



**Premise**

# **Scoping Report**

MONARO SOLAR FARM

Report No: 221105/REP

Rev: 001E




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# 1. INTRODUCTION

## 1.1 Background

Terrain Solar is proposing to develop an approximately 100 Megawatt AC (MWac) solar farm, including up to 100 megawatt hours (MWhours) of battery energy storage (although noting a likely capacity of closer to 40 MW hours). The proposal is located in NSW, approximately 5 kilometres west of the town of Cooma.

The land is located within the Snowy Monaro Regional Council.

The development would be known as the Monaro Solar Farm (MSF).

## 1.2 Report purpose and structure

The estimated capital investment value of the project exceeds \$30 million (estimated CIV is \$245 million) and the proposal entails the delivery of an electricity generating works with a yield of greater than 30 MW. The project therefore represents State Significant Development (SSD) and an Environmental Impact Statement (EIS) is required to support any development application.

This scoping report has been prepared to support a request to Department Planning, Industry and Environment (DPIE) for the Secretary's Environmental Assessment Requirements (SEARs). These will inform the preparation of an Environmental Impact Statement (EIS) in support of a state significant development application submitted under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This report has been prepared by reference to the *Scoping an Environmental Impact Statement: Draft Environmental Impact Assessment Guidance Series June 2017*.

The report is structured as follows:

- **Section 2** provides details of the site and context
- **Section 3** provides details of the proposed development
- **Section 4** provides the strategic framework
- **Section 5** provides a summary of impacts
- **Section 6** provides a project justification
- **Section 7** provides details of proposed consultation; and
- **Section 8** provides a summary of the estimated capital investment value.

## 1.3 Report terms

Within this report the following terms are used and definitions have been adopted:

- *Solar Investigation Area*: The entirety of the land holding in the same ownership, which has been the subject of detailed analysis (as discussed throughout this report) to identify the preferred and proposed development footprint;
- *Proposed development footprint*: Identified through refinement of the solar investigation area to identify the portion of the site that will contain panel arrays, inverters, site offices, access tracks and parking and screening vegetation, and will be the focus of the EIS development area;
- *BESS and substation investigation area*: A specific portion of the overall holding adjacent to the existing 132 kV overhead power lines that would accommodate the substation, switching station and BESS. Detailed design would identify the location within this area for placement of the BESS, switching station and substation. The connection into the grid would occur from within this area.

## 2. SITE DETAILS

### 2.1 Location and regional context

The site is located at 115 Old Mill Road, Dairymans Plains, NSW, 2630 and consists of a larger land holding of approximately 1,800 hectares (ha). The subject site for this State Significant Development (SSD) Development Application (DA) would have an approximate area of 180 ha which would be refined through the concept design and engagement during the Secretary's Environmental Assessment Requirements (SEARs) process.

The subject site for the proposed solar development footprint consists of land described in **Table 1**.

**Table 1 – Solar Development Footprint Lots**

Lot	DP	Size (ha)
87	750524	28.1
68	750524	48.5
73	750524	40.6
74	750524	16.5
76	750524	15.8
62	750524	16.4
75	750524	40.1
77	750524	16.6
67	750524	64.9
30	750524	31.4
<b>TOTAL AREA</b>		<b>318.9</b>

Peripheral features of the development would be provided on the site including a substation and battery energy storage system (BESS), access road and connecting powerline. These would be located on the land as described in **Table 2**.

**Table 2 – Ancillary development lots**

Element	Lot	DP	Size (ha)
Substation/BESS	133	750524	107.3
Access road	18	750524	32.5
Connection powerline	63	750524	80.8
	64	750524	95.5
	65	750524	28.5
	34	750524	40
	49	750524	32
	133	750524	107.3

Element	Lot	DP	Size (ha)
<b>TOTAL</b>			<b>523.9</b>

All of the lots listed in Table 2 are held in the same ownership as the solar development site.

The substation would be connected to the adjacent TransGrid owned 132 kV overhead power line (Munyang to Cooma 97K) as per **Figure 2**.

## 2.2 Site description

The solar farm investigation area consists generally of cleared, fenced paddocks currently used for extensive agriculture including grazing and cropping. Remnants of trees are located over the site. To the west, Slacks Creek abuts the solar farm investigation area. Access to the proposed development footprint is afforded by Dry Plains Road which intersects with Snowy Mountains Highway, with a large lot residential housing development utilising the road for access. To the east, Cooma Golf Club adjoins the site.

The solar farm investigation area has been the subject of detailed survey.

Overall the proposed solar development site slopes with an Average Height Datum (AHD) of 908 metres AHD in the southern extent.

There are a number first and second order watercourses within the solar development site, which act as the low gully point and drain generally to the north into Spring Creek. The sloping areas of the site are typically along the southern boundary in proximity to the mapped waterways; the site generally levels out to the east.

Slacks Creek to the west is identified via the *Cooma Monaro Local Environmental Plan 2013* (CMLEP2013) as being a sensitive riparian watercourse. This mapped area does not intersect with the solar development site, the proposed area of the substation/battery or the connecting power line.

The map displays the Dairylands region in New South Wales, Australia. The Dairylands Estate is highlighted in red, situated near the town of Berrima. The map shows various towns and locations, including Berrima, Bumbalong, Bredbo, Jerangle, Chukola, Buryall, Bineira, Uooma, Glen Fergus, Coomarrath, Numeralla, Courmegrany, Badja, Belwra, Wadbilliga National Park, Yowrie, Wandella, Nootatani National Park, Colargo, Verona, Quarna, Brigo, Numbugga, Bimboka, Glenbog, Holtz Flat, Boco, Ma'fra, Inermungy, Botondra, Dalgety, Beloka, Paspung, Popetah, Moonbah, Jindabyne, East Jindabyne, Kalkite, Avonside, Rocky Plain, Costralaira, Middlebank, Buckenderra, Dry Plain, Shannons Flat, Bolero, Adamnaby, Anglers Reach, Providence Portal, Cabramurra, Maragle, and Perisher Ski Resort. The map also shows the Macanalilly State Conservation Area, Kymbeyrin, Dangerrong Nature Reserve, and Wadbilliga National Park. The legend indicates that the red outline represents the 'HOST LOT' and the black outline represents 'LGA BOUNDARIES'. An inset map shows the location of the Dairylands Estate within the state of New South Wales. A scale bar indicates distances up to 15 km.








Figure 2 – Development Site




LEGEND

-  DEVELOPMENT SITE
-  SOLAR INVESTIGATION AREA
-  PROPOSED DEVELOPMENT FOOTPRINT
-  BATTERY SUBSTATION INVESTIGATION AREA
-  ACCESS ROAD
-  GRID CONNECTION
-  NON ASSOCIATED LANDOWNERS
-  ASSOCIATED LANDOWNERS


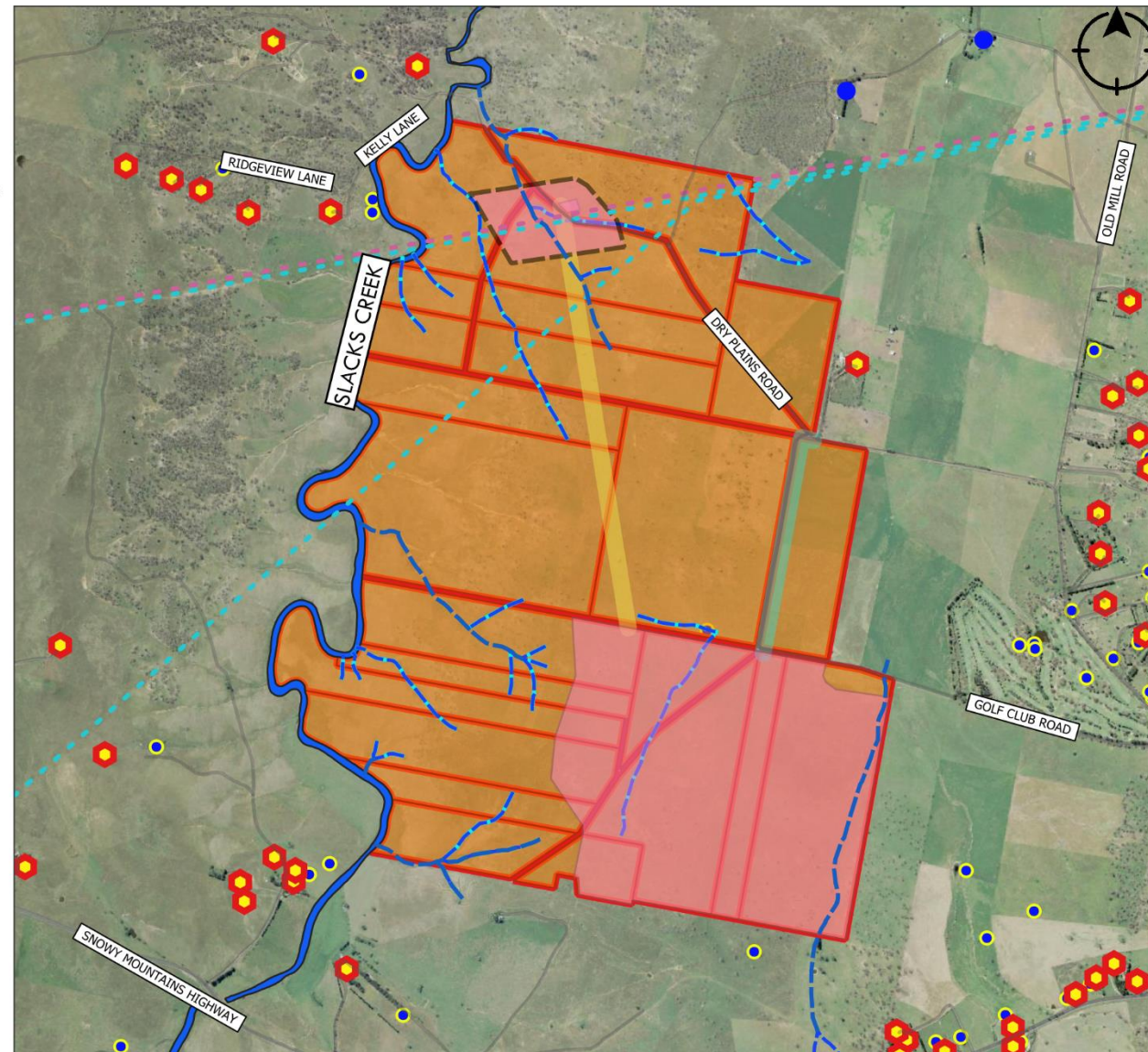
WATER FEATURES

-  WATER FEATURE CORRIDOR
-  MAPPED STRAHLER 1ST ORDER STREAM
-  MAPPED STRAHLER 2ND ORDER STREAM
-  DAMS
-  LICENCED BORES

OVERHEAD POWERLINES

-  132kV
-  66kV
-  33kV

0 0.5 1 km

## 2.3 Site selection

Prior to progressing with the pre-scoping for this proposed solar development, Terrain Solar commenced investigations to identify areas of the state that featured electrical infrastructure with the capacity to support new electricity generating facilities.

Upon settling on the Cooma region, Terrain engaged Premise to complete a constraints analysis of five sites pre-selected by Terrain as having suitable attributes for the development of a solar development, including:

- Generally flat, developable;
- On land zoned such that electricity generating works are permitted with consent;
- Proximal to electrical infrastructure whereby there is capacity to connect into the network;
- Receptivity of the receiving environment (visual, noise etc);
- Minimal site development constraints (ecological etc)
- Enough optimal land to host the target size of the Solar Farm.

The rigorous constraints analysis included a review of mapped environmental constraints (such as hazards or protection areas) together with an analysis of slope attributes, as derived from commercial LiDAR data.

As a result of this analysis, and discussions with relevant landowners, the subject site was chosen as the preferred choice.

The portions of the land holding held in the same ownership were then further refined via visual impact analysis to determine the most appropriate portion of the site to accommodate the solar development. This is discussed in more detail in **Appendix B** and **Section 2.4.2**.

As a result of this further refinement, the south-eastern portion of the site (proposed development footprint) was selected for the proposed development due to the visually protected nature of this portion of the landscape.

## 2.4 Surrounding development

### 2.4.1 LAND USE

The development site mostly consists of cleared land with some patches of vegetation and several isolated trees. The site is currently used for agricultural purposes, such as cropping and grazing. Buildings on the site are limited to infrastructure associated with the agricultural land use.

A breakdown of land use within a 2 km radius is provided in **Table 3** and depicted in **Figure 3**.

The primary land uses within 2 km of the development site are grazing pastures, modified and native.

**Table 3 – Summary of land use within 2 km of the site**

Land Use	Area (ha)	Percent
Grazing native vegetation	1,651	48%
Grazing modified pastures	1,321	38%
Residential and farm infrastructure	297	9%
Services	45	1%



Land Use	Area (ha)	Percent
Transport and communication	38	1%
River	87	3%
1,651	1,651	1,651

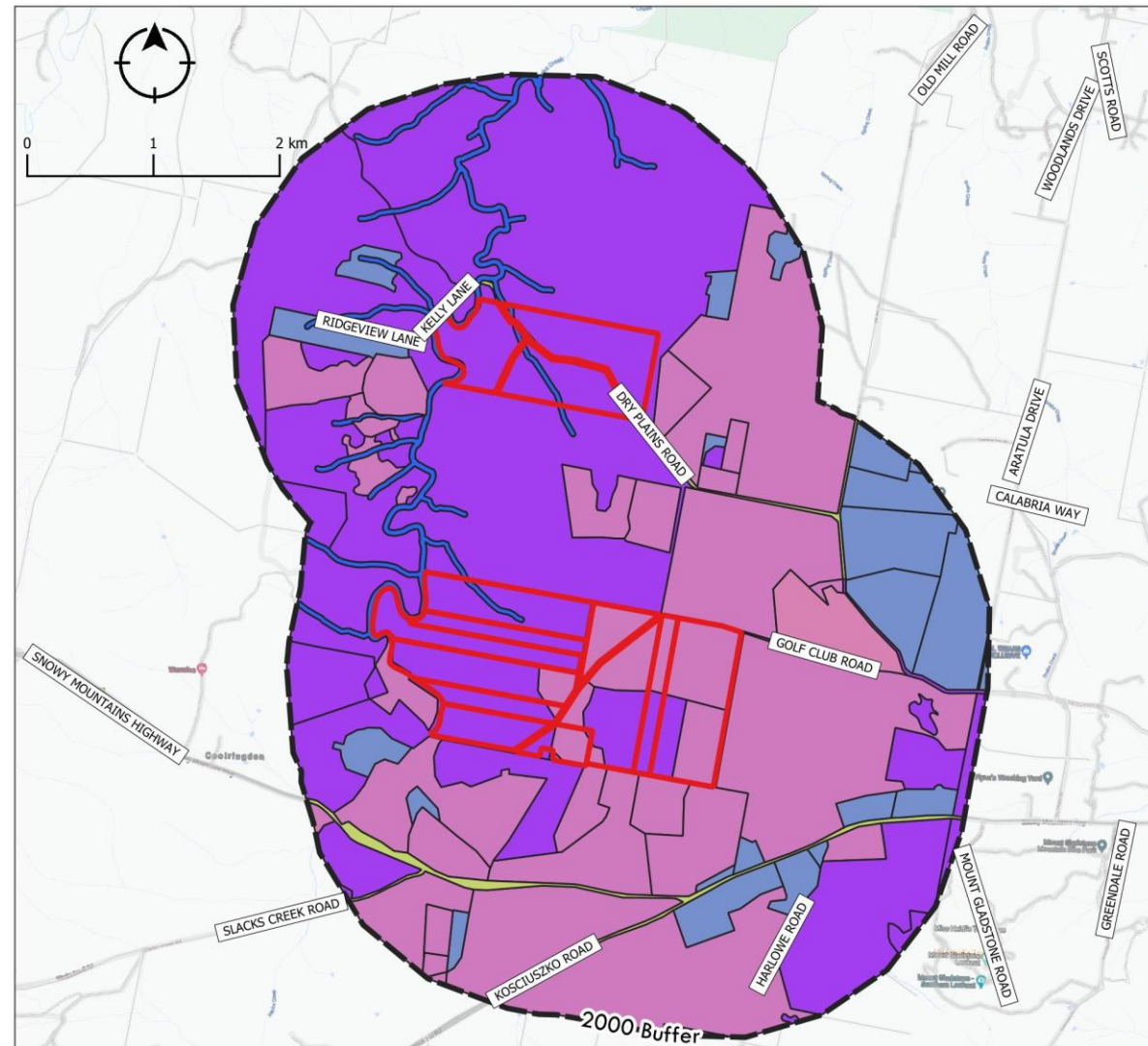
Figure 3 – Land Use

LEGEND

 DEVELOPMENT SITE

LAND USE

-  2.1.0 Grazing native vegetation
-  3.2.0 Grazing modified pastures
-  5.4.0 Residential and farm infrastructure
-  5.5.0 Services
-  5.7.0 Transport and communication
-  6.3.0 River



## 2.4.2 POTENTIALLY AFFECTED LAND OWNERS

The proposed solar development is located to the west of the town of Cooma, with surrounding land users being of agricultural use, such as grazing fields. Within the vicinity of the Site are residential receivers located along Snowy Mountains Highway which intersects with Dry Plains Road and Kosciuszko Road, together with large lot residential non associated land owners to the north-west, south-west and east.

The topography of the land provides the capacity to shield views towards the adopted development footprint from the suburban areas of Cooma, and also to the large lot residential housing developments to the south-west, south-east and east of the site.

Iris Visual were engaged by Terrain Solar to conduct initial analysis of the site in the context of its visual catchment and the potential for visual impacts associated with the proposed solar infrastructure – refer **Appendix B**.

