
***Carisbrook Solar Farm
Landscape & Visual Assessment***

For: ib vogt GmbH

June 2018 | Final

Carisbrook Solar Farm

Landscape & Visual Assessment

Client	ib vogt GmbH
Project No	15127
Version	Final
Signed	
Approved by	Allan Wyatt
Date	28 June 2018

XURBAN

Suite 1103 | 408 Lonsdale Street | Melbourne 3000 | Victoria | Australia
ABN | 18831715013

Table of Contents

1.	Introduction	1
	The subject site	1
2.	Methodology	2
	Project description	2
	The viewshed	2
	Landscape units and sensitivity	2
	Seen area analysis	2
	Viewpoint assessment	2
	Public domain viewpoints	2
	Private domain viewpoints	3
	Scale of Effects	4
	Photomontages	5
	Camera data	5
	Computer modelling and the wireframe model	6
	GPS Coordinates and camera metadata	6
3.	Planning background	7
	Zoning	7
	Overlays	8
4.	The subject site & environs	9
	Existing land uses and vegetation	9
	Topography	10
	Existing vegetation	11
5.	Proposed landscaping	13
6.	Visual assessment	14
	Viewpoint 1 – Pyrenees Highway #1	15
	Viewpoint 2 - Pyrenees Highway #2	16
	Viewpoint 3 - Pyrenees Highway #3	17
	Viewpoint 4	17
	Viewpoint 5	18
	Viewpoint 6	18
	Viewpoint 7	19
	Viewpoint 8	21
7.	Conclusion	22
	Views from the Pyrenees Highway	22
	Views from the local road network	22

Table of figures

Figure 1	<i>The subject site (Map source – Google Earth Pro)</i>	1
Figure 2	<i>Visual impact – publicly accessible viewpoints</i>	3
Figure 3	<i>Visual impact – residential viewpoints</i>	4
Figure 4	<i>Horizontal and vertical fields of view</i>	5
Figure 5	<i>Photomontage construction</i>	6
Figure 6	<i>Photography meta data (Source: GeoSetter)</i>	6
Figure 7	<i>Zoning (Map source – Planning Maps Victoria)</i>	7
Figure 8	<i>Overlays (Map source – Planning Maps Victoria)</i>	8
Figure 9	<i>Property location (Source: Nearmap, Imagery 01 January 2015)</i>	9
Figure 10	<i>Bald Hill looking west along Boundary Road</i>	10
Figure 11	<i>Existing planting along the Pyrenees Highway looking east</i>	11
Figure 12	<i>Existing planting</i>	11
Figure 13	<i>Existing planting on Boundary Road</i>	12
Figure 14	<i>Proposed planting</i>	13
Figure 15	<i>Viewpoint locations (Map source: Google Earth Pro)</i>	14
Figure 16	<i>VP1 – Existing view looking east</i>	15
Figure 17	<i>VP2 – Existing view looking north west</i>	16
Figure 18	<i>VP2 Photomontage (without vegetation)</i>	16
Figure 19	<i>VP2 Photomontage (with vegetation)</i>	16
Figure 20	<i>VP3 – Existing view looking west</i>	17
Figure 21	<i>VP 4 – Existing view looking west</i>	17
Figure 22	<i>VP 5 – Existing view looking south</i>	18
Figure 23	<i>VP 6 – Existing view looking south</i>	18
Figure 24	<i>VP 7 – Existing house</i>	19
Figure 25	<i>VP 7 – Existing view looking east</i>	19
Figure 26	<i>VP 7 – Photomontage (without vegetation)</i>	20
Figure 27	<i>VP 7 – Photomontage (with vegetation)</i>	20
Figure 28	<i>VP 8 – Existing house</i>	21
Figure 29	<i>VP 8 – Existing view looking east</i>	21

1. Introduction

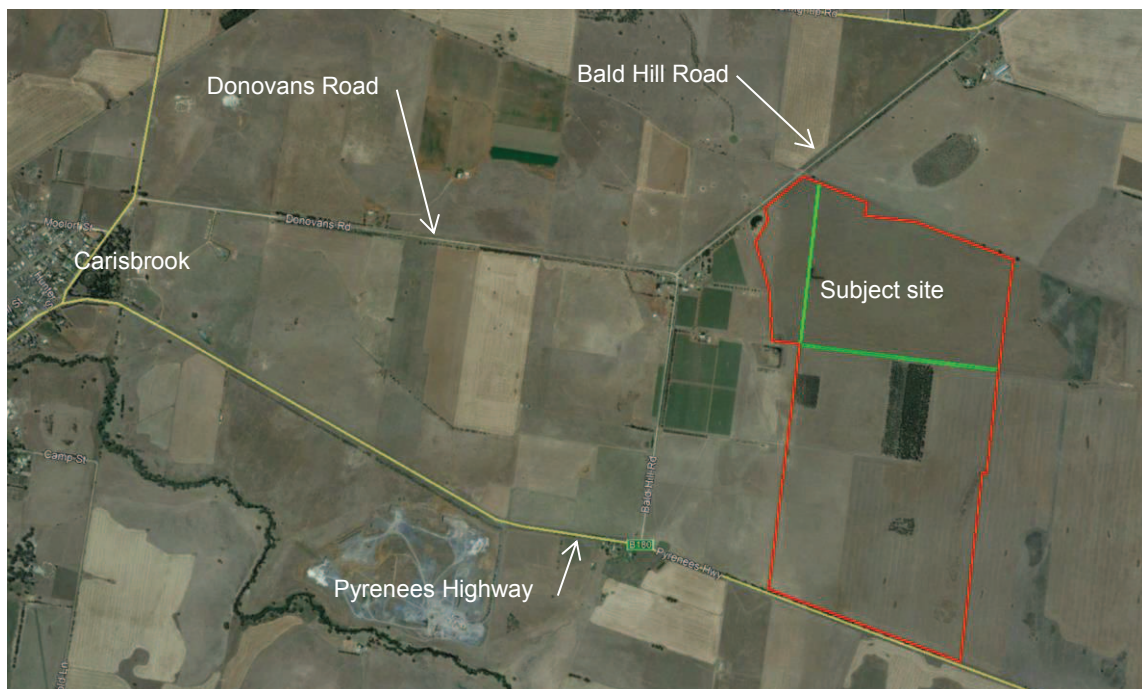
lb vogt proposes to locate a solar farm on the Pyrenees Highway, approximately 50km north of Ballarat and approximately 5 km east of Carisbrook in the Central Goldfields Shire.

The following report seeks to show the visual impact implications on viewers using the Pyrenees Highway and the local road network as well as from residential properties within the viewshed of the solar farm. This report also describes the landscape design that responds to this setting.

The subject site

The site is to the north of the Pyrenees Highway and east of Bald Hill Road, Carisbrook. **Figure 1** shows the location of the subject site and the surrounding road network.

