

Glint and Glare Assessment

West Mokoan Solar Farm

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Glint and Glare Assessment

West Mokoan Solar Farm

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1.0 Introduction

1.1 Background

AECOM Australia Pty Ltd (AECOM) has been commissioned by South Energy on behalf of 892 Yarrowonga Development Pty Ltd (the Client) to provide supporting information for a planning permit application which relates to the proposed development of a photovoltaic solar farm on part of the land at the following addresses:

- 892 Yarrowonga Road, Goorambat,
- Benalla-Yarrowonga Road, Benalla,
- 616 Benalla-Yarrowonga Road, Benalla.

The proposed development would be called the West Mokoan Solar Farm (the Project) developed by South Energy through the project entity (the Client).

As part of the planning permit application a Glint and Glare assessment must be undertaken to determine the likely impact of glint and glare from the proposed development on nearby sensitive receptors and identify appropriate, feasible and reasonable mitigation strategies if required.

The objectives of this study are as follows:

- Conduct a glare potential analysis of the proposed West Mokoan Solar Farm based on a single axis tracking system;
- Identify potential glare impacts at nominated observation points, routes and flight paths near the Project, and;
- Recommend improvements or mitigation options available to the Client to reduce glare issues that may impact the public.

This report details the key inputs, methodology and the results of this glare assessment.

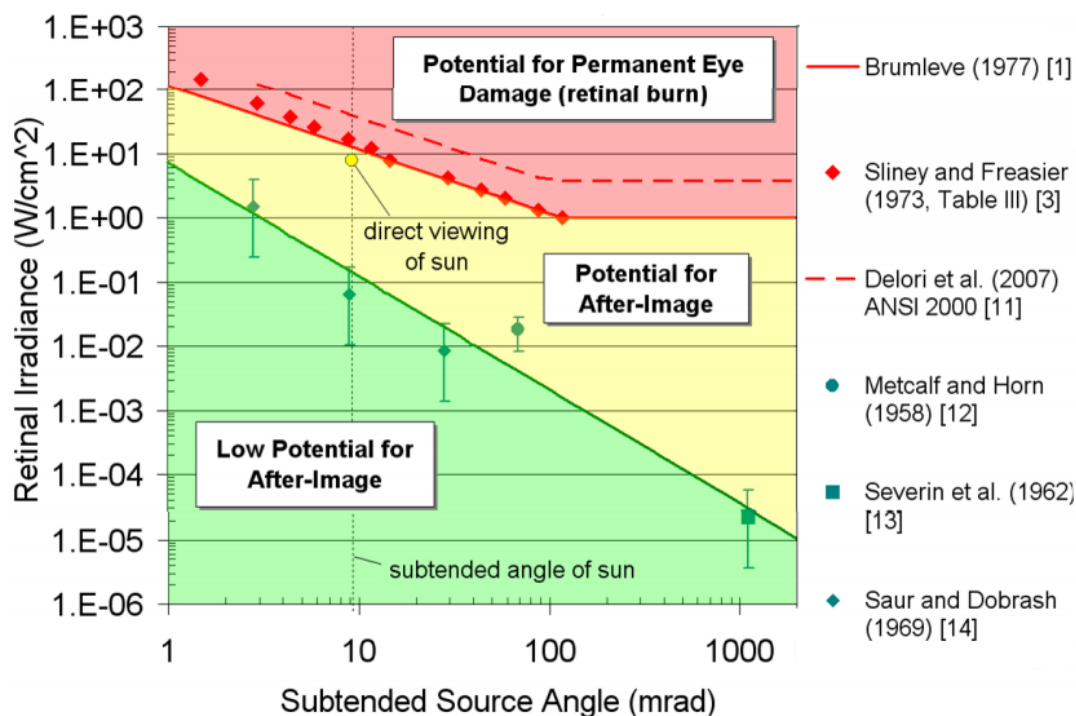
1.2 Glint and glare from solar panels

Glint and glare (referred to collectively in this report as glare) are caused by a significant contrast between a light source and background illuminance. Glare occurs over a continuous period while glint is a brief flash of light. Glint and glare can be hazardous when they affect critical operations like aviation. Aside from causing discomfort to the viewer, glare can be a source of distraction and can leave after-images in the viewer's vision.

The visual or ocular impact caused by glare is a function of the intensity of the glare source upon the retina (retinal irradiance) and the portion of a viewer's field of vision that the glare occupies (subtended source angle). This function is described in the glare hazard plot (Figure 1) which plots the risk of looking directly at the sun as a comparison.

In instances where glare is detected by the software, results of the assessment are shown graphically in the same manner.

Figure 1 Glare hazard plot illustrating ocular impact as a function of retinal irradiance and subtended source angle¹



1.3 Civil Aviation Safety Authority requirements

The Civil Aviation Safety Regulations require that air traffic control towers are protected from glare. Through consultation with Air Services Australia (ASA) and the Civil Aviation Safety Authority (CASA), AECOM has been advised that there are no rules or regulations guiding the assessment of such glare. CASA therefore recommends that proponents of solar PV systems within or near airports follow the guidelines issued by the US Federal Aviation Administration (FAA) when making their assessments.

The FAA recommends that any proposed solar farms that are below the direct approach paths to an airport (aligned with a runway) and within a distance of around 5 nautical miles (approximately 10km) from a runway end should be referred for a specific assessment by the relevant authorities.

The FAA requires the use of Solar Glare Hazard Assessment Tool (SGHAT, currently marketed as GlareGauge) to demonstrate the impact of glare caused by PV systems proposed for installation on airports in the US². CASA would typically not object to a solar farm if the glare analysis indicates that air traffic control (ATC) towers experience no glare and runway approaches experience at most “low potential for after-image” glare.

The nearest airstrip to West Mokoan Solar Farm is the Gliding Club of Victoria, which is located approximately 10km to the south west. Due to the proximity to this airstrip, it is necessary to assess the impact of glare on aircraft flight approach. The airstrip does not appear to have any air traffic control towers.

¹ Ho, C.K., Sims, C.A., Yellowhair, J., Bush, E. (2014), *Solar Glare Hazard Analysis Tool (SGHAT) Technical Reference Manual*, Sandia National Laboratories and US Department of Energy.

² *Technical Guidance for Evaluating Selected Solar Technologies on Airports*, 2010, Federal Aviation Administration

2.0 Site Overview

2.1 West Mokoan Solar Farm

The Site is located at Benalla, approximately 200km north east of Melbourne's CBD. The solar farm is currently in the early development stage with a concept design capacity of 236MW_{DC}/194MW_{AC}.

The Site lies approximately 10km north east of the Benalla town centre and is generally bound by Benalla-Yarrowonga Road on the western perimeter, Farnley Road on the northern perimeter, and Boundary Road on the eastern perimeter. Stockyard Creek and Lake Mokoan Road intersect the Site, creating a split between the northern and southern sections of the Site. The Site has a combined area of approximately 458 hectares, comprising of numerous large paddocks with several farm dwellings. The proposed development area and landscape plan is shown in Figure 2. Flood modelling conducted for the Site indicates that flood depths are significant at some locations within the southern parcel. Solar modules and other equipment in these areas, indicated in red in Figure 2, are to be elevated to maintain the appropriate clearance above flood levels.

Coordinates of the proposed solar farm development area are provided in the GlareGauge Report attached in Appendix A.

Dense screening, intermittent screening and infill planting is to be used along boundaries of the array to reduce sight of array and block glare from surrounding receptors. The landscape concept plan showing the planting zones for the northern array and southern array are shown in Figure 3 and Figure 4, respectively.

Figure 2 West Mokoan Solar Farm development area

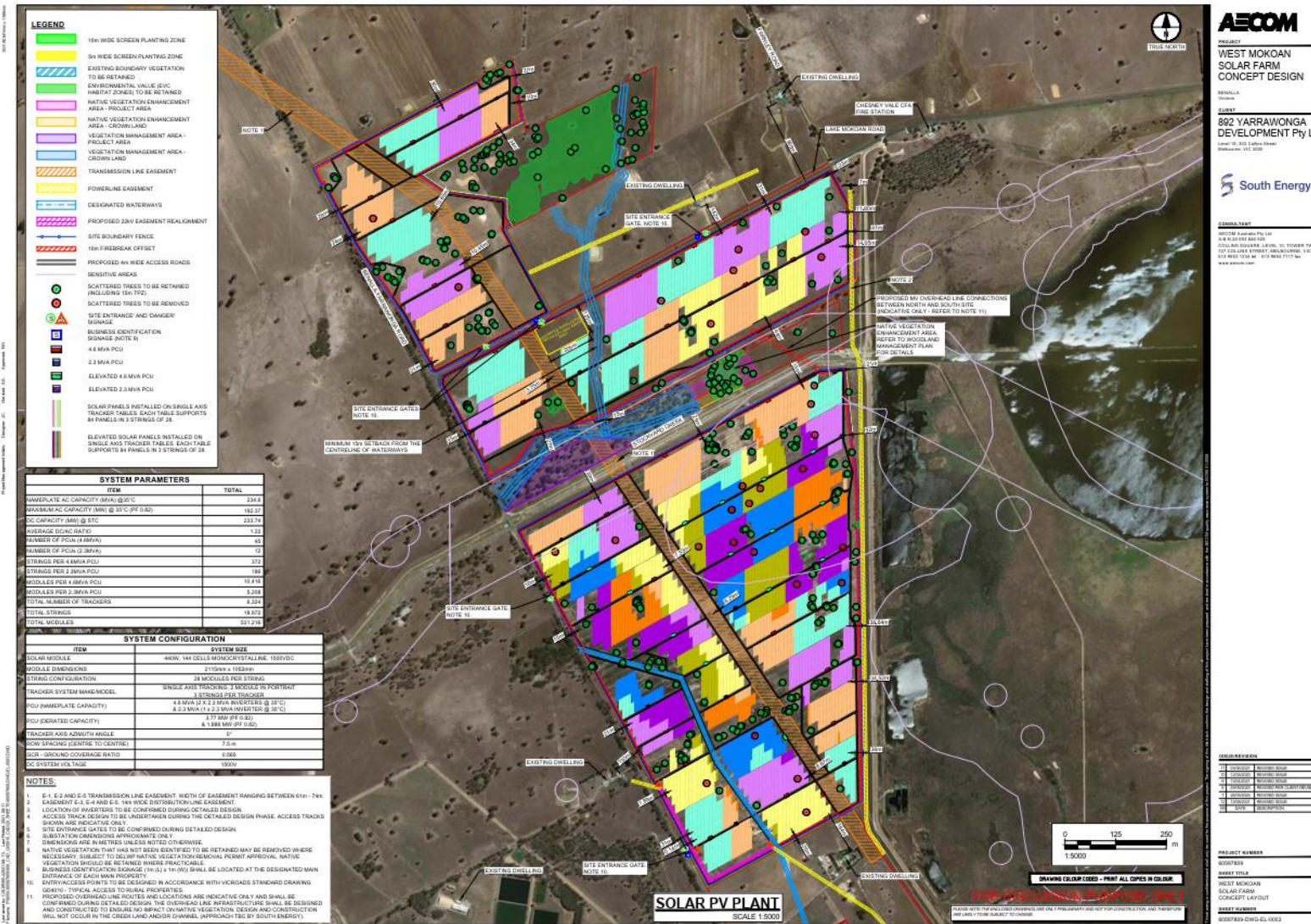


Figure 3 Northern Array Landscape Concept Plan

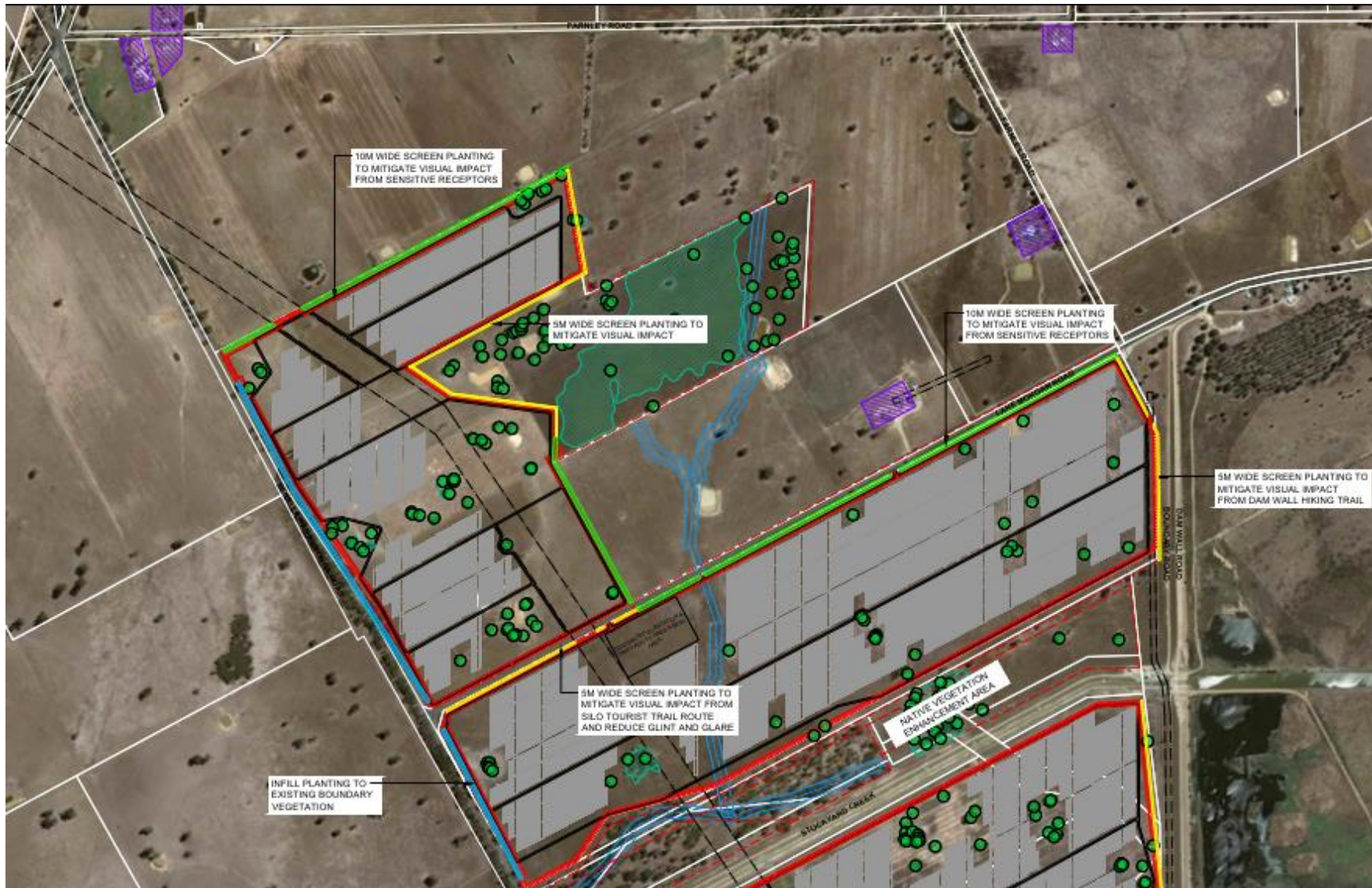
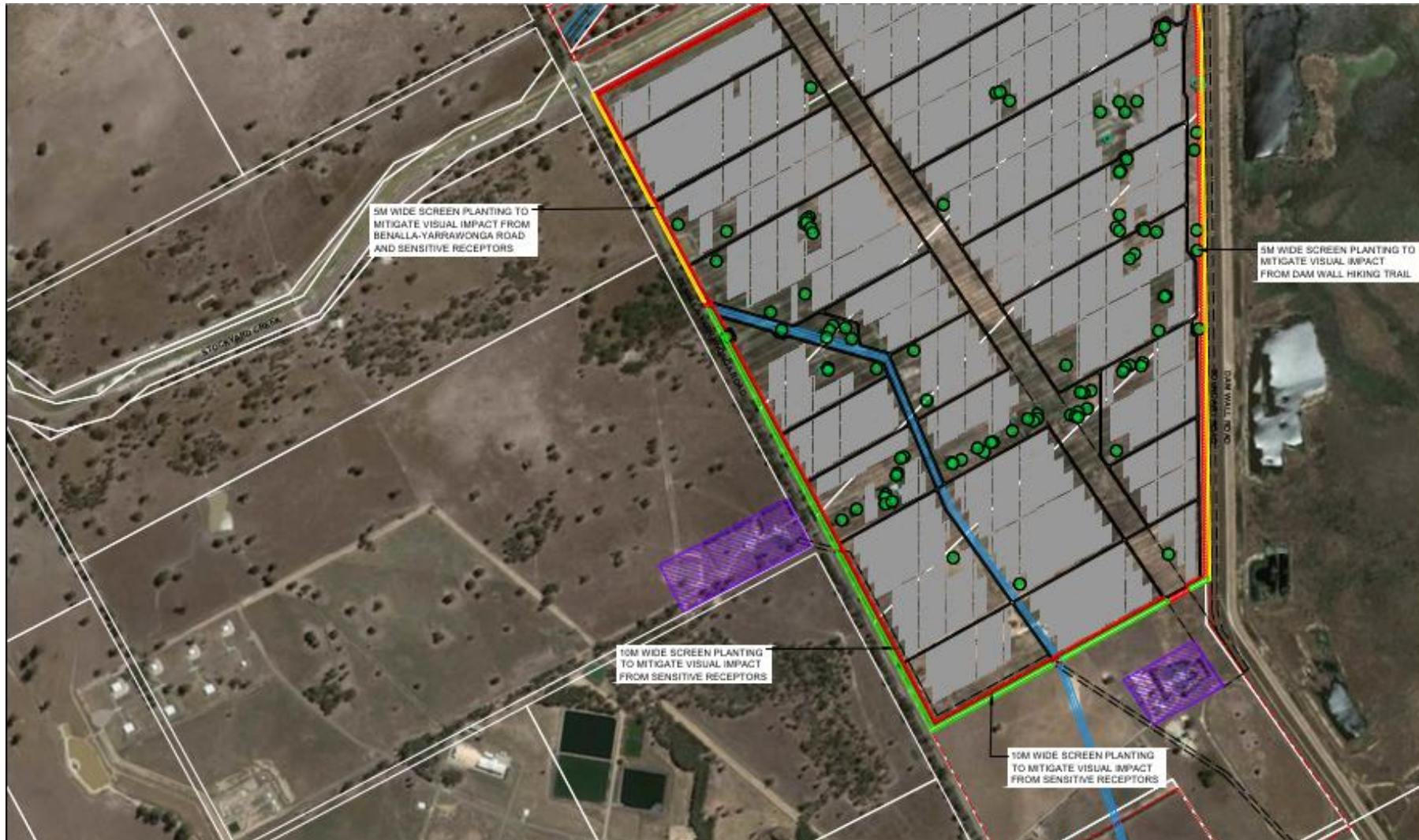


Figure 4 Southern Array Landscape Concept Plan



3.0 Glare Analysis Software

3.1 Overview

AECOM has used the GlareGauge software (release 2021A) marketed by ForgeSolar to undertake this glare analysis. GlareGauge's algorithms were developed by Sandia National Laboratories in its Solar Glare Hazard Analysis Tool (SGHAT). Release 2021A improves upon the reliability, consistency, and speed of prior software versions that were used in previous revisions of this report.

GlareGauge employs an interactive Google Maps interface whereby the outline of the solar array can be manually drafted. It simulates an annual sun path based on the chosen location to calculate sun positions and vectors. GlareGauge requires a number of inputs regarding the characteristics of the solar PV systems including panel orientation, tracking type, slope and height above ground.

Glare hazard is determined based on the retinal irradiance and subtended angle described in Section 1.2. Glare hazards are defined according to the potential of the glare to impact vision as defined in Table 1.

Table 1 Glare impact definitions

Colour Coding	Glare Impact Category	Definition
Not shown on glare hazard plot	No Glare Predicted	Indicates that no glare is expected at the observation points for the Site configuration.
		This category is not shown on the glare hazard plot.
Not shown on glare hazard plot	Glare beyond 50 degrees from pilot line-of-Site on approach	Indicates that glare is present but would not cause a safety hazard to pilots according to recent research and flight simulator testing.
		This category is not shown on the glare hazard plot.
Green	Low potential for after image	Indicates there is glare present however only a low potential for a temporary after-image (a lingering image of the glare in the field of view).
		This category is shown green on the glare hazard plot.
Yellow	Potential for after image	Indicates that there is glare present with the potential to leave a temporary after-image of the glare.
		This hazard is shown yellow on the glare hazard plot.
Red	Potential for permanent eye damage	Indicates that there is glare present with the potential for permanent eye damage if observed.
		This hazard is shown red on the glare hazard plot.

3.2 Assumptions

Glare hazard is difficult to define and is not the same for every person. It is dependent on a number of factors including reflectance parameters (light intensity, angle of reflectance etc.), the size of the glare source and the observer's distance from it, and ocular/eye parameters (pupil diameter, distance from the pupil to the retina, etc). Therefore, the following standard assumptions (default values within GlareGauge) have been made through the course of the analysis:

- The model assumes flat reflective surfaces and that light reflected by the solar panels is specular (i.e. the angle of incidence = the angle of reflection).
- The average subtended angle of the sun as viewed from earth is ~9.3 mrad or 0.5°.

- The ocular transmission coefficient accounts for radiation that is absorbed in the eye before reaching the retina. A value of 0.5 is typical³.
- Diameter of the pupil – the size impacts the amount of light entering the eye and reaching the retina. The typical value is 0.002m for daylight-adjusted eyes
- Eye focal length: This value is used to determine the projected image size on the retina for a given subtended angle of the glare source. A typical value of 0.017 m is used
- Flight path modelling assumptions:
 - Glide slope: This value represents the angle at which aircrafts approach the runway and is taken to be 3°
 - Threshold crossing height: The height above ground of the aircraft as it crosses the threshold point, which is defined as the end of the runway at which the aircraft makes its descent. This is assumed to be 15.24m
- The entire PV array area is assumed to be used by the Client for the duration of the project, thus observation points located within the array area were not considered in the modelling

3.3 Limitations

GlareGauge has the following limitations:

- The detailed geometry of the solar panel arrays is not rigorously represented, e.g. gaps between panels, detailed variations in height of the array and support structures.
- Obstacles (e.g. trees, vegetation buffers, structures or earth) between the observation points and the solar panel arrays that may obstruct observed glare are not considered. This results in a more conservative assessment.
- Directional viewpoints from each observation point are not defined. The impact of each solar panel array on each observation point is calculated. In specific circumstances, this may lead to an overestimation of the extent of glare at a particular observation point.
- A year-round typical clear-day solar irradiance profile (worst-case for glare) is used. The model profile has a lower irradiance level in the mornings and evenings and a maximum at solar noon. Actual irradiance levels and profile on any given day can be affected by cloud cover and other environmental factors, however this is not considered in this model.
- ForgeSolar utilises a simplified model of backtracking. Single axis trackers track the movement of the sun as it moves east to west throughout the day. Yield is maximised, and light reflection is minimised when panels are directly normal to the sun. During times of day when the sun is outside the tracking range, it is assumed that panels instantaneously revert to a pre-determined resting angle which is defined as 0° (panels assumed to lie flat). This results in a more conservative simulation of glare from the backtracking mechanism and would result in higher incidences of glare during sunset and sunrise, when the sun is at a lower angle relative to the array.
- The modelling does not model the glare impact on all possible flight paths. Instead, a two-mile (3.22 km) flight path beginning at the take-off/landing point is considered.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare analysis methodology used by GlareGauge is continually being updated. Version 2021A has improved the OP and path analysis methods which have improved the reliability, consistency of prior methods. As a result, models of the same system run on older version of GlareGauge show different results which are superseded by the updated methodologies.

³ Solar Glare Hazard Analysis Tool (SGHAT) User's Manual v. 2H, Clifford K. Ho, Cianan A. Sims, Julius E. Yellowhair Sandia National Laboratories Updated 22/07/2015

4.0 GlareGauge Inputs

The sections below detail the inputs applied by AECOM for analysis in GlareGauge. All azimuth values are relative to true north and all tilt angles relative to horizontal.

4.1 PV system parameters

An overview of the input data used for the modelling of the West Mokoan Solar Farm Site is shown in Table 2. Site specific inputs are detailed in Section 4.2. The boundary of the system is based on the proposed development area shown in Section 2.1 and the varying tracker heights are considered in the modelling. If the development area changes it is recommended that the glare potential be reanalysed.

Table 2 General PV system inputs for GlareGauge

Input Data	Units	Value	Comment
General Project Parameters			
Reflectivity calculations	-	Varies with incident angle	As incident angle increases, the reflectivity increases.
Reflection diffusion	-	Correlated to module surface type	Calculates the spread of the reflected beam according to the glass texturing and ARC.
Time zone	UTC	+10	VIC time zone.
Peak DNI	W/m ²	1,170	AECOM estimate.
Orientation of array	degrees	0	Rows aligned in north-south direction.
Solar panel surface material	-	Smooth glass with Anti-Reflective Coating (ARC)	As per module datasheet.
Time interval	mins	1	Model interval throughout the year.
Mounting Type	-	Single axis tracking	As per tracker datasheet
Single Axis Tracking Parameters			
Tilt of tracking axis	degrees	0	0° = Facing upwards. Panels rotate during operation according to single axis tracking operation.
Orientation of tracking axis	degrees	0	0°= Rows aligned north-south.
Offset angle of panel	degrees	0	Angle between tracking axis and panel.
Tracking Range	degrees	±60° (range of 120°)	
Height of panel above ground	m	2.442	The height measured from the ground to the point of tracking rotation for standard trackers, as provided by the client.
		2.767	The height measured from ground to the point of tracking rotation for elevated trackers, as provided by the client.
Backtracking ⁴	-	Yes	As per tracker datasheet

⁴ Tracking systems are designed to follow the sun across the sky, maximising the total irradiance received. However, when the sun is low in the horizon, pointing the solar panels directly towards the sun results in row-to-row shading, significantly impacting performance. Backtracking is a strategy used to eliminate row to row shading during these times, whereby rather than following the sun, the trackers move back to ensure no shading occurs.

Input Data	Units	Value	Comment
Resting angle	degrees	0°	Panels assumed to revert to an angle of 0° when the sun is outside tracking range

4.2 Observation Point, Route Receptor and Flight Path Locations

AECOM input observation points (OPs) and route receptor (RRs) locations for the Site into GlareGauge. These points were identified as potential areas where glare could impact the residents or drivers within or close to one kilometre of the proposed development. Glare was assessed at each of the observation points and route receptors, assuming the observer was 1.5 m above ground which is assumed to be the typical viewing height whilst standing or driving. The route receptors also assume a view angle of 50 degrees (field of view (FOV) of observer to the left and right in the direction of travel). FAA research suggests glare outside 50-degree FOV has no impact on the receptor⁵.

For the nearby airstrip, flight path (FPs) were input into the GlareGauge software based on the runway location and direction. The modelling of glare impacts on the nearby runways considers a two-mile flight path beginning at the runway approach and extends two miles in the direction of the flight path. The pilot visibility from the cockpit is also considered, and the maximum downward viewing angle from the horizon is 30°. Similar to RRs, a 50° FOV angle is also assumed.

The OPs are shown as red markers in Figure 5. Similarly, nearby roads and railways (termed route receptors, or RRs) are shown as blue lines in Figure 5. The flight paths (FPs) are shown as red lines in Figure 6, with red markers indicating the endpoints. A table of OP, RR and FP coordinates is provided in the GlareGauge Report attached in Appendix A.

⁵ *Evaluation of Glare as a Hazard for General Aviation Pilots on Final Approach* (Report DOT/FAA/AM-15/12). Retrieved from: https://www.faa.gov/data_research/research/med_humanfacs/oamtechreports/2010s/media/201512.pdf

Figure 5 Observation points and route receptors analysed

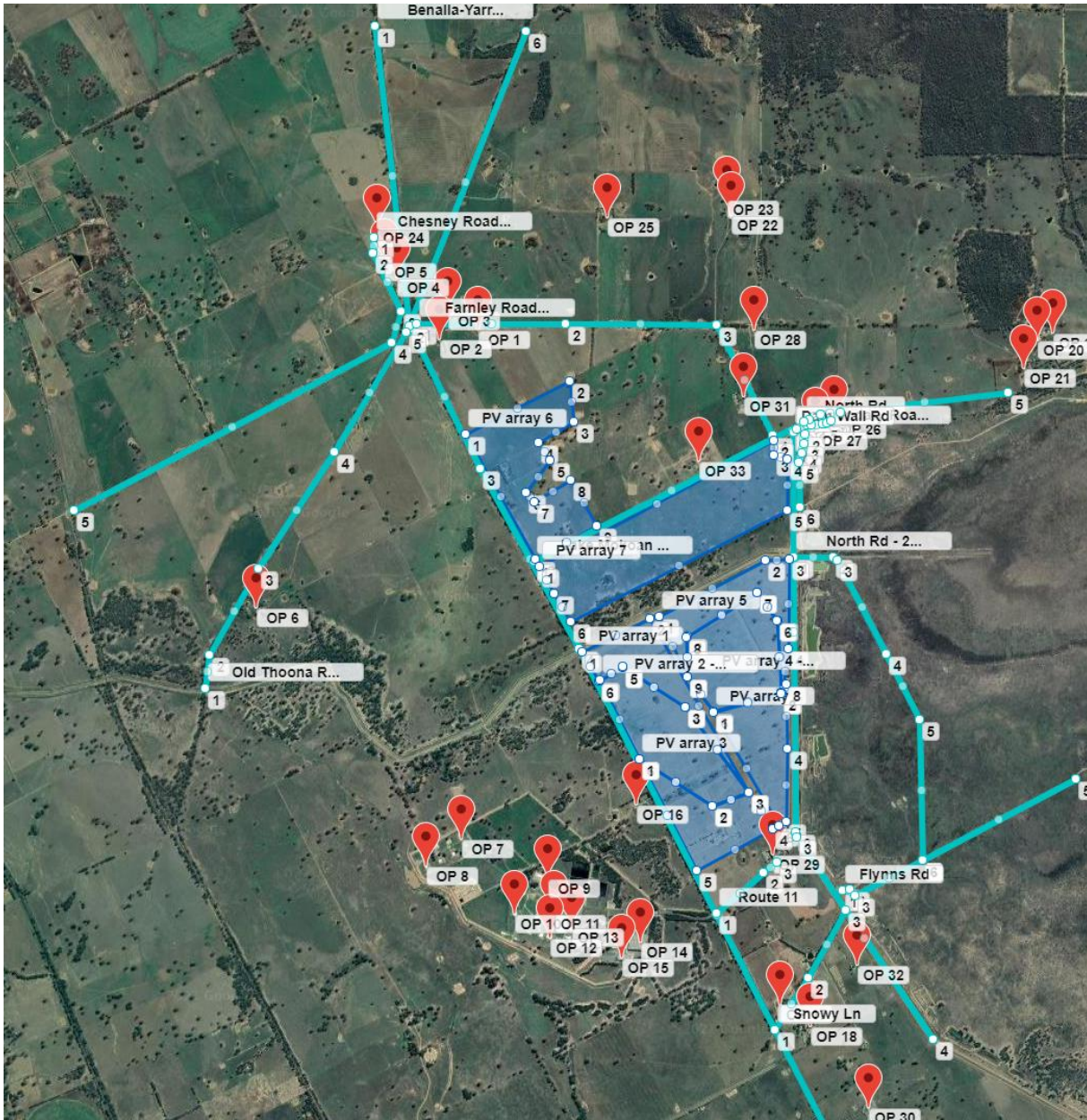
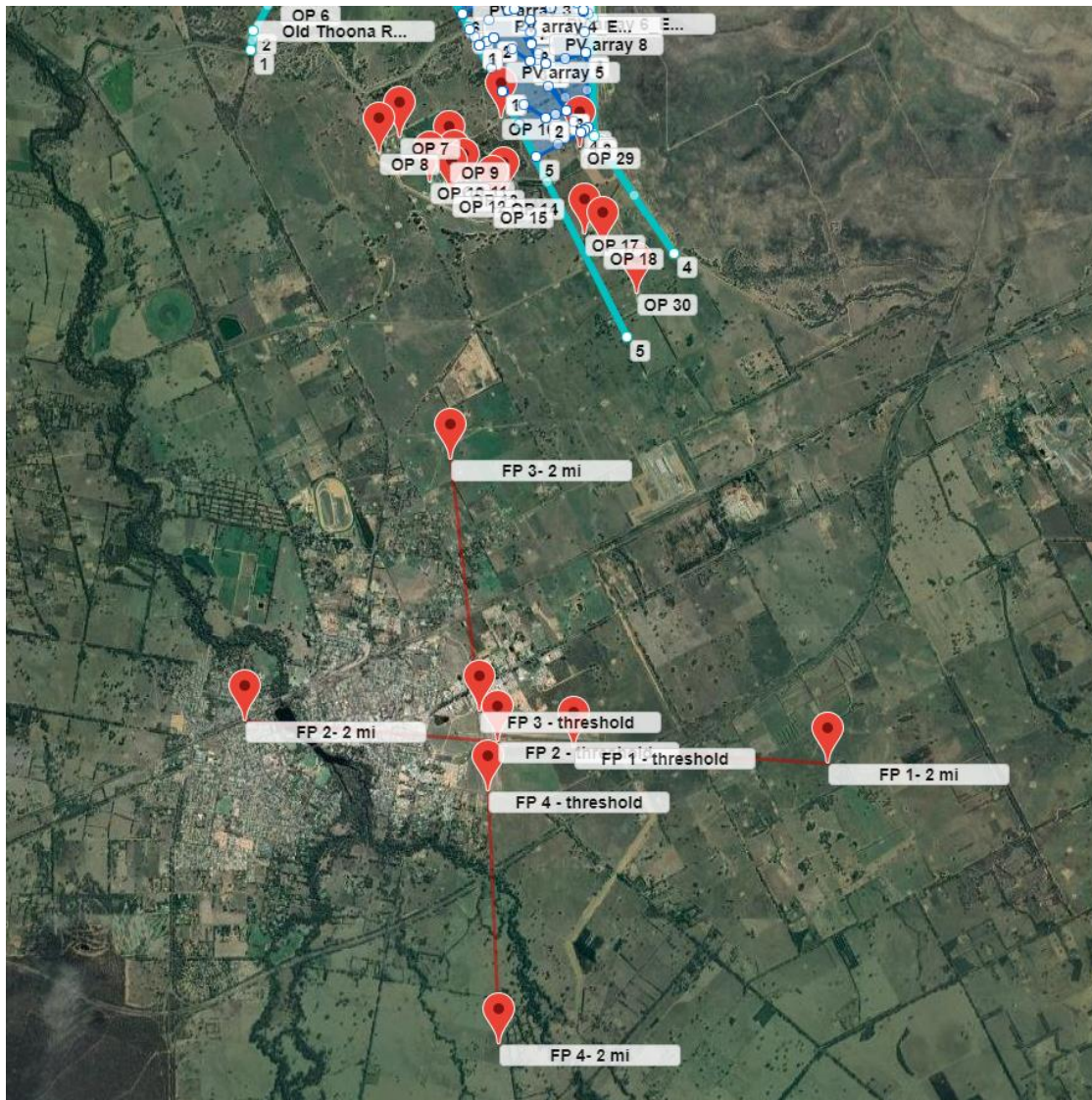


Figure 6 Location of flight path analysed



5.0 Results

An overview of the results from the glare analysis, presented as total annual minutes of glare⁶ for each observation point and route receptor, is provided in Table 3. Varying levels of glare have been predicted for the observation points and route receptors analysed.

The glare predicted from the modelling in Table 3 is considered conservative as glare effects from the panels would only occur when the weather is sunny and clear and the panel predicted to produce glare is in clear view at the observation point. Glare analysis software does not consider topography of land or existing screening such as trees between the array and observation points which may be blocking or reducing glare. Glare experienced at observation points and route receptors would be observed from the direction of the array. For a more detailed breakdown of the section of the array the glare would be observed from at each observation point or route receptor, see modelling results in Appendix A.

Table 3 Total annual minutes of glare caused by the solar array to each observation point

Observation Point/Route Receptor	Low potential for after image (min/year)	Potential for after image (min/year)	Hazard Summary	Approximate minimum distance to site (m)
Lake Mokoan Road	107	35,500	Yellow Glare with potential for after image	Adjacent to the site
Benalla-Yarrowonga Road	5	21,042	Yellow Glare with potential for after image	Adjacent to the site
Boundary Road	0	14,635	Yellow Glare with potential for after image	Adjacent to the site
OP 33	0	11,081	Yellow Glare with potential for after image	Adjacent to the site
OP 16	0	10,719	Yellow Glare with potential for after image	165
North Rd - 2	70	7,798	Yellow Glare with potential for after image	Adjacent to site
OP 7	1,391	6,859	Yellow Glare with potential for after image	1,465
Dam Wall Rd	0	6,426	Yellow Glare with potential for after image	Adjacent to the site
OP 27	95	5,992	Yellow Glare with potential for after image	295
OP 9	451	5,677	Yellow Glare with potential for after image	1,015
OP 8	2,097	4,934	Yellow Glare with potential for after image	1,700

⁶ Values are the summation of glare from PV array 1, PV array 2, PV array 3, PV array 4, PV array 5

Observation Point/Route Receptor	Low potential for after image (min/year)	Potential for after image (min/year)	Hazard Summary	Approximate minimum distance to site (m)
OP 26	217	4,773	Yellow Glare with potential for after image	465
Farnley Road	1	4,743	Yellow Glare with potential for after image	35
North Rd	2	3,943	Yellow Glare with potential for after image	Adjacent to the site
Flynns Rd	642	3,918	Yellow Glare with potential for after image	Closest end of Road starts approximately 600m from site
OP 10	656	3,371	Yellow Glare with potential for after image	1,335
OP 31	0	3,110	Yellow Glare with potential for after image	345
OP 11	335	2,905	Yellow Glare with potential for after image	1,060
OP 21	1,304	2,748	Yellow Glare with potential for after image	1,180
OP 20	1,653	2,467	Yellow Glare with potential for after image	2,075
OP 1	0	2,432	Yellow Glare with potential for after image	630
OP 2	21	2,312	Yellow Glare with potential for after image	695
OP 28	7	2,091	Yellow Glare with potential for after image	725
OP 19	1,794	2,073	Yellow Glare with potential for after image	2,185
OP 13	156	1,621	Yellow Glare with potential for after image	1,000
OP 3	25	1,603	Yellow Glare with potential for after image	865
OP 12	257	1,415	Yellow Glare with potential for after image	1,185
Chesney Road	5,019	1,264	Yellow Glare with potential for after image	935

Observation Point/Route Receptor	Low potential for after image (min/year)	Potential for after image (min/year)	Hazard Summary	Approximate minimum distance to site (m)
OP 4	0	390	Yellow Glare with potential for after image	1,245
OP 24	25	214	Yellow Glare with potential for after image	1,640
OP 6	4,751	74	Yellow Glare with potential for after image	1,985
OP 29	0	25	Yellow Glare with potential for after image	175
Route 11 unnamed private driveway	0	16	Yellow Glare with potential for after image	200
Old Thoona Road	277	0	Green Glare with low potential for after image	750
OP 5	0	0	No glare predicted	1,295
OP 14	0	0	No glare predicted	695
OP 15	0	0	No glare predicted	835
OP 17	0	0	No glare predicted	1,165
OP 18	0	0	No glare predicted	1,400
OP 22	0	0	No glare predicted	1,300
OP 23	0	0	No glare predicted	1,390
OP 25	0	0	No glare predicted	1,165
OP 30	0	0	No glare predicted	2,150
OP 32	0	0	No glare predicted	1,175
Snowy Ln	0	0	No glare predicted	800
FP 1	0	0	No glare predicted	7,510
FP 2	0	0	No glare predicted	7,410
FP 3	0	0	No glare predicted	7,040
FP 4	0	0	No glare predicted	8,045

6.0 Glare Mitigation Measures

6.1 Limiting backtracking resting angle

Single-axis tracking (SAT) structures rotate PV modules about a north-south axis as the sun moves across the sky from east to west. Backtracking is a control algorithm that is implemented by most SAT solar PV mounting structures. It aims to prevent row-to-row shading which would otherwise occur by tilting the panels away from the sun when the sun is low in the sky.

Backtracking can have a significant impact on the extent of glint and glare caused by a solar farm. As the sun approaches the horizon, modules also gradually rotate to the horizontal (0° angle) to avoid inter-row shading. The backtracking process and backtracking resting angle are shown below in Figure 7 and Figure 8, respectively. As the light is being reflected at a shallow angle, there is the potential for observers near ground level to be affected by reflecting light.

Figure 7 Backtracking of a single-axis tracking system

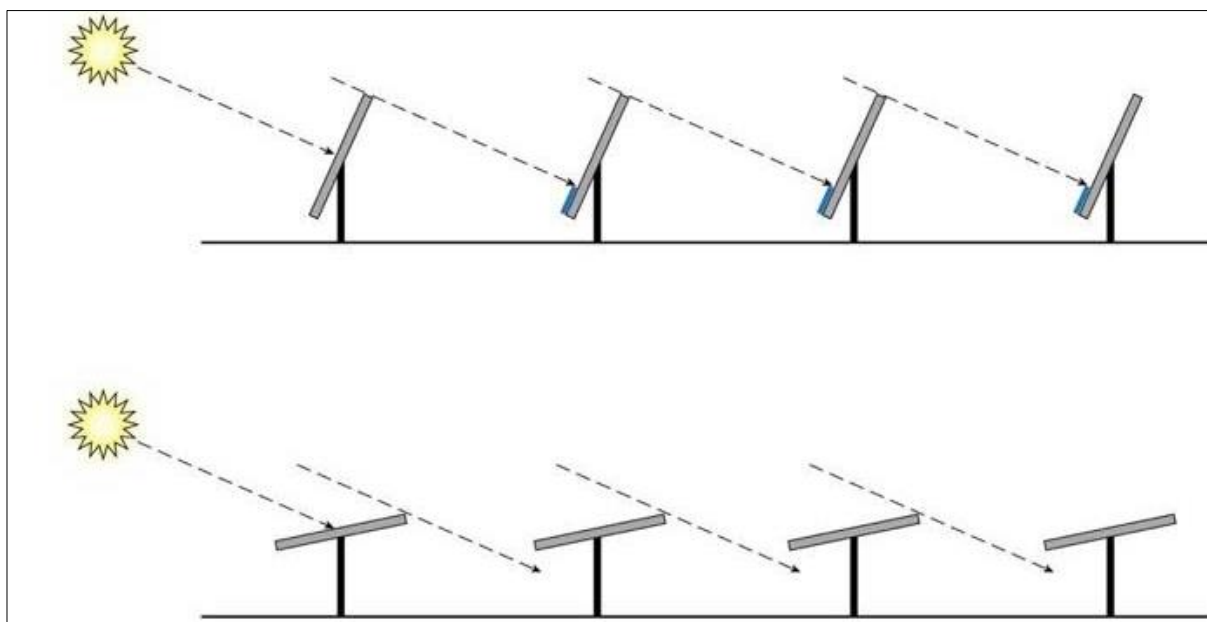
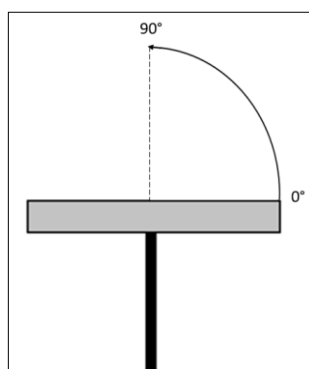


Figure 8 Backtracking resting angle



Many SAT systems can be programmed to limit the backtracking angle such that the angle of the solar panels is never below a defined limit while the sun is low in the sky. This serves to reflect sunlight above observers near ground level. It is important to note that the panels would pass through shallow angles in the middle of the day (i.e. lie relatively flat) when the sun is at its highest point. As the angle of incidence is relatively close to normal in this case, only small amounts of light are reflected and glare is unlikely to occur, thus the limit only needs to be applied when the sun is low in the sky. This modification is possible, but as the tracking manufacturer and the final solar farm layout are yet to be confirmed, it would be further confirmed during detailed design stage once more information becomes

available. The effectiveness of mitigating glare through limiting resting angle is explored in the following sections to determine whether this modification should be considered as design progresses.