As a result of this analysis, the south-eastern corner of the overall holding was selected as the proposed development site, being considered the most appropriate location for the proposed solar infrastructure. A substation and battery energy storage system would be located within Lot 133 DP750524, in the north of the site, and adjacent to existing TransGrid owned 132kV overhead electrical infrastructure. Iris Visual note that:

*The proposed development footprint (area to contain panel arrays, inverters, site offices, access tracks and parking, screening vegetation etc.) has been refined through a process of 3D viewshed modelling and slope analysis, utilising LIDAR point cloud data. The proposed development footprint has been selected in response to the predicted visibility of the site and location of sensitive receivers. This process maximises the potential for natural screening of the site by the existing landform and vegetation of the site and surrounding areas to minimise the potential visual impact of the project. A Slope analysis has also been used to inform the refinement process as the need for earthworks, which can cause landscape and visual impacts, would be less in areas where gentler slopes exist. (Refer Figure F) Based on this analysis, a proposed development footprint has been identified for the project which minimises potential visual impact. (Refer Figure E)*

*The refinement of the proposed development footprint has included:*

- *removing development from the northern areas of the solar farm investigation area, which are most visible from areas to the northeast, north, northwest of the site including the residences on Ridgeview Lane Wambook and along Dry Plains Road*
- *removing development from areas to the west and south west of the solar farm investigation area to minimise views from properties in Wambook and Coolringdon.*
- *removing development from the central field east of the central ridge of the solar farm investigation area which would be visible from the elevated areas of Dairymans Plains in the east*
- *reducing the potential visibility of the proposed development site from the Snowy Mountains Highway, by maintaining the 400 metre 'scenic protection' buffer as well as removing development from the south eastern areas of the solar farm investigation area, which have a greater potential visibility from the highway.*

*Several options for the location of the substation were also tested for visibility. However, all suitable locations along the existing powerline having some potential visibility from the residences of Wambo Brook in the northeast, and Dry Plains Road and residences to the north of this road. (Refer **Figure G**)*

As a result of the refinement of the project footprint, the closest non associated land owner to the project is an isolated building located approximately 370 metres to the south-west of the site.

By reference to Figure A within **Appendix B** (reproduced as **Figure 4**), it is noted that there are a total of 21 non associated land owners within 1 km of the solar development site, with a further 36 within the 1-2 km range, and another 32 within the 2-3 km range.

These non associated land owners are grouped in a number of 'suburbs' around the site including Coolringdon to the south and southwest (6 non associated land owners within 1-2 km), Pine Valley to the south and south-east (26 non associated land owners within 500m-2 km) and properties on the elevated areas of Dairyman's Plains, east of Dry Plains and Old Mill roads (45 non associated land owners within 1-2 km). A number of isolated non associated land owners are also located around the site.

Iris Visual note:

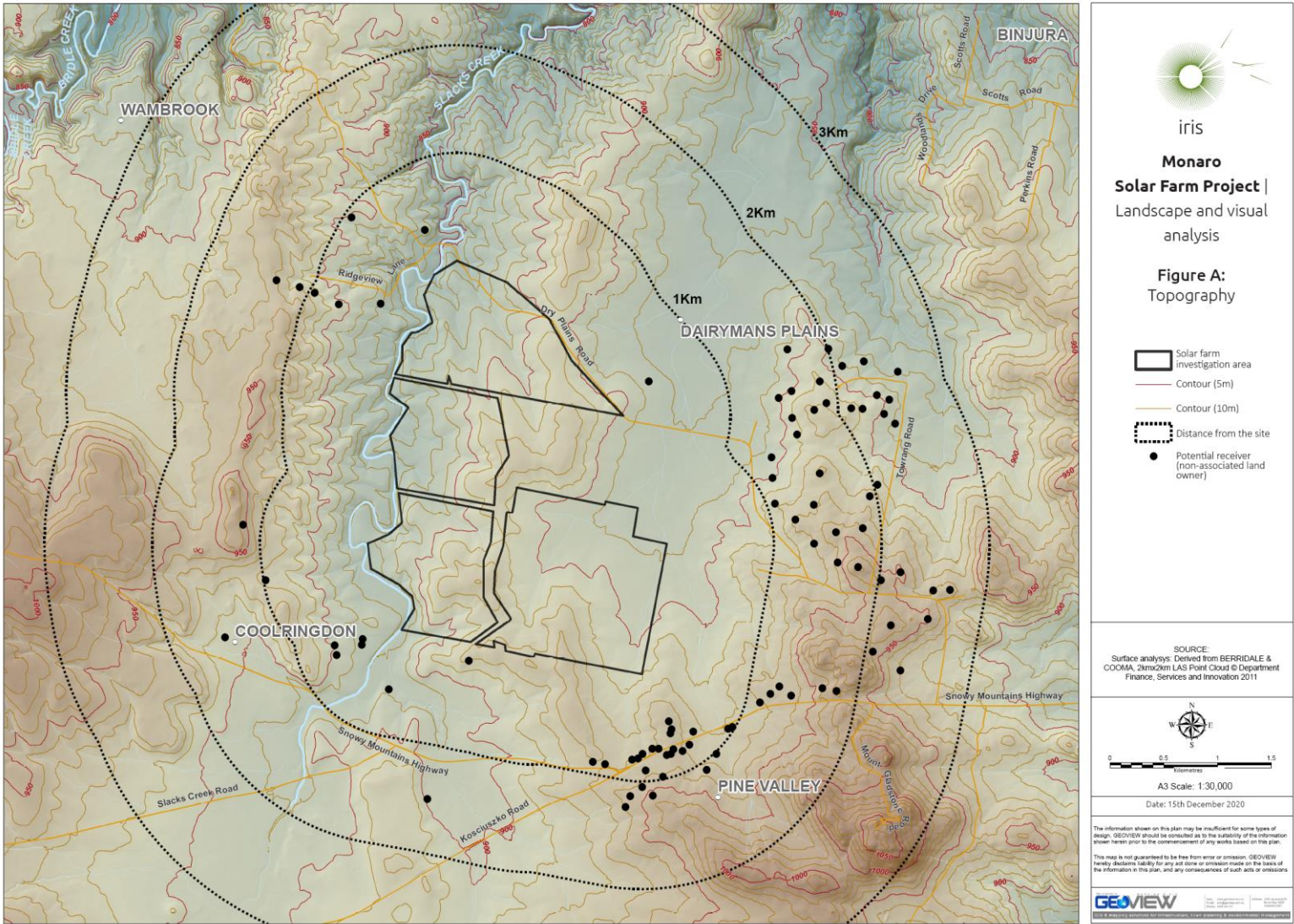
*Overall, the proposed development footprint has a relatively small visual catchment due mainly to the ridgeline located to the west of the proposed development footprint and surrounding undulating landform. The existing vegetation within the areas surrounding the proposed development footprint, including the Cooma Golf Course to the east, would reduce the visibility of the project by screening and filtering views. The vegetation which frames the valley and attractiveness of the layered views to the distant mountains would reduce the visual prominence of the proposed development footprint which would be located on the valley floor.*

Engagement with nearby non associated land owners has commenced, including a letter box drop of a letter introducing Terrain Solar and the project, engagement with Council, and the carry out of door knocking to potentially affected land owners. This is discussed in more detail in **Section 7**.

The EIS would provide a visual assessment of the potential impacts of the solar farm. Given the prevailing topography, this is expected to be limited.



Figure 4 – Nearby landowners



### 2.4.3 KEY INFRASTRUCTURE

The development site is bisected by Dry Plains Road which intersects with Snowy Mountains Highway which provides direct access into the township of Cooma.

A range of electricity transmission lines cross the site as shown in **Figure 2**, including 66 kV and 132 kV.

## 2.5 Environmental Features

### 2.5.1 TOPOGRAPHY

The solar development site is generally flat with some undulations in the southern extent. The site is currently used for agricultural purposes, including grazing. The site slopes towards an unnamed creek in the east.

### 2.5.2 VEGETATION

The solar development site is generally cleared of vegetation with a number of isolated paddock trees located in the southern and eastern extent. The proposed substation investigation area is mapped as being sensitive terrestrial Biodiversity under the CMLEP2013 however the solar development site is outside of this mapped area. Avoidance of impact to sensitive vegetation was a key consideration in site selection.

The solar development site is not mapped as being Bushfire Prone Land, however a high level bushfire assessment would be completed to support the EIS and identify any areas of concerns.

A biodiversity impact assessment would be completed in conjunction with preparation of the EIS and sensitive areas would either be avoided/excluded from the development footprint, or would be cleared lawfully via the provisions of the BC Act and subject to agreed offsetting. In either regard, the very small areas involved would be unlikely to affect the viability of the project.

### 2.5.3 WATER

#### 2.5.3.1 Surface water

The proposed solar development site is identified as containing a number of 1<sup>st</sup> and 2<sup>nd</sup> order streams. These waterways are ephemeral and unnamed. The waterways generally slope to the north towards Spring Creek. Slacks Creek is located on land to the west of the site and Snake Creek traverses through the R5 zoned land to the East. These creeks are identified as being geological sites of local heritage significance.

Appropriate buffers would be provided to ensure impacts to the watercourse are minimised.

A hydraulic analysis would be completed as part of the EIS preparation to ensure that impacts to this adjacent land is manageable.

#### 2.5.3.2 Groundwater

The proposed solar development site is identified as being Groundwater Vulnerable under the CMLEP. Investigations are to assess the groundwater vulnerability under Clause 6.4 of the CMLEP.

There are no licenced bores within the solar development portion of the site. Within 2 km metres of the solar development site there are 41 licenced bores. These are depicted in **Figure 2** and site details are summarised in **Table 4**.

Table 4 – Groundwater bore data

Site ID	Bore Depth (m)	Drilled Depth (m)	Drilled Date	Easting	Northing	Elevation	Class
GW038390	17.6	17.7	01/02/1974	685364	5987137	921.92	Water Supply
GW401280	38	38	14/12/1995	681617	5991263	902.46	Water Supply
GW416187	65	0	30/05/2013	685630	5989173	0	Water Supply
GW400722	30	30	29/03/1999	686013	5988754	924.97	Water Supply
GW401439	45	45	04/03/2000	684988	5987134	925.61	Water Supply
GW029965	38.1	38.1	01/10/1968	684734	5986873	938.22	Water Supply
GW400541	40	0	01/02/1991	682324	5991055	858	Unknown
GW414554	14	0	19/06/2003	685106	5987157	920.95	Irrigation
GW061410	22.9	22.9	01/10/1985	685719	5987407	934.26	Water Supply
GW416695	48	48	03/08/2015	685833	5987524	0	Water Supply
GW401814	42	42	14/01/2000	685388	5987134	923.99	Water Supply
GW403201	42	42	03/04/2001	683332	5986671	906.18	Water Supply
GW401281	38	38	19/03/1996	682263	5991709	887.14	Water Supply
GW068620	24	24	23/10/1990	685736	5990404	888.48	Water Supply
GW402791	53	0	29/06/2002	686078	5987512	948.84	Unknown
GW049963	18.3	18.3	01/02/1979	685998	5988789	924.52	Water Supply
GW054408	13	0	01/09/1954	682469	5987260	893.83	Unknown
GW415906	60	60	28/10/2003	685229	5987625	913.84	Water Supply
GW063729	45	0	01/10/1986	685997	5989899	911.42	Water Supply

Site ID	Bore Depth (m)	Drilled Depth (m)	Drilled Date	Easting	Northing	Elevation	Class
GW038450	21	21	01/09/1973	685317	5987262	917.72	Stock and Domestic
GW400682	0	0		681303	5988529	909.84	Water Supply
GW044504	14.3	14.3	01/11/1973	685131	5987944	902.27	Water Supply
GW402020	54	54	25/09/2002	685996	5989358	917.79	Water Supply
GW047004	30.5	30.5	01/10/1977	685827	5988947	918.36	Irrigation
GW403208	54	54	31/03/2005	682025	5987925	884.46	Water Supply
GW402139	39	39	30/06/1983	685457	5988992	905.99	Other
GW400681	10.8	0		682122	5987977	884.73	Water Supply
GW038962	14.3	14.4	01/11/1973	685452	5987752	916.09	Stock and Domestic
GW400769	45	45	12/03/1998	683906	5989080	894.42	Water Supply
GW414589	90	90	04/04/2001	684129	5987560	918.01	Water Supply
GW400542	40	0	01/02/1991	682325	5991117	859.01	Unknown
GW071646	74.6	74.6	30/10/1992	685947	5989022	930.24	Water Supply
GW402928	30.78	0	01/03/2005	684723	5986686	945.03	Unknown
GW402783	41	0		686403	5987452	973.19	Water Supply
GW402140	18	18	30/06/1983	685700	5988855	913.5	Water Supply
GW416073	54	54	29/02/2004	685608	5987340	0	Water Supply
GW401259	30.48	0	01/12/1997	686013	5989234	924.33	Water Supply
GW404902	33	0	01/01/1986	686188	5987505	957.05	Water Supply
GW061372	41	41	01/12/1985	685454	5989016	904.78	Exploration
GW402138	0	0	30/06/1983	685383	5989010	906.71	Other



Site ID	Bore Depth (m)	Drilled Depth (m)	Drilled Date	Easting	Northing	Elevation	Class
GW048131	48.8	48.8	01/07/1977	684833	5986840	940.23	Water Supply

Given the drill depths and the nature of the proposed works, it is unlikely that groundwater would be intersected by the proposed development.

### 2.5.3.3 Flooding

The solar development site is not mapped as being flood affected under the CMLEP. There is no known flood study applicable to the land.

Hydraulic analysis would be completed as a component of the proposed EIS to confirm the potential for any flood inundation over the land. Given the ground levels in the vicinity of Spring Creek, the likelihood of significant inundation is considered low.

## 3. DEVELOPMENT DESCRIPTION

### 3.1 Solar farm

The MSF will use solar PV panels to convert sunlight into electrical current, with grid compliant energy then delivered to the TransGrid electrical network. Electricity will be sold into the National Electricity Market (NEM) and Large Generation Certificates (LGC's) will be sold to liable entities under the *Renewable Energy Act 2000*.

The proposed output capacity of the proposed solar farm is approximately 100 megawatts. The final capacity and development footprint of the solar farm infrastructure will be refined through consideration of findings as a result of further connection and site investigations and identification of constraints and opportunities mapped through the environmental impact assessment process. The intent, however, is to maximise the sent out generation from the site within the relevant electricity network constraints. At this stage the development site footprint includes an area of approximately 180 ha.

Solar PV technology will be either crystalline silicone or thin film. The solar PV modules will be connected together via a direct current (DC) collection system consisting of cables mounted on the module support structure. The support structure will be east-west tracking. A tracking system tracks the daily movement of the sun and a motorised system rotates the panels constantly towards the sun to maximise energy output performance.

Inverters and transformers will be located in an array within the footprint to convert the dc current to alternating current (AC). Inverter and transformer assemblies will be mounted on a steel platform or slab at ground level and generally covered. The AC collection system will consist of underground cabling at 22kV or 33kV to connect to each inverter assembly and deliver the electricity to the site substation. The site substation will consist of a transformer to increase voltage to 132kV. The site substation will be enclosed securely.

A connection from the site substation to TransGrid's nearby overhead power lines will be made via overhead or underground high voltage cables, and would form part of this application. This infrastructure connects the proposed development footprint and the BESS investigation area.

Battery storage providing a capacity of up to 100 MWhours, but likely to be closer to 40 MWhours, would form part of the application, however a decision on whether it would be installed would be made closer to the point

of construction and commissioning, given the uncertainty around the cost of battery delivery. Storage would provide the capacity to deliver electricity to the transmission network on demand and more closely follow price fluctuations. If battery storage is included at the development site, battery banks will be housed in containers or a shed. The structures will provide shelter and security and will incorporate services to control temperature etc. Concrete footings are likely to be laid to support the structures. The storage facility would be located near the site substation or in the solar array area and will be connected via underground or overhead cables. Consent is expressly sort for a BESS as part of this SSD application, and a decision on installation would be taken later.

A control room with associated parking area will be located on the site. This will be a relatively small structure which will provide amenities for a limited number of operational staff as well as facilities to enable monitoring of the performance of the solar farm and communications connections to the electricity market operator. Once operational the solar farm will require minimal site based maintenance with no more than 3 – 4 staff expected to be required. Operation may include remote monitoring to minimise the need for site staff.

Construction is estimated to take up to 12-18 months. The site is expected to require minimal preparation in advance of installing the PV panel system as it is generally flat with minor undulations and largely devoid of vegetation. A security fence will be installed on the site boundary and construction tracks will be laid down. Construction will require the use of bull dozers, water trucks, graders, flatbed trucks, skid steers, front end loaders, roller compactors, trenchers, backhoes, gravel trucks, water tankers, cranes, and aerial lifts. Deliveries of modules and other equipment will be made via heavy vehicles up to b-double in size on the approved route and site entrance.

## 3.2 Grid connection

A transmission line will connect the MSF to the nearby TransGrid overhead powerlines and would be owned by the operator of the MSF.

The Infrastructure SEPP makes development for the purpose of an electricity transmission or distribution network permissible without consent when carried out by or on behalf of an electricity supply authority or a public authority. Such development may be assessed under Part 5 of the EP&A Act. Alternatively, transmission or distribution infrastructure may be considered a component of the project and assessed as a permitted activity via the Part 4 SSD process as a legitimately ancillary component of the solar farm development.

The subject land is zoned a combination of RU1 Primary Production pursuant to the *Cooma- Monaro Local Environmental Plan 2013*.

A power line connection route will be subject to a detailed assessment. The agreed power line route is zoned RU1 – Primary Production and is permissible as an ancillary component of an electricity generating works, which is permitted with consent on RU1 Zoned land (refer to **Section 4**).

The environmental impacts of transmission or distribution lines required for MSF (a solar SSD project) will be considered in the assessment of the application for the development.

Consistent with DPIE's *Large Scale Solar Energy Guideline* (December 2018), Terrain Solar will provide information in the Environmental Impact Statement about the necessary transmission line, including the proposed location, timing of decision-making, interaction with the timelines of the solar energy project and relevant stakeholders, to assist in the consideration of all aspects of the project.

## 3.3 Labour

Over the approximately nine month construction effort the demand for labour will vary depending on the site activities being undertaken. Installation and commissioning of modules is labour intensive. Employment

is expected to peak at approximately 100 on-site workers involved directly in project construction. This peak period is expected to extend over a six month (24 weeks) period. Outside this peak the workforce would drop to 50. These jobs will include construction managers, electricians, fitters, plant operators, mechanics and other skilled labour.

