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# MEMO

To: David Walker, Planning & Project Manager, Premise  
From: Suzie Rawlinson, Director  
Date: 11 April, 2023  
Re: **Merino Solar Farm Project**  
Landscape and visual amenity preliminary assessment for scoping report

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## 1. Introduction

ITP and Terrain Solar are proposing an approximately 450 MW solar farm and associated works at Tirrannaville, south of Goulburn, known as Merino solar farm (Refer **Attachment A, Figure 1**). The site includes two discrete areas, that are separated by an area of about two kilometres. These sites are located generally to the north and south. The site is located in the Goulburn Mulwaree Council Local Government Area (LGA).

## 2. Site landscape character and landform

The site is located to the south of Goulburn in an area of undulating landform partly surrounded by ridgelines and hills (refer to **Attachment A, Figure 2**).

The northern site has a gently undulating terrain, including several dams and a shallow valley extending north-south through the centre of the site, rising to low ridges to the east and west of the site. The landform ranges from a low point of 643 metres at the northern end of the site, to high points of about 684 metres at the south eastern and western edges of the site, a variation in height of about 40 metres (refer to **Attachment A, Figure 2 and 4**).

The southern site is flatter and low lying, ranging generally between about 644-655 metres elevation, a variation in height of about 11 metres, except for a small hill at the northern end of the site, which rises to about 668 metres (refer to **Attachment A, Figure 2 and 4**).

The site is currently open grazing pastures and sown paddocks. There are some scattered trees in central parts of the northern site within the valley, and there is a dense corridor of trees along the western edge of the southern site, alongside Braidwood Road.

The landscape surrounding the site is characterised by largely open fields, with corridors of vegetation located along field boundaries and roads, vegetated creeks, hill tops and ridgelines, and with trees within gardens surrounding scattered rural dwellings.

The Hume Highway is located about four kilometres to the north of the site, aligned generally east to west and to the south of the Goulburn town centre. The Main Southern Railway line also passes through Goulburn and is located to the west and at a distance of about four kilometres from the site.

There are several transmission line corridors in the vicinity of the site. This includes a 66Kv line which is located to the west of the site and aligned generally north south. This line comes within one kilometre of the southern

site area. There is a 330kV line about two kilometres to the north of the northern site and a second 330kV line that directly to the south of the northern site area, passing between the to areas of the project site (refer to **Attachment A, Figure 2**)

### 3. Relevant planning considerations

The site is within the South East and Tablelands Region and Goulburn Mulwaree Council area. The following review identifies key documents which provide relevant planning provisions that relate to the matters considered in this memo.

#### 4.1 State Environmental Planning Policy (Transport and Infrastructure) 2007

The *State Environmental Planning Policy (Transport and Infrastructure)* (the TI SEPP) sets out the planning rules and controls for regionally and state significant renewable energy development in NSW. The TI SEPP identifies Goulburn as a Regional City, with a mapped area that broadly covers an area comprising a 10-kilometres from the urban areas of Goulburn.

The following provision applies to areas identified on the Regional Cities Map – Goulburn:

*Clause 2.42, (2) 'Development consent must not be granted unless the consent authority is satisfied that the development—*

*(a) is located to avoid significant conflict with existing or approved residential or commercial uses of land surrounding the development, and*

*(b) is unlikely to have a significant adverse impact on the regional city's—*

*(i) capacity for growth, or*

*(ii) scenic quality and landscape character.*

The northern area of this project is located within the area identified on the TI SEPP Regional Cities Map – Goulburn.

#### 4.2 Draft South East and Tablelands Regional Plan 2041

This Plan (NSW Department of Planning and Environment, 2022) is intended to guide the land use planning priorities for the region over the next 20 years. Objective 4 aims to preserve the heritage and character of the region's towns and villages. It says that the ... '*region's scenic and cultural landscapes provide unique settings for its urban areas and a strong link to its natural and historic landscapes*' (p.42). It further describes the rural character of the region is a '*prized asset*' (p.95).

The renewable energy industry is recognised as '*priority growth sector*' in the region (p.67) and supports the investigations for the '*declaration of a renewable energy zone in the region*' (p.68). Objective 8 also aims for '*a net zero region by 2050*' and describes the region as a '*well-established hub for renewable energy with its many wind and solar farms*' (p.31).

#### 4.3 Goulburn Local Strategic Planning Statement 2020

The Goulburn Local Strategic Planning Statement (LSPS) sets out the 20 year vision for land-use in the local government area, which includes the site (Goulburn Mulwaree Council, 2022).

Planning Priority 4: Housing, encourages higher density residential development closer to the Goulburn CBD and relies on the '*already zoned urban land to continue to deliver infill and medium density housing in suitable locations*' (Planning Priority 4, p.24). The project site is located in the rural area south of Goulburn and is not identified within or near any areas identified for residential expansion in the LSPS.

The closest area of proposed housing is located about 1.5 kilometres to the north of the northern site, at Brisbane Grove, where 132 large lot dwellings are proposed in the (Attachment 2a, Urban and Fringe Housing Strategy - Goulburn).

Planning Priority 5: Primary Industry aims to *'promote renewable energy projects'* (p.28). The LSPS says, *'the co-location of renewable energy projects should occur where possible, in order to maximise infrastructure, including corridors with access to the electricity network'* (p.28). The regional context plan identifies a *'wind farm corridor'* to the west of Goulburn (p.11).

#### 4.4 Goulburn Mulwaree Local Environmental Plan 2009

The purpose of the Goulburn Mulwaree Local Environmental Plan 2009 ('the LEP') is to... *'to provide direction and guidance as to the manner in which growth and change are to be managed in Goulburn Mulwaree'* (cl.1.2.2j).

##### Land use zoning

The site is in the RU1 Primary Production zone, which aims to... *'minimise the visual impact of development on the rural landscape'* (Land Use Table, Zone RU1 objectives). The LEP also aims to... *'allow the development of non-agricultural land uses which are compatible with the character of the zone'* in this zone (Land Use Table, Zone RU1 objectives).

Land to the north west of the northern site is zoned RU6 Transition, which aims to... *'protect and maintain land that provides a transition between rural and other land uses of varying intensities or environmental sensitivities'* and *'minimise conflict between land uses within this zone and land uses within adjoining zones'* (Land Use Table, Zone RU6 objectives).

Goulburn airport is located to the north of the northern site is zoned SP2: Infrastructure, which aims to... *'provide for infrastructure and related uses'* (Land Use Table, Zone SP2 objectives).

Clause 5.5, controls relating to secondary dwellings on land in a rural zone, has not been adopted in this LEP.

##### Heritage

There are no local heritage listed historic places on the site. There are also no state listed heritage places on the site or near the site.

However, there are several local heritage listed historic places near the northern site. These include the property containing Pelican homestead and shearing shed, located adjacent to the western site boundary (homestead building located near Braidwood Road, over two kilometres away from the site), and Tirranna homestead and gardens located about two kilometres to the west of the site, west of Braidwood Road. Others in this area include Tirranna Public School, St Andrew's Anglican Church and Cemetery, and the property containing Burringurroolung homestead, gardens and stables, which are all over three kilometres from the northern site.

There is also one local heritage listed historic place near the southern site, the property containing Springfield homestead, outbuildings and gardens, located about two kilometres to the south of the site, west of Braidwood Road.

#### 4.5 Goulburn Mulwaree Development Control Plan 2009

Goulburn Mulwaree Development Control Plan 2009 ('the DCP'), Chapter 8 (s.8.1), identifies several important view corridors and vistas in Goulburn, however, none of these extend to or include the site.

The DCP requires that adequate buffer areas and setbacks be used to minimise negative impacts on rural dwellings from adjoining land uses, including a 80-150 metre buffer for Rural Industry (Chapter 5, s. 5.9).

In relation to the preparation of a landscape plan, Chapter 13 requires landscaping to be... *'sensitive to site attributes such as existing landscape features, existing vegetation.... and views and vistas'* as well as select *'plant material that reflects the character of the area'* (s.3.5.1).

#### 4.6 Goulburn and Marulan Urban and Fringe Housing Strategy 2020

This strategy was adopted by Council and conditionally endorsed by the NSW Department of Planning, Industry and Environment (DPIE) in 2020. The site is located outside of the strategy area.

## 4. Preliminary visual assessment

The following preliminary assessment has been undertaken in accordance with the requirements of the *Technical Supplement – Landscape and Visual Impact Assessment, Large-Scale Solar Energy Guideline*, prepared by the NSW Department of Planning and Environment, 2022 ('the DPE Technical Supplement').

The following analysis assumes the entire area within the northern and southern project site would be occupied by solar infrastructure. which has been modelled at a maximum height of five metres.

### 5.1 Potential visibility of the project

A visual catchment of the site has been prepared to identify the theoretical area from which the solar farm may be visible. (Refer to **Attachment A, Figure 3**).

This visual catchment plan has been developed using a digital elevation model (landform data derived from LiDAR) combined with points on the site at the maximum height of the proposed solar farm (assumed solar panel height of five metres to represent a height greater than a worst-case scenario) and identifies areas that would have a direct line of sight to these points.

As this analysis does not take into account the screening effect of vegetation and buildings, that may offer visual screening, the area shown on this plan is a worst-case scenario for locations where there may be a view to the site.

The visual catchment of the site has identified the areas that would potentially have views to the northern site, the southern site, and any areas that would potentially have views to both sites.

The visual catchment (**Attachment A, Figure 3**), shows:

- The visual catchments of the northern and southern sites are largely separate, due to a small ridgeline located between the sites.
- The visual catchment extends mainly to areas within about one kilometre from both the northern and southern areas of the site
- There is the potential for more distant views from elevated areas to the north east, west and south east, extending across the slopes that surround the site at a distance up to four kilometres
- The network of ridges and hills surrounding the site limits views to either site from areas beyond these hills.
- There are small areas of elevated land to the south east and west of the site which would potentially have views to both sites, some of these areas are beyond the four kilometre study area.

A reverse viewshed diagram has also been prepared for each site area (refer to **Attachment A, Figure 5 and Figure 6**). The diagrams have used a digital surface model (landform data derived from LiDAR ) and points at each dwelling within the visual catchment to identify areas of the site that have the most visibility from surrounding dwellings. These maps will be used to refine the layout of the solar farm.

## 5.2 Views from public roads and rail lines

As required by the DPE Technical Supplement, all public roads and rail lines within 2.5 kilometres of the project have been identified.

For this site:

- The nearest rail line is not within 2.5 km of the site
- The nearest highway is not within 2.5 km of the site
- There are several local roads within 2.5 km of the site, including: Braidwood Road, Windellama Road, Currawang Road, Painters Lane, Elm Grove Road, Gretta Road and Corrinyah Road.

Braidwood Road and Windellama Road are two-lane local sealed roads, extending south from Goulburn through the rural area of Tirrannville towards Lake Bathurst and Windellama, providing access to rural properties. These roads provide access to smaller less frequented roads such as Painters Lane. Similarly, Currawang Road is a two-lane sealed local road, which extends southwest from Braidwood Road, providing access to rural properties to the west of the site.

Painters Lane is a gravel road extending east-west between Braidwood Road and Windellama Road, between the northern and southern sites, providing access to several rural dwellings. This road extends along the northern and north eastern boundary of the southern site and would generally be used by residents and their visitors.

To the north of the site, there are several sealed cul-de-sac roads extending to a slightly elevated and hilly area south of Goulburn. These roads provide access to several dwellings located in the rural area north and west of the airport, including Elm Grove Road, Gretta Road and Corrinyah Road.

None of these roads are identified as scenic routes. Representative views from a selection of these roads would require detailed visual assessment in the EIS. This is likely to include the assessment of views from Braidwood Road, Windellama Road, Painters Lane and Gretta Road.

## 5.3 Views from private dwellings

As required by the DPE Technical Supplement, all dwellings within four kilometres of the project have been identified. (Refer to **Attachment A, Figure 4**).

For these dwellings, the Preliminary Assessment Tools contained in the DPE Technical Supplement have been used to identify those dwellings that would require detailed assessment in the EIS.

This was done by:

- Calculating the distance of each dwelling from the nearest point of the site
- Determining the relative height difference between the proposed development and each viewpoint
- Plotting each dwelling on the Preliminary Assessment Tool to determine the indicative vertical field of view (as either 1, 2, 3 or 4+ degrees)
- Measuring the worst-case horizontal field of view of the proposed development from each viewpoint using the visual catchment map (not considering topography or vegetation)
- Compare the vertical and horizontal fields of view using the matrix in the Guideline to determine whether detailed visual assessment of each dwelling is required in the EIS.
- Remove those dwellings (two near the northern site) that are not in the visual catchment and will not require detailed analysis.

The results of the preliminary assessment are:

- **Northern site** - 23 of the 53 dwellings within four kilometres of the project require detailed assessment.
- **Southern site** - 9 of the 28 dwellings within four kilometres of the project require detailed assessment.

Refer to **Table 1, Table 2, Attachment B** and **Attachment C**, which provide the results and workings undertaken for the preliminary visual assessment.

TABLE 1 – PRELIMINARY VISUAL ASSESSMENT RESULTS – SOUTHERN SITE AREA

Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VFV)	Horizontal field of view (HFV)	Detailed assessment required (Y/N)	Within visual catchment (Y/N)
R001	204 Elm Grove Road Tirrannaville	1010	675	643	684	41	2°	> 30 degrees	Y	Y
R002	182 Elm Grove Road Tirrannaville	1376	684	643	684	41	1°	> 70 degrees	Y	Y
R003	244 Elm Grove Road Tirrannaville	729	663	643	684	41	3°	> 20 degrees	Y	Y
R004	70 Gretta Road Tirrannaville	997	674	643	684	41	2°	> 30 degrees	Y	Y
R005	124 Gretta Road Brisbane Grove	731	665	643	684	41	3°	> 20 degrees	Y	Y
R006	81 Gretta Road Brisbane Grove	1519	694	643	684	51	2°	> 30 degrees	Y	Y
R007	168 Gretta Road Brisbane Grove	868	659	643	684	41	2°	> 30 degrees	Y	Y
R008	170 Gretta Road Brisbane Grove	1097	661	643	684	41	2°	> 30 degrees	Y	Y
R009	169 Gretta Road Brisbane Grove	1088	674	643	684	41	2°	> 30 degrees	Y	Y
R010	165 Gretta Road Brisbane Grove	1242	668	643	684	41	2°	> 30 degrees	Y	Y
R014	126 Corrinayah Road Brisbane Grove	2090	677	643	684	41	1°	< 70 degrees	N	Y
R015	124 Corrinayah Road Brisbane Grove	2058	675	643	684	41	1°	< 70 degrees	N	Y
R016	120 Corrinayah Road Brisbane Grove	2080	668	643	684	41	1°	< 70 degrees	N	Y
R017	90 Corrinayah Road Brisbane Grove	2301	690	643	684	47	1°	< 70 degrees	N	Y
R018	77 Corrinayah Road Brisbane Grove	2330	661	643	684	41	1°	< 70 degrees	N	Y
R019	53 Corrinayah Road Brisbane Grove	2311	660	643	684	41	1°	< 70 degrees	N	Y
R020	125 Corrinayah Road Brisbane Grove	1875	648	643	684	41	1°	< 70 degrees	N	Y
R021	480 Windellama Road Brisbane Grove	1964	635	643	684	49	1°	< 70 degrees	N	Y
R022	441 Windellama Road Brisbane Grove	2449	643	643	684	41	1°	< 70 degrees	N	Y
R023	439 Windellama Road Brisbane Grove	2509	646	643	684	41	1°	< 70 degrees	N	Y
R024	648 Windellama Road Gundry	1309	640	643	684	44	2°	> 30 degrees	Y	Y
R025	643 Windellama Road Gundry	1417	641	643	684	43	1°	< 70 degrees	N	Y
R026	639 Windellama Road Gundry	1704	640	643	684	44	1°	< 70 degrees	N	Y
R027	684 Windellama Road Gundry	1116	643	643	684	41	2°	> 30 degrees	Y	Y

Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VfV)	Horizontal field of view (HFV)	Detailed assessment required (Y/N)	Within visual catchment (Y/N)
R028	736 Windellama Road Gundry	872	653	643	684	41	2°	> 30 degrees	Y	Y
R029	737 Windellama Road Gundry	939	650	643	684	41	2°	> 30 degrees	Y	Y
R030	778 Windellama Road Gundry	551	651	643	684	41	4°	> 10 degrees	Y	Y
R031	782 Windellama Road Gundry	481	653	643	684	41	4°	> 10 degrees	Y	Y
R032	1046 Windellama Road Gundry	698	681	643	684	41	3°	> 20 degrees	Y	Y
R034	877 Windellama Road Gundry	1223	679	643	684	41	2°	> 30 degrees	Y	N
R038	1046 Windellama Road Gundry	874	706	643	684	63	3°	> 20 degrees	Y	N
R039	100 Gundry Lane Gundry	253	693	643	684	50	4°	> 10 degrees	Y	Y
R041	1061 Windellama Road Gundry	1730	695	643	684	52	1°	< 70 degrees	N	Y
R042	1013 Windellama Road Gundry	1867	692	643	684	49	1°	< 70 degrees	N	Y
R044	101 Gundry Lane Gundry	570	685	643	684	42	4°	> 10 degrees	Y	Y
R045	57 Gundry Lane Gundry	963	693	643	684	50	2°	> 30 degrees	Y	Y
R048	1132 Windellama Road Gundry	1148	697	643	684	54	2°	> 30 degrees	Y	Y
R087	4844 Braidwood Road Tirrannaville	295	696	643	684	53	4°	> 10 degrees	Y	Y
R089	411 Windellama Road Brisbane Grove	2631	639	643	684	45	1°	< 70 degrees	N	Y
R101	22 Yattalunga Road Tirrannaville	2500	684	643	684	41	1°	< 70 degrees	N	Y
R107	138 Elm Grove Road Tirrannaville	2313	700	643	684	57	1°	< 70 degrees	N	Y
R119	46 Mountain Ash Road Brisbane Grove	3205	636	643	684	48	1°	< 70 degrees	N	Y
R120	83 Johnsons Lane Brisbane Grove	2882	662	643	684	41	1°	< 70 degrees	N	Y
R123	262 Windellama Road Brisbane Grove	3764	632	643	684	52	1°	< 70 degrees	N	Y
R130	298 Windellama Road Brisbane Grove	3680	632	643	684	52	1°	< 70 degrees	N	Y
R131	363 Mountain Ash Road Gundry	3941	668	643	684	41	1°	< 70 degrees	N	Y
R137	130 Barretts Lane Gundry	4211	668	643	684	41	0°	N/A	N	Y
R139	100 Barretts Lane Gundry	4240	654	643	684	41	0°	N/A	N	Y
R140	361 Windellama Road Brisbane Grove	3262	635	643	684	49	1°	< 70 degrees	N	Y
R150	55 Barretts Lane Brisbane Grove	4047	660	643	684	41	1°	< 70 degrees	N	Y
R153	78 Corrinayah Road Brisbane Grove	2449	668	643	684	41	1°	< 70 degrees	N	Y
R155	94 Rosemont Road Goulburn	4289	672	643	684	41	0°	N/A	N	Y
R160	242 Brisbane Grove Road Brisbane Grove	2851	642	643	684	42	1°	< 70 degrees	N	Y

Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VfV)	Horizontal field of view (HFV)	Detailed assessment required (Y/N)	Within visual catchment (Y/N)
R162	242 Brisbane Grove Road Brisbane Grove	2851	642	643	684	42	1°	< 70 degrees	N	Y
R167	274 Mountain Ash Road Gundry	3719	640	643	684	44	1°	< 70 degrees	N	Y
R174	16 Gretta Road Tirrannville	1061	676	643	684	41	2°	> 30 degrees	Y	Y

TABLE 2 – PRELIMINARY VISUAL ASSESSMENT RESULTS – SOUTHERN SITE AREA

Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VfV)	Horizontal field of view (HFV)	Detailed assessment required (Y/N)	Within visual catchment (Y/N)
R057	542 Painters Lane Tirrannville	3004	677	644	668	33	1°	< 70 degrees	N	Y
R058	47 Meadow Lane Tirrannville	2136	664	644	668	24	1°	< 70 degrees	N	Y
R059	29 Meadow Lane Tirrannville	2027	667	644	668	24	1°	< 70 degrees	N	Y
R060	48 Meadow Lane Tirrannville	1885	662	644	668	24	1°	< 70 degrees	N	Y
R061	30 Meadow Lane Tirrannville	1809	668	644	668	24	1°	< 70 degrees	N	Y
R062	22 Meadow Lane Tirrannville	1849	664	644	668	24	1°	< 70 degrees	N	Y
R063	350 Painters Lane Tirrannville	779	655	644	668	24	2°	> 30 degrees	Y	Y
R064	302 Painters Lane Tirrannville	553	655	644	668	24	2°	> 30 degrees	Y	Y
R065	274 Painters Lane Tirrannville	291	654	644	668	24	4°	> 10 degrees	Y	Y
R066	352 Painters Lane Tirrannville	889	662	644	668	24	2°	> 30 degrees	Y	Y
R067	4186 Braidwood Road Tirrannville	2572	683	644	668	24	1°	< 70 degrees	N	Y
R068	226 Readers Road Quialigo	3809	708	644	668	64	1°	< 70 degrees	N	Y
R069	Braidwood Road Tirrannville	2699	683	644	668	39	1°	< 70 degrees	N	Y
R070	4002 Braidwood Road Tirrannville	2620	683	644	668	39	1°	< 70 degrees	N	Y
R071	3986 Braidwood Road Tirrannville	2940	692	644	668	48	1°	< 70 degrees	N	Y
R078	4186 Braidwood Road Tirrannville	1009	664	644	668	24	1°	< 70 degrees	N	Y
R079	4230 Braidwood Road Tirrannville	601	661	644	668	24	2°	> 30 degrees	Y	Y
R081	139 Painters Lane Tirrannville	301	659	644	668	24	4°	> 10 degrees	Y	Y
R082	91 Painters Lane Tirrannville	387	660	644	668	24	3°	> 20 degrees	Y	Y
R083	73 Painters Lane Tirrannville	392	661	644	668	24	3°	> 20 degrees	Y	Y
R084	45 Painters Lane Tirrannville	410	662	644	668	24	3°	> 20 degrees	Y	Y
R114	4033 Braidwood Road Tirrannville	2689	663	644	668	24	1°	< 70 degrees	N	Y
R146	276 Currawang Road Tirrannville	3802	657	644	668	24	0°	N/A	N	Y
R169	1416 Windellama Road Quialigo	3607	679	644	668	35	1°	< 70 degrees	N	Y
R170	1534 Windellama Road Quialigo	3570	684	644	668	40	1°	< 70 degrees	N	Y
R171	16 Gretta Road Tirrannville	2965	689	644	668	45	1°	< 70 degrees	N	Y

Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VFV)	Horizontal field of view (HFV)	Detailed assessment required (Y/N)	Within visual catchment (Y/N)
R50	1278 Windellama Road Tirrannaville	3422	687	644	668	43	1°	< 70 degrees	N	Y
R53	579 Painters Lane Tirrannaville	3055	680	644	668	36	1°	< 70 degrees	N	Y

## 5. Cumulative impacts

There is the potential for a cumulative visual impact with the proposed Gundry Solar Farm, proposed by Light Source BP. This solar farm is located about one kilometre east of the northern site of the proposed Merino Solar Farm. The scoping report for this project has been published on the DPE Major Projects website and SEARs have been issued.

While there is the potential for locations where there would be views to both projects, preliminary visibility analysis, (prepared by assessing the visibility of infrastructure at a height of 5 metres across the entire Gundry Solar Farm site), indicates that there are very few private dwellings and public domain locations, within the 4 kilometres of the Gundry Solar Farm site, from which both the proposed Merino Solar Farm and Gundry Solar Farm could be seen. Refer to **Attachment D**. Those dwellings that may have a view to both solar farm sites are located west of Windellama Road.

## 6. Next steps

Further analysis of the visibility of the site, and site investigations would be undertaken to refine the development footprint, determine the location of any infrastructure that has a high visibility, and provision of screening vegetation, to respond to the views from residential dwellings with views to the site. A landscape strategy would also be prepared to identify the proposed location of screen planting to mitigate any potential visual impacts of the project.

During the preparation of an EIS, a detailed visual assessment would be prepared that would further analyse the potential visual impact of the project. This would include field verification of the visibility analysis and an assessment of representative viewpoints of the project.

This assessment would identify the potential visual impact from the public domain, including views from surrounding roads, such as Braidwood Road, Windellama Road, Painters Lane and Gretta Road.

There would be a detailed visual assessment undertaken for the private residential dwellings identified for detailed assessment, or evidence provided to confirm these dwellings would not require further assessment as appropriate.

The potential amenity impacts of glare and reflectivity would also be considered from private residential dwellings and roads in those areas where there is the potential for a view to the project.

The potential for a cumulative landscape character and visual impact of the project together with the Gundry Solar Farm would be considered in the detailed landscape character and visual impact assessment.

## 7. References

Goulburn Mulwaree Council, 2022, *Goulburn Local Strategic Planning Statement 2020*, URL: <https://www.goulburn.nsw.gov.au/Development/Plans-Strategies#section-2> (accessed 13/02/2023)

Goulburn Mulwaree Council, 2009, *Goulburn Mulwaree Development Control Plan 2009*, URL: <https://www.goulburn.nsw.gov.au/Development/Plans-Strategies#section-4> (accessed 13/02/2023).

NSW Department of Planning and Environment, 2022, *Draft South East and Tablelands Regional Plan 2041*, URL: <https://pp.planningportal.nsw.gov.au/southeast-tablelands-RP> (accessed 13/02/2023)

NSW Department of Planning and Environment, *Technical Supplement - Landscape and Visual Impact Assessment Large-Scale Solar Energy Guideline*, 2022, August 2022 (version issued November 2022).

## 8. Attachments

Attachment A: Visual assessment figures

Attachment B: Preliminary visual assessment analysis - Northern site

Attachment C: Preliminary visual assessment analysis - Southern site

Attachment D: Visibility with Gundry Solar Farm

Attachment A:  
Visual assessment Figures

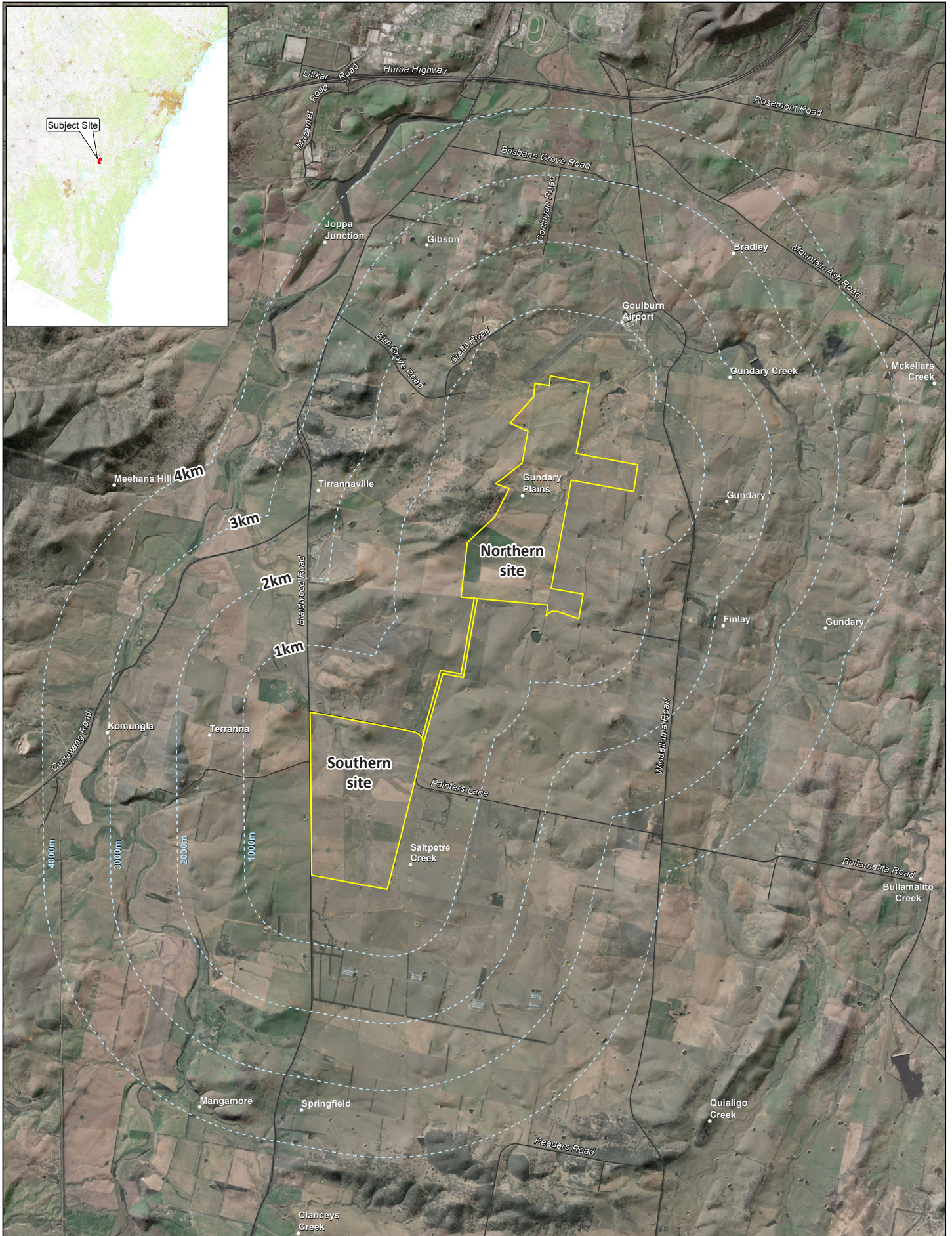
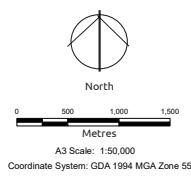


Figure 1 - Location  
**Merino Solar Farm**  
 Terrain Solar and ITP Renewables



Source: Cadastral Boundary: Department of Finance, Services and Innovation 2022  
 Surface analysis: Derived from LIDAR - GOULBURN, 5 metre Resolution Digital Elevation Model © Department Finance, Services and Innovation 2013 / 2019  
 Imagery: Maxar 2021

Disclaimer: No warranty is given in relation to the data (including accuracy, reliability, completeness, currency or suitability) and no liability is accepted (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws.