6.1.1 Modelling methodology

The software models a simplified representation of backtracking. This simplified model uses a default resting angle, which the PV modules immediately return to once backtracking would normally operate. A resting angle of 0° means that panels lie horizontal.

AECOM modelled the effect different resting angles would have on glint and glare from the array. To determine the approximate resting angle that no glare would occur at, resting angles between 0° and 15° (increasing in 5° increments) were modelled. The resting angle was then increased or decreased from the resting angle that resulted in the least amount of glare by 1° increments to find the resting angle with the least amount of glare.

All other inputs remain unchanged from the Original Assessment.

6.1.2 Modelling results

The GlareGauge modelling results for each resting angle and the observation points that are predicted to experience glare are outlined in Table 4. Location of observation points (OPs) and route receptor (RR) are shown in Figure 5 with locations and flight paths (FPs) are shown in Figure 6. Full GlareGauge reports for each scenario are provided in Appendix B.

Table 4 Summary of modelling results

Resting Angle	Glare with low potential for after image		Glare with moderate potential for after image	
	Affected Observation Points	Total annual glare duration (min/year)	Affected Observation Points	Total annual glare duration (min/year)
0°	Lake Mokoan Road, Chesney Road; Flynns Road; Old Thoona Road; North Road; North Road 2; OP 3; OP 6 – OP 13; OP 19 – OP 21; OP 24; OP 26 – OP 28	21,358	Lake Mokoan Road, Benalla-Yarrawonga Road; Boundary Road; Chesney Road; Dam Wall Road; Farnley Road; Flynns Road; North Road; North Road 2; Route 11; OP 1 – OP 4; OP 6 – OP 13; OP 16; OP 19 – OP 21; OP 24; OP 26 – OP 29; OP -31; OP -33	178,171
5°	N/A	0	Benalla-Yarrawonga Road; Lake Mokoan Road; Boundary Road; North Road;	14,693
10°	N/A	0	Lake Mokoan Road	1,397
13°	N/A	0	Lake Mokoan Road	8
14°	N/A	0	N/A	0
15°	N/A	0	N/A	0

Limiting the resting angle of the solar PV panels to 14 degrees removed all instances of low and moderate potential for glare for all OPs and RRs. Therefore, if the panels are limited to a resting angle of 14 degrees no glare is expected to affect any OPs or RRs.

6.2 Vegetation screening

Vegetation screens along parts of the Site boundary are proposed to mitigate visual impacts from sensitive receptors as panels that are not visible from the receptor then have no reflection impact. Proposed vegetation planting zones along the border of the development area in the landscape plan are shown in Figure 3 and Figure 4. The proposed locations of vegetation screening along parts of the Site boundary to mitigate visual impacts from sensitive receptors is outlined below.

Dense screening (10m wide planting zone) is to be planted on the:

- south western boundary of the southern array,
- north eastern boundary of the array, and
- parts of the boundary between the array and Lake Mokoan Road.

Intermittent screening (5m wide planting zone) is to be planted on:

- parts of the southern array's western boundary,
- most of the array's eastern boundary, and
- the remaining boundary between the array and Lake Mokoan Road.

Infill planting (additional trees and shrubs to increase density of planting and provide a dense screen) is to be planted on:

- the western boundary of the northern array where existing vegetation is already well established.

Although the presence of vegetation screening would assist in mitigating the predicted glare, the modelling software is unable to quantify this impact. Taking into consideration the relatively flat landscape where most of the glare is predicted to occur on the roads surrounding the solar farm, the height of the screening should be the height of the panels at the maximum angle where any glare is predicted to occur. If the height of screening is at or above the height of the panels where glare is predicted to occur, the glare should not be visible to receptors.

The height of the panels will vary as they track the sun however glare is only expected to occur when the panels are at an angle between 0 and 13 degrees during backtracking, as discussed in section 6.1. The height of the panels at 13 degrees is 3.5 m. Thus, once vegetation has reached a height of 3.5 metres any predicted impacts at surrounding dwellings and the adjacent roads would likely be removed.

Once the vegetation in the landscaping plan has grown to 3.5 m, the vegetation screening alone would likely remove glare from nearby dwellings and roads. As the planned vegetation screening is not expected to reach a height of 3.5 m until approximately 5 years post installation, additional screening would be required while the vegetation screening is growing to an effective height to remove visibility of panels from receptors. Manmade screening that can be used while the vegetation is growing to a sufficient height is further discussed in Section 6.3.

6.3 Manmade screening

The construction of shade cloth or glare screens on the site's proposed security fences can help interrupt the line of vision between the solar installation and points of interest that may be affected by glare prior to sufficient establishment of the boundary landscape.

To effectively control glare, shade cloth, that can be added to security fencing to shield observers, should be made from a material with low visible light transmission, such as dark coloured fabric solar shade cloths with densities of 95% or greater (meaning 95% or more of the sunlight is blocked) with low visual transmittance of less than 10% (indicating a glare reduction of 90% or more).

Alternatively, the security fencing could be made of a non-transparent material such as metal, vinyl, or composite. Examples of suitable manmade screening are shown in Table 5. GlareGauge software is unable to model the glint and glare reducing effect shade cloths and fences have and thus outcomes of using shade cloth or fences are not modelled or quantified.

Table 5 Manmade screening

Type of manmade screening	Example
Shade cloth attached to security fencing	
Glare screen	
Non-transparent security fence	

7.0 Summary of Recommendations

The modelling results show that for a number of OPs and RRs, observers are predicted to experience glare with moderate potential for after image during various times of the day. There is no glare potential predicted for the FPs. This section summarises the results with recommendations for glare mitigation for each OP and RR that was shown to experience potential glare. Further discussion of these findings can be found in Appendix C.

Planting zones shown in Figure 3 and Figure 4 indicate the proposed locations of 5m and 10m wide vegetation screens along parts of the Site boundary to mitigate visual impact from sensitive receptors. The presence of vegetation screening may assist in mitigating the predicted glare, however the modelling software is unable to quantify this impact. It is noted that while the vegetation screening is growing to an effective height, additional glare mitigation strategies may be required.

To reduce the potential for glare at the Site the resting angle of the solar PV modules can be limited in the backtracking algorithm. An analysis found that limiting the resting angle to 14 degrees removed all instances of low and moderate potential for glare for all OPs and RRs. Based on previous project experience, a resting angle of 14 degrees would likely result in a reduction in system energy yield. During detailed design, a more detailed assessment of the extent of the solar arrays to be modified, and the impacts this may have to system performance, is recommended to achieve a balanced and optimised outcome.

Another method to reduce the effects of glare while the vegetation screen is growing to a sufficient height, is through the installation of a glare screen, non-transparent fence, or 95% or greater density shade cloth between the array and the points of interest can provide effective screening. Manmade screening could be installed at the site boundary between the dwellings where solar reflection may be possible until planned vegetation screening grows to 3.5 m in height. This would likely remove any glint and glare impacts as the solar panels and surrounding landscape are relatively flat and the solar panels are 3.5 m tall at a 13 degree tilt, equal to the screening height beyond which no glare is expected to occur. Therefore, any predicted impacts at these dwellings and the adjacent roads would likely be removed. Once the vegetation in the landscaping plan has grown to 3.5 m the vegetation screening alone would likely remove glare from nearby dwellings and roads and manmade screening may be removed.

Table 6 summarises the existing and suggested glare mitigation strategies for the proposed array. Glare hazard on the OPs and RRs are for a resting angle of 0°.

Table 6 Summary of glare mitigation strategies

Observation Point/Route Receptor	Glare Hazard	Time of Day	Existing Mitigation	Suggested Mitigation
OP 1 – OP 4, OP 24	Yellow Glare with potential for after image	For up to 30 minutes between 5AM - 6AM from October to February	Limited existing vegetation and proposed 10m wide vegetation buffer along the northern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
OP 6	Yellow Glare with potential for after image	For up to 15 minutes between 5AM – 8AM from February to April and September to November	Existing vegetation and proposed vegetation buffer and infill planting along parts of the western border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.

Observation Point/Route Receptor	Glare Hazard	Time of Day	Existing Mitigation	Suggested Mitigation
OP 7 – OP 13	Yellow Glare with potential for after image	For up to 15 minutes between 5:30AM – 8AM from March to October	Existing vegetation and proposed 10m wide vegetation buffer along the western and southern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
OP 16	Yellow Glare with potential for after image	For up to 18 minutes between 5AM – 8AM throughout the year	Existing vegetation and proposed 10m wide vegetation buffer along the western border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
OP 19 – OP 21	Yellow Glare with potential for after image	For up to 20 minutes between 6PM - 8PM from September to March	Existing vegetation and proposed 5m and 10m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
OP 26 – OP 27	Yellow Glare with potential for after image	For up to 30 minutes between 5PM - 8PM throughout the year	Existing vegetation and proposed 5m and 10m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
OP 28	Yellow Glare with potential for after image	For up to 20 minutes between 6PM – 8PM from October to March	Existing vegetation and proposed 5m and 10m wide vegetation buffer along the northern and eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
OP 29	Yellow Glare with potential for after image	For up to 15 minutes between 5:30PM – 8PM from September to May	Existing vegetation and proposed 10m wide vegetation buffer along the southern border of the Site as	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m.

Observation Point/Route Receptor	Glare Hazard	Time of Day	Existing Mitigation	Suggested Mitigation
			shown in section 2.1.	Please refer to Appendix C for further discussion.
OP 31 and 33	Yellow Glare with potential for after image	For up to 30 minutes between 5AM – 7AM and 4PM – 8PM throughout the year	Limited existing vegetation and proposed 10m wide vegetation buffer along the northern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Benalla-Yarrowonga Road	Yellow Glare with potential for after image	For up to 40 minutes between 5AM-7AM October to April	Proposed vegetation buffer and infill planting to existing vegetation along parts of the western border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Boundary Road	Yellow Glare with potential for after image	For up to 90 minutes between 3PM – 6PM April to September	Proposed 5m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Chesney Road	Yellow Glare with potential for after image	For up to 12 minutes between 4AM – 6AM in October to February	Existing vegetation and proposed 10m wide vegetation buffer along the northern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Farnley Road	Yellow Glare with potential for after image	For up to 38 minutes between 4AM – 6AM and between 5PM – 8PM from Throughout the year	Existing vegetation and proposed 10m wide vegetation buffer along the northern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Lake Mokoan Road	Yellow Glare with potential for after image	For up to 50 minutes between 5AM – 8AM and between 4PM – 8PM throughout the year	Proposed 5m wide vegetation buffer along the southern border of Lake Mokoan Road traversing	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m.

Observation Point/Route Receptor	Glare Hazard	Time of Day	Existing Mitigation	Suggested Mitigation
			the Site as shown in section 2.1.	Please refer to Appendix C for further discussion.
Old Thoona Road	Green Low potential for temporary after image	For up to 12 minutes between 6AM – 7AM from April to May and September to October	Existing vegetation and proposed 10m wide vegetation buffer along the northern and western border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Dam Wall Rd	Yellow Glare with potential for after image	For up to 35 minutes between 5PM – 8PM from August to April	Proposed 5m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Flynns Rd	Yellow Glare with potential for after image	For up to 20 minutes between 4:30PM – 7PM from February to October	Proposed 5m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
North Rd	Yellow Glare with potential for after image	For up to 50 minutes between 4PM - 5PM and 6PM - 8PM From November to February and June to July	Proposed 5m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
North Rd - 2	Yellow Glare with potential for after image	For up to 22 minutes between 4:30PM – 7:30PM from February to November	Proposed 5m wide vegetation buffer along the eastern border of the Site as shown in section 2.1.	Limit the panel resting angle to 14 degrees until the vegetation is sufficiently established to a height of 3.5 m. Please refer to Appendix C for further discussion.
Route 11 (unnamed private driveway)	Yellow Glare with potential for after image	For up to 5 minutes between 5PM – 7PM from March to September and September to November	Proposed 10m wide vegetation buffer along the Southern border of the Site as shown in section 2.1.	None suggested

8.0 Conclusions

The results of the glare hazard analysis identified that for West Mokoan Solar Farm, glare with moderate potential for after image is predicted to be caused by the operation of the array configuration outlined in this report. Measures to reduce glare were discussed for observation points, route receptors and flight paths identified to be potentially affected by moderate potential hazard glare.

The glare model developed for the Project assumes the solar arrays are installed within the development area shown in Figure 2, and the entire development area is considered a potential glare source. The model includes conservative assumptions (i.e. a high irradiance) and does not consider any vegetation, buildings or topographical features that may exist between the solar panel arrays and the observation points.

The GlareGauge model is unable to accurately account for the backtracking operation of the tracker. The software is able to run a simplified model of backtracking, whereby the panels are modelled to revert to a pre-determined resting angle when the angle of the sun is outside of the tracking range.

It is anticipated to take five years for the proposed vegetation screening to reach the required height of 3.5 m to be able to remove potential glare at the OPs and RRs. During the period when the vegetation is growing to a sufficient height, either of the following options can be implemented:

- A. Install manmade screening (shade cloth, glare screen or non-transparent security fence) on the site's security fence at 3.5 m high (noting that the existing security fence would need to increase in height to support this screening), OR
- B. Limit the resting angle of the solar panels to a minimum of 14 degrees during backtracking operation.

The current preference is to restrict the resting angle to 14 degrees, however both options are able to mitigate the impacts of possible glint and glare until vegetation screening reaches the required height of three and a half metres.

If the glare mitigation strategies recommended in this report are established, it is reasonable to consider glint and glare from the solar farm would not have an impact on road or aviation safety, or the reasonable amenity of residents of the dwellings modelled in the report.

Appendix A

GlareGauge Report

West Mokoan - updated 2021

West Mokoan - 0 degrees

Created April 21, 2021
Updated April 22, 2021
Time-step 1 minute
Timezone offset UTC+10
Site ID 52828.9446

Project type Advanced
Project status: active
Category 100 MW to 1 GW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
 Ocular transmission coefficient: 0.5
 Pupil diameter: 0.002 m
 Eye focal length: 0.017 m
 Sun subtended angle: 9.3 mrad

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results

Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	SA tracking	SA tracking	3,292	9,111	-
PV array 2 - elevated	SA tracking	SA tracking	450	12,680	-
PV array 3	SA tracking	SA tracking	2,640	26,365	-
PV array 4 - elevated	SA tracking	SA tracking	3,168	5,845	-
PV array 5	SA tracking	SA tracking	2,768	4,337	-
PV array 6	SA tracking	SA tracking	5,085	44,851	-
PV array 7	SA tracking	SA tracking	581	61,819	-
PV array 8	SA tracking	SA tracking	3,374	13,163	-

Component Data

PV Array(s)

Total PV footprint area: 3,534,994 m²

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 266,969 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.470800	146.003130	161.96	2.44	164.41
2	-36.468610	146.008690	164.37	2.44	166.81
3	-36.480130	146.016890	162.67	2.44	165.12
4	-36.474440	146.011650	163.15	2.44	165.59
5	-36.471790	146.006530	162.05	2.44	164.49
6	-36.472690	146.004550	161.78	2.44	164.22



Name: PV array 2 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 469,172 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472650	146.004600	163.12	2.77	165.89
2	-36.471780	146.006530	164.37	2.77	167.14
3	-36.474440	146.011650	164.96	2.77	167.73
4	-36.480130	146.016890	161.70	2.77	164.47
5	-36.480980	146.013910	163.61	2.77	166.38
6	-36.477880	146.007890	162.90	2.77	165.66



Name: PV array 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 311,412 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.477900	146.007870	163.83	2.44	166.27
2	-36.480990	146.013900	161.74	2.44	164.18
3	-36.480130	146.016910	170.18	2.44	172.62
4	-36.482550	146.018900	165.36	2.44	167.81
5	-36.485290	146.012560	167.59	2.44	170.03



Name: PV array 4 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 436,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472440	146.011850	160.98	2.77	163.75
2	-36.469770	146.011800	161.35	2.77	164.12
3	-36.466860	146.017570	162.00	2.77	164.77
4	-36.468740	146.019260	164.50	2.77	167.27
5	-36.473490	146.019580	166.31	2.77	169.08
6	-36.474750	146.013990	165.32	2.77	168.08



Name: PV array 5
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 289,046 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.468470	146.009460	162.65	2.44	165.09
2	-36.464740	146.018280	161.71	2.44	164.15
3	-36.464620	146.020190	165.09	2.44	167.53
4	-36.470550	146.020105	165.55	2.44	167.99
5	-36.473580	146.019590	165.38	2.44	167.82
6	-36.468710	146.019230	161.97	2.44	164.41
7	-36.466880	146.017600	162.34	2.44	164.78
8	-36.469800	146.011740	163.97	2.44	166.41
9	-36.472470	146.011820	162.60	2.44	165.04



Name: PV array 6
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 554,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.456383	145.993541	173.09	2.44	175.54
2	-36.452868	146.002163	176.68	2.44	179.12
3	-36.455535	146.002436	173.66	2.44	176.10
4	-36.456916	145.999549	170.45	2.44	172.89
5	-36.458109	146.000525	174.90	2.44	177.34
6	-36.460211	145.998535	171.24	2.44	173.68
7	-36.460838	145.999198	170.29	2.44	172.74
8	-36.459426	146.002241	169.09	2.44	171.53
9	-36.462439	146.004387	166.30	2.44	168.75
10	-36.464635	145.999315	169.00	2.44	171.45

Name: PV array 7
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 919,599 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.465122	145.999611	169.38	2.44	171.82
2	-36.456798	146.018969	169.57	2.44	172.01
3	-36.457771	146.018930	168.80	2.44	171.24
4	-36.458022	146.020101	169.32	2.44	171.76
5	-36.461410	146.020023	165.96	2.44	168.41
6	-36.468762	146.002221	166.71	2.44	169.15
7	-36.466942	146.000851	169.23	2.44	171.68

Name: PV array 8
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Footprint area: 288,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.474760	146.013970	163.89	2.44	166.34
2	-36.473540	146.019570	165.38	2.44	167.82
3	-36.472899	146.019975	167.50	2.44	169.94
4	-36.477228	146.020037	164.15	2.44	166.60
5	-36.482020	146.019990	165.02	2.44	167.47
6	-36.482300	146.019390	166.38	2.44	168.82

2-Mile Flight Path Receptor(s)

Name: FP 1
Description:
Threshold height : 15 m
Direction: 273.0 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.552472	146.018036	173.07	15.24	188.31
2-mile point	-36.553985	146.054021	176.94	180.06	357.00

Name: FP 2
Description:
Threshold height : 15 m
Direction: 94.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.551877	146.007064	171.04	15.24	186.28
2-mile point	-36.549659	145.971137	172.00	182.96	354.96

Name: FP 3
Description:
Threshold height : 15 m
Direction: 173.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.548520	146.004514	172.19	15.24	187.43
2-mile point	-36.519799	146.000373	168.43	187.69	356.11

Name: FP 4
Description:
Threshold height : 15 m
Direction: 357.6 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.557814	146.006108	174.03	15.24	189.27
2-mile point	-36.586701	146.007617	178.02	179.94	357.96



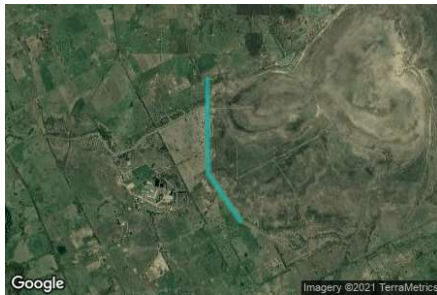
Route Receptor(s)

Name: Benalla-Yarrowonga Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.429270	145.986090	195.35	1.50	196.85
2	-36.449160	145.988920	181.34	1.50	182.84
3	-36.458620	145.994720	174.09	1.50	175.59
4	-36.470610	146.002930	162.03	1.50	163.53
5	-36.505920	146.025470	168.59	1.50	170.09

Name: Boundary Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456180	146.020460	170.11	1.50	171.61
2	-36.482720	146.020720	170.10	1.50	171.60
3	-36.483040	146.020810	169.97	1.50	171.47
4	-36.496460	146.032090	168.76	1.50	170.26

Name: Chesney Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.443340	145.985990	186.75	1.50	188.25
2	-36.444340	145.985940	184.86	1.50	186.36
3	-36.448240	145.988220	181.96	1.50	183.46
4	-36.450300	145.987410	176.61	1.50	178.11
5	-36.461420	145.961230	163.94	1.50	165.44

Name: Dam Wall Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456194	146.020561	170.15	1.50	171.65
2	-36.456041	146.020820	170.26	1.50	171.76
3	-36.455712	146.021649	170.48	1.50	171.98
4	-36.455720	146.022015	170.49	1.50	171.99
5	-36.455700	146.022936	170.85	1.50	172.35
6	-36.455622	146.023302	170.71	1.50	172.21
7	-36.455461	146.023682	170.89	1.50	172.39

Name: Farnley Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.449010	145.989530	180.71	1.50	182.21
2	-36.449060	146.001810	179.29	1.50	180.79
3	-36.449080	146.014190	182.24	1.50	183.74
4	-36.456430	146.018890	169.97	1.50	171.47

Name: Flynn's Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.486586	146.024583	166.13	1.50	167.63
2	-36.486531	146.025236	166.24	1.50	167.74
3	-36.486939	146.025626	166.73	1.50	168.23
4	-36.484570	146.031235	163.00	1.50	164.50
5	-36.479223	146.043807	163.00	1.50	164.50

Name: Lake Mokoan Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464800	145.999220	169.49	1.50	170.99
2	-36.455370	146.021850	170.02	1.50	171.52
3	-36.455060	146.022800	171.00	1.50	172.50
4	-36.454880	146.024430	172.09	1.50	173.59
5	-36.453610	146.038270	175.33	1.50	176.83

Name: North Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.455546	146.021446	170.24	1.50	171.74
2	-36.456327	146.021485	171.30	1.50	172.80
3	-36.457002	146.021422	171.54	1.50	173.04
4	-36.457625	146.021236	170.23	1.50	171.73
5	-36.458216	146.021025	168.27	1.50	169.77
6	-36.461218	146.021081	167.39	1.50	168.89

Name: North Rd - 2
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464511	146.020533	166.67	1.50	168.17
2	-36.464511	146.023810	163.00	1.50	164.50
3	-36.464730	146.024200	163.00	1.50	164.50
4	-36.470927	146.028219	163.00	1.50	164.50
5	-36.475267	146.030982	163.00	1.50	164.50
6	-36.484605	146.031243	163.00	1.50	164.50

Name: Old Thoona Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.473170	145.972080	165.67	1.50	167.17
2	-36.471000	145.972410	166.76	1.50	168.26
3	-36.465250	145.976500	167.24	1.50	168.74
4	-36.457540	145.982700	169.86	1.50	171.36
5	-36.449620	145.988610	181.27	1.50	182.77
6	-36.429670	145.998520	228.93	1.50	230.43

Name: Route 11
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.488119	146.014258	167.02	1.50	168.52
2	-36.485421	146.018071	163.43	1.50	164.93
3	-36.484700	146.019242	164.89	1.50	166.39

Name: Snowy Ln
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.495849	146.019037	167.11	1.50	168.61
2	-36.492367	146.021739	164.19	1.50	165.69
3	-36.487930	146.024870	167.17	1.50	168.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	-36.449450	145.994600	193.91	1.50	195.41
OP 2	-36.450050	145.991370	179.53	1.50	181.03
OP 3	-36.448190	145.992090	183.99	1.50	185.49
OP 4	-36.445990	145.987840	182.94	1.50	184.44
OP 5	-36.444980	145.986880	181.39	1.50	182.89
OP 6	-36.467900	145.976260	163.92	1.50	165.42
OP 7	-36.483190	145.993200	163.99	1.50	165.49
OP 8	-36.484980	145.990270	162.56	1.50	164.06
OP 9	-36.485840	146.000300	165.00	1.50	166.50
OP 10	-36.488180	145.997550	162.08	1.50	163.58
OP 11	-36.488150	146.000840	163.52	1.50	165.02
OP 12	-36.489780	146.000490	164.43	1.50	165.93
OP 13	-36.489080	146.002260	165.85	1.50	167.35
OP 14	-36.490040	146.007970	168.27	1.50	169.77
OP 15	-36.491050	146.006450	165.34	1.50	166.84
OP 16	-36.480935	146.007630	163.90	1.50	165.40
OP 17	-36.494190	146.019500	165.18	1.50	166.68
OP 18	-36.495640	146.021960	166.78	1.50	168.28
OP 19	-36.449630	146.041960	200.29	1.50	201.79
OP 20	-36.450118	146.040630	203.77	1.50	205.27
OP 21	-36.452030	146.039564	186.99	1.50	188.49
OP 22	-36.441860	146.015430	204.20	1.50	205.70
OP 23	-36.440810	146.015082	206.52	1.50	208.02
OP 24	-36.442680	145.986200	186.87	1.50	188.37
OP 25	-36.442030	146.005170	204.56	1.50	206.06
OP 26	-36.455370	146.023940	171.02	1.50	172.52
OP 27	-36.456160	146.022360	170.94	1.50	172.44
OP 28	-36.449440	146.017320	182.53	1.50	184.03
OP 29	-36.484270	146.018820	166.16	1.50	167.66
OP 30	-36.501000	146.026770	166.45	1.50	167.95
OP 31	-36.453870	146.016460	174.38	1.50	175.88
OP 32	-36.491530	146.025840	165.54	1.50	167.04
OP 33	-36.458187	146.012754	169.04	1.50	170.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	SA tracking	SA tracking	3,292	9,111	-	-
PV array 2 - elevated	SA tracking	SA tracking	450	12,680	-	-
PV array 3	SA tracking	SA tracking	2,640	26,365	-	-
PV array 4 - elevated	SA tracking	SA tracking	3,168	5,845	-	-
PV array 5	SA tracking	SA tracking	2,768	4,337	-	-
PV array 6	SA tracking	SA tracking	5,085	44,851	-	-
PV array 7	SA tracking	SA tracking	581	61,819	-	-
PV array 8	SA tracking	SA tracking	3,374	13,163	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv-array-1 (green)	16	32	156	51	24	23	16	52	80	106	25	0
pv-array-1 (yellow)	278	174	61	344	425	450	444	377	149	153	208	399
pv-array-2 (green)	43	1	0	0	0	0	0	0	1	0	47	0
pv-array-2 (yellow)	182	252	176	502	1035	1066	1069	739	301	205	164	224
pv-array-3 (green)	0	4	0	0	0	0	0	0	0	0	0	0
pv-array-3 (yellow)	1621	1179	448	441	496	511	517	462	432	861	1561	1795
pv-array-4 (green)	0	0	250	43	66	101	79	14	233	57	0	0
pv-array-4 (yellow)	506	418	88	0	239	324	316	54	1	381	477	515
pv-array-5 (green)	0	0	102	117	0	0	0	9	195	4	0	0
pv-array-5 (yellow)	491	415	307	0	4	56	2	0	154	436	461	503
pv-array-6 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-6 (yellow)	1829	1611	1052	1297	679	841	627	1232	1086	1462	1795	1813
pv-array-7 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-7 (yellow)	4352	2989	2390	1664	1973	2491	2295	1602	2071	2973	3860	4887
pv-array-8 (green)	37	18	52	0	0	0	0	0	16	59	38	0
pv-array-8 (yellow)	64	68	548	805	2632	2685	2767	1469	580	243	28	110

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0

FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	1015	13
OP: OP 7	433	1521
OP: OP 8	714	960
OP: OP 9	122	1354
OP: OP 10	179	710
OP: OP 11	66	501
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	2060
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	1814
Route: Boundary Road	0	0
Route: Chesney Road	757	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	1
Route: Lake Mokoan Road	0	177
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	6	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 1 - Receptor (FP 1)

No glare found

PV array 1 - Receptor (FP 2)

No glare found

PV array 1 - Receptor (FP 3)

No glare found

PV array 1 - Receptor (FP 4)

No glare found

PV array 1 - OP Receptor (OP 1)

No glare found

PV array 1 - OP Receptor (OP 2)

No glare found

PV array 1 - OP Receptor (OP 3)

No glare found

PV array 1 - OP Receptor (OP 4)

No glare found

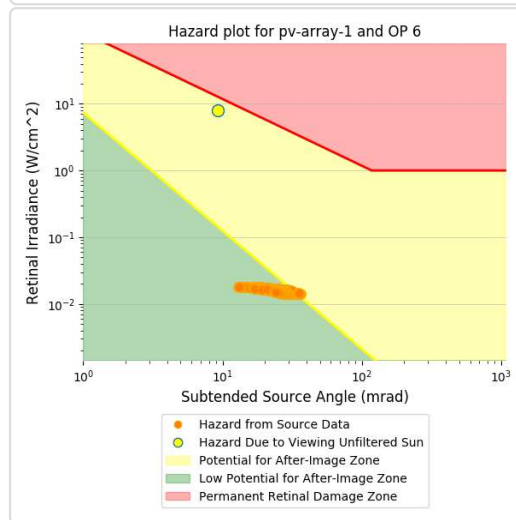
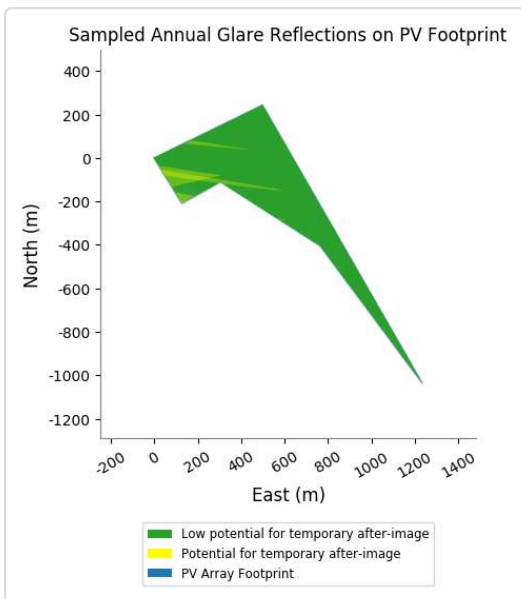
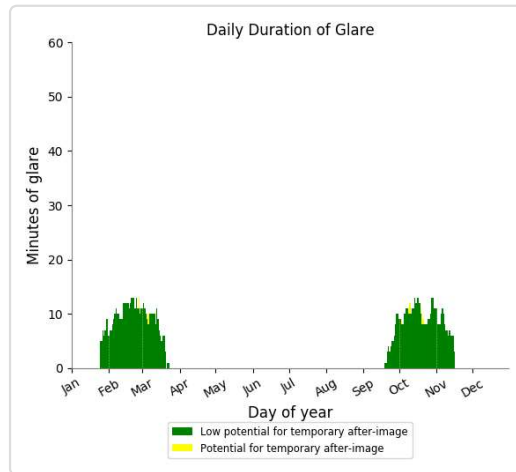
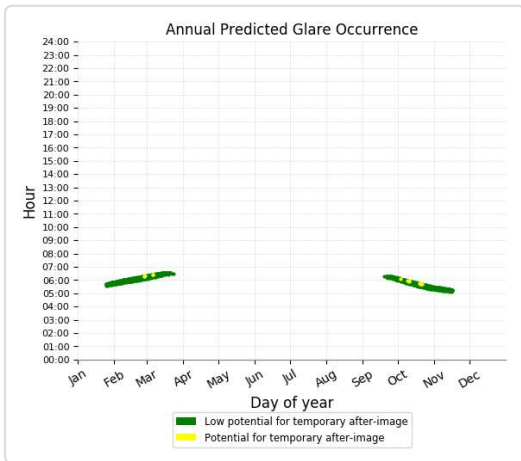
PV array 1 - OP Receptor (OP 5)

No glare found

PV array 1 - OP Receptor (OP 6)

PV array is expected to produce the following glare for receptors at this location:

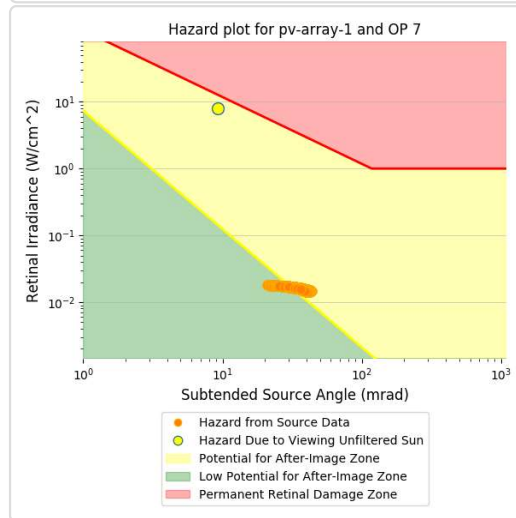
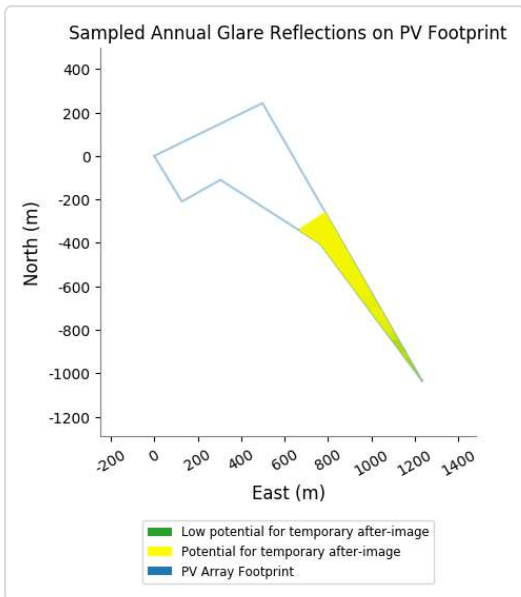
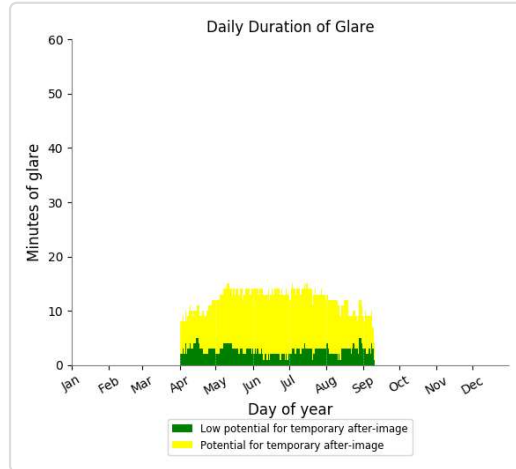
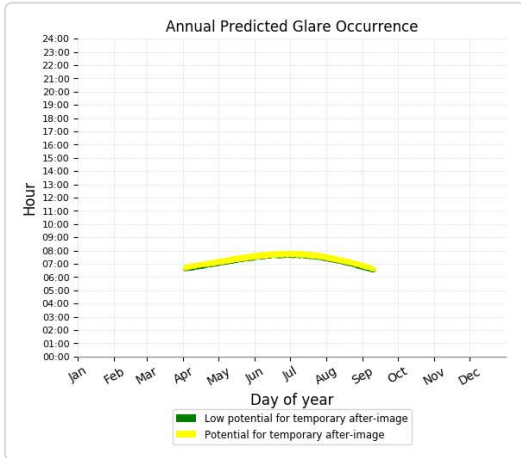
- 1,015 minutes of "green" glare with low potential to cause temporary after-image.
- 13 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 7)

PV array is expected to produce the following glare for receptors at this location:

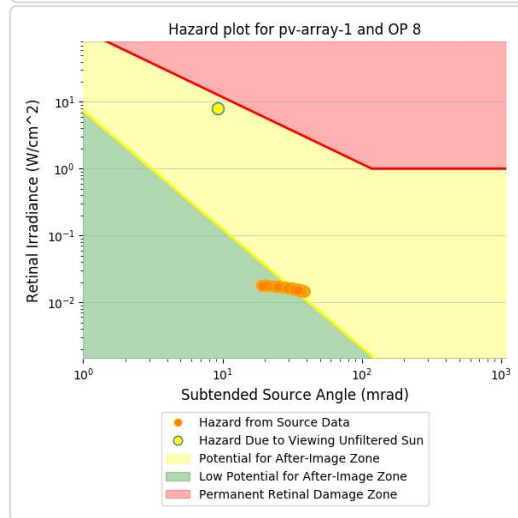
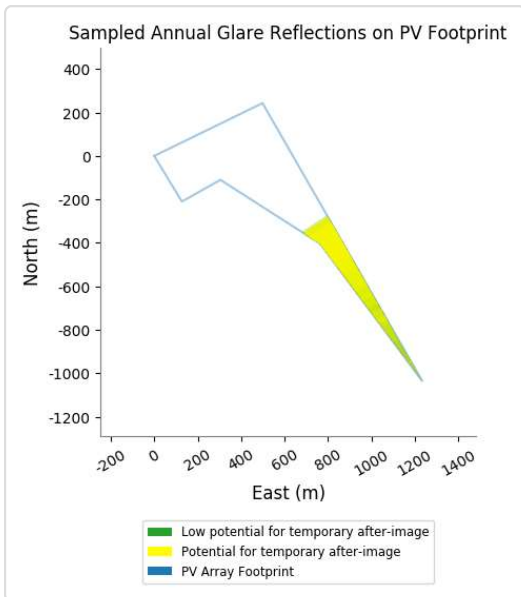
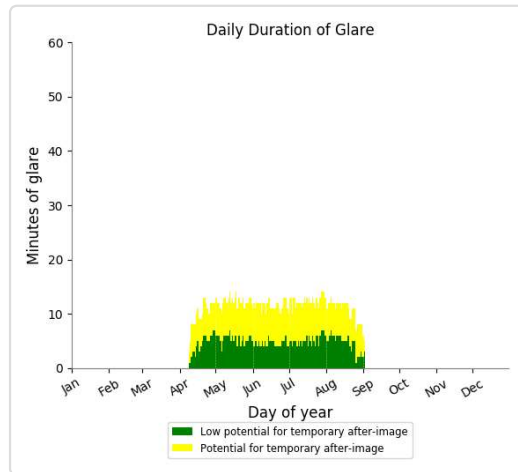
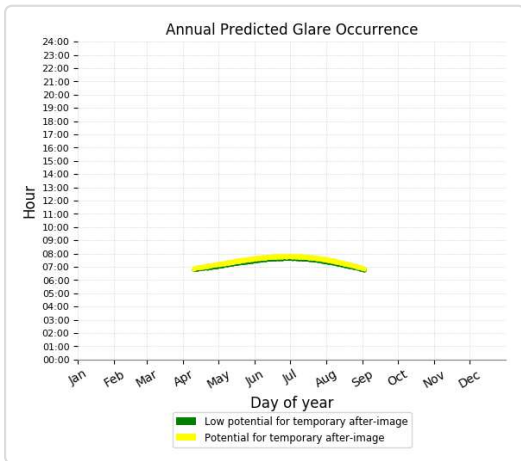
- 433 minutes of "green" glare with low potential to cause temporary after-image.
- 1,521 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 8)

PV array is expected to produce the following glare for receptors at this location:

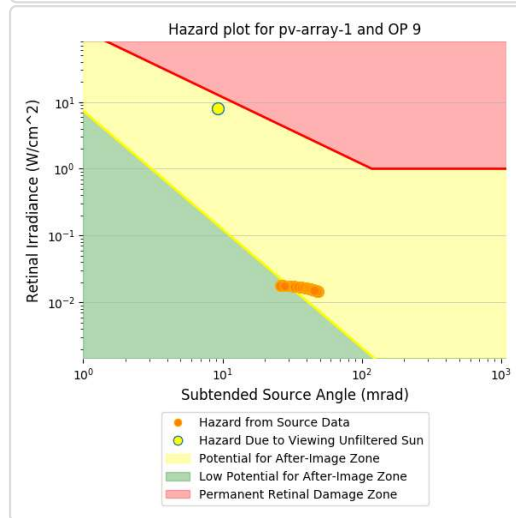
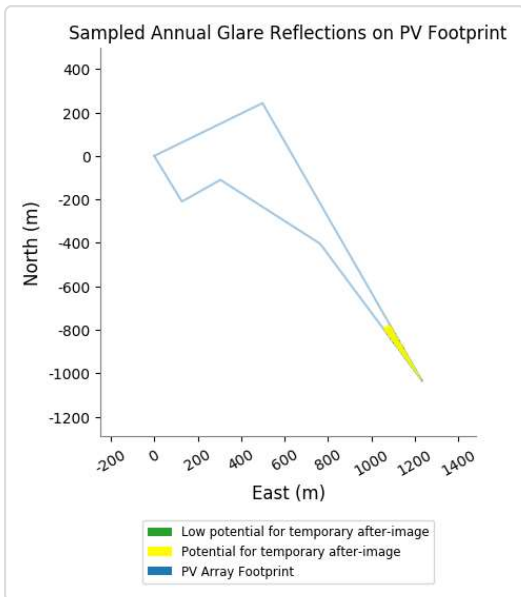
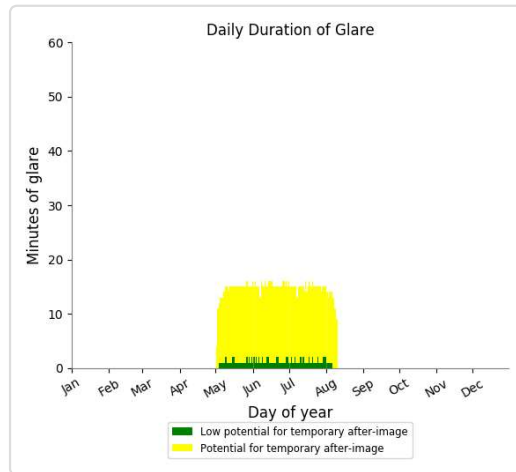
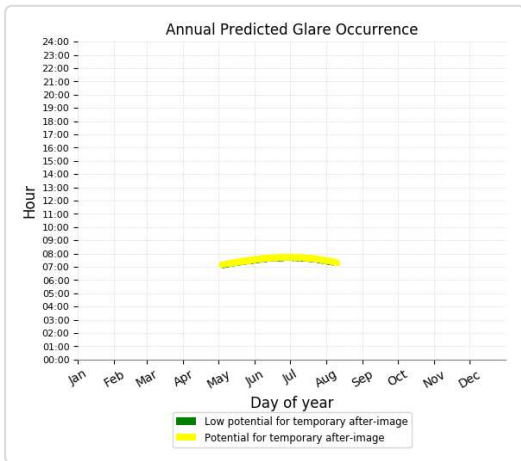
- 714 minutes of "green" glare with low potential to cause temporary after-image.
- 960 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 9)

PV array is expected to produce the following glare for receptors at this location:

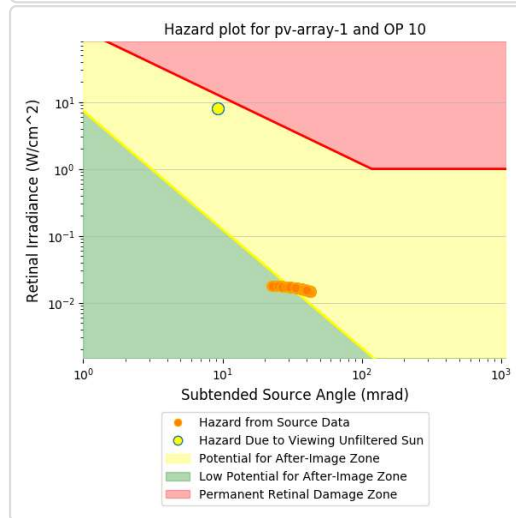
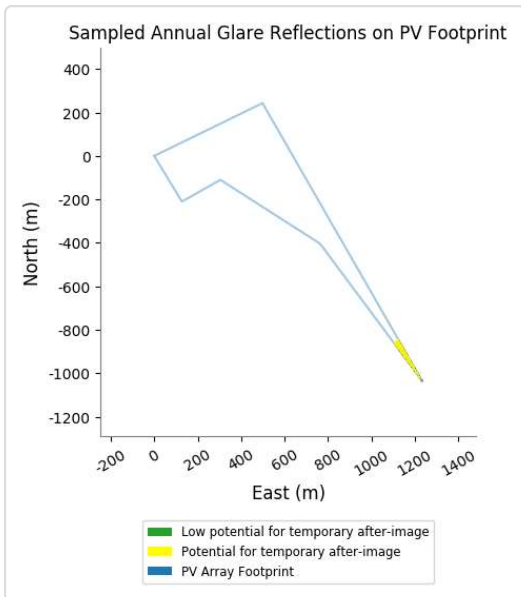
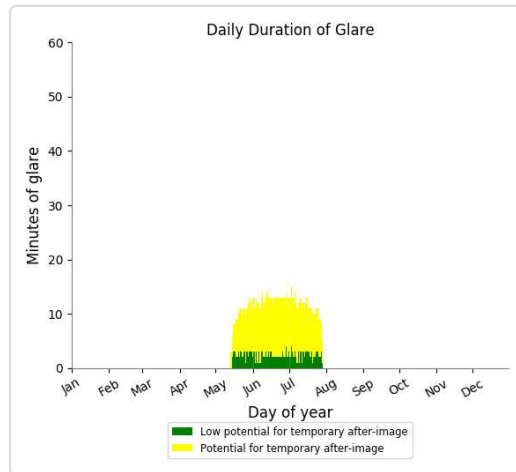
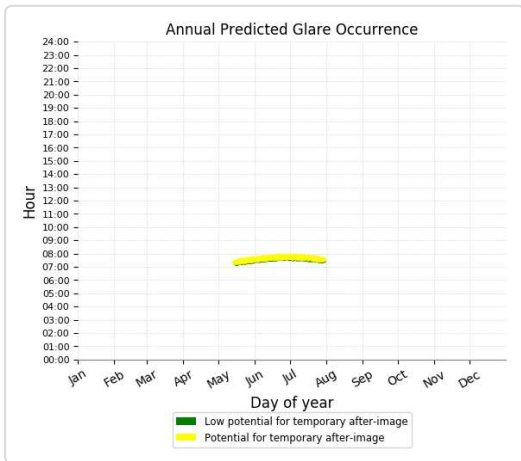
- 122 minutes of "green" glare with low potential to cause temporary after-image.
- 1,354 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 10)

PV array is expected to produce the following glare for receptors at this location:

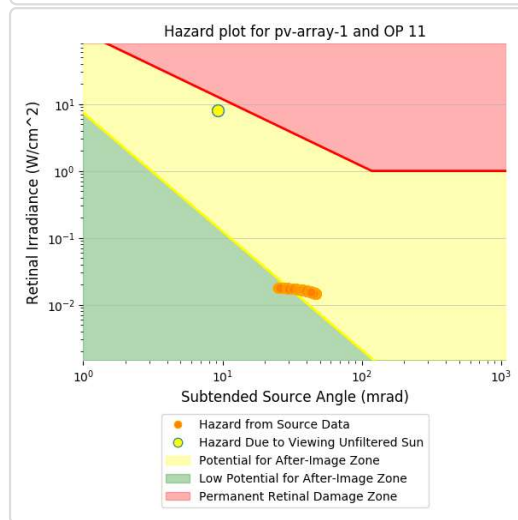
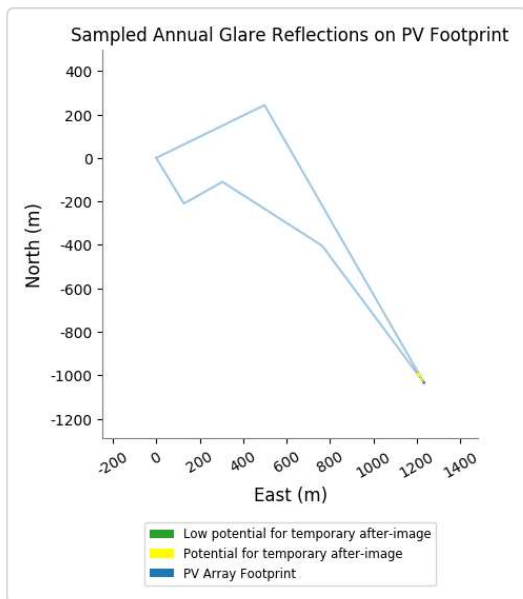
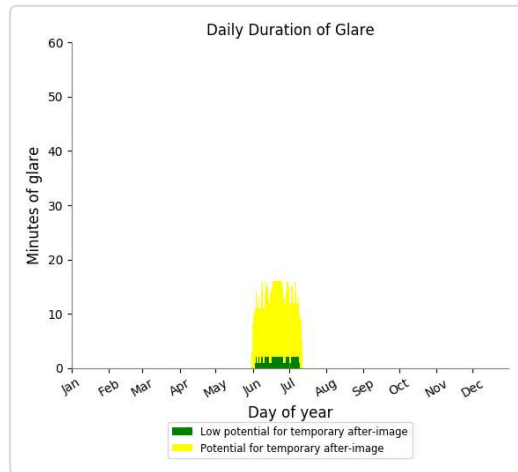
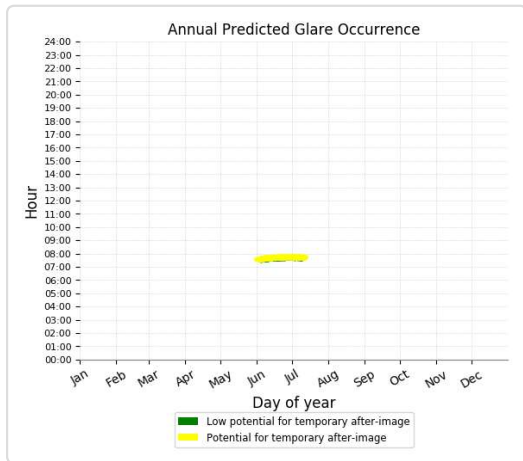
- 179 minutes of "green" glare with low potential to cause temporary after-image.
- 710 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 11)

PV array is expected to produce the following glare for receptors at this location:

- 66 minutes of "green" glare with low potential to cause temporary after-image.
- 501 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 12)

No glare found

PV array 1 - OP Receptor (OP 13)

No glare found

PV array 1 - OP Receptor (OP 14)

No glare found

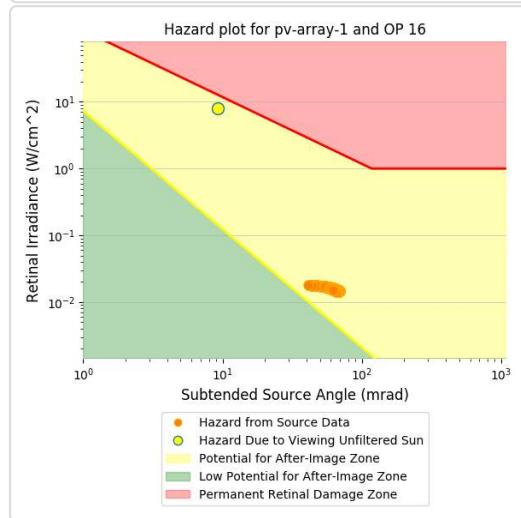
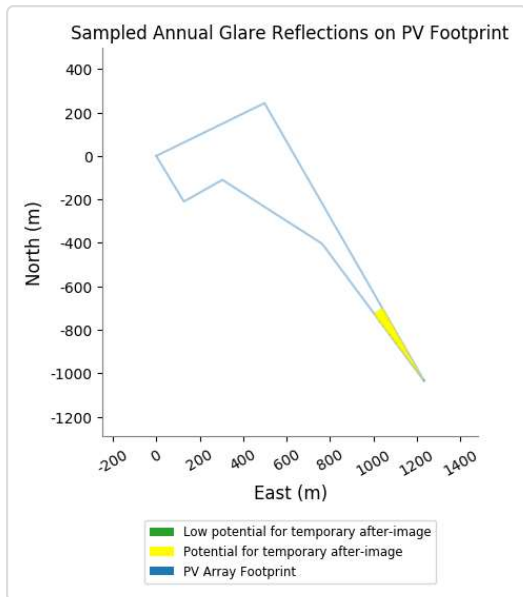
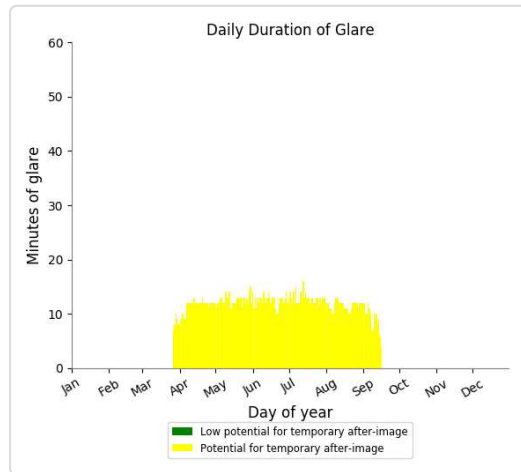
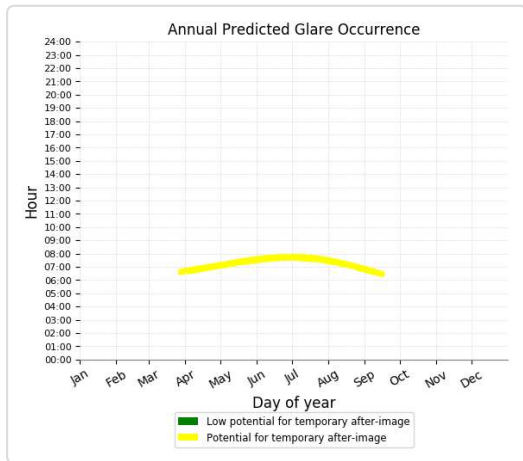
PV array 1 - OP Receptor (OP 15)

No glare found

PV array 1 - OP Receptor (OP 16)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,060 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - OP Receptor (OP 17)

No glare found

PV array 1 - OP Receptor (OP 18)

No glare found

PV array 1 - OP Receptor (OP 19)

No glare found

PV array 1 - OP Receptor (OP 20)

No glare found

PV array 1 - OP Receptor (OP 21)

No glare found

PV array 1 - OP Receptor (OP 22)

No glare found

PV array 1 - OP Receptor (OP 23)

No glare found

PV array 1 - OP Receptor (OP 24)

No glare found

PV array 1 - OP Receptor (OP 25)

No glare found

PV array 1 - OP Receptor (OP 26)

No glare found

PV array 1 - OP Receptor (OP 27)

No glare found

PV array 1 - OP Receptor (OP 28)

No glare found

PV array 1 - OP Receptor (OP 29)

No glare found

PV array 1 - OP Receptor (OP 30)

No glare found

PV array 1 - OP Receptor (OP 31)

No glare found

PV array 1 - OP Receptor (OP 32)

No glare found

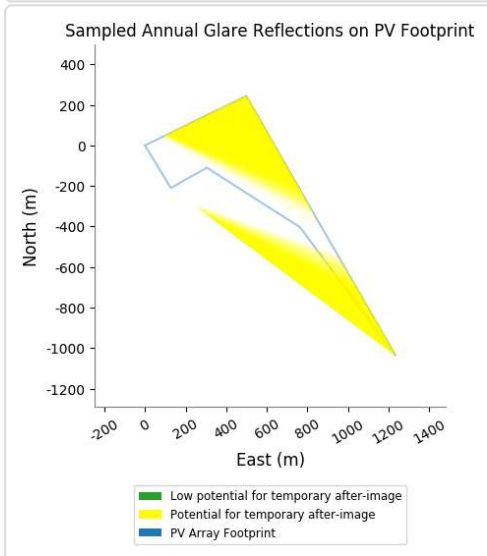
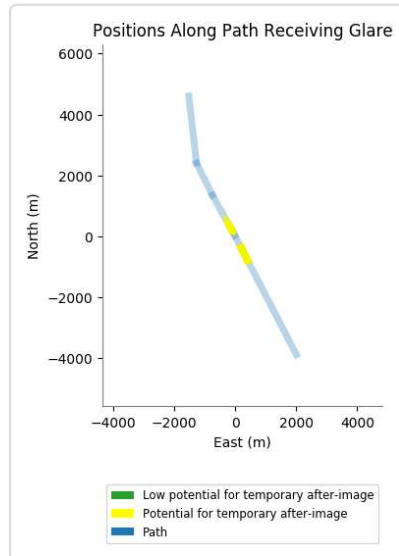
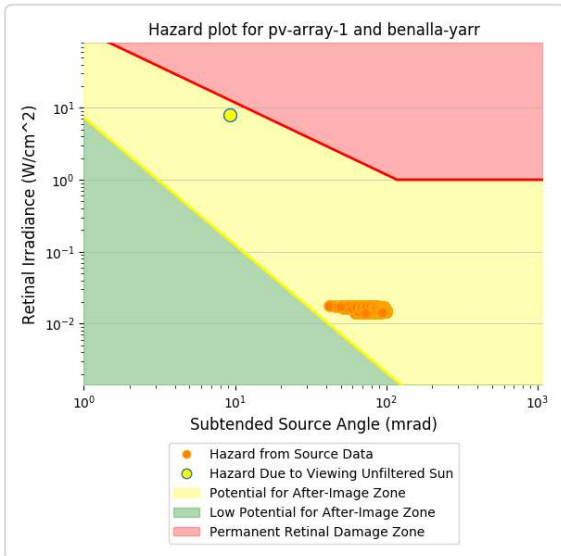
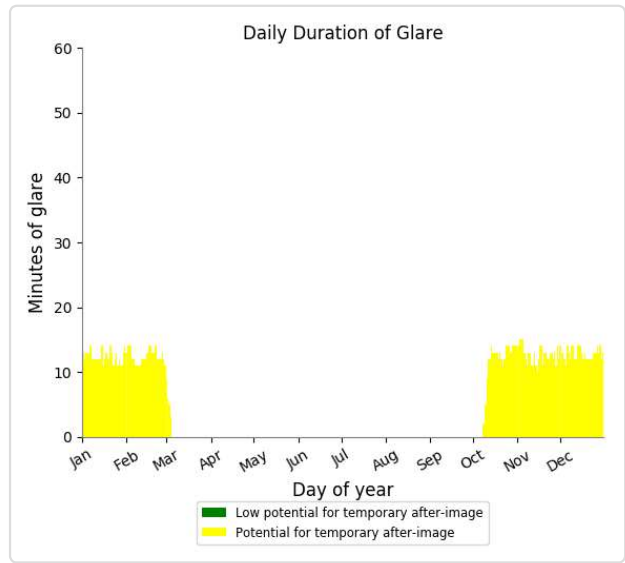
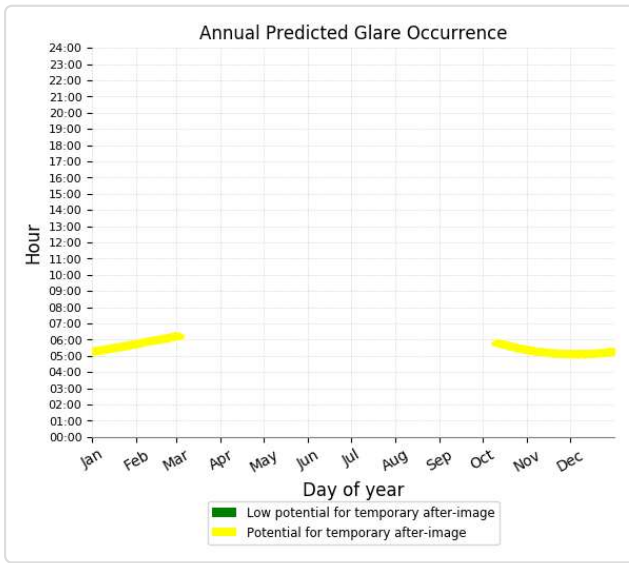
PV array 1 - OP Receptor (OP 33)

No glare found

PV array 1 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,814 minutes of "yellow" glare with potential to cause temporary after-image.



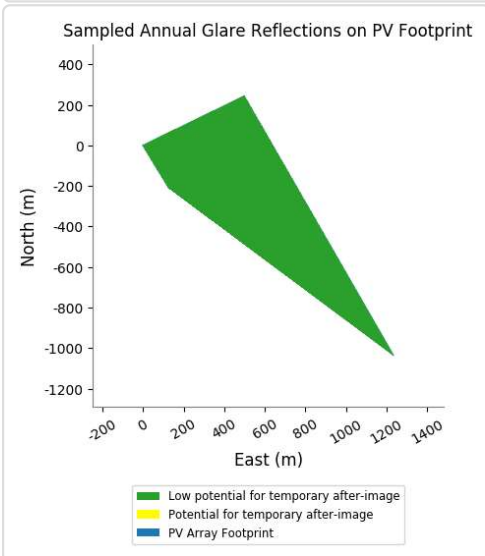
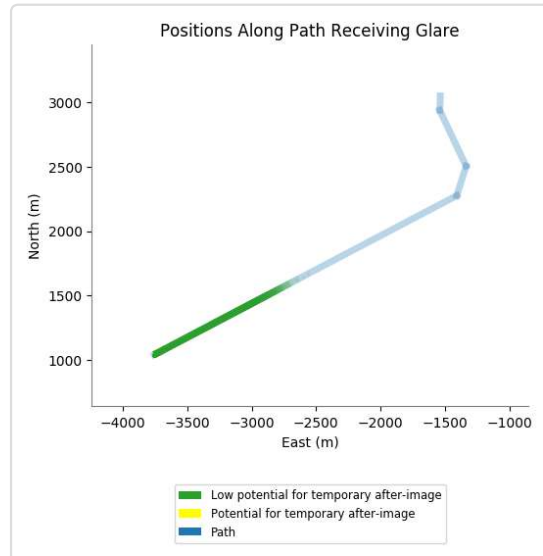
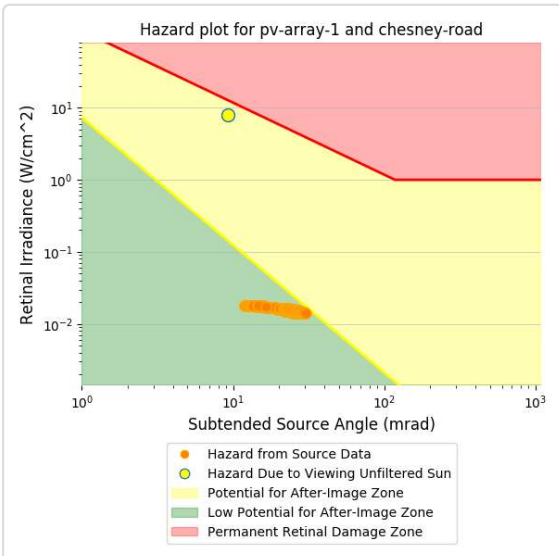
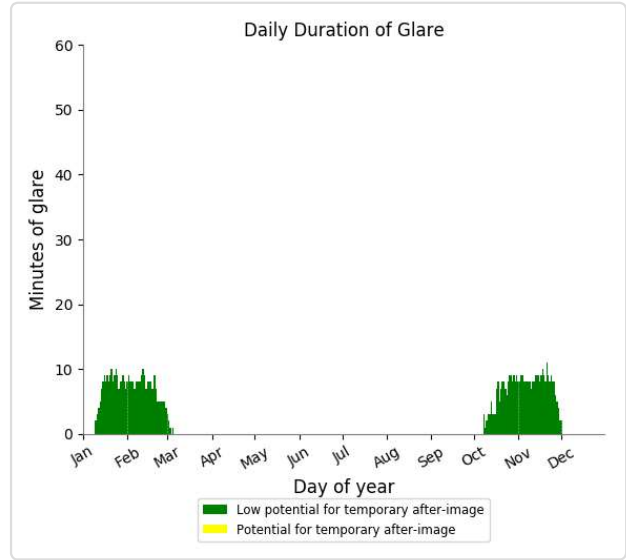
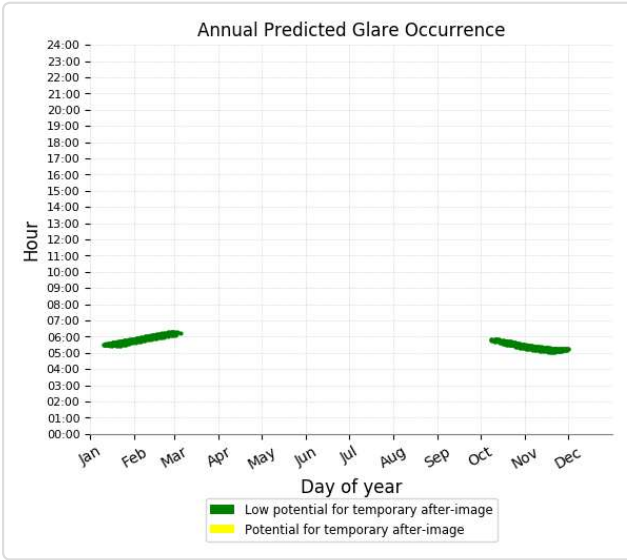
PV array 1 - Route Receptor (Boundary Road)

No glare found

PV array 1 - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

- 757 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - Route Receptor (Dam Wall Rd)

No glare found

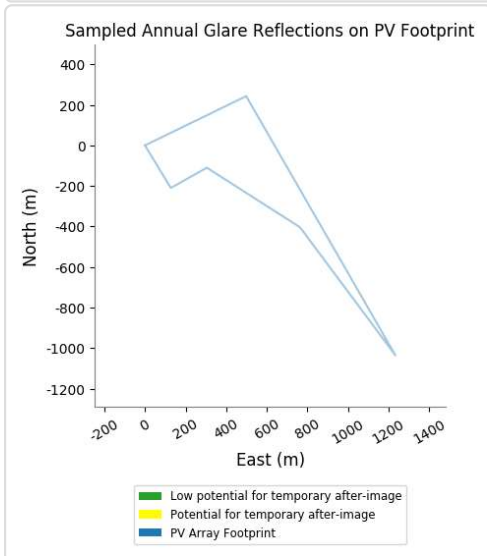
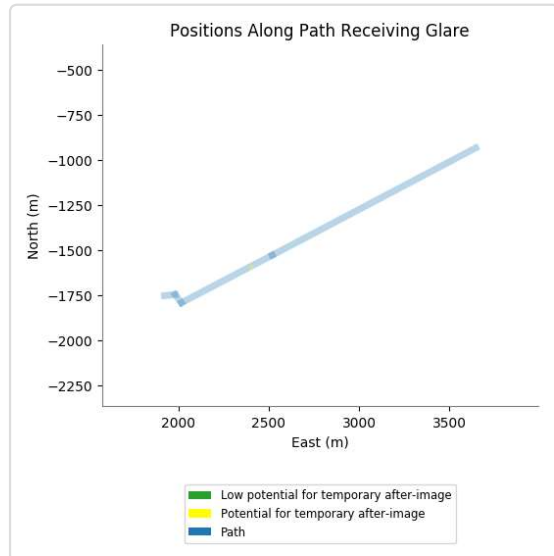
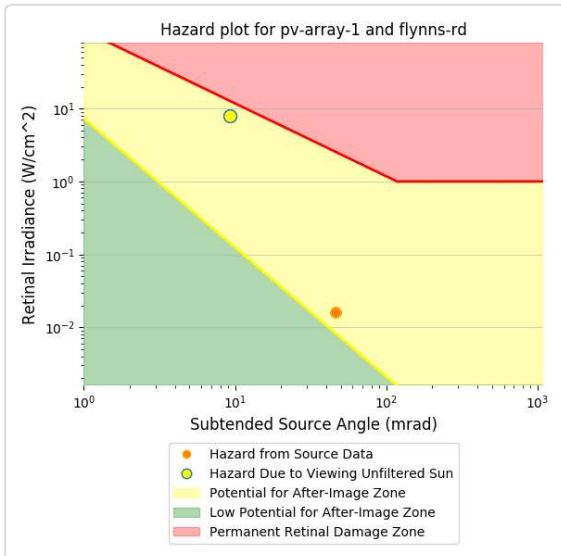
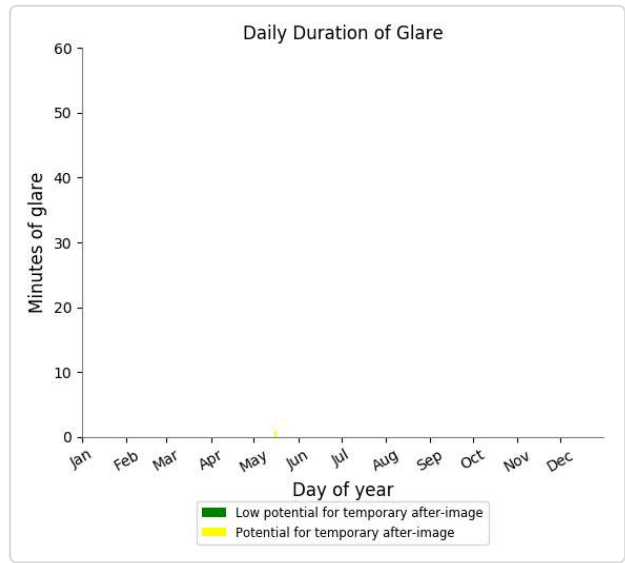
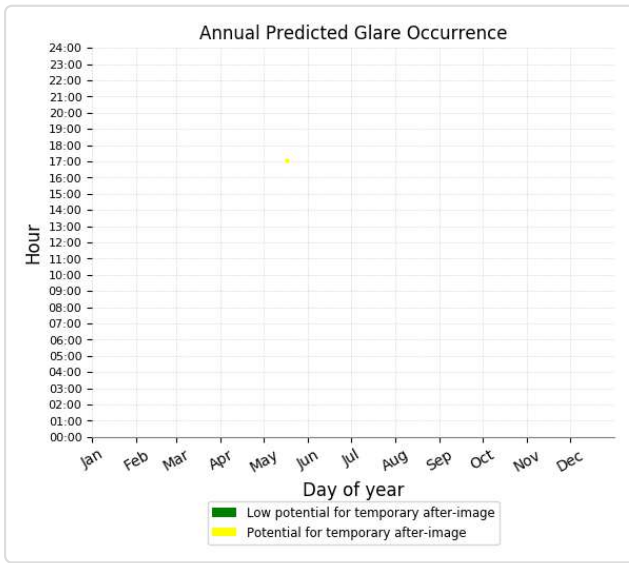
PV array 1 - Route Receptor (Farnley Road)

No glare found

PV array 1 - Route Receptor (Flynn's Rd)

PV array is expected to produce the following glare for receptors at this location:

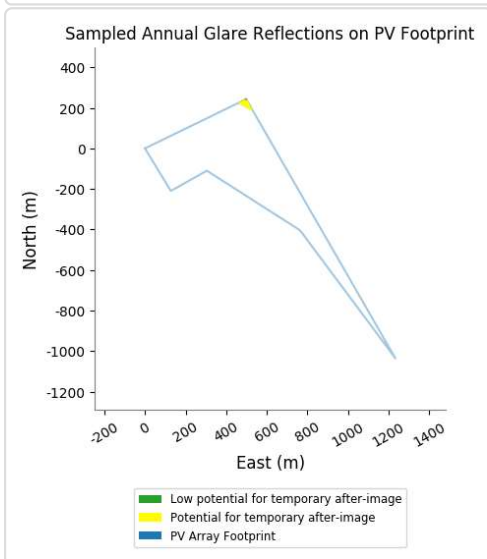
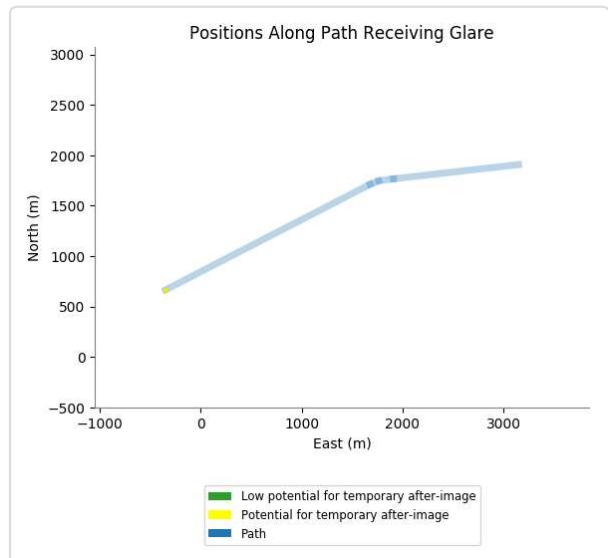
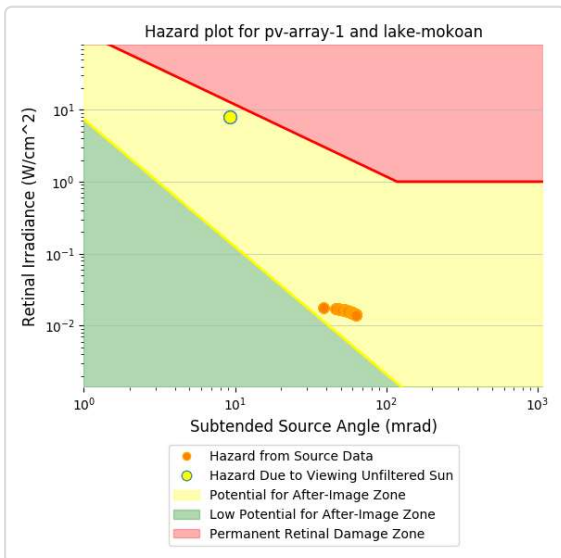
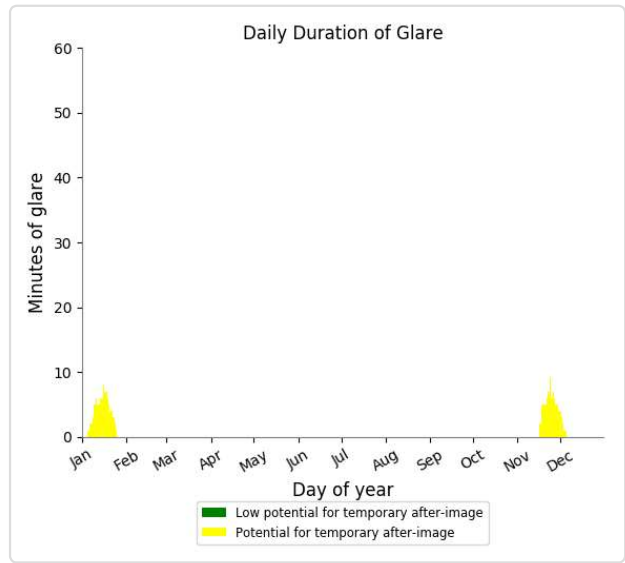
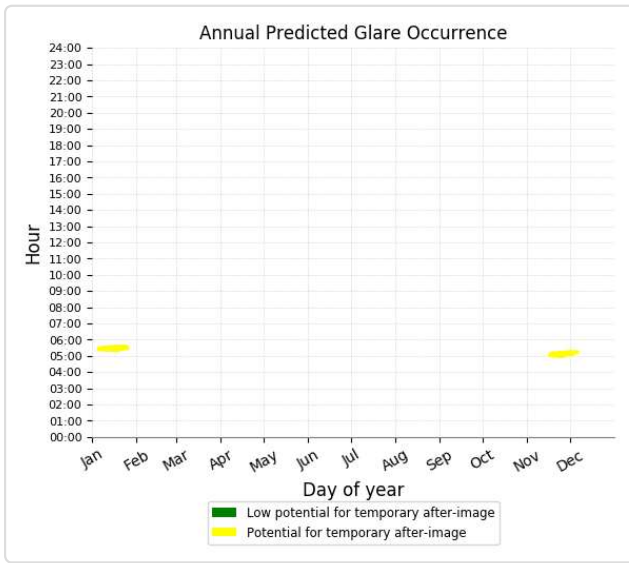
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 177 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - Route Receptor (North Rd)

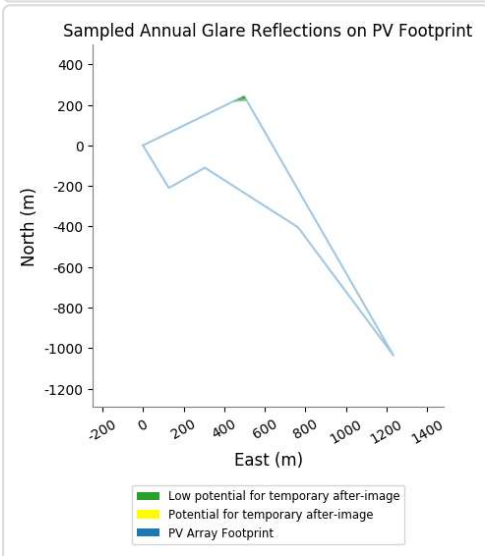
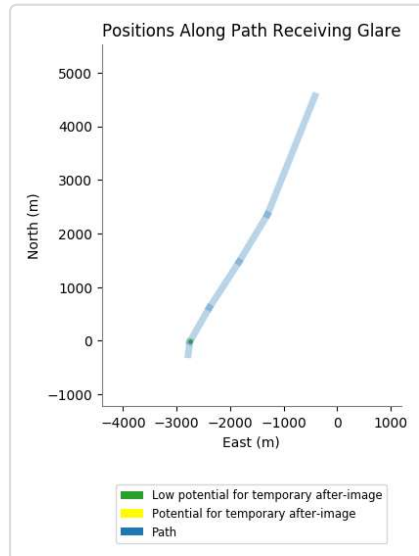
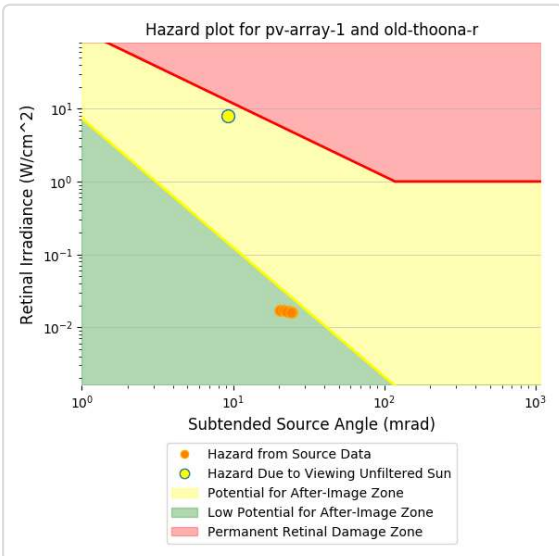
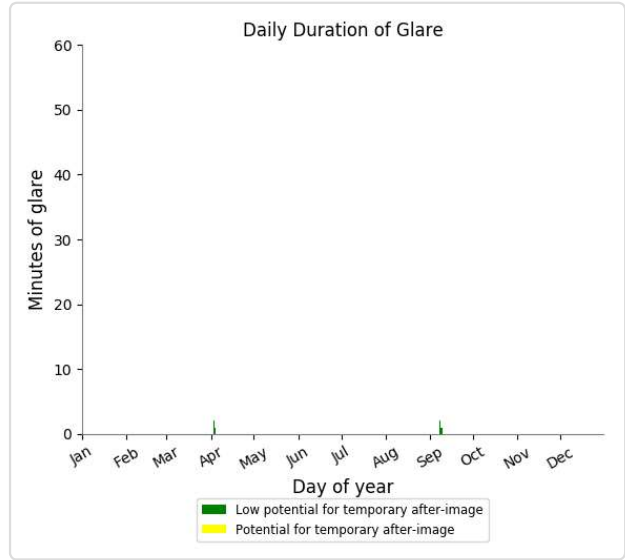
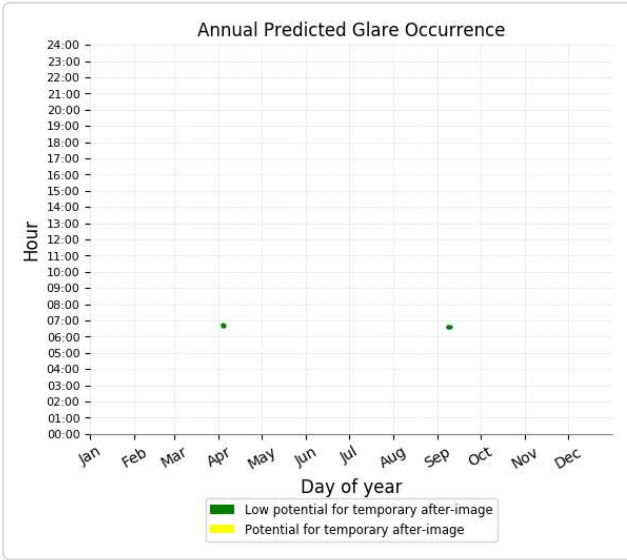
No glare found

PV array 1 - Route Receptor (North Rd - 2)

No glare found

PV array 1 - Route Receptor (Old Thoon Road)

- PV array is expected to produce the following glare for receptors at this location:
- 6 minutes of "green" glare with low potential to cause temporary after-image.
 - 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1 - Route Receptor (Route 11)*No glare found***PV array 1 - Route Receptor (Snowy Ln)***No glare found***PV array 2 - elevated** potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	25
OP: OP 7	26	2148
OP: OP 8	74	1455
OP: OP 9	0	1417
OP: OP 10	3	680
OP: OP 11	0	382
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	2354
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	1271
Route: Boundary Road	0	2137
Route: Chesney Road	347	9
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	802

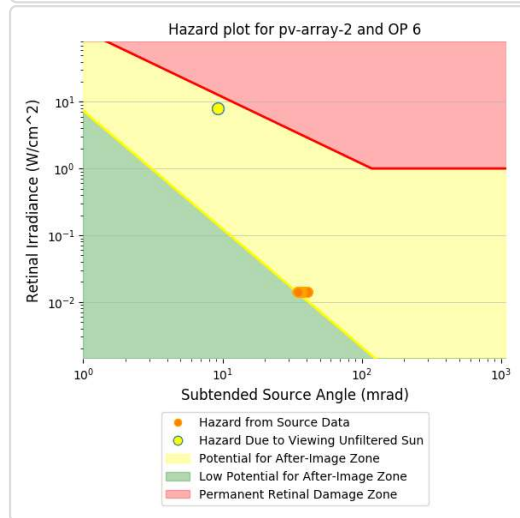
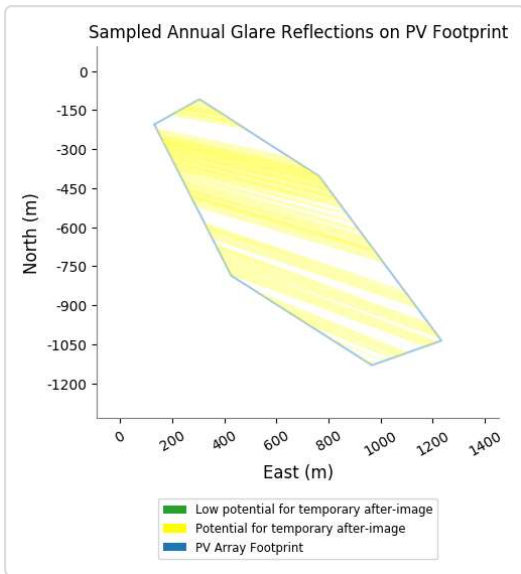
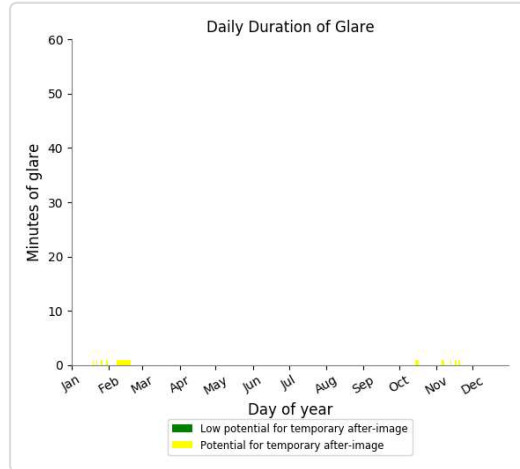
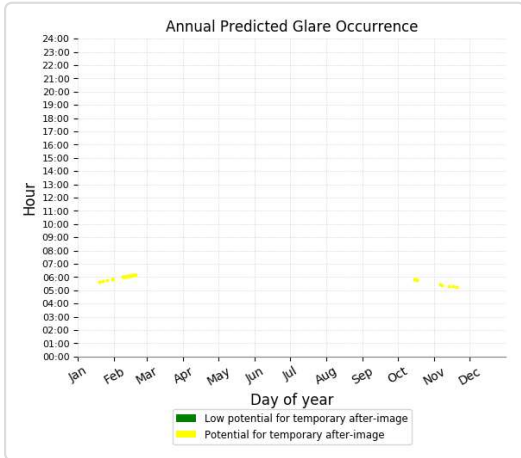
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 2 - elevated - Receptor (FP 1)*No glare found***PV array 2 - elevated - Receptor (FP 2)***No glare found***PV array 2 - elevated - Receptor (FP 3)***No glare found***PV array 2 - elevated - Receptor (FP 4)***No glare found***PV array 2 - elevated - OP Receptor (OP 1)***No glare found***PV array 2 - elevated - OP Receptor (OP 2)***No glare found***PV array 2 - elevated - OP Receptor (OP 3)***No glare found***PV array 2 - elevated - OP Receptor (OP 4)***No glare found***PV array 2 - elevated - OP Receptor (OP 5)***No glare found*

PV array 2 - elevated - OP Receptor (OP 6)

PV array is expected to produce the following glare for receptors at this location:

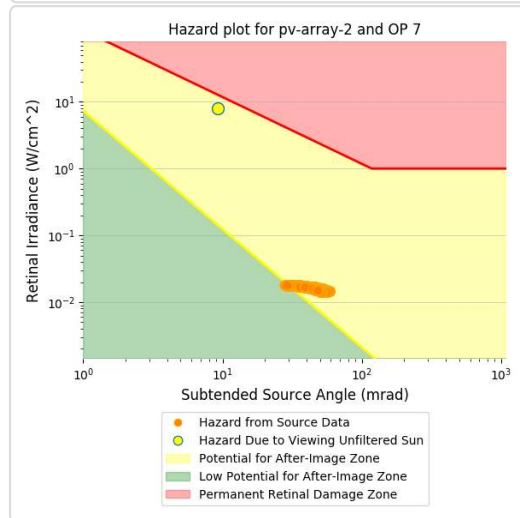
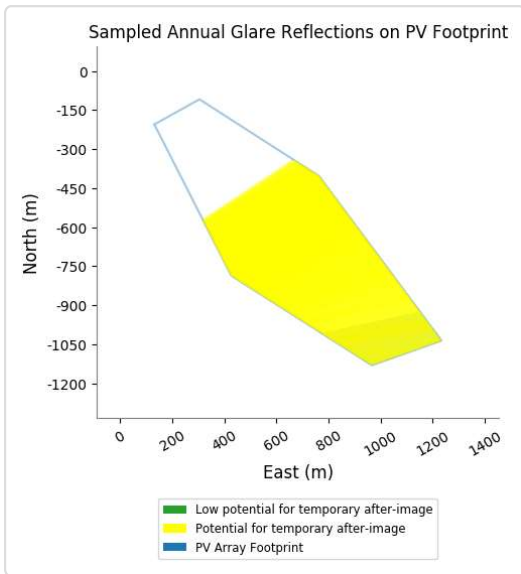
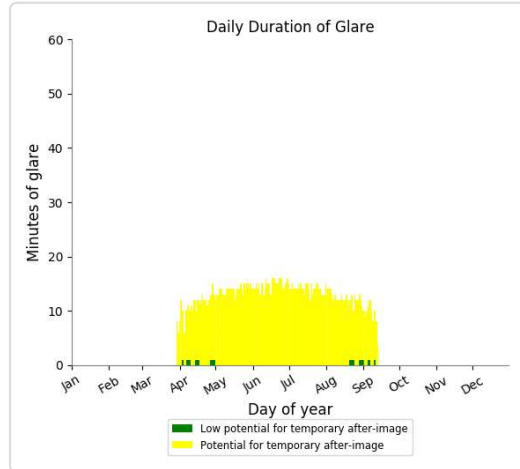
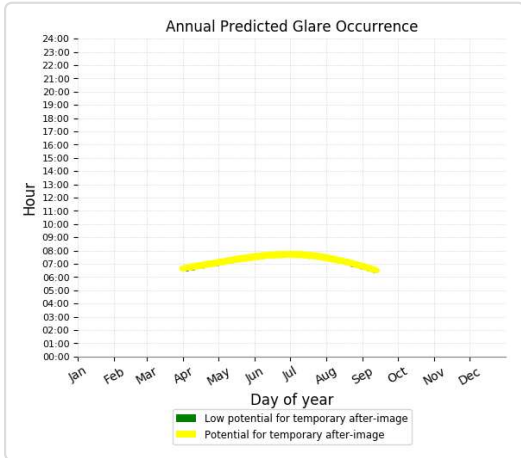
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 25 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 7)

PV array is expected to produce the following glare for receptors at this location:

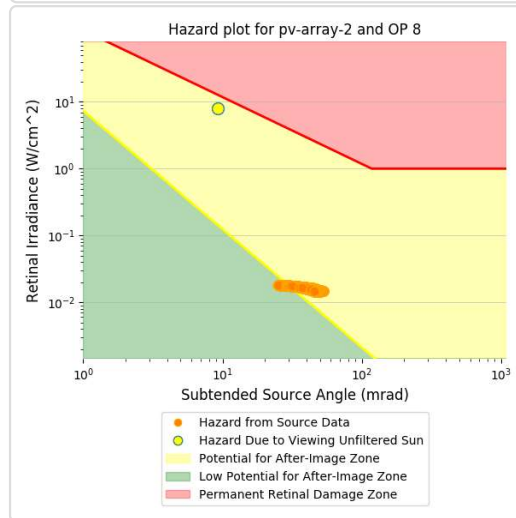
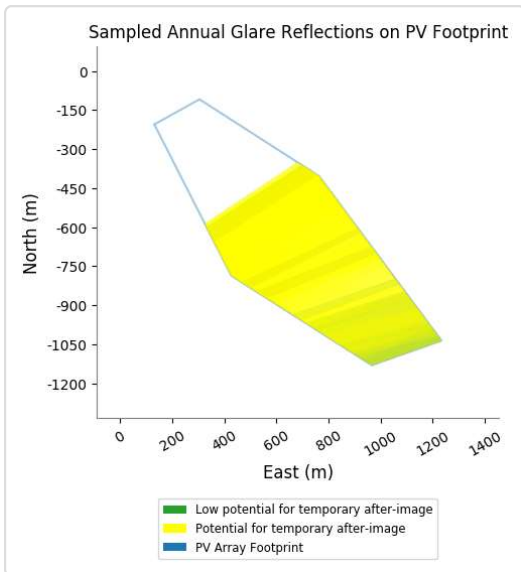
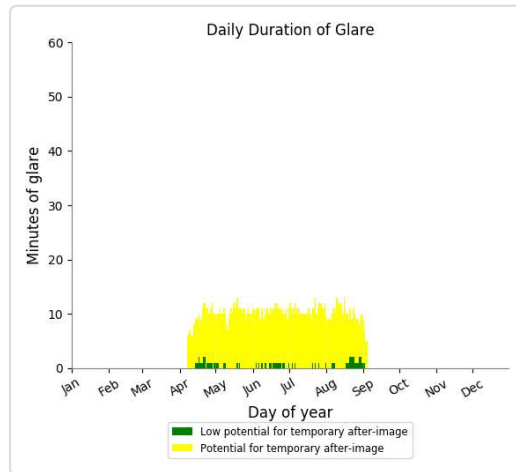
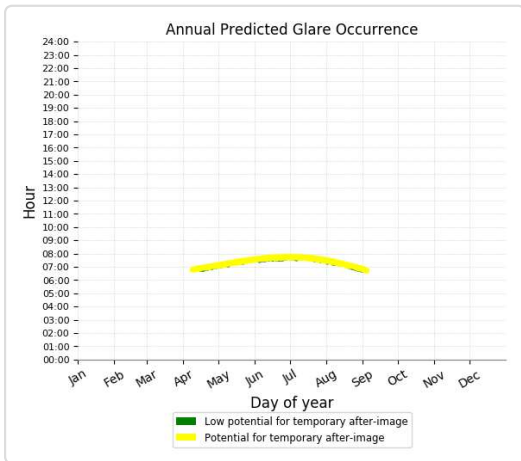
- 26 minutes of "green" glare with low potential to cause temporary after-image.
- 2,148 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 8)

PV array is expected to produce the following glare for receptors at this location:

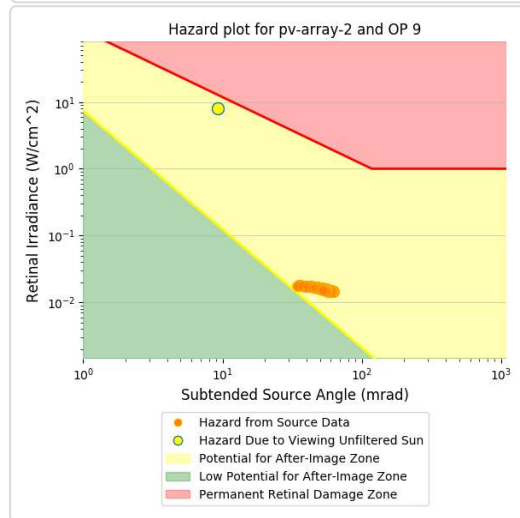
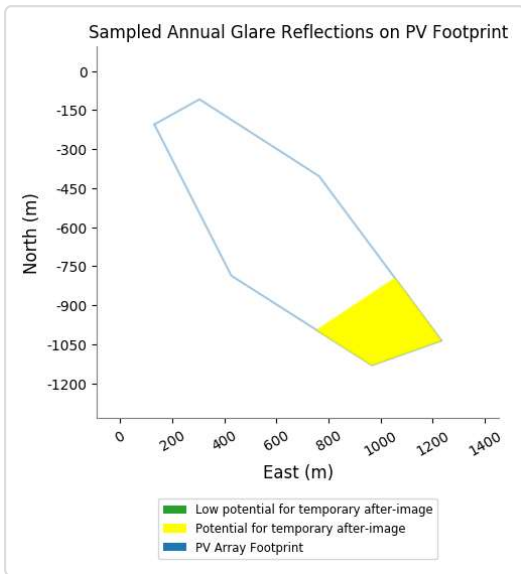
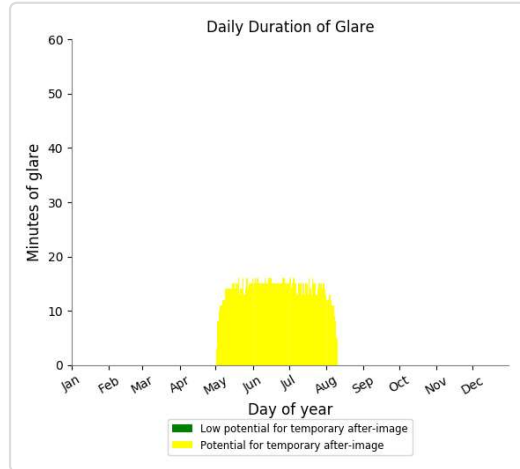
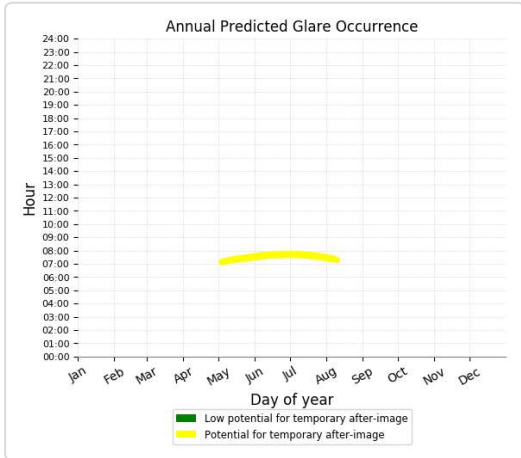
- 74 minutes of "green" glare with low potential to cause temporary after-image.
- 1,455 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 9)

PV array is expected to produce the following glare for receptors at this location:

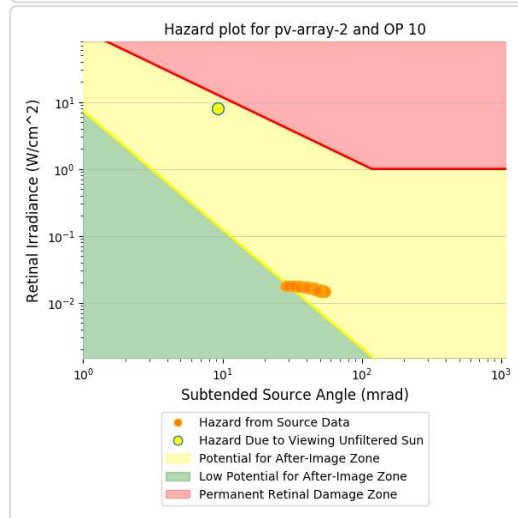
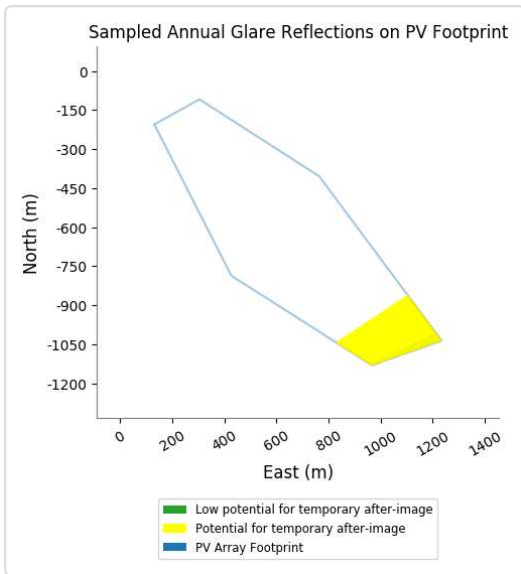
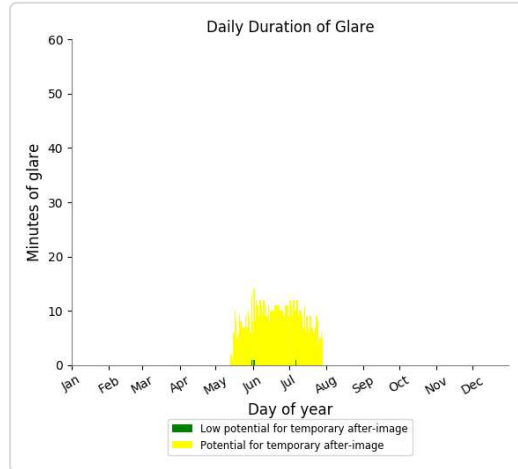
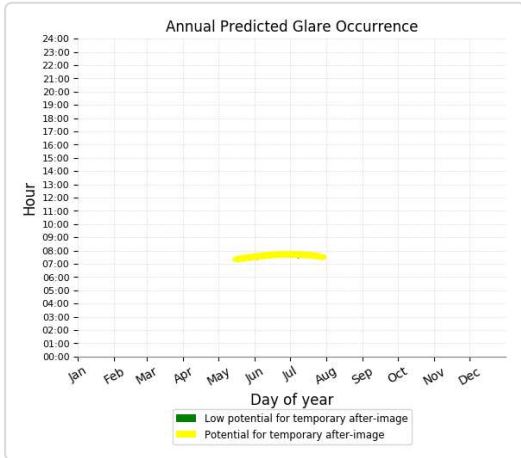
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,417 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 10)

PV array is expected to produce the following glare for receptors at this location:

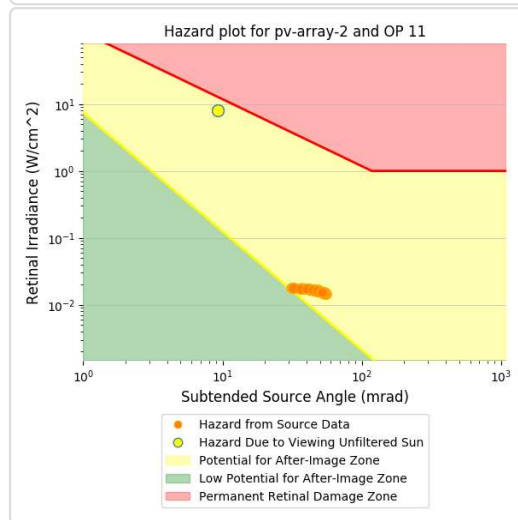
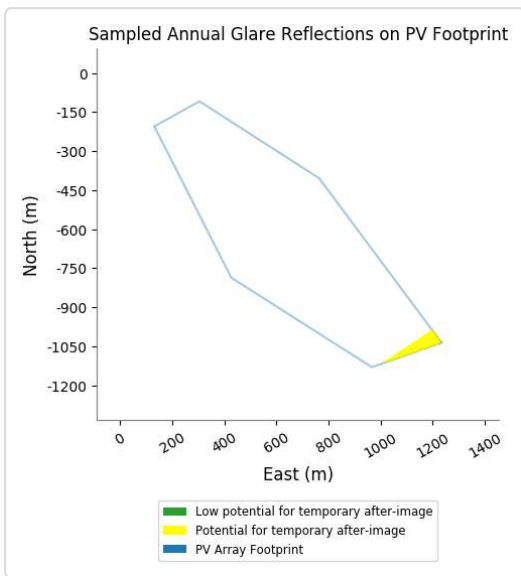
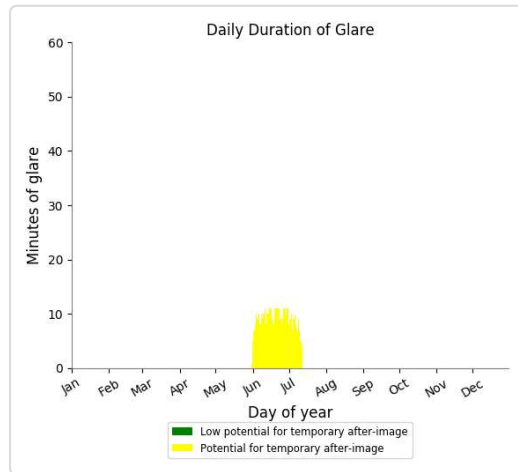
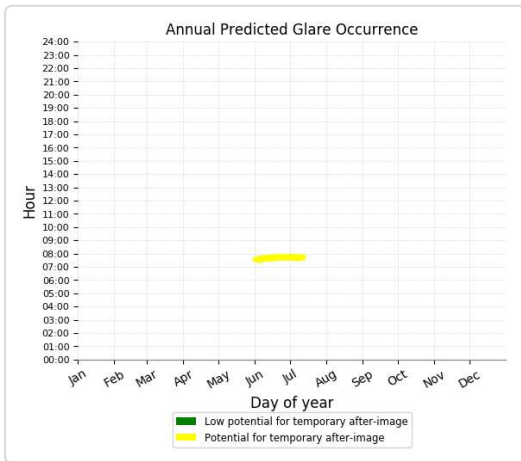
- 3 minutes of "green" glare with low potential to cause temporary after-image.
- 680 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 11)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 382 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 12)

No glare found

PV array 2 - elevated - OP Receptor (OP 13)

No glare found

PV array 2 - elevated - OP Receptor (OP 14)

No glare found

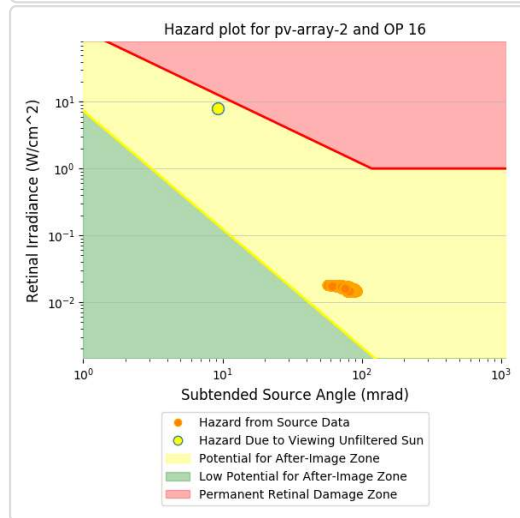
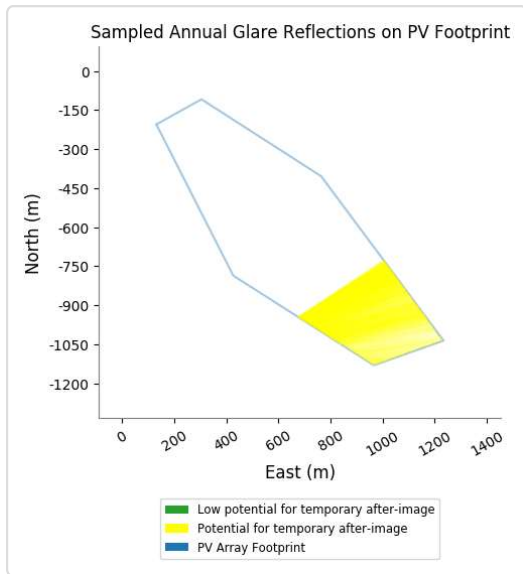
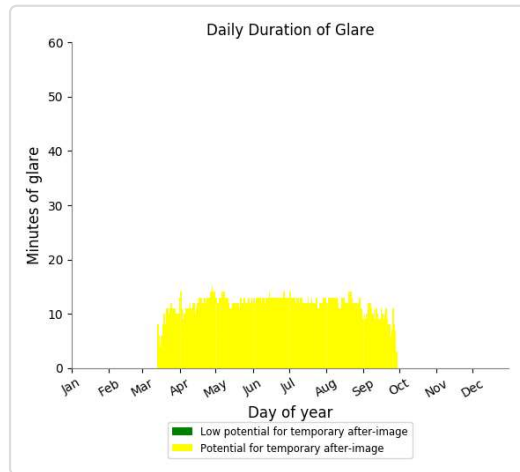
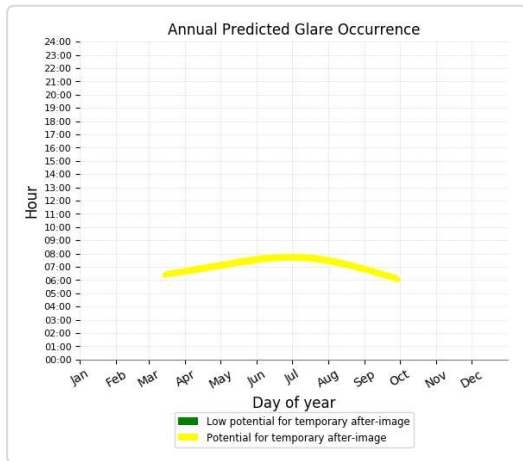
PV array 2 - elevated - OP Receptor (OP 15)

No glare found

PV array 2 - elevated - OP Receptor (OP 16)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,354 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - OP Receptor (OP 17)

No glare found

PV array 2 - elevated - OP Receptor (OP 18)

No glare found

PV array 2 - elevated - OP Receptor (OP 19)

No glare found

PV array 2 - elevated - OP Receptor (OP 20)

No glare found

PV array 2 - elevated - OP Receptor (OP 21)

No glare found

PV array 2 - elevated - OP Receptor (OP 22)

No glare found

PV array 2 - elevated - OP Receptor (OP 23)

No glare found

PV array 2 - elevated - OP Receptor (OP 24)

No glare found

PV array 2 - elevated - OP Receptor (OP 25)

No glare found

PV array 2 - elevated - OP Receptor (OP 26)

No glare found

PV array 2 - elevated - OP Receptor (OP 27)

No glare found

PV array 2 - elevated - OP Receptor (OP 28)

No glare found

PV array 2 - elevated - OP Receptor (OP 29)

No glare found

PV array 2 - elevated - OP Receptor (OP 30)

No glare found

PV array 2 - elevated - OP Receptor (OP 31)

No glare found

PV array 2 - elevated - OP Receptor (OP 32)

No glare found

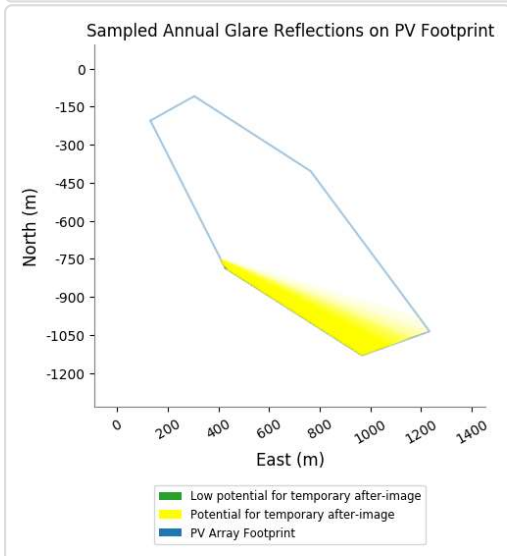
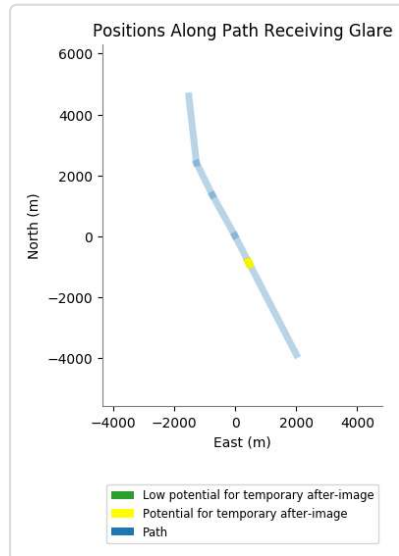
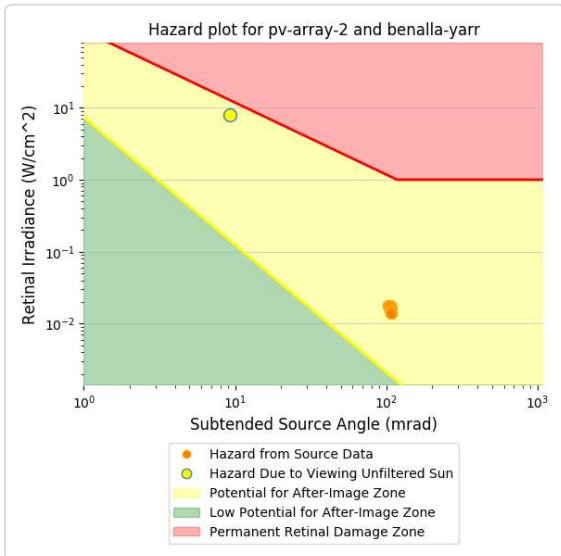
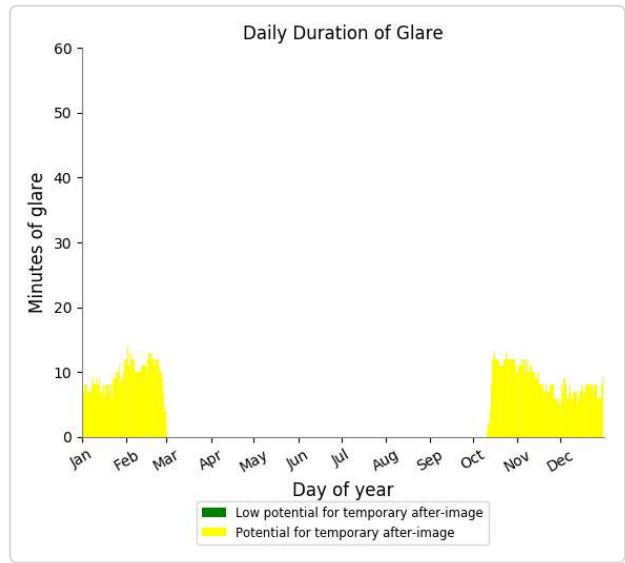
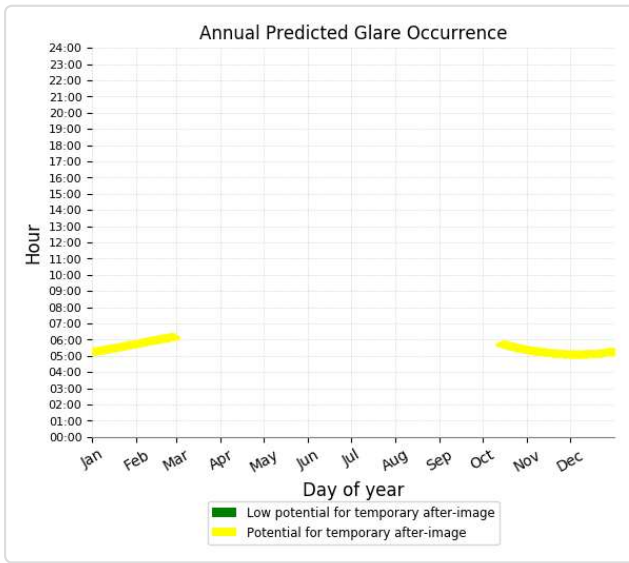
PV array 2 - elevated - OP Receptor (OP 33)

No glare found

PV array 2 - elevated - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

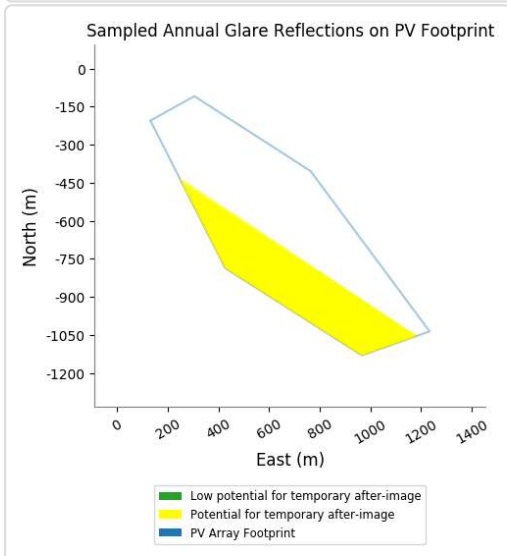
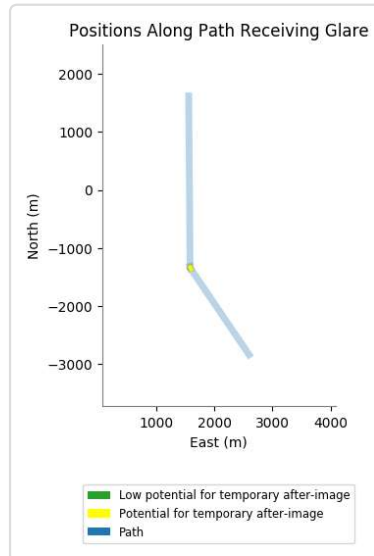
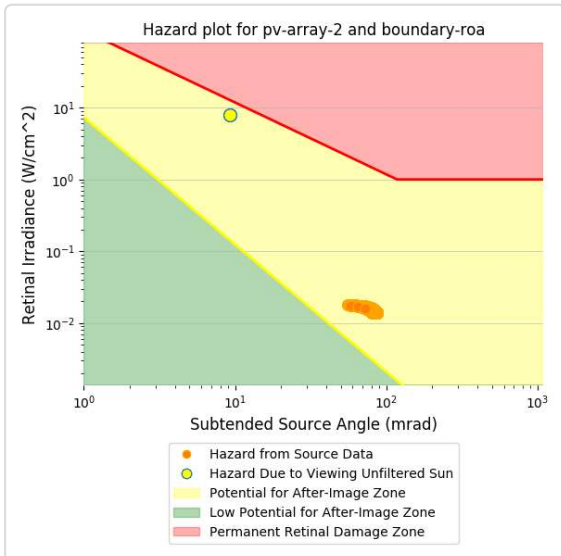
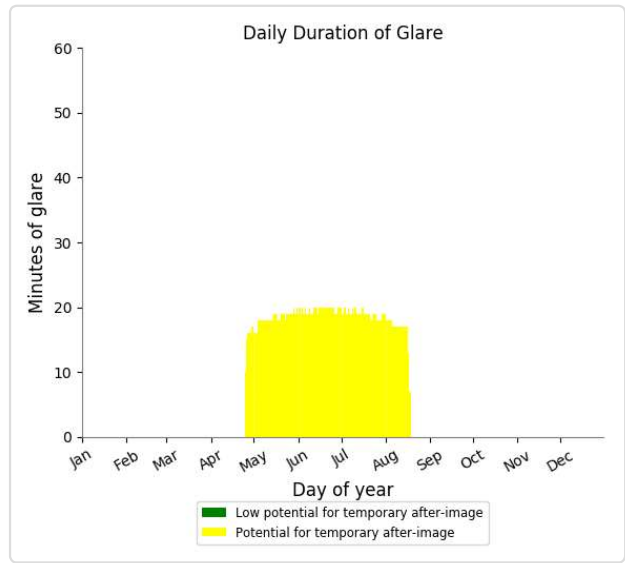
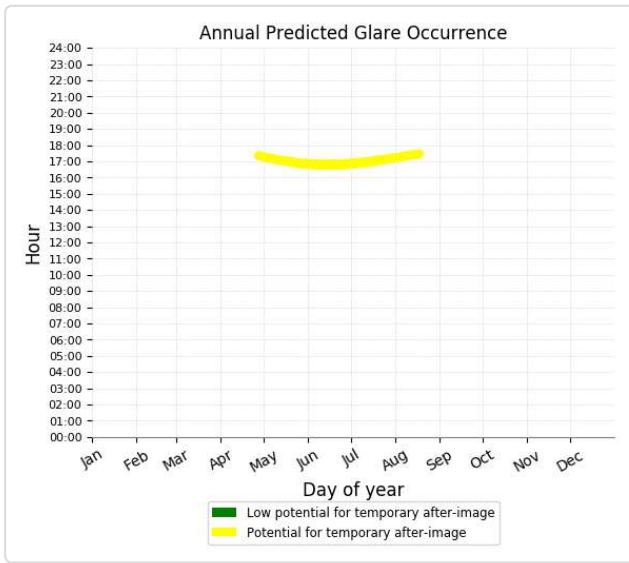
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,271 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - Route Receptor (Boundary Road)

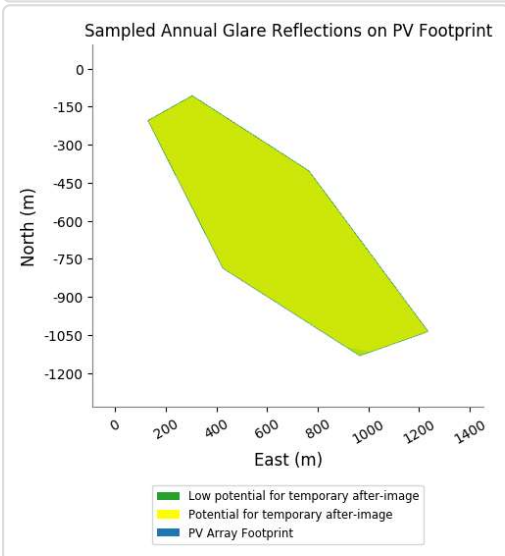
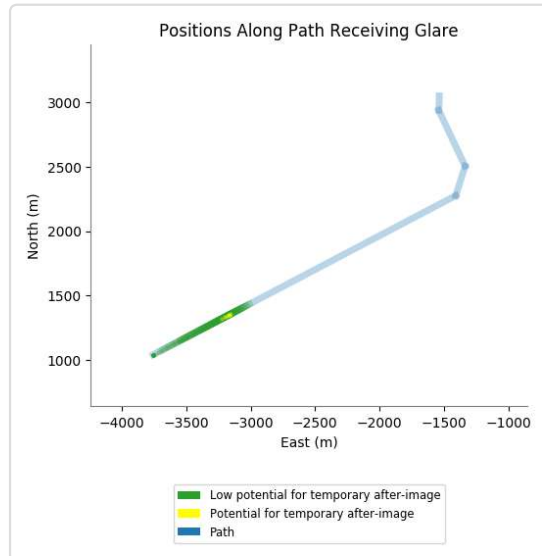
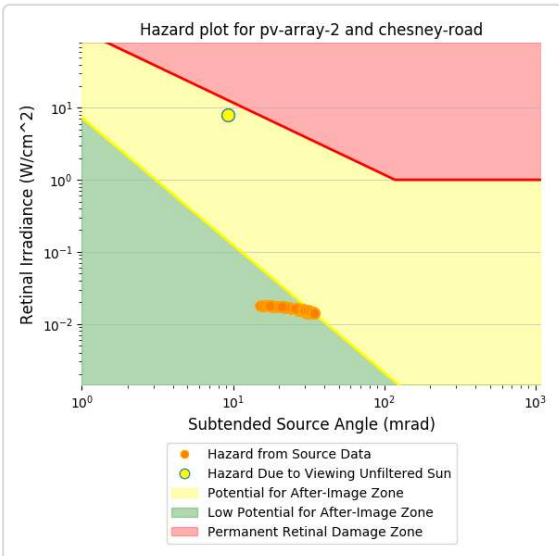
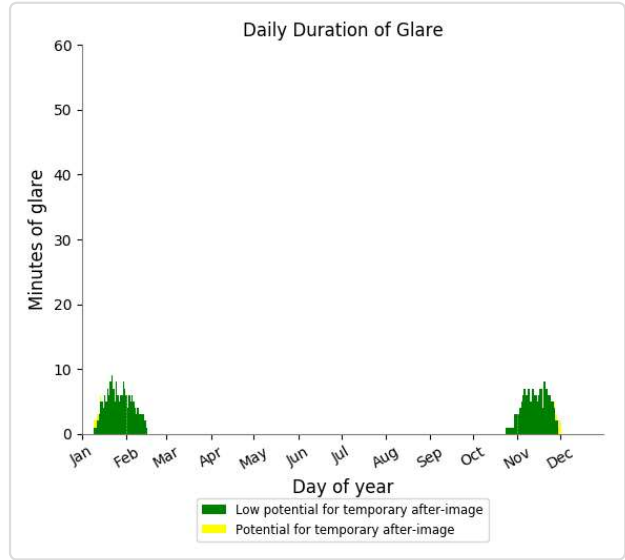
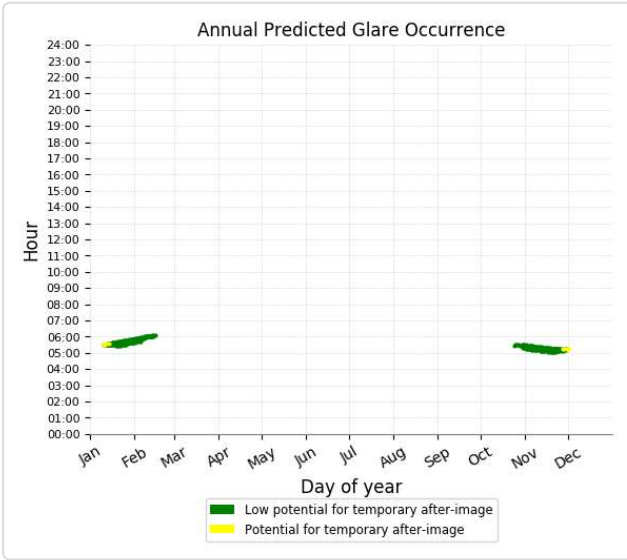
PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,137 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - Route Receptor (Chesney Road)

- PV array is expected to produce the following glare for receptors at this location:
- 347 minutes of "green" glare with low potential to cause temporary after-image.
 - 9 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - Route Receptor (Dam Wall Rd)

No glare found

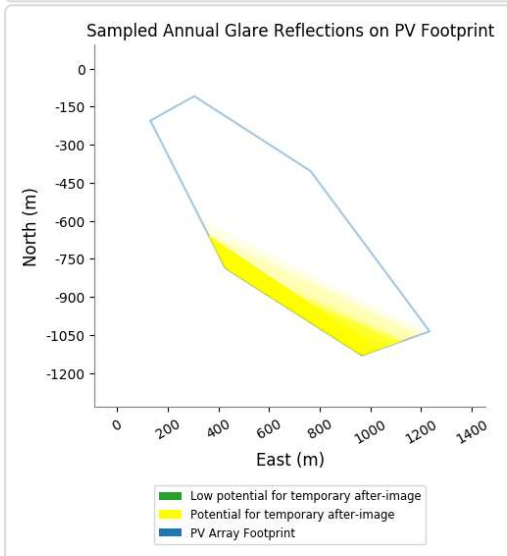
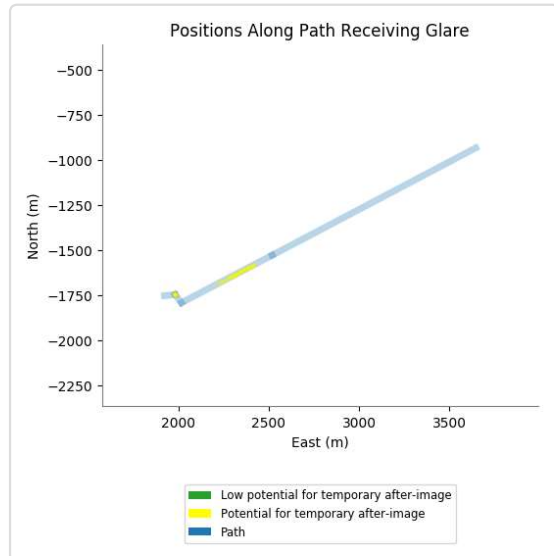
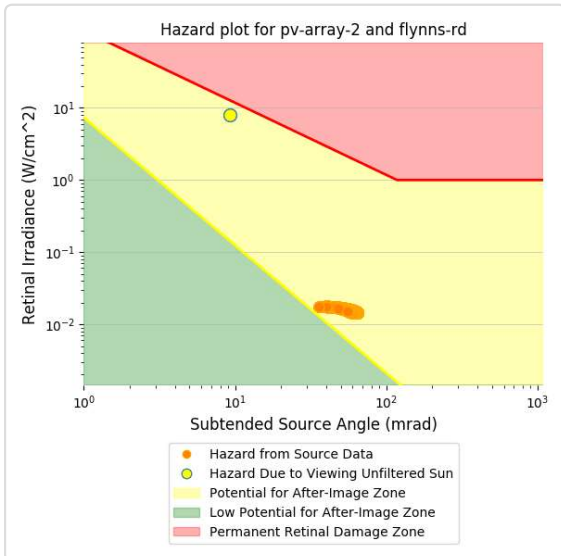
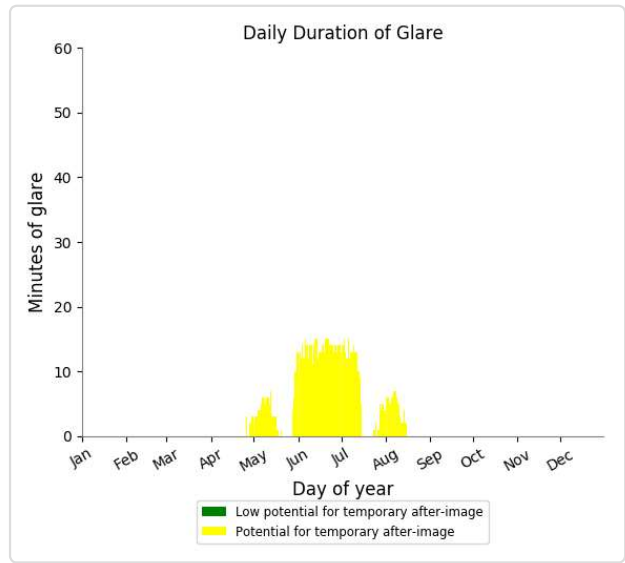
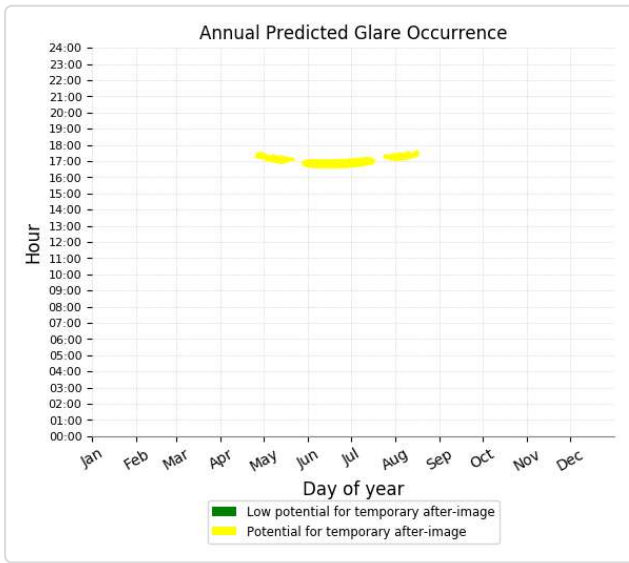
PV array 2 - elevated - Route Receptor (Farnley Road)

No glare found

PV array 2 - elevated - Route Receptor (Flynn's Rd)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 802 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 2 - elevated - Route Receptor (Lake Mokoan Road)

No glare found

PV array 2 - elevated - Route Receptor (North Rd)

No glare found

PV array 2 - elevated - Route Receptor (North Rd - 2)

No glare found

PV array 2 - elevated - Route Receptor (Old Thoona Road)

No glare found

PV array 2 - elevated - Route Receptor (Route 11)

No glare found

PV array 2 - elevated - Route Receptor (Snowy Ln)

No glare found

PV array 3 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	1377	0
OP: OP 7	181	2087
OP: OP 8	447	1719
OP: OP 9	0	2778
OP: OP 10	101	1981
OP: OP 11	0	1964
OP: OP 12	18	1410
OP: OP 13	0	1532
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	5529
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0

