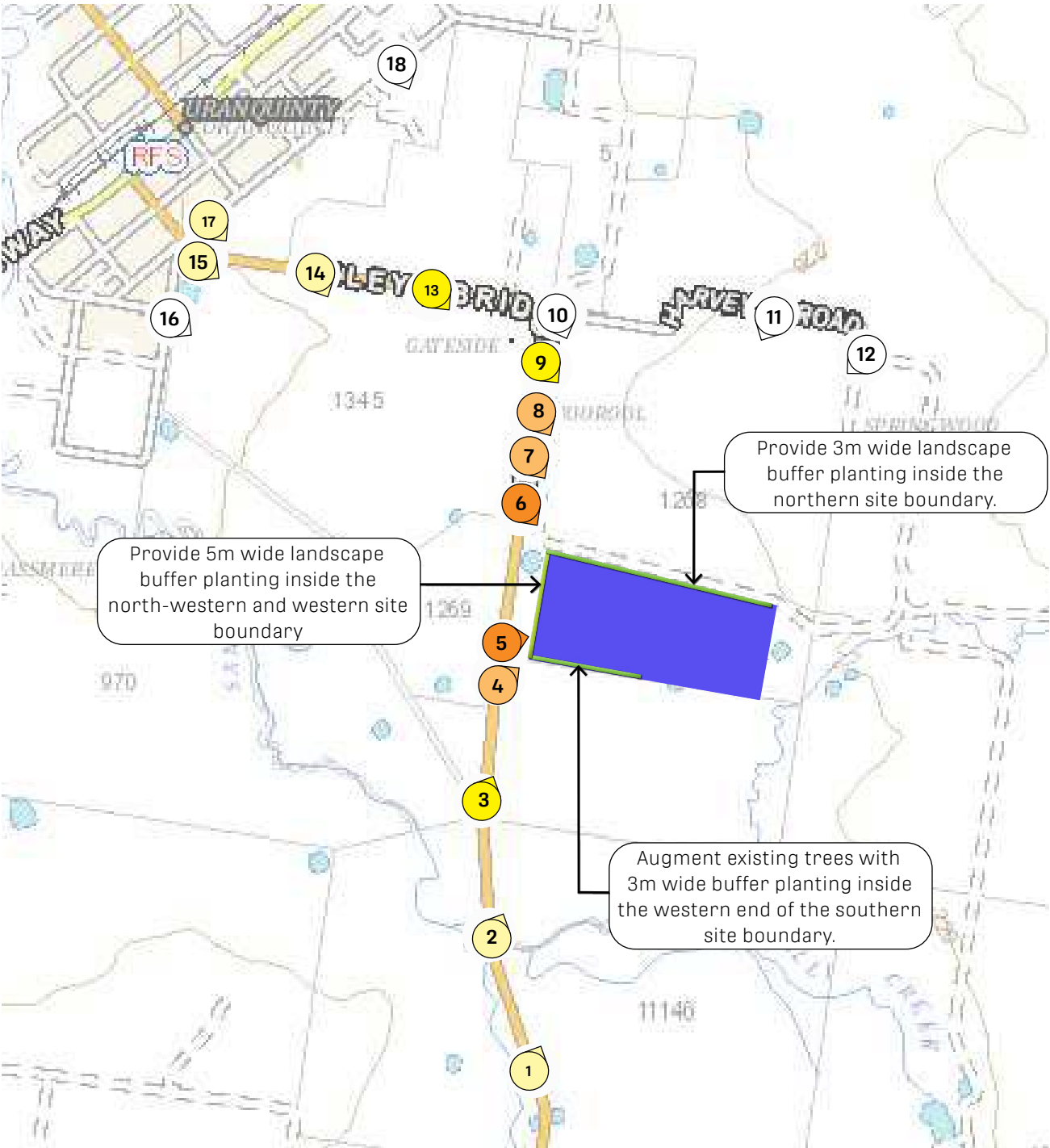
Site is obscured by topography and vegetation.