File: MerinoSF\_Fig1\_SiteLocation\_230214  
 Date: 14/02/2023

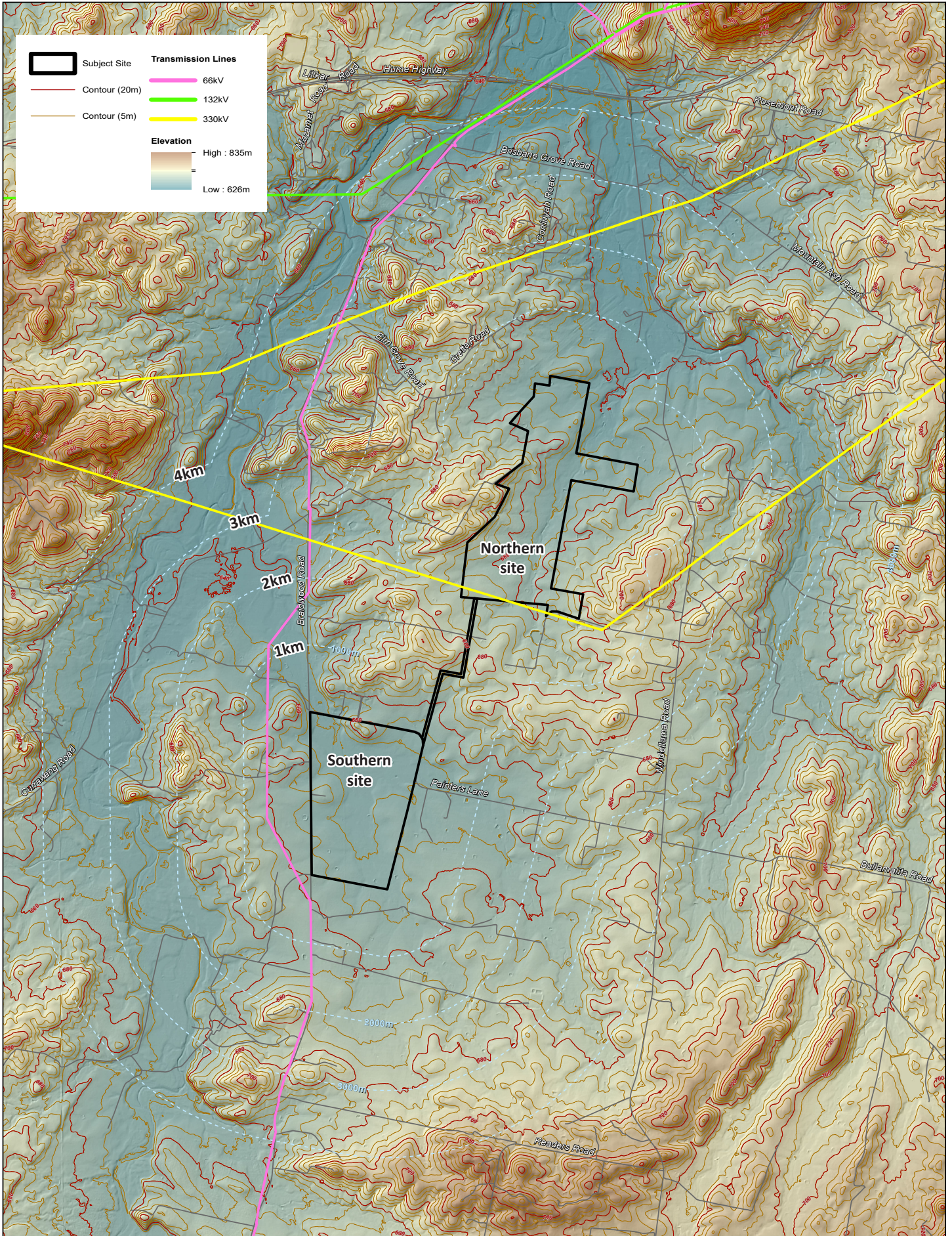


Figure 2 - Topography  
**Merino Solar Farm**  
 Terrain Solar and ITP Renewables

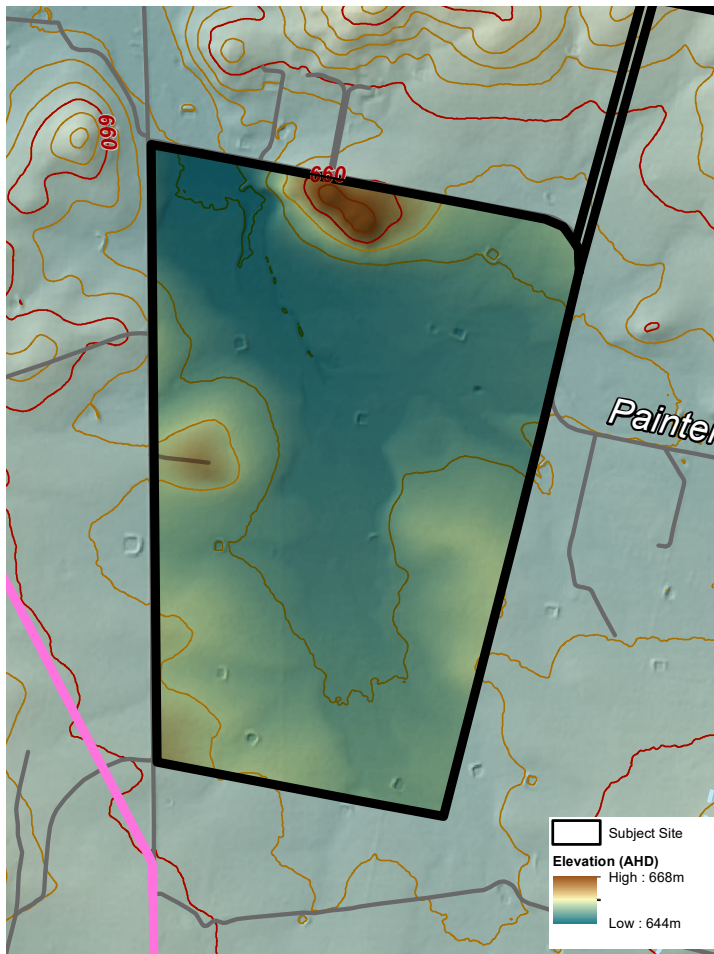
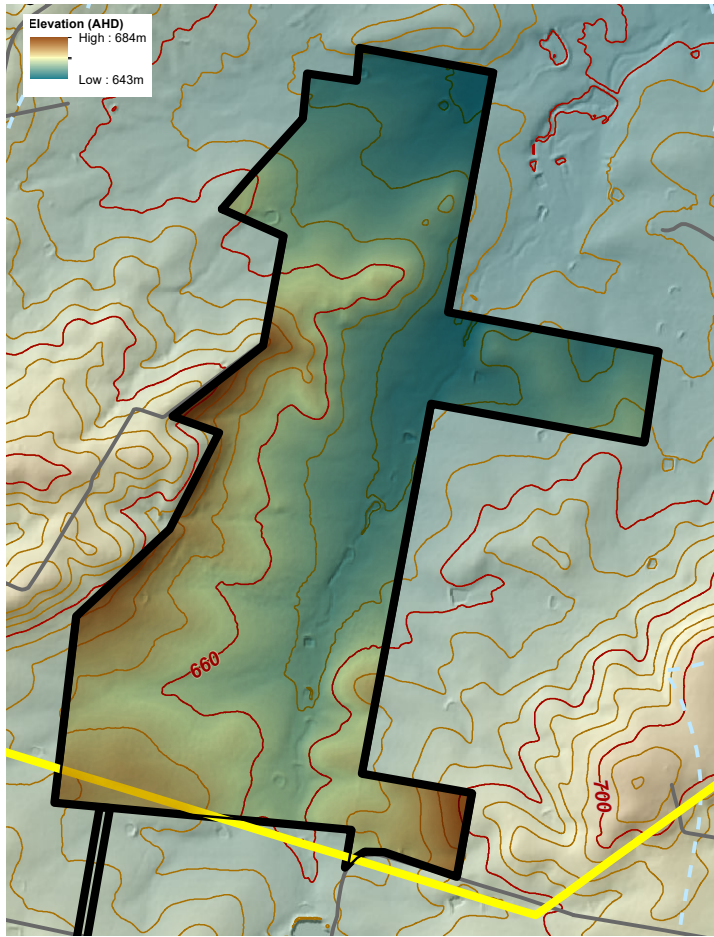


0 500 1,000 1,500  
 Metres  
 A3 Scale: 1:50,000  
 Coordinate System: GDA 1994 MGA Zone 55

Source: Cadastral Boundary: Department of Finance, Services and Innovation 2022  
 Surface analysis: Derived from LIDAR - GOULBURN, 5 metre Resolution Digital Elevation Model © Department Finance, Services and Innovation 2013 / 2019

Disclaimer: No warranty is given in relation to the data (including accuracy, reliability, completeness, currency or suitability) and no liability is accepted (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws.

File: MerinoSF\_Fig2\_Topography\_230214  
 Date: 14/02/2023



**Merino Solar Farm**

Terrain Solar and ITP Renewables

Figure 3 - Site elevation

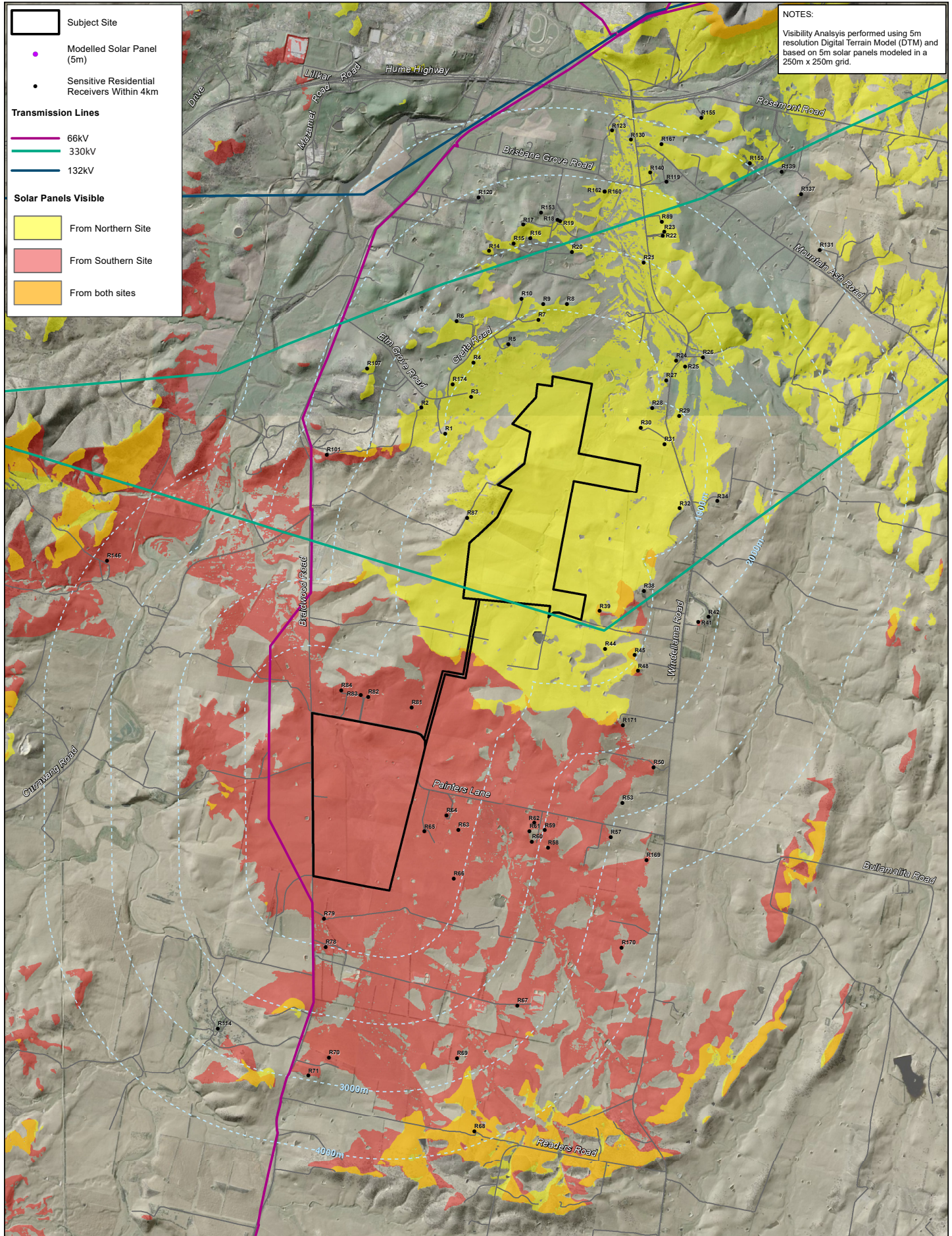
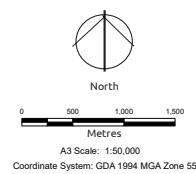


Figure 4 - Visual Catchment  
**Merino Solar Farm**  
 Terrain Solar and ITP Renewables

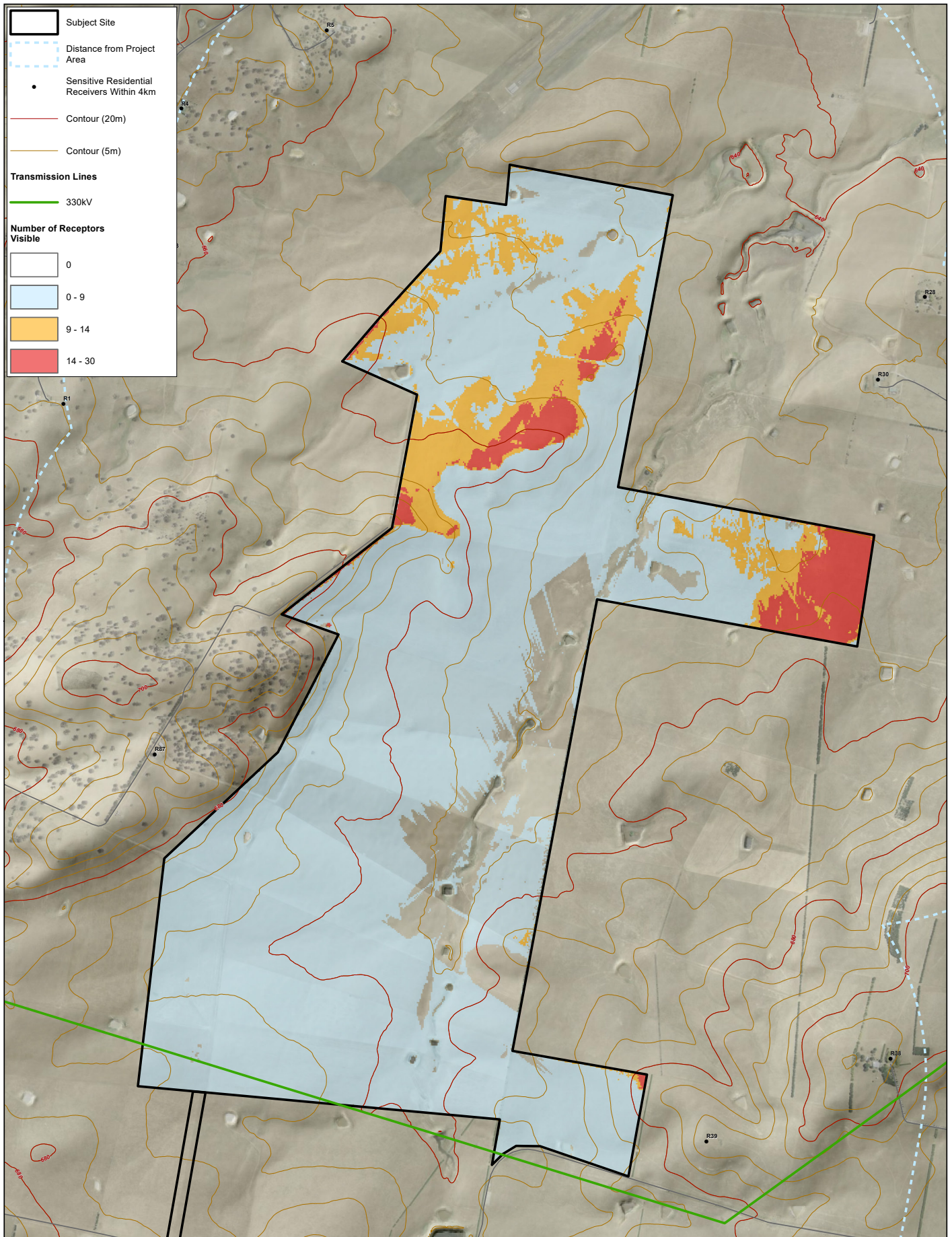


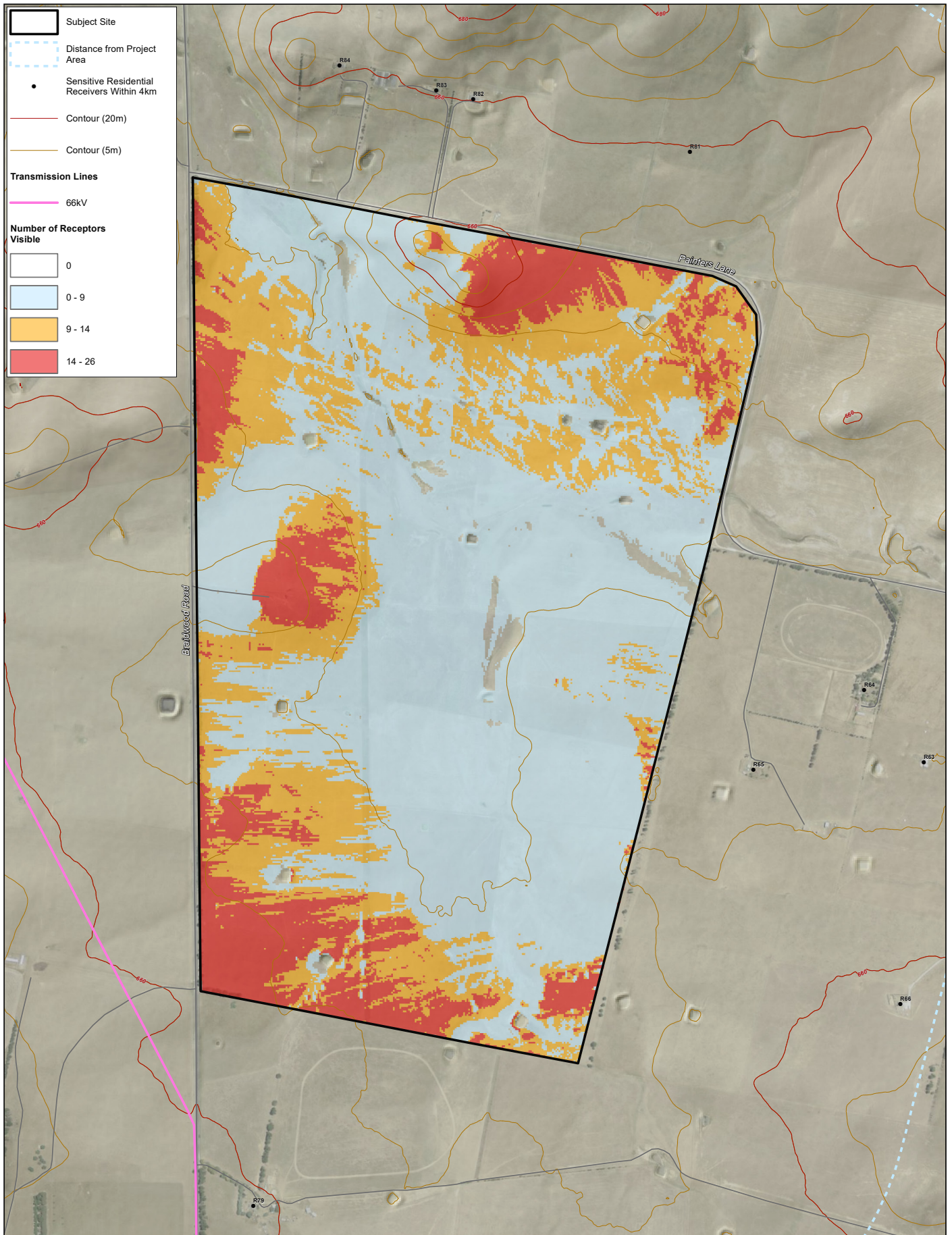
Source: Cadastral Boundary: Department of Finance, Services and Innovation 2022  
 Surface analysis: Derived from LiDAR - GOULBURN, 5 metre Resolution Digital Elevation Model © Department of Finance, Services and Innovation 2013 / 2019

Disclaimer: No warranty is given in relation to the data (including accuracy, reliability, completeness, currency or suitability) and no liability is accepted (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) resulting in any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws.