Figure 1 The subject site (Map source – Google Earth Pro)



The subject site, shown in **Figure 1**, is approximately a 311 hectare allotment on multiple titles. The allotments surrounding the subject site are rural properties of differing sizes.

The following report seeks to show the visual impact implications of this proposal and ascertain the appropriateness of the proposed solar farm within the current landscape setting.

2. Methodology

The methodology used within this visual assessment of the solar farm includes the following steps.

Project description

Describing the proposed visual components of the solar farm. These include, but are not limited to, the solar panels and the proposed vegetation around the boundaries.

The viewshed

Defining the viewshed of the solar farm is based upon the elevations of the components within the solar farm and the parameters of human vision. The viewshed is the study area for this visual assessment.

Landscape units and sensitivity

Landscape Units are based on the physical characteristics of the area within the viewshed. The characteristics that assist in defining the landscape units include geology, vegetation, topography and drainage patterns, as well as the extent of man-modifications and urban development.

The landscape sensitivity of each of the landscape units is the degree to which the particular landscape can undergo further change. Generally, the greater the extent of man-modifications, the lesser its sensitivity to change.

Seen area analysis

Typically, as part of a visual assessment, Geographical Information Systems software (GIS) can provide a Seen Area Analysis (SAA) which illustrates those areas from which the solar farm could be visible, as a whole or in part. The SAA does not take into account vegetation, built form nor minor intervening topographical features such as small road cuttings.

However, the existing topography of the solar farm and the surrounding landscape is one that is very flat and therefore apart from the shielding afforded by Bald Hill, there is little in the way of topographical relief which would restrict views to the solar farm from the surrounding landscape. Therefore, a SAA has not been prepared for this project.

Viewpoint assessment

The assessment of the potential visual impact is undertaken from indicative viewpoints within the public domain and from residential properties.

Public domain viewpoints

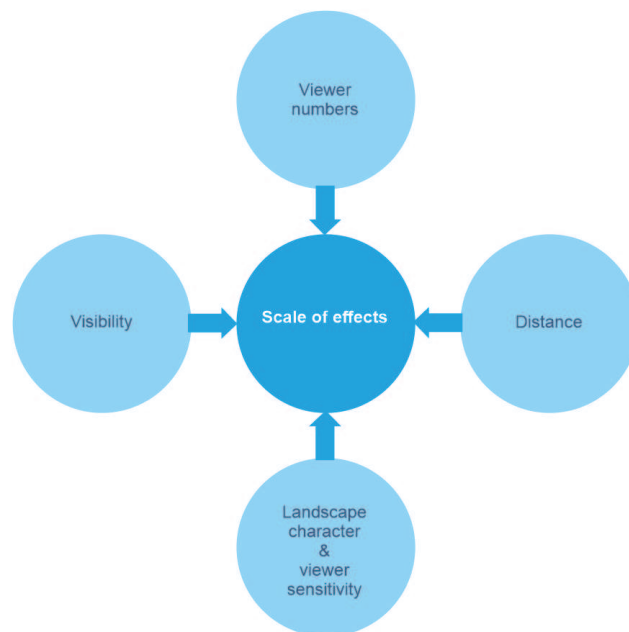
In assessing the visual impact of a solar farm from the public domain, the assessment of visual impact is undertaken from a range of publicly accessible viewpoints and is based on four criteria:

- **Visibility:** The visibility of the solar farm can be affected by intervening topography, vegetation and buildings.
- **Distance:** The distance of the viewer from the proposed nearest component of the solar farm. The level of visual impact decreases as distance increases.

- Landscape character and viewer sensitivity: The character of the surrounding landscape, both around the site and adjacent to the viewing location, must be considered. Generally, a man-modified landscape is considered of lower sensitivity and a pristine landscape is considered highly sensitive. A residential townscape would be given a higher sensitivity than an industrial landscape.
- Number of viewers: The level of visual impact decreases where there are fewer people able to view the solar farm. Alternatively, the level of visual impact increases where views are from a recognised vantage point. Viewer numbers from a recognised vantage point would be rated as high.

This is diagrammatically illustrated in **Figure 2**.

Figure 2 Visual impact – publicly accessible viewpoints

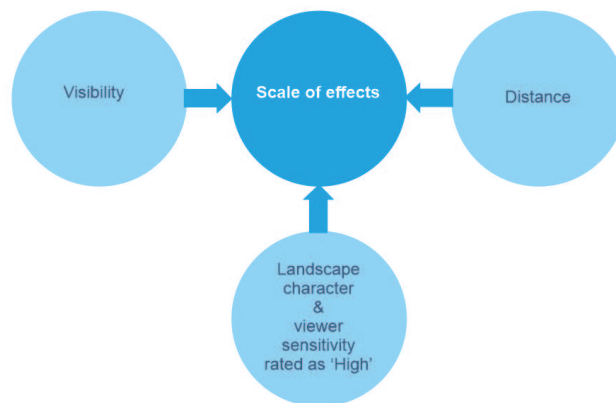


These four criteria need to be considered in the assessment of visual impact. However, the ratings of each criterion are not numerically based and cannot be simply added together and averaged to arrive at an overall rating.

Private domain viewpoints

The assessment of visual impact from residential properties is slightly different to one undertaken from publicly accessible viewpoints. An assessment of viewer numbers is not relevant and the landscape sensitivity is always rated as “high,” as it must be recognised that people feel most strongly about the view from their house and from their outdoor living spaces. Furthermore, occupants of residential properties are regularly observing from their house whereas persons viewing the Solar farm Area from publicly accessible viewpoints are typically only at those points for comparatively short periods of time.

Figure 3 Visual impact – residential viewpoints



The visibility of the solar farm and the distance between the residential location and the solar farm are the two criteria that vary within an assessment of the visual impact from a residential property. Viewer sensitivity is always rated as “high”.

The same ‘Scale of Effects’ is used for both the assessment of the visual impact from publicly accessible viewpoints and from residential locations.

Scale of Effects

The scale of effects, for rating the overall visual impact of the solar farm from publicly accessible and residential viewpoints, range from no impact (**nil**) to a potentially **positive** visual impact. Negative visual impacts are graded from **negligible** to **high**.

Nil – there would be no perceptible visual change.

Positive – would be a visual change that improves the outlook or view.

Negligible – minute level of effect that is barely discernible over ordinary day-to-day effects. The assessment of a “negligible” level of visual impact is usually based on distance. That is, the solar farm would either be at such a distance that, when visible in good weather, the solar farm would be a minute element in the view within a man-modified landscape or it would be predominantly screened by intervening topography and vegetation.

Low – visual impacts that are noticeable but that will not cause any significant adverse impacts. The assessment of a “low” level of visual impact would be derived if the rating of any one of four criteria, that is visibility, distance, viewer numbers and landscape sensitivity, is assessed as low.