Outcomes

The visual assessment outcomes are summarised below:

Viewshed	Impact
1, 2	Low
3	Moderate - low
4	Moderate - high
5, 6	High
7, 8	Moderate - high
9	Moderate - low
10, 11, 12	Negligible
13	Moderate - low
13, 14, 15	Low
16	Negligible
17	Low
18	Negligible



Landscape Buffer Plan Scale 1:4000 @ A4



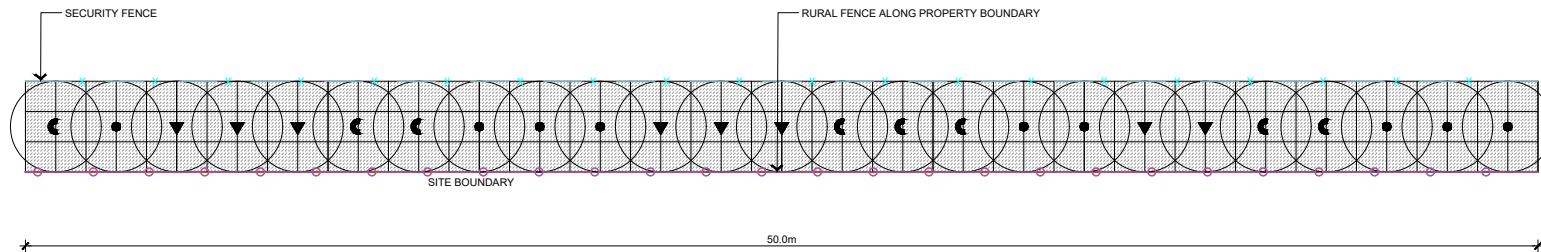
- 3.0m wide landscape buffer planting located between rural fence and security fence
- 5.0m wide landscape buffer planting located between rural fence and security fence



Typical Planting Plans



Elevation: 3m wide Landscape Buffer Planting Plan 50m Transect

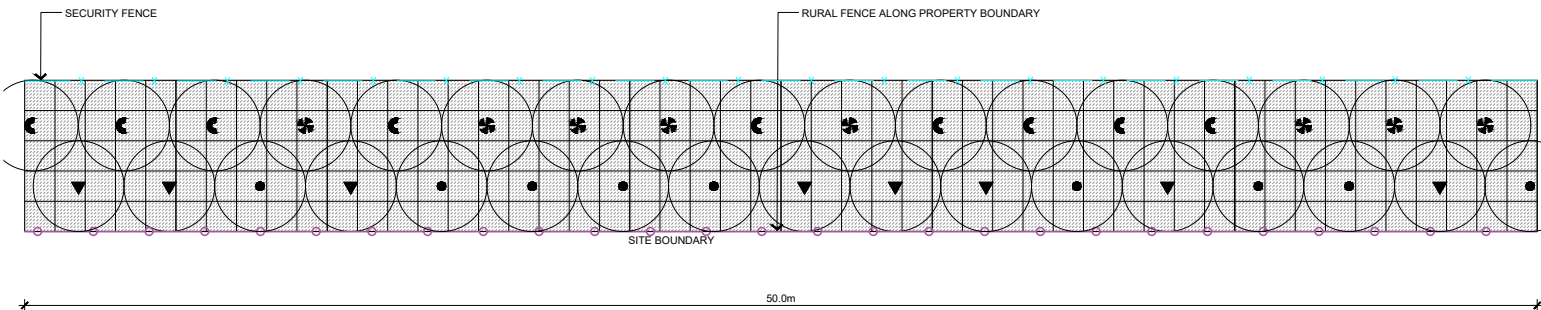
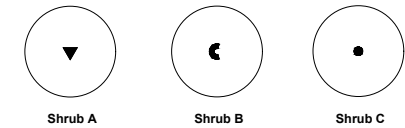


Plan: 3m wide Landscape Buffer Planting Plan 50m Transect

PLANT QUANTITIES FOR 150sqm

SHRUBS:
25 TOTAL NO.

NOTE:
GRID LINES ARE SHOWN AT 1.0m SPACING TO ASSIST WITH SET-OUT OF ALL PLANTS.



Plan: 5m wide Landscape Buffer Planting Plan 50m Transect

PLANT QUANTITIES FOR 250sqm

SHRUBS:
34 TOTAL NO.

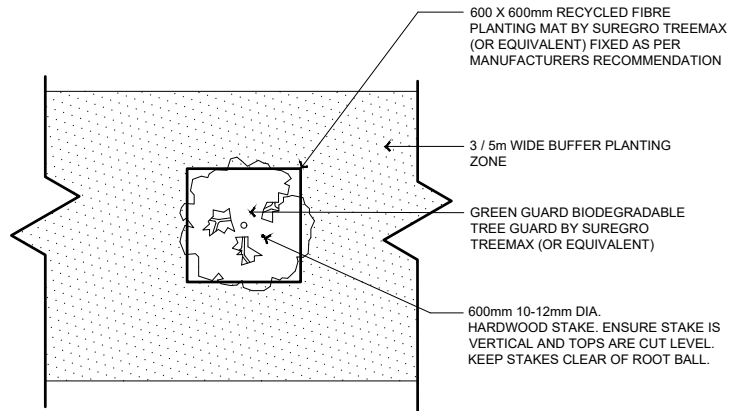
NOTE:
GRID LINES ARE SHOWN AT 1.0m SPACING TO ASSIST WITH SET-OUT OF ALL PLANTS.