File: MerinoSF\_Fg3\_Visibility\_230215

Date: 15/02/2023



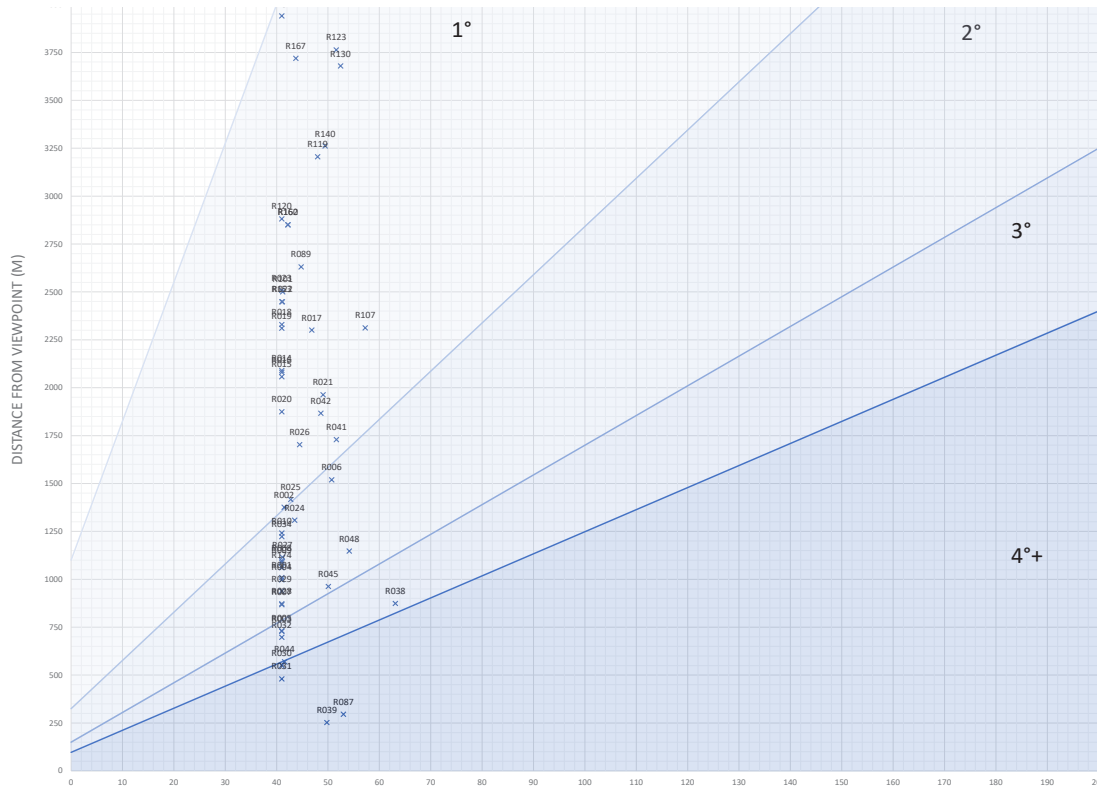


**Merino Solar Farm**

Terrain Solar and ITP Renewables

Figure 6 - Reverse Viewshed, Southern site

Attachment B:  
Preliminary visual assessment  
analysis - Northern site



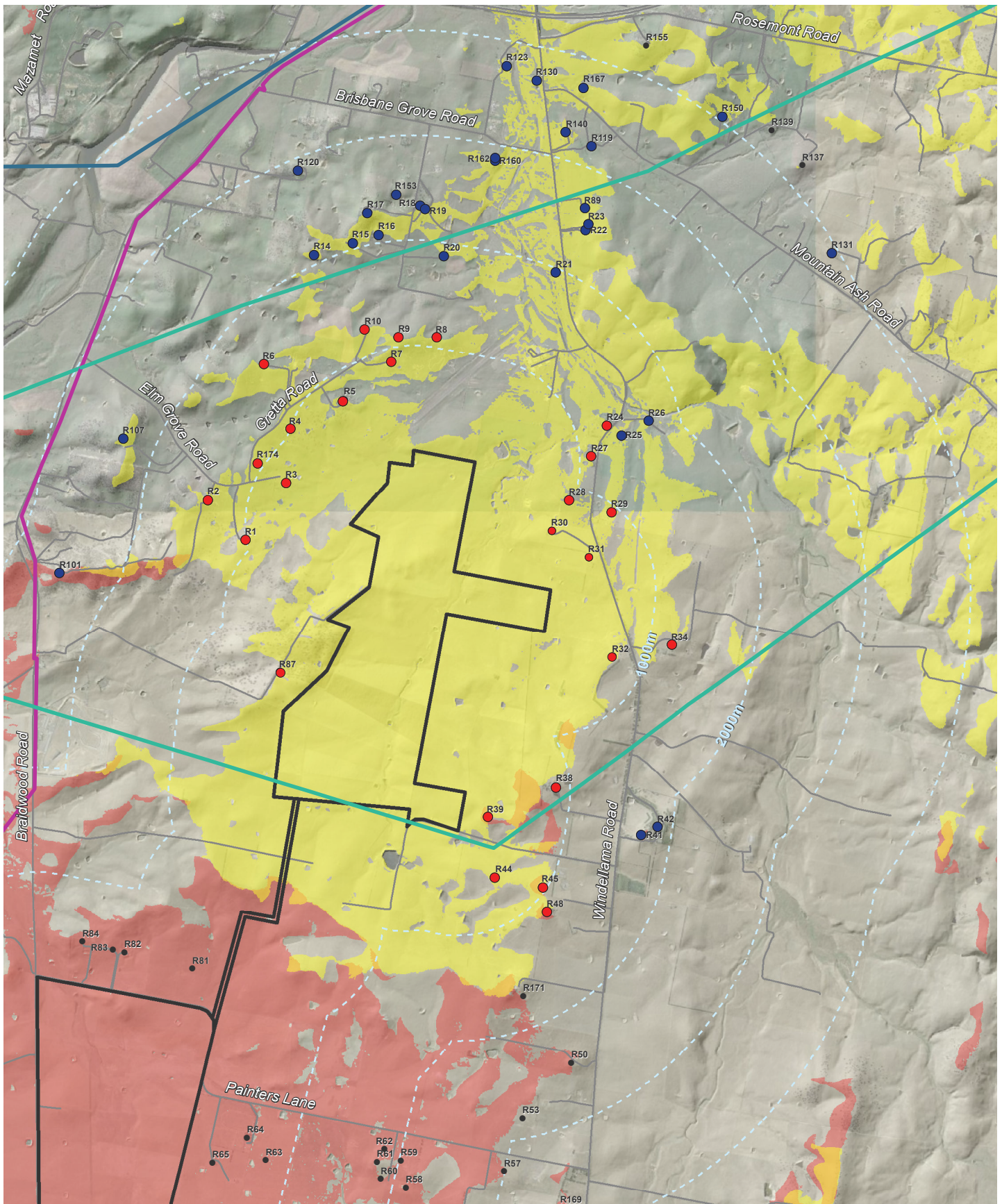
Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VFOV)	Horizontal field of view (HFOV)	Detailed visual assessment required (Y/N)
R001	204 Elm Grove Road Tirrannaville	1010	675	643	684	41	2°	> 30 degrees	Y
R002	182 Elm Grove Road Tirrannaville	1376	684	643	684	41	1°	> 70 degrees	Y
R003	244 Elm Grove Road Tirrannaville	729	663	643	684	41	3°	> 20 degrees	Y
R004	70 Gretta Road Tirrannaville	997	674	643	684	41	2°	> 30 degrees	Y
R005	124 Gretta Road Brisbane Grove	731	665	643	684	41	3°	> 20 degrees	Y
R006	81 Gretta Road Brisbane Grove	1519	694	643	684	51	2°	> 30 degrees	Y
R007	168 Gretta Road Brisbane Grove	868	659	643	684	41	2°	> 30 degrees	Y
R008	170 Gretta Road Brisbane Grove	1097	661	643	684	41	2°	> 30 degrees	Y
R009	169 Gretta Road Brisbane Grove	1088	674	643	684	41	2°	> 30 degrees	Y
R010	165 Gretta Road Brisbane Grove	1242	668	643	684	41	2°	> 30 degrees	Y
R014	126 Corrinah Road Brisbane Grove	2090	677	643	684	41	1°	< 70 degrees	N
R015	124 Corrinah Road Brisbane Grove	2058	675	643	684	41	1°	< 70 degrees	N
R016	120 Corrinah Road Brisbane Grove	2080	668	643	684	41	1°	< 70 degrees	N
R017	90 Corrinah Road Brisbane Grove	2301	690	643	684	47	1°	< 70 degrees	N
R018	77 Corrinah Road Brisbane Grove	2330	661	643	684	41	1°	< 70 degrees	N
R019	53 Corrinah Road Brisbane Grove	2311	660	643	684	41	1°	< 70 degrees	N
R020	125 Corrinah Road Brisbane Grove	1875	648	643	684	41	1°	< 70 degrees	N
R021	480 Windellama Road Brisbane Grove	1964	635	643	684	49	1°	< 70 degrees	N
R022	441 Windellama Road Brisbane Grove	2449	643	643	684	41	1°	< 70 degrees	N
R023	439 Windellama Road Brisbane Grove	2509	646	643	684	41	1°	< 70 degrees	N
R024	648 Windellama Road Gundary	1309	640	643	684	44	2°	> 30 degrees	Y
R025	643 Windellama Road Gundary	1417	641	643	684	43	1°	< 70 degrees	N
R026	639 Windellama Road Gundary	1704	640	643	684	44	1°	< 70 degrees	N
R027	684 Windellama Road Gundary	1116	643	643	684	41	2°	> 30 degrees	Y
R028	736 Windellama Road Gundary	872	653	643	684	41	2°	> 30 degrees	Y
R029	737 Windellama Road Gundary	939	650	643	684	41	2°	> 30 degrees	Y
R030	778 Windellama Road Gundary	551	651	643	684	41	4°	> 10 degrees	Y
R031	782 Windellama Road Gundary	481	653	643	684	41	4°	> 10 degrees	Y
R032	1046 Windellama Road Gundary	698	681	643	684	41	3°	> 20 degrees	Y
R034	877 Windellama Road Gundary	1223	679	643	684	41	2°	> 30 degrees	Y
R038	1046 Windellama Road Gundary	874	706	643	684	63	3°	> 20 degrees	Y
R039	100 Gundary Lane Gundary	253	693	643	684	50	4°	> 10 degrees	Y
R041	1061 Windellama Road Gundary	1730	695	643	684	52	1°	< 70 degrees	N
R042	1013 Windellama Road Gundary	1867	692	643	684	49	1°	< 70 degrees	N
R044	101 Gundary Lane Gundary	570	685	643	684	42	4°	> 10 degrees	Y
R045	57 Gundary Lane Gundary	963	693	643	684	50	2°	> 30 degrees	Y
R048	1132 Windellama Road Gundary	1148	697	643	684	54	2°	> 30 degrees	Y
R087	4844 Braidwood Road Tirrannaville	295	696	643	684	53	4°	> 10 degrees	Y
R089	411 Windellama Road Brisbane Grove	2631	639	643	684	45	1°	< 70 degrees	N
R101	22 Yattalunga Road Tirrannaville	2500	684	643	684	41	1°	< 70 degrees	N
R107	138 Elm Grove Road Tirrannaville	2313	700	643	684	57	1°	< 70 degrees	N
R119	46 Mountain Ash Road Brisbane Grove	3205	636	643	684	48	1°	< 70 degrees	N
R120	83 Johnsons Lane Brisbane Grove	2882	662	643	684	41	1°	< 70 degrees	N
R123	262 Windellama Road Brisbane Grove	3764	632	643	684	52	1°	< 70 degrees	N
R130	298 Windellama Road Brisbane Grove	3680	632	643	684	52	1°	< 70 degrees	N
R131	363 Mountain Ash Road Gundary	3941	668	643	684	41	1°	< 70 degrees	N
R137	130 Barretts Lane Gundary	4211	668	643	684	41	0°	N/A	N
R139	100 Barretts Lane Gundary	4240	654	643	684	41	0°	N/A	N
R140	361 Windellama Road Brisbane Grove	3262	635	643	684	49	1°	< 70 degrees	N
R150	55 Barretts Lane Brisbane Grove	4047	660	643	684	41	1°	< 70 degrees	N
R153	78 Corrinah Road Brisbane Grove	2449	668	643	684	41	1°	< 70 degrees	N
R155	94 Rosemont Road Goulburn	4289	672	643	684	41	0°	N/A	N
R160	242 Brisbane Grove Road Brisbane Grove	2851	642	643	684	42	1°	< 70 degrees	N
R162	242 Brisbane Grove Road Brisbane Grove	2851	642	643	684	42	1°	< 70 degrees	N
R167	274 Mountain Ash Road Gundary	3719	640	643	684	44	1°	< 70 degrees	N
R174	16 Gretta Road Tirrannaville	1061	676	643	684	41	2°	> 30 degrees	Y













## Merino Solar Farm

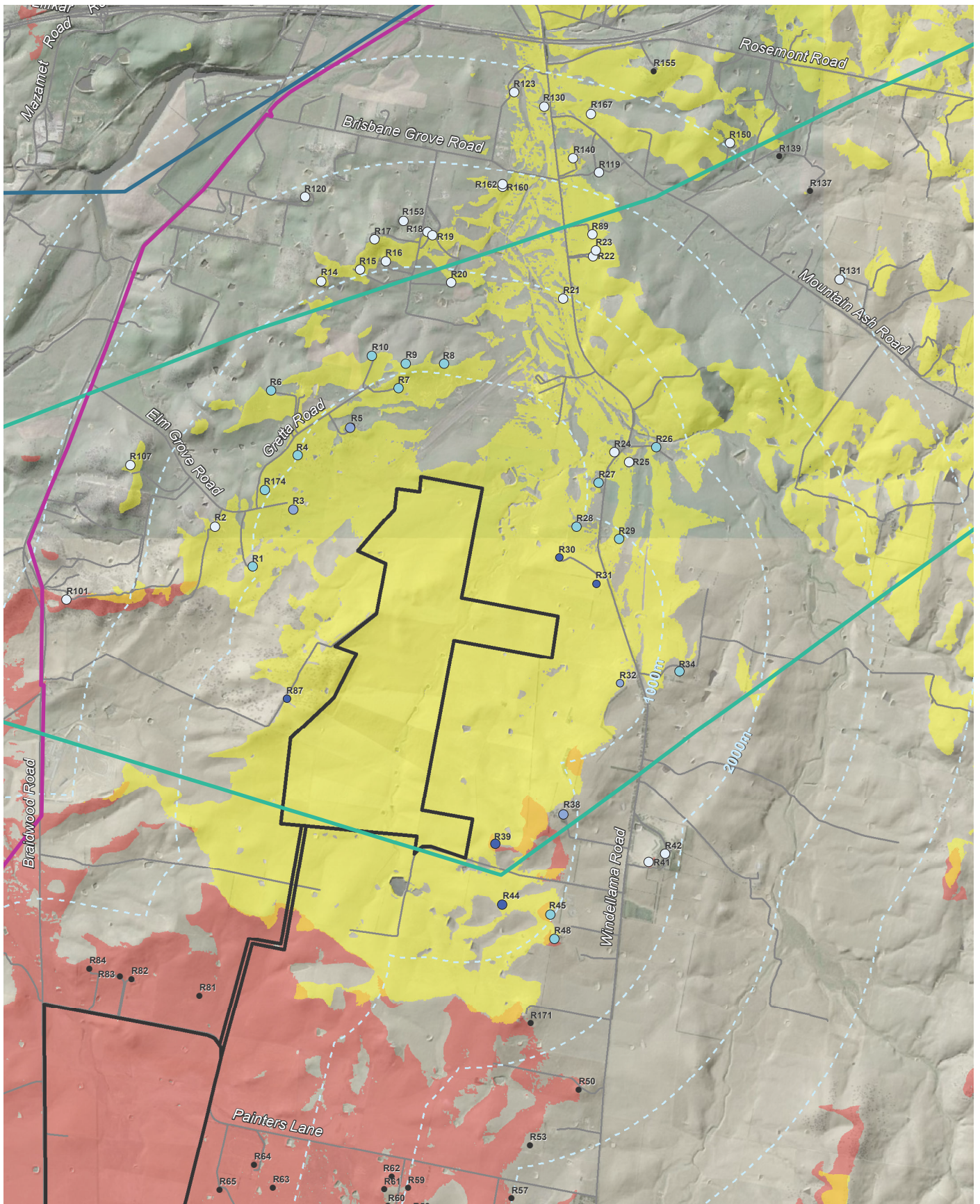
Terrain Solar and ITP Renewables

Figure 7 - Preliminary Assessment Tool Analysis, Northern site





Key		Existing Transmission lines	Visual catchment:	Detailed assessment required:
	Subject site	 66kV	 Northern site	 Yes
	Modelled solar panel height (5m)	 330kV	 Southern site	 No
		 132kV	 North and south	











**Key**

-  Subject site
-  Modelled solar panel height (5m)





**Existing Transmission lines**

-  66kV
-  330kV
-  132kV

**Visual catchment:**

-  Northern site
-  Southern site
-  North and south

**Vertical field of view:**

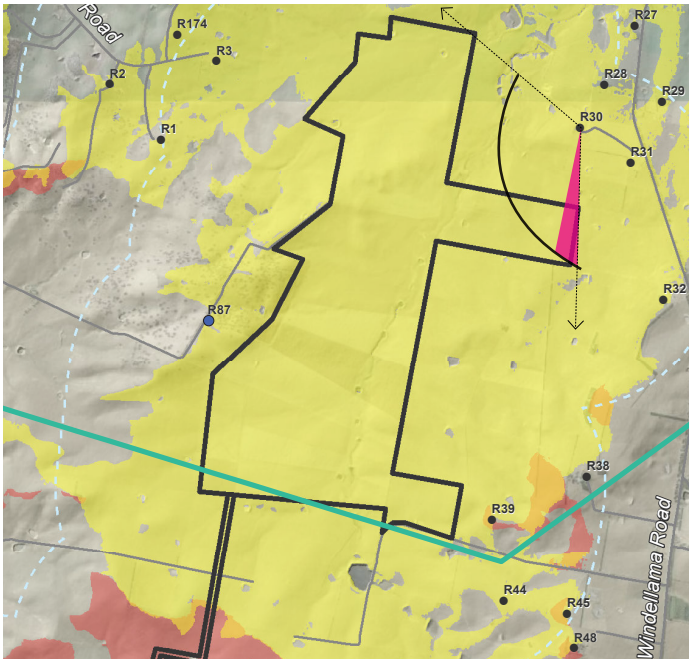
-  4° vertical field of view
-  3° vertical field of view
-  2° vertical field of view
-  1° vertical field of view



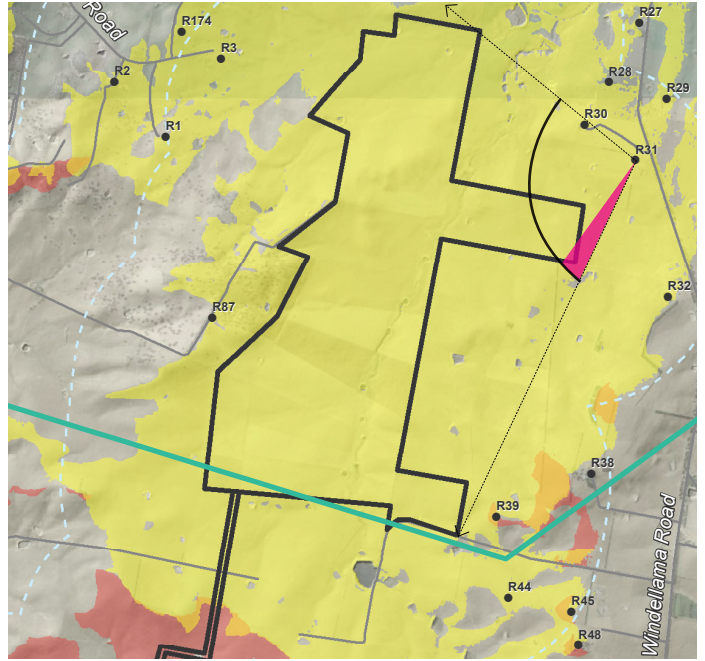
**Merino Solar Farm**

Terrain Solar and ITP Renewables

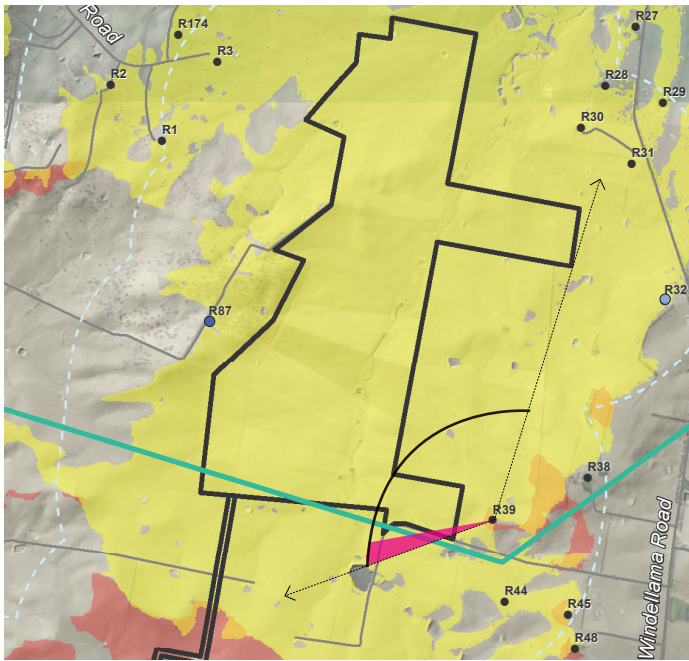
Figure 9 - Preliminary assesment, Vertical field of view



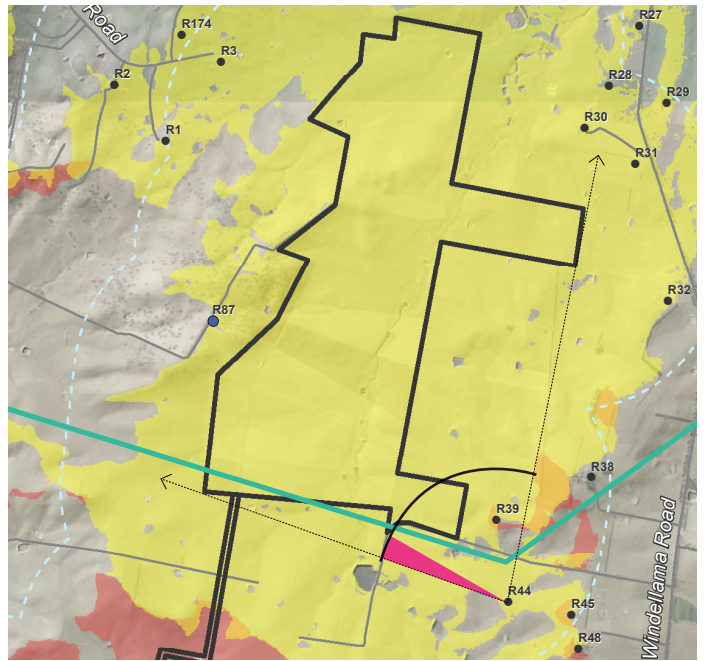
Dwelling R30



Dwelling R31



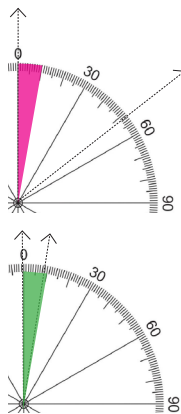
Dwelling R39



Dwelling R44

Key

- Subject site
- Dwelling location
- Existing transmission lines**
  - 66kV
  - 330kV
  - 132kV
- Visual catchment**
  - Northern site
  - Southern site
  - North and south site



Horizontal field of view

>10° detailed assessment required

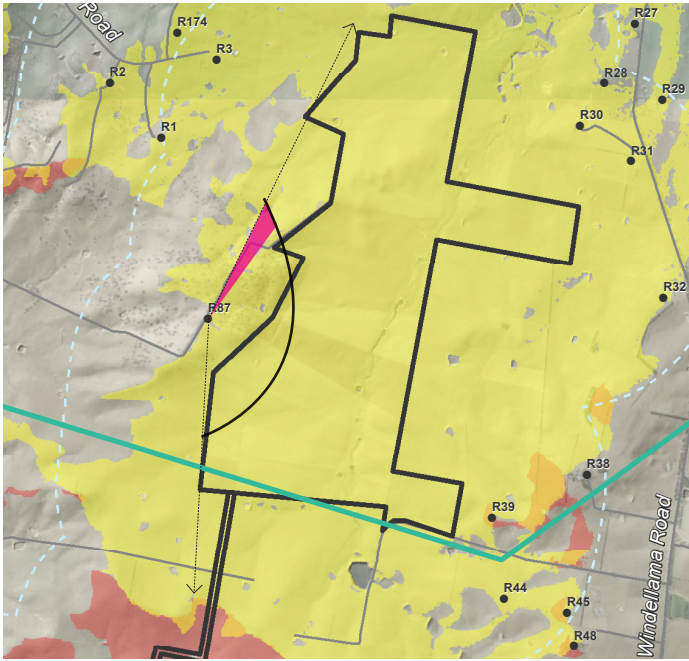
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**Merino Solar Farm**






Terrain Solar and ITP Renewables




Figure 10 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 4° vertical field of view

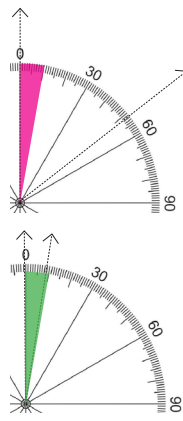


Dwelling R87

**Key**

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV

- Visual catchment**
-  Northern site
-  Southern site
-  North and south site

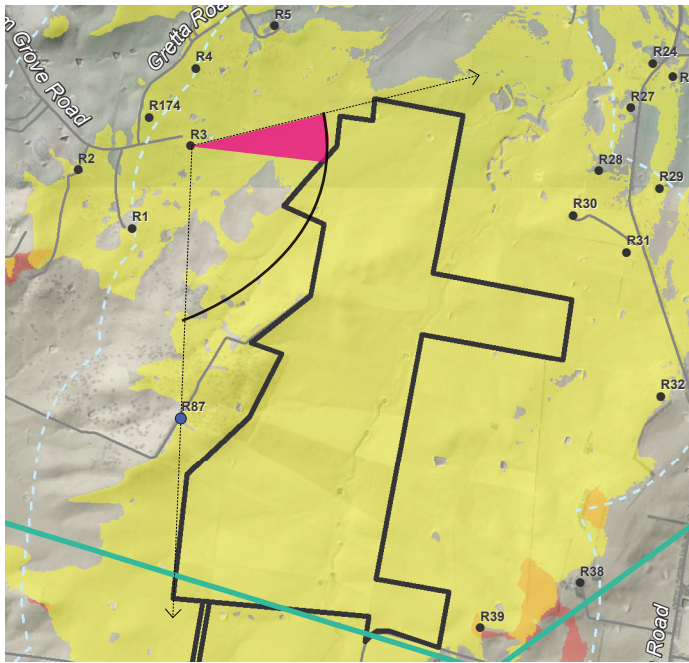


**Horizontal field of view**

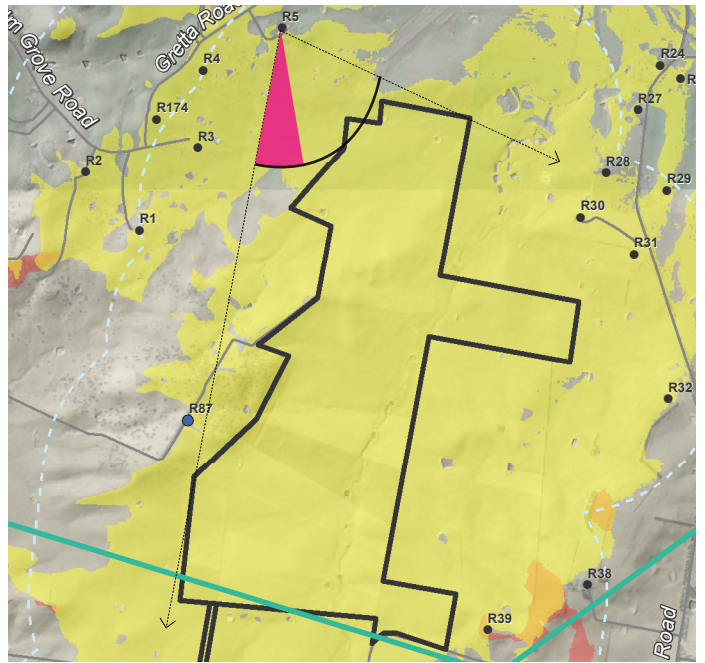
- >10° detailed assessment required
- <10° no further assessment required



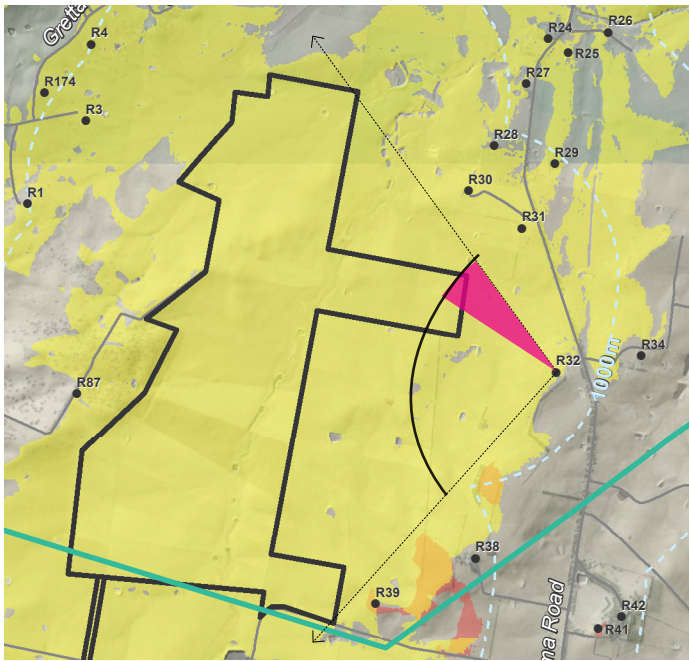
Figure 11 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 4° vertical field of view



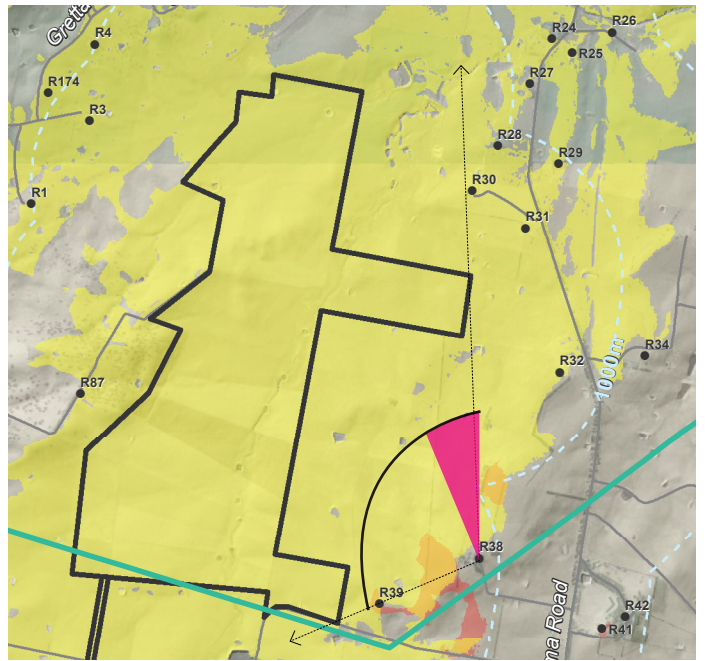
Dwelling R3



Dwelling R5



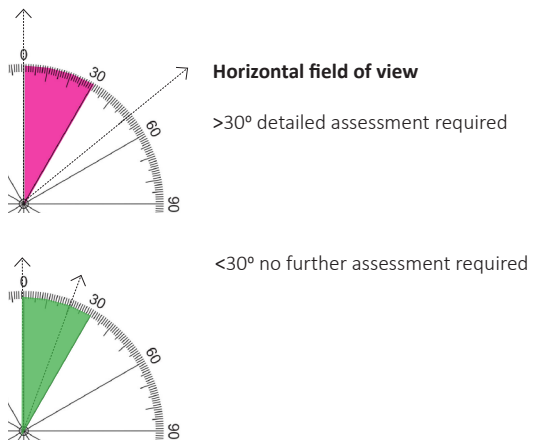
Dwelling R32



Dwelling R38

Key

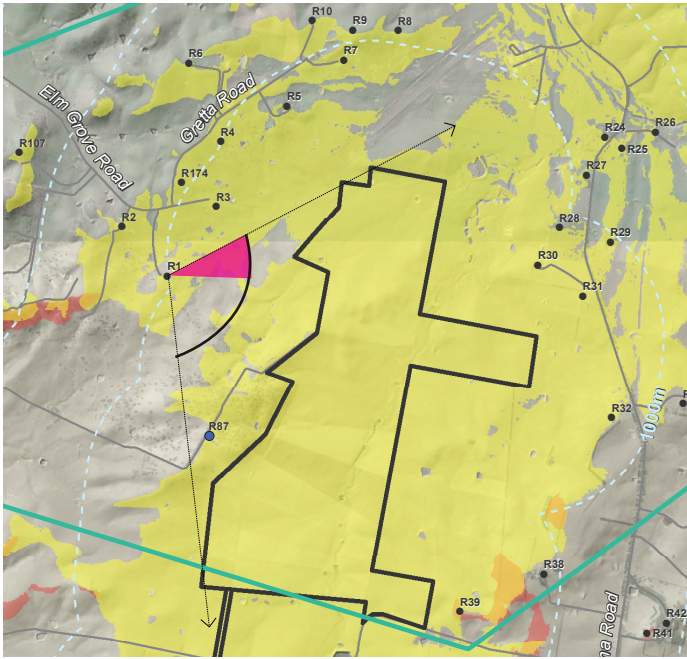
- Subject site
- Dwelling location
- Existing transmission lines**
- 66kV
- 330kV
- 132kV
- Visual catchment**
- Northern site
- Southern site
- North and south site