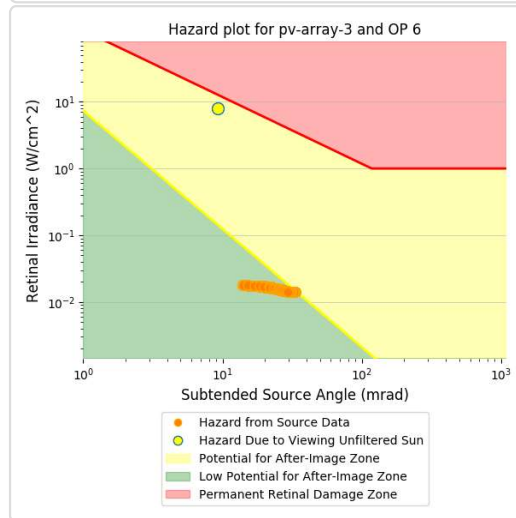
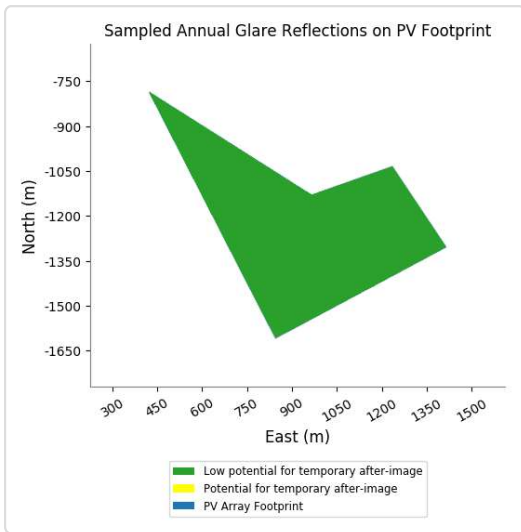
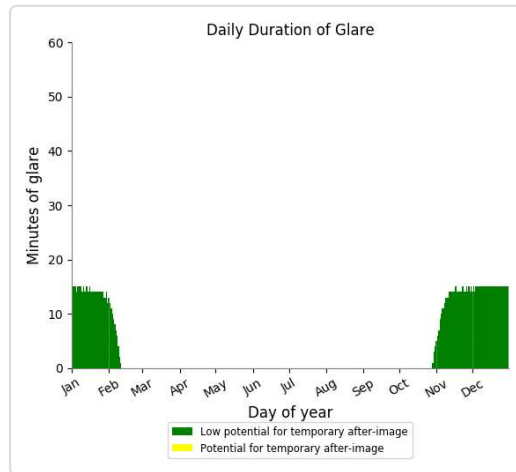
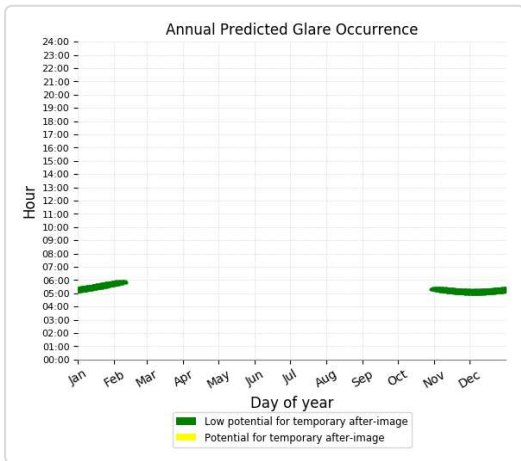
OP: OP 29	0	25
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	7309
Route: Boundary Road	0	15
Route: Chesney Road	493	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	23	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	16
Route: Snowy Ln	0	0

PV array 3 - Receptor (FP 1)*No glare found***PV array 3 - Receptor (FP 2)***No glare found***PV array 3 - Receptor (FP 3)***No glare found***PV array 3 - Receptor (FP 4)***No glare found***PV array 3 - OP Receptor (OP 1)***No glare found***PV array 3 - OP Receptor (OP 2)***No glare found***PV array 3 - OP Receptor (OP 3)***No glare found***PV array 3 - OP Receptor (OP 4)***No glare found***PV array 3 - OP Receptor (OP 5)***No glare found*

PV array 3 - OP Receptor (OP 6)

PV array is expected to produce the following glare for receptors at this location:

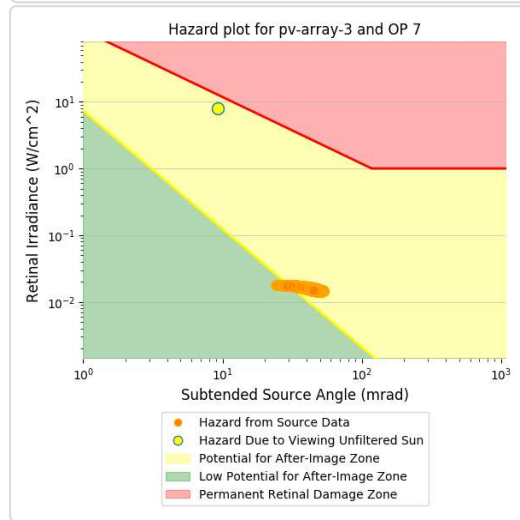
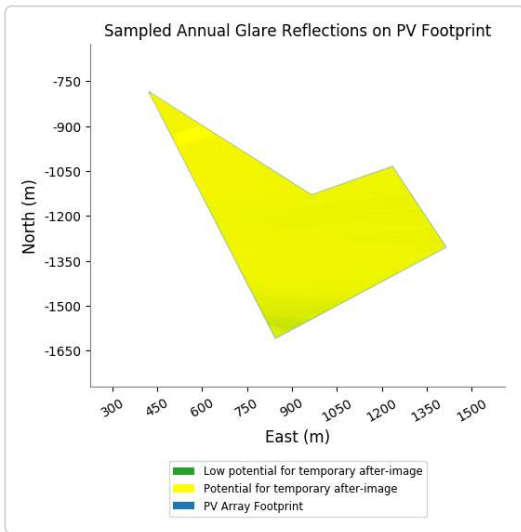
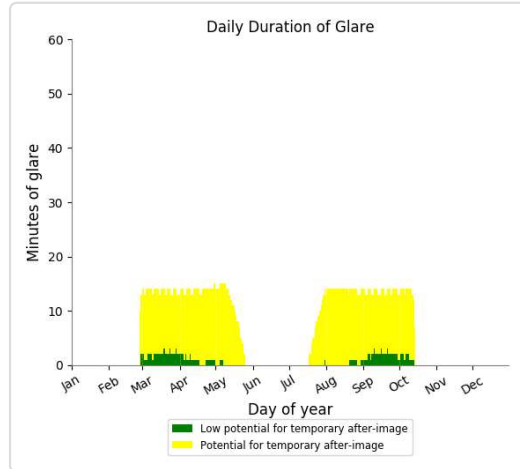
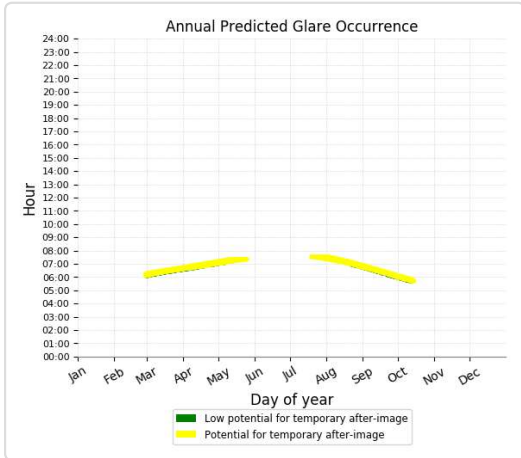
- 1,377 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 7)

PV array is expected to produce the following glare for receptors at this location:

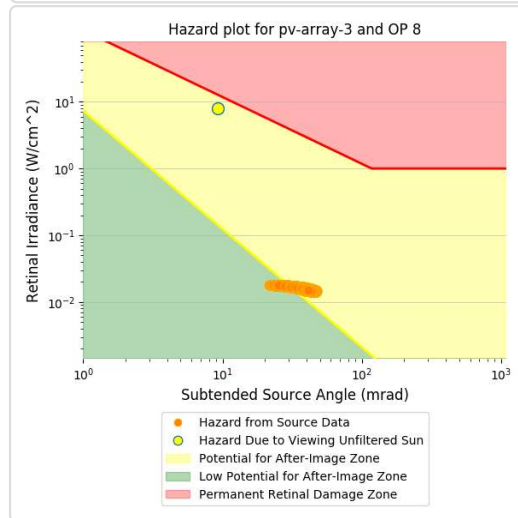
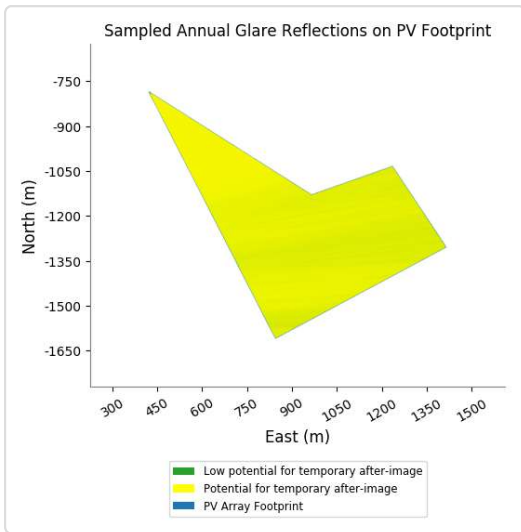
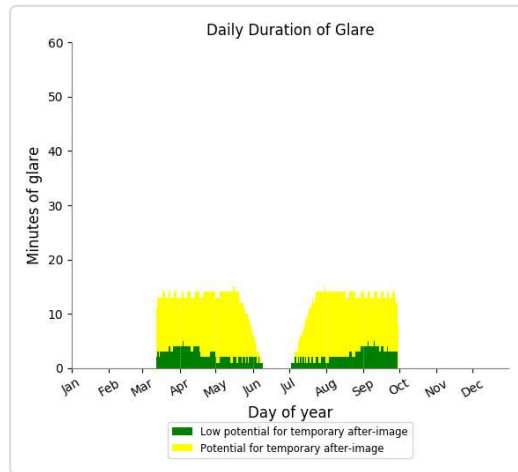
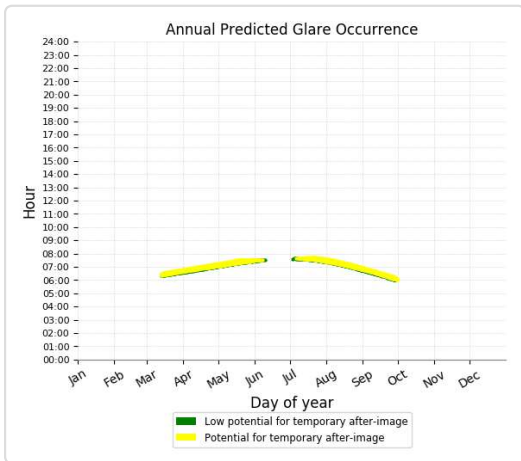
- 181 minutes of "green" glare with low potential to cause temporary after-image.
- 2,087 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 8)

PV array is expected to produce the following glare for receptors at this location:

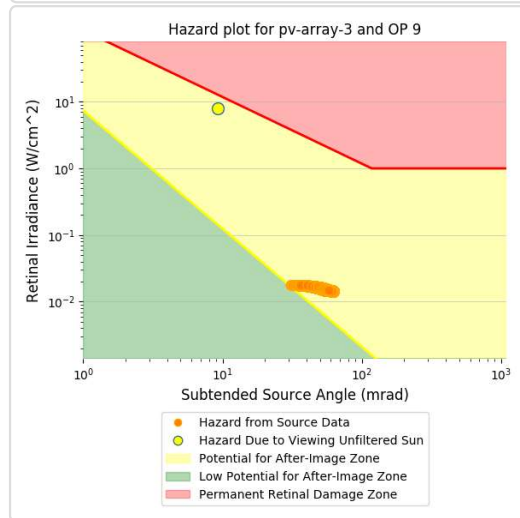
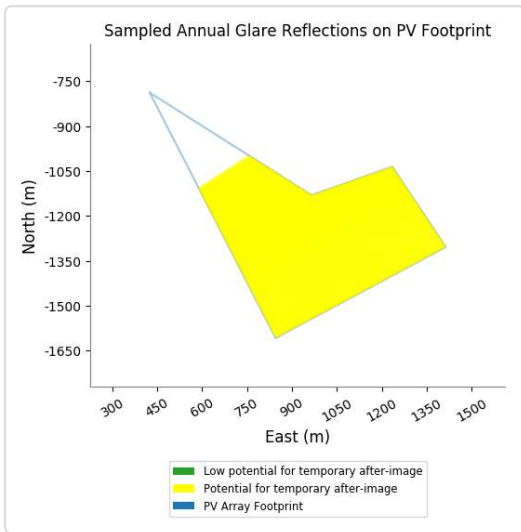
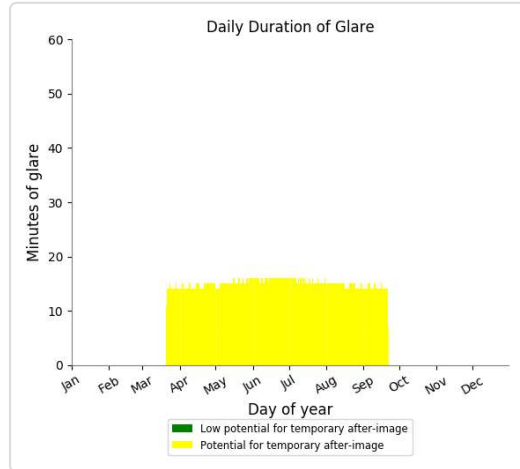
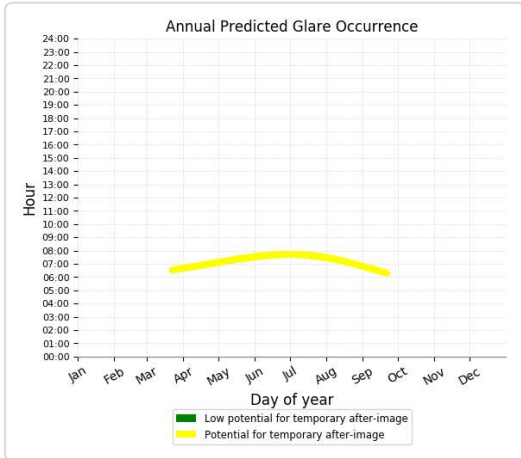
- 447 minutes of "green" glare with low potential to cause temporary after-image.
- 1,719 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 9)

PV array is expected to produce the following glare for receptors at this location:

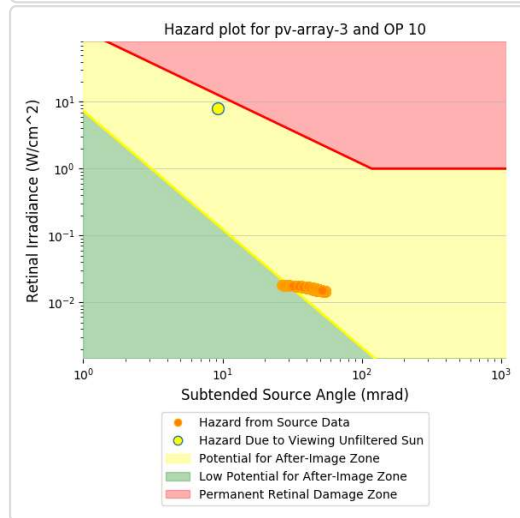
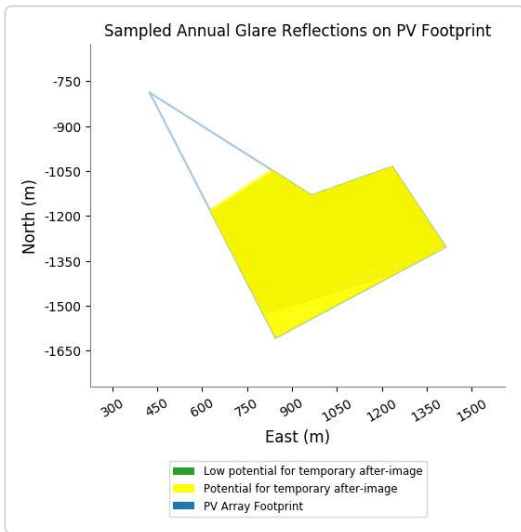
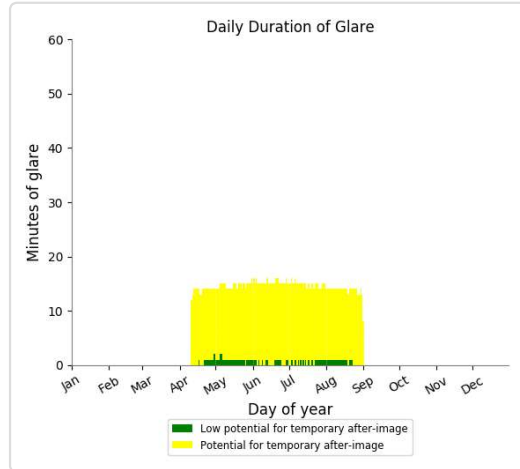
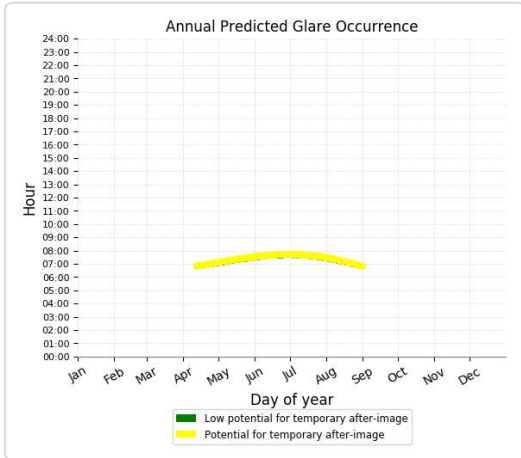
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,778 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 10)

PV array is expected to produce the following glare for receptors at this location:

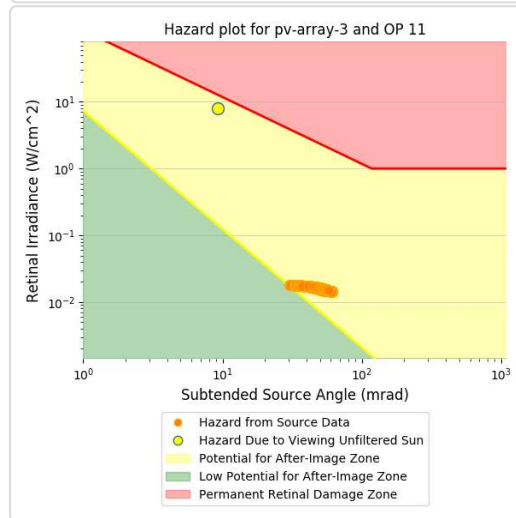
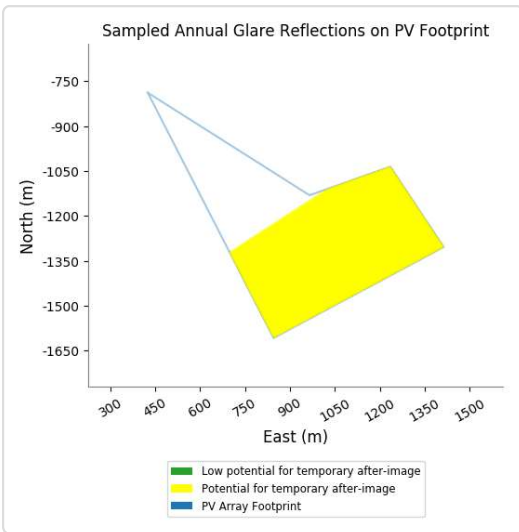
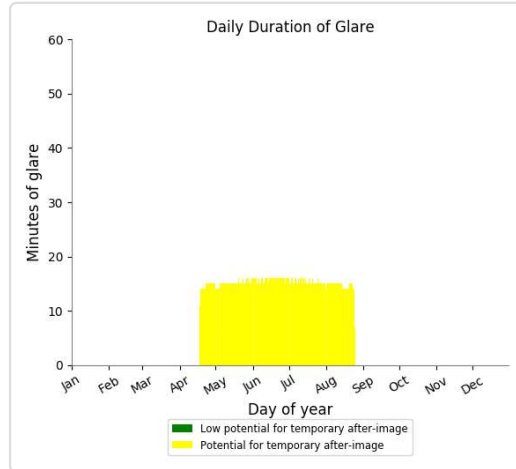
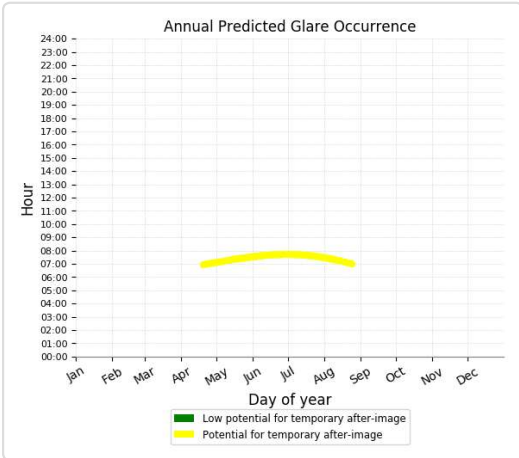
- 101 minutes of "green" glare with low potential to cause temporary after-image.
- 1,981 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 11)

PV array is expected to produce the following glare for receptors at this location:

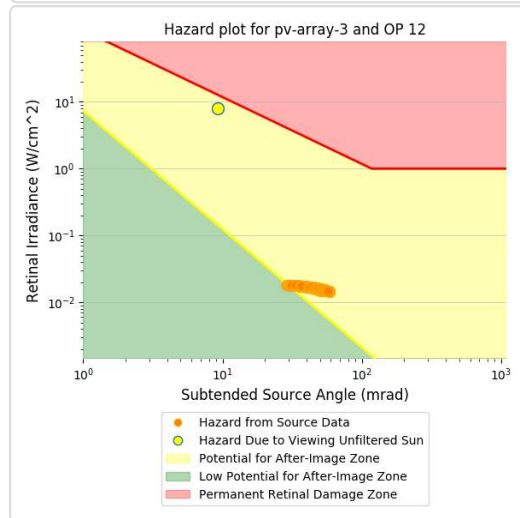
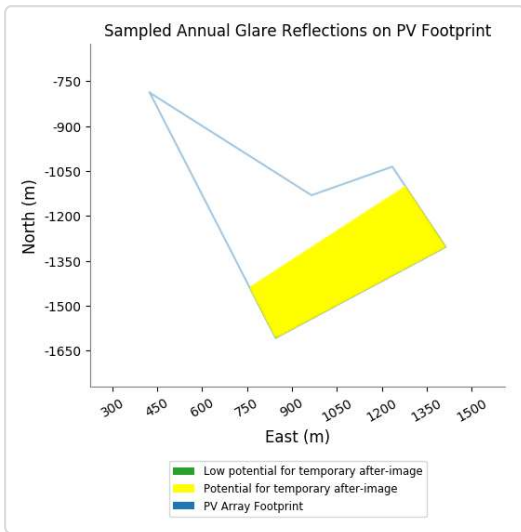
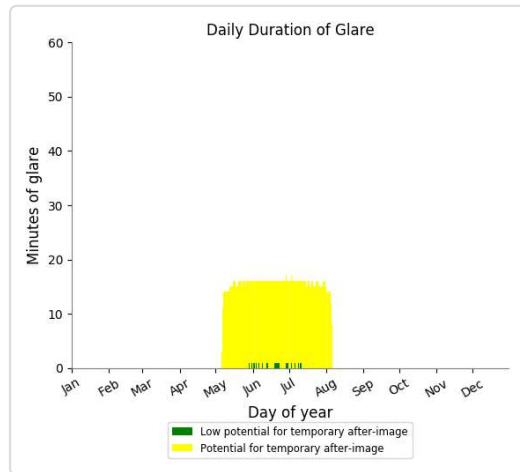
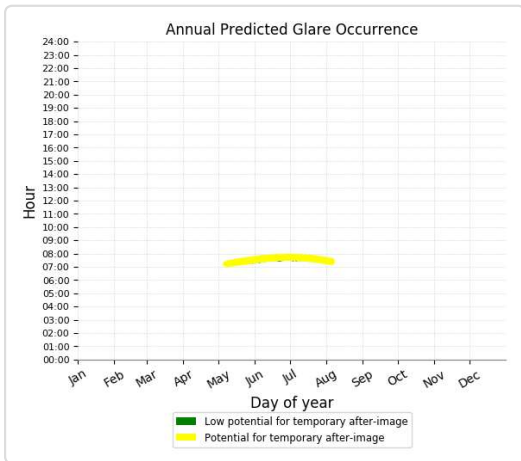
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,964 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 12)

PV array is expected to produce the following glare for receptors at this location:

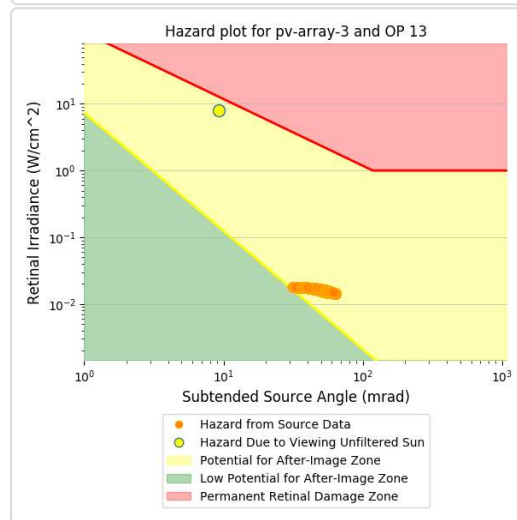
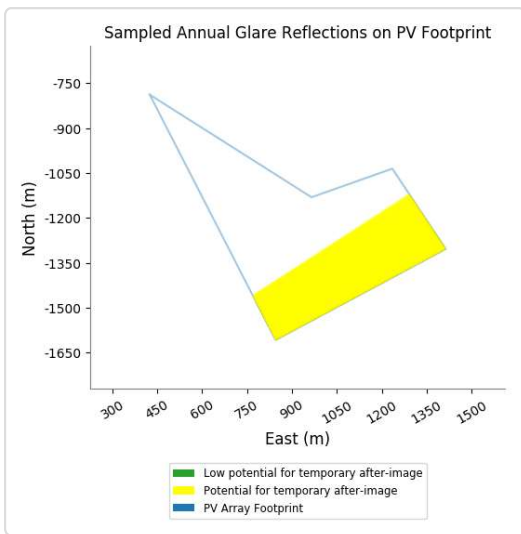
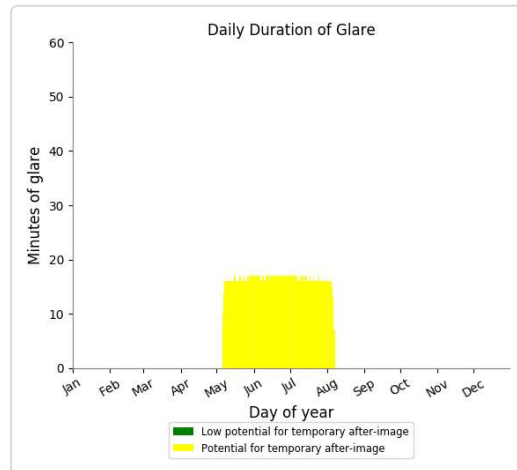
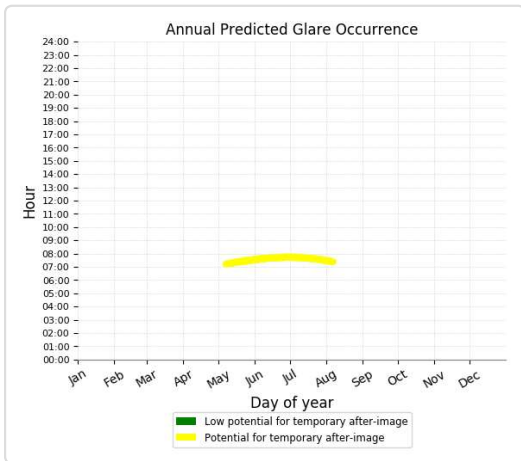
- 18 minutes of "green" glare with low potential to cause temporary after-image.
- 1,410 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 13)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,532 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 14)

No glare found

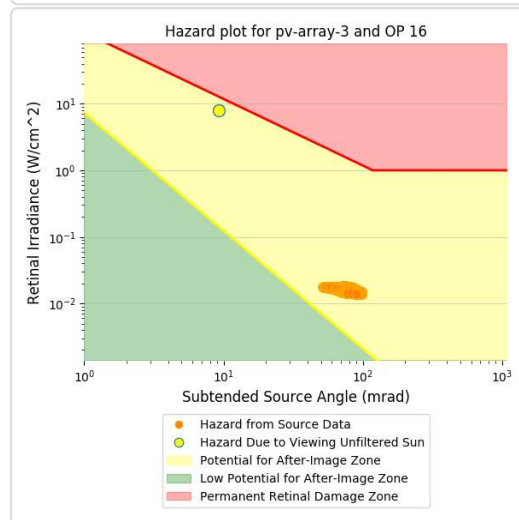
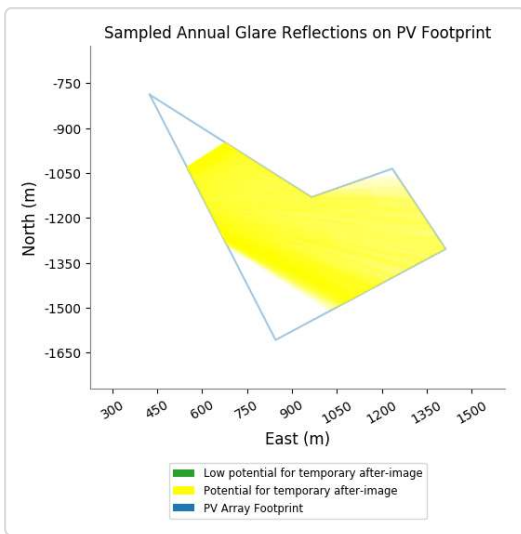
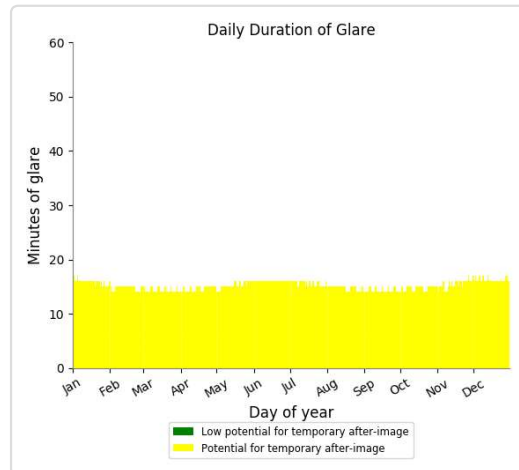
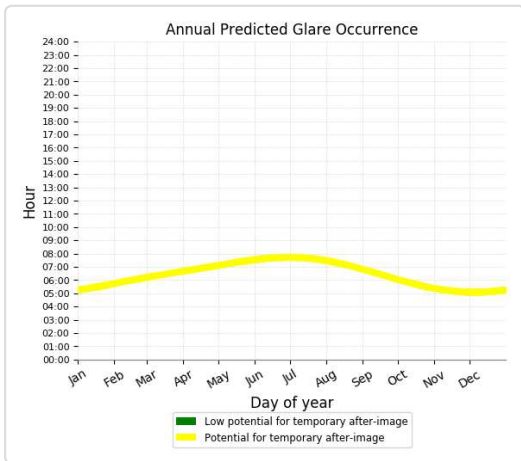
PV array 3 - OP Receptor (OP 15)

No glare found

PV array 3 - OP Receptor (OP 16)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 5,529 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 17)

No glare found

PV array 3 - OP Receptor (OP 18)

No glare found

PV array 3 - OP Receptor (OP 19)

No glare found

PV array 3 - OP Receptor (OP 20)

No glare found

PV array 3 - OP Receptor (OP 21)

No glare found

PV array 3 - OP Receptor (OP 22)

No glare found

PV array 3 - OP Receptor (OP 23)

No glare found

PV array 3 - OP Receptor (OP 24)

No glare found

PV array 3 - OP Receptor (OP 25)

No glare found

PV array 3 - OP Receptor (OP 26)

No glare found

PV array 3 - OP Receptor (OP 27)

No glare found

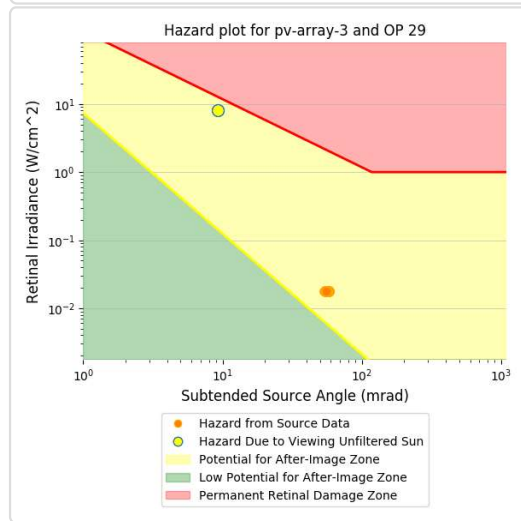
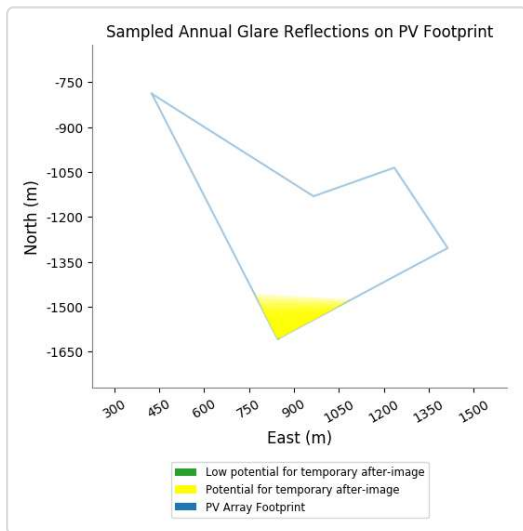
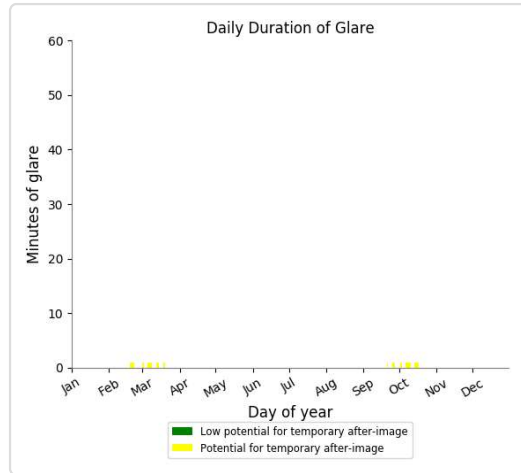
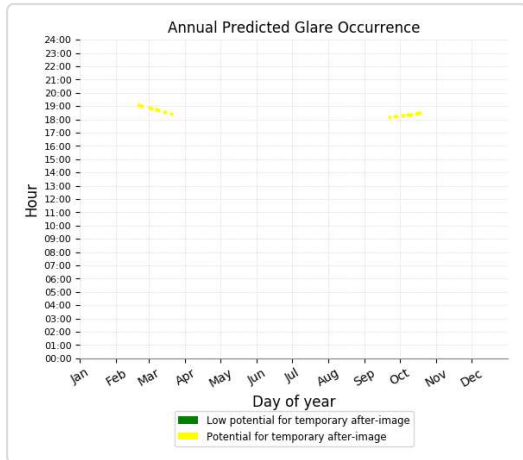
PV array 3 - OP Receptor (OP 28)

No glare found

PV array 3 - OP Receptor (OP 29)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 25 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - OP Receptor (OP 30)

No glare found

PV array 3 - OP Receptor (OP 31)

No glare found

PV array 3 - OP Receptor (OP 32)

No glare found

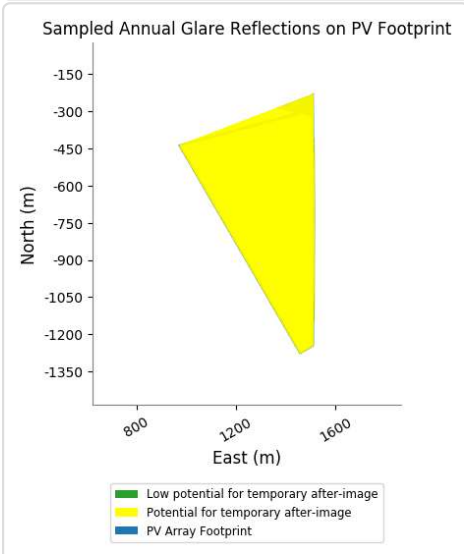
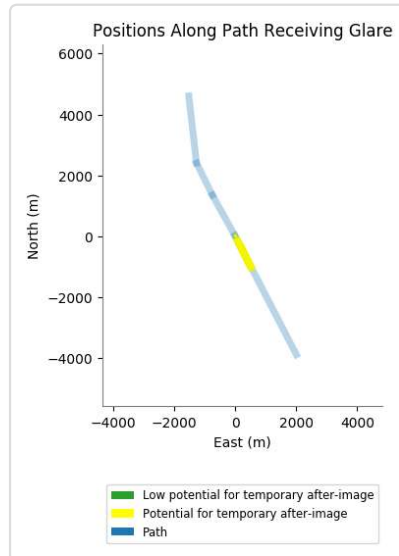
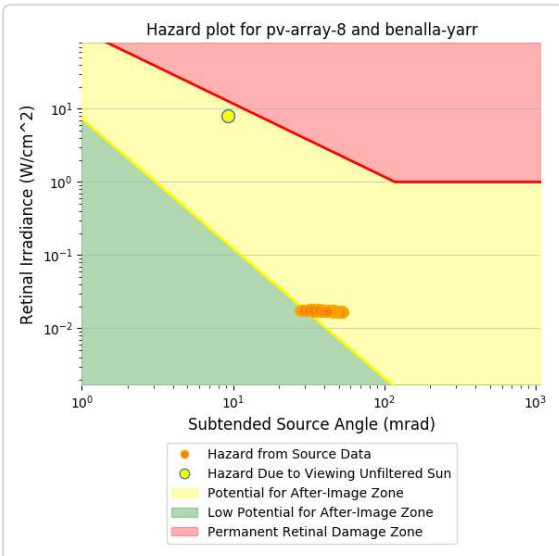
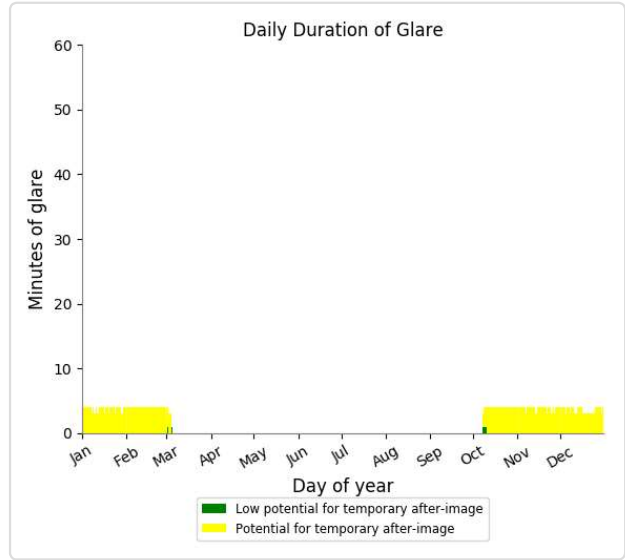
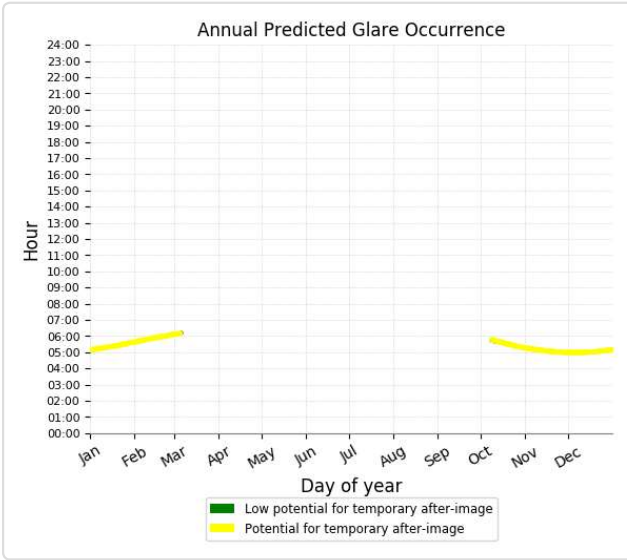
PV array 3 - OP Receptor (OP 33)

No glare found

PV array 3 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

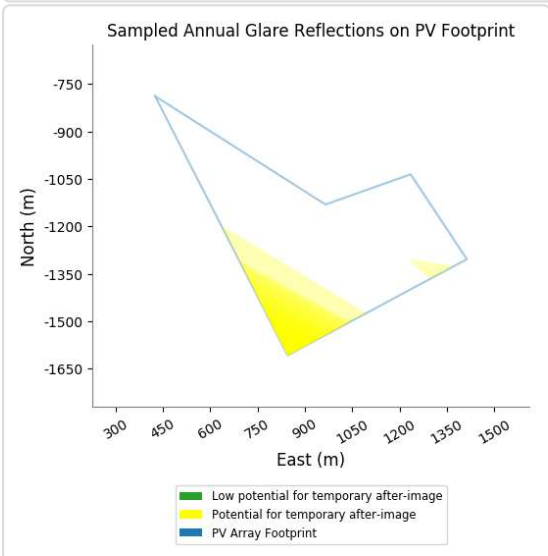
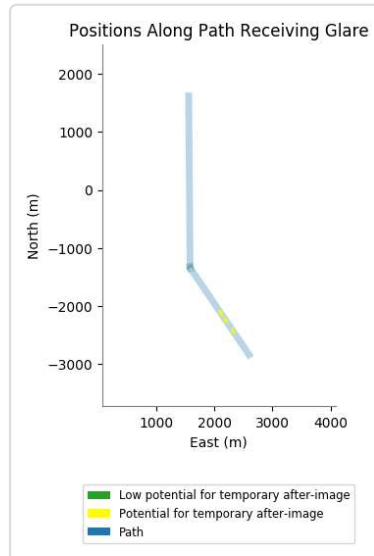
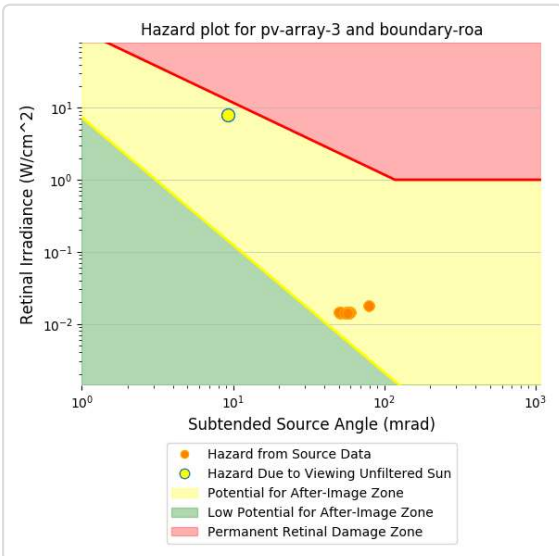
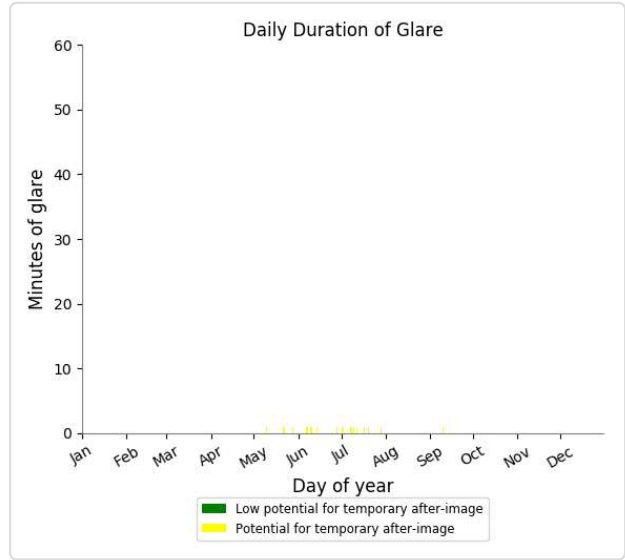
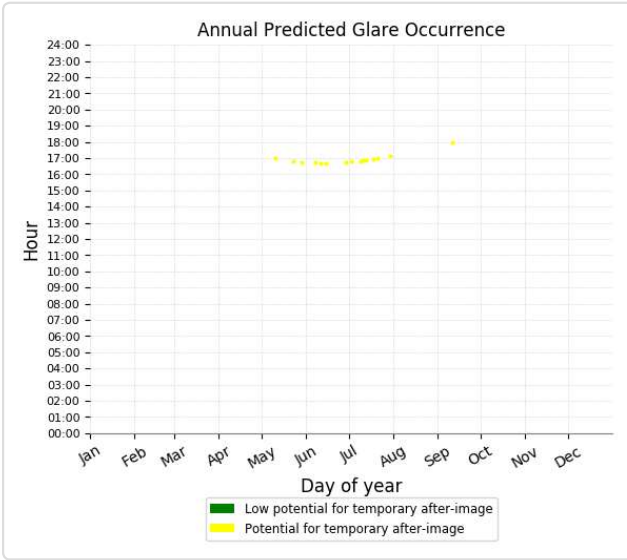
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 7,309 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - Route Receptor (Boundary Road)