Typical Plant Schedule

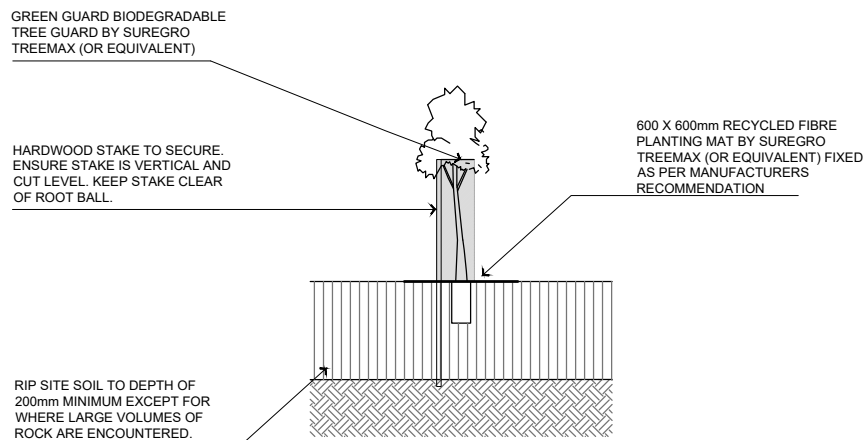
Botanical Name	Common Name	Height x spread (m)	Installation Size	% of mix
Shrub A				30%
▶ <i>Acacia iteaphylla</i>	Flinders Range Wattle	2-4 x 2-4m	Tubestock	
▶ <i>Acacia longifolia</i>	Sallow Wattle	3-7 x 3-6	Tubestock	
▶ <i>Acacia pycnantha</i>	Golden Wattle	5-8 x 3-6	Tubestock	
Shrub B				35%
▶ <i>Callistemon citrinus</i>	Crimson Bottlebrush	2-4 x 3-5	Tubestock	
▶ <i>Callistemon sieberi</i>	River Bottlebrush	3-6 x 2-5	Tubestock	
▶ <i>Hakea salicifolia</i>	Willow leafed Hakea	4-5 x 3-4	Tubestock	
Shrub C				35%
▶ <i>Bursaria spinosa</i>	Sweet Bursaria	2-4 x 2-4	Tubestock	
▶ <i>Grevillea x 'Ivanhoe'</i>	Ivanhoe Grevillea	5-8 x 4-6m	Tubestock	
▶ <i>Grevillea pteridifolia x banksii 'Honey Gem'</i>	Grevillea Honey Gem	4 - 5 x 2 - 3	Tubestock	
				100%



Details and Notes



Typical Detail Plan Tubestock Planting with Guard



Typical Detail Section Tubestock Planting with Guard

Standard notes

- ▶ Set out and dimensions. Written dimensions shall take precedence over scale. Check all drawing scales in conjunction with drawing size. Drawings must be read in association with other construction drawings.
- ▶ Services and site assets. The contractor shall verify the nature and location of the 'as built' of all existing services and retained site assets affected by their works. Services shown are indicative only.
- ▶ Reference. The contractor shall refer to all drawings prior to and during the works.
- ▶ Discrepancies. Notify superintendent of any suspected or known discrepancies or errors prior to ordering of affected materials and or construction of affected works.
- ▶ Relevant standards. The contractor shall undertake all pricing and works in accordance with current industry best practice and all relevant Australian standards.
- ▶ Existing trees. Existing trees to be protected and retained during construction. Refer AS4970 protection of trees on development sites. The contractor shall use the formula based on height and DBH and supply and erect the tree protection zone for each tree. No earthworks, level changes or stockpiling is to occur within the tree protection zone.
- ▶ Falls. All areas are to be graded evenly to ensure positive drainage. Ponding is unacceptable.
- ▶ Landscape buffer planting area preparation. Apply appropriate herbicide to remove weeds and pasture grass. For all buffer planting types cultivate on site topsoil to 200mm depth with soil amelioration additives. Supply and install weed mat to individual holes for each shrub.
- ▶ Clearance to roadways. Ensure that all planting has a clearance of minimum 3.0 metres to all road tracks within the site.