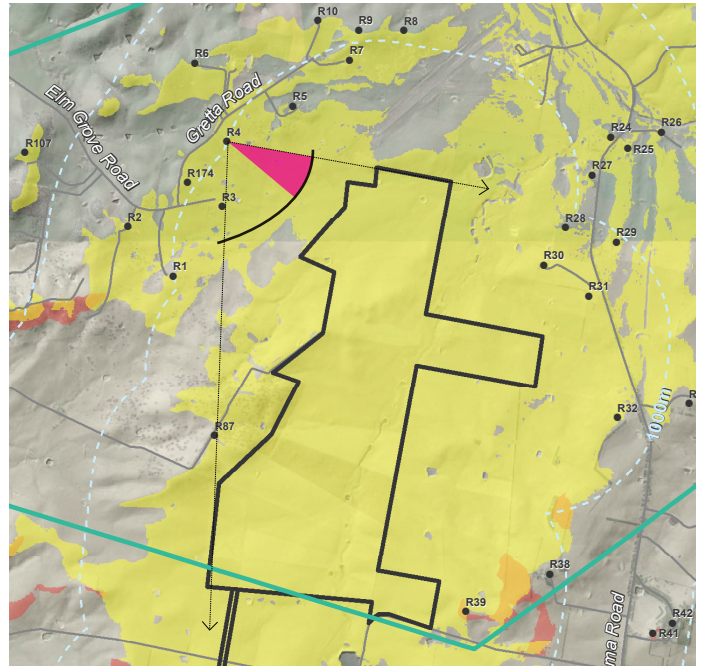
**Merino Solar Farm**

Terrain Solar and ITP Renewables

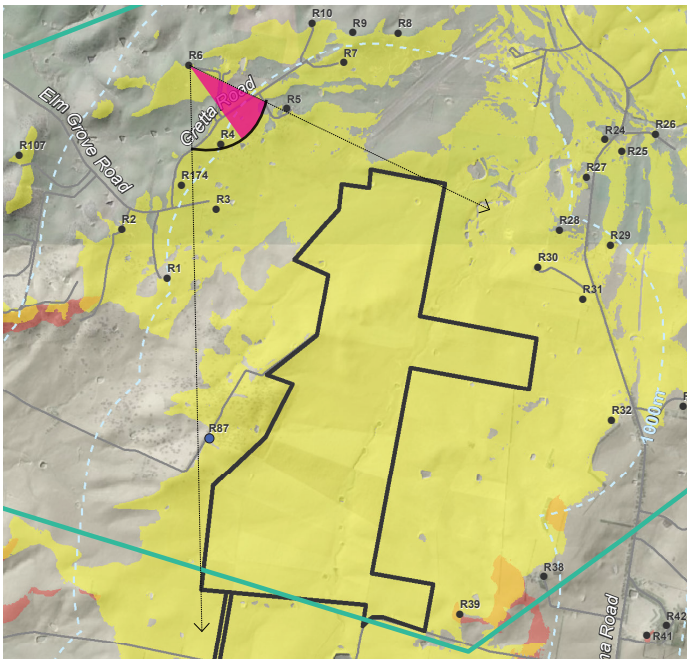
Figure 12 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 3° vertical field of view



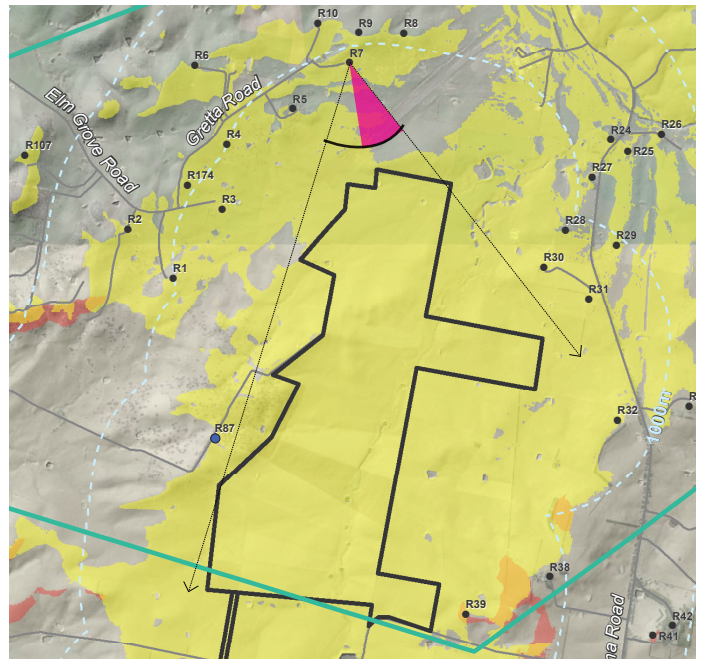
Dwelling R1



Dwelling R4











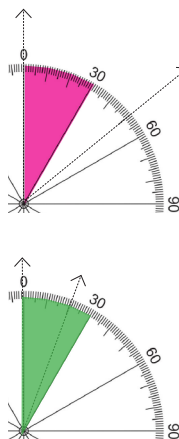
Dwelling R6



Dwelling R7

Key

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site



Horizontal field of view

>30° detailed assessment required

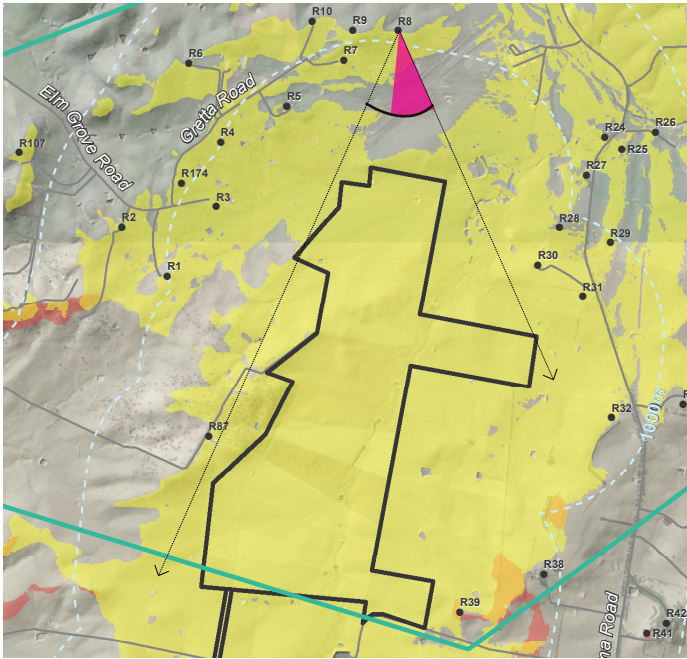
<30° no further assessment required



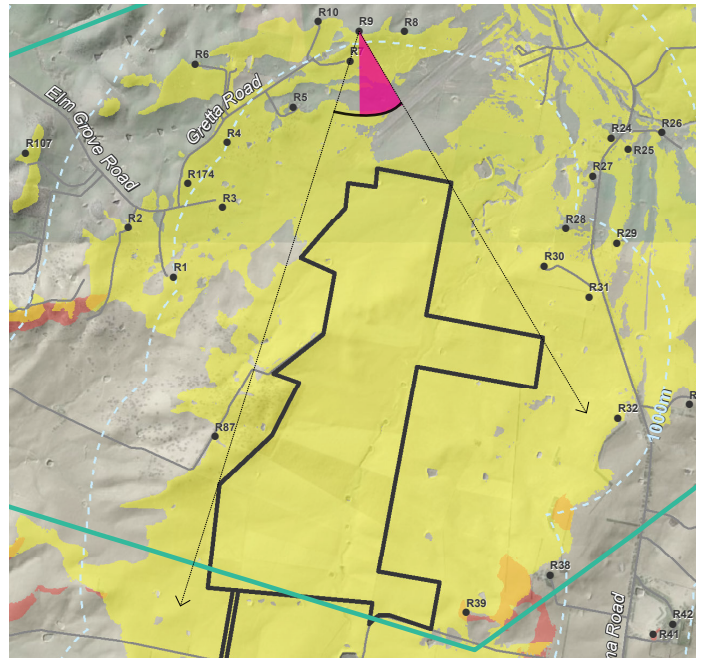
**Merino Solar Farm**

Terrain Solar and ITP Renewables

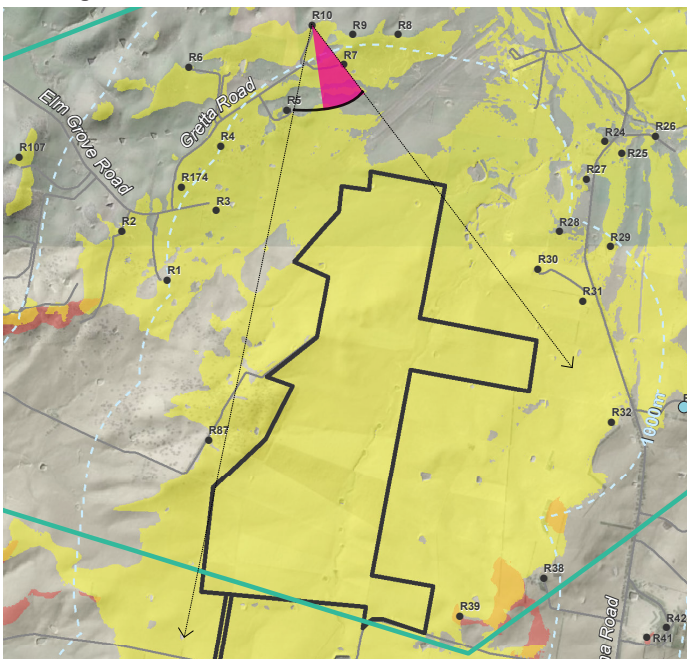
Figure 13 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 2° vertical field of view



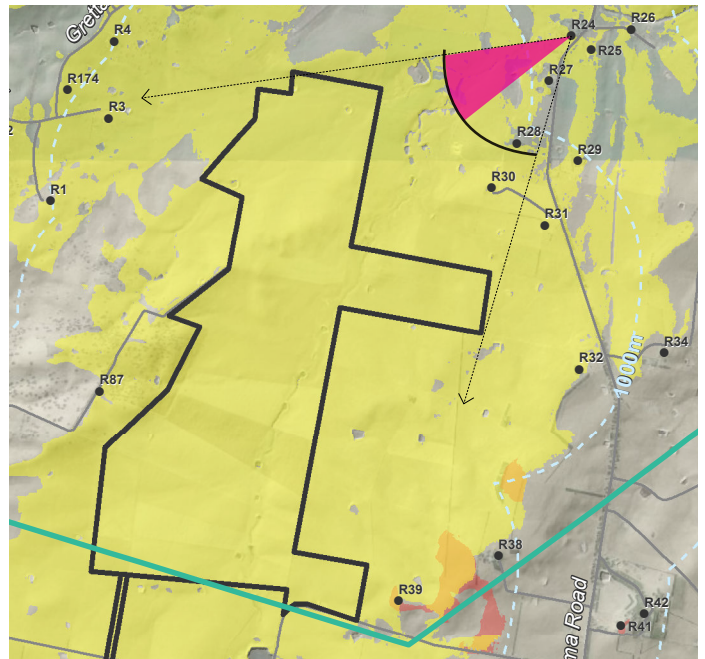
Dwelling R8



Dwelling R9



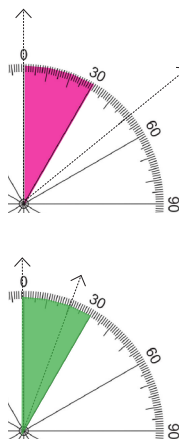
Dwelling R10



Dwelling R24

Key

- Subject site
- Dwelling location
- Existing transmission lines**
  - 66kV
  - 330kV
  - 132kV
- Visual catchment**
  - Northern site
  - Southern site
  - North and south site



Horizontal field of view

>30° detailed assessment required

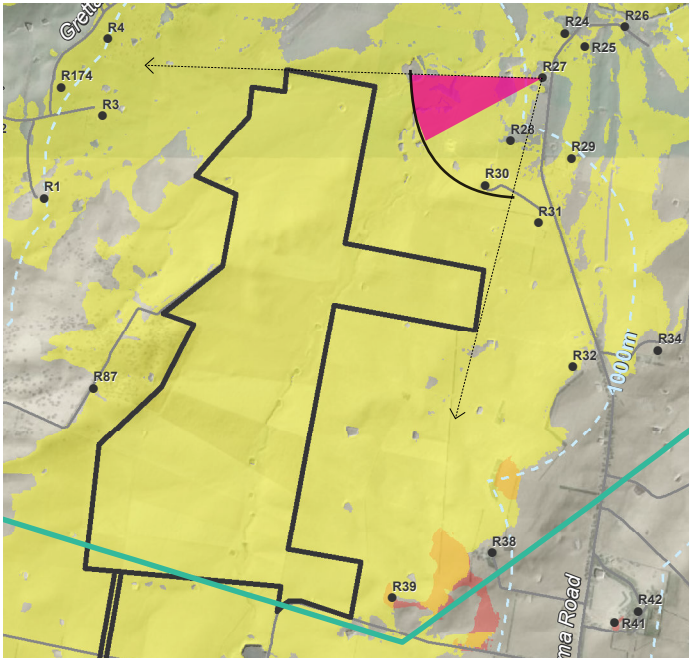
<30° no further assessment required



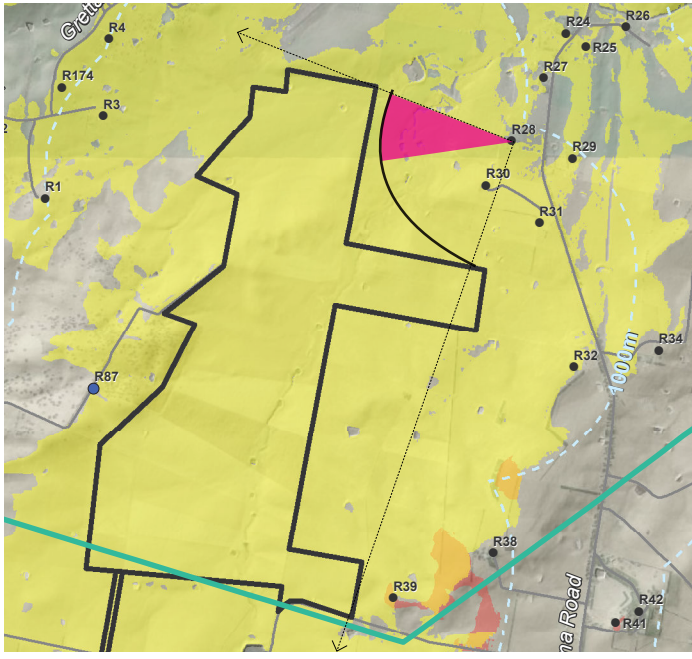
**Merino Solar Farm**

Terrain Solar and ITP Renewables

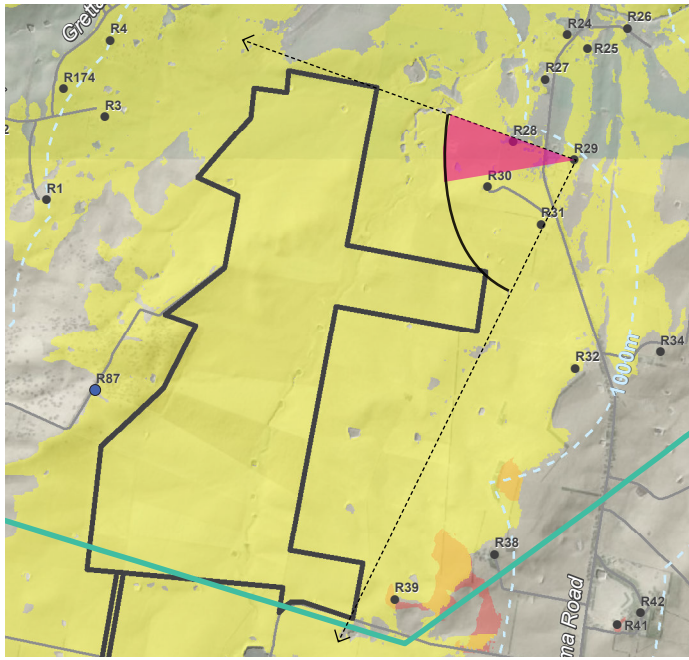
Figure 14 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 2° vertical field of view



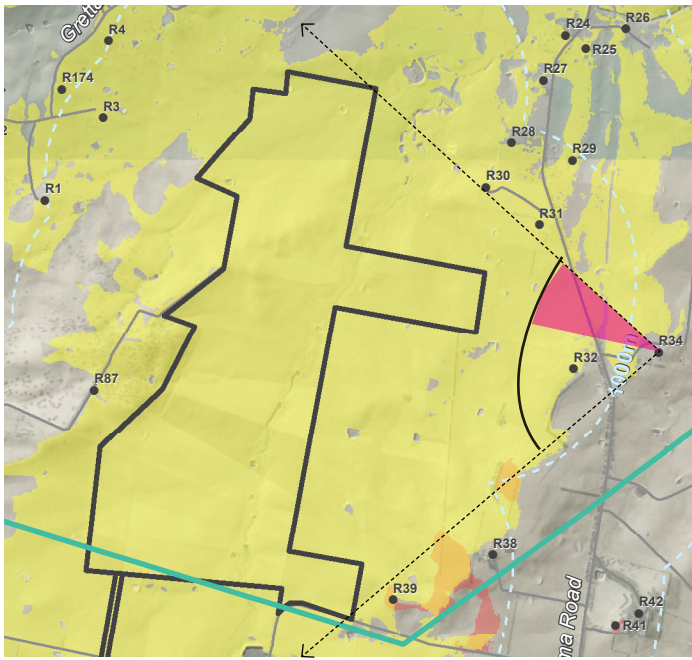
Dwelling R27



Dwelling R28



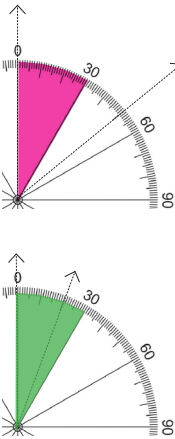
Dwelling R29



Dwelling R34

Key

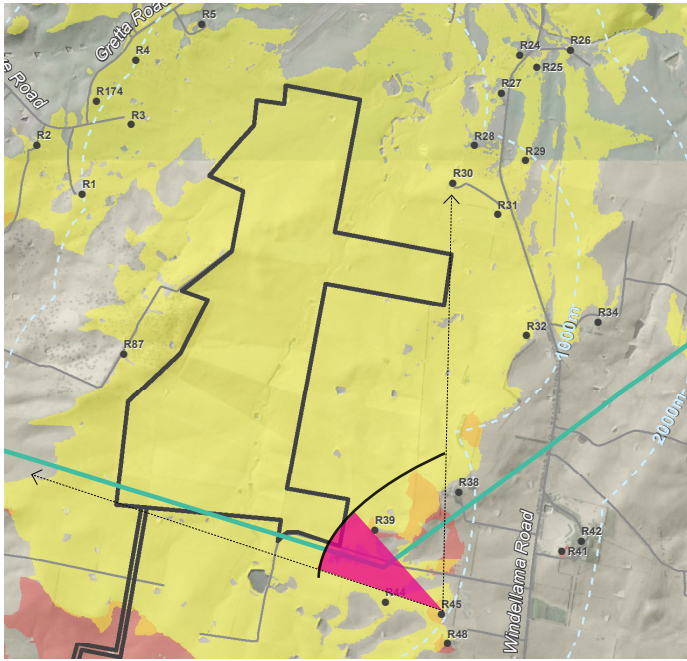
- Subject site
- Dwelling location
- Existing transmission lines**
- 66kV
- 330kV
- 132kV
- Visual catchment**
- Northern site
- Southern site
- North and south site



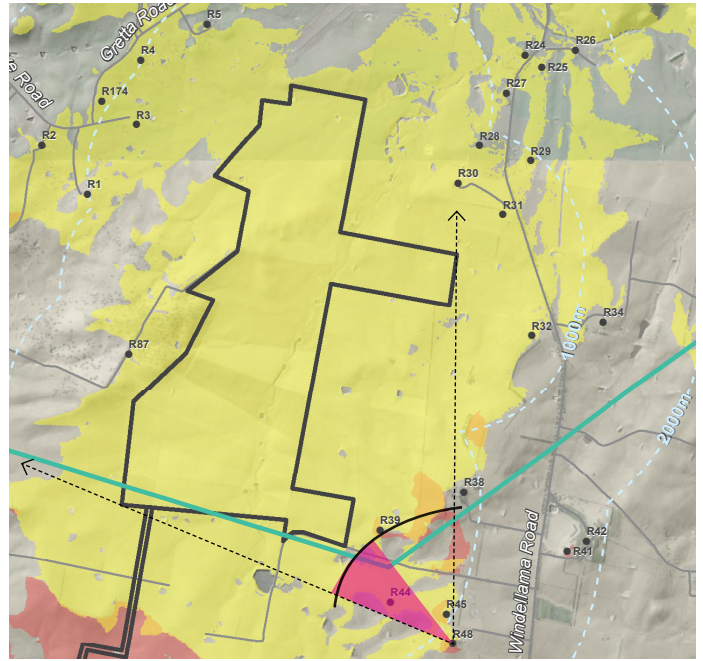
**Horizontal field of view**  
 >30° detailed assessment required  
 <30° no further assessment required



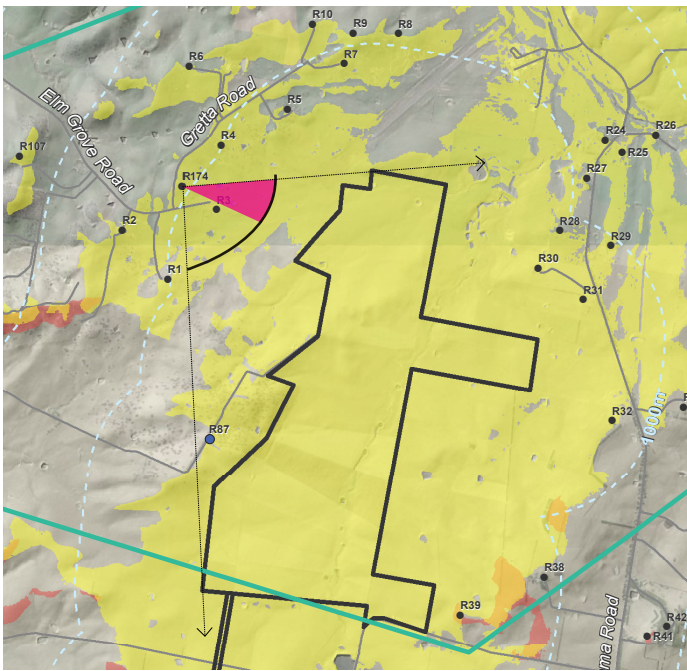
Figure 15 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 2° vertical field of view



Dwelling R45



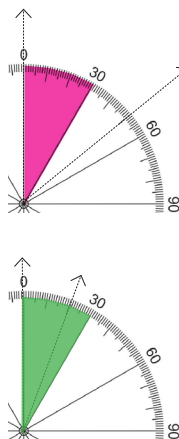
Dwelling R48



Dwelling R174

Key

- Subject site
- Dwelling location
- Existing transmission lines**
  - 66kV
  - 330kV
  - 132kV
- Visual catchment**
  - Northern site
  - Southern site
  - North and south site



Horizontal field of view

>30° detailed assessment required

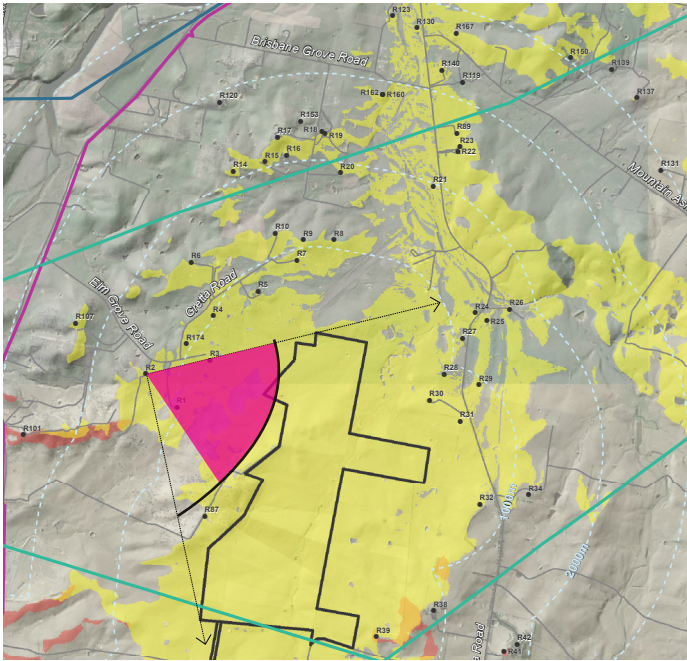
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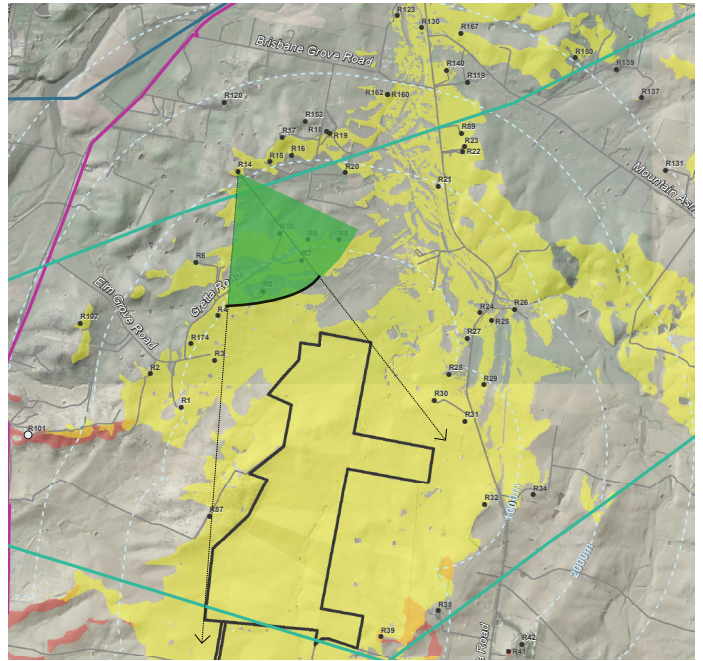
**Merino Solar Farm**

Terrain Solar and ITP Renewables

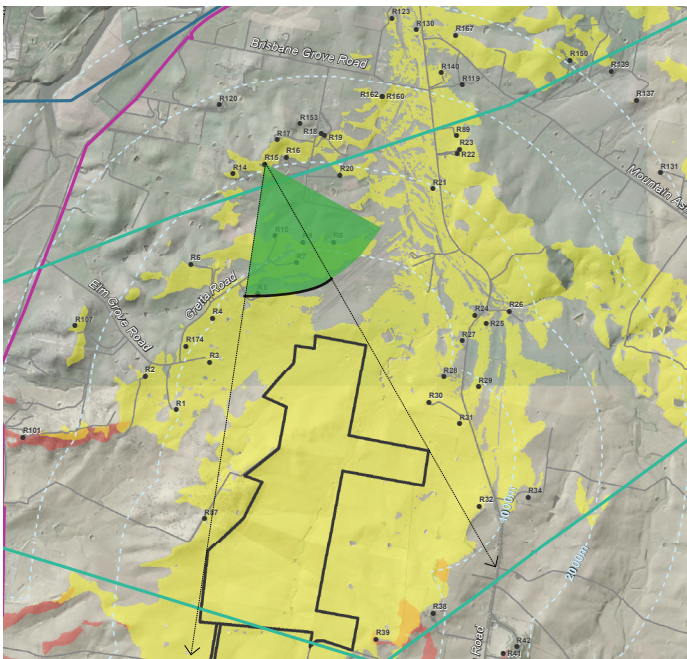
Figure 16 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 2° vertical field of view