## **4. PERMISSIBILITY AND STRATEGIC PLANNING**

### **4.1 Strategic planning documents**

#### **4.1.1 NSW 2021 PLAN AND RENEWABLE ENERGY ACTION PLAN**

The NSW 2021 plan, released in 2011, sets state-wide priorities for action and also guides resource allocation. Goal 22 of this plan seeks to protect the natural environment and includes a specific target to increase renewable energy. The plan states:

*We will contribute to the national renewable energy target by promoting energy security through a more diverse energy mix, reducing coal dependence, increasing energy efficiency and moving to lower emission energy sources.*

Specific initiatives include:

- Establishing a Joint Industry Government Taskforce to develop a Renewable Energy Action Plan for NSW to identify opportunities for investment in renewable energy sources.

Since release of the 2021 plan, the NSW Government has overseen the development of the NSW Renewable Energy Action Plan (REAP). The vision of the plan is a 'secure, affordable and clean future for NSW'. Goal 1 of the REAP is to attract renewable energy investment, including to 'support mid-scale solar PV to enable an uptake of solar technologies where they are most cost effective'.

The proposed MSF sits comfortably with this state led objective and is consistent with the goal and intent of the REAP.

#### **4.1.2 SNOWY MOUNTAINS MASTER PLAN**

The Snowy Mountains Master Plan (Special Activation Precinct SAP) aims to focus on Jindabyne and surrounding villages which utilise the Kosciuszko National Park. The SAP endeavours to provide industrial and commercial infrastructure to the region bringing together planning and investment opportunities.

The Master Plan focus is the following:

- Increasing year-round tourism
- Creating year-round employment opportunities
- Investing in the regions infrastructure to meet growing needs of residents, seasonal works and temporary visitors.

Whilst the Plan is not specific to Cooma or the Site, the Site falls within the region and therefore may benefit from the increase planning towards employment and infrastructure opportunities.

#### **4.1.3 SNOWY MONARO LOCAL STRATEGIC PLANNING STATEMENT**

The Local Strategic Planning Statement (LSPS) is designed to achieved the overarching strategic planning which will link the South East and the Tablelands region. The LSPS sets out a 20-year goal which sees the

region being developed into five key towns and surrounding villages which reflects their diverse landscape, architecture and community.

The LSPS sets out a series of planning priorities, with the proposal responding to the following priorities.

- Planning Priority 4- Move towards a carbon neutral future
- Planning Priority 6 – Maximise potential for business growth and efficiency
- Planning Priority 12 – Capitalise on Growth and Change by Preparing for New Business and Population

As the proposal endeavours to provide energy through the provision of a solar farm, it correlates directly with Priority 4, whilst ensuring it maximise the potential growth for new business to be established within the Cooma Region.

The EIS will further investigate the LSPS and draw upon its summation to support the proposal.

## 4.2 Environmental Planning Framework

### 4.2.1 COMMONWEALTH LEGISLATION

#### 4.2.1.1 Environment Protection and Biodiversity Conservation 1999

A search of the online Protected Matters Search Tool (PMST) did not identify matters of national environmental significance or other matters protected by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as likely to occur at or near the area.

#### 4.2.1.2 Native Title Act 1993

A review of National Native Title Tribunal's Native Title Register did not identify any Native Title claims or applications, or Indigenous Land Use Agreements at or near the site.

### 4.2.2 NSW LEGISLATION

#### 4.2.2.1 Environmental Planning and Assessment Act 1979

The proposed MSF would be assessed under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

#### 4.2.2.2 Biodiversity Conservation Act 2016

The potential impacts to threatened species listed under the *Biodiversity Conservation Act 2016* will be considered in the EIS.

#### 4.2.2.3 Roads Act 1993

The development would utilise the existing local road connecting to a local road, Dry Plains Road and Snowy Mountains Highway. Therefore, consent from Roads and Maritime Services is not required under section 138 of the *Roads Act 1993*.

#### 4.2.2.4 National Parks and Wildlife Act 1974

The potential impacts to Aboriginal heritage pursuant to the *National Parks and Wildlife Act 1974* will be considered in the EIS. This is discussed in more detail in **Section 5.2.3**.

#### 4.2.2.5 Heritage Act 1977

There is identified local heritage items under the CMLEP 2013 near to, but not on, the site, however, no items of state significance are located within the Site or Site's vicinity.

#### 4.2.2.6 Water Management Act 2000

The development may require consideration of impacts to waterfront land, as defined in the WM Act. This will be addressed in the EIS. At this time, buffers to waterways have been provided via the solar site investigation footprint to avoid the need to impact waterfront land.

Pursuant to Section 4.41(1)(g) an activity approval required under the WM Act, other than an aquifer interference approval, is not required for SSD. Aquifer interference is not anticipated in relation to this site.

#### 4.2.2.7 Fisheries Management Act 1994

The development site does not contain watercourses mapped as key fish habitat.

Details assessment of potential impacts to fish habitat is therefore not expected to be required. This will nonetheless be addressed in the ecology report supporting the EIS.

### 4.2.3 ENVIRONMENTAL PLANNING INSTRUMENTS

#### 4.2.3.1 State Environmental Planning Policy

##### 4.2.3.1.1 State Environmental Planning Policy (State and Regional Development) 2011

Clause 8 of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) provides that development is declared to be State Significant Development (SSD) for the purposes of the EP&A Act if:

*(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*

*(b) the development is specified in Schedule 1 or 2.*

Clause 20 of Schedule 1 of the SRD SEPP provides:

*Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that—*

*(a) has a capital investment value of more than \$30 million, or*

*(b) has a capital investment value of more than \$10 million and is located in an environmentally sensitive area of State significance.*

The proposed development is not located in an environmentally sensitive area of State Significance, but does have a capital investment value in excess of \$30 million (estimated CIV is \$245 million) – refer **Section 7**.

Accordingly, the proposed solar development is declared to be SSD for the purposes of the EP&A Act.

#### 4.2.3.1.2 State Environmental Planning Policy (Infrastructure) 2007

By virtue of Clause 34 of Division 4 of Part 3 of the *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) the development of electricity generating works are permitted on prescribed rural, industrial or special use zone. An electricity generating works is defined by the standard instrument as:

*electricity generating works means a building or place used for the purpose of—*

*(a) making or generating electricity, or*

*(b) electricity storage.*

The RU1 zone is a prescribed rural zone and the project entails the carrying out of electricity generating works; therefore development in relation to the site is permitted with consent via clause 34 of the ISEPP.

By reference to Schedule 3 or the ISEPP, the development is not a traffic generating development and therefore does not require referral to Transport for NSW

#### 4.2.3.1.3 State Environmental Planning Policy No 55 – Remediation of Land

A review of the NSW EPA Contaminated Land Record and List of NSW contaminated sites notified to the EPA as of the 22 October 2020 confirms there are no known contaminated sites at or near the site.

Based on the historical agricultural use of the site, it is unlikely that significant contamination exists at the site. Assessment of contamination risk will be undertaken as part of the EIS.

Construction and operation of the proposal is unlikely to pose a significant contamination risk. A CEMP would address management of contamination if identified during construction.

#### 4.2.3.1.4 State Environmental Planning Policy No. 33 - Hazardous And Offensive Development

*SEPP No. 33 - Hazardous and Offensive Development* (SEPP33) applies to development that is potentially hazardous or offensive.

By reference to the intention to include a BESS, a screening opinion would be completed to inform preparation of the EIS, and if required, a preliminary hazard analysis would be prepared to assess impacts in the context of the requirements of SEPP33.

#### 4.2.3.1.5 State Environmental Planning Policy (Koala Habitat Protection) 2020

*State Environmental Planning Policy (Koala Habitat Protection) 2020* applies to the Snowy Mountains LGA, and therefore an assessment of core koala habitat at the site is required. This would be addressed by an appropriate ecological assessment sufficient to satisfy the requirements of the *Biodiversity Conservation Act 2016*.

Snowy Monaro Regional Council have prepared the Cooma-Monaro Comprehensive Koala Plan of Management which will need to be considered along with the Koala Habitat Protection SEPP.

#### 4.2.3.2 Local Environmental Plan

##### 4.2.3.2.1 Cooma-Monaro Local Environmental Plan 2013

The Aims of the *Cooma-Monaro Local Environmental Plan 2013* are to:

*(1) This Plan aims to make local environmental planning provisions for land in Cooma-Monaro in accordance with the relevant standard environmental planning instrument under section 3.20 of the Act.*

*(2) The particular aims of this Plan are as follows—*

- (a) to plan and manage for environmental sustainability,*
- (b) to promote and coordinate the orderly and economic use and development of land,*
- (c) to provide clarity and certainty for the community regarding the future development of Cooma-Monaro, while allowing flexibility to respond to change,*
- (d) to encourage opportunities for primary production in rural areas,*
- (e) to encourage opportunities for development in the urban area, including industrial land,*
- (f) to support the growth of villages while ensuring their character is retained,*
- (g) to protect historic, environmentally significant and cultural sites and areas of quality visual amenity,*
- (h) to encourage the siting and management of development to avoid, as far as practicable, conflict between adjoining and nearby land uses, both within and between zones having regard to likely future land uses,*
- (i) to provide a range of housing opportunities, including rural residential development in the vicinity of Cooma-Monaro and the villages,*
- (j) to protect watercourses, riparian habitats, wetlands and water quality within water catchments*

The Site is located within the Snowy Monaro LGA and is therefore subject to the provision of the CMLEP2013. The proposed solar development site is located on land zoned RU1 Primary Production. The objectives of the RU1 zone are:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- To minimise the fragmentation and alienation of resource lands.*
- To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- To encourage land uses that are unlikely to generate significant additional traffic relative to the capacity and safety of a road, or create or increase a condition of ribbon development on any road.*

- *To encourage land uses that are unlikely to create unreasonable or uneconomic demands for the provision or extension of public amenities or services.*
- *To protect the water quality of receiving watercourses and groundwater systems.*
- *To protect the visual landscape values of the rural area*

Within the RU1 zone electricity generating works are permitted under *Any other development not specified in item 2 or 4.*

Additionally, by virtue of clause 34 of the ISEPP, electricity generating works are permitted within a prescribed rural zone. The RU1 zone is a prescribed rural zone. Pursuant to clause 8 of the ISEPP, the ISEPP prevails to the extent of any inconsistency with any other environmental planning instrument. Thus electricity generating works are permitted with consent in the RU1 zone via the ISEPP.

## **5. IMPACT IDENTIFICATION AND ASSESSMENT**

### **5.1 PRELIMINARY RISK ASSESSMENT**

A preliminary risk assessment based on a desk-top review of available data, an initial site inspection, and review of SEARs issued by the Department for other solar farms, have all been considered to identify potential impacts associated with the development.

It is noted, however, these impacts are identified and prioritised on the basis of preliminary research alone and their significance (or otherwise) will ultimately be determined following completion of further specialist studies, investigation and assessment.

### **5.2 KEY ISSUES**

#### **5.2.1 CUMULATIVE IMPACT**

There are no known state significant solar or wind development within 50 km of the subject site, nor any other large scale (i.e., state significant) construction projects. As such, the likelihood of significant cumulative impacts from major developments is not anticipated.

#### **5.2.2 BIODIVERSITY IMPACTS**

The development may involve clearing of native vegetation, likely to be primarily limited to ground cover. Whilst the extent of the proposed clearing has yet to be determined, there are known occurrences of Endangered Ecological Communities in the locality and existing records of threatened species sightings near the site (as recorded in the NSW Atlas of Wildlife). There is also the potential for species and ecological communities listed under the *Environment Protection and Biodiversity Conservation Act 1999* to occur at or near the site, notwithstanding a search of the site using the Department of Environment's online Protected Matters Search Tool (PMST) did not reveal any matters of significance.

A search of the Bionet Atlas of NSW Wildlife within a 2 km radius of solar development site identified two threatened flora species and no threatened fauna species.

A review of the Bureau of Meteorology (BOM) National Atlas of Groundwater Dependent Ecosystems (GDE) confirms there are GDEs (surface or subsurface dependent) within the development site.



A Biodiversity Development Assessment Report would be prepared to support the EIS and discharge the assessment obligations of the BC Act.

The project would also have a strong focus on the management and eradication of noxious weeds on the site, with particular attention paid to African love grass, which is a known weed in the locality.

### **5.2.3 ABORIGINAL HERITAGE**

An extensive search of the online Aboriginal Heritage Information Management System (AHIMS) on the 28 October 2020 identified 48 Aboriginal sites or places within a 10km radius of the proposed works area. However, no Aboriginal sites or places are recorded within the development area.

Potential impacts of the proposal may include disturbance of unknown Aboriginal heritage sites. It is proposed that as part of the EIS a specialist Aboriginal Heritage Assessment would be undertaken to identify potential impacts, and necessary management and mitigation measures.

### **5.2.4 CONSTRUCTION NOISE**

Noise impacts would mostly be associated with construction activities and include noise generated by preparatory earthworks, delivery and assembly of the solar panel infrastructure, grid connection, and operation of vehicles.

Operational noise impacts may include the operation of a solar tracking system (optional feature to be confirmed), transformer station and switchgear, and maintenance works. Operational noise impacts are expected to be negligible. It is proposed that as part of the EIS a specialist Construction and Operational Noise and Vibration Assessment would be undertaken to identify potential impacts, and necessary management and mitigation measures.

### **5.2.5 VISUAL IMPACTS**

Iris Visual were engaged by Terrain Solar to complete an initial analysis of the visual sensitivity of the landscape and its capacity to absorb the proposed solar development without significant impact.

Iris note:

*The proposed development footprint has been refined through a process of 3D viewshed modelling and slope analysis, utilising LIDAR point cloud data. The proposed development footprint has been selected in response to the predicted visibility of the site and location of sensitive receivers. This process maximises the potential for natural screening of the site by the existing landform and vegetation of the site and surrounding areas to minimise the potential visual impact of the project. A Slope analysis has also been used to inform the refinement process as the need for earthworks, which can cause landscape and visual impacts, would be less in areas where gentler slopes exist. Based on this analysis, a development footprint has been identified for the project which minimises potential visual impact.*

In respect of the adopted development footprint it is noted that there are a total of 21 non associated land owners within 1 km of the solar development site, with a further 36 within the 1-2 km range, and another 32 within the 2-3 km range.

Potential impacts to surrounding sensitive receptors may include changes to existing rural views and solar glint and glare from the solar panels. It is proposed that as part of the EIS a Visual Impact Assessment would be undertaken to identify potential impacts, and necessary management and mitigation measures.

### 5.2.6 ACCESS AND TRAFFIC

The site is currently accessed from Dry Plains Road. This would be the intended access for construction and operational purposes – refer **Figure 2**.

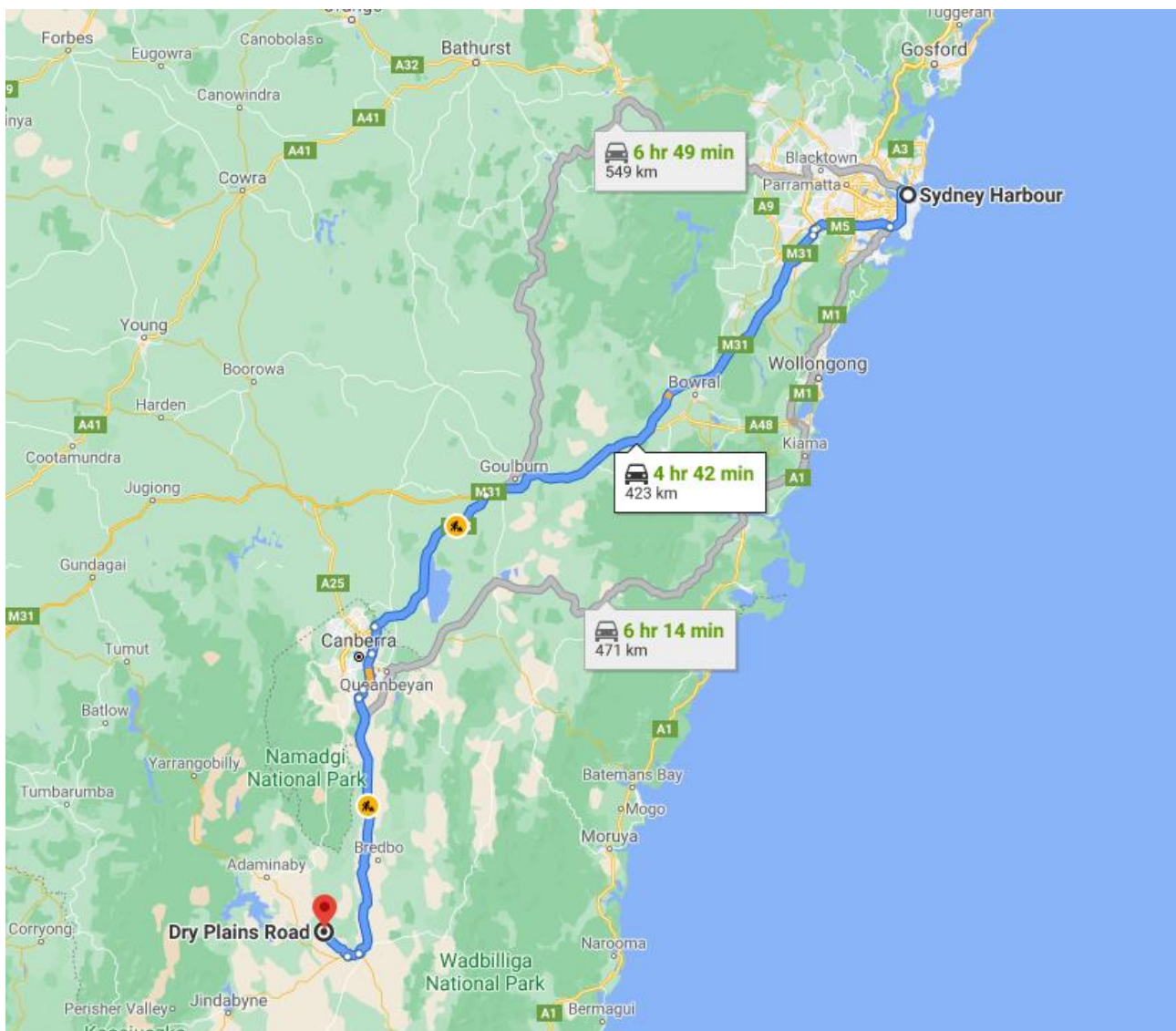
Investigations as to the suitability of this route, including any necessary road upgrades, would be completed with Snowy Monaro Council staff. Consultation is also proposed with Transport for NSW.