PV array is expected to produce the following glare for receptors at this location:

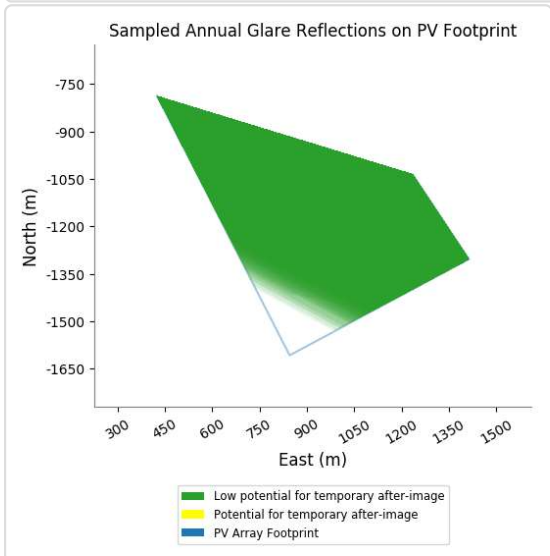
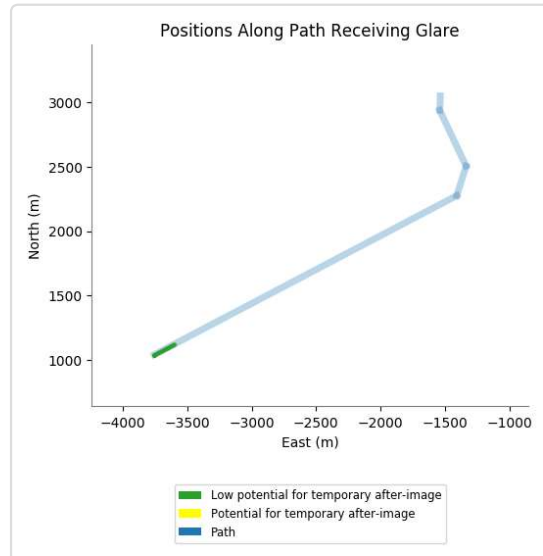
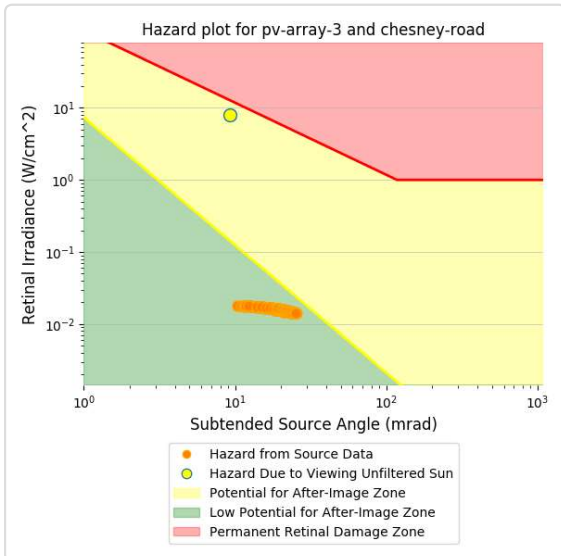
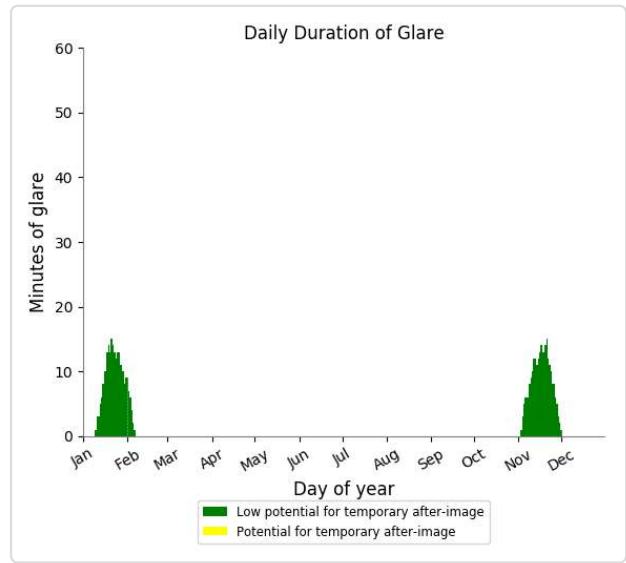
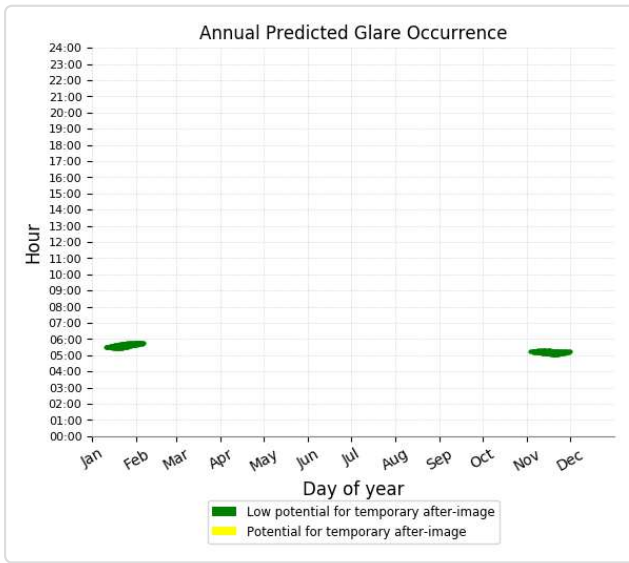
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 15 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

- 493 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - Route Receptor (Dam Wall Rd)

No glare found

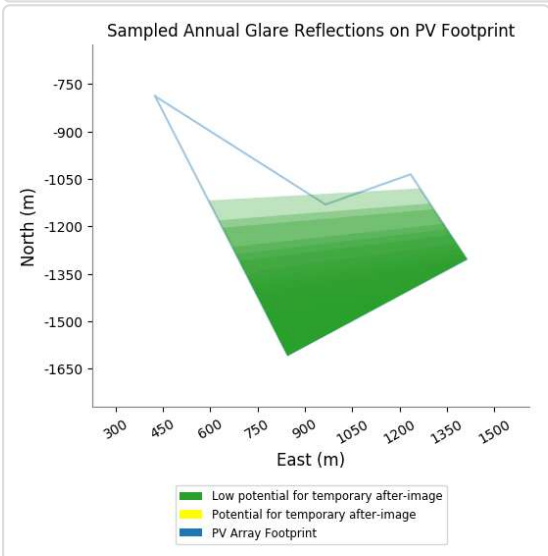
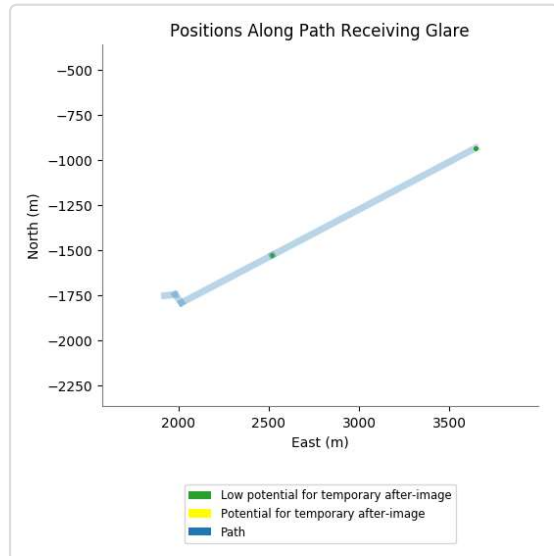
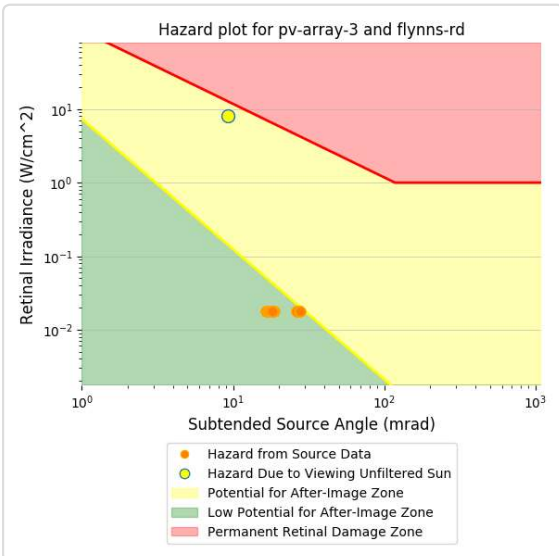
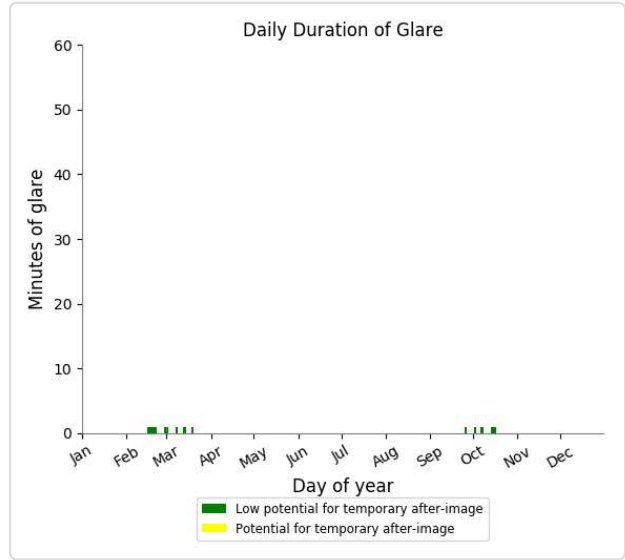
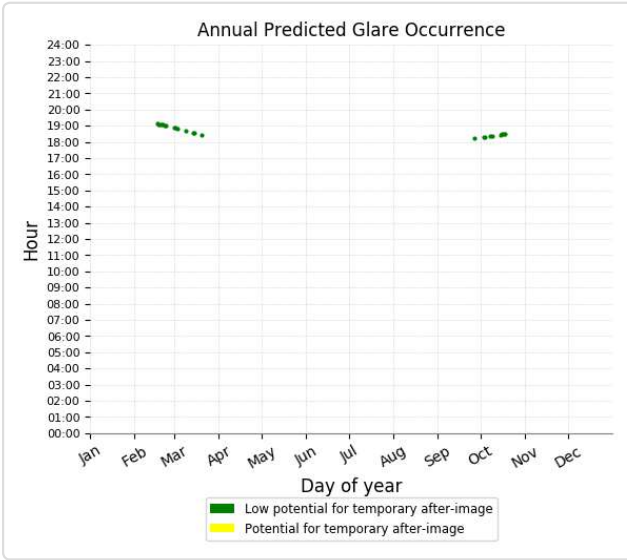
PV array 3 - Route Receptor (Farnley Road)

No glare found

PV array 3 - Route Receptor (Flynn's Rd)

PV array is expected to produce the following glare for receptors at this location:

- 23 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - Route Receptor (Lake Mokoan Road)

No glare found

PV array 3 - Route Receptor (North Rd)

No glare found

PV array 3 - Route Receptor (North Rd - 2)

No glare found

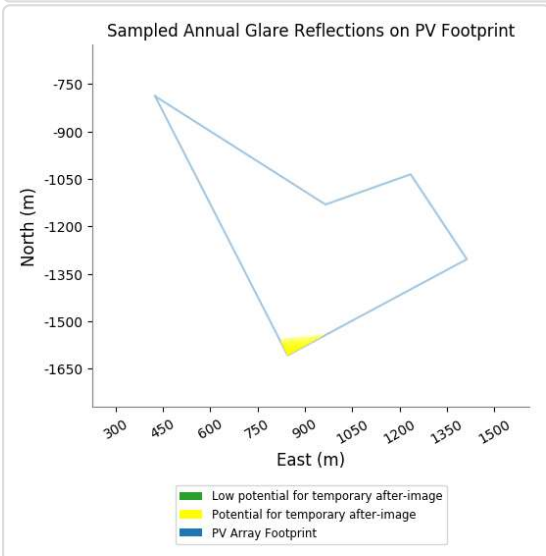
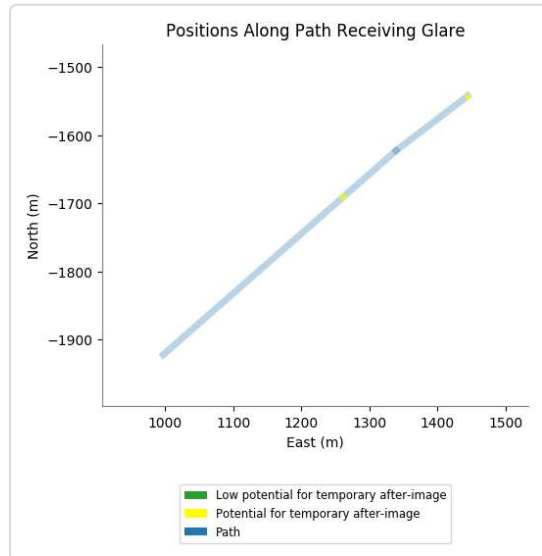
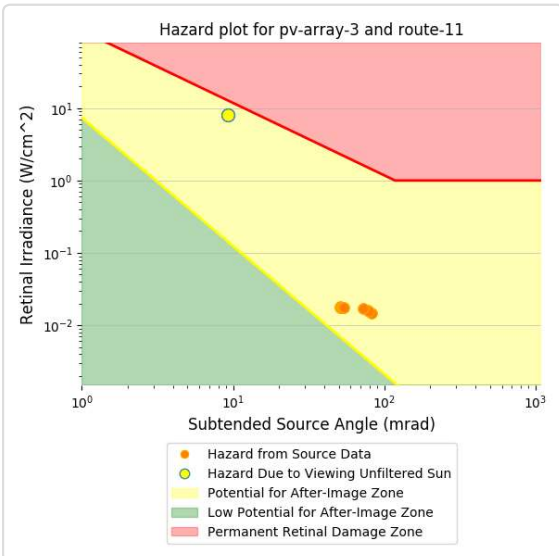
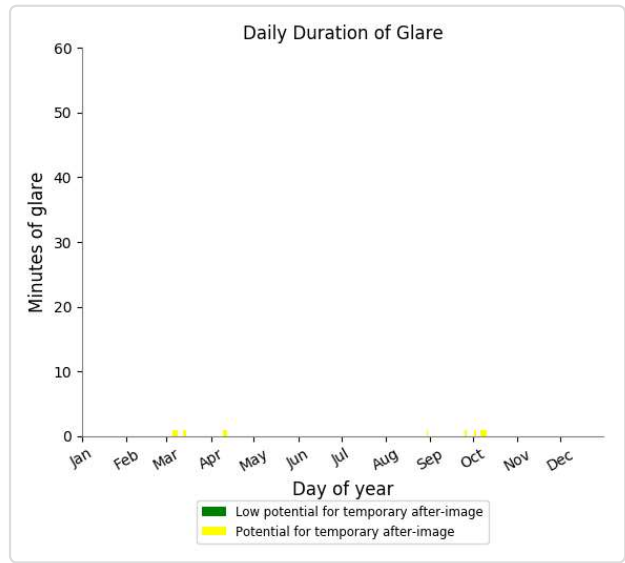
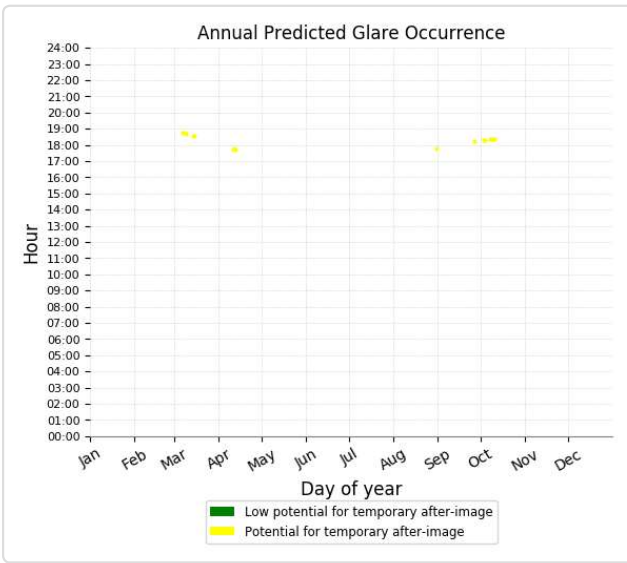
PV array 3 - Route Receptor (Old Thoona Road)

No glare found

PV array 3 - Route Receptor (Route 11)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 16 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - Route Receptor (Snowy Ln)*No glare found***PV array 4 - elevated** potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	1010	36
OP: OP 7	207	1087
OP: OP 8	305	800
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	2272
Route: Boundary Road	0	0
Route: Chesney Road	1560	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	1650
Route: North Rd	0	0

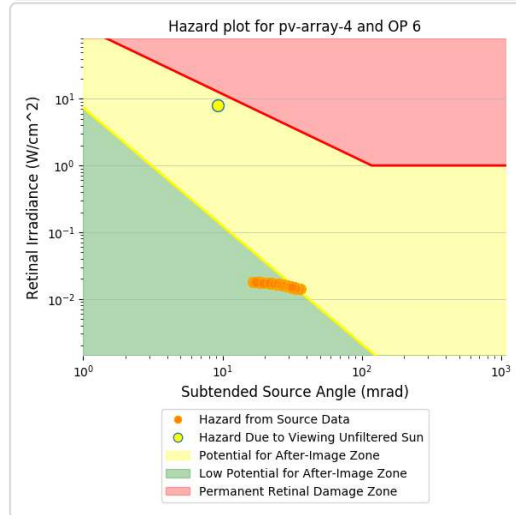
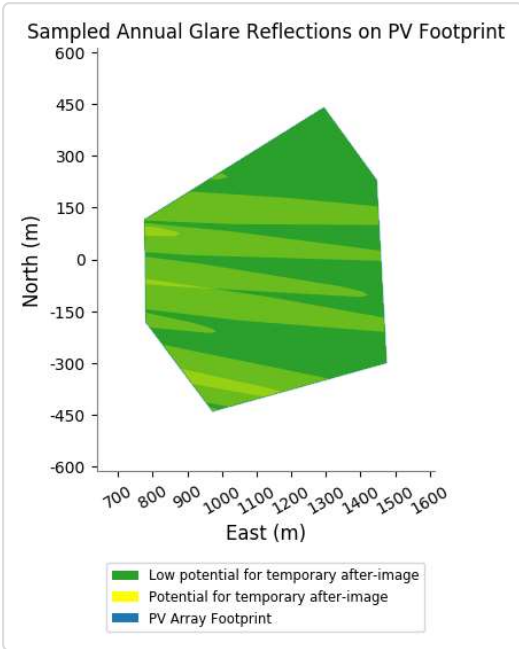
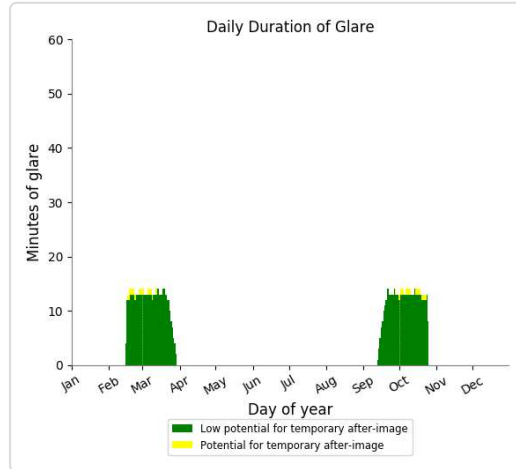
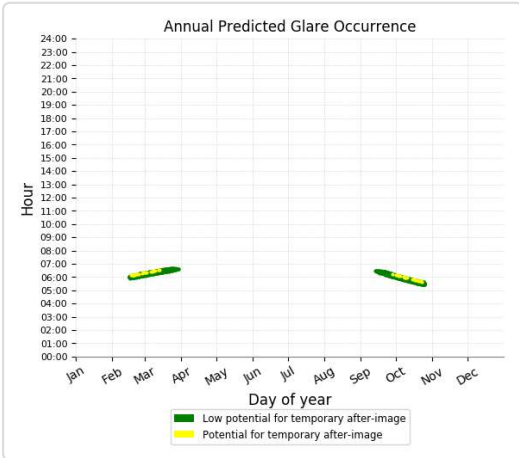
Route: North Rd - 2	0	0
Route: Old Thoona Road	86	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 4 - elevated - Receptor (FP 1)*No glare found***PV array 4 - elevated - Receptor (FP 2)***No glare found***PV array 4 - elevated - Receptor (FP 3)***No glare found***PV array 4 - elevated - Receptor (FP 4)***No glare found***PV array 4 - elevated - OP Receptor (OP 1)***No glare found***PV array 4 - elevated - OP Receptor (OP 2)***No glare found***PV array 4 - elevated - OP Receptor (OP 3)***No glare found***PV array 4 - elevated - OP Receptor (OP 4)***No glare found***PV array 4 - elevated - OP Receptor (OP 5)***No glare found*

PV array 4 - elevated - OP Receptor (OP 6)

PV array is expected to produce the following glare for receptors at this location:

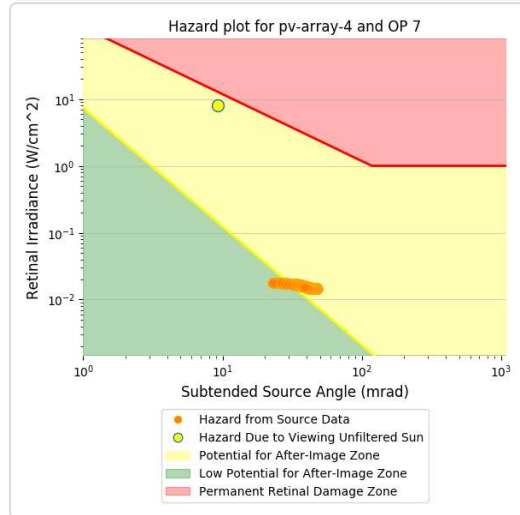
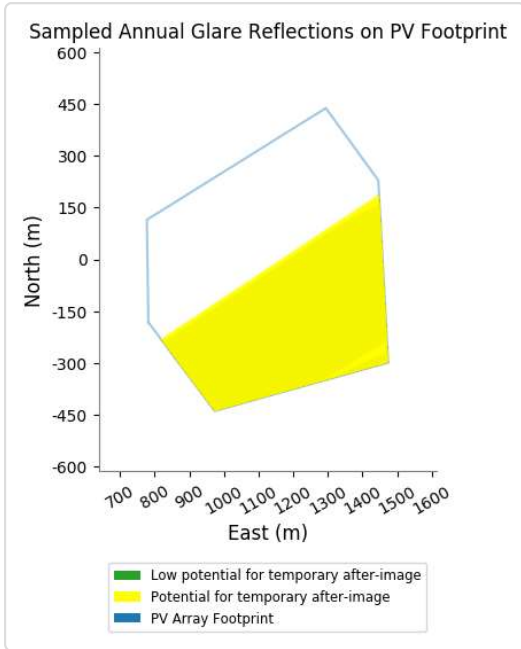
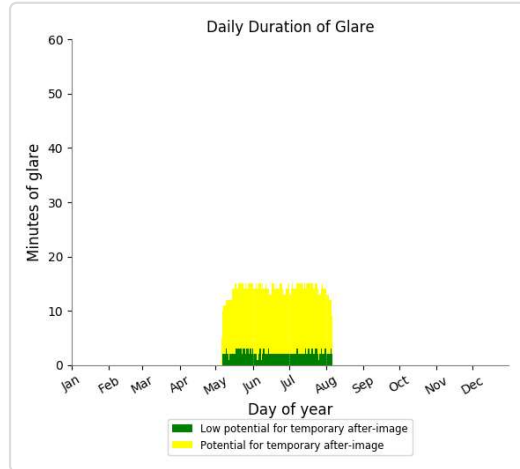
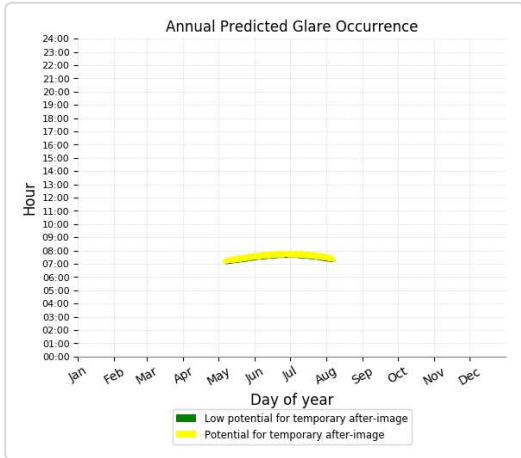
- 1,010 minutes of "green" glare with low potential to cause temporary after-image.
- 36 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 4 - elevated - OP Receptor (OP 7)

PV array is expected to produce the following glare for receptors at this location:

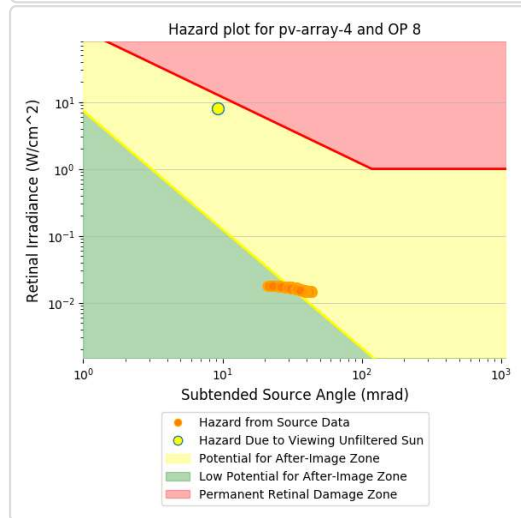
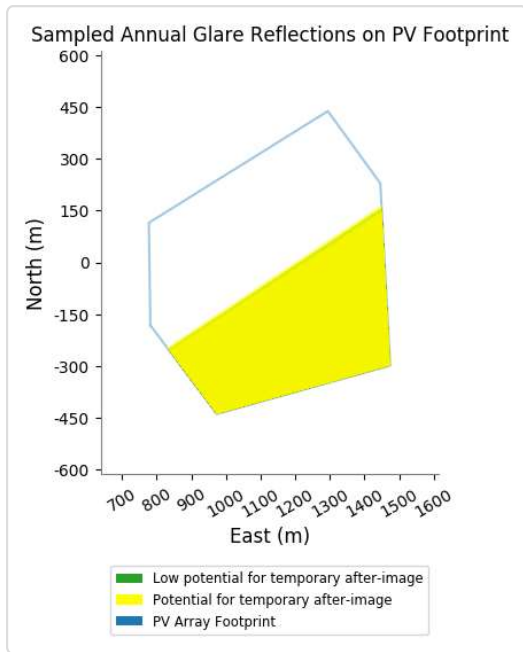
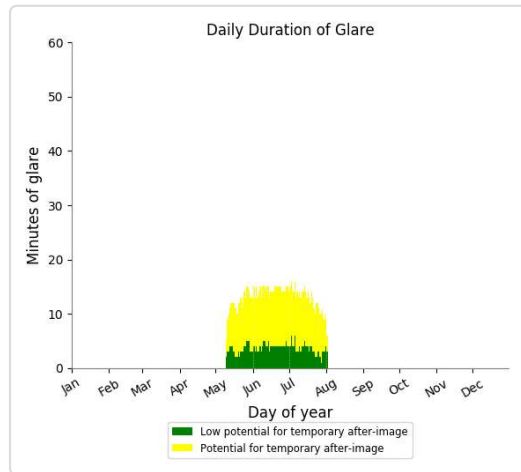
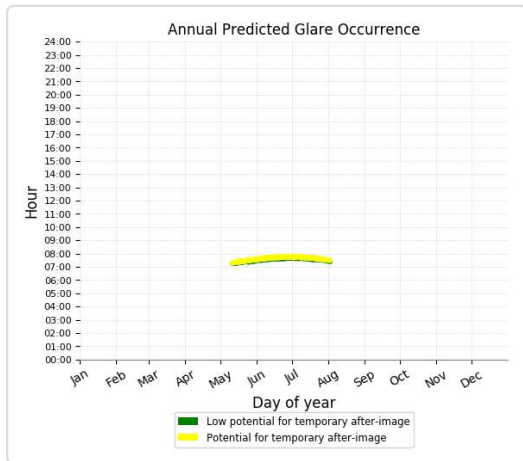
- 207 minutes of "green" glare with low potential to cause temporary after-image.
- 1,087 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 4 - elevated - OP Receptor (OP 8)

PV array is expected to produce the following glare for receptors at this location:

- 305 minutes of "green" glare with low potential to cause temporary after-image.
- 800 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 4 - elevated - OP Receptor (OP 9)

No glare found

PV array 4 - elevated - OP Receptor (OP 10)

No glare found

PV array 4 - elevated - OP Receptor (OP 11)

No glare found

PV array 4 - elevated - OP Receptor (OP 12)

No glare found

PV array 4 - elevated - OP Receptor (OP 13)

No glare found

PV array 4 - elevated - OP Receptor (OP 14)

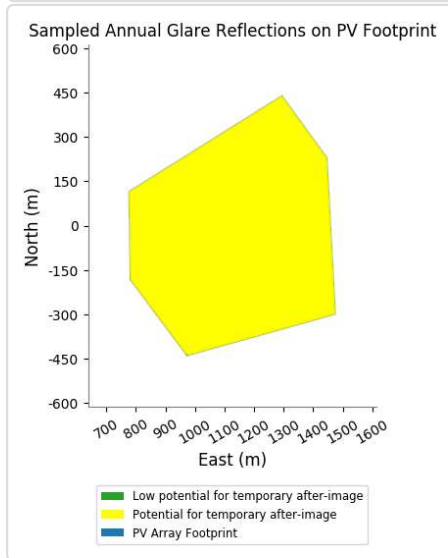
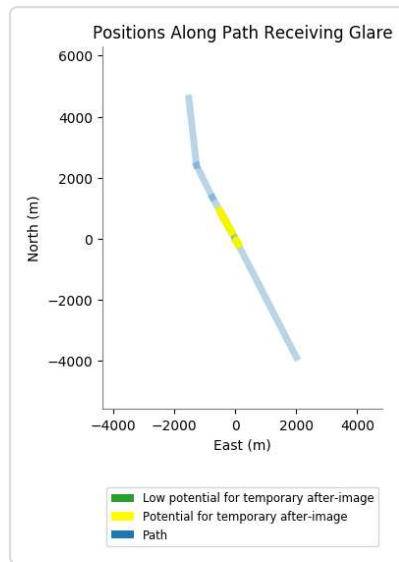
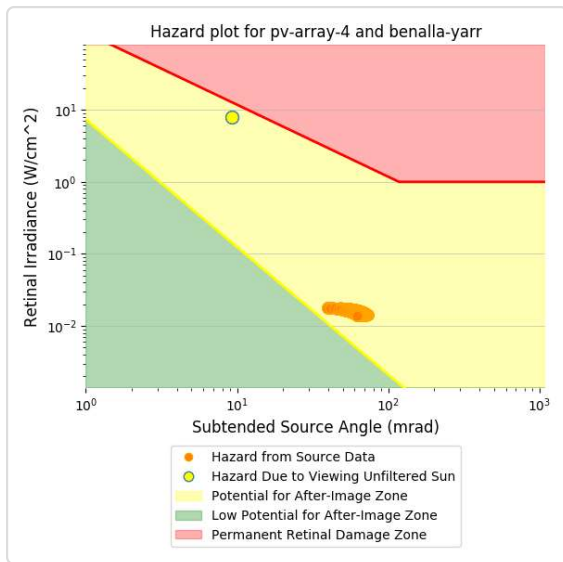
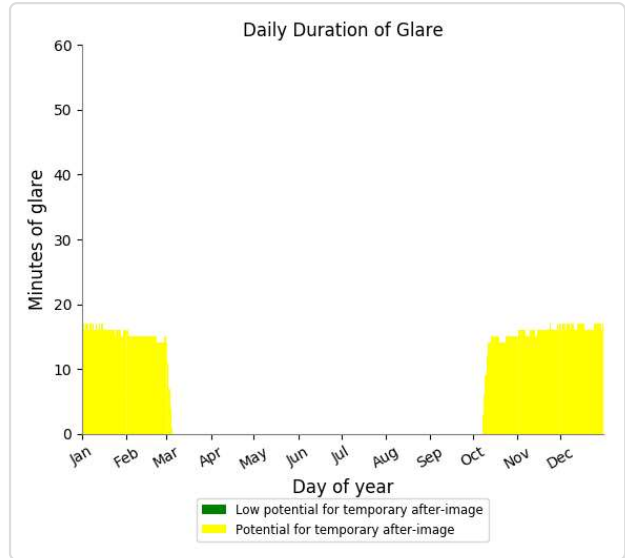
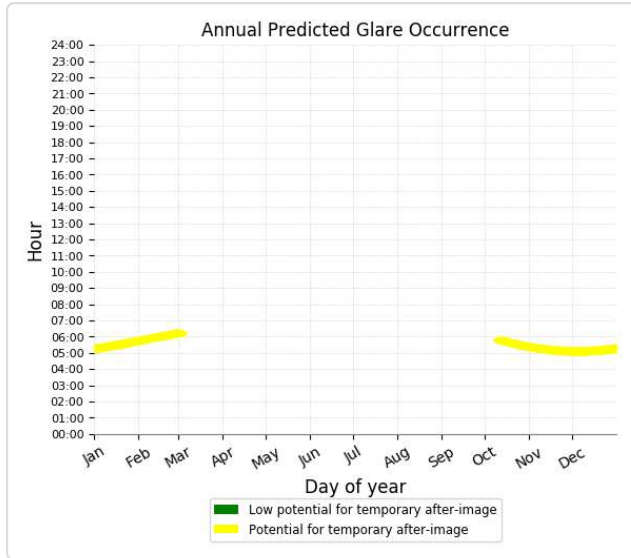
No glare found

PV array 4 - elevated - OP Receptor (OP 15)*No glare found***PV array 4 - elevated - OP Receptor (OP 16)***No glare found***PV array 4 - elevated - OP Receptor (OP 17)***No glare found***PV array 4 - elevated - OP Receptor (OP 18)***No glare found***PV array 4 - elevated - OP Receptor (OP 19)***No glare found***PV array 4 - elevated - OP Receptor (OP 20)***No glare found***PV array 4 - elevated - OP Receptor (OP 21)***No glare found***PV array 4 - elevated - OP Receptor (OP 22)***No glare found***PV array 4 - elevated - OP Receptor (OP 23)***No glare found***PV array 4 - elevated - OP Receptor (OP 24)***No glare found***PV array 4 - elevated - OP Receptor (OP 25)***No glare found***PV array 4 - elevated - OP Receptor (OP 26)***No glare found***PV array 4 - elevated - OP Receptor (OP 27)***No glare found***PV array 4 - elevated - OP Receptor (OP 28)***No glare found***PV array 4 - elevated - OP Receptor (OP 29)***No glare found***PV array 4 - elevated - OP Receptor (OP 30)***No glare found***PV array 4 - elevated - OP Receptor (OP 31)***No glare found***PV array 4 - elevated - OP Receptor (OP 32)***No glare found***PV array 4 - elevated - OP Receptor (OP 33)***No glare found*

PV array 4 - elevated - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,272 minutes of "yellow" glare with potential to cause temporary after-image.



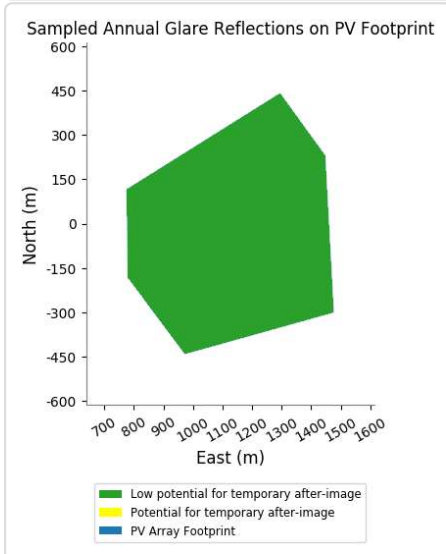
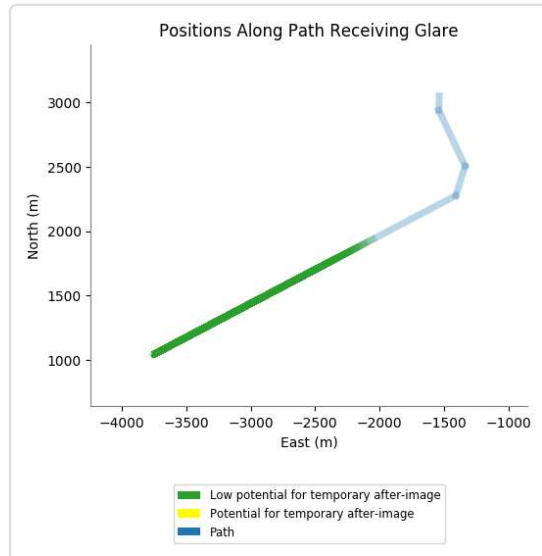
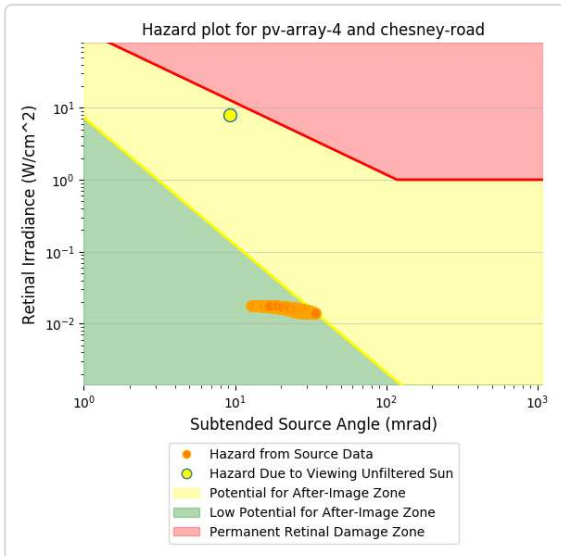
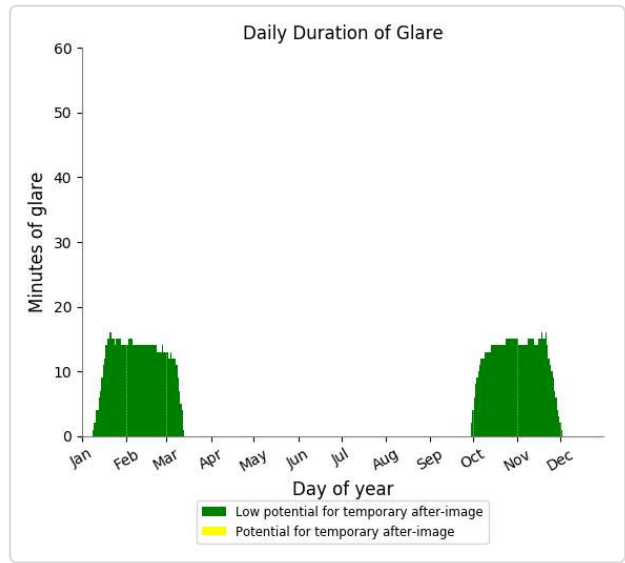
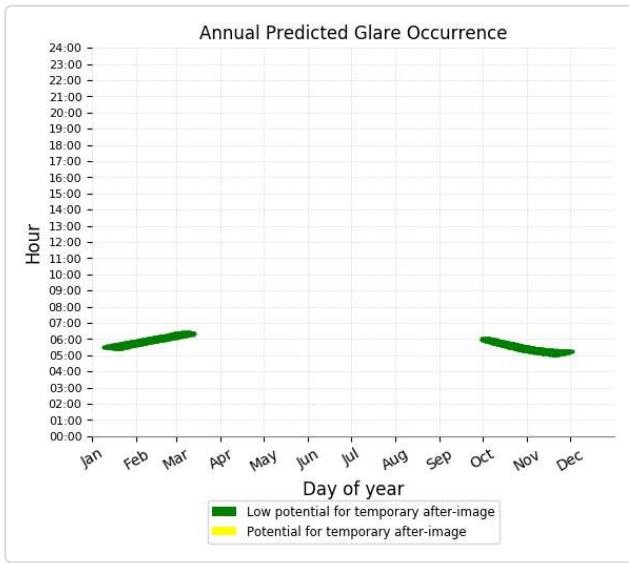
PV array 4 - elevated - Route Receptor (Boundary Road)

No glare found

PV array 4 - elevated - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

- 1,560 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 4 - elevated - Route Receptor (Dam Wall Rd)

No glare found

PV array 4 - elevated - Route Receptor (Farnley Road)