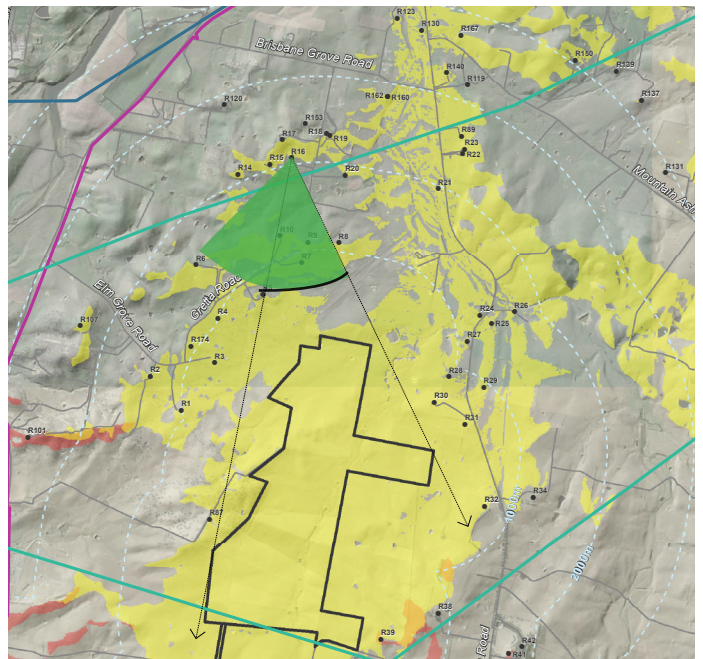
Dwelling R2



Dwelling R14











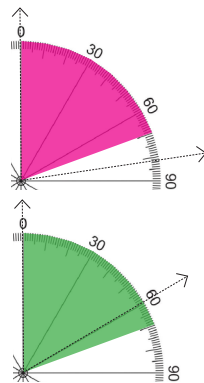
Dwelling R15



Dwelling R16

Key

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site



Horizontal field of view

>70° detailed assessment required

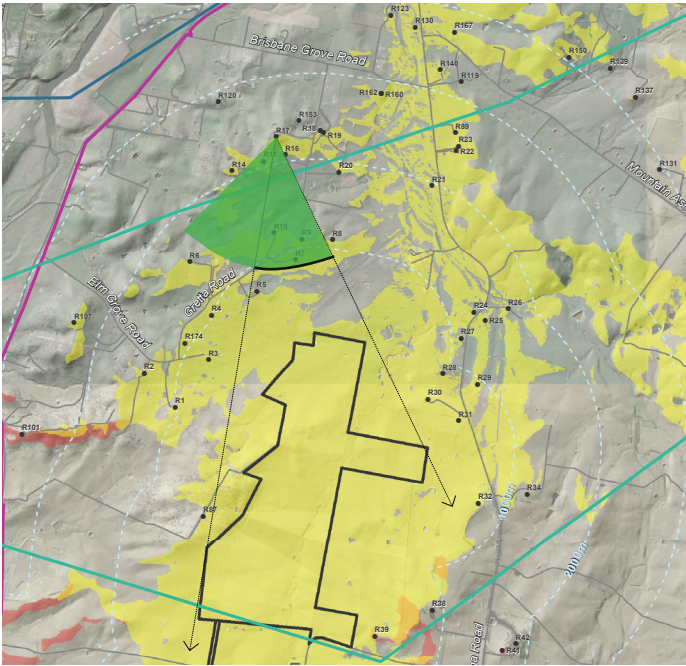
<70° no further assessment required



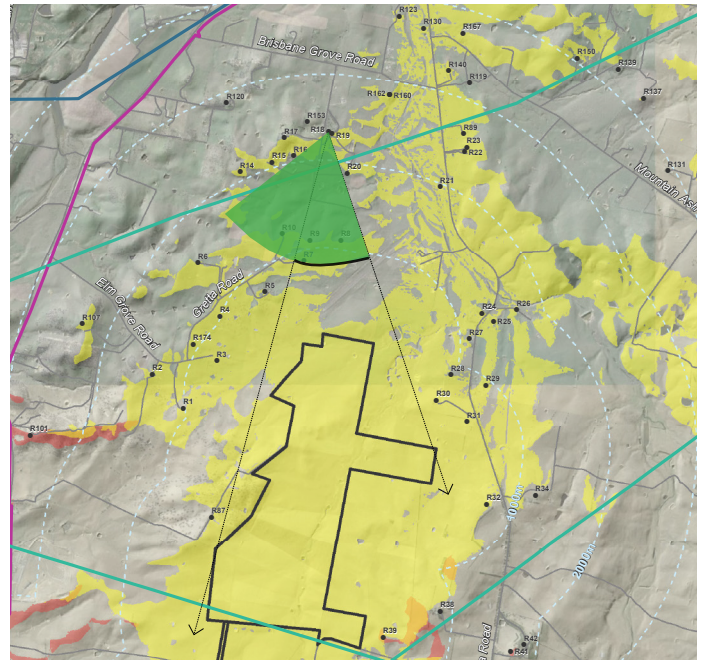
**Merino Solar Farm**

Terrain Solar and ITP Renewables

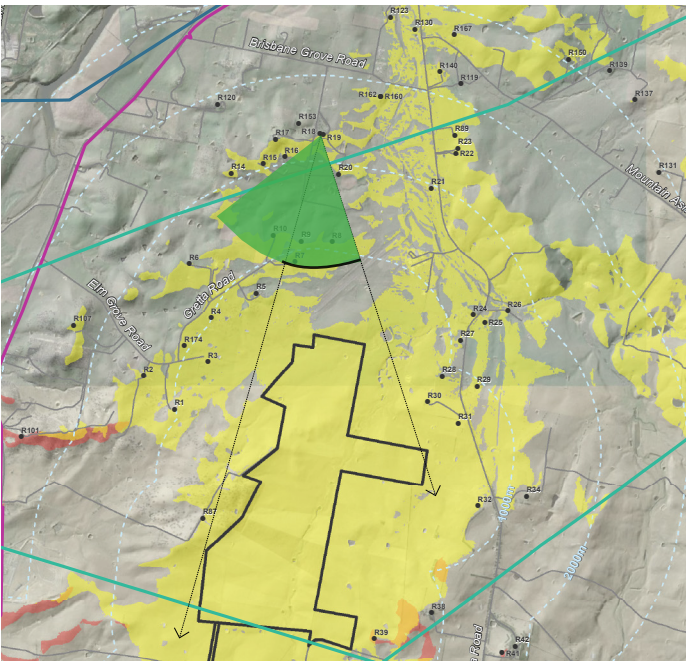
Figure 17 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



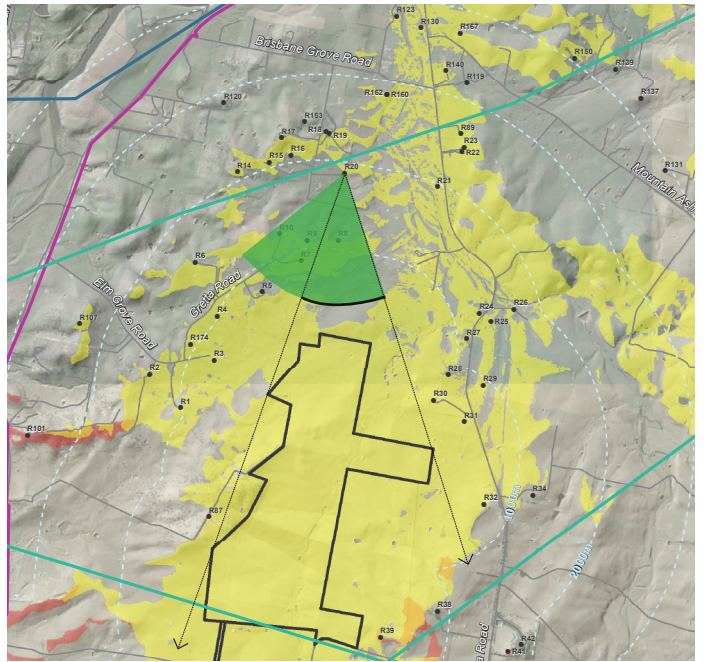
Dwelling R17



Dwelling R18



Dwelling R19



Dwelling R20

Key

Subject site

Dwelling location

Existing transmission lines

66kV  
 330kV  
 132kV

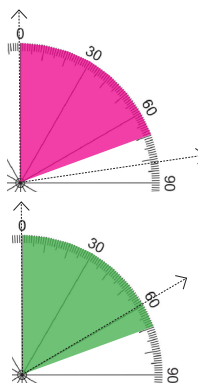
Visual catchment

Northern site  
 Southern site  
 North and south site

Horizontal field of view

>70° detailed assessment required

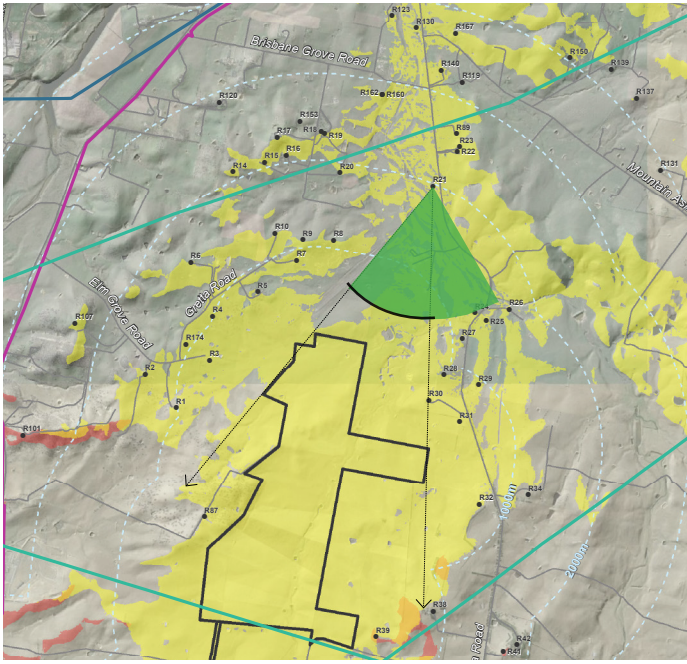
<70° no further assessment required



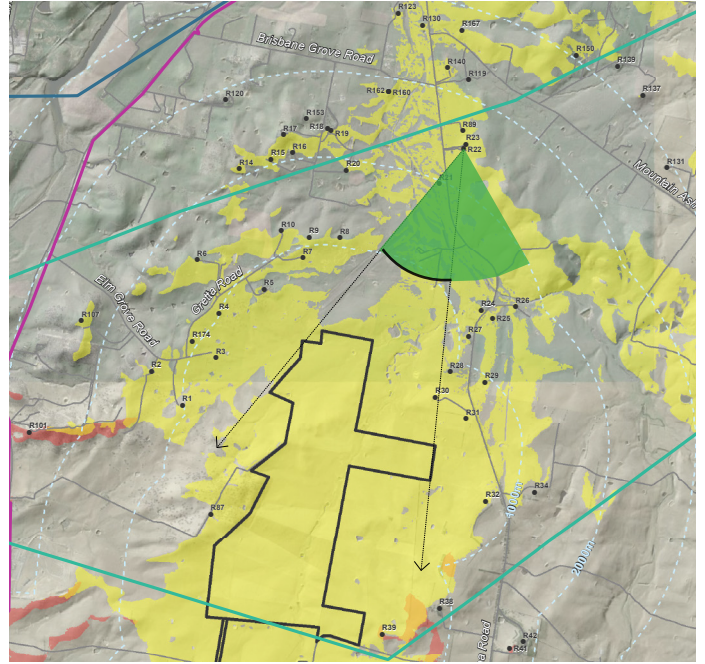
**Merino Solar Farm**

Terrain Solar and ITP Renewables

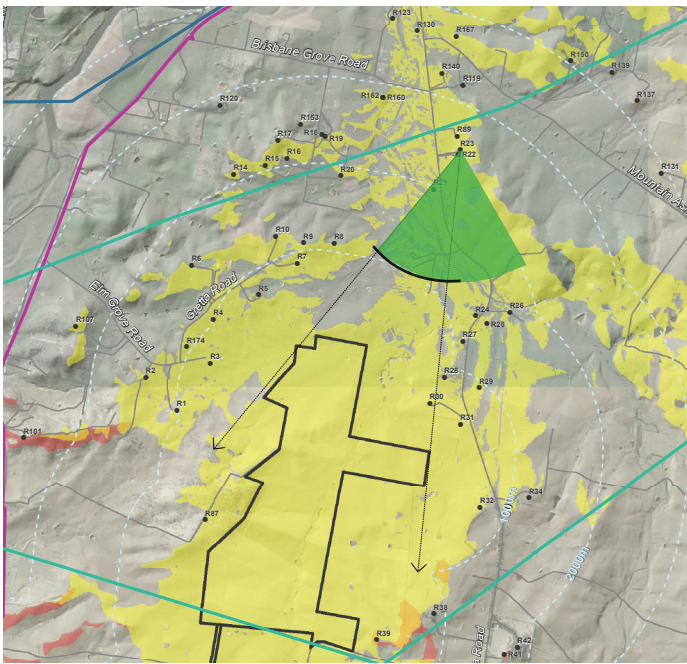
Figure 18 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



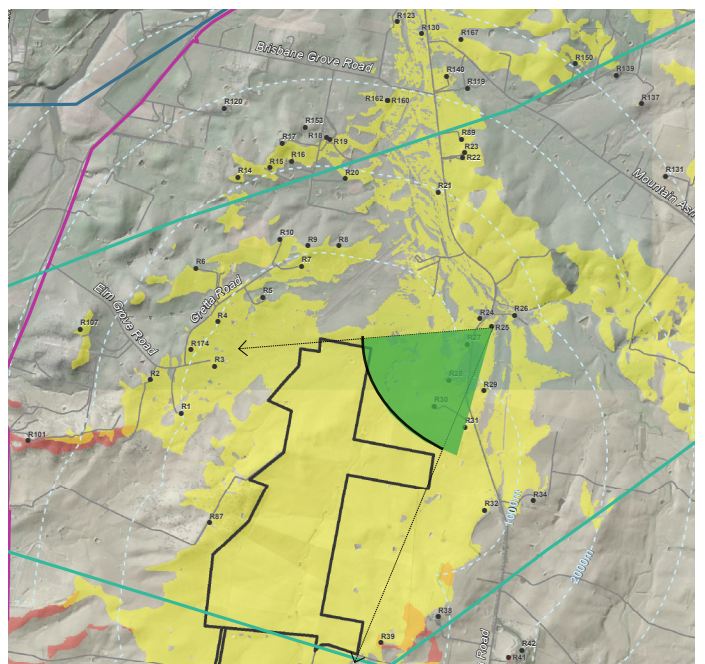
Dwelling R21



Dwelling R22



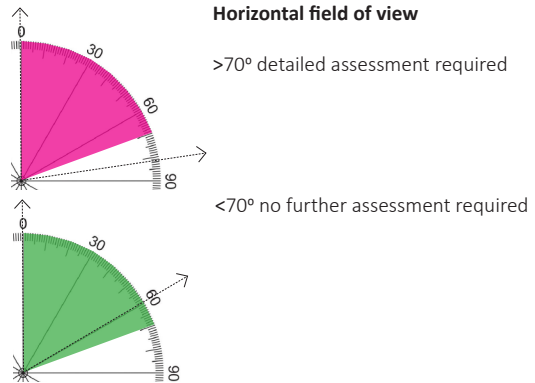
Dwelling R23



Dwelling R25

Key

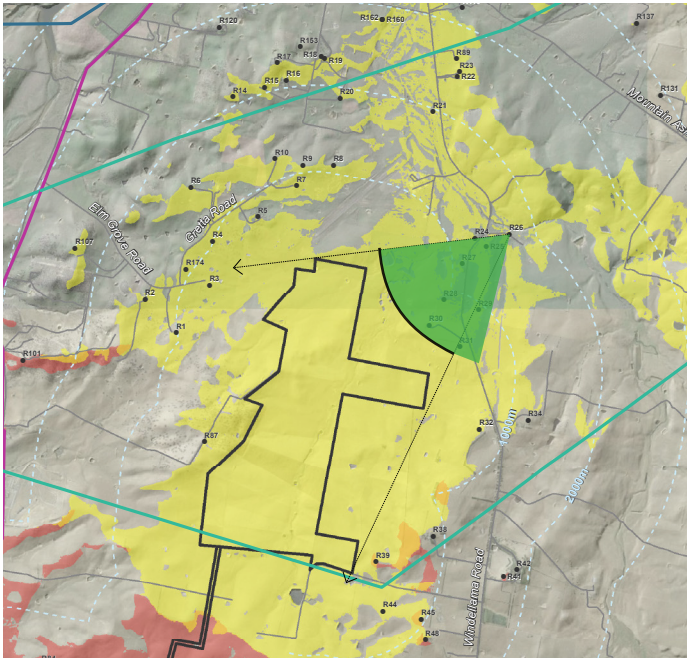
- Subject site
- Dwelling location
- Existing transmission lines**
  - 66kV
  - 330kV
  - 132kV
- Visual catchment**
  - Northern site
  - Southern site
  - North and south site



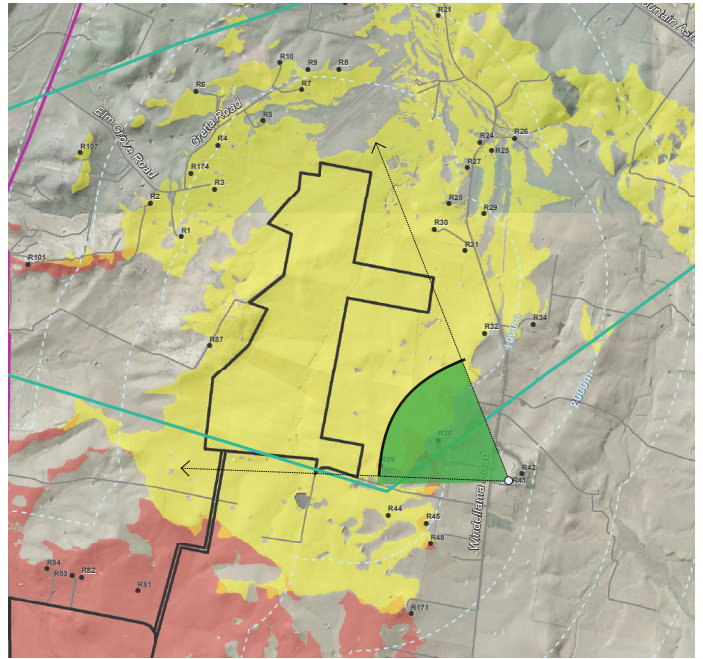
**Merino Solar Farm**

Terrain Solar and ITP Renewables

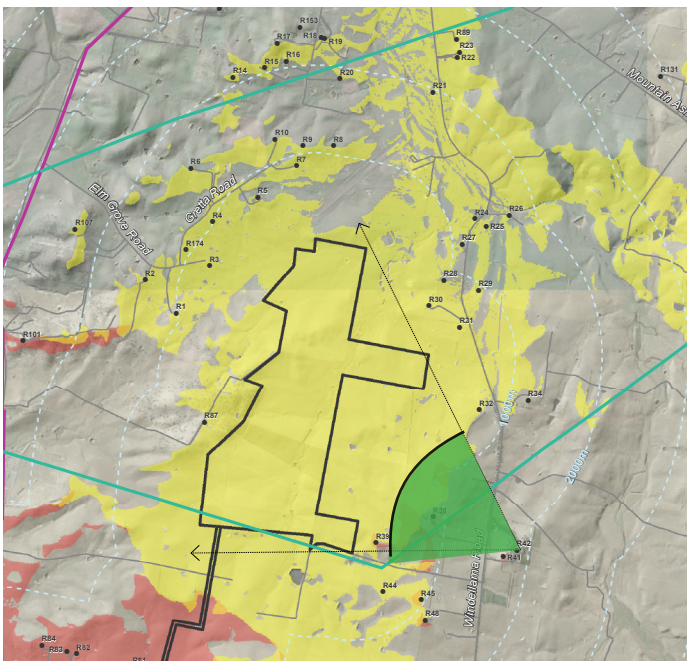
Figure 19 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



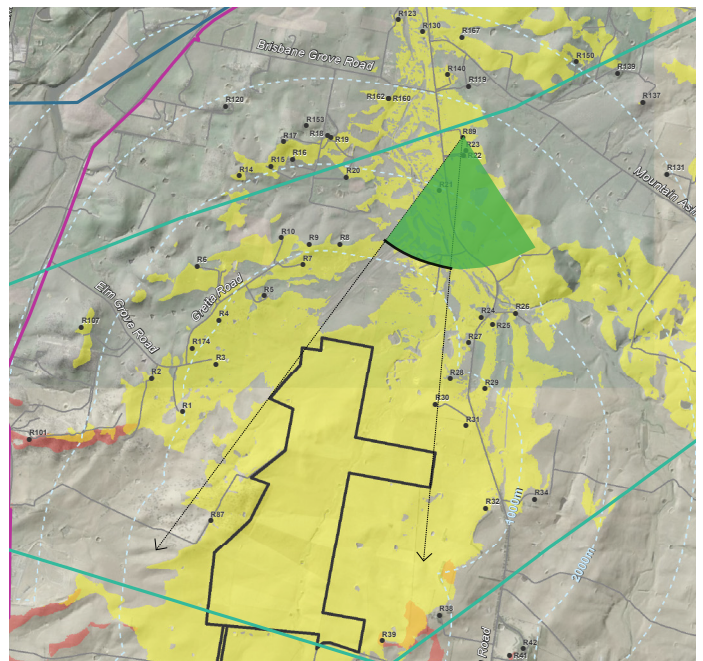
Dwelling R26



Dwelling R41










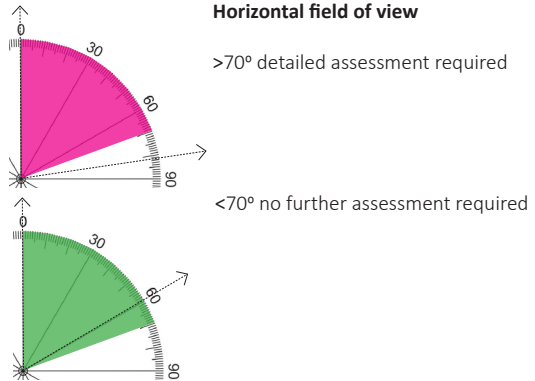
Dwelling R42



Dwelling R89

**Key**

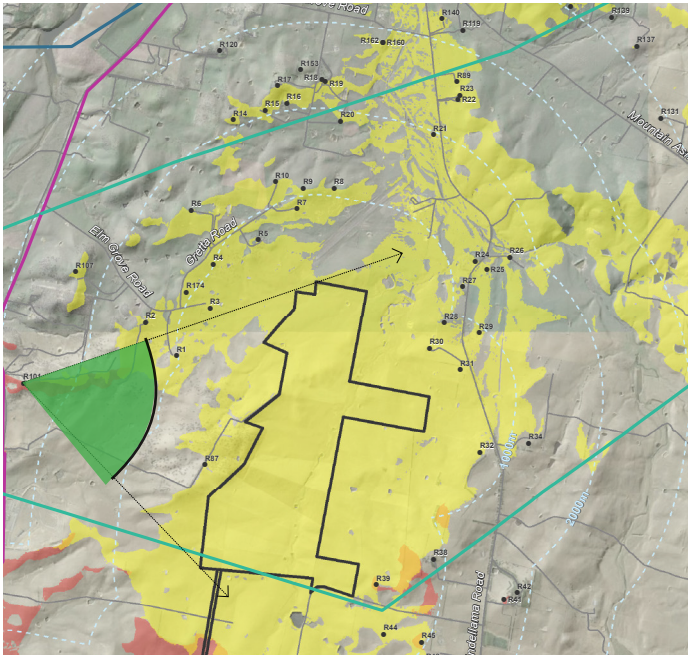
-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site



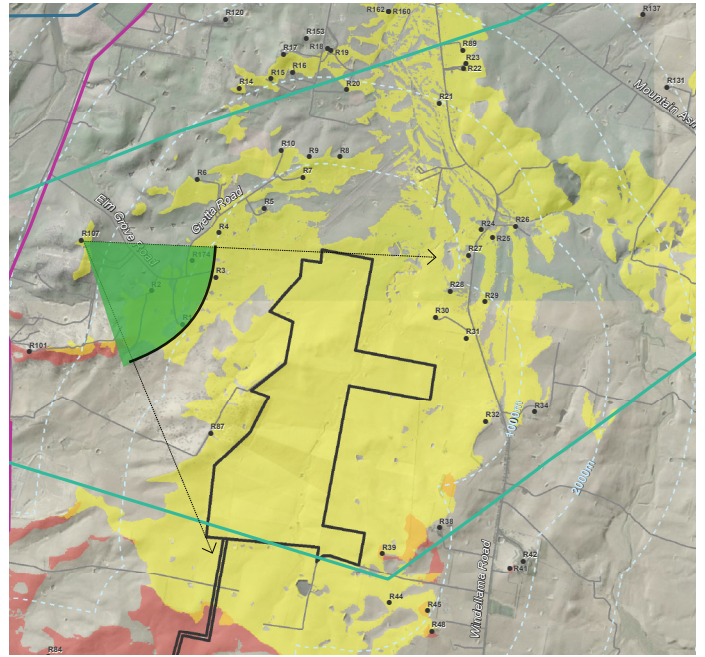
**Merino Solar Farm**

Terrain Solar and ITP Renewables

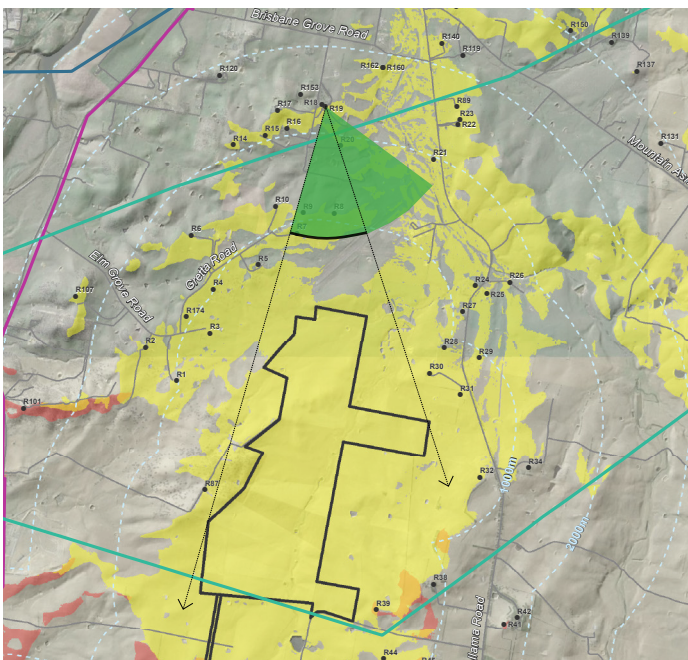
Figure 20 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