Materials for construction would be expected to primarily arrive at Port of Sydney, and would be transported to site by heavy vehicles up to b-double in size.

The expected route for vehicles would be via the Hume and Monaro Highways (refer **Figure 5**). This is an authorised b-double route for vehicles up to 26 metres in length.

A traffic impact assessment would be prepared to support the EIS and traffic impacts would be addressed in a Construction Environmental Management Plan (CEMP).

**Figure 5 – Anticipated construction traffic routes**



### 5.2.7 OTHER ENVIRONMENTAL ISSUES

Other environmental issues that they considered less likely to affect the project are identified in **Table 5**. These issues are considered to be manageable through the application and implementation of appropriate management and mitigation measures.

**Table 5 – Other Environmental Issues**

Issue	Potential Impacts	Strategies
Air quality	Potential impacts during construction may occur as a result of dust generation and vehicle emissions.	Air quality impacts would be assessed in the EIS. Management of air quality impacts would be addressed in a CEMP.
Bushfire risk	The site is not mapped as bushfire prone land.	Potential bushfire risk and appropriate management/mitigation measures would be addressed in the EIS. Bushfire risk management would be addressed in a CEMP.
EMF hazard and risk	Impacts from an electromagnetic field (EMF) may be generated by transmission lines and underground cables. EMF risks are expected to be below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines (adopted by the Australian Radiation Protection and Nuclear Safety Agency, ARPANSA).	Potential EMF hazards and risks will be assessed in the EIS, including calculation of EMF levels associated with proposed infrastructure.
Groundwater	Impacts to groundwater are considered unlikely due to the depth of groundwater bearing zones. However, as the Site is identified as being groundwater vulnerable, consideration of potential impacts to groundwater would be considered.	The existing groundwater environment and potential impacts would be addressed in the EIS.
Land use	The development would result in a change in land use from agricultural purpose to electricity generation. The capacity exists to continue to use the land for grazing purposes following the development of the land for solar development purposes. The land can also be reestablishment for use for agriculture purposes upon completion of the development and decommissioning of the site. A review of state land capability mapping confirms that the proposed development footprint is located entirely within class 3 land, the connection power line is located in class 3 and 5 land, and the substation and BESS are located in class 5 land.	Impacts to land use will be assessed in the EIS.

Issue	Potential Impacts	Strategies
Loss of resources	The approval of the use of the land for the purposes of a solar farm including extensive agriculture supports the ongoing agricultural use of the land. The proposal has the potential to affect exploration and future mining of potential mineral resources. The site is not currently impacted by any mining titles or exploration licences. The site contains	Impacts to existing land resources would be assessed in the EIS.
Social and economic	Construction is expected to generate positive economic impacts by creating employment opportunities. Increased employment opportunities may attract more people to Cooma, increasing pressure on accommodation and services.	Impacts to the social and economic environment would be assessed in the EIS.
Soils and water	Potential impacts to soils and surface water may occur during construction, such as erosion and sedimentation. Impacts are expected to be minimal and manageable.	Impacts to soil and water would be assessed in the EIS. Management of soil and water impacts would be addressed in a CEMP.
Geology	The site is not mapped as being likely to contain naturally occurring asbestos (NOA), although noting land to the east of the site has been mapped as having a low potential for the occurrence of likelihood of NOA.	Geotechnical investigations will be completed and reported in the EIS.
Historic Heritage	A search of the NSW Planning Portal (Heritage), inclusive of items listed under the CMLEP2013, the NSW Office of Environment and Heritage State Heritage Register and Department of the Environment Australian Heritage Database indicates there are known local heritage items at or near the site.	Impacts to historic heritage would be assessed in the EIS.
Waste management	Potential impacts may include generation of waste during construction. Operation of the project is not expected to generate waste.	Potential wastes generated by the proposal would be addressed in the EIS. Waste management would be addressed in a CEMP.

## 6. JUSTIFICATION

### 6.1 Development Suitability

Benefits from this project will contribute to the Snowy Monaro region, the state and the nation.

MSF will particularly benefit the Cooma region given it provides a good solar resource, suitable land use and good network connection opportunities. Cooma is a growing regional centre with a number of growth

prospects. New clean energy generation will be an ideal complement to these growth prospects and contribute to the sustainability of the town and region.

Local economic benefits include employment, particularly during construction, together with the provision of services and components and training of local contractors. The project will also provide ongoing operational and maintenance opportunities for local companies. The project will introduce new capabilities to the region which will benefit later projects. Local companies may have the capacity to win project work around the country as the solar industry grows. The project benefits the state because it ensures that renewable energy which is consumed in NSW is also generated here. Without local renewable generation projects in NSW, NSW electricity consumers will have to import renewable generation from projects in other states.

The annual carbon emissions avoided through generation of clean energy will be significant. Solar projects are a relatively new development in Australia despite being well established in overseas markets. MSF will contribute to reducing the cost of large scale solar in Australia by adding to the experience base of the local supply chain.

## 6.2 Site Suitability

Terrain Solar identified the MSF site during a thorough screening program to identify suitable large scale solar sites in New South Wales. The site was selected after a number of alternatives were discarded due to sub-optimal performance against screening criteria. The proposed site is located in an area with a strong connection point and has Terrain has identified that it is unlikely to be constrained. The solar resource is good. The land is zoned RU1 and within the RU1 zone, electricity generation works are permissible with consent pursuant to the ISEPP.

The development site is largely devoid of significant biodiversity constraints and the generally flat nature of the land means the project would not require significant civil works to facilitate construction. Further, whilst the land is currently used for farming and grazing the site is not located on or near any Biophysical Strategic Agricultural Land (BSAL). The site landowner is committed to supporting the project. The site has good overall fundamental parameters that will generate electricity at a competitive rate.

## 6.3 Justification for preferred arrangement

The proposed site is well suited for a solar PV facility. Its proximity to the nearby transmission network minimises the connection infrastructure required and minimises the associated cost burden. The nearby transmission network has been assessed by Terrain to show that the connection is suitable and will face minimal constraints. The site terrain is ideally suited as it is relatively flat and generally devoid of native vegetation. Therefore, very little site preparation will be required prior to installing the facility. There is minimal flooding risk. Site access is also excellent from the adjacent local roads.

# 7. CONSULTATION

## 7.1 Site selection consultation

In identifying the subject site as being suitable for the proposal, Terrain Solar has engaged in consultation with local land owners, Snowy Monaro Regional Council and TransGrid. The opportunities and areas of risk have been explored with stakeholders during these consultations.

As outlined in **Section 2.3**, a range of sites in the region were considered via a constraints analysis before the final land parcel was selected.

Once selected, this land parcel was then the subject of further analysis to identify the appropriate portion of the site for use for development of the solar development. The portion of the site selected has been chosen due to its excellent shielding from neighbouring properties and flat and developable landform.

## 7.2 Scoping Stage Consultation

Terrain Solar engaged Elton's Consulting to prepare an engagement strategy to guide the carrying out of consultation for the proposed MCSF. A SEARs engagement overview document is provided at **Appendix A**.

A community notification letter was issued to 39 non associated landowners located in proximity to the proposed development site.

This notification introduced the project, outlined the planning process and provided contact details for the community infoline, mailbox and website. The process of dropping of letters also involved talking to residents, including 13 face to face conversations. The main concern raised with the potential for visual impacts, however the majority of the feedback was generally positive.

As a result of the notification, and as at the 29 January 2021, only one email and no phone calls had been received via the dedicated project email and phone number. This submission was simply a registration of interest.

Terrain Solar have submitted an initial preliminary connection enquiry to Transgrid and have received a positive response. Terrain Solar are now in the process of putting together further information to support a full grid connection enquiry.

Terrain Solar conducted a pre-application meeting with Snowy Monaro Regional Council on the 28 October 2020. No in-principle objections to the project were raised and specific advice was taken by Terrain with respect to conducting community engagement.

## 7.3 EIS Consultation

Consultation to inform the EIS preparation will be undertaken in accordance with the following guidelines:

- *Large-Scale Solar Energy Guideline for State Significant Development* (DP&E, 2018).
- *Community and Stakeholder Engagement Draft Environmental Impact Assessment Guidance Series* (DP&E, 2017)
- *Community Consultative Committee Guidelines State Significant Projects* (DP&E, 2019) – if a Community Consultative Committee is required.

### **Snowy Monaro Regional Council**

Snowy Monaro Regional Council will continue to be informed of the proposal and further face to face meetings will be scheduled with the planning officers and elected officials.

### **Neighbours**

Neighbours will continue to be consulted through information posted directly and face to face meetings as requested to inform them of project details and progress and to obtain their input. This will continue through the development approval process and construction.



### **Community**

The community will be informed of the project through notices in the local newspaper and via Snowy Monaro Regional Council. Subject to COVID-19 restrictions, consultation will incorporate an information day at EIS stage. Contact numbers and an email address will be provided for people who wish for more details.

### **Special Interest Groups**

Special interest groups will be informed of the project to the extent they are affected by the project. The process of identifying special interested groups has commenced via engagement of Elton's to provide specific engagement services and through consultation with Council staff. As the development progresses and the construction schedule becomes clearer, local businesses will be advised via notices and media and will be invited to provide proposals for construction equipment, goods and services.

### **State and Federal Government**

State and Federal government authorities will be informed of the project to the extent they are affected. The NSW Department of Industry and Regional Development Australia will be advised to ensure any opportunities to coordinate with the proposed infrastructure developments in relation to the MSF are captured. Elected representatives, State and federal elected members and the relevant ministers for Energy, Environment and Regional Development will be advised of the project as it progresses to ensure it is recognised for its contribution to state and federal clean energy development targets.

### **Other**

Consultation will also be undertaken with the following stakeholders:

- Members of the local Aboriginal community;
- Organisations representing local, regional, State, national and international interests regarding business, community, indigenous and environmental issues; and
- Affected utility providers.

## **7.4 Post Approval Consultation**

If approved, the following consultation would be undertaken:

- Ongoing consultation with affected landholders and the community to manage any issues regarding construction and operational impacts; and
- Consultation on compliance with any relevant consent conditions .

## **8. CAPITAL INVESTMENT VALUE**

**Table 6** provides a preliminary breakdown of the capital cost of the project.

The overall cost of equipment and construction will be approximately \$245 million assuming the final capacity is 100 MWac plus an optional battery energy storage system of up to 100 MWhours, but likely to be closer to 40 MWhours.

**Table 6 – Estimated Capital Investment Value**

Project component	\$ (millions)
Solar PV module equipment including installation, mounting structure equipment, inverters, LV Transformer equipment, civil works and electrical and communication cabling and equipment.	\$170 million
BESS	\$65 million
<b>TOTAL</b>	<b>\$245 million</b>

## 9. REFERENCES

**Table 7 – References**

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NSW Office of Environment and Heritage (OEH). (n.d.). <i>State Heritage Register</i> . Retrieved from: <a href="http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx#amapsearch">http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx#amapsearch</a> [Accessed 13 November 2019].





# **APPENDIX A**

## **ENGAGEMENT STRATEGY**



# Monaro Large Scale Solar Farm

SEARS Engagement Scoping Report

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**Client:** Terrain

**Date:** 01 February 2021



**Contact:**

Caroline Anthony  
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<b>Prepared by</b>	Anna Collins
<b>Reviewed by</b>	Caroline Anthony
<b>Date</b>	1 February 2021
<b>Version</b>	FINAL

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# 1 Project Purpose

Terrain Solar is seeking approval to build a large-scale solar energy project at 115 Old Mill Rd, Dairymans Creek. The proposed solar project will produce roughly 100 MW of energy over a **200-hectare site**.

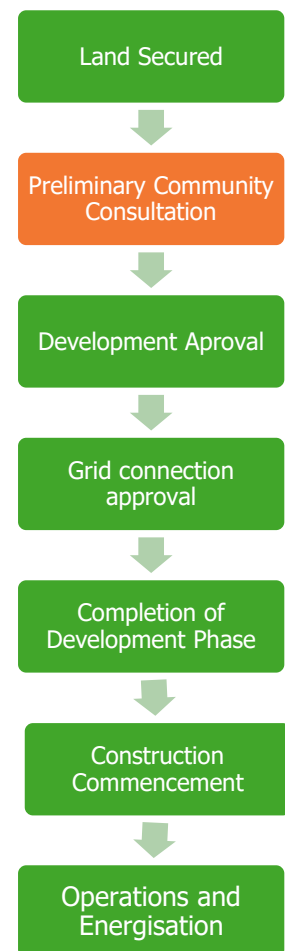
Once the site is fully operational it will export clean, renewable energy to the national energy market powering 34,000 average homes.

Prior to lodging the scoping report for the SEARS, Terrain Solar carried out preliminary engagement with adjacent landowners.

The purpose of this preliminary engagement was to:

- » build awareness of the of the proposal with adjacent landowners
- » create a positive perception of the proposal and Terrain Solar within the local community
- » be prepared to manage any negative responses from the local community and media
- » establish channels for local community to ask questions and give feedback

The following report outlines the engagement carried out, stakeholder feedback and next steps in the engagement process.






## Engagement principles:

- » **No surprises:** provide timely, relevant, clear and transparent information to the local community about the proposed modification and the approval process
- » **Accessible:** make the planning and approvals process clear and understandable for a non-technical audience
- » **Accountable:** provide a clear and accurate account of engagement activities to inform the planning approval process
- » **Collaborative:** establish a positive relationship with the local community, as a trusted member of that community
- » **Responsive:** respond to community questions and concerns openly and honestly
- » **Adaptable:** deliver an engagement program that is safe and effective in the changing COVID environment

## 2 Community Engagement

A preliminary engagement program was developed to introduce the project to adjacent landowners, establishing communication channels and relationships with key stakeholders ahead of SEARS lodgement. The purpose of this engagement was to inform and engage sensitive receivers surrounding the proposed site at **115 Old Mill Rd, Dairymans Plain**.

The following engagement channels were implemented:

	Community notification		Community info-line and inbox		Project website
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### Community notification

A community notification was issued to **39** sensitive receivers across:

- Dry Plains Rd
- Towrang Rd
- Snowy Mountains Highway
- Kosciuszko Rd
- Ridgeview Lane

The notification provided a brief introduction to Terrain Solar, an overview of the planning process and contact details for the community infoline and mailbox. All stakeholders received the community notification via letterbox drop on **Friday 8 January 2020**. A copy of the notification is provided in **Appendix A**.

As the letter was distributed to sensitive receivers, Terrain's Project Development Manager doorknocked all residents introducing the project team, proposed project and noted verbal feedback provided by residents. Out of the **39** sensitive receivers, the team spoke to **13 residents**.

Overwhelmingly, feedback provided by residents was positive, with the main concern being the visual impact of infrastructure. Other key concerns included:

- Project Timing
- Construction impacts
- Visual Amenity



**"My main interest is the visual impact that the solar panels will have on my property ... we just want to know where it will be positioned to understand how it will impact our view"**

In addition to this, the Cooma Golf Club was identified as a sensitive receiver. As such, Terrain met with the club President to discuss any concerns about the proposed project as part of the letterbox drop on Friday 8 January. Verbal feedback provided by the Golf Club was largely supportive and indicated no immediate issues with the solar proposal.



## Project infoline and email address

A dedicated 1800 line and project email address were also established for community members to provide their feedback and comments on the project, and to ask questions of the project team.

**1** email was received between **Friday 8 January** date to **Friday 29 January**. This email was a registration of interest in the project from a community member. No phone calls were received on the 1800 number during this period.

The dedicated project website, infoline and email address will remain active and open to the public throughout the project, and the team will respond to enquiries and questions as they arise.

### 3 Future engagement

Terrain Solar is committed to ongoing engagement for the Monaro Solar Project. We will continue to consult directly with the adjacent landowners as well as the broader community. Engagement will continue to be informed by the planning process and engagement tools will be accessible, transparent and collaborative. Future engagement with the key stakeholders will include:

- » One-on-one meetings (where requested)
- » Website updates
- » Community notifications
- » Briefings with local members, Council and key stakeholder groups
- » Information sessions for the broader community

The 1800 info line and project email address will remain open to all interested stakeholders during the project life span. These channels will remain as critical points of contact between stakeholders and the Terrain stakeholder engagement and community relations team.

Further to this pending SEARS approval, the project team will hold information sessions as part of the EIS process, which will be accessible to all interested local stakeholders. This will be an opportunity for the local community to learn more and speak to members of the project team directly.

# A **Community Notification**



January 2020

Dear resident

### **A solar energy proposal for Monaro**

We are writing to tell you about a proposal for a new solar energy project in your local area.

Terrain Solar is an Australian owned and operated business delivering large scale solar energy projects to regional Australia that benefit the community, the environment and the economy.

Terrain Solar is proposing to build a solar energy project on land located at 115 Old Mill Rd, Dairymans Plain. The proposed solar project will produce around 100 megawatts of energy which will be used to send power into the local energy grid.

The proposal is in the early stages and we want to work closely with the community as we develop this important project. As we progress through each stage of local and state government approval processes we will provide more detailed information about the project and invite you to ask questions and provide feedback on the proposal.

We will soon be making a request to the Department of Planning, Industry and Environment for the Secretary's Environmental Assessment Requirements (SEARs), which specify what approvals are required for this proposal. The Department will publish the SEARs on their website once they have reviewed our request.

When the SEARs have been received, we will hold information sessions for the local community where you will be able to talk to members of our team, ask questions and provide your feedback.

We would have liked to come and personally meet with residents to discuss this proposal, however the safety of the local community is our priority. If you would like to arrange a face-to-face or online meeting for more information, please contact us on **1800 749 232**, by email at **[info@monarosolarfarm.com.au](mailto:info@monarosolarfarm.com.au)** or visit our website at **[www.monarosolarfarm.com.au](http://www.monarosolarfarm.com.au)**

We understand the importance of keeping the local community informed and we look forward to talking to you more about this exciting project.