Therefore, a solar farm in a landscape which is man-modified, and which already contains many buildings or other structures, may be rated as a low level of visual impact. Similarly, if the distance from which it is viewed means that its scale is similar to other elements in the landscape it would also be assessed as a low level of visual impact.

Medium – visual impact occurs when significant effects may be able to be mitigated / remedied. The assessment of a “medium” visual impact will depend upon all four-assessment criteria being assessed as higher than “low.”

High or unacceptable adverse effect – extensive adverse effects that cannot be avoided, remedied or mitigated. The assessment of a “high or unacceptable adverse effect” from a publicly accessible viewpoint requires the assessment of all four factors to be high. For example, a highly sensitive landscape, viewed by many people, with the solar farm in close proximity and views that were unable to be screened or filtered would lead to an assessment of an unacceptable adverse effect.

Photomontages

Photomontages can assist in the assessment of individual viewpoints by illustrating the scale and location of the solar farm and ancillary earthworks in the existing landscape.

The photomontages show the changes in a 60° horizontal field of view. This horizontal field of view represents the central cone of view in which symbol recognition and colour discrimination can occur. The vertical field of view is between 10° - 15° . The field of view of human vision is shown in **Figure 4**.

Figure 4 Horizontal and vertical fields of view

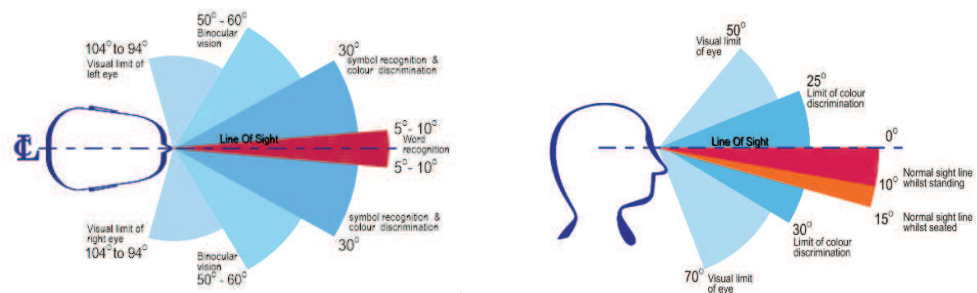


Figure 4 is based upon a diagram within '*Human Dimension and Interior Space*', Julius Panero & Martin Zelnik, *Witney Library of Design*, 1979. Similar data can be found in the more recent publication entitled '*The Measure of Man and Woman, Revised Edition*', Henry Dreyfuss Associates, John Wiley & Sons, 2012.

The photomontages appended to this report are shown with a 60° field of view. Panoramas are included to show the full extent of the solar farm and the entire wireframe image that was the basis of the photomontages

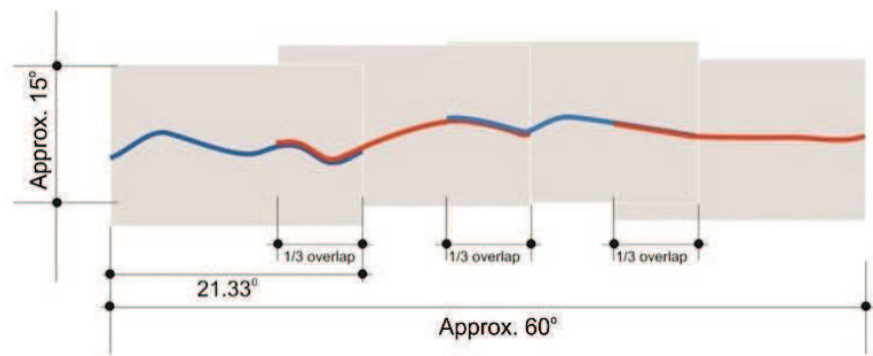
It is recognised that the small photographs and the A3 photomontages included within this assessment whilst technically accurate, are not perceptually accurate, as objects in smaller images do not appear to be of the correct scale. The A3 images, which are appended to this report (Annex B), are clearer than the smaller images in the text, as these are larger. A0 photomontages have been prepared and will be made available and these provide a clear indication of the actual visual impact – these are perceptually accurate.

Camera data

The photography used in the photomontages was taken with a 60 mm lens on a Nikon D5 digital camera. This lens has a picture angle of 26.5° and a horizontal angle of view of approximately 21.3° . (http://nikonimaging.com/global/products/lens/af/micro/af_micro60_mmf_28d/).

The camera was held at eye level, approximately 1.65 m above ground level. Four photographs overlapped 1/3 to create an image approximately the same as the central cone of view of human vision, i.e. $50\text{--}70^{\circ}$ horizontal and 15° vertical. **Figure 5** demonstrates the overlap of the photographs which are used to create the panorama in the photomontages.

Figure 5 Photomontage construction



Computer modelling and the wireframe model

The computer modelling of the solar farm to create the photomontages utilises computer-based 3D data. Cadastral data as well as the proposed panels within the solar farm are modelled within a computer program (3D Max). A virtual camera is set up in the model at the GPS coordinates for each of the photographs that are being used within the panorama.

The digital model or wireframe view is then overlaid on the photographic panorama. Known points within survey information such as topography, building locations or other infrastructure are registered into the base photographs (or other predetermined points). For technical accuracy, these points must align. This verifies the location and apparent height and scale of the solar farm.

After the background reference points have been aligned, the visible components of the solar farm, are rendered.

GPS Coordinates and camera metadata

GPS coordinates at each publicly accessible or residential viewpoint were recorded on a separate hand-held GPS as well as on camera metadata from a GPS unit attached to the camera. This attached GPS unit gives both the GPS coordinates, the altitude of the camera as well as the bearing (Geographic North / Magnetic North) along the centre point of each photograph.

Figure 6 Photography meta data (Source: GeoSetter)

GPS Data		
	Decimal	Sexagesimal
Latitude:	-37.06503833	S37°3'54.14"
Longitude:	143.88902000	E143°53'20.47"
Image Direction [°]:	249.20	Magnetic North
Dest. Latitude:		
Dest. Longitude:		
Altitude [m]: 240.0		
Get from Web		Get All from Web

The locations from which the photographs were taken are also marked on a digital map within Google Earth Pro and the image and location was checked against the Google Earth Street View image, where this was available, to provide a further check on the veracity of the location.

Where distances and bearings are given for the public domain and residential viewpoints, these were calculated using Google Earth. Google Earth provides True North (Geographic North) bearings.