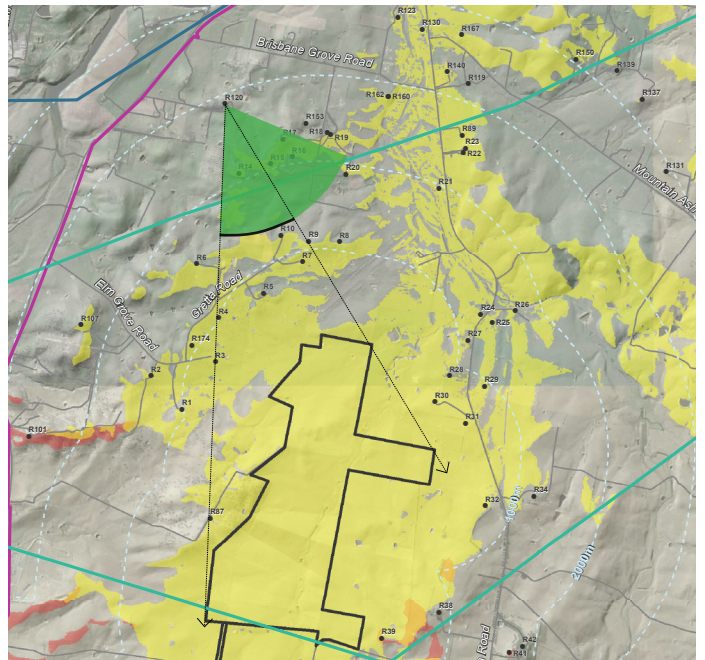
Dwelling R101



Dwelling R107











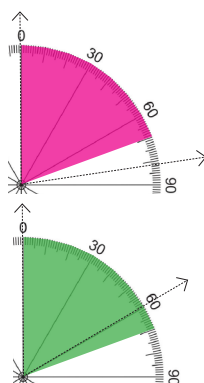
Dwelling R119



Dwelling R120

**Key**

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site



**Horizontal field of view**

>70° detailed assessment required

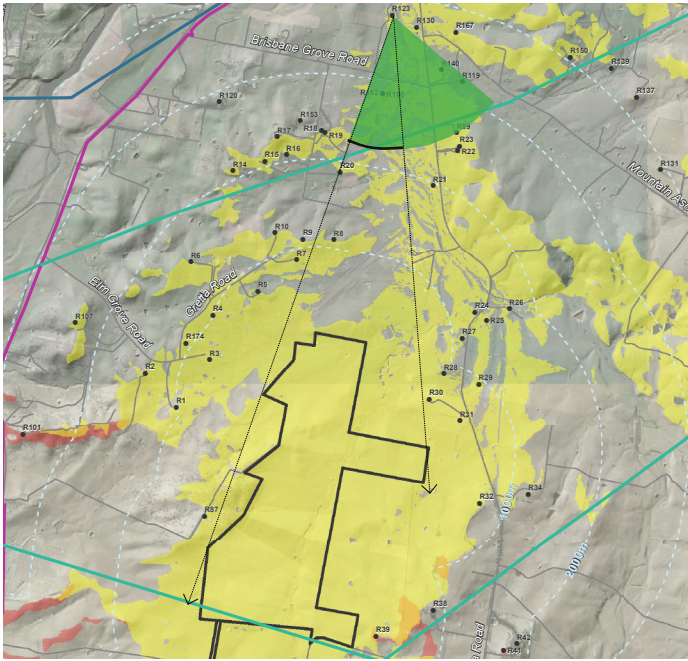
<70° no further assessment required



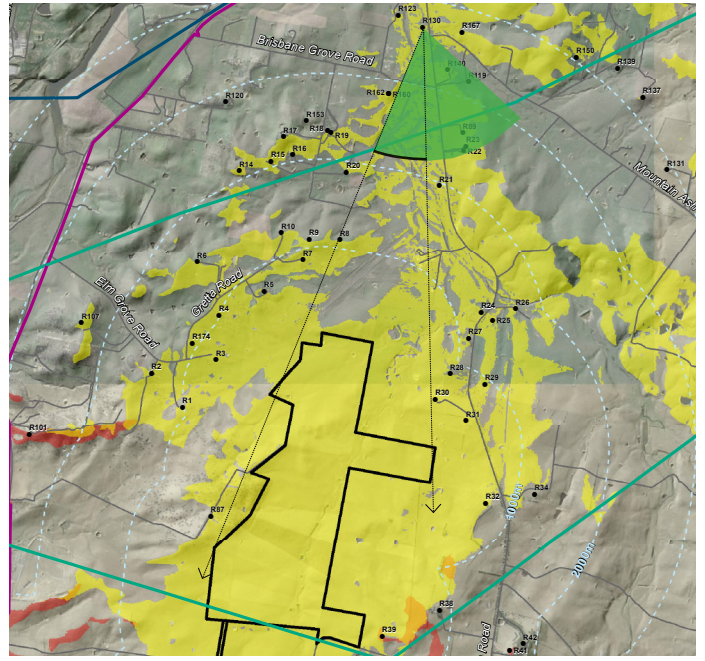
**Merino Solar Farm**

Terrain Solar and ITP Renewables

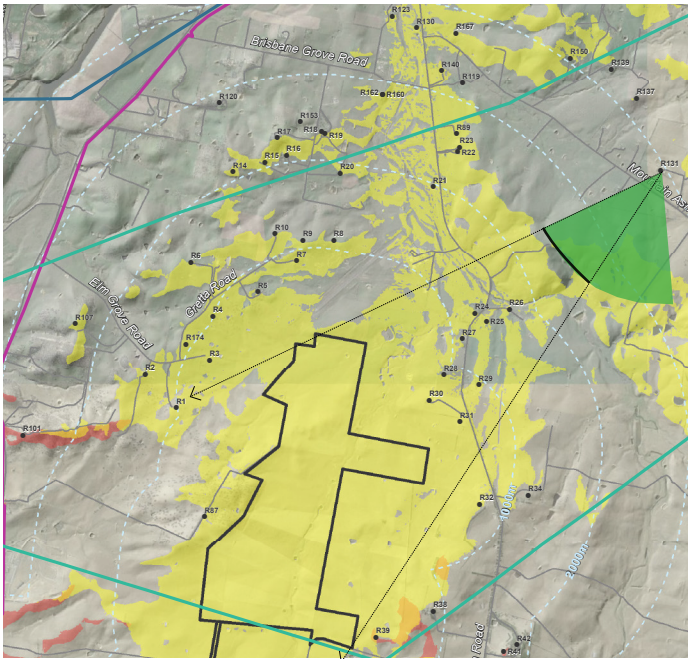
Figure 21 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



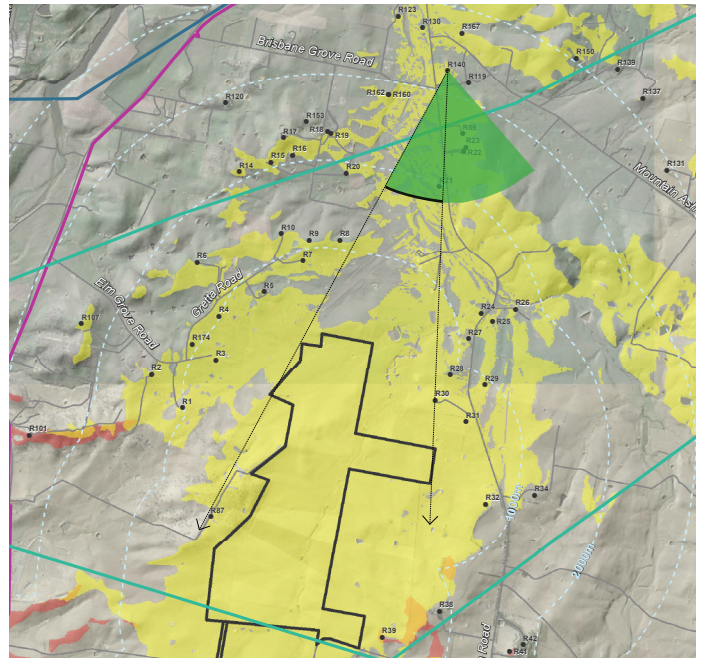
Dwelling R123



Dwelling R130




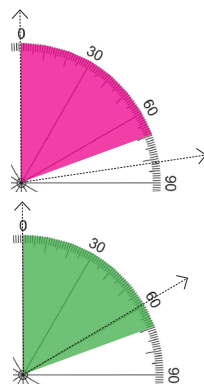
Dwelling R131



Dwelling R140

**Key**

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site



**Horizontal field of view**

>70° detailed assessment required

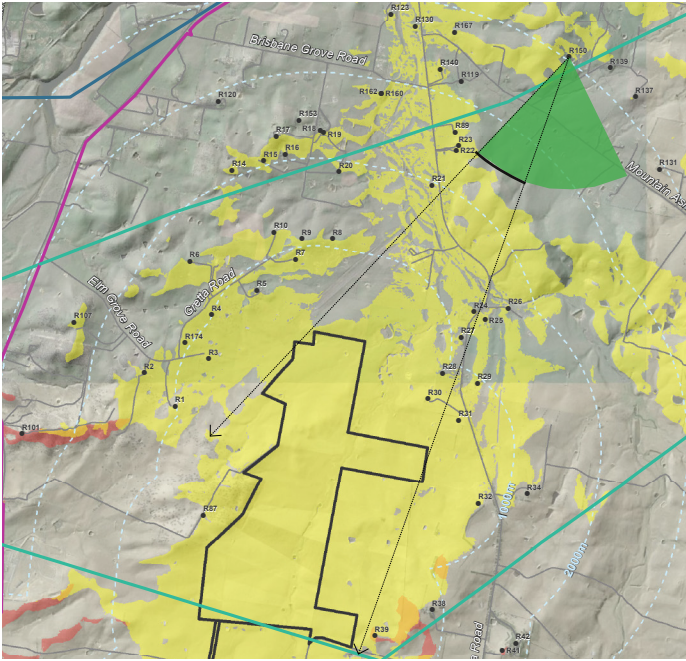
<70° no further assessment required



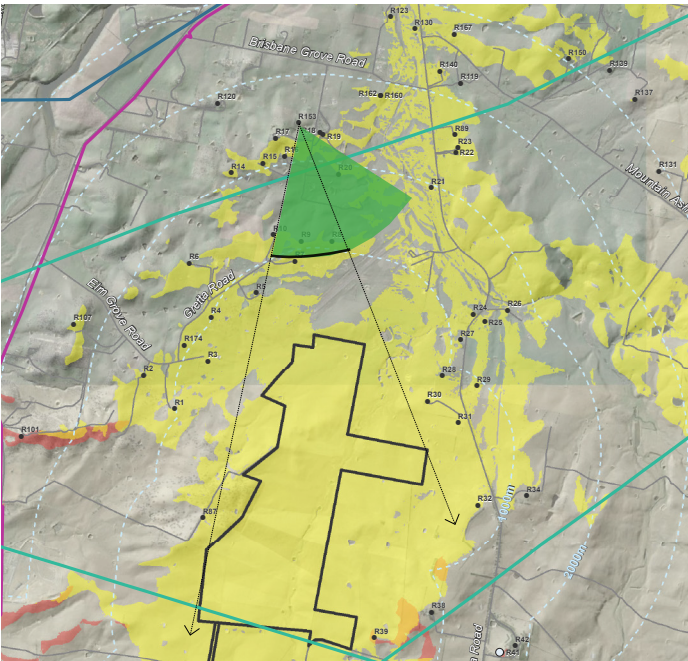
**Merino Solar Farm**

Terrain Solar and ITP Renewables

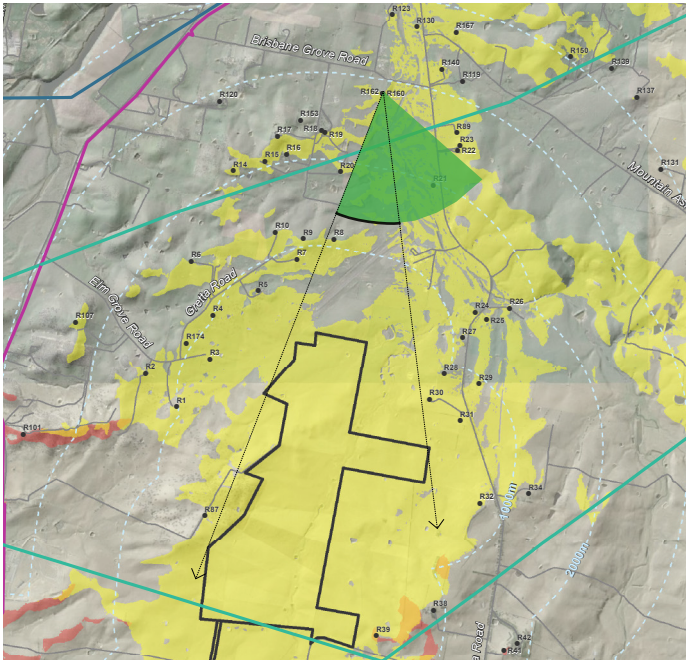
Figure 22 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



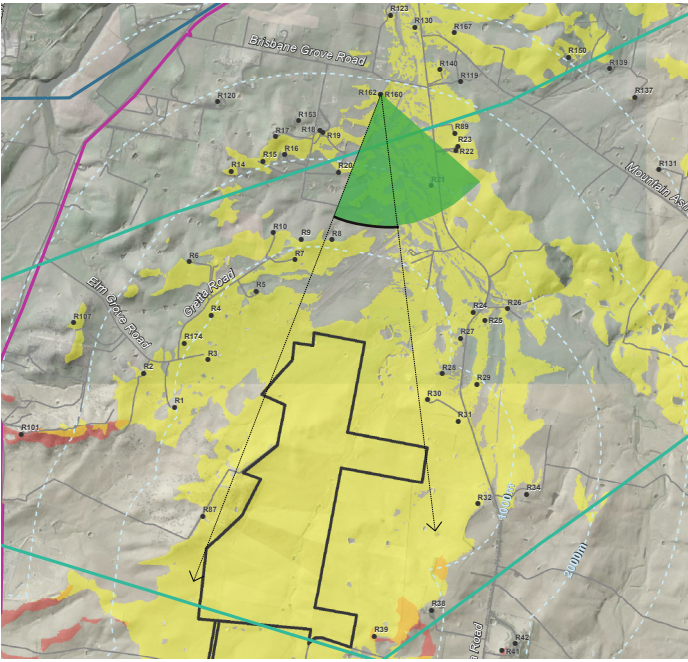
Dwelling R150



Dwelling R153



Dwelling R160



Dwelling R162

Key

- Subject site
- Dwelling location
- Existing transmission lines**
- 66kV
- 330kV
- 132kV
- Visual catchment**
- Northern site
- Southern site
- North and south site

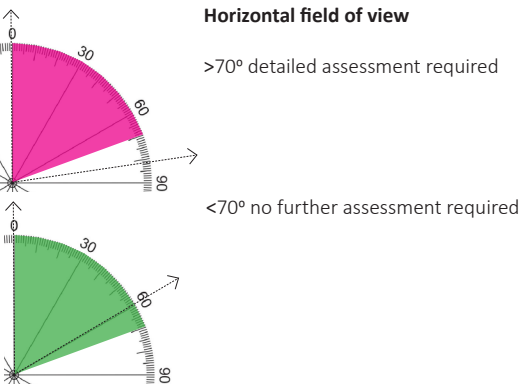
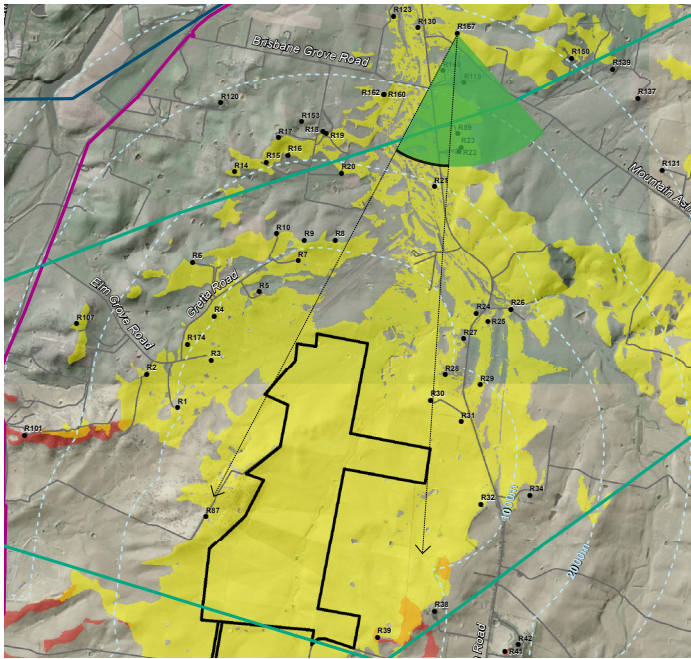










Figure 23 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view

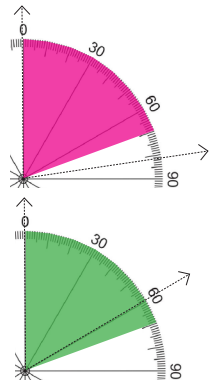


Dwelling R167

**Key**

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV

- Visual catchment**
-  Northern site
  -  Southern site
  -  North and south site



**Horizontal field of view**

- >70° detailed assessment required
- <70° no further assessment required



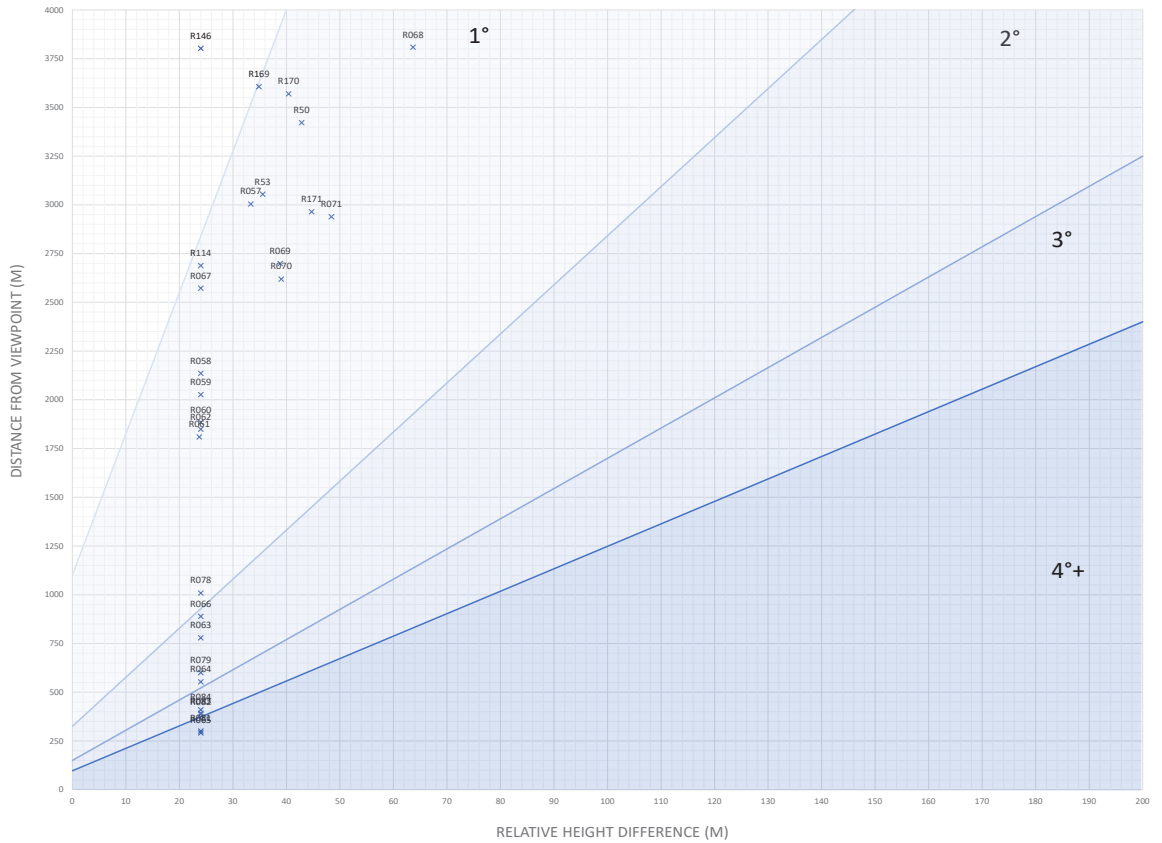
Figure 24 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view

Attachment C:  
Preliminary visual assessment  
analysis - Southern site



**Merino Solar Farm**

Terrain Solar and ITP Renewables



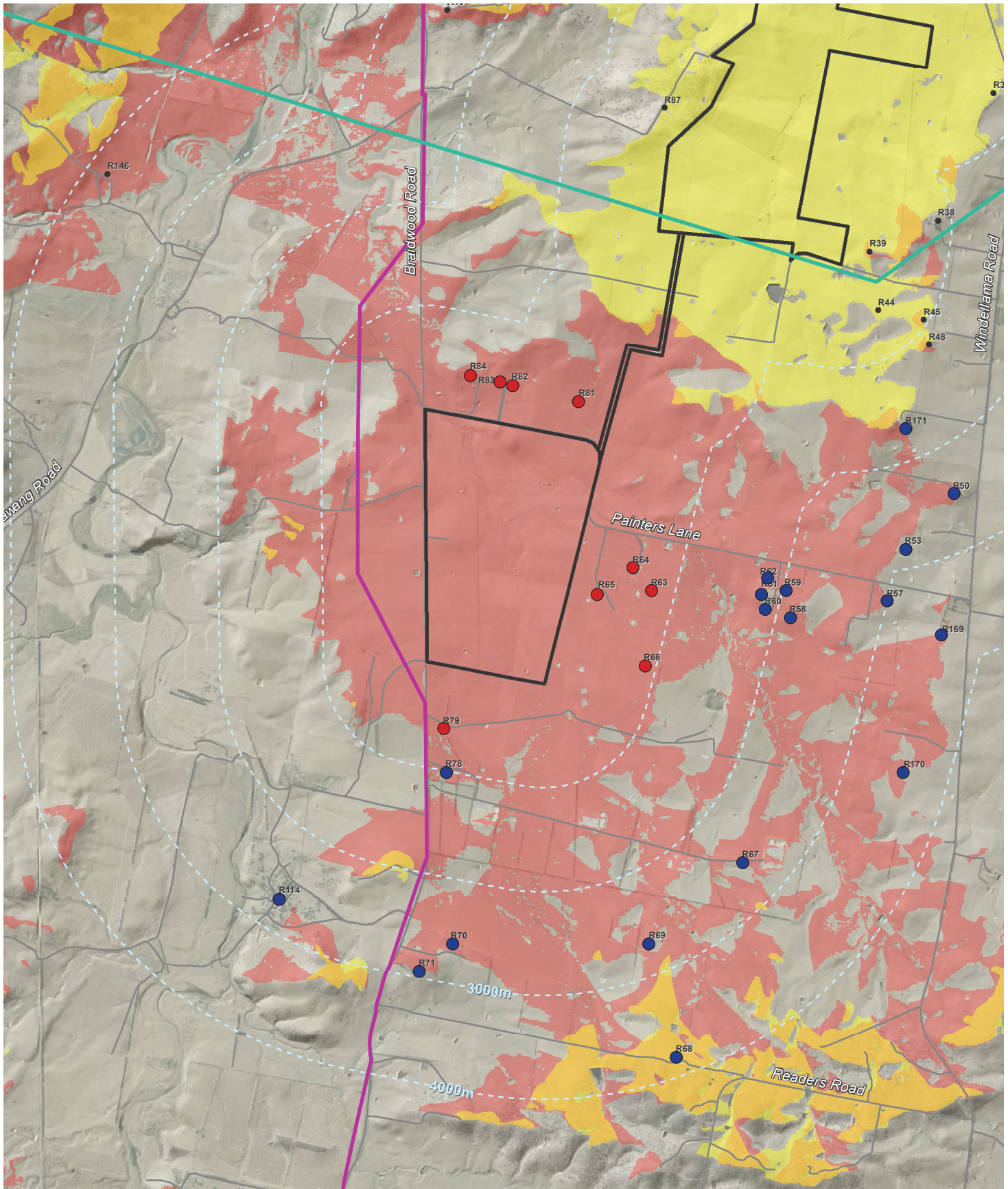
Tag	Address	Distance to site boundary (metres)	Height of dwelling (metres)	Lowest point of solar farm	Highest point of solar farm	Relative height difference (metres)	Vertical field of view (VFV)	Horizontal field of view (HFV)	Detailed visual assessment required (Y/N)
R001	204 Elm Grove Road Tirrannaville	1010	675	643	684	41	2°	> 30 degrees	Y
R002	182 Elm Grove Road Tirrannaville	1376	684	643	684	41	1°	> 70 degrees	Y
R003	244 Elm Grove Road Tirrannaville	729	663	643	684	41	3°	> 20 degrees	Y
R004	70 Gretta Road Tirrannaville	997	674	643	684	41	2°	> 30 degrees	Y
R005	124 Gretta Road Brisbane Grove	731	665	643	684	41	3°	> 20 degrees	Y
R006	81 Gretta Road Brisbane Grove	1519	694	643	684	51	2°	> 30 degrees	Y
R007	168 Gretta Road Brisbane Grove	868	659	643	684	41	2°	> 30 degrees	Y
R008	170 Gretta Road Brisbane Grove	1097	661	643	684	41	2°	> 30 degrees	Y
R009	169 Gretta Road Brisbane Grove	1088	674	643	684	41	2°	> 30 degrees	Y
R010	165 Gretta Road Brisbane Grove	1242	668	643	684	41	2°	> 30 degrees	Y
R014	126 Corrinayah Road Brisbane Grove	2090	677	643	684	41	1°	< 70 degrees	N
R015	124 Corrinayah Road Brisbane Grove	2058	675	643	684	41	1°	< 70 degrees	N
R016	120 Corrinayah Road Brisbane Grove	2080	668	643	684	41	1°	< 70 degrees	N
R017	90 Corrinayah Road Brisbane Grove	2301	690	643	684	47	1°	< 70 degrees	N
R018	77 Corrinayah Road Brisbane Grove	2330	661	643	684	41	1°	< 70 degrees	N
R019	53 Corrinayah Road Brisbane Grove	2311	660	643	684	41	1°	< 70 degrees	N
R020	125 Corrinayah Road Brisbane Grove	1875	648	643	684	41	1°	< 70 degrees	N
R021	480 Windellama Road Brisbane Grove	1964	635	643	684	49	1°	< 70 degrees	N
R022	441 Windellama Road Brisbane Grove	2449	643	643	684	41	1°	< 70 degrees	N
R023	439 Windellama Road Brisbane Grove	2509	646	643	684	41	1°	< 70 degrees	N
R024	648 Windellama Road Gundry	1309	640	643	684	44	2°	> 30 degrees	Y
R025	643 Windellama Road Gundry	1417	641	643	684	43	1°	< 70 degrees	N
R026	639 Windellama Road Gundry	1704	640	643	684	44	1°	< 70 degrees	N
R027	684 Windellama Road Gundry	1116	643	643	684	41	2°	> 30 degrees	Y
R028	736 Windellama Road Gundry	872	653	643	684	41	2°	> 30 degrees	Y
R029	737 Windellama Road Gundry	939	650	643	684	41	2°	> 30 degrees	Y
R030	778 Windellama Road Gundry	551	651	643	684	41	4°	> 10 degrees	Y
R031	782 Windellama Road Gundry	481	653	643	684	41	4°	> 10 degrees	Y
R032	1046 Windellama Road Gundry	698	681	643	684	41	3°	> 20 degrees	Y
R034	877 Windellama Road Gundry	1223	679	643	684	41	2°	> 30 degrees	Y
R038	1046 Windellama Road Gundry	874	706	643	684	63	3°	> 20 degrees	Y
R039	100 Gundry Lane Gundry	253	693	643	684	50	4°	> 10 degrees	Y
R041	1061 Windellama Road Gundry	1730	695	643	684	52	1°	< 70 degrees	N
R042	1013 Windellama Road Gundry	1867	692	643	684	49	1°	< 70 degrees	N
R044	101 Gundry Lane Gundry	570	685	643	684	42	4°	> 10 degrees	Y
R045	57 Gundry Lane Gundry	963	693	643	684	50	2°	> 30 degrees	Y
R048	1132 Windellama Road Gundry	1148	697	643	684	54	2°	> 30 degrees	Y
R087	4844 Braidwood Road Tirrannaville	295	696	643	684	53	4°	> 10 degrees	Y
R089	411 Windellama Road Brisbane Grove	2631	639	643	684	45	1°	< 70 degrees	N
R101	22 Yattalunga Road Tirrannaville	2500	684	643	684	41	1°	< 70 degrees	N
R107	138 Elm Grove Road Tirrannaville	2313	700	643	684	57	1°	< 70 degrees	N
R119	46 Mountain Ash Road Brisbane Grove	3205	636	643	684	48	1°	< 70 degrees	N
R120	83 Johnsons Lane Brisbane Grove	2882	662	643	684	41	1°	< 70 degrees	N
R123	262 Windellama Road Brisbane Grove	3764	632	643	684	52	1°	< 70 degrees	N
R130	298 Windellama Road Brisbane Grove	3680	632	643	684	52	1°	< 70 degrees	N
R131	363 Mountain Ash Road Gundry	3941	668	643	684	41	1°	< 70 degrees	N
R137	130 Barretts Lane Gundry	4211	668	643	684	41	0°	N/A	N
R139	100 Barretts Lane Gundry	4240	654	643	684	41	0°	N/A	N
R140	361 Windellama Road Brisbane Grove	3262	635	643	684	49	1°	< 70 degrees	N
R150	55 Barretts Lane Brisbane Grove	4047	660	643	684	41	1°	< 70 degrees	N
R153	78 Corrinayah Road Brisbane Grove	2449	668	643	684	41	1°	< 70 degrees	N
R155	94 Rosemont Road Goulburn	4289	672	643	684	41	0°	N/A	N
R160	242 Brisbane Grove Road Brisbane Grove	2851	642	643	684	42	1°	< 70 degrees	N
R162	242 Brisbane Grove Road Brisbane Grove	2851	642	643	684	42	1°	< 70 degrees	N
R167	274 Mountain Ash Road Gundry	3719	640	643	684	44	1°	< 70 degrees	N
R174	16 Gretta Road Tirrannaville	1061	676	643	684	41	2°	> 30 degrees	Y