Yours sincerely

**Tom Allen**

**Project Development Manager**



## **ABOUT TERRAIN SOLAR**

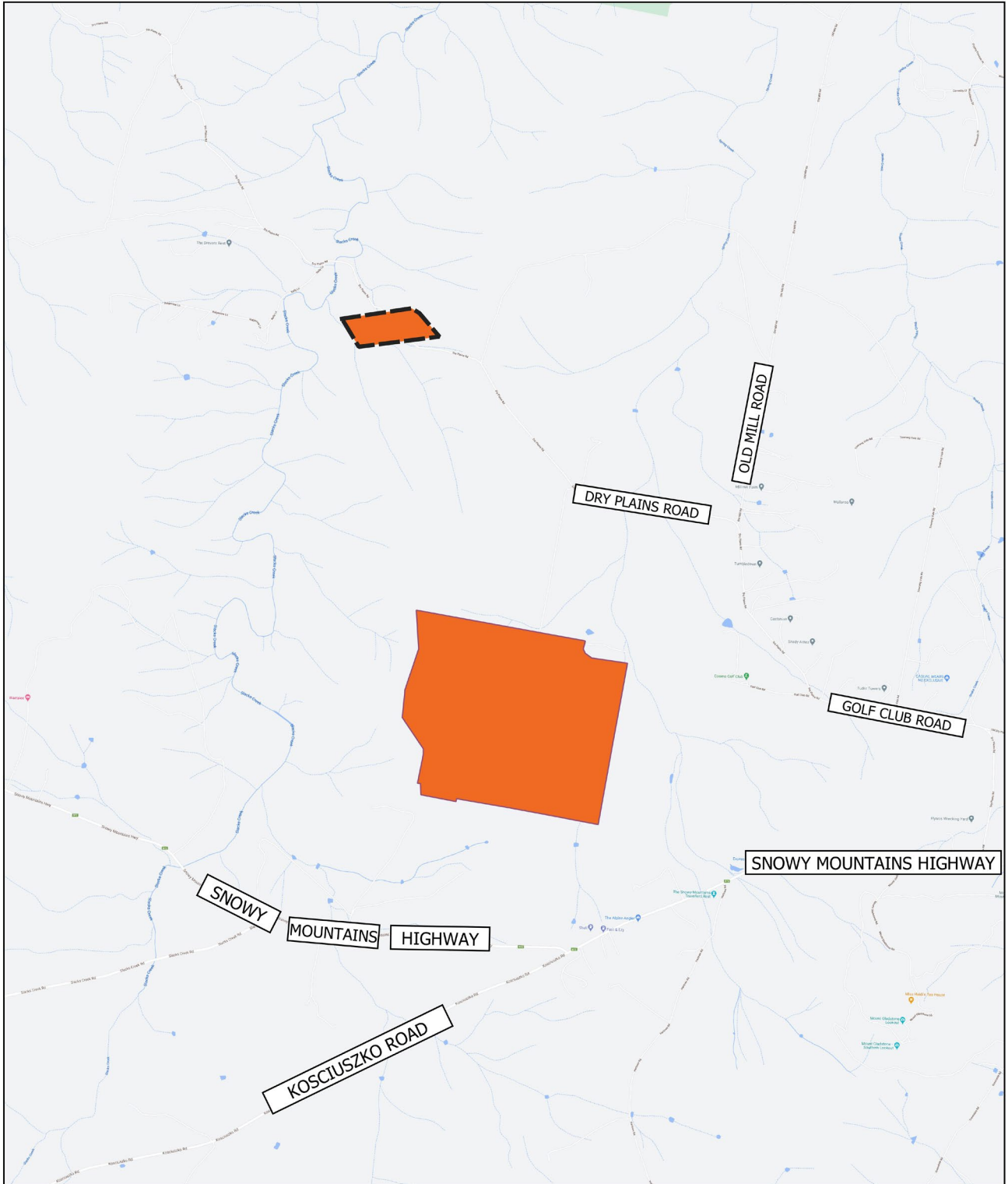
We are an Australian owned and operated business that is developing innovative and strategically located solar farms across regional Australia.

Terrain Solar recently worked in collaboration with Queensland University to complete a project in Warwick in Queensland's Southern downs region.

We currently have projects under construction in a variety of locations including Corowa, Wagga Wagga and Junee.

We are proud of what we do – creating clean energy and investment in regional NSW.

We are committed to working closely with local communities to deliver better outcomes for everyone.



 Solar Farm Site Investigation Area

The exact location of solar infrastructure on the site is under investigation and has not yet been determined. We will keep the community informed as plans develop

## B Key messages



## Key messages

Key messages were used to guide and inform all stakeholder interactions and collateral, these are outlined below.

### About the project

- » Terrain Solar is proposing to build a large-scale solar energy project at 115 Old Mill Rd, Dairymans Plains
- » This proposed solar project will produce around 100 megawatts of energy over 200-hectare site (once fully operational)
- » The Monaro large scale solar project will generate enough renewable energy to power approximately 34,000 average NSW homes
- » This large-scale solar energy project will be used to send clean renewable sourced power into the NSW electricity grid to serve the needs of both the local community, and the broader NSW community
- » During the peak of construction there will be roughly 200 workers on site, drawing in skilled local contractors and sub-contractors

### Planning process

- » Right now, we're in the early stages of a rigorous planning process that involves extensive local and state government approvals that we expect to take around a year to complete.
- » We'll be working closely with the local community through each stage of this planning process, so they can understand what we're proposing, ask questions and give us their feedback.
- » Very shortly, we'll be making a request to the Department of Planning, Environment and Planning for the Secretary's Environmental Assessment Requirements (SEARs), which will clarify the specific approval requirements for this proposal.
- » If approved, we expect construction will start around late 2021 and take around about 8-12 months to complete.

### Consultation

- » The project team will shortly be doorknocking houses in the Dairymans Plains to let residents know what's happening and to offer an initial opportunity to ask questions.
- » We understand that not everyone will be available to talk at this time, but don't worry - this will be the first of many opportunities you will have to talk with us.
- » In late November, we'll be holding online information sessions where the local community can learn more and ask questions of the project team

In the meantime, you can find out more by calling us on **1800 749 232**, email at [info@marulansolarfarm.com.au](mailto:info@marulansolarfarm.com.au) or go to our website at <https://www.marulansolarfarm.com.au/>

### About Terrain Solar

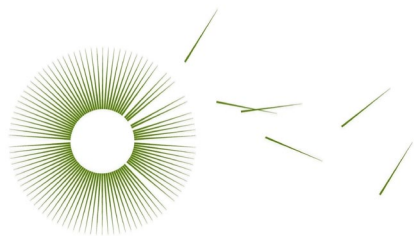
- » Terrain Solar is an Australian owned and operated business that has a track record of successfully developing solar projects across regional Australia, including at Wagga Wagga, Junee, Corowa, Warwick, and Moama, and we have a number of large-scale solar farms actively in development.
- » Terrain Solar brings has a strong track record in working with local communities the development of large-scale renewable energy projects across regional QLD & NSW.





# **APPENDIX B**

## **LANDSCAPE AND VISUAL AMENITY PRELIMINARY ADVICE**



iris

78 Macgregor Terrace, Bardon 4064  
PO Box 189 Red Hill 4059  
ABN 72166862157

## MEMO

To: Tom Allen, Planning & Project Manager, Terrain Solar  
From: Suzie Rawlinson, Director  
Date: 2<sup>nd</sup> February, 2021  
Re: **Monaro Renewable Energy Project**  
Landscape and visual amenity preliminary advice for scoping report

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The Monaro renewable energy project is located in the Snowy Monaro Region of NSW, north of the Snowy Mountains Highway, approximately five kilometres west of Cooma. The solar farm investigation area is located in the Dairyman's Creek locality within the broad valley which surrounds Slacks Creek. The solar farm investigation area has an undulating terrain and is divided by a central ridgeline with small spurs which form a series of smaller valleys. (Refer **Figure A**) The valley is characterised by open grazing pastures with some scattered trees. The existing Murrumbidgee to Cooma 132kV transmission lines cross the valley in a northeast-southwest direct through northern part of the solar farm investigation area.

This area of the valley is surrounded to the west, north and east by vegetated hills. This includes a small ridgeline formed by undulating hills between Wambook and Coolringdon to the west, the hills of the Murrumbidgee Reserve to the north, a vegetated ridge at Binjura to the northeast, a ridge to the east of Dairyman's Plains, and Gladstone Hill to the southeast.

Beyond the valley, the foothills of the Snowy Mountains form a visual backdrop in west and north westerly views from the valley. The vegetated hills, ridgelines and distant mountains are important local visual features, which create a sense of visual enclosure to the valley and an attractive multi-layered effect to some distant views.

The valley includes some scattered rural dwellings and agricultural buildings. There are several groupings of properties on elevated land including a small group of dwellings in Wambook to the north east of the solar farm investigation area, a group of dwellings on bushland blocks at Binjura to the northeast, and rural residential properties on the ridge east of Dairyman's Plains.

The Cooma Golf Course is located to the east of the valley, on Dry Plains Road. It includes well maintained mature corridors of trees around its perimeter and within the course and is a noticeably green open space within this otherwise rural landscape.

The village of Pine Valley is located to the south of the solar farm investigation area on the Snowy Mountains Highway and is a service stop for visitors. There is a café and formalised lookout at Mount Gladstone Reserve which offers elevated views across the valley to the surrounding mountains in the west, and also east to Cooma.

### ***Planning considerations***

The solar farm investigation area is in the Snowy Monaro Regional Council area. It is also on the western boundary of the former Cooma-Monaro Shire Area, which extends west to Slacks Creek and south to the Snowy Mountains Highway. The areas to the west and south of the solar farm investigation area are within the former Snowy Mountains Shire. While the shire Local Environmental Plans (LEP) and Development Control Plans (DCP) are still current, the Local Strategic Planning Statement (LSPS) sets the future direction for the amalgamated council area and preparation of a new LEP and DCP for the entire Snowy Monaro Council area is underway.

### **Snowy Monaro Local Strategic Planning Statement 2020**

The solar farm investigation area is located on the boundary between the 'Cooma' and 'Monaro' sub regions (Structure Map and Rural Land Use Characteristics Map).

Planning Priority 2 aims to '*protect and enhance the scenic landscape of the Region*', which include the '*steep rugged alpine mountains and the wind swept Monaro plains*' (p.24). The plan states that ... '*there is an expectation that rural landscapes be maintained for enjoyment*', and that '*visually intrusive development*' be prevented, particularly in '*important scenic landscape*' areas (p.24). The plan identifies the following objectives for Planning Priority 2:

- *Protect and enhance the unique rural and alpine landscapes of the region through appropriate planning controls.*
- *Minimise the impact of development on the landscape, particularly on the fringe of towns and villages.*
- *Support the implementation of large scale renewable energy projects outside of scenic protection areas and areas of high environmental value.*

The solar farm investigation area does not have any areas identified for scenic protection or high environmental value in the plan.

The Local Strategic Planning Statement identified several actions for the Cooma, including to:

- 2.1 *Identify significant landscape areas as scenic protection areas in the LEP and DCP.*
- 2.2 *Prepare a Rural Land Use Strategy which considers the visual importance of the rural landscapes throughout the region.*
- 2.3 *Council will implement planning controls that influence the form and scale of permissible development in rural areas.*

Council have prepared a draft Rural Land Use Strategy (*Snowy River Rural Lands Strategy & Rural Lands Study*) which addresses some of these actions. The current Local Environmental Plan (LEP) and Development control Plan (DCP) for the Cooma-Monaro Shire, and adjacent Snowy Mountains Shire, as well as the *Snowy River Rural Lands Strategy & Rural Lands Study* will be reviewed in the following paragraphs.

### **Cooma-Monaro Shire Local Environmental Plan 2013**

This plan includes several aims including to protect 'areas of quality visual amenity' (cl.1.2.2g).

The LEP includes a 'Scenic Protection area' clause (6.9) which has the objective to '*maintain the visual amenity of the major rural road corridors*' (cl. 6.9.1). This clause applies to land identified as 'Scenic Protection' on the Scenic Protection map. This includes a 400-metre scenic protection 'buffer' area

along the Snowy Mountains Highway. As the solar farm investigation area is located about 700 metres to the north of the highway at its closest point, this clause would not apply (cl. 6.9.2). (Refer **Figure B**)

The solar farm investigation area is currently zoned RU1 Primary Production. One of the eight objectives for this zone is to *‘protect the visual landscape values of the rural area’*.

### **Cooma-Monaro Shire Development Control Plan 2014**

The Development Control Plan (DCP) identifies three areas within the Shire considered to be of *‘outstanding landscape value’* which *‘should be protected from development that will negatively impact upon it’* (s.6.10). The solar farm investigation area is not located within or near these areas, nor is it near any of the three *‘Cooma Gateways’* identified in section 6.2 of the DCP.

### **Snowy Mountains Shire Local Environmental Plan 2013**

Two scenic protection areas have been identified in the Local Environmental Plan (LEP), including the *‘Lake Eucumbene and Lake Jindabyne scenic protection area’* and the *‘eastern approaches to Kosciuszko National Park’*. The solar farm investigation area is not located adjacent to or near to these areas, nor is it near any of the Snowy River conservation areas or sites.

To the west of the solar farm investigation area, the land is zoned RU1 Primary Production. The visual value of the Shire’s rural landscape is recognised by one of the six objectives for this zone, which aims to *‘ensure that development maintains and protects the scenic values and rural landscape characteristics of the zone through compatible, small-scale development’*.

### **Snowy Mountains Shire Development Control Plan 2013**

The Development Control Plan (DCP) identifies eight *‘rural locality’* areas, each with a statement outlining the existing landscape character and specific planning requirements for future development. The solar farm investigation area is adjacent to the *‘Adaminaby – Eucumbene rural’* locality, which contains rolling to undulating hills predominately under agricultural use. Areas identified as having *‘very high’* landscape amenity within this locality are located around Lake Eucumbene over 20 kilometres away from the proposal site.

### **Snowy River Rural Lands Strategy & Rural Lands Study, 2020**

This study includes new zoning maps for rural areas to add RU2 into the scheme. The Strategy says *‘Rural areas with topographical constraints and scenic values are proposed to be zoned RU2’* (p.41) It is proposed that the zoning of the valley, east of Slacks Creek and north of the Snowy Mountains Highway be changed from RU1 to RU2. This area of the valley is located within the Proposed RU2 Rural Landscape Canberra Corridor, Murrumbidgee Mountains and Eucumbene. (p.103)

The study acknowledges that electricity-generating works subject to the State Environmental Planning Policy (Infrastructure) 2007 are permissible in prescribed rural (RU1, RU2, RU3, RU4), industrial (IN1, IN2, IN3, IN4) and special use zones (SP1, SP2). However, the study indicates that *‘Despite this, Council gives a high priority to scenic views and landscapes as well as areas of high environmental value such as biodiversity corridors.’* (p.89)

The study indicates that Council does not support the construction of electricity generating works (solar and wind farm) development within the exclusion areas identified in the maps. (p. 89) The relevant map (Map 17) identifies scenic protection areas, which do not include the site or study area.

This study has reviewed the scenic protection clauses of the LEPs. It indicates that Council intends to bring the areas already identified in the Cooma Monaro LEP and Snowy Mountains Shire LEP 2013 into the new Cooma-Monaro DCP and LEP which is currently under development. This includes the scenic



protection areas as well as the 400-metre scenic ‘buffer’ area which currently applies to the scenic routes, which would remain and be used across the entire Snowy-Monaro Council area.

### *Site analysis and development footprint refinement*

The proposed development footprint (area to contain panel arrays, inverters, site offices, access tracks and parking, screening vegetation etc.) has been refined through a process of 3D viewshed modelling and slope analysis, utilising LIDAR point cloud data. The proposed development footprint has been selected in response to the predicted visibility of the site and location of sensitive receivers. This process maximises the potential for natural screening of the site by the existing landform and vegetation of the site and surrounding areas to minimise the potential visual impact of the project. (Refer **Figure C & D**). A Slope analysis has also been used to inform the refinement process as the need for earthworks, which can cause landscape and visual impacts, would be less in areas where gentler slopes exist. (Refer **Figure F**) Based on this analysis, a proposed development footprint has been identified for the project which minimises potential visual impact. (Refer **Figure E**)

The refinement of the proposed development footprint has included:

- removing development from the northern areas of the solar farm investigation area, which are most visible from areas to the northeast, north, northwest of the site including the residences on Ridgeview Lane Wambrook and along Dry Plains Road
- removing development from areas to the west and south west of the solar farm investigation area to minimise views from properties in Wambrook and Coolringdon.
- removing development from the central field east of the central ridge of the solar farm investigation area which would be visible from the elevated areas of Dairymans Plains in the east
- reducing the potential visibility of the proposed development footprint from the Snowy Mountains Highway, by maintaining the 400 metre ‘scenic protection’ buffer as well as removing development from the south eastern areas of the solar farm investigation area, which have a greater potential visibility from the highway.

Several options for the location of the substation were also tested for visibility. However, all suitable locations along the existing powerline having some potential visibility from the residences of Wambrook in the northeast, and Dry Plains Road and residences to the north of this road. (Refer **Figure G**)

The location of the substation to the east of the available site area (option 2 or 3) would increase the distance from potential receivers on Ridgeview Lane, somewhat reducing the potential visibility of the substation and potential for visual impacts. Three further locations have been considered in this area (Options 3a, 3b and 3c). As the viewshed of these options is similar the preferred location should be the most suitable from an operational perspective. However, achieving the greatest distance from residences on Ridgeview Lane Wambrook and minimising the need for earthworks and vegetation removal can be further explored through detailed design.

Overall, the refinement of the proposal development footprint substantially minimises the number of potential private residences who would view the site; minimises the number of potential receptors within one kilometre of the proposed development footprint and reduces the potential visibility and duration of views to the project from the Highway.

### *Proposed development footprint visibility*

The landform within the solar farm investigation area is undulating, including a ridgeline running north-south through the centre and several small spurs which naturally break up the visibility of the area. Based on the landform, the proposal includes separate visual catchments to the east and west of the ridgeline. The proposed development footprint area comprises mainly north east and east facing slopes and is contained to the south by the tail of the main ridgeline through the site. The visual catchment of the proposed development footprint (panel arrays) would be largely contained by the surrounding landform and have limited visibility from surrounding residences. (Refer **Figure E**)

It is predicted that there would be low visibility, if at all, from Wambo Brook which is over two kilometres north west of the proposed development footprint.