No glare found

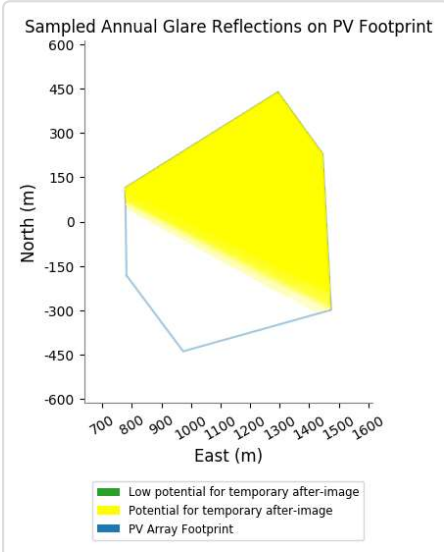
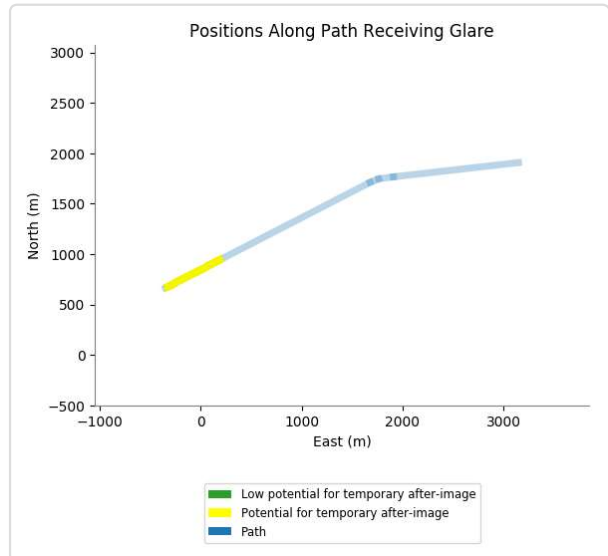
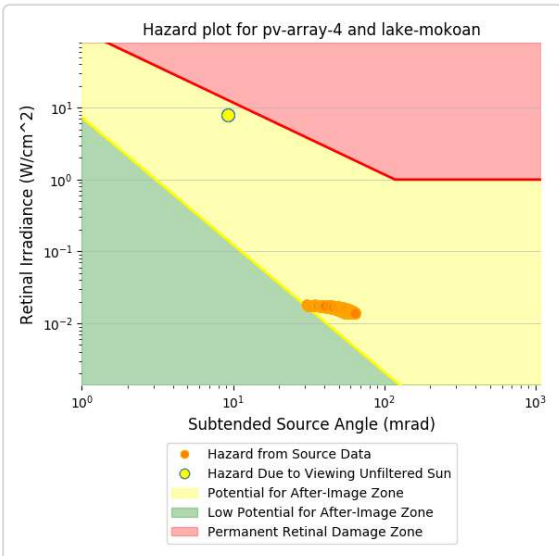
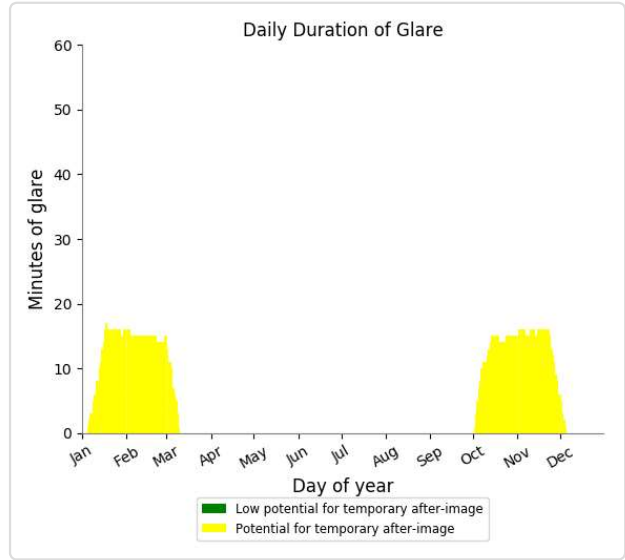
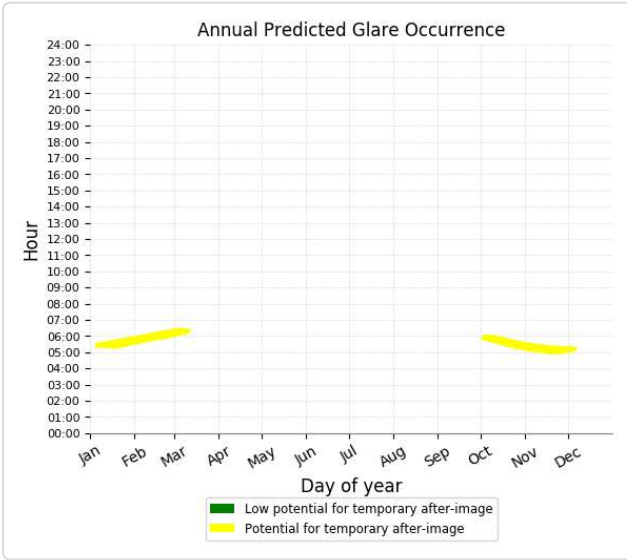
PV array 4 - elevated - Route Receptor (Flynn's Rd)

No glare found

PV array 4 - elevated - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,650 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 4 - elevated - Route Receptor (North Rd)

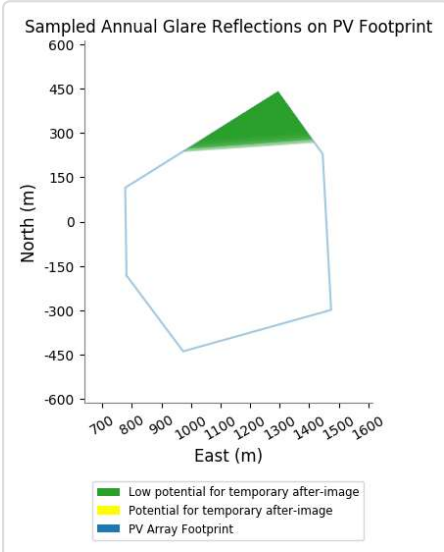
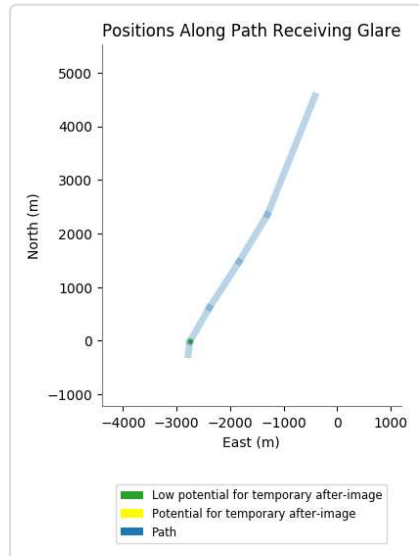
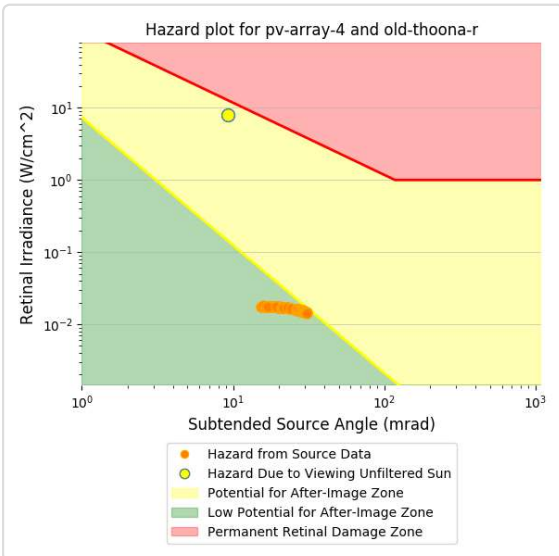
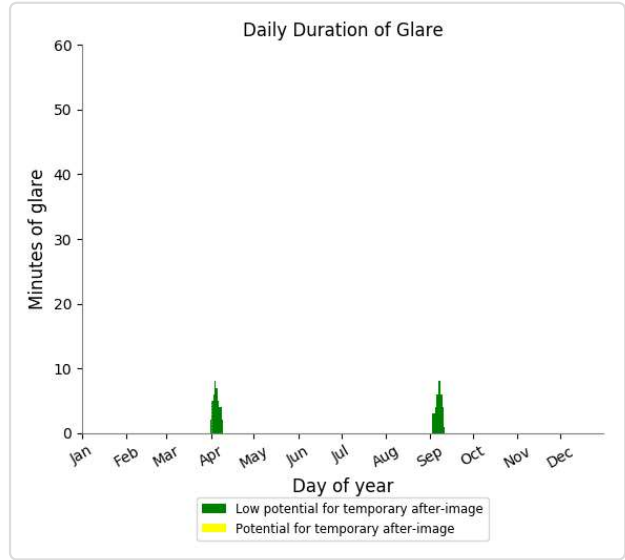
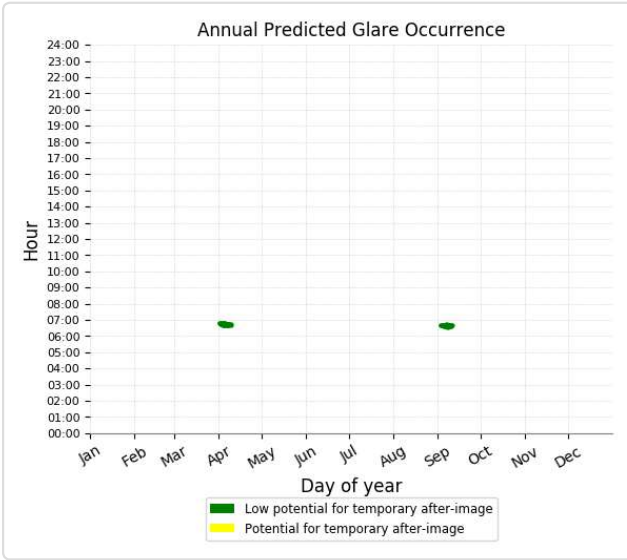
No glare found

PV array 4 - elevated - Route Receptor (North Rd - 2)

No glare found

PV array 4 - elevated - Route Receptor (Old Thoon Road)

- PV array is expected to produce the following glare for receptors at this location:
- 86 minutes of "green" glare with low potential to cause temporary after-image.
 - 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 4 - elevated - Route Receptor (Route 11)*No glare found***PV array 4 - elevated - Route Receptor (Snowy Ln)***No glare found***PV array 5** potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	21	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	968	0
OP: OP 7	0	16
OP: OP 8	8	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrawonga Road	0	2215
Route: Boundary Road	0	54
Route: Chesney Road	1569	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	1	0
Route: Flynns Rd	0	0

Route: Lake Mokoan Road	16	2052
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	185	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 5 - Receptor (FP 1)

No glare found

PV array 5 - Receptor (FP 2)

No glare found

PV array 5 - Receptor (FP 3)

No glare found

PV array 5 - Receptor (FP 4)

No glare found

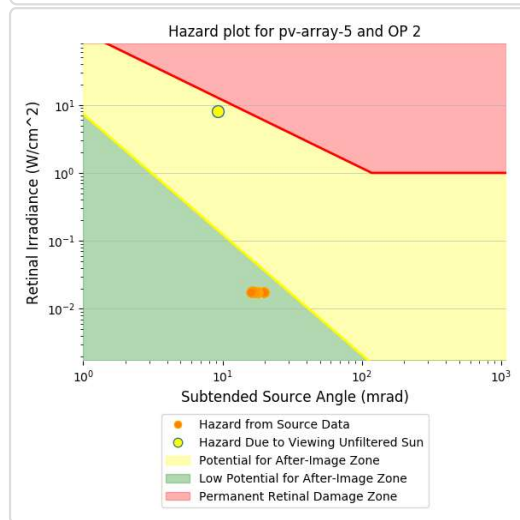
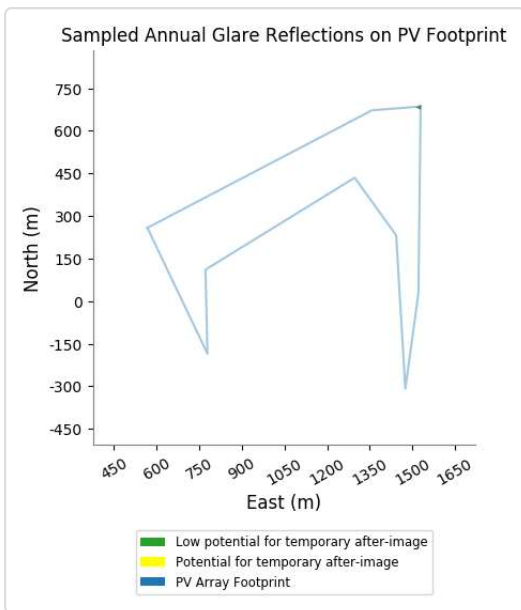
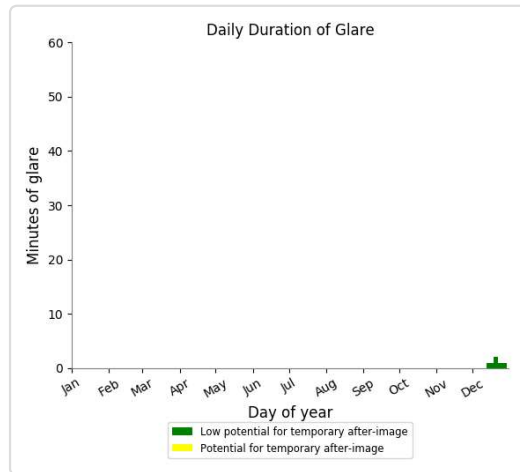
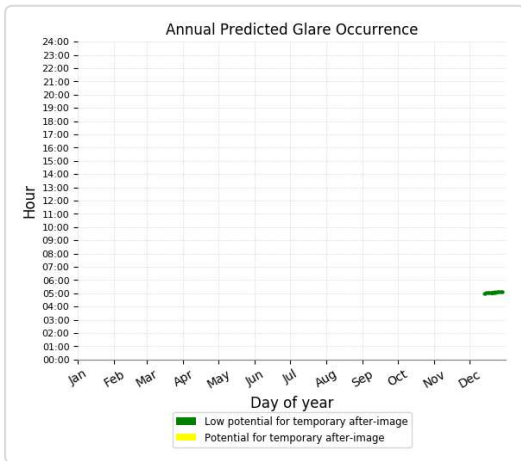
PV array 5 - OP Receptor (OP 1)

No glare found

PV array 5 - OP Receptor (OP 2)

PV array is expected to produce the following glare for receptors at this location:

- 21 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - OP Receptor (OP 3)

No glare found

PV array 5 - OP Receptor (OP 4)

No glare found

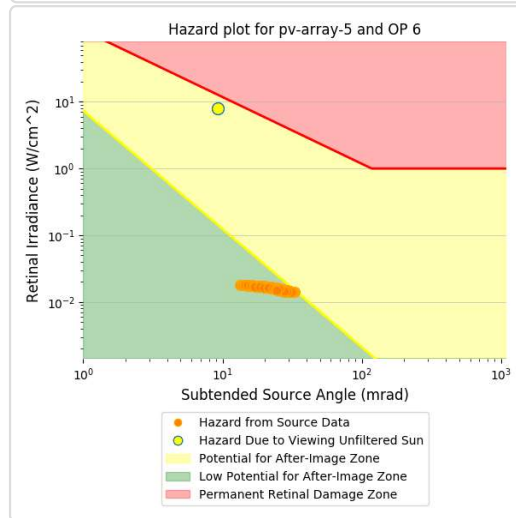
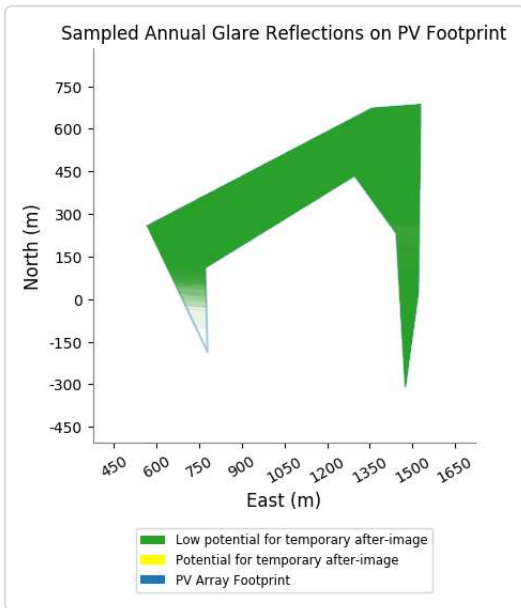
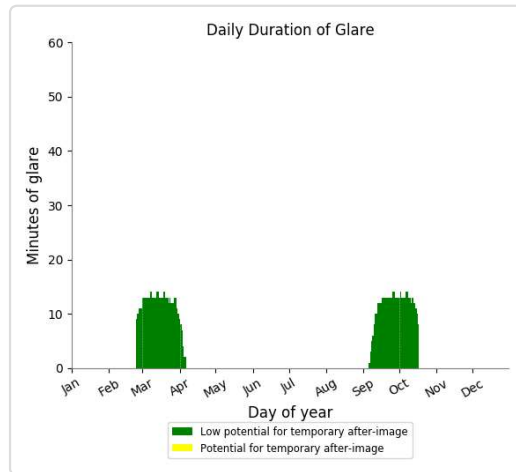
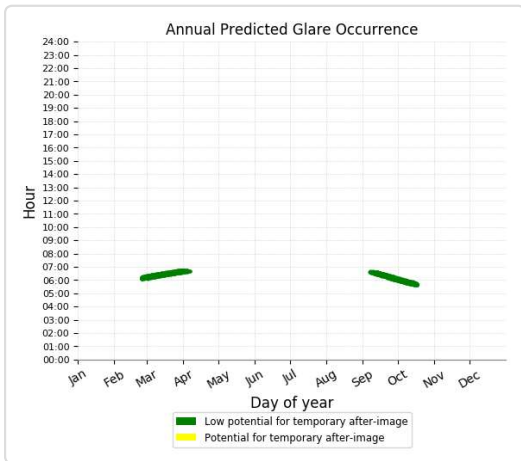
PV array 5 - OP Receptor (OP 5)

No glare found

PV array 5 - OP Receptor (OP 6)

PV array is expected to produce the following glare for receptors at this location:

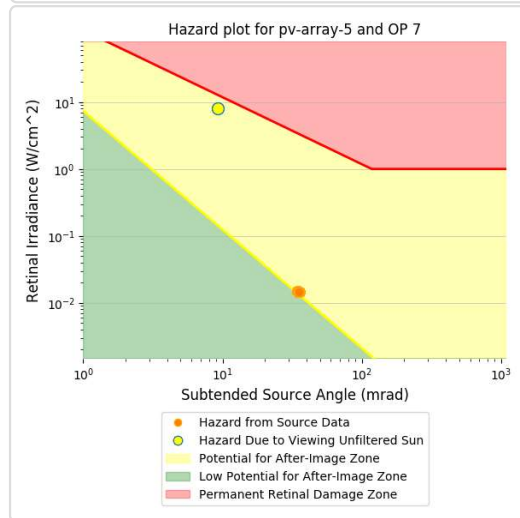
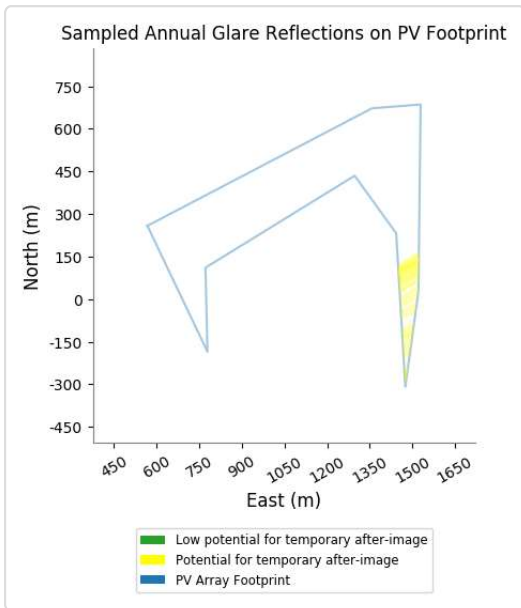
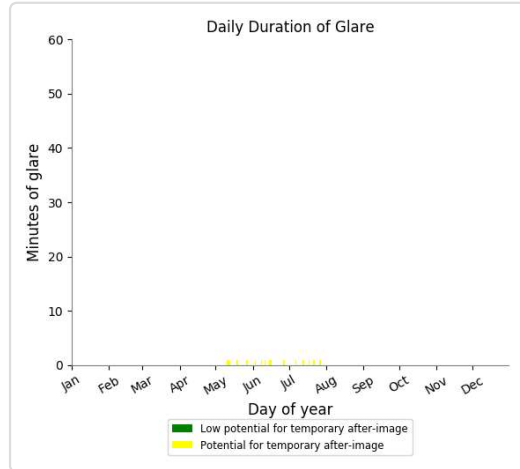
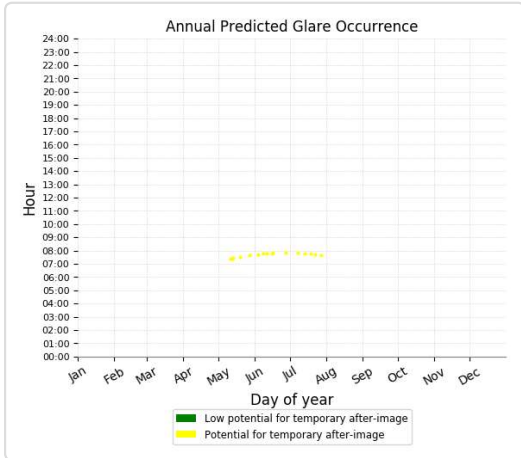
- 968 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - OP Receptor (OP 7)

PV array is expected to produce the following glare for receptors at this location:

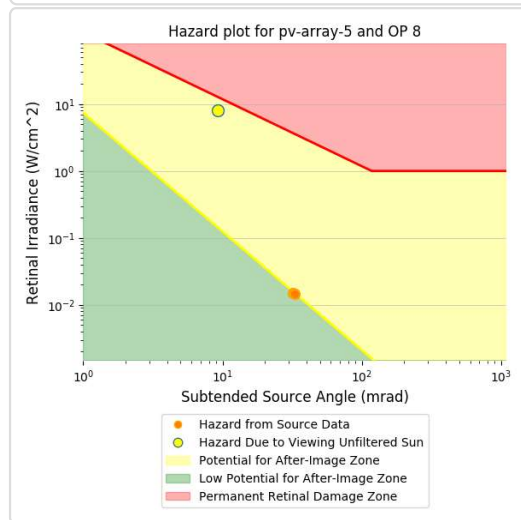
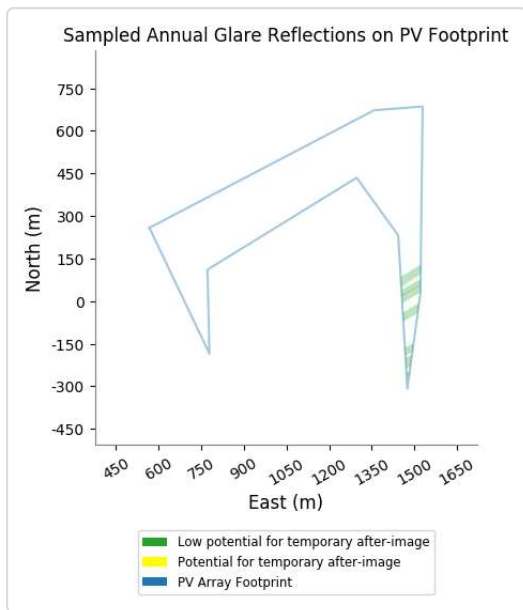
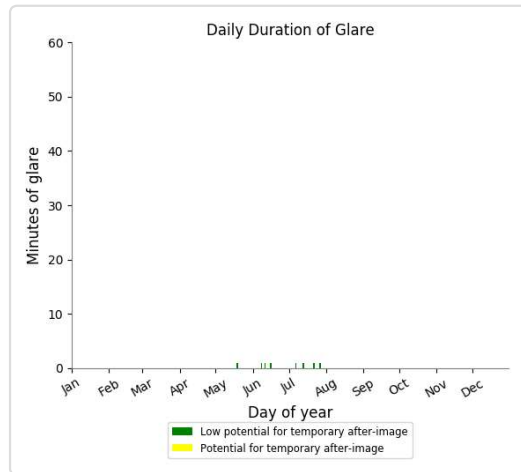
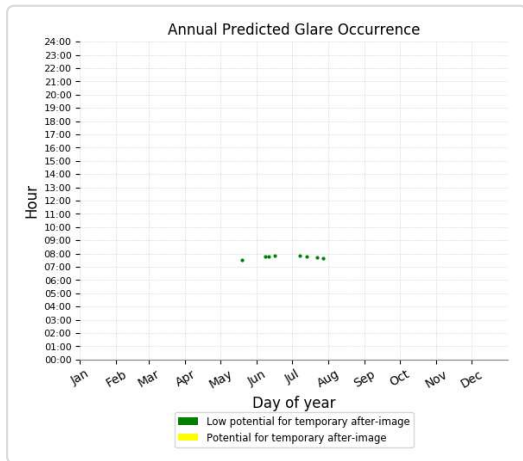
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 16 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - OP Receptor (OP 8)

PV array is expected to produce the following glare for receptors at this location:

- 8 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - OP Receptor (OP 9)

No glare found

PV array 5 - OP Receptor (OP 10)

No glare found

PV array 5 - OP Receptor (OP 11)

No glare found

PV array 5 - OP Receptor (OP 12)

No glare found

PV array 5 - OP Receptor (OP 13)

No glare found

PV array 5 - OP Receptor (OP 14)

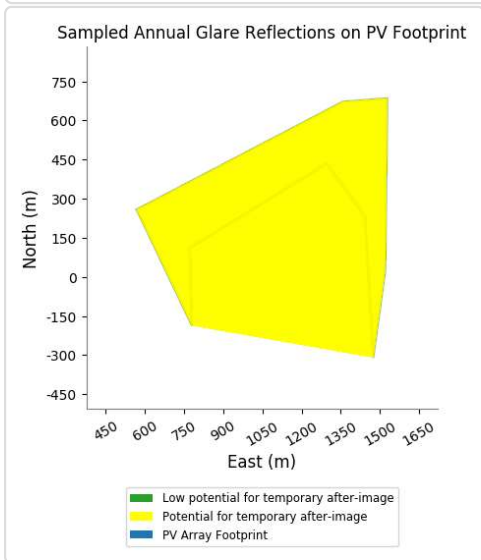
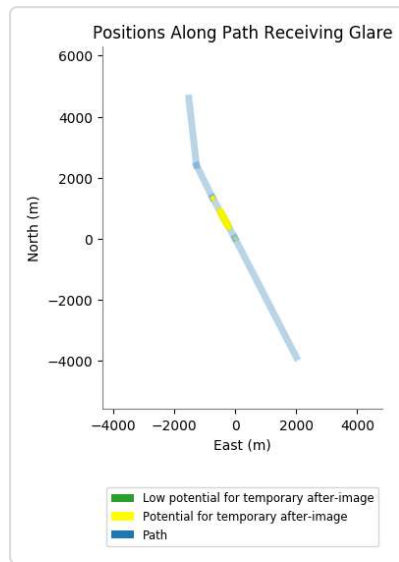
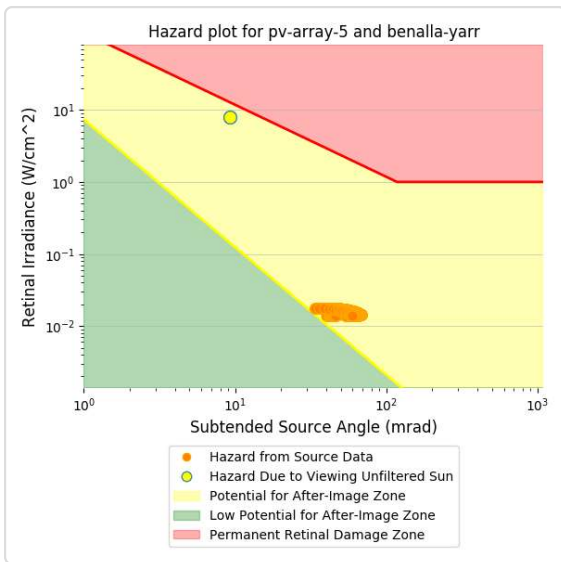
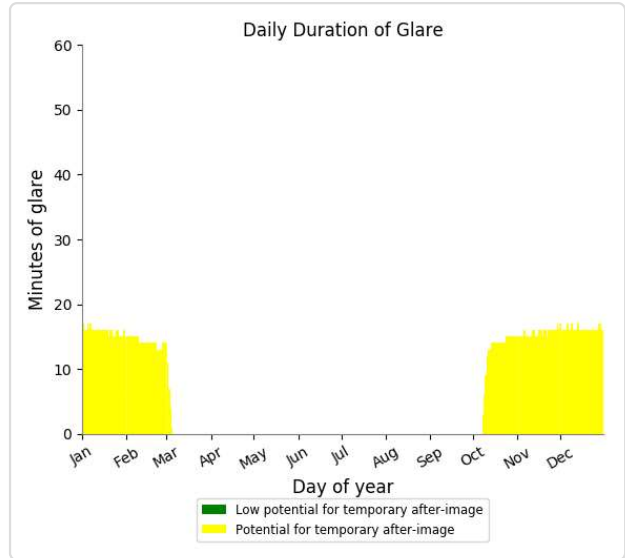
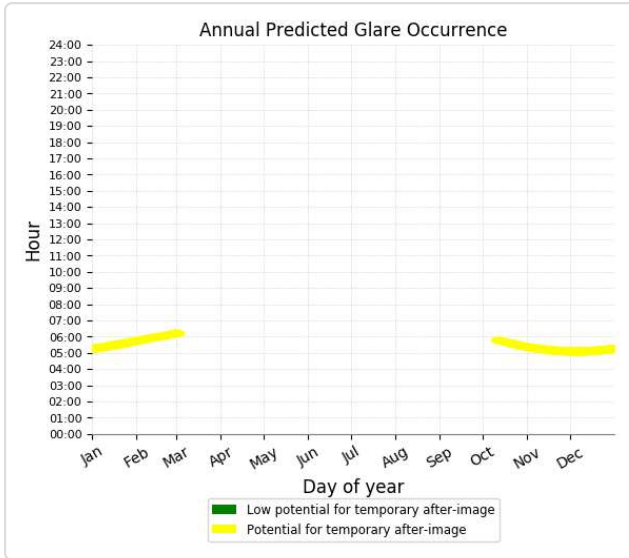
No glare found

PV array 5 - OP Receptor (OP 15)*No glare found***PV array 5 - OP Receptor (OP 16)***No glare found***PV array 5 - OP Receptor (OP 17)***No glare found***PV array 5 - OP Receptor (OP 18)***No glare found***PV array 5 - OP Receptor (OP 19)***No glare found***PV array 5 - OP Receptor (OP 20)***No glare found***PV array 5 - OP Receptor (OP 21)***No glare found***PV array 5 - OP Receptor (OP 22)***No glare found***PV array 5 - OP Receptor (OP 23)***No glare found***PV array 5 - OP Receptor (OP 24)***No glare found***PV array 5 - OP Receptor (OP 25)***No glare found***PV array 5 - OP Receptor (OP 26)***No glare found***PV array 5 - OP Receptor (OP 27)***No glare found***PV array 5 - OP Receptor (OP 28)***No glare found***PV array 5 - OP Receptor (OP 29)***No glare found***PV array 5 - OP Receptor (OP 30)***No glare found***PV array 5 - OP Receptor (OP 31)***No glare found***PV array 5 - OP Receptor (OP 32)***No glare found***PV array 5 - OP Receptor (OP 33)***No glare found*

PV array 5 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

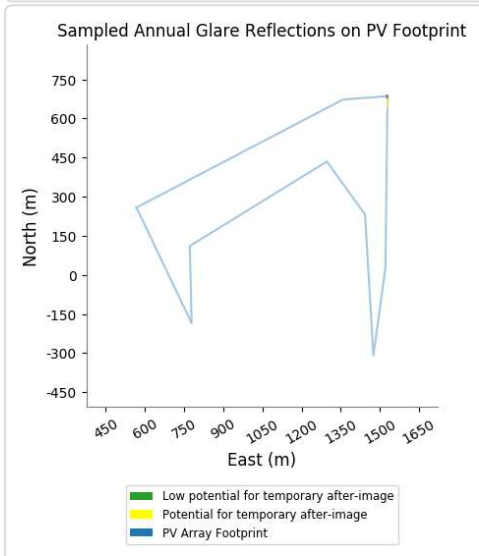
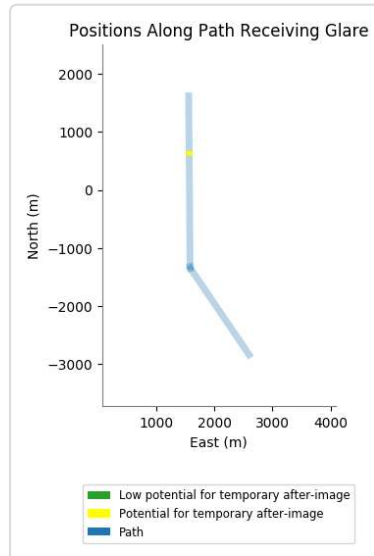
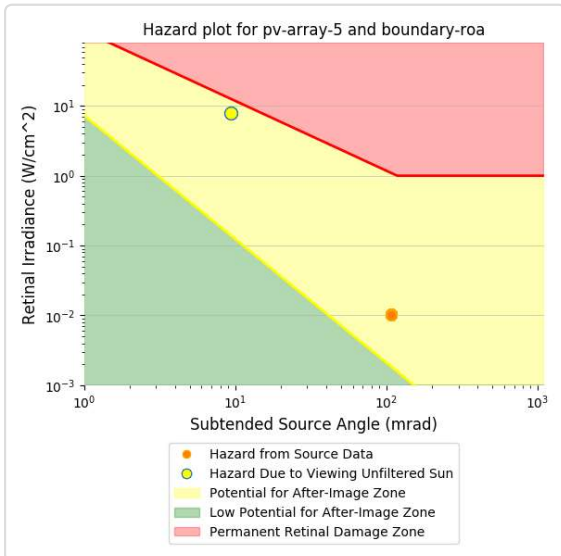
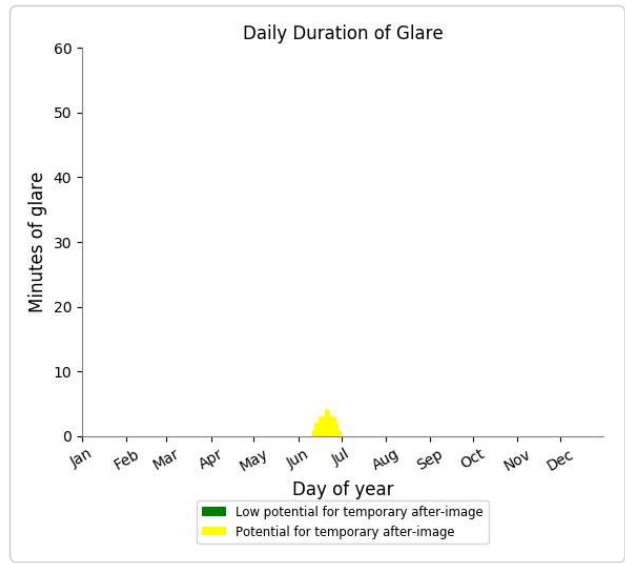
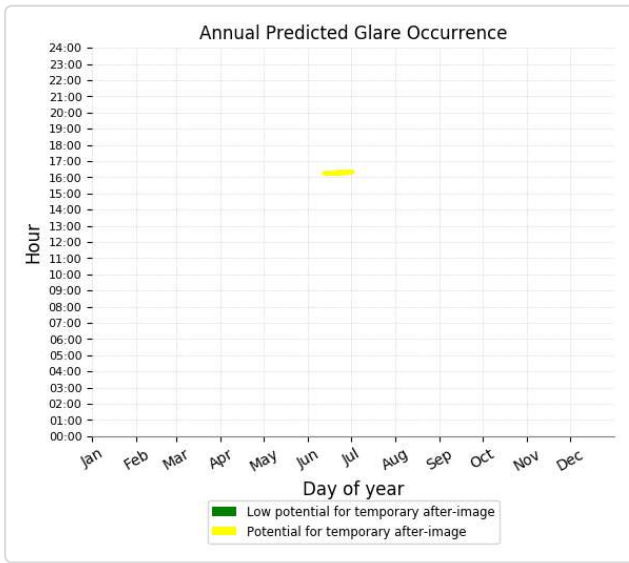
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,215 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - Route Receptor (Boundary Road)

PV array is expected to produce the following glare for receptors at this location:

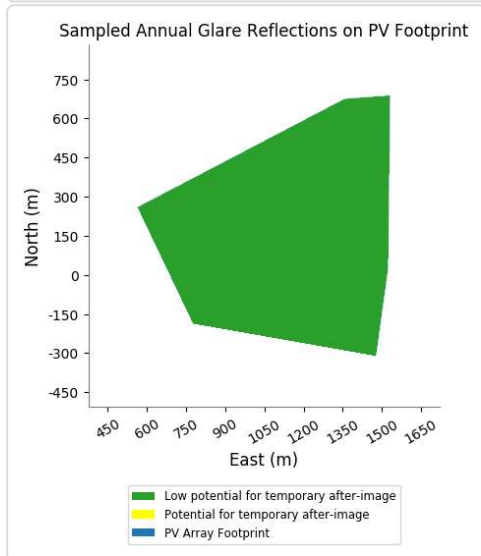
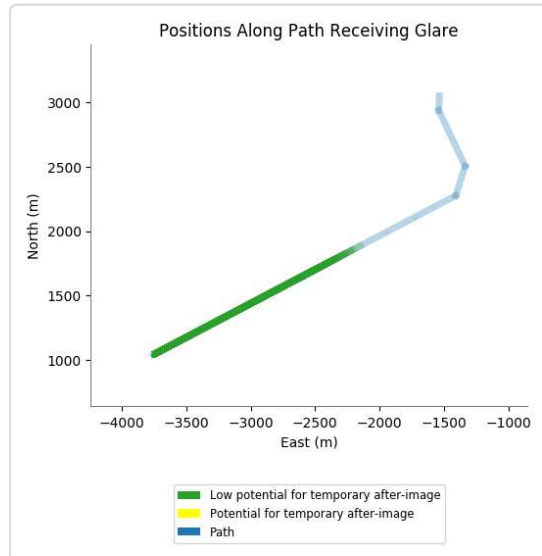
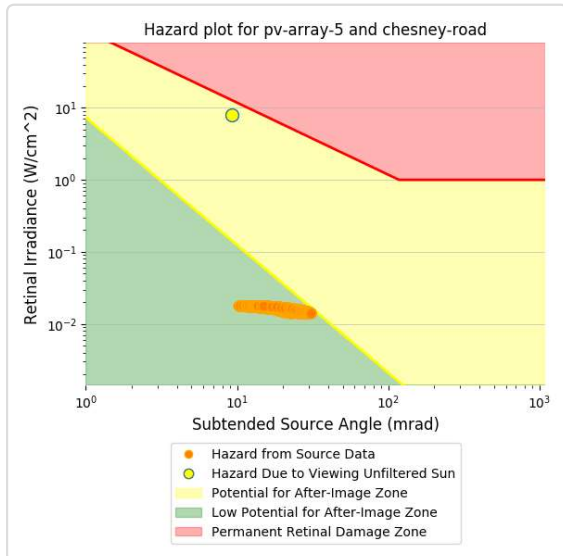
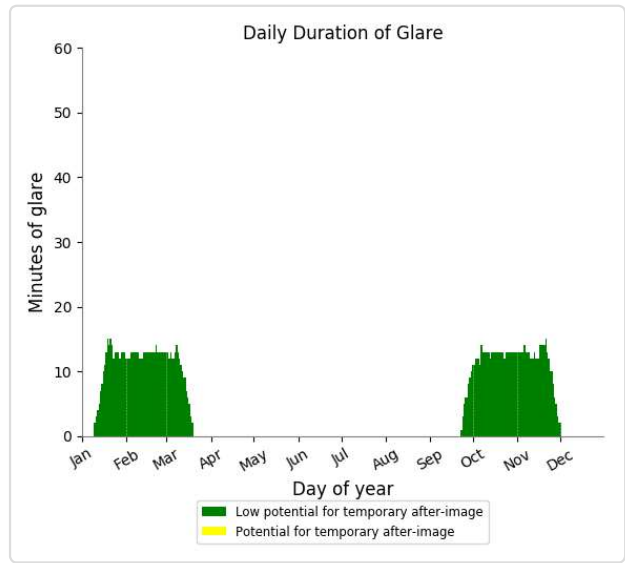
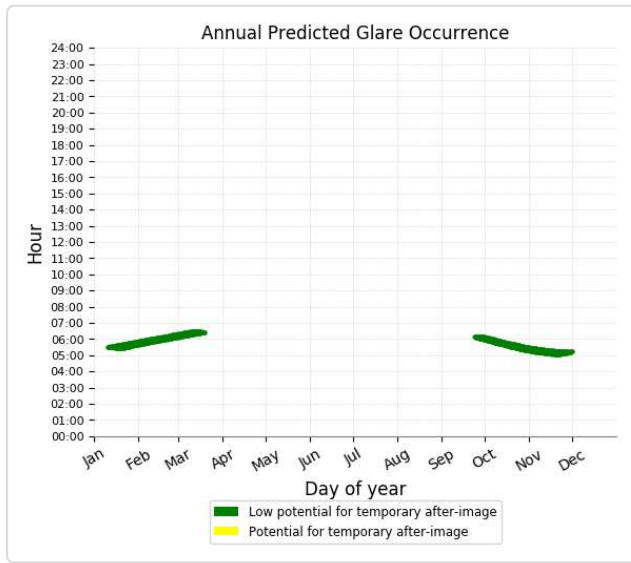
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 54 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

- 1,569 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



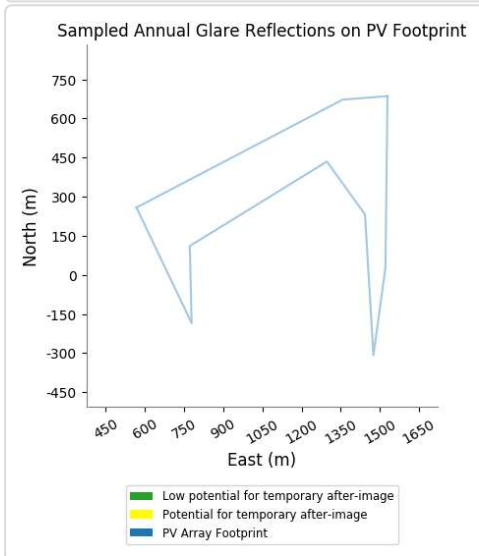
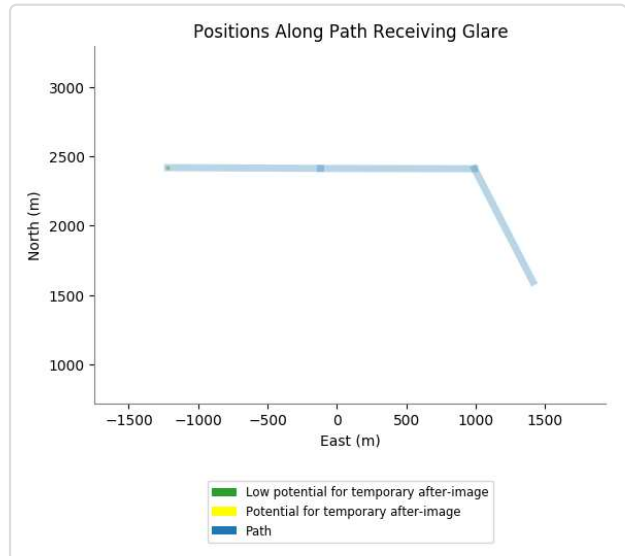
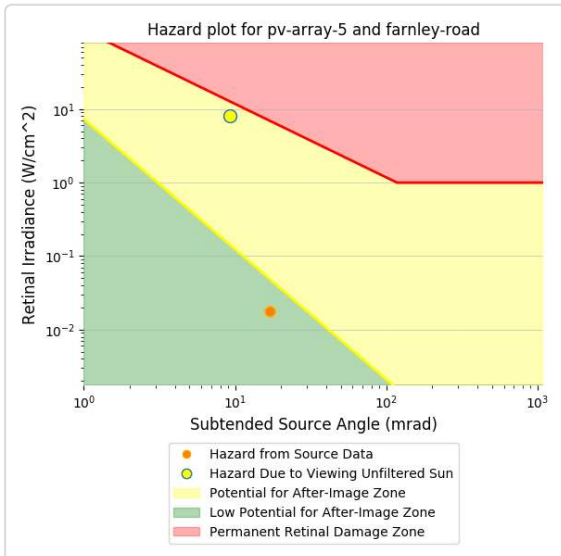
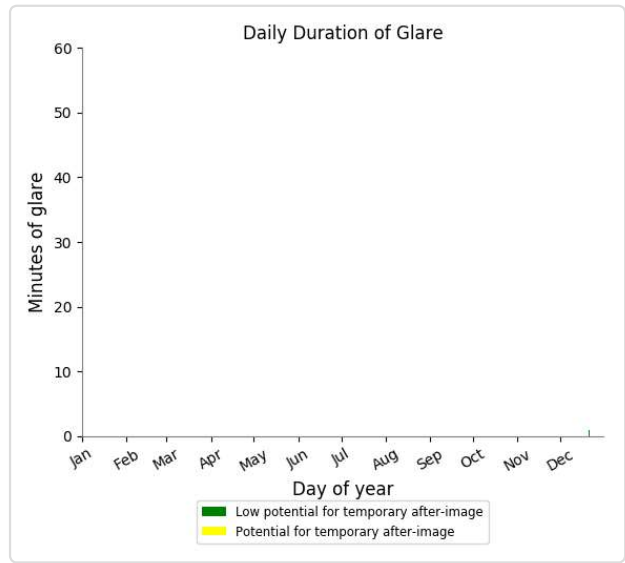
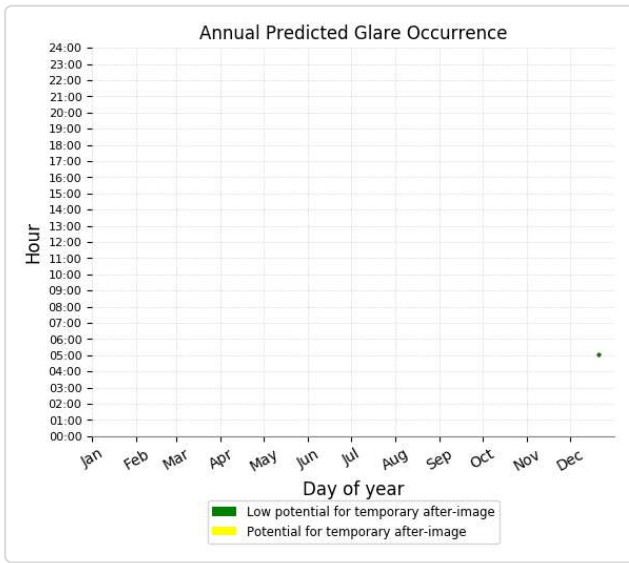
PV array 5 - Route Receptor (Dam Wall Rd)