## Merino Solar Farm

Terrain Solar and ITP Renewables

Figure 25 - Preliminary Assessment Tool Analysis, Southern site

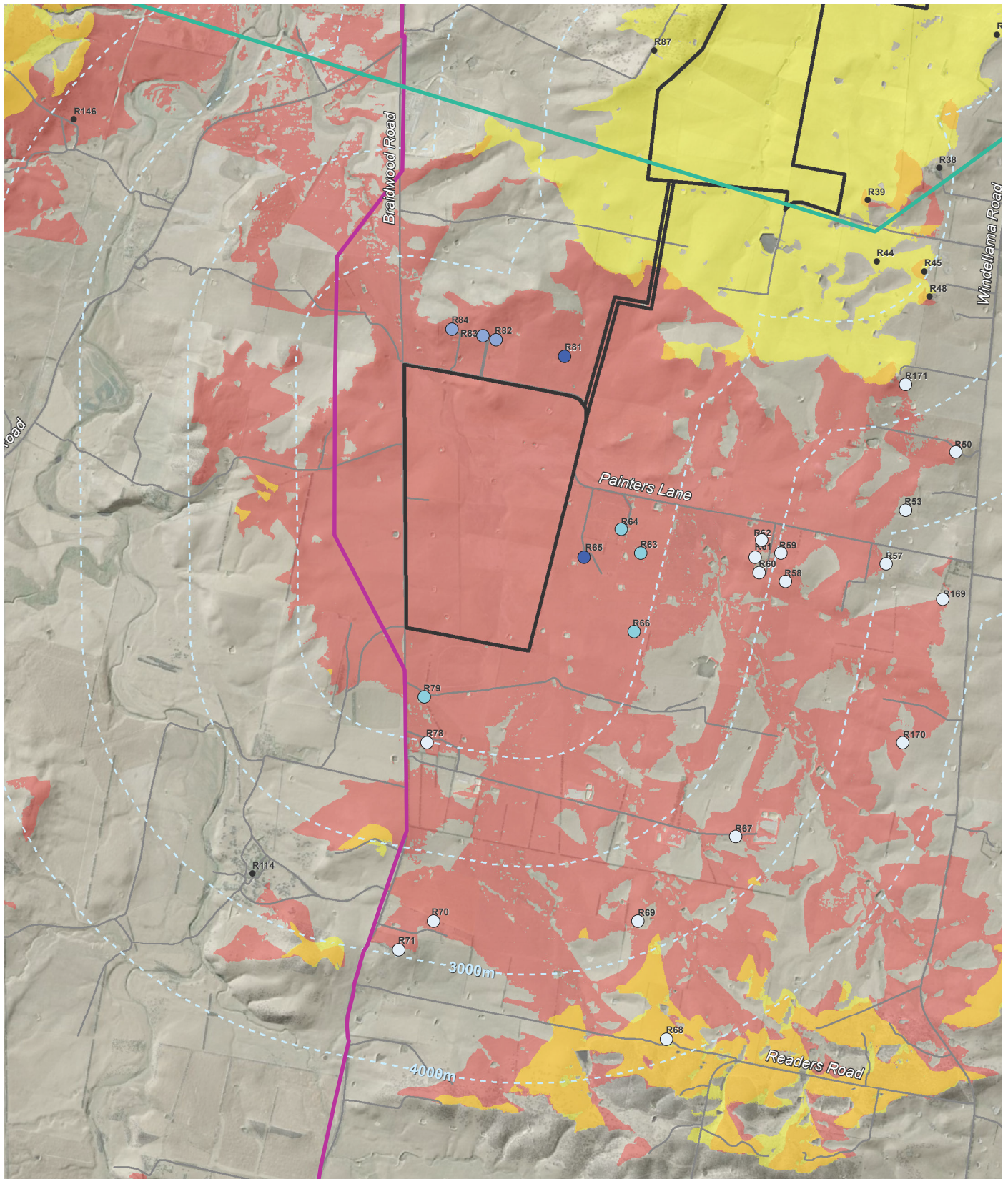


<b>Key</b>	<b>Transmission lines</b>	<b>Solar panels visible:</b>	<b>View from dwelling requires detailed assessment:</b>
Subject site	66kV	From Northern site	Yes
Modelled solar panel (5m)	330kV	From Southern site	No
	132kV	From both sites	



**Merino Solar Farm**  
Terrain Solar and ITP Renewables

Figure 26 - Result of preliminary assesment, Southern site



Key

- Subject Site
- Modelled Solar Panel (5m)
- Sensitive Residential Receivers Within 4km

- Solar Panels Visible**
- From Northern Site
  - From Southern Site
  - From both sites

- Transmission Lines**
- 66kV
  - 132kV
  - 330kV

**Results of vertical angle of view assessment:**

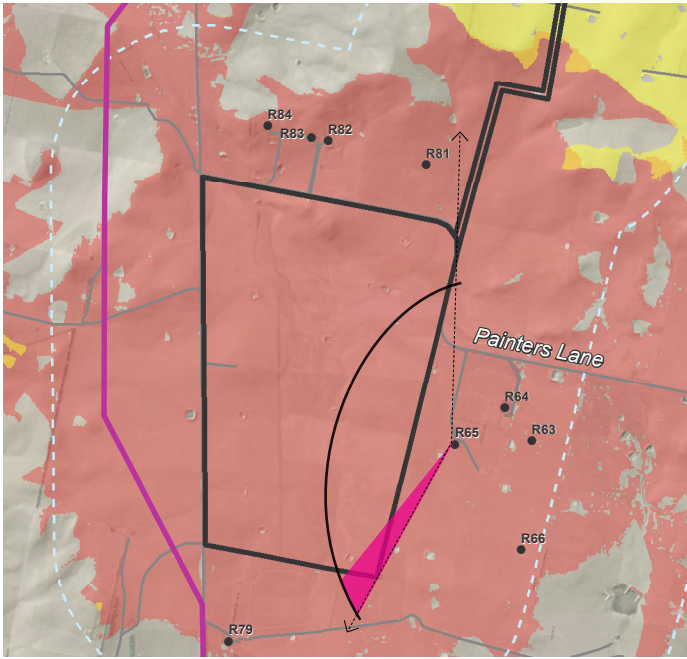
- 4° vertical field of view
- 3° vertical field of view
- 2° vertical field of view
- 1° vertical field of view



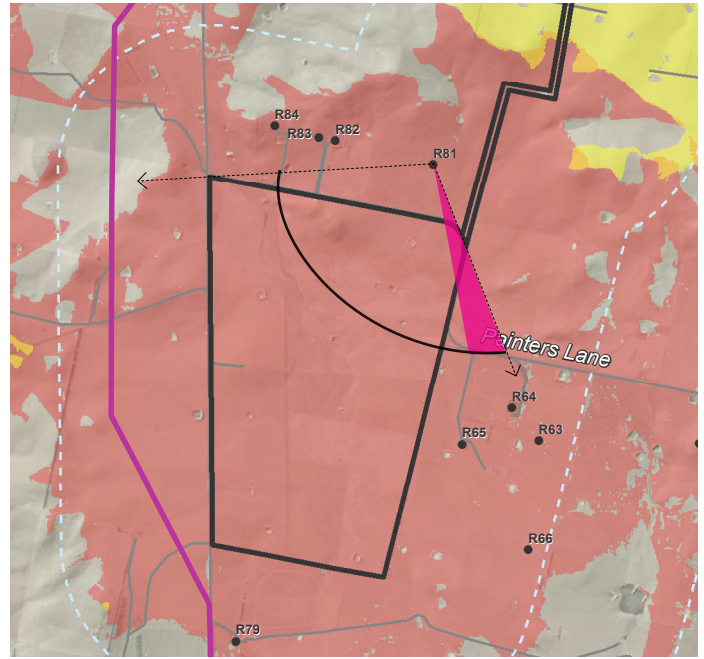
**Merino Solar Farm**

Terrain Solar and ITP Renewables

Figure 27 - Preliminary assesment, Vertical field of view








Dwelling R65






Dwelling R81

Key

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV

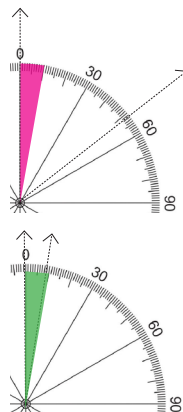
Visual catchment

-  Northern site
-  Southern site
-  North and south site

Horizontal field of view

>10° detailed assessment required

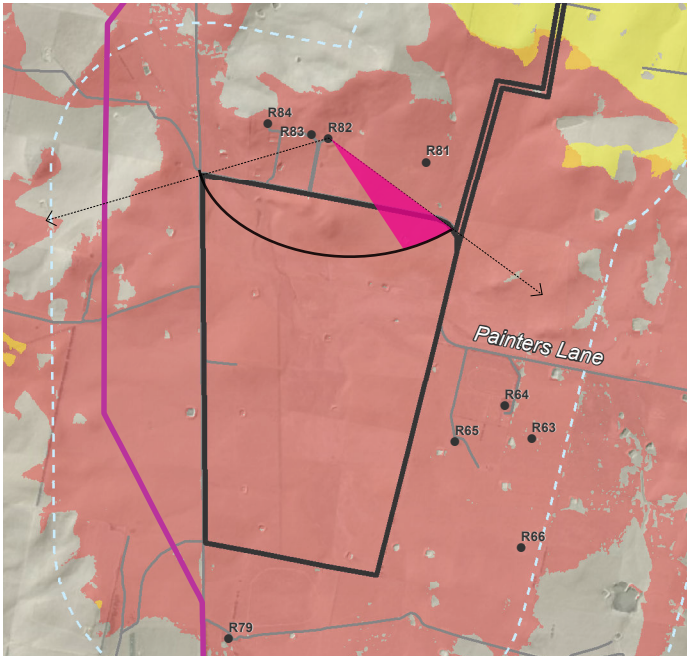
<10° no further assessment required



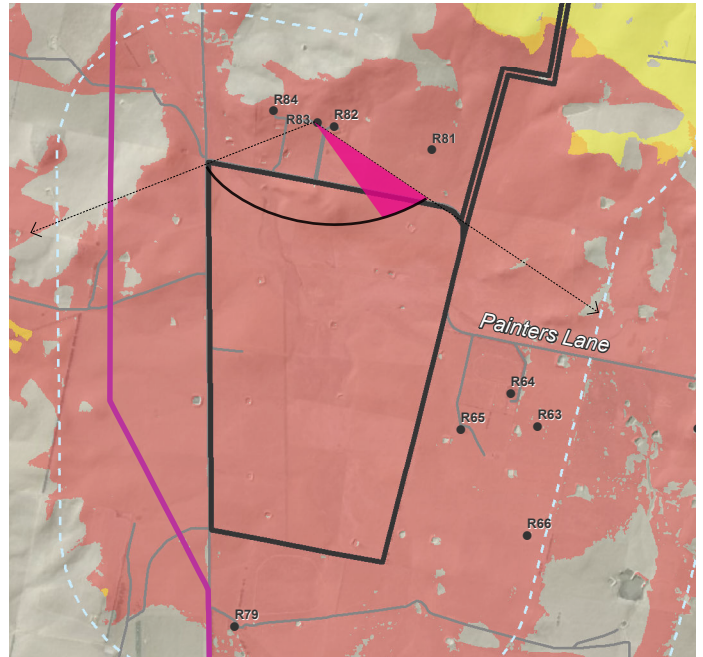
**Merino Solar Farm**

Terrain Solar and ITP Renewables

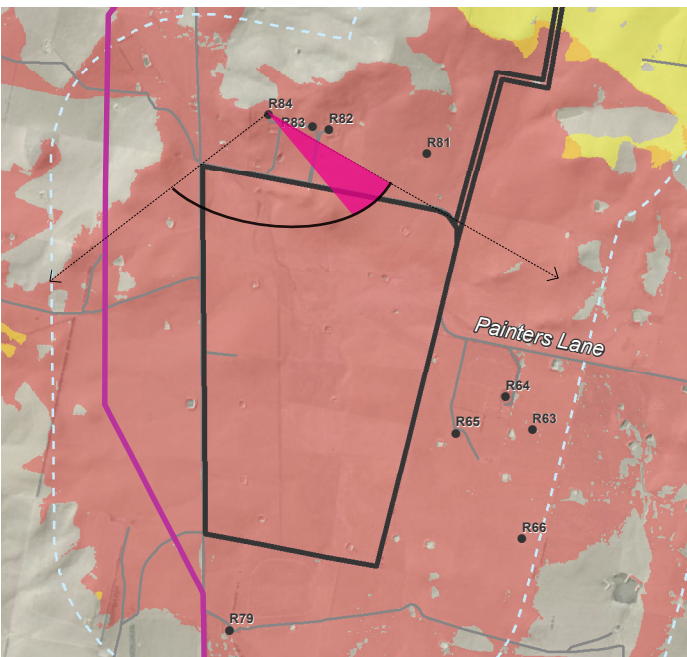
Figure 28 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 4° vertical field of view



Dwelling R82












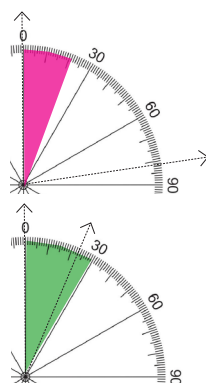
Dwelling R83



Dwelling R84

Key

- |   |                                 |   |                      |
|---|---------------------------------|---|----------------------|
|   | Subject site                    |  | Northern site        |
|  | No Detailed assessment required |  | Southern site        |
|  | Detailed assessment required    |  | North and south site |
| <b>Existing transmission lines</b>  |                                 |   |                      |
|   | 66kV                            |   |                      |
|   | 330kV                           |   |                      |
|   | 132kV                           |   |                      |



**Horizontal field of view**

>30° detailed assessment required

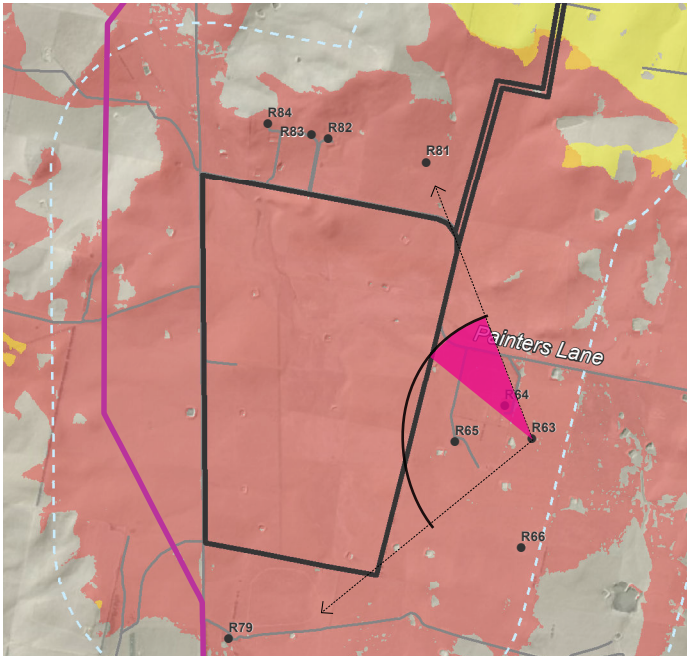
<30° no further assessment required



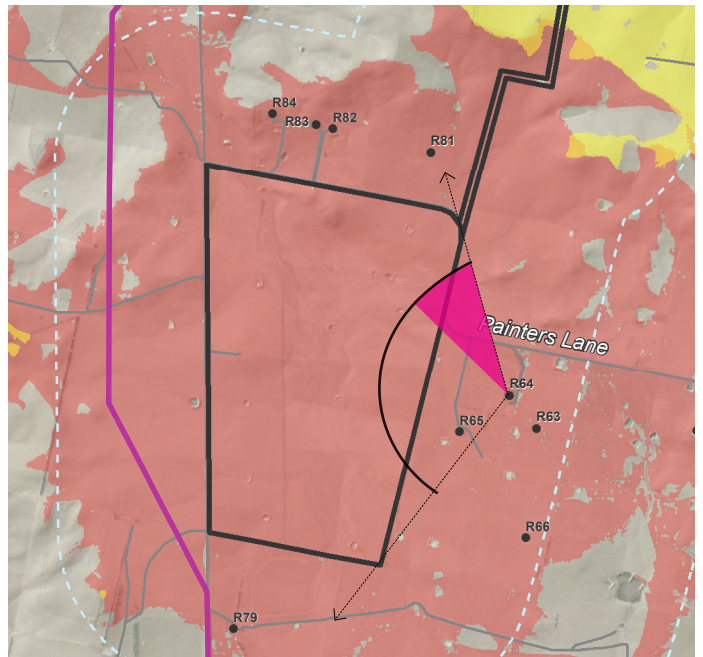
**Merino Solar Farm**

Terrain Solar and ITP Renewables

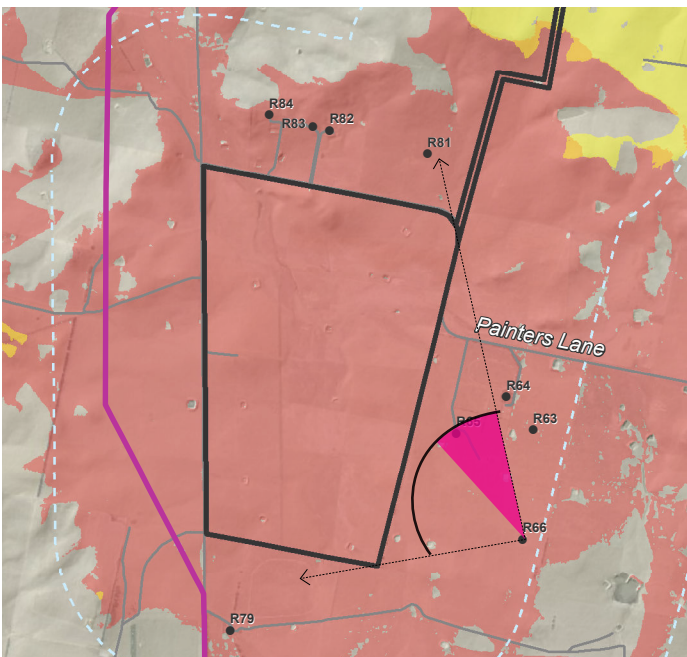
Figure 29 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 3° vertical field of view



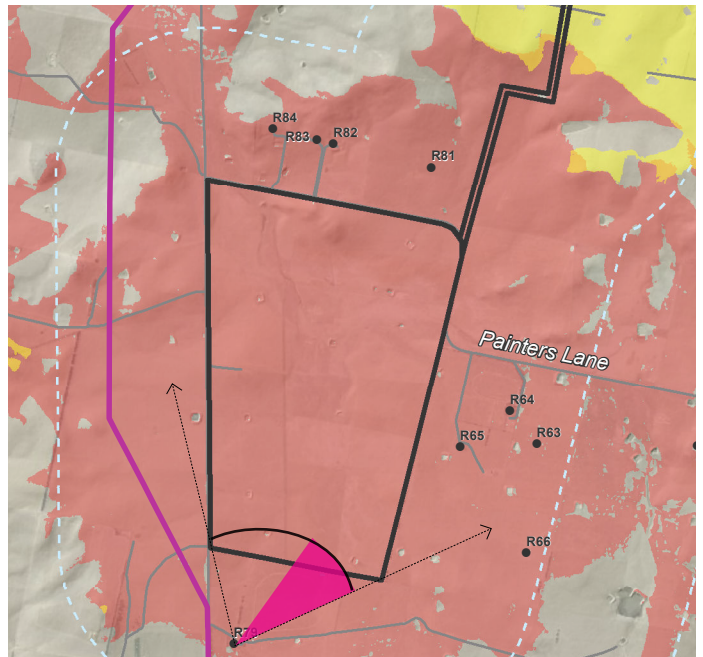
Dwelling R63



Dwelling R64






Dwelling R66



Dwelling R79

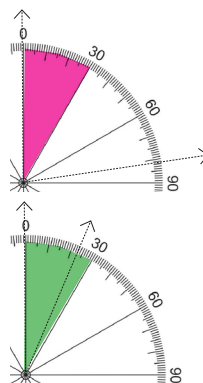
Key

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site

Horizontal field of view

>30° detailed assessment required

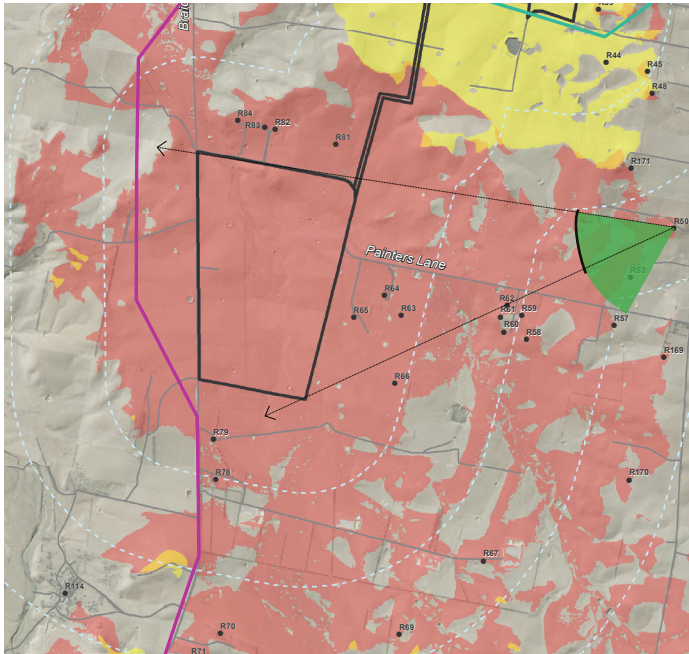
<30° no further assessment required



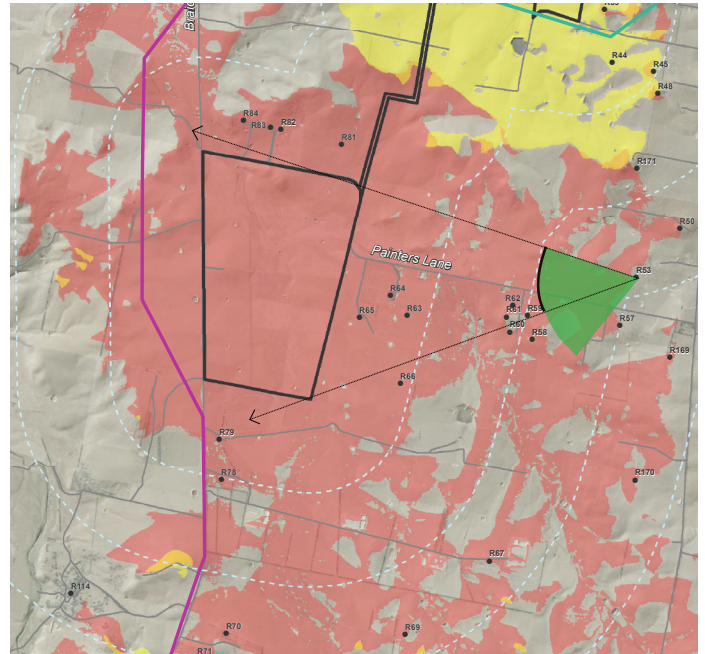
**Merino Solar Farm**

Terrain Solar and ITP Renewables

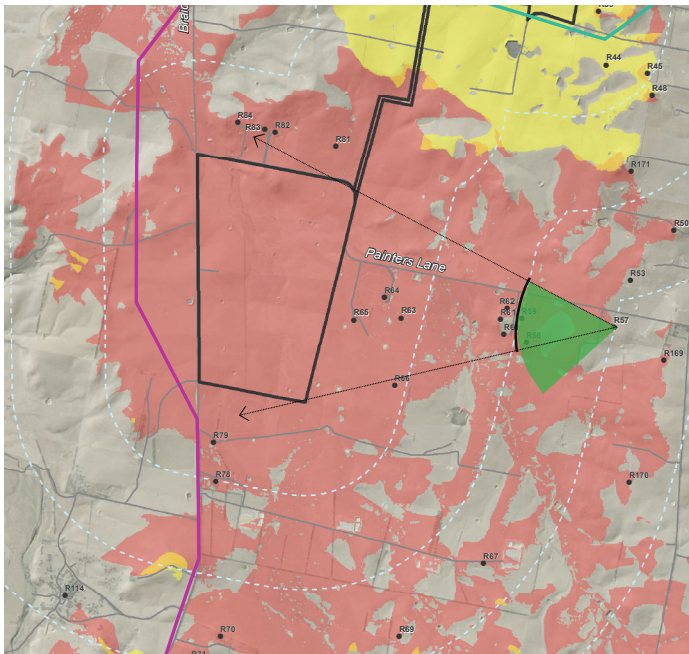
Figure 30 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 2° vertical field of view