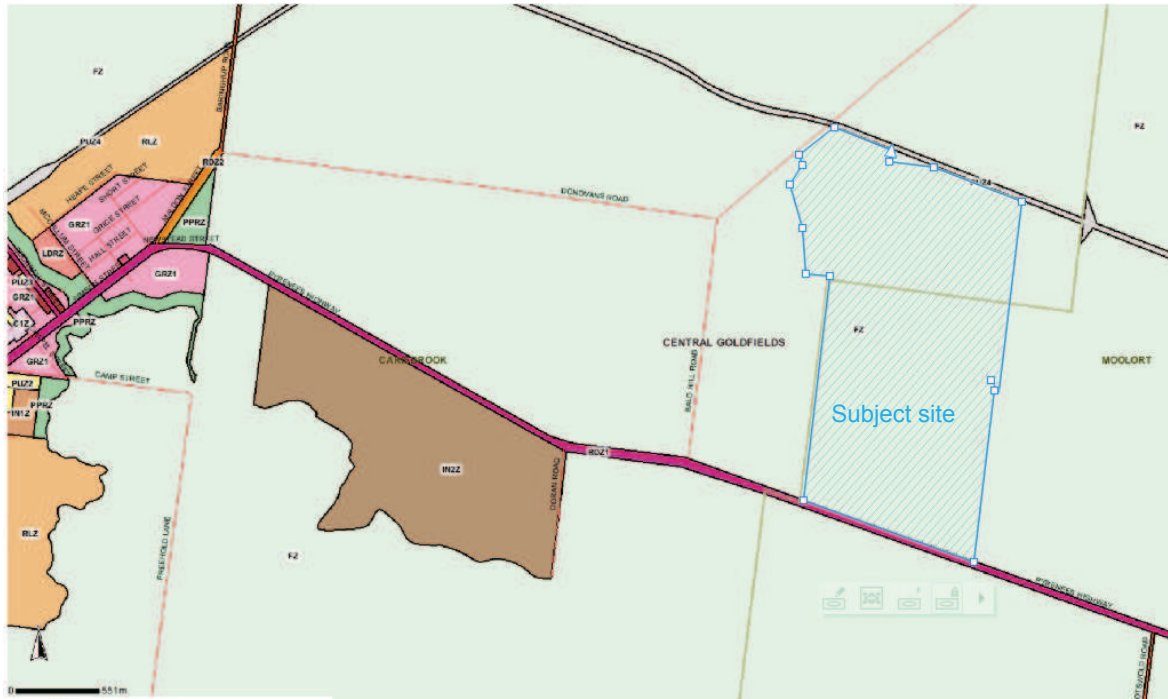
3. Planning background

The subject site is within the Central Goldfields Planning Scheme.

Zoning

Figure 7 shows the current zones and the light blue hatched area designates the subject site.

Figure 7 Zoning (Map source – Planning Maps Victoria)



The subject site and the surrounding land is zoned Farm Zone (FZ). There is an area on the opposite side of the Pyrenees Highway that is zoned Industrial Zone (IN2Z). At the eastern edge of this industrial zoned land, immediately west of Doran Road, is the 'Hanson Construction Material, Carisbrook' Quarry.

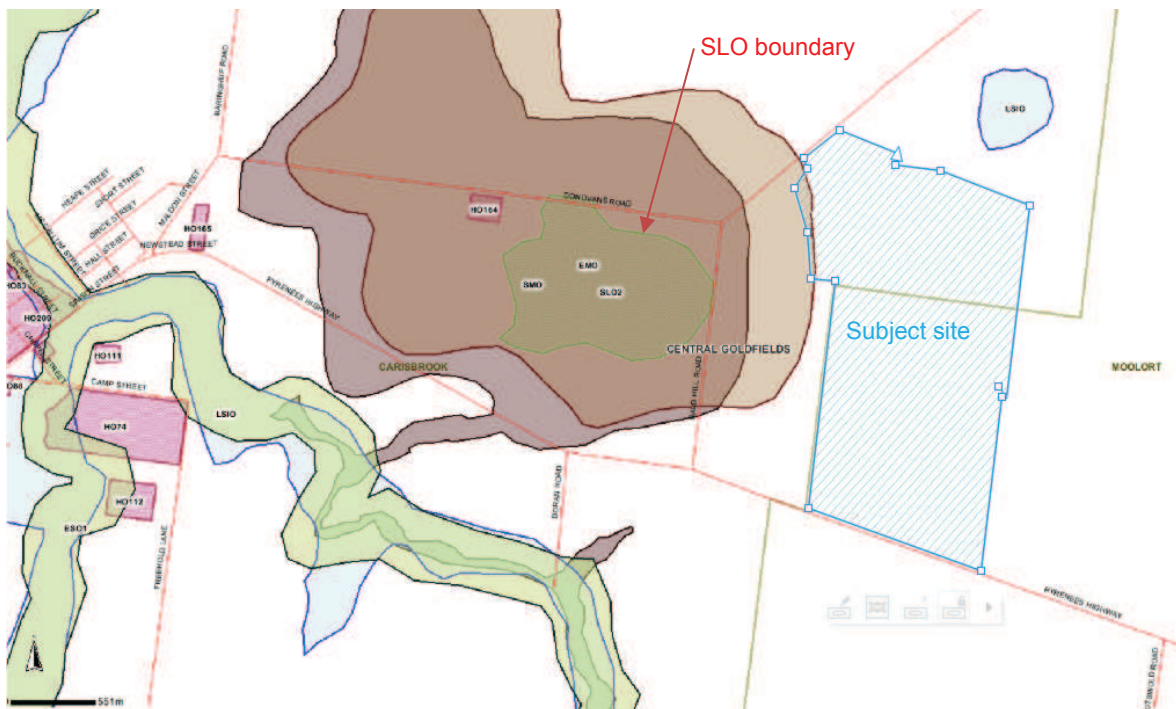
The location of the Industrial Zone is of significance for this assessment, as it is about the same distance as the subject site from the Significant Landscape Overlay (SLO2) which is discussed in the following section of this report.

The urban areas of Carisbrook and their associated zoning is visible on the left of **Figure 7** and the grey strip to the north of the subject site is a Public Use – Transport (PUZ4) which is associated with the Castlemaine and Dunolly Rail line located in this corridor.

Overlays

Figure 8 shows the overlays on or adjacent to the subject site.

Figure 8 Overlays (Map source – Planning Maps Victoria)



Relevant to the assessment is the area designated as a Significant Landscape (SLO2), which is the green shaded area within the brown and tan overlay areas, which designate an Erosion Management Overlay (EMO) and a Salinity Management Overlay (SMO). There is a small area designated within a Heritage Overlay (HO164) on the south side of Donovans Road.

Significant Landscape Overlay (SLO2) Talbot District Volcanic Rises

The overlay recognises the ridges and rises of the volcanic plains. The landscape character objectives to be achieved are:

- To provide for the protection of existing vegetation and landforms in areas which are either visually sensitive, of scientific or geological importance, and possess natural features which have a high degree of landscape.
- To ensure that the scenic and recreational value of scenic routes throughout the Central Goldfields and its region, are not compromised by the inappropriate siting and design of buildings.