An existing residence, located over one kilometre to the north of the proposed development footprint is also unlikely to have a view to the project due to shielding by landform and vegetation.

The vegetation surrounding the Cooma Golf Course, located on Golf Club Road about 300 metres to the east of the proposed development footprint, would obstruct local views. The well-maintained vegetation within the golf course would screen the project in views from the residential properties on the elevated areas of Dairymans Plains, east of Dry Plains and Old Mill roads, which are over one kilometre from the proposed development footprint.

To the southeast and south of the proposed development footprint the undulating landform creates several smaller visual catchments, containing views and screening the project. As such, there are a group of receptors (residences and commercial properties) located along the Snowy Mountains Highway in Pine Valley which have a low potential visibility of the proposed development footprint.

In Coolringdon, to the south and southwest of the valley, there is one potential receiver located within 500 metres of the proposed development footprint. This receiver is located in an area with low potential visibility of the development due to the intervening landform and orientation of the landform of the proposed development footprint, which is oriented to the north and northeast. There are several scattered receivers located over one kilometre from the proposed development footprint which would also have low potential visibility of the project due to the landform. There would be the opportunity to provide screening of these views within the proposed development footprint.

Views from the Snowy Mountains Highway are of higher sensitivity as it is a scenic route. When travelling west from Cooma there is a long view directed across the valley to the foothills and to the mountains of the Kosciuszko National Park, which does not include the proposed development footprint. The proposed development footprint is set back over 700 metres from the highway and there are limited areas of the development that would be seen in these views (Refer **Figure B**).

As the highway passes through Pine Valley the proposed development footprint is largely out of view with the local undulating landform and intermittent trees along the highway and within the adjacent properties providing screening. As the landform rises to the west of the valley, there are views to the south western corner of the proposed development footprint. These visible areas would be viewed over intervening fields and would be about one kilometre from the highway.

The lookout at Mount Gladstone Reserve, located about 2.5km southeast of the proposed development footprint, is a locally important viewing location. From the viewing area there are broad panoramic views to the north, and northwest, including areas of the proposed development footprint, in the middle to background of the view, about three kilometres away. The views from the lookout are multilayered and the distant mountains are the focal point.

Overall, the proposed development footprint has a relatively small visual catchment due mainly to the ridgeline located to the west of the proposed development footprint and surrounding undulating landform. The existing vegetation within the areas surrounding the proposed development footprint, including the Cooma Golf Course to the east, would reduce the visibility of the project by screening and filtering views. The vegetation which frames the valley and attractiveness of the layered views to the distant mountains would reduce the visual prominence of the proposed development footprint which would be located on the valley floor.

### ***Potential visual mitigation measures***

Further refinement of the development footprint would be undertaken to respond to community engagement and investigation of viewsheds from private residences. This would include particularly properties to the southeast and southwest of the site which have been identified as having some potential for views to the proposed development footprint, and northeast and north in relation to the proposed substation.

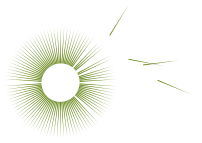
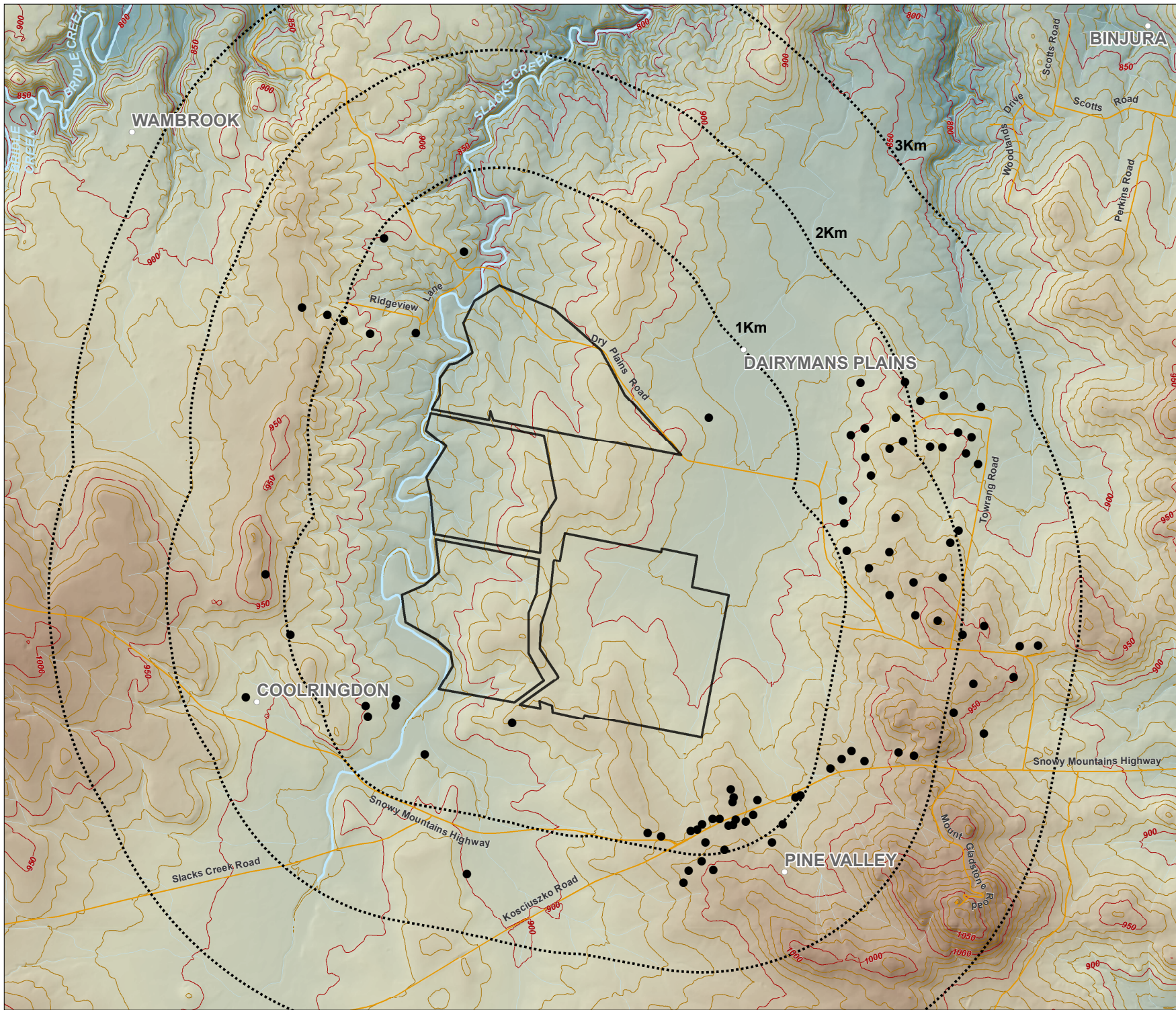
A landscape strategy would be prepared identifying the location of vegetation to further reduce the visibility of the project. This is likely to include strategies including the provision of vegetation within the southern area of the proposed development footprint to further filter and screen views from the Snowy Mountains Highway, the establishment of vegetation along the ridgeline, and vegetation to screen the substation from surrounding residences and Dry Plains Road.

### ***Summary of visual potential impacts***

The proposal site is not identified as a scenic protection area and is outside the 400-metre scenic protection buffer identified for the Snowy Mountains Highway in the LEP. There would be a small number of residences within one kilometre of the proposed development footprint and these properties are in areas identified as having a low potential visibility, i.e. they would only see a small area of the project if at all. The potential visibility of the project in these areas could be reasonably managed through the strategic location of buffer vegetation. There would be only one potential sensitive receptor within 500 metres of the proposed development footprint. (Refer **Figure E**)

A detailed landscape character, visual and glare impact assessment would be undertaken for the Environmental Impact Statement. This would include the assessment of important views and vistas including from the Snowy Mountains Highway, Mt Gladstone and the Cooma Golf Course. Views from groups of private properties, including private residences within one kilometre of the proposed development footprint and others where a potential visual impact is identified would be assessed. A glare assessment would be undertaken for potentially affected residential receptors, the Highway and local roads within one kilometre of the proposed development footprint.

The results of this visual and glare assessment would inform further refinement of the development footprint, the location of built elements within the site to address identified potential visual impacts. A landscape strategy identifying areas of vegetation would be prepared to support the landscape character, visual and glare assessment.



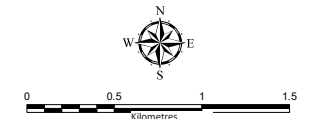
iris

## Monaro Solar Farm Project | Landscape and visual analysis

**Figure A:**  
Topography

- Solar farm investigation area
- Contour (5m)
- Contour (10m)
- Distance from the site
- Potential receiver (non-associated land owner)

**SOURCE:**  
Surface analysis: Derived from BERRIDALE & COOMA, 2kmx2km LAS Point Cloud © Department Finance, Services and Innovation 2011



A3 Scale: 1:30,000

Date: 15th December 2020

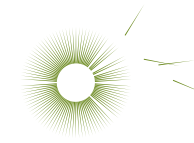
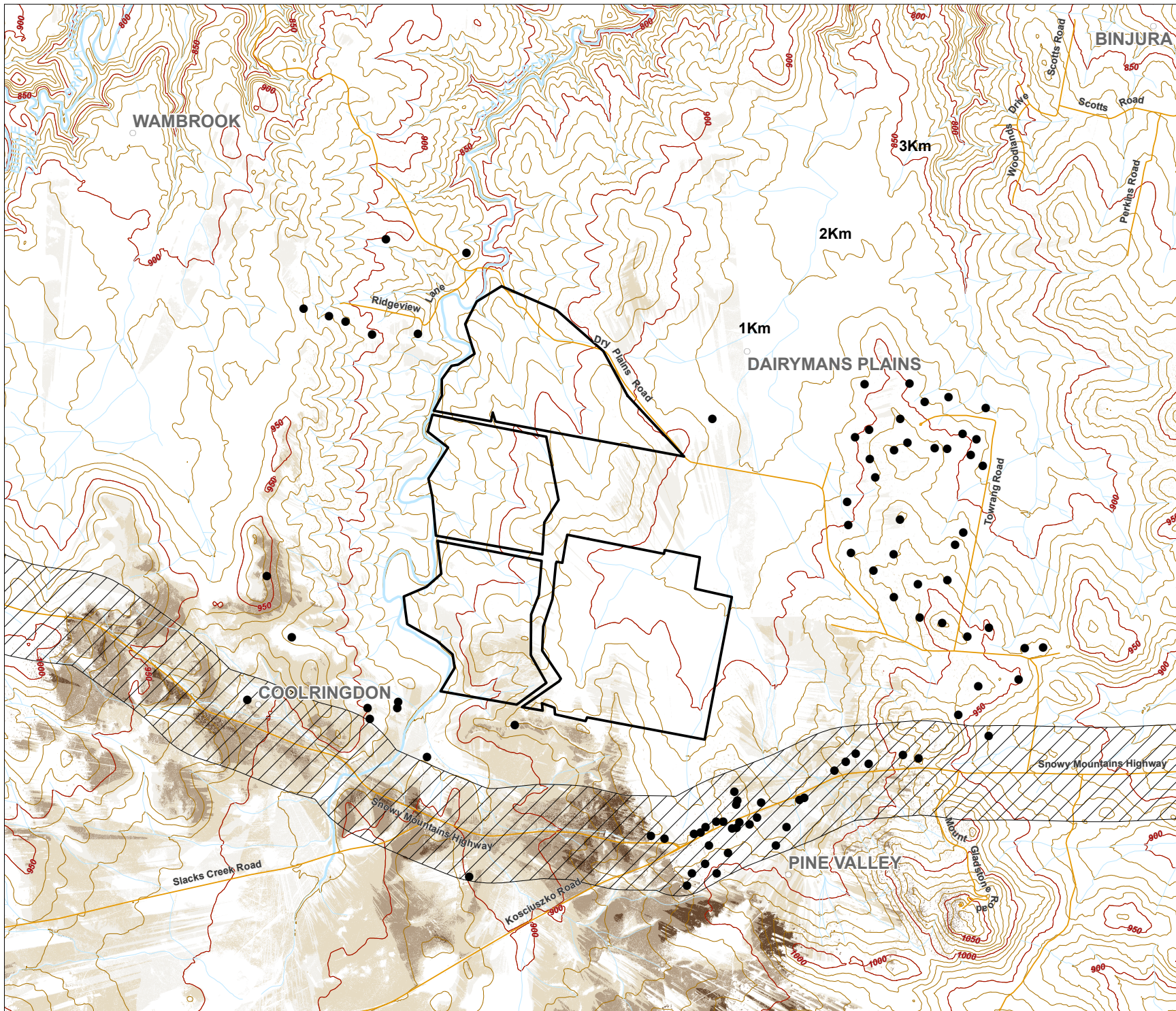
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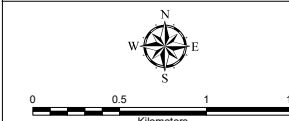
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## Monaro Solar Farm Project | Landscape and visual analysis

**Figure B:**  
Areas visible from  
the Highway

- Solar farm investigation area
  - Scenic buffer (400m)
  - Contour (50m)
  - Contour (10m)
  - Potential receiver (non-associated land owner)
- Visibility**
- Low (visible from a short section of highway)
  - Low- moderate
  - Moderate
  - High (visible from longer section of highway)

**SOURCE:**  
Surface analysis: Derived from BERRIDALE & COOMA, 2kmx2km LAS Point Cloud © Department Finance, Services and Innovation 2011



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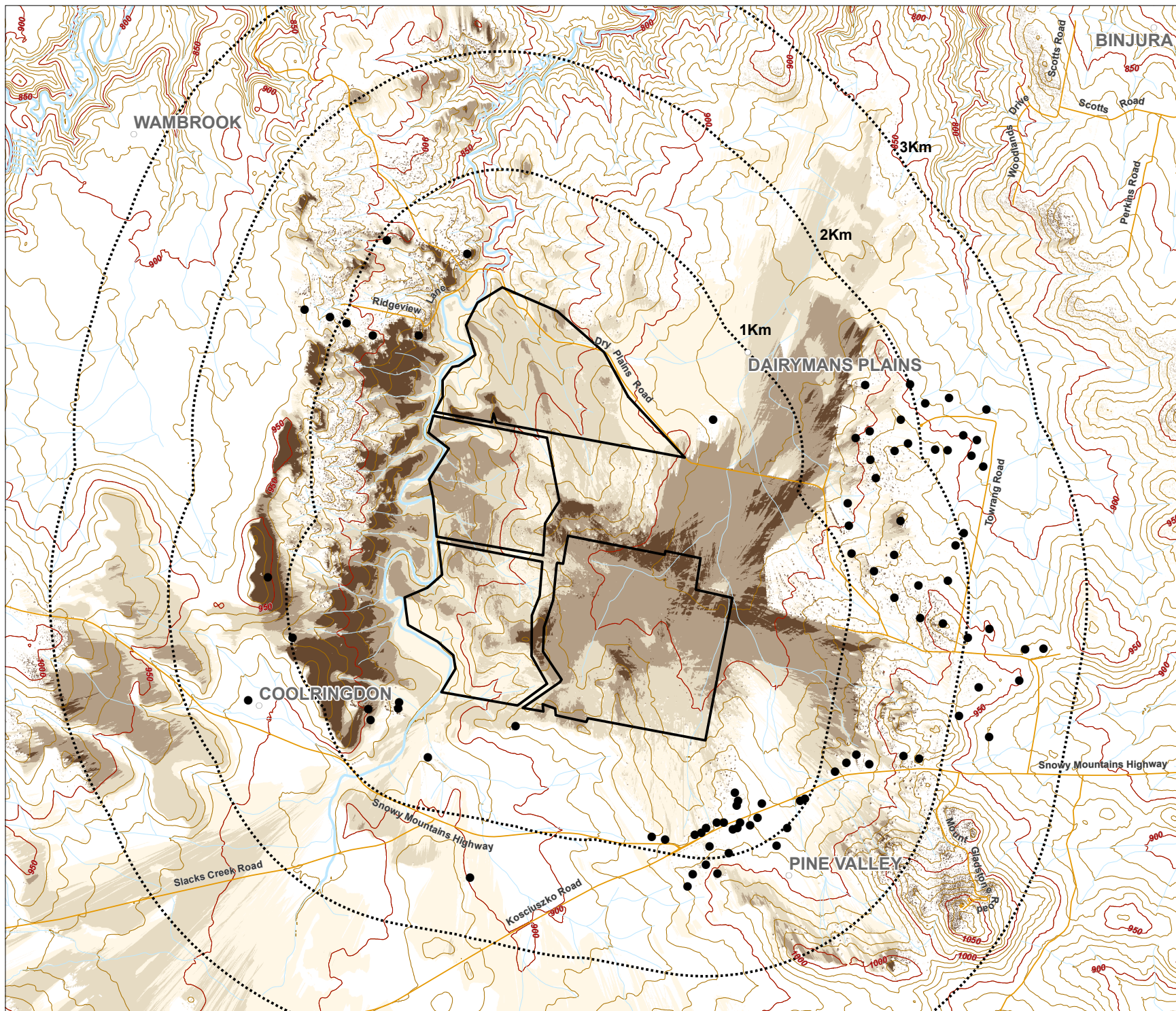
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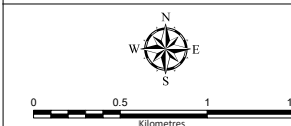
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# **Monaro** **Solar Farm Project |** Landscape and visual analysis

**Figure C:**  
 Visual catchment of  
 the site

- Solar farm investigation area
- Contour (50m)
- Contour (10m)
- Distance from the site
- Potential receiver (non-associated land owner)
- Visibility**
- Low (1-8% visible)
- Low-moderate (8-25%)
- Moderate (25-40%)
- High (40% or more visible)