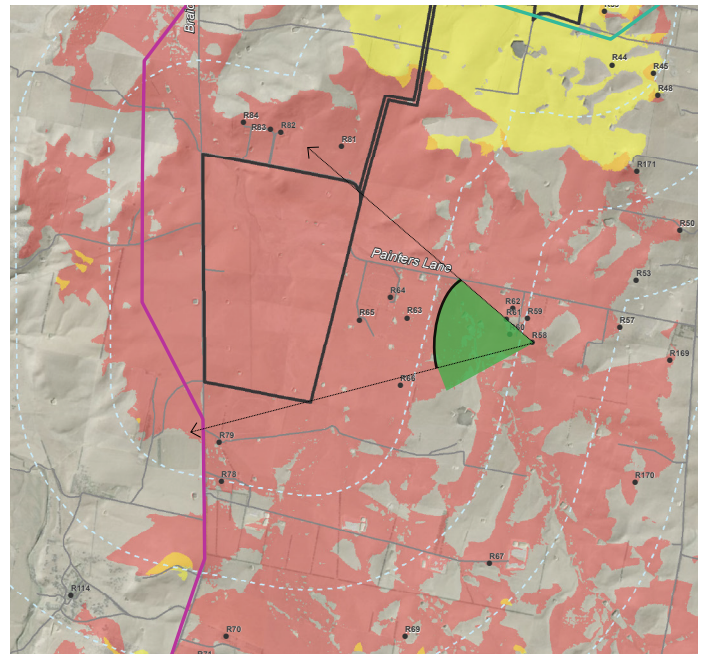
Dwelling R50



Dwelling R53











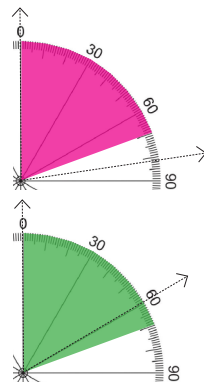
Dwelling R57



Dwelling R58

**Key**

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site



**Horizontal field of view**

>70° detailed assessment required

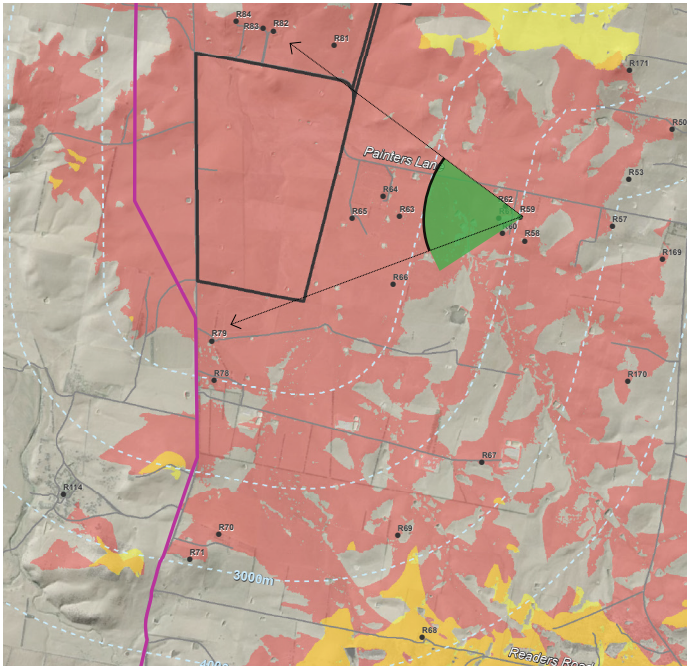
<70° no further assessment required



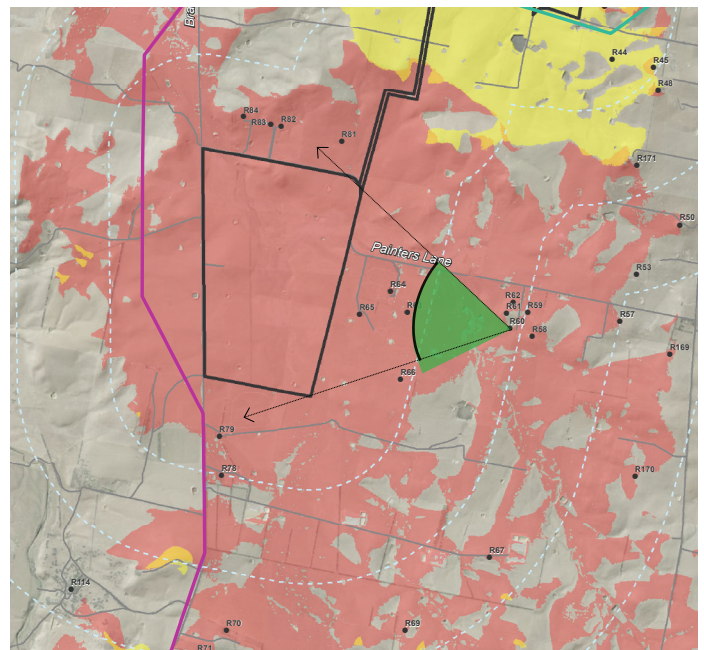
**Merino Solar Farm**

Terrain Solar and ITP Renewables

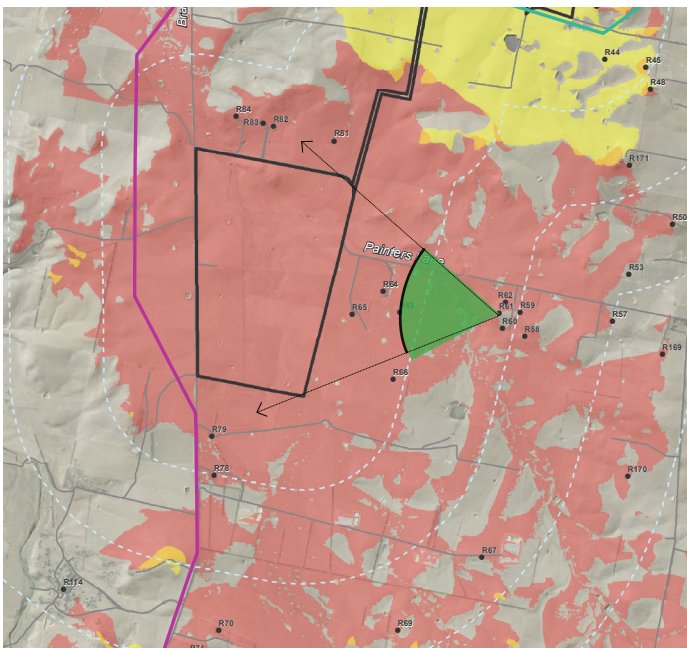
Figure 31 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



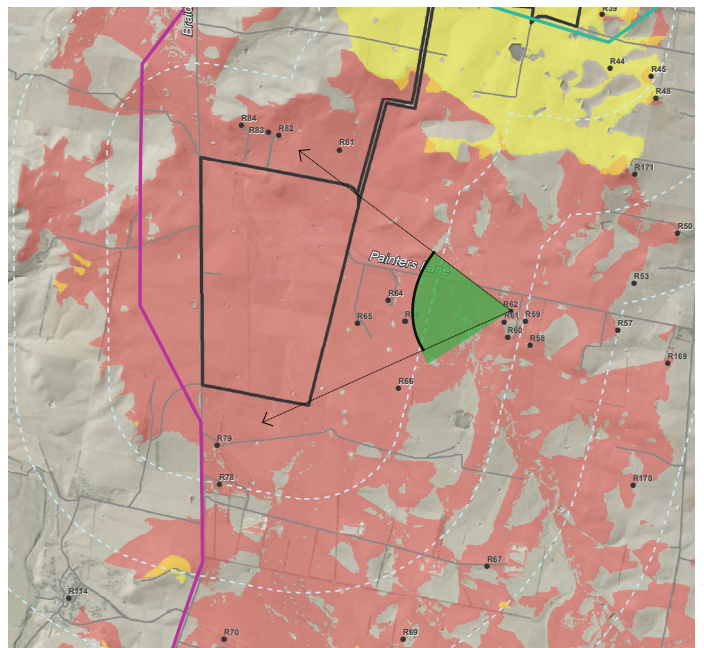
Dwelling R59



Dwelling R60











Dwelling R61



Dwelling R62

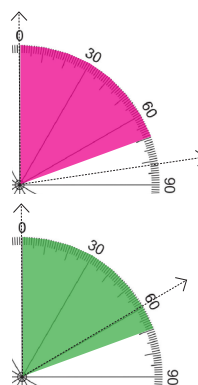
Key

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV
- Visual catchment**
-  Northern site
-  Southern site
-  North and south site

Horizontal field of view

>70° detailed assessment required

<70° no further assessment required

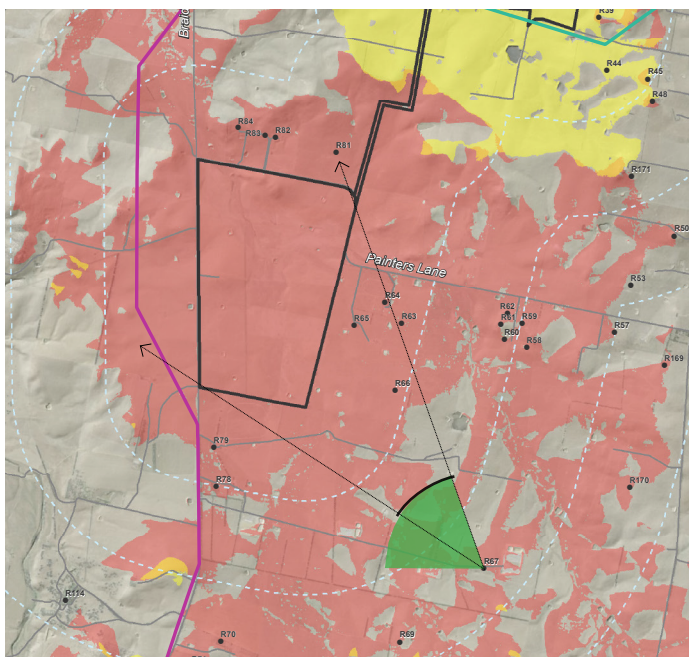


**Merino Solar Farm**

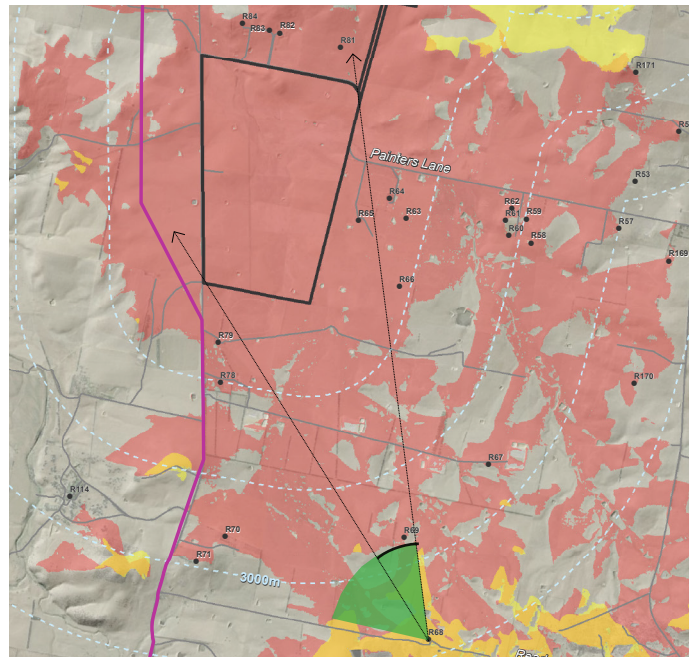
Terrain Solar and ITP Renewables

Figure 32 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view

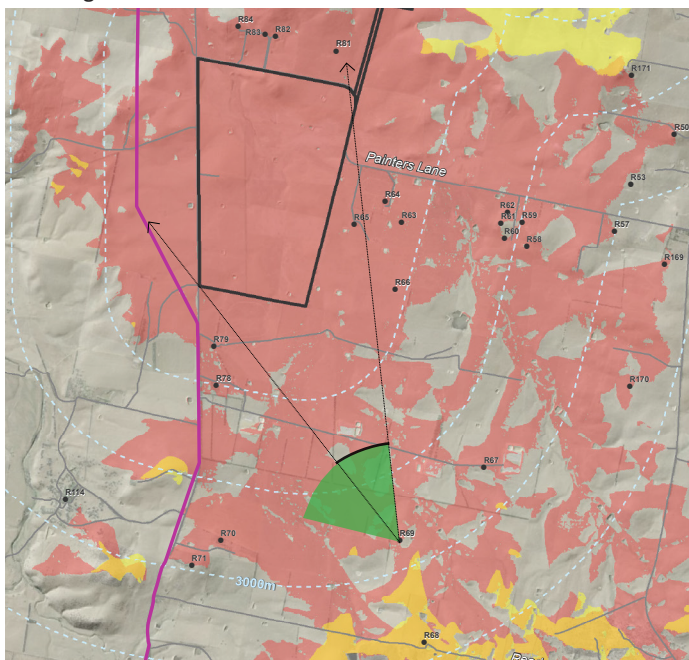
Horizontal field of view from dwellings with 1° vertical field of view



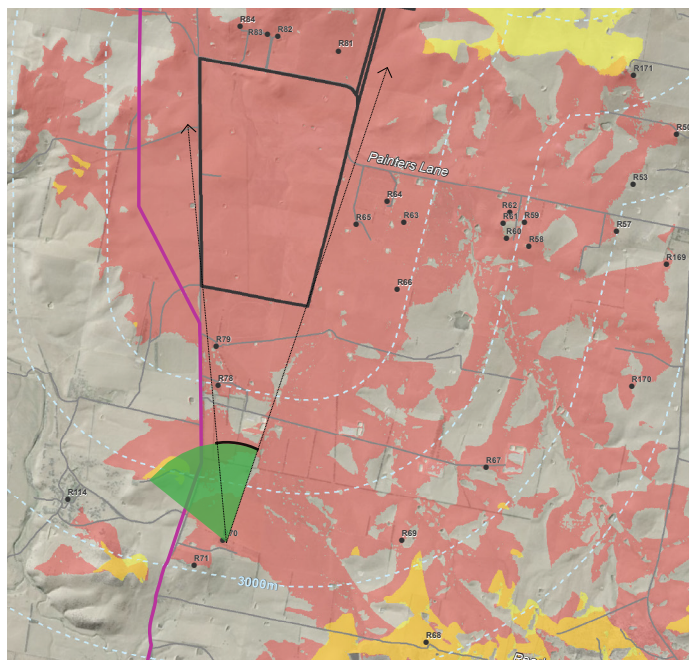
Dwelling R67



Dwelling R68



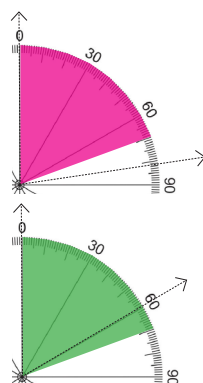
Dwelling R69



Dwelling R70

Key

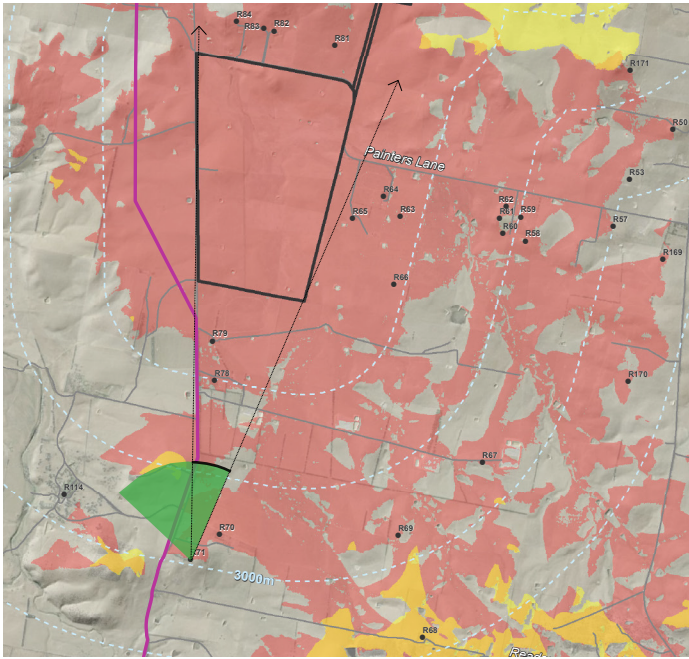
- Subject site
- Dwelling location
- Existing transmission lines**
- 66kV
- 330kV
- 132kV
- Visual catchment**
- Northern site
- Southern site
- North and south site



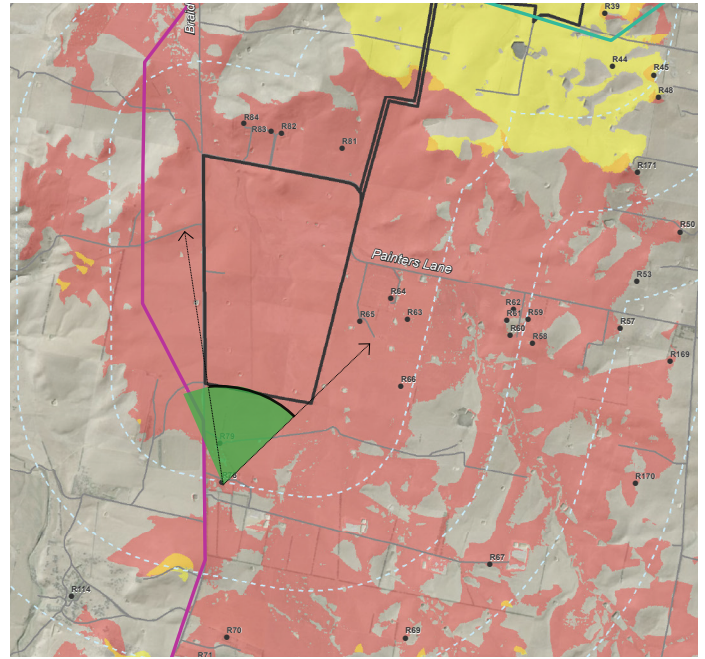
**Horizontal field of view**  
 >70° detailed assessment required  
 <70° no further assessment required



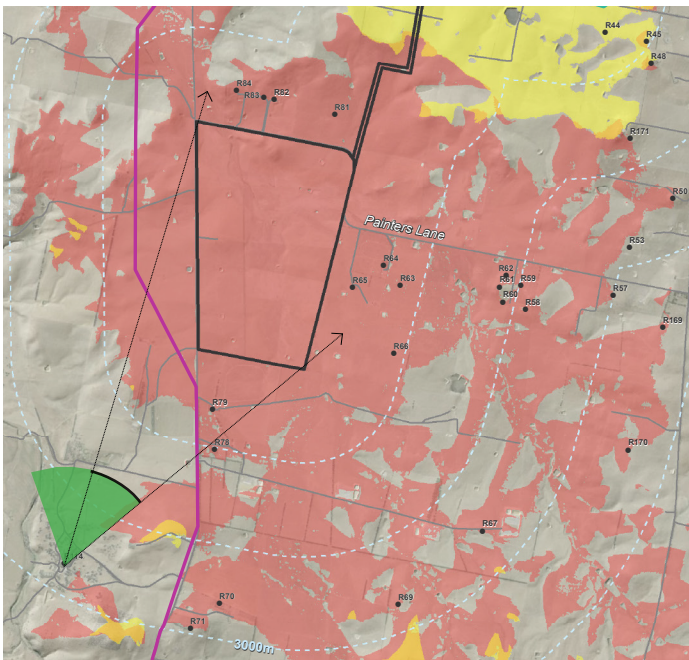
Figure 33 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view



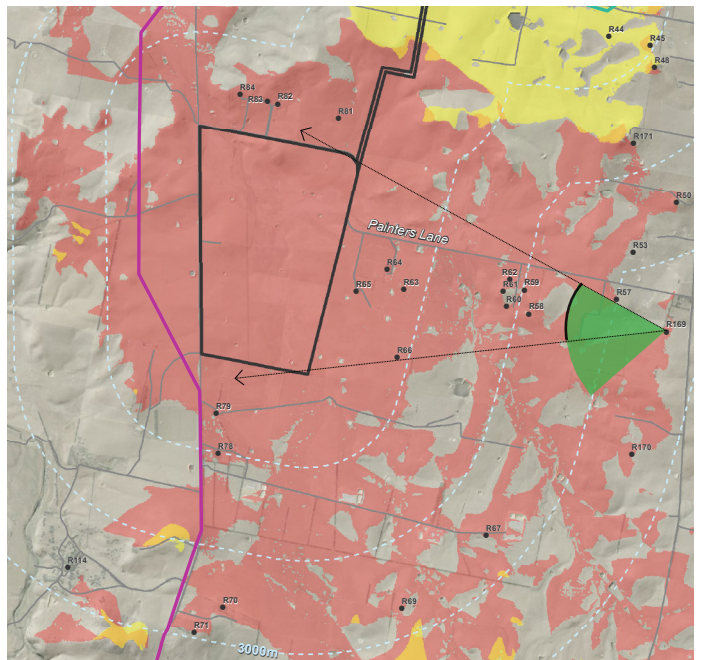
Dwelling R71



Dwelling R78



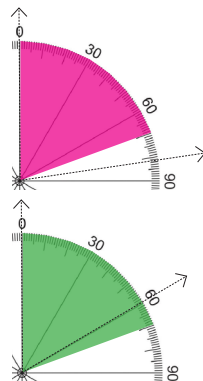
Dwelling R114



Dwelling R169

Key

- Subject site
- Dwelling location
- Existing transmission lines**
- 66kV
- 330kV
- 132kV
- Visual catchment**
- Northern site
- Southern site
- North and south site



Horizontal field of view

>70° detailed assessment required

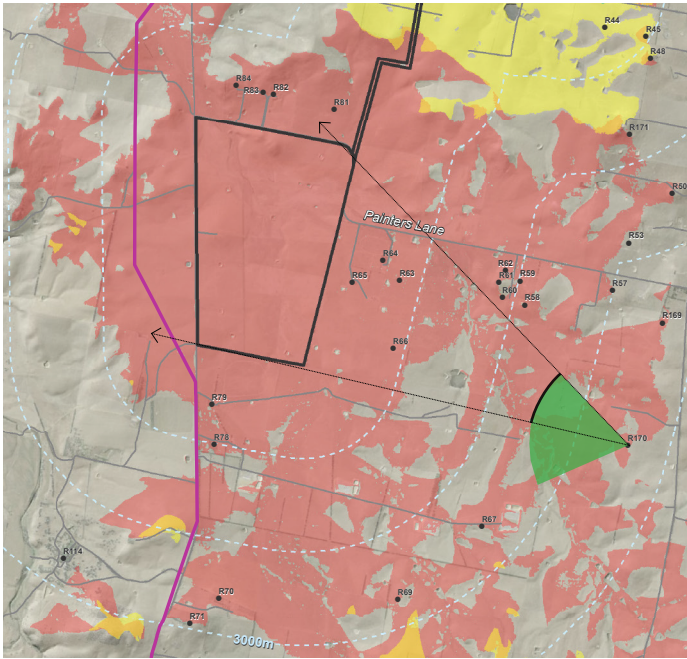
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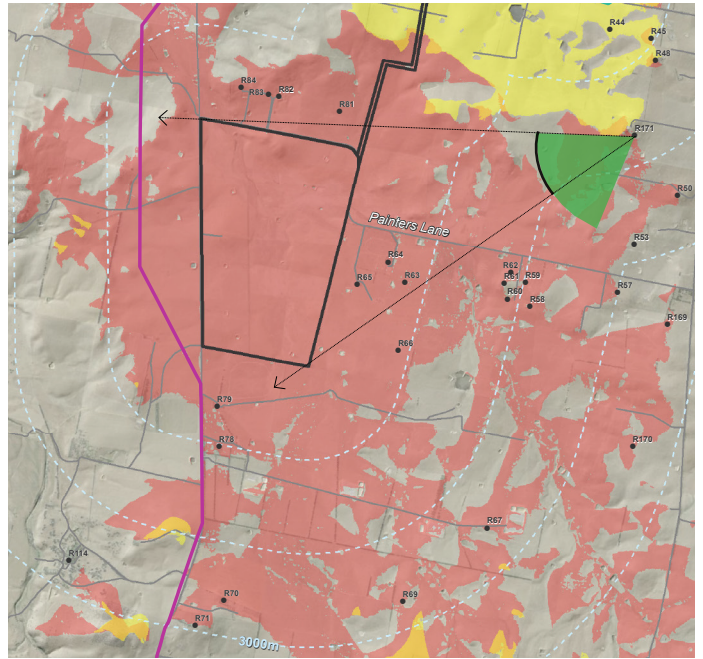
**Merino Solar Farm**

Terrain Solar and ITP Renewables

Figure 34 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view








Dwelling R170






Dwelling R171

**Key**

-  Subject site
-  Dwelling location
- Existing transmission lines**
-  66kV
-  330kV
-  132kV

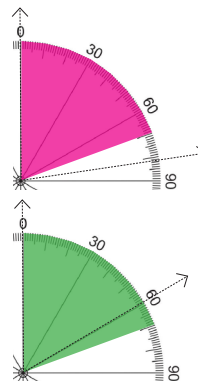
**Visual catchment**

-  Northern site
-  Southern site
-  North and south site

**Horizontal field of view**

>70° detailed assessment required

<70° no further assessment required



**Merino Solar Farm**

Terrain Solar and ITP Renewables

Figure 35 - Preliminary assesment, Horizontal field of view by dwelling from dwellings with 1° vertical field of view

Attachment D:  
Visibility with Gundry Solar  
Farm

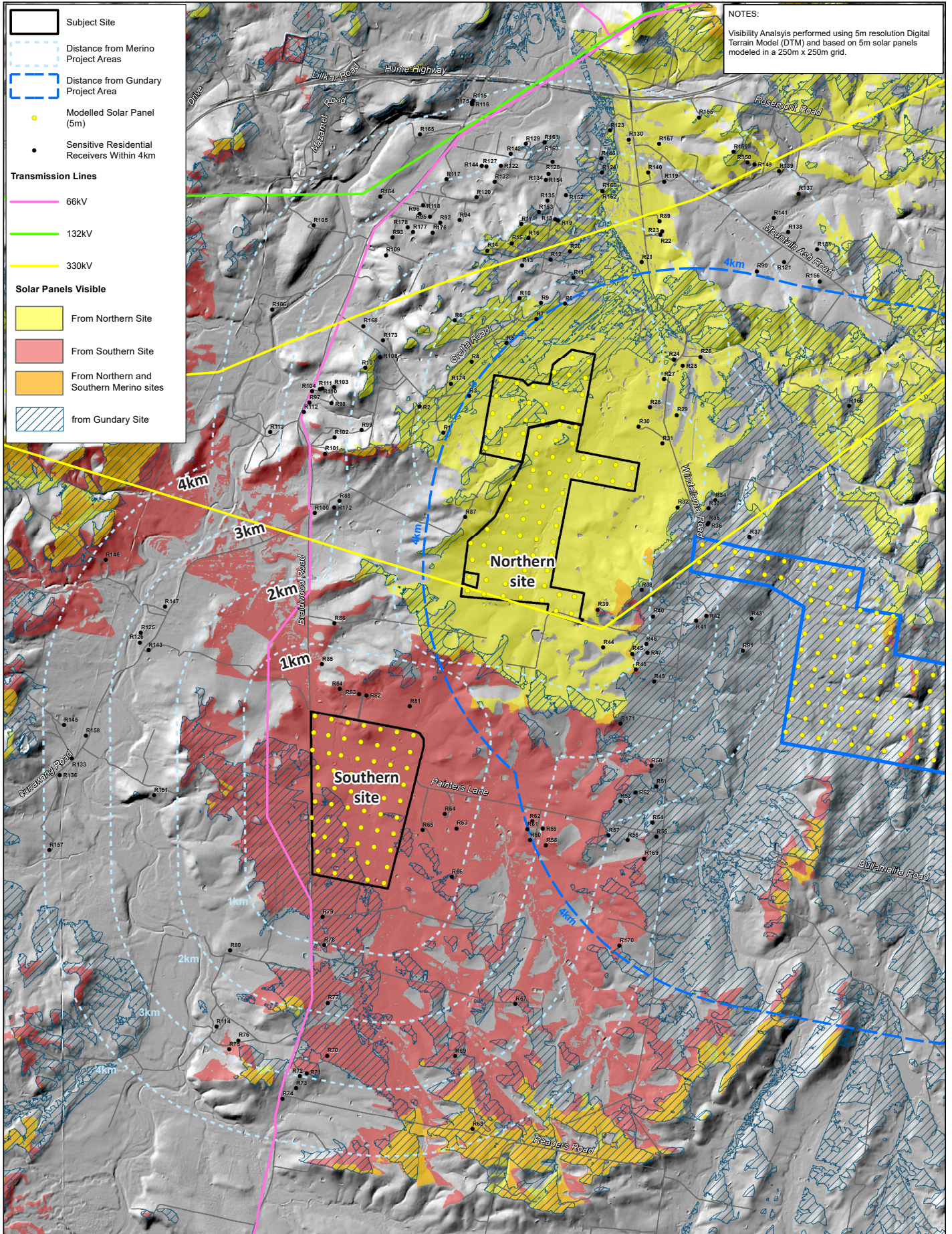
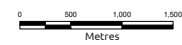


Figure 36 - Visual catchment with Gundry Solar Farm\*  
**Merino Solar Farm**

Terrain Solar and ITP Renewables



A3 Scale: 1:50,000  
 Coordinate System: GDA 1994 MGA Zone 55

\*Gundry Solar Farm indicative 5 metre height and site location.

Cadastral Boundary: Department of Finance, Services and Innovation 2022  
 Surface analysis: Derived from LIDAR - GOULBURN, 5 metre Resolution Digital Elevation Model © Department Finance, Services and Innovation 2013/1 2019