The decision guidelines include:

- The net effect of the height, bulk and general appearance of the proposed buildings and works on the scenic value of the landscape features and areas.
- The need for building materials to be non-reflective or of colours that complement the landscape.
- The need for landscaping or vegetation screening.

Significance of the overlays to this assessment

The overlays seek to preserve the landscape and topographical dominance of Bald Hill. However, the SLO does not seek to sterilise the surrounding land as both the Council's designation of the Industrial Zone on the opposite side of the Highway and the presence of buildings to the west of Bald Hill Road clearly illustrate.

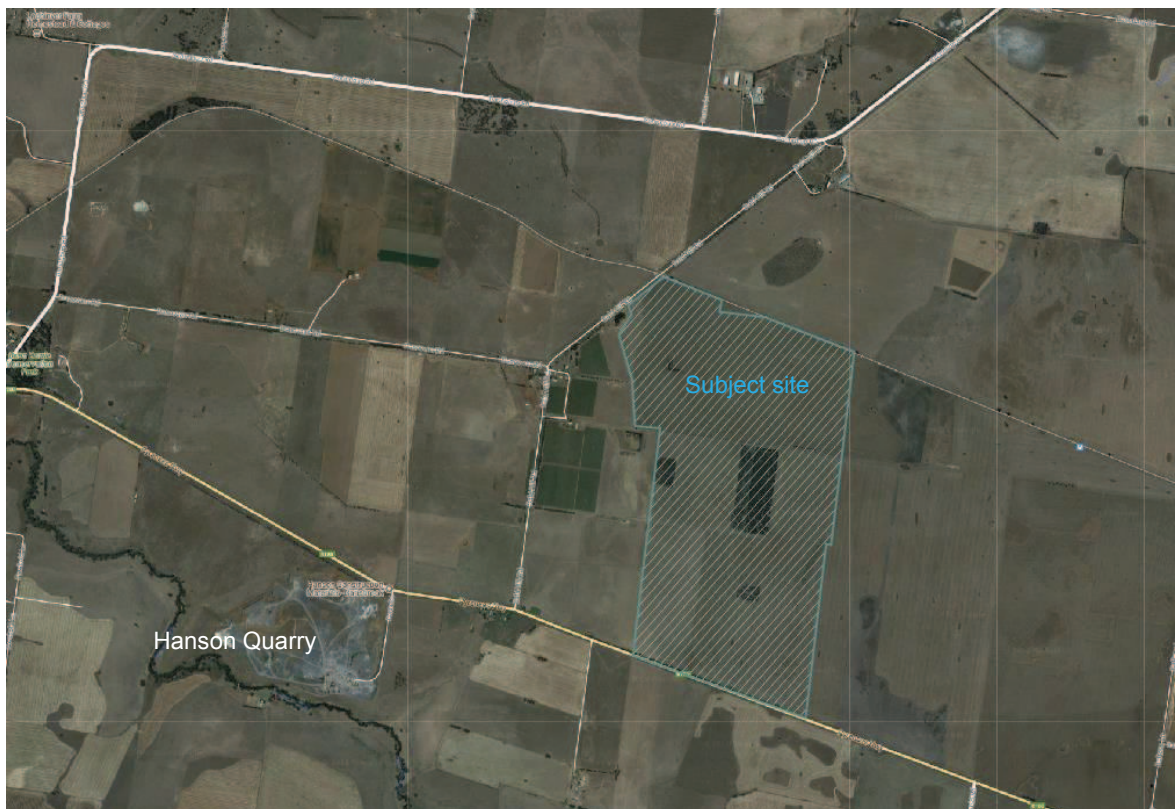
4. The subject site & environs

The subject site is bordered by rural farmland with associated residential properties.

Existing land uses and vegetation

Figure 9 shows the current site and adjoining land uses. The location of the subject site is shown by the blue hatched area. The Hanson Quarry mentioned previously is to the south west on the opposite side of the Pyrenees Highway.

Figure 9 Property location (Source: Nearmap, Imagery 01 January 2015)



There is limited vegetation on the subject site, as most of the land has been cleared for farming. There is vegetation along the boundary of Bald Hill Road as well as established Eucalypts along the northern side of the Pyrenees Highway. There is also a strip of She-oak (*Allocasuarina sp.*) along the southern side of Boundary Road, which is the road just visible in the north east corner of **Figure 9**.

The proposed landscaping is based on these existing plantings adjacent or near the subject site.

Topography

Apart from Bald Hill, which is not part of the subject site, the subject site and the surrounding landscape is very flat.

The highpoint of the subject site is approximately 243.5 AHD on the south east corner of the subject site adjacent to the Pyrenees Highway with the low point of the subject site being 219.40 AHD adjacent to Bald Hill Road in the north west corner of the subject site.

This gives a fall of 24.1 m over a distance of approximately 3000 m, a resultant grade of approximately 1:125.

The subject site sits at the base of Bald Hill which is the dominant topographical feature in the existing landscape.

Figure 10 *Bald Hill looking west along Boundary Road*



Existing vegetation

Boundary planting is establishing along the frontage of the subject site in the road reserve parallel to the Pyrenees Highway. This existing planting of Sugar Gums (*Eucalyptus cladocalyx*) is shown in **Figure 11**.

Figure 11 Existing planting along the Pyrenees Highway looking east



The subject site is to the left of **Figure 11**. It is also apparent in this Figure that the subject site is exceptionally flat with views in this direction showing no topographical variation.

Other planting occurs as individual trees and in hedgerows visible across this basaltic plain. In **Figure 12** is an example of remnant mature Sheoak.

Figure 12 Existing planting



Further north Boundary Road has a hedge-like row of Sheoak (*Allocasuarina sp.*) planted adjacent to the roadside.

Figure 13 Existing planting on Boundary Road



The Sheoak, with the occasional Wattle / Eucalypt mixture provides a dense visual screen along this section of Boundary Road.

These species will be used in the 20 m buffer planting proposed on the southern and western edges of the solar farm.

5. Proposed landscaping

The plants utilised in the proposed landscape buffer planting and heights that may be anticipated in 5-10 years are listed below.

Botanical Name	Common Name	Height
Acacia melanoxylon	Blackwood	3-7m
Allocasuarina littoralis	Black Sheoak	3-6m
Allocasuarina verticillata	Drooping Sheoak	3-7m
Allocasuarina luehmannii	Buloke	3-5m
Eucalyptus leucoxylon	Yellow Gum	3-10m
Eucalyptus melliodora	Yellow Box	3-10m
Eucalyptus macrocarpa	Grey Box	3-10m

It is recognised that this is a harsh environment for growing trees and these heights are much below the eventual mature heights that these species can grow to. However, these heights have been used as the basis for the heights of vegetation in the photomontages and discussed later in this report.