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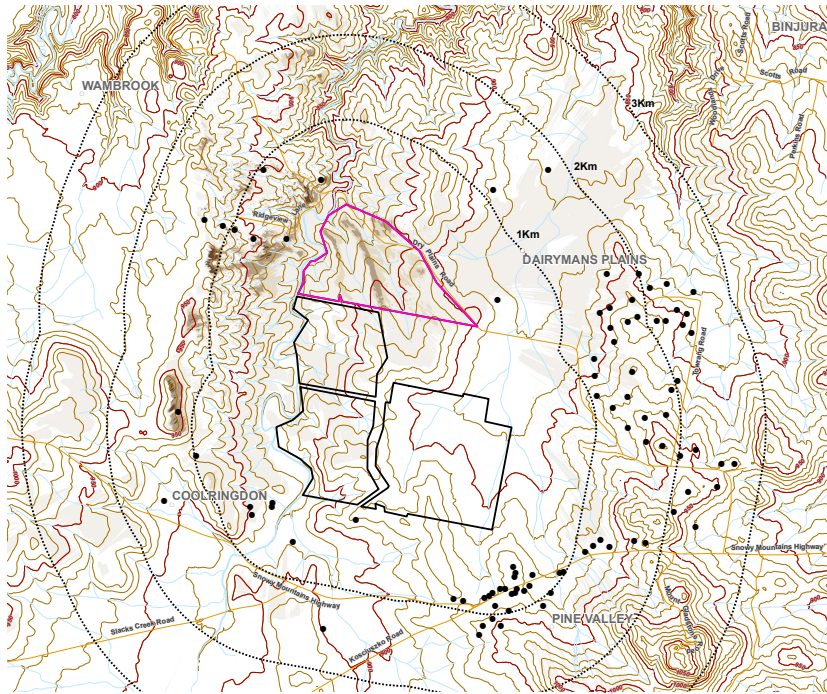
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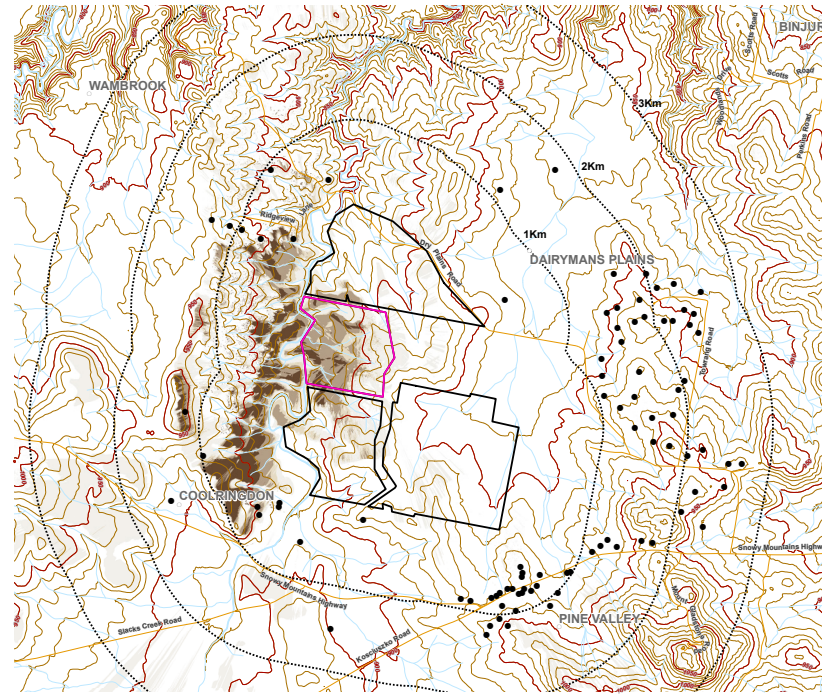
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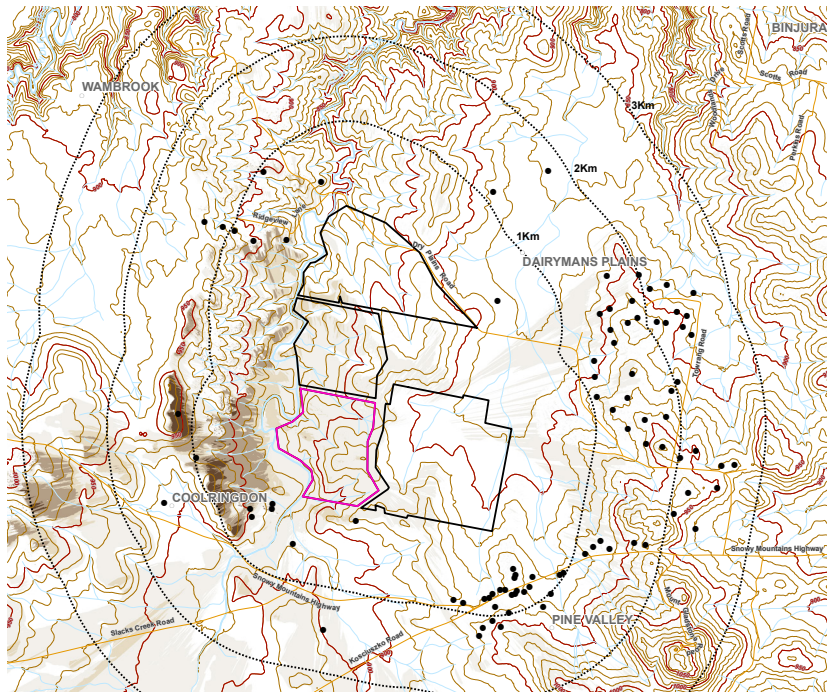




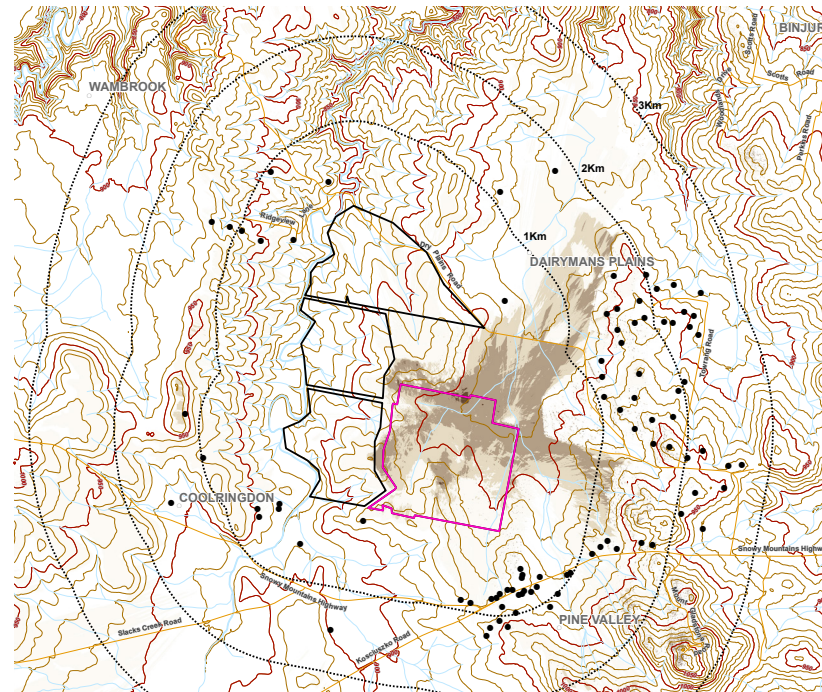
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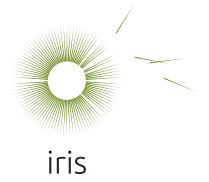
Area 2



Area 3

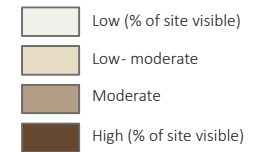


Area 4

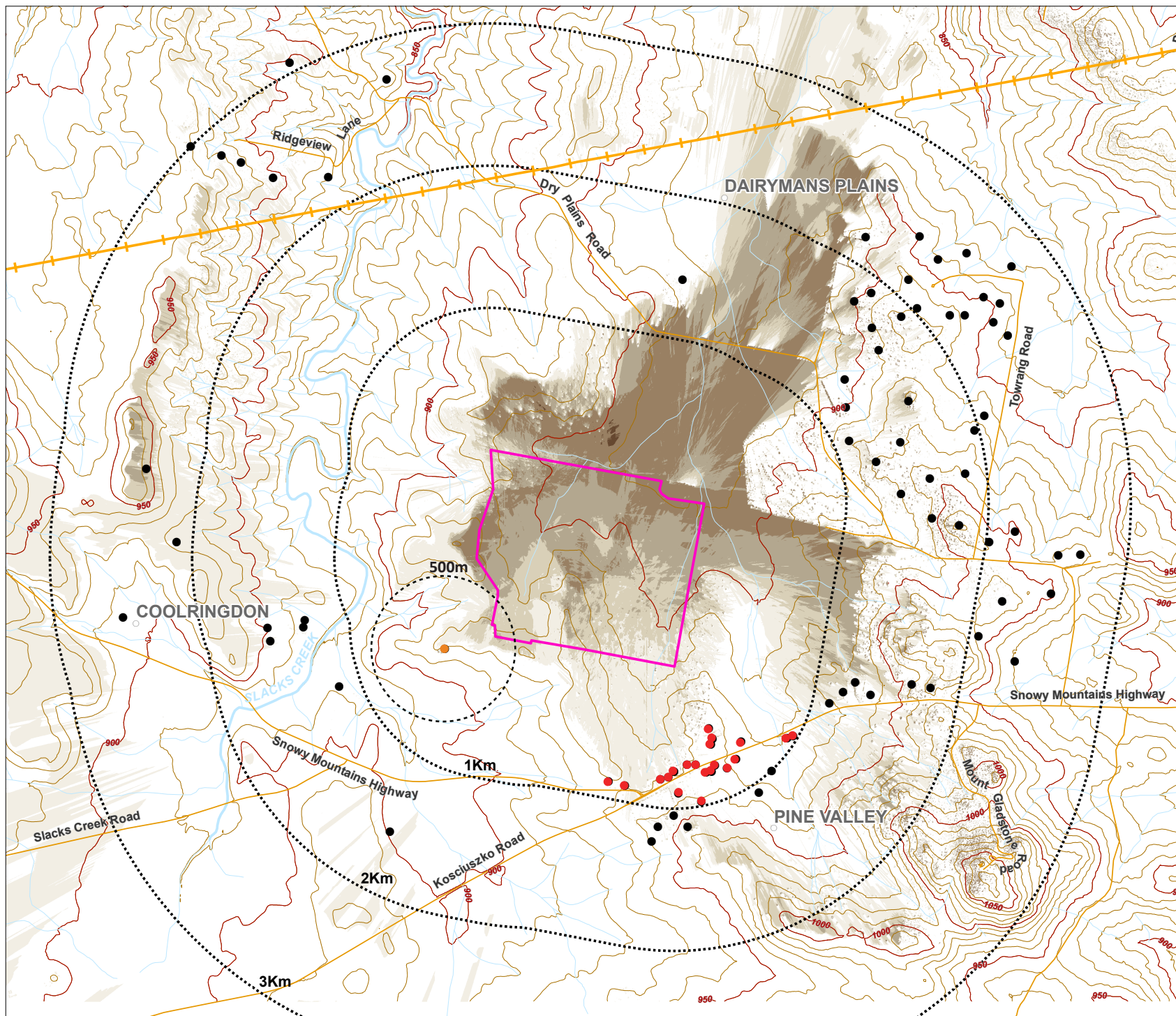


## Monaro Solar Farm Project | Landscape and visual analysis

**Figure D:**  
Visual catchment  
by site area







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## Solar Farm Project

**Figure E:**  
Visual catchment  
with receiver  
setbacks

- Receiver (non-associated land owner) within 1km
- Receiver (non-associated land owner) within 500m

Proposed development footprint

Overhead powerline

Contour (50m)

Contour (10m)

Distance from the site

Potential receiver (non-associated land owner)

### Visibility

Low (1-20% of site visible)

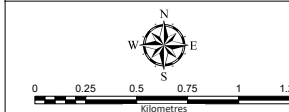
Low-moderate (20-40%)

Moderate (40-60%)

Moderate-high (60-80%)

High (80%+ of site visible)

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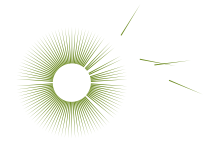
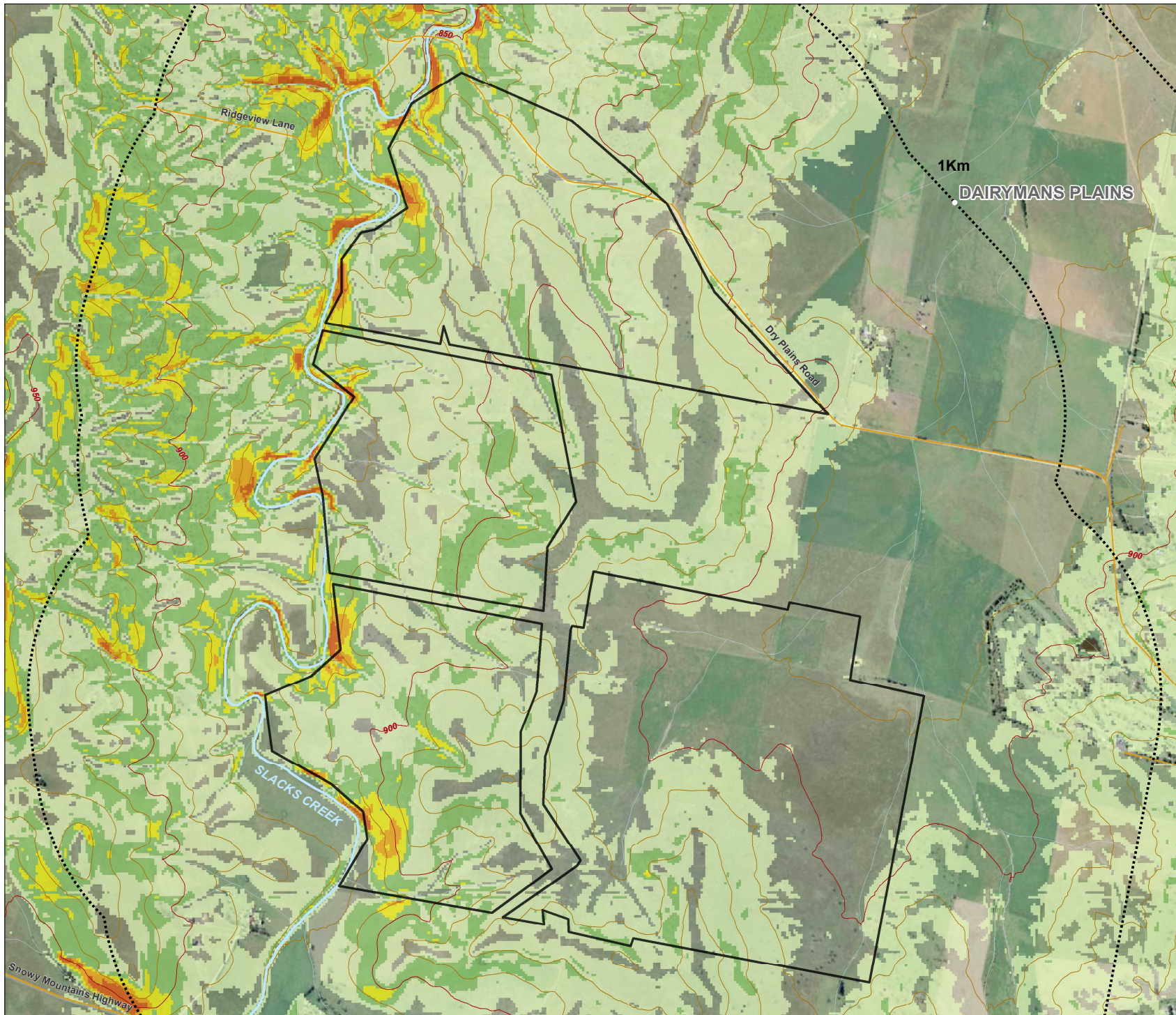
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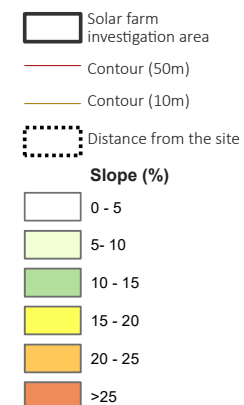


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Landscape and visual  
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**Figure F:**  
Slope analysis



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0 0.25 0.5 0.75  
Kilometres