Figure 14 Proposed planting

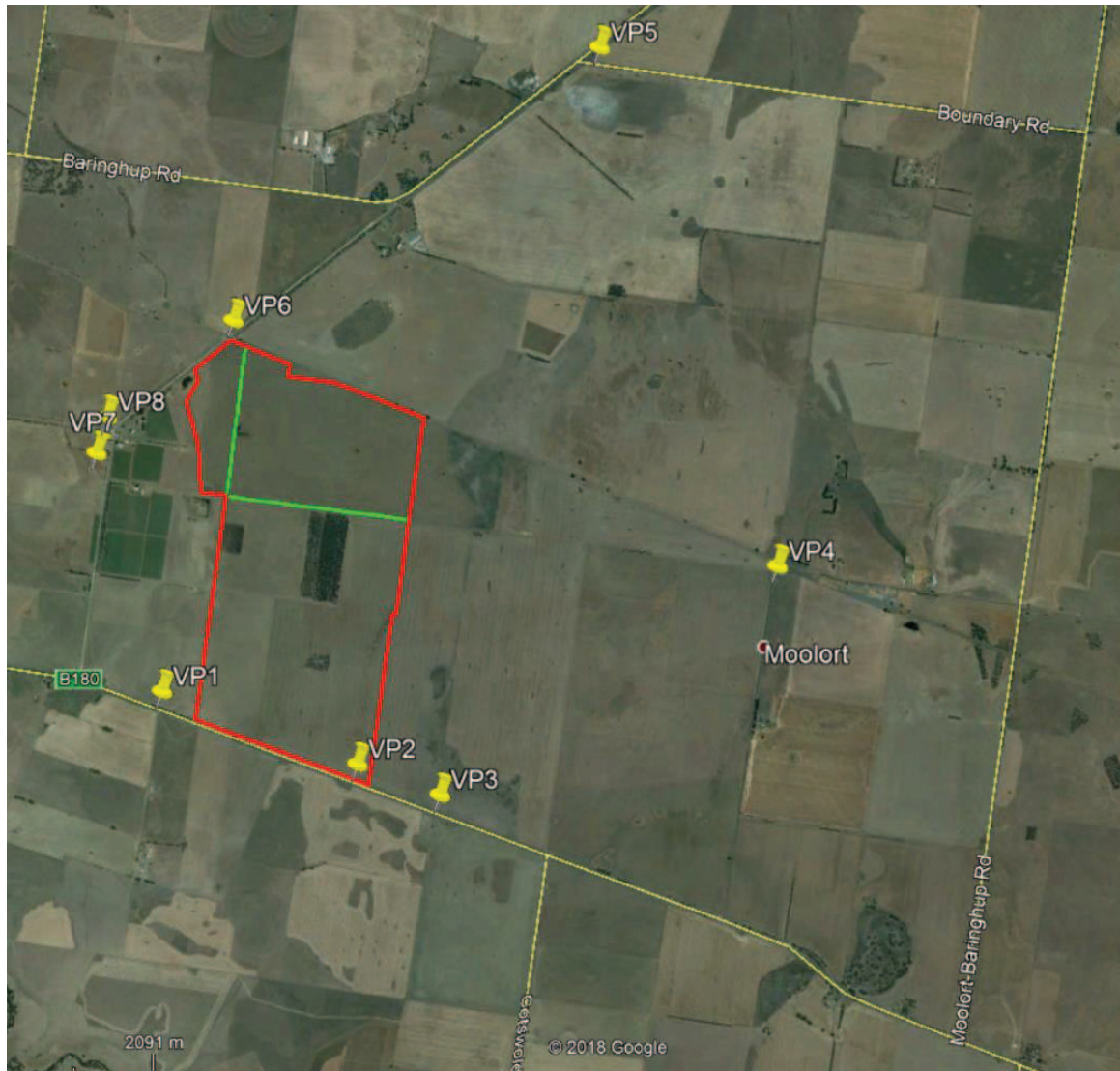


The landscape buffer planting is shown on the western and southern side of the solar farm. An A3 version of this plan is appended to this report.

6. Visual assessment

In analysing the potential visual impact, the impact and potential change at a number of different locations were assessed. **Figure 15** shows the location of viewpoints that demonstrate the range of views to the solar farm. The red line designates the subject site.

Figure 15 Viewpoint locations (Map source: Google Earth Pro)



The view from each of these viewpoints is discussed in the following sections.

Viewpoint 1 – Pyrenees Highway #1

Viewpoint 1 (VP1) is approximately 250 m west of the solar farm's south western corner.

Figure 16

VP1 – Existing view looking east



The Pyrenees Highway is bordered by Sugar Gums along this section of the highway. Initially the solar farm would be visible and in the early stages there would be a change to the landscape. The visual impact would partly depend upon people's perception of the panels as they would be a different landscape element. However, even for travellers who disliked the presence of the solar farm panels, any view would be momentary as one passed on the highway. This is not a location where people stop and admire a view.

For these reasons immediately after construction the visual impact would be assessed as **Low**.

But in time, as vegetation matures, the visual impact would reduce to Nil and for some people the border of trees may even be **Positive**.

Viewpoint 2 - Pyrenees Highway #2

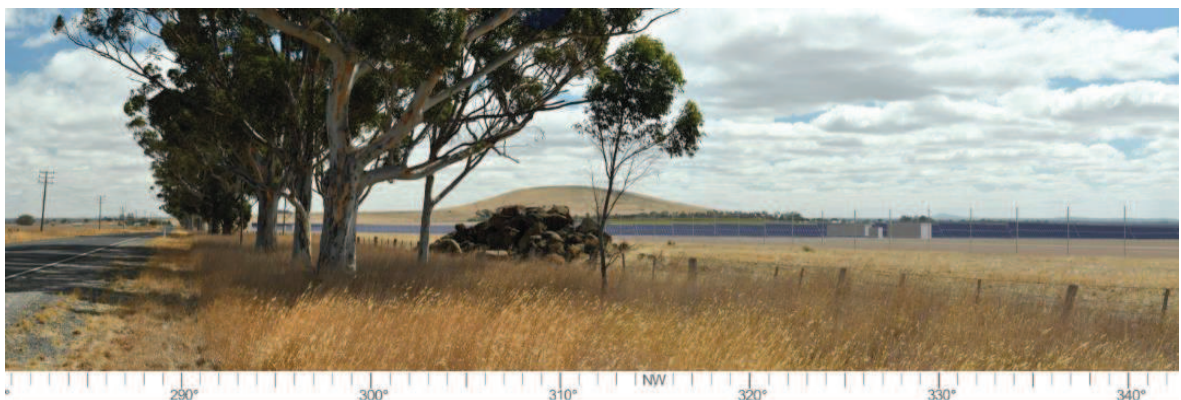
Viewpoint 2 (VP2) is approximately at the eastern end of the proposed solar farm. **Figure 17** is a view looking west back towards Bald Hill.

Figure 17 VP2 – Existing view looking north west



This location shows the impact of the solar farm in the foreground of a view to Bald Hill. A photomontage has been prepared to show how the solar panels will look in this landscape.

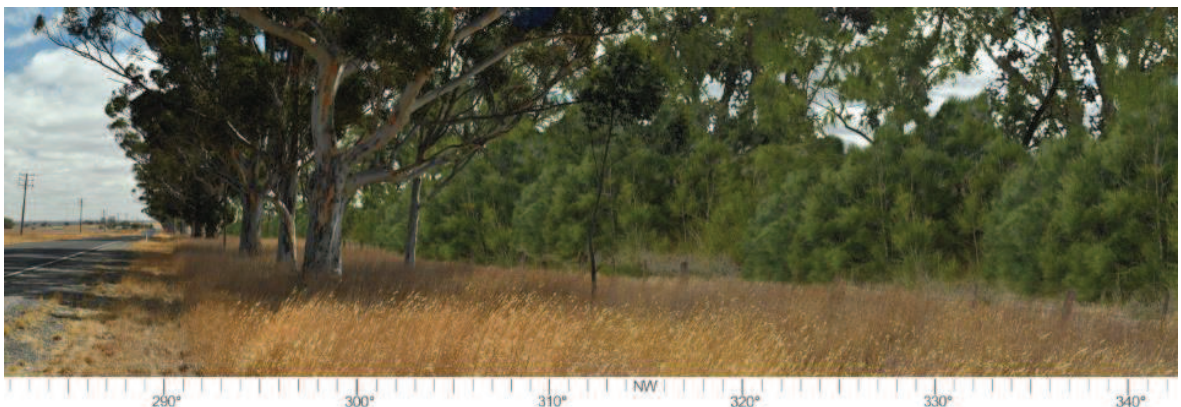
Figure 18 VP2 Photomontage (without vegetation)



Even without any vegetation the proposed solar farm is a low element in this expansive landscape. A pile of rocks in the foreground is visually larger than the solar panels behind.

The view to the solar farm would be completely screened once the 20 m buffer planting was established.

Figure 19 VP2 Photomontage (with vegetation)



However, even for travellers who disliked the presence of the solar farm panels, any view would be momentary as one passed on the highway. This is not a location where people stop and admire a view.

For these reasons immediately after construction the visual impact would be assessed as **Low**.

But in time, as vegetation matures, the visual impact would reduce to Nil and for some people the border of trees may even be **Positive**.

Viewpoint 3 - Pyrenees Highway #3

Viewpoint 3 (VP3) is located on the Pyrenees Highway approximately 450 m east of the edge of the solar farm. Bald Hill is visible in the background.

Figure 20 VP3 – Existing view looking west



The proposed solar farm may just be visible from VP3 in the short term. For these reasons the overall visual impact from VP#3 would be assessed as **Negligible**.

Viewpoint 4

Viewpoint 4 (VP4) is located at the corner of Buttons Lane approximately 2.4 km from the solar farm. This viewpoint looks towards the west towards Bald Hill which is just visible in the background, on the left of **Figure 21**. Piles of rock and a lone tree are also visible.

Figure 21 VP 4 – Existing view looking west



There is a slight ridge between this location and Bald Hill which would screen any view to the solar farm. This very gentle ridge is sufficient to screen the lower sections of Bald Hill. For these reasons the overall visual impact from VP#4 would be assessed as **Nil**.

Viewpoint 5

Viewpoint 4 (VP4) is located at the corner of Boundary Road and Baringhup Road approximately 2.7 km from the solar farm. This viewpoint looks towards the south with Bald Hill which is just visible in the background, on the right of **Figure 22**. Lines of existing trees are visible in the middle distance. These tree lines would be between the solar farm and this viewpoint.

Figure 22 VP 5 – Existing view looking south



Both the distance and this intervening vegetation would mean that, at worst, the solar farm would be barely visible. As well, this is a little used road.

For these reasons the overall visual impact from VP5 would be assessed as **Negligible**.

Viewpoint 6

Viewpoint 6 (VP6) is located on Bald Hill Road south of Baringhup Road on the north western corner of the solar farm where Bald Hill Road crosses the railway line. Bald Hill Road, north of this viewpoint, is lined with trees.

VP6 is taken at the rail crossing and Bald Hill Road is visible on the right of **Figure 23**.

Figure 23 VP 6 – Existing view looking south



This is a little used road. The proposed solar panels would be visible in the immediate foreground. However, given the low usage and the horizontal nature of the solar farm, the visual impact from VP6 would be assessed as **Low**.

Viewpoint 7

Viewpoint 7 (VP7) is located from a residence on the side of Bald Hill at 1069 Bald Hill Road with an elevated view over the proposed solar farm. This viewpoint is approximately 700 m west of the solar farm.

The existing house, from where the photographs were taken, is shown **Figure 24**. Photographs were taken from the front verandah.

Figure 24 VP 7 – Existing house



Photographs were taken from the front verandah.

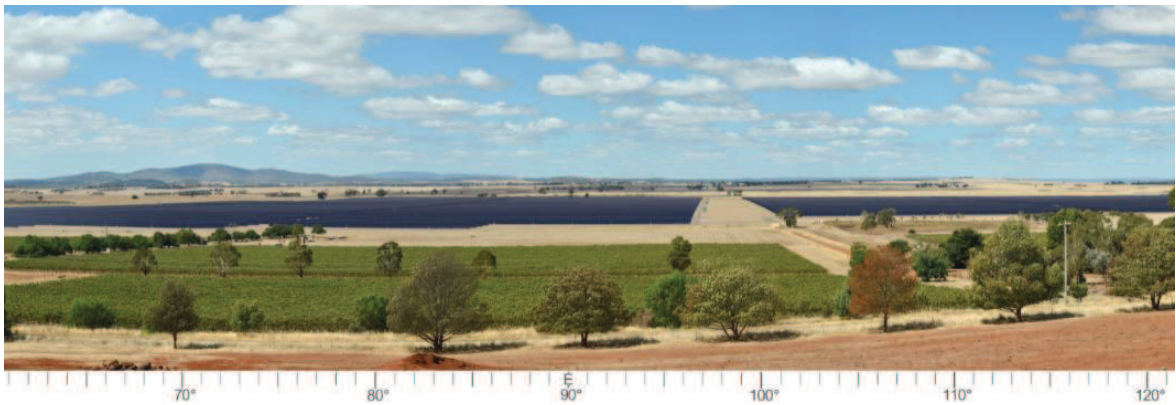
Figure 25 VP 7 – Existing view looking east



This is a panoramic view with the mountains in the background. This residence looks over a rural landscape with rectangular parcels of land containing varying agricultural uses including grapes, pasture and wood lots. It is a man-modified landscape, but nonetheless, very appealing.