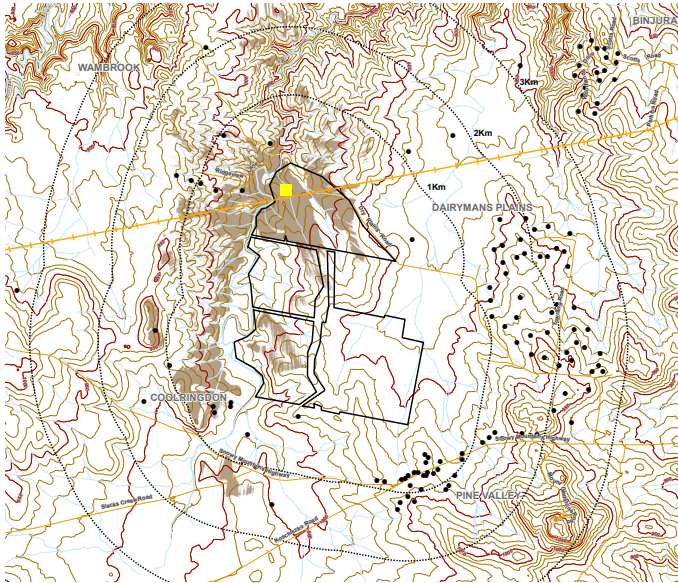
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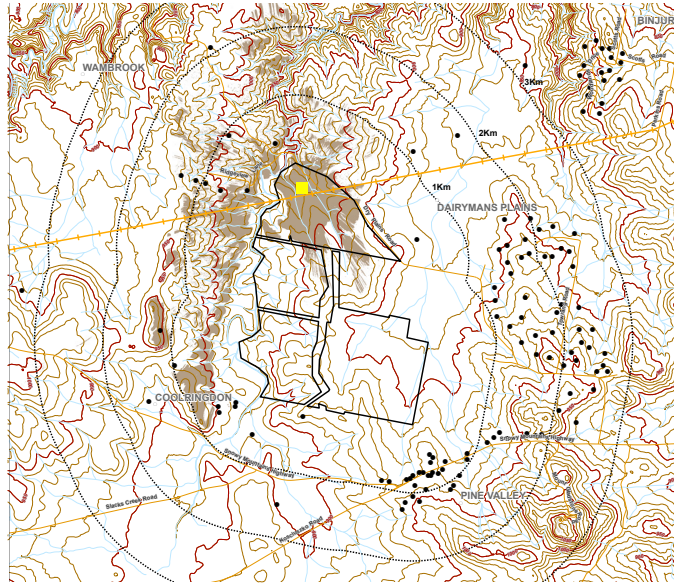
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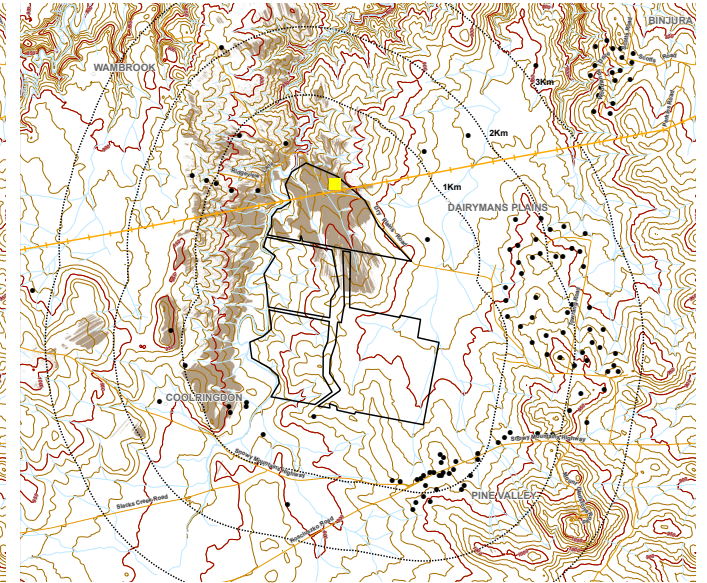




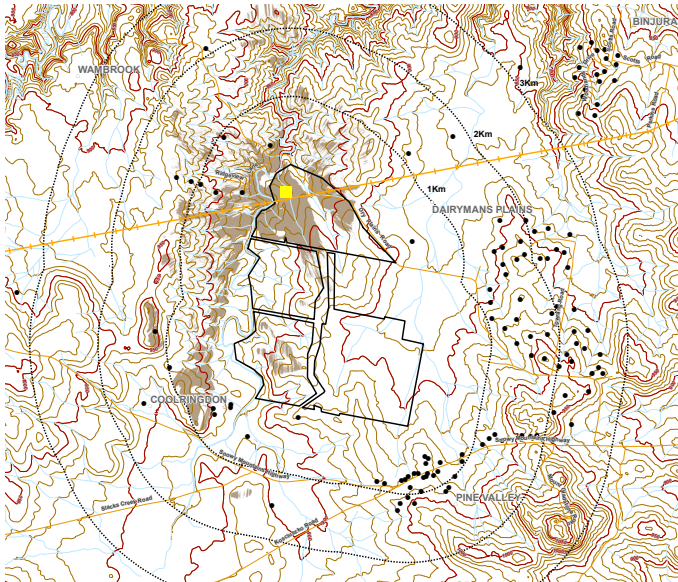
Location option 1- 3ha area modelled at height of 5m



Location option 2- 3ha area modelled at height of 5m



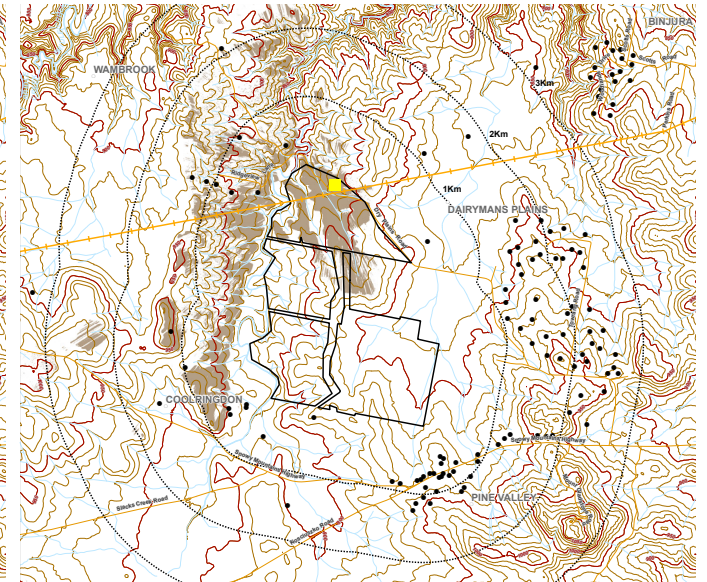
Location option 3- 3ha area modelled at height of 5m



Location option 1- 3ha area modelled at height of 2m



Location option 2- 3ha area modelled at height of 2m

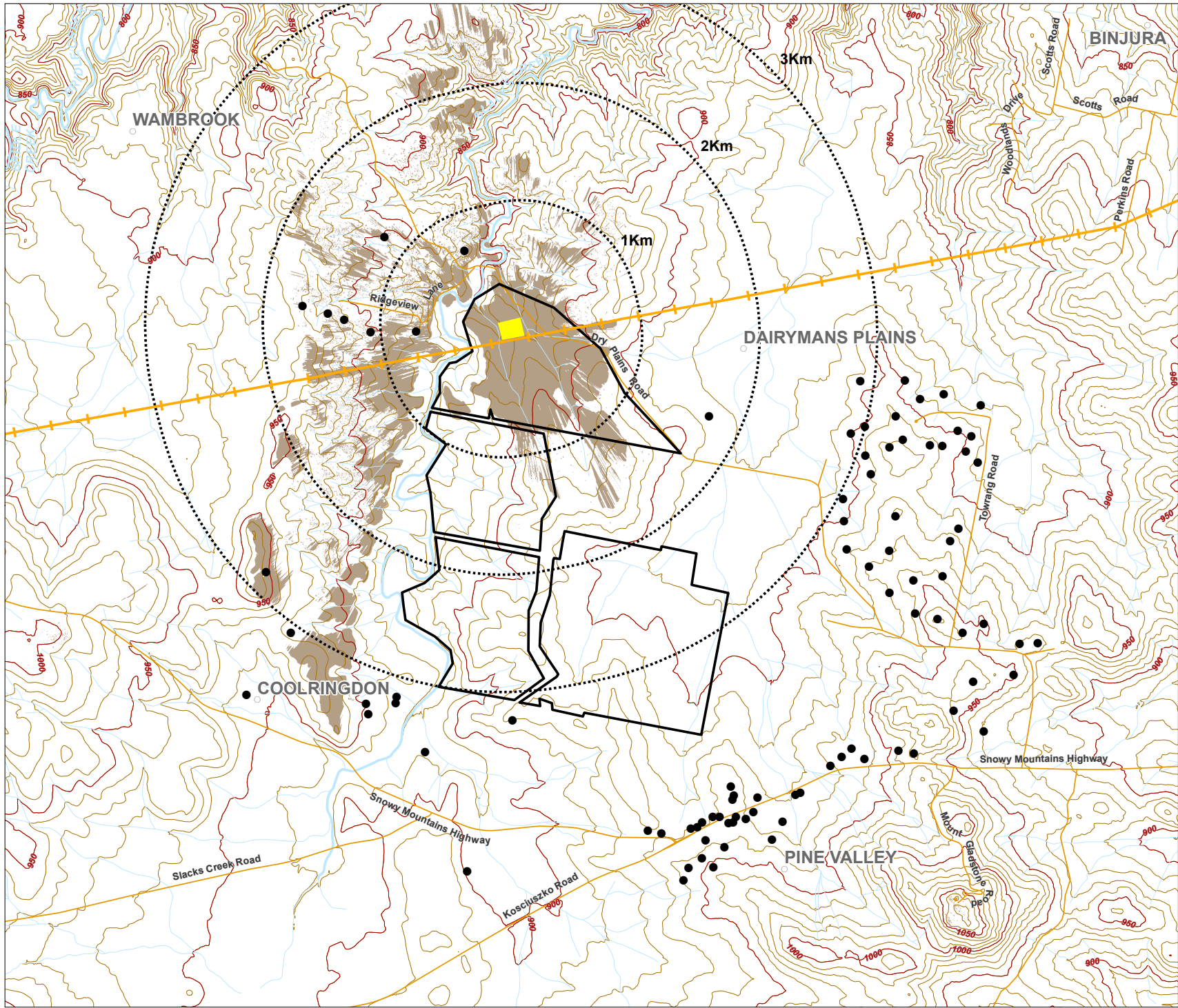


Location option 3- 3ha area modelled at height of 2m

Key

- Potential substation location
- Existing powerline
- Visual catchment













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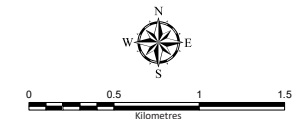
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**Figure H:**  
Visual catchment  
substation location  
Option 3a

-  Potential substation location  
(assume 3ha x 5m tall)
-  Overhead powerline
-  Contour (50m)
-  Contour (10m)
-  Distance from site
-  Potential receiver (non-  
associated land owner)
-  Solar farm investigation area
-  Visual catchment

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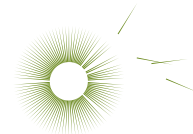
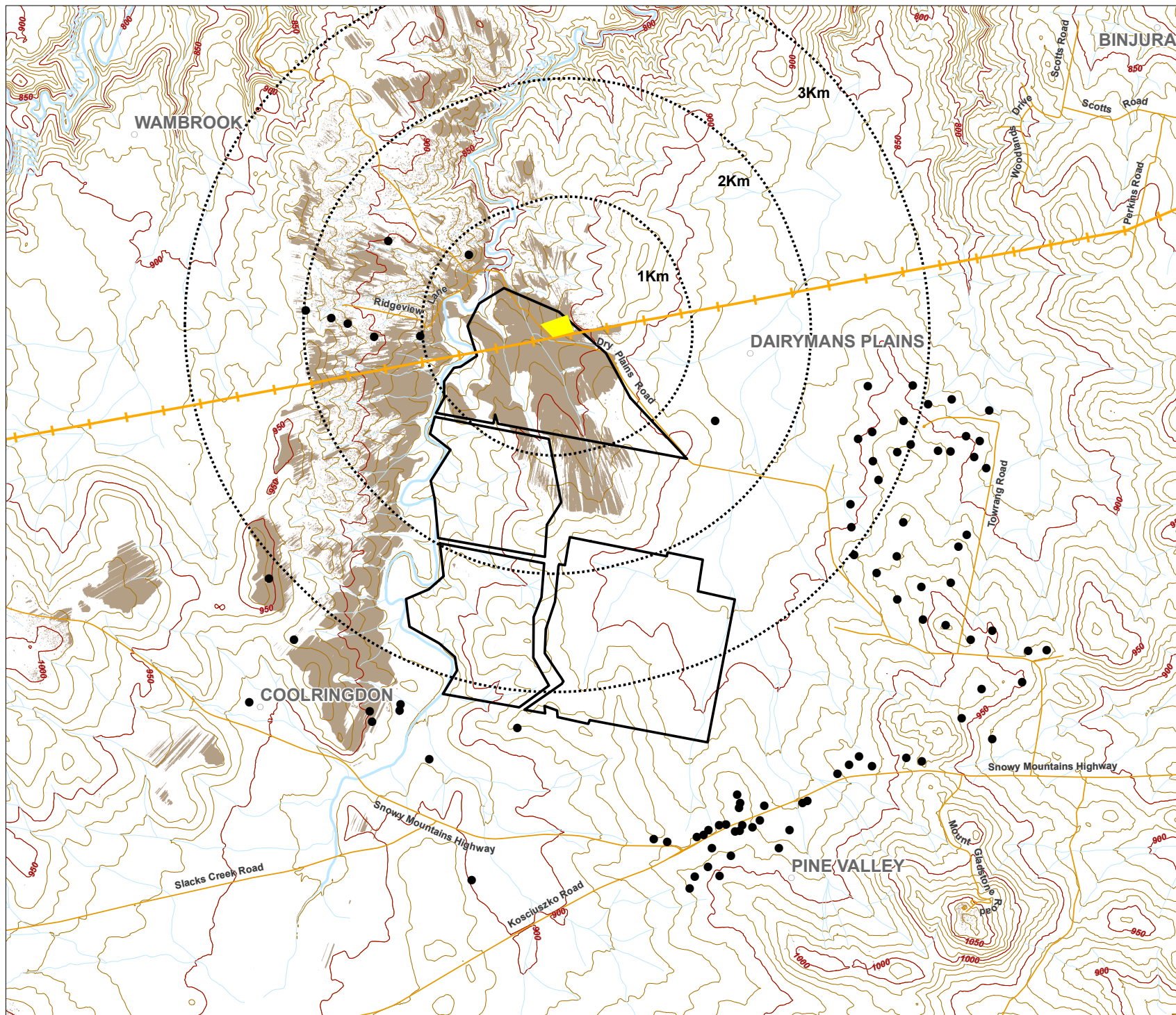
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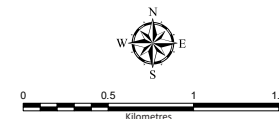
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**Figure I:**  
 Visual catchment  
 substation location  
 Option 3b

- Potential substation location  
(assume 3ha x 5m tall)
- Overhead powerline
- Contour (50m)
- Contour (10m)
- Distance from the site
- Potential receiver (non-associated land owner)
- Solar farm investigation area
- Visual catchment

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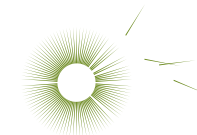
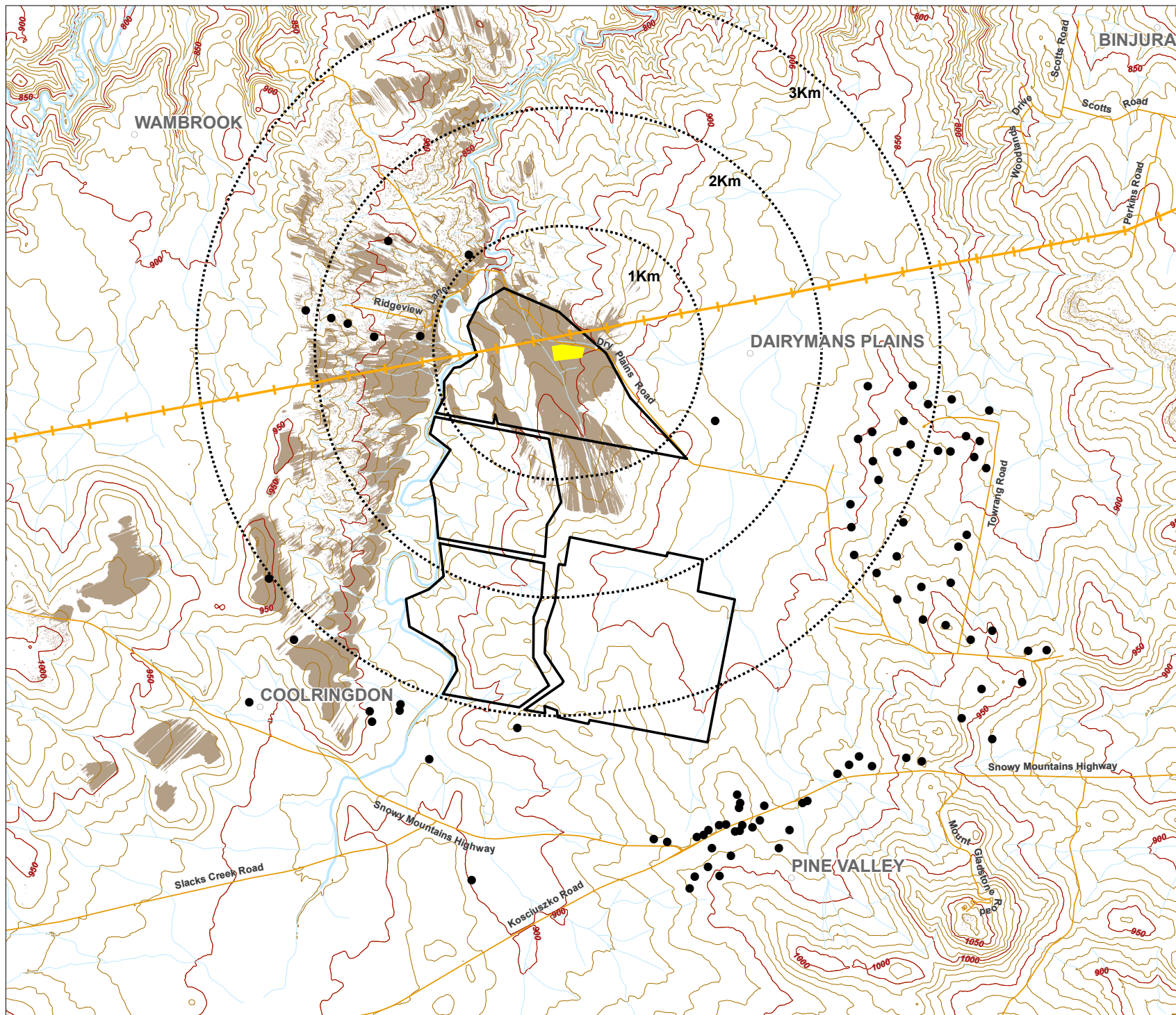
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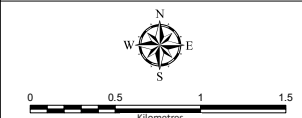
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 Landscape and visual  
 analysis

**Figure J:**  
 Visual catchment  
 substation location  
 Option 3c

- Potential substation location  
(assume 3ha x 5m tall)
- Overhead powerline
- Contour (50m)
- Contour (10m)
- Distance from site
- Potential receiver (non-  
associated land owner)
- Solar farm investigation area
- Visual catchment

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