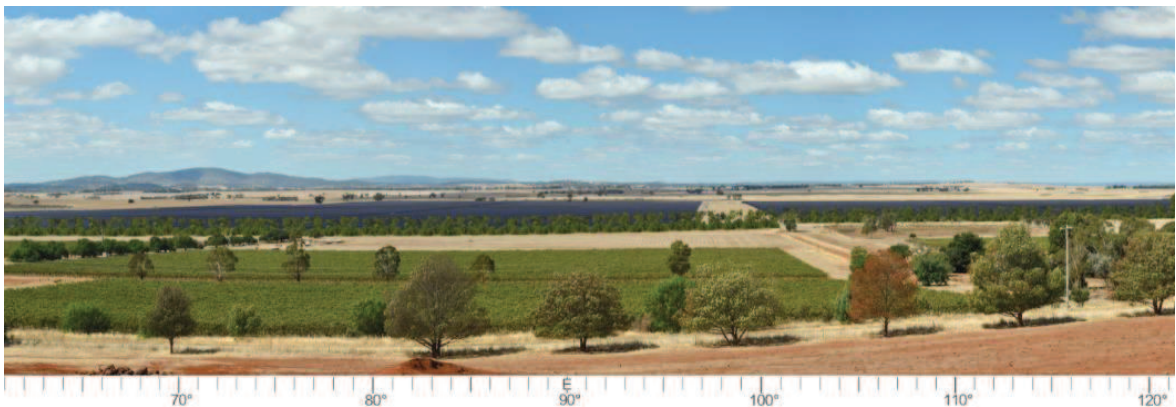
The solar panels would be visible in the middle distance and these are shown in the photomontage in **Figure 26**.

Figure 26 VP 7 – Photomontage (without vegetation)



The rectangular outline of the solar panels is an obvious, additional element in the landscape, albeit at some distance. Although the solar panels are visible, the overall visual impact would be assessed as **Medium**, as this impact can be reduced by planting and the solar farm is approximately 700m from this residence. This planting is shown in **Figure 27**.

Figure 27 VP 7 – Photomontage (with vegetation)



In the photomontage with vegetation the proposed planting along the western edge of the solar farm will place a linear band of vegetation across this panoramic view, whilst not blocking views to the mountains and the plains beyond. The solar farm could be seen as an intriguing element in the view.

However, even assuming a conservative assessment based upon a dislike for this particular change, there is no doubt that planting has reduced the level of impact. For these reasons the level of visual impact once planting is established is assessed as **Low**.

Viewpoint 8

Viewpoint 8 (VP8) is located from a residence on the side Bald Hill Road, but lower in elevation than VP7. This viewpoint is approximately 590 m west of the solar farm.

The existing house, from where the photographs were taken is shown **Figure 24**. Photographs were taken from the front verandah.

Figure 28 VP 8 – Existing house



Photographs were taken from the front verandah.

Figure 29 VP 8 – Existing view looking east



This is not a panoramic view, but one constrained by existing garden planting. This residence is also lower than that assessed at VP7.

The solar panels may be visible in the middle distance, but they will be a relatively small addition to this particular view and therefore the level of visual impact from VP8 is assessed as **Low to Negligible**.

7. Conclusion

Views from the Pyrenees Highway

The proposed solar farm is located adjacent to the Pyrenees Highway and for a while, before planting establishes, there will be some visual impact. But this is a highway that passes many forms of landscape, sheds and other constructions. The time that a viewer would be able to see the solar farm would be of short duration. Once landscaping was established, the solar farm would be largely screened from view, although filtered views through the trees may still be possible. Therefore, the level of visual impact from the Pyrenees Highway would be **Low** to **Negligible**.

Views from the local road network

Any views from the local road network are limited. A driver needs to be immediately adjacent to the solar farm on its western edge to obtain a view. These roads also have low useage and for these reasons the visual impact from the local road network is assessed as **Negligible**.

Views from residential properties

There appears to be only two dwellings that have a visual impact. Other dwellings are further removed and would be unable to see the proposed solar farm.

Only one dwelling has a panoramic view over the solar farm and that view would be partially mitigated once vegetation was established.

Therefore, the proposed solar farm is appropriately sited with minimal visual impact. The landscape setting which is being established is consistent with the landscape of the Bald Hills area.

Annexure A

Landscape plan

13 August 2018

ib vogt GmbH
Level 35,
1 International Tower,
100 Barangaroo Avenue,
SYDNEY NSW 2000

Attention: Mr Simon Kerrison
Email: Simon.Kerrison@ibvogt.com

Reference No: 15127 / L2

RE: Carisbrook Solar Farm – Layout amendments

Dear Simon,

Further to your email I have examined the amended layout for the Carisbrook solar farm (2512.M4.001.0.F_Carisbrook_Module_Array_Layout).

Although the drawing has changed slightly to incorporate more inverter buildings the solar panel layout has remained unchanged from that layout which was the basis for the modelling and the subsequent photomontages. The security fence remains in the same location.

For these reasons I do not believe that it is either necessary or desirable to change either my report or the accompanying photomontages.

If you have any queries, please do not hesitate to contact me.

Yours sincerely,

for XURBAN



Allan Wyatt – *Landscape Architect*

Urban Design
Landscape Architecture
Visual assessment

Suite 1103 / 408 Lonsdale Street
Melbourne 3000
Victoria Australia
Telephone: +61 3 9642 8040
Web: xurban.com.au

ABN: 18831715013

Plant Schedule

Botanical name	Common name
Eucalyptus albens	White Box
Eucalyptus blakelyi	Blakely's Red-gum
Eucalyptus camaldulensis	River Red-gum
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Grey Box
Allocasurina luehmannii	Buloke

Establishment

Order plants as tube stock from a local nursery specialising in growing from local provenance seed.

Weedicide existing grass in landscape buffer areas, avoid existing Eucalypt / Buloke seedlings if present.

Rip area to be planted to a minimum depth of 500mm when the soil is moist, preferably around April / May or early June.

Fence landscape buffer area with stock proof / rabbit proof farm fence.

Rotary hoe areas after grasses have died and before planting. Lightly harrow.

Plant trees (tubes or enviro-cells) with individual rabbit guards, preferably in Autumn.

In 'landscape buffer' areas plant at one tree approximately every 2m in linear rows, rows at 2.5m centres (ie. 7 rows of plants).

Completely control all vegetation within 1m of seedlings for the first 2 years.

Legend

Title Boundaries	Existing trees
Farm fence	Landscape buffer



Scale:



North

Project: Carisbrook Solar Farm	Date: 27 June 2018
For: ib vogt GmbH	Project No: 15127
Drawing:	Amendment:

Landscape Plan LS1