No glare found

PV array 5 - Route Receptor (Farnley Road)

PV array is expected to produce the following glare for receptors at this location:

- 1 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



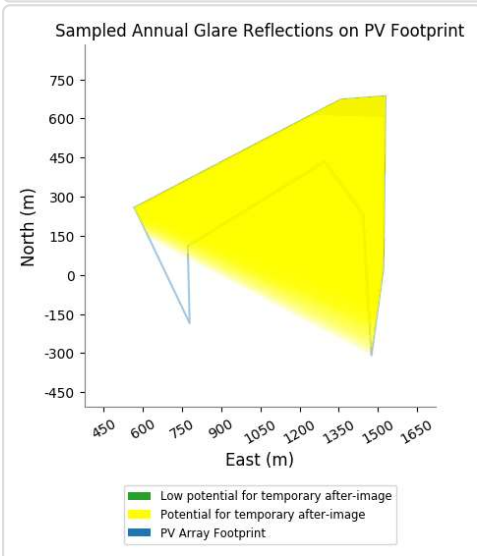
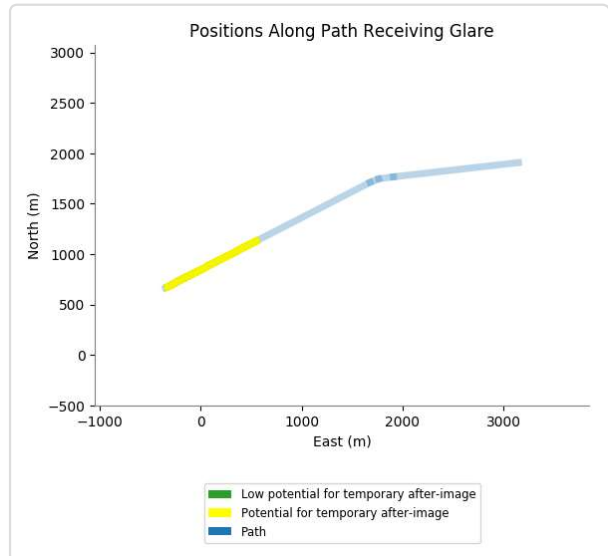
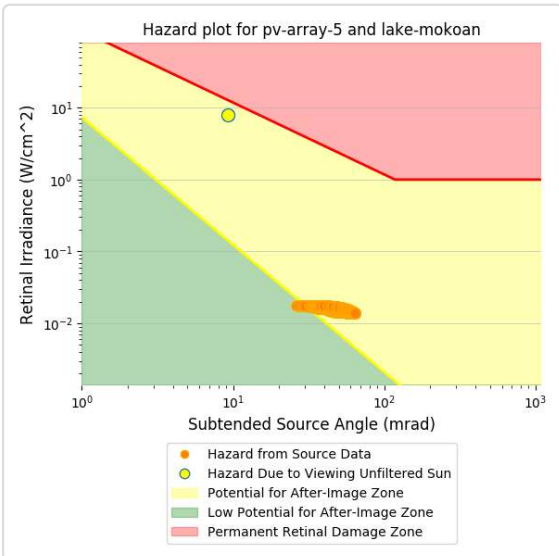
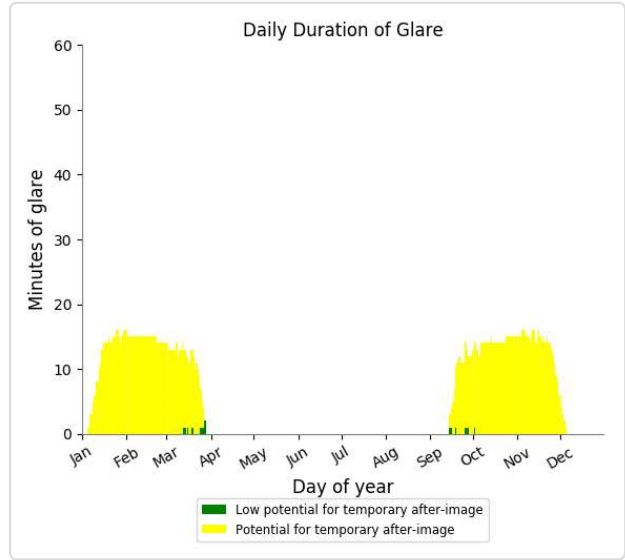
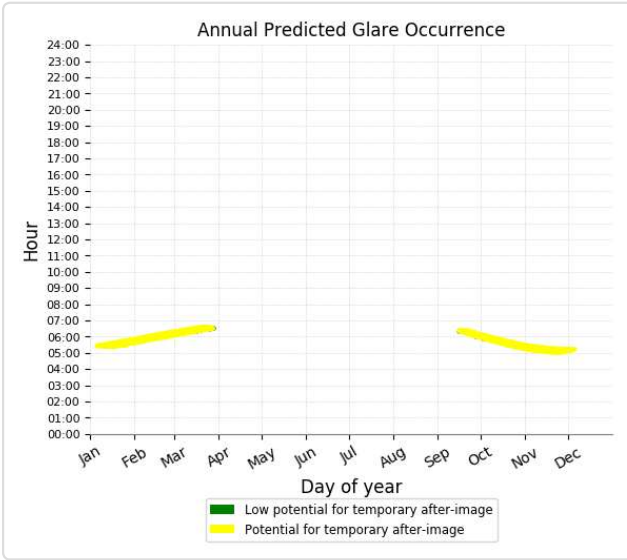
PV array 5 - Route Receptor (Flynn's Rd)

No glare found

PV array 5 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 16 minutes of "green" glare with low potential to cause temporary after-image.
- 2,052 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - Route Receptor (North Rd)

No glare found

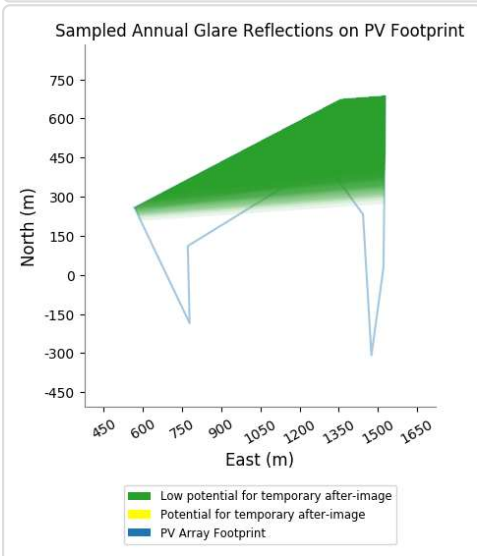
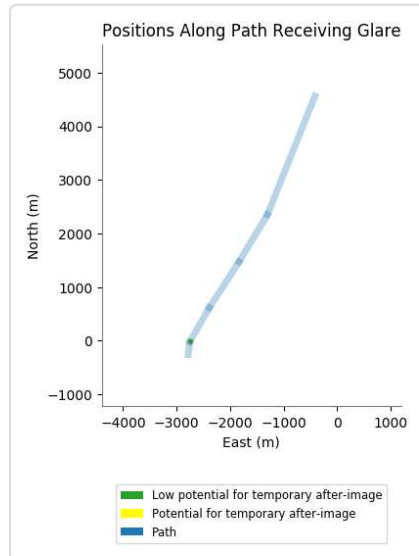
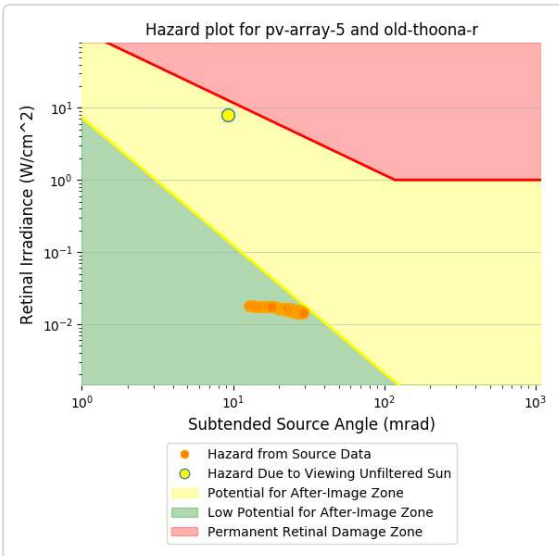
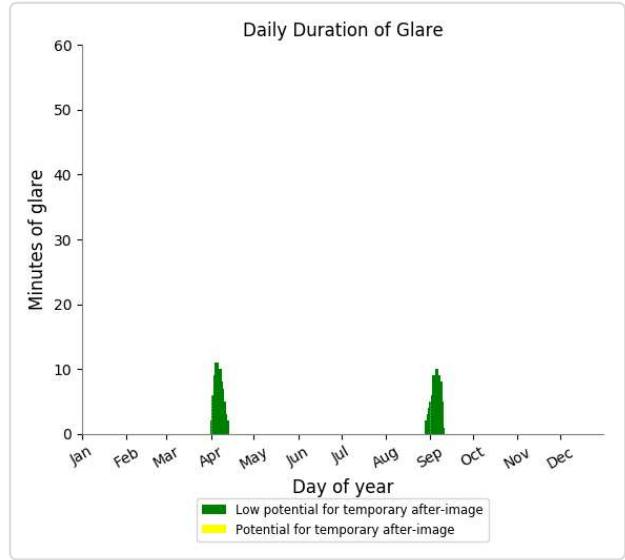
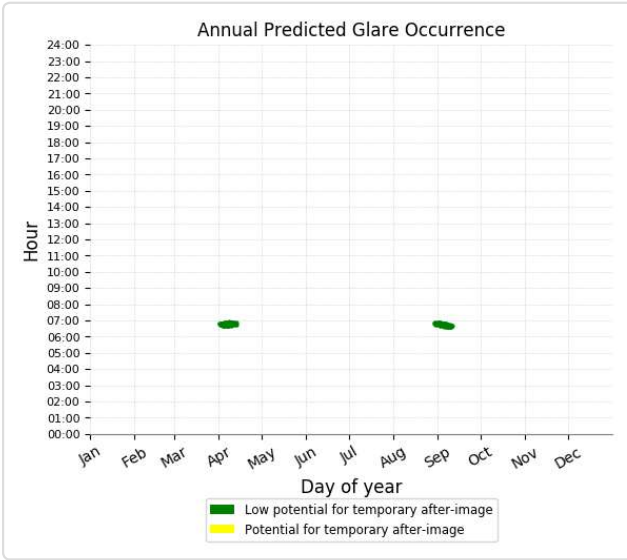
PV array 5 - Route Receptor (North Rd - 2)

No glare found

PV array 5 - Route Receptor (Old Thoon Road)

PV array is expected to produce the following glare for receptors at this location:

- 185 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 5 - Route Receptor (Route 11)*No glare found***PV array 5 - Route Receptor (Snowy Ln)***No glare found***PV array 6** potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	649
OP: OP 2	0	1647
OP: OP 3	0	416
OP: OP 4	0	106
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	1601	346
OP: OP 20	1496	605
OP: OP 21	1183	588
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	217	2534
OP: OP 27	95	2694
OP: OP 28	7	2091
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	3110
OP: OP 32	0	0
OP: OP 33	0	5160
Route: Benalla-Yarrawonga Road	0	5267
Route: Boundary Road	0	0
Route: Chesney Road	0	790
Route: Dam Wall Rd	0	3416
Route: Farnley Road	0	3449
Route: Flynns Rd	414	0

Route: Lake Mokoan Road	0	8930
Route: North Rd	2	439
Route: North Rd - 2	70	2614
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 6 - Receptor (FP 1)

No glare found

PV array 6 - Receptor (FP 2)

No glare found

PV array 6 - Receptor (FP 3)

No glare found

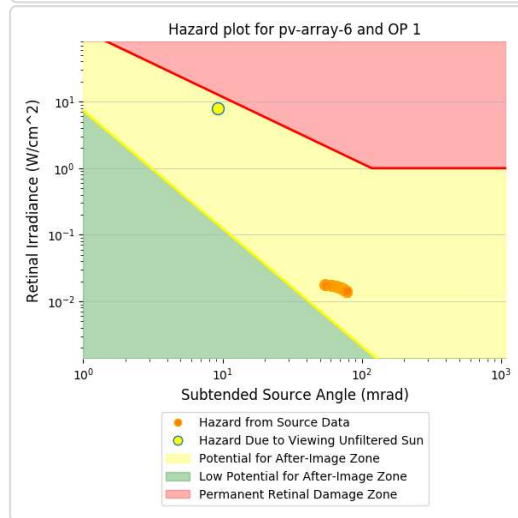
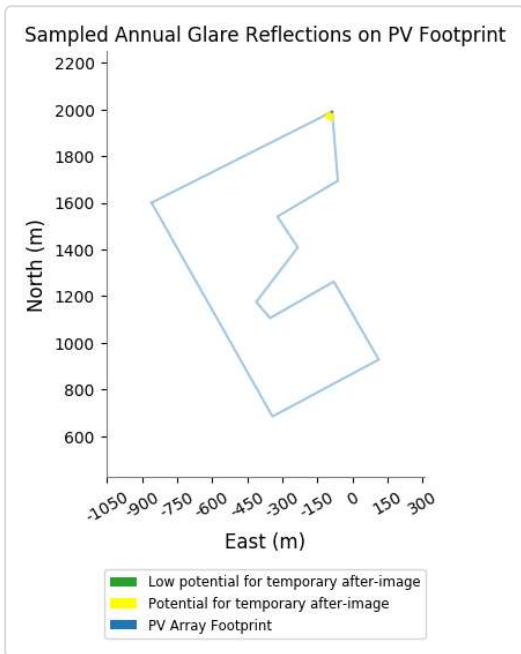
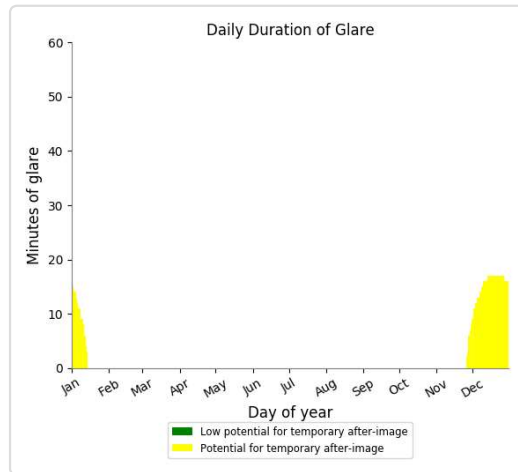
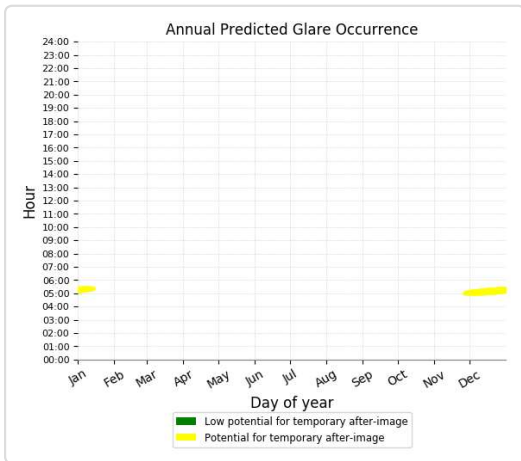
PV array 6 - Receptor (FP 4)

No glare found

PV array 6 - OP Receptor (OP 1)

PV array is expected to produce the following glare for receptors at this location:

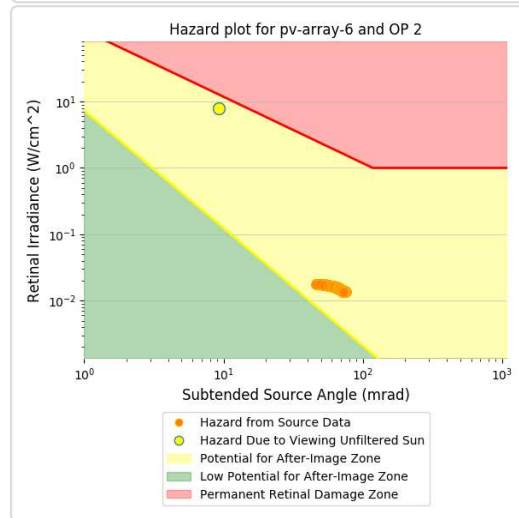
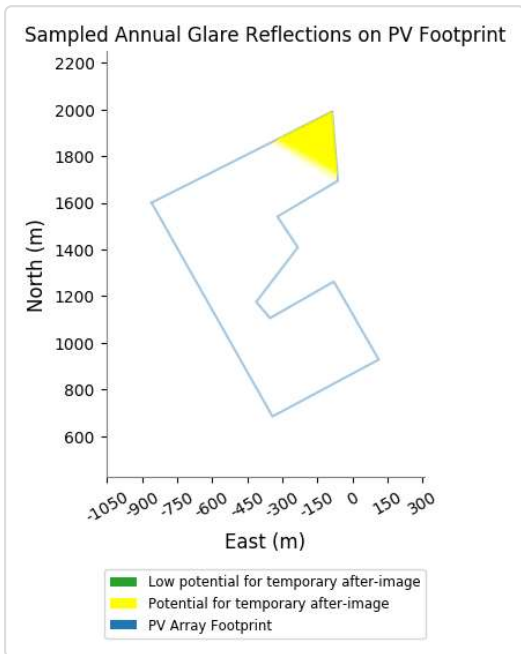
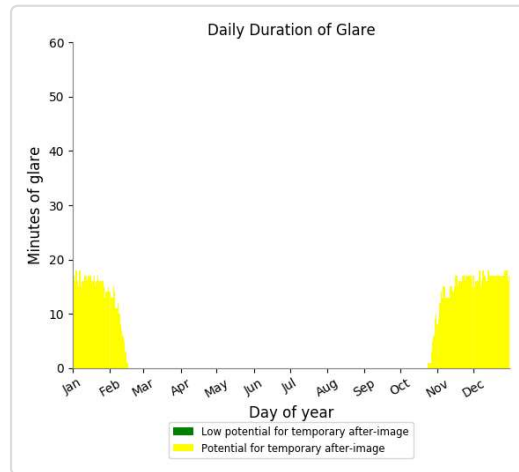
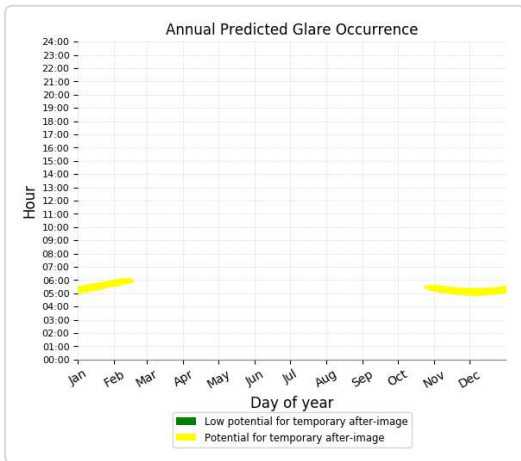
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 649 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 2)

PV array is expected to produce the following glare for receptors at this location:

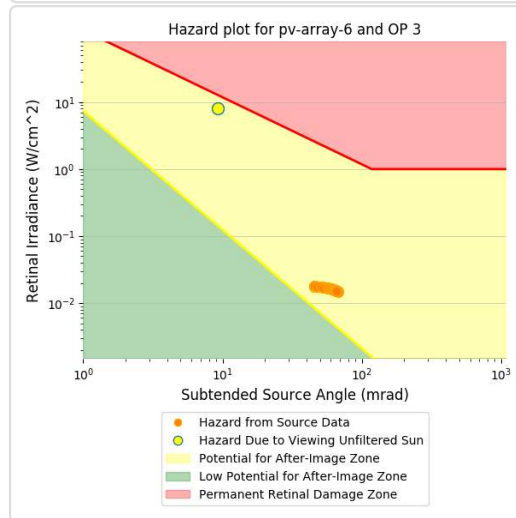
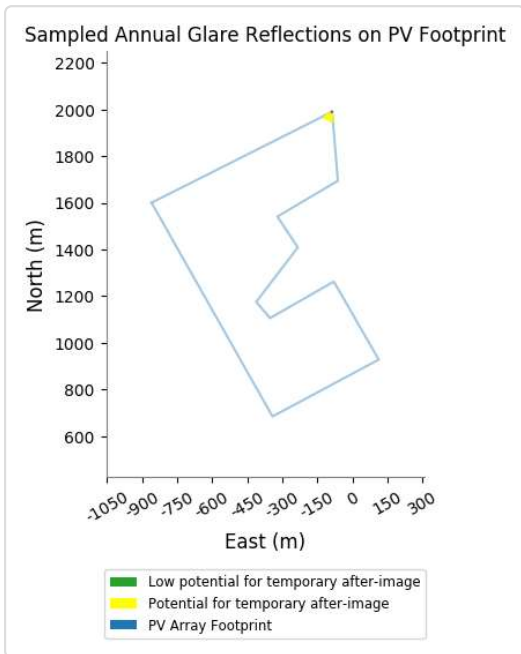
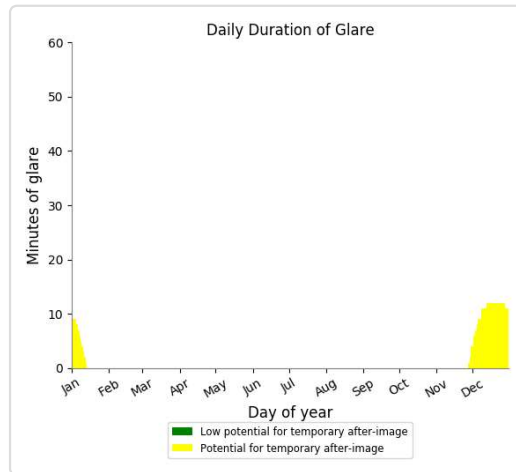
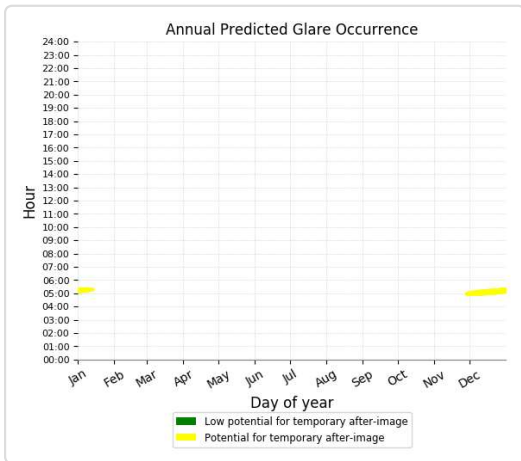
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,647 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 3)

PV array is expected to produce the following glare for receptors at this location:

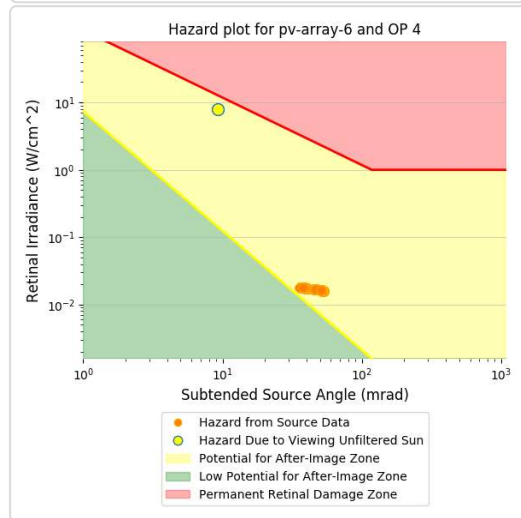
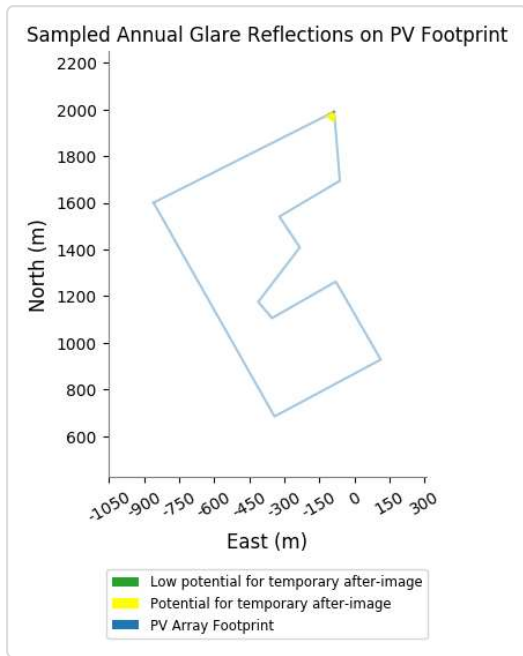
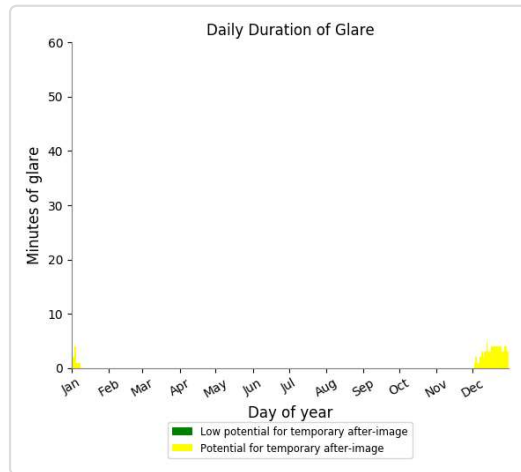
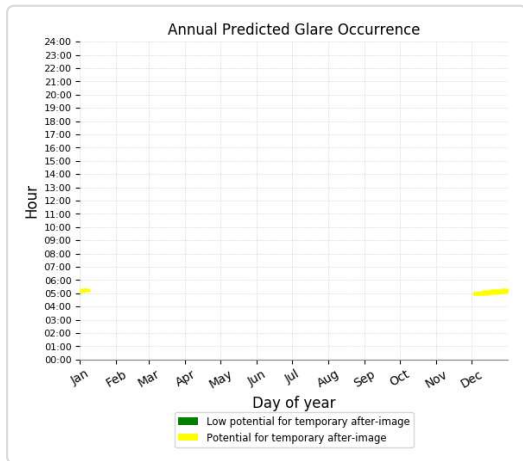
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 416 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 4)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 106 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 5)

No glare found

PV array 6 - OP Receptor (OP 6)

No glare found

PV array 6 - OP Receptor (OP 7)

No glare found

PV array 6 - OP Receptor (OP 8)

No glare found

PV array 6 - OP Receptor (OP 9)

No glare found

PV array 6 - OP Receptor (OP 10)

No glare found

PV array 6 - OP Receptor (OP 11)

No glare found

PV array 6 - OP Receptor (OP 12)

No glare found

PV array 6 - OP Receptor (OP 13)

No glare found

PV array 6 - OP Receptor (OP 14)

No glare found

PV array 6 - OP Receptor (OP 15)

No glare found

PV array 6 - OP Receptor (OP 16)

No glare found

PV array 6 - OP Receptor (OP 17)

No glare found

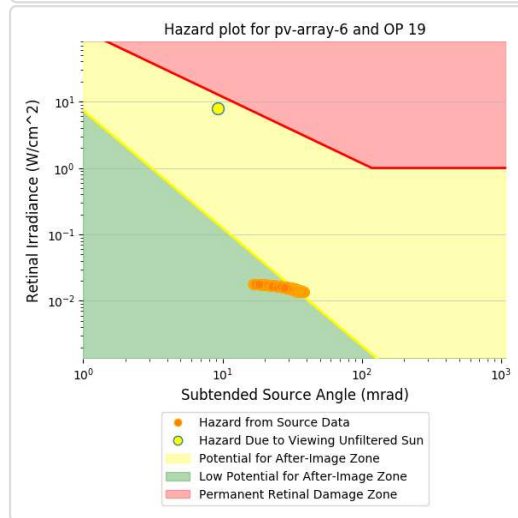
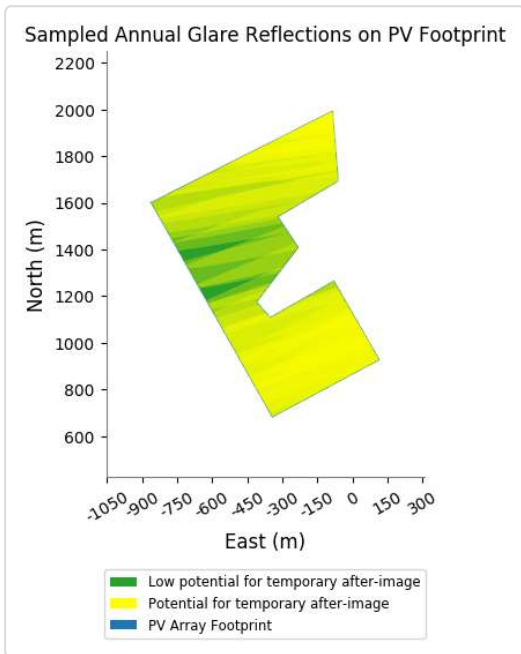
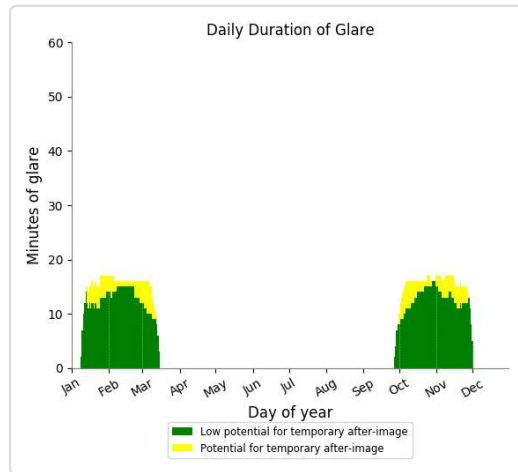
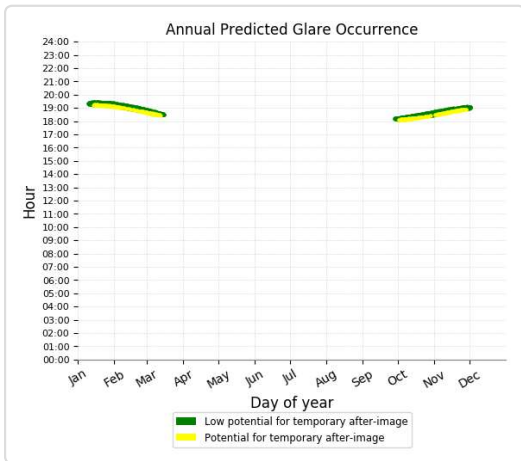
PV array 6 - OP Receptor (OP 18)

No glare found

PV array 6 - OP Receptor (OP 19)

PV array is expected to produce the following glare for receptors at this location:

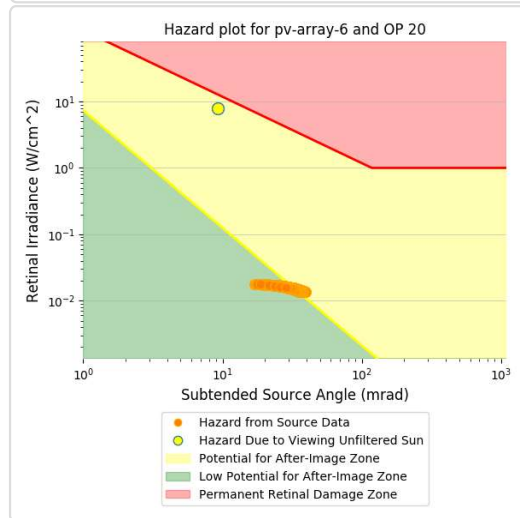
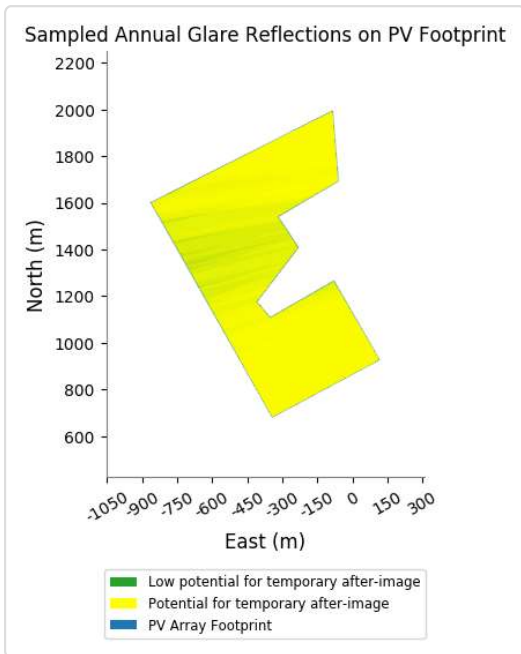
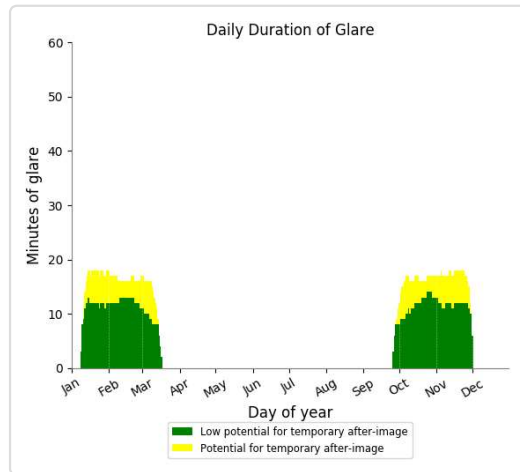
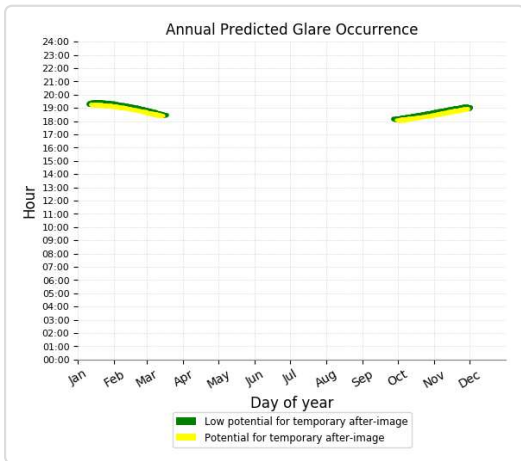
- 1,601 minutes of "green" glare with low potential to cause temporary after-image.
- 346 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 20)

PV array is expected to produce the following glare for receptors at this location:

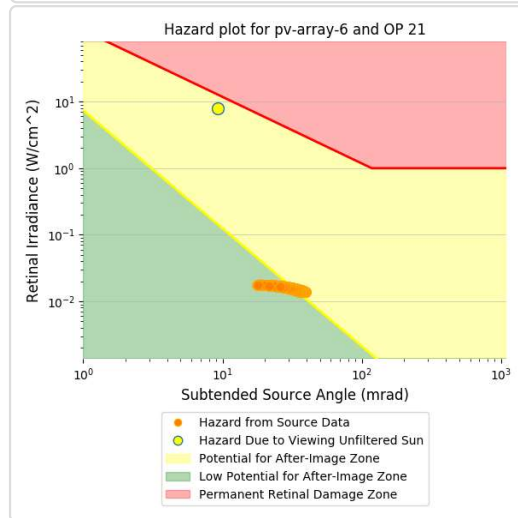
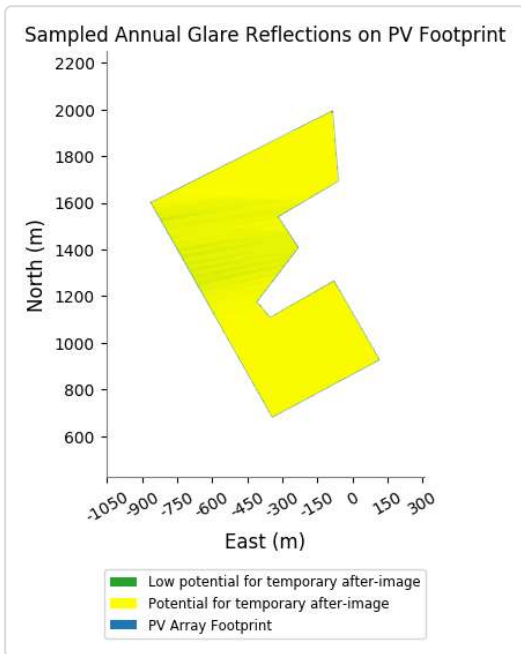
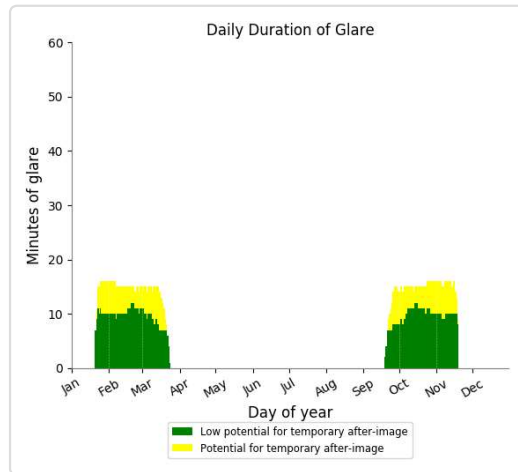
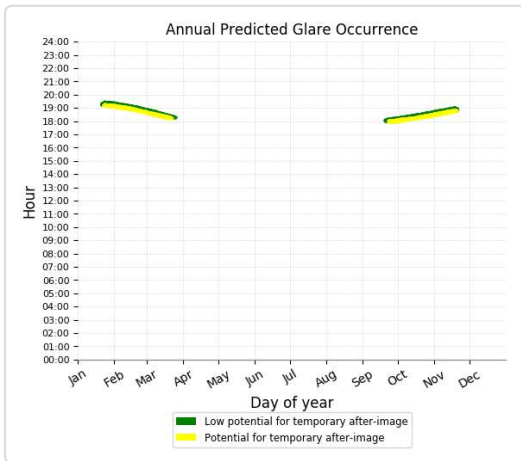
- 1,496 minutes of "green" glare with low potential to cause temporary after-image.
- 605 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 21)

PV array is expected to produce the following glare for receptors at this location:

- 1,183 minutes of "green" glare with low potential to cause temporary after-image.
- 588 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 22)

No glare found

PV array 6 - OP Receptor (OP 23)

No glare found

PV array 6 - OP Receptor (OP 24)

No glare found

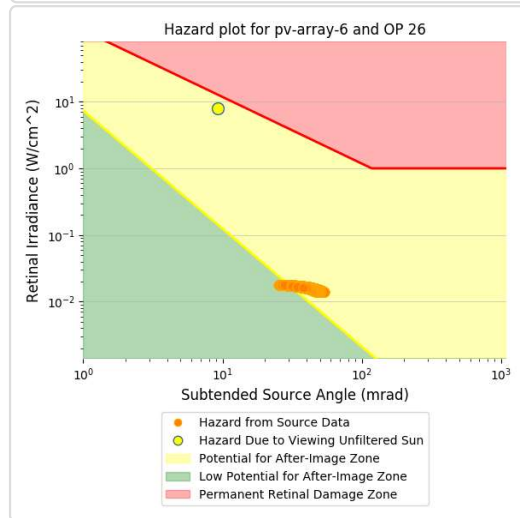
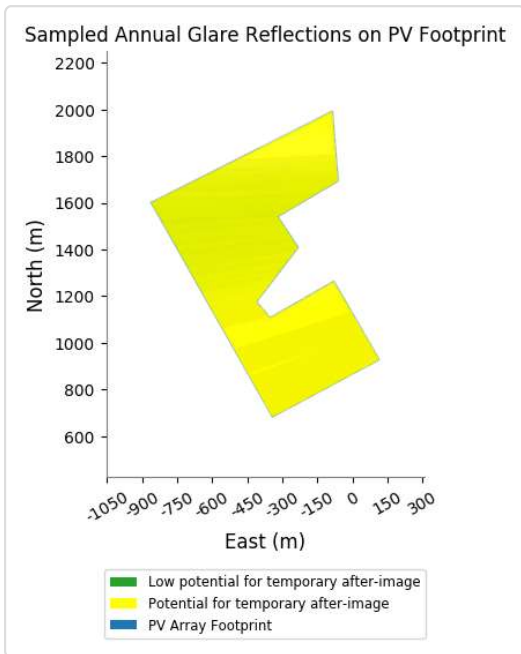
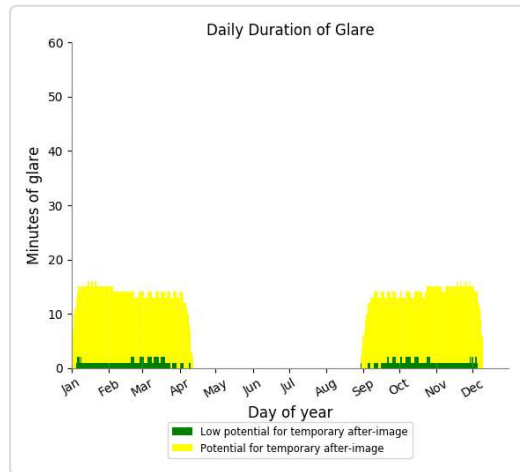
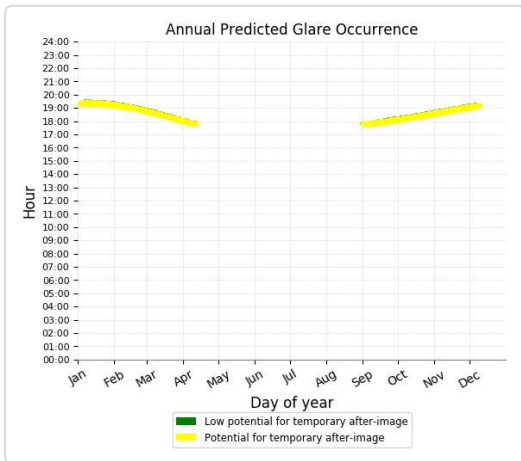
PV array 6 - OP Receptor (OP 25)

No glare found

PV array 6 - OP Receptor (OP 26)

PV array is expected to produce the following glare for receptors at this location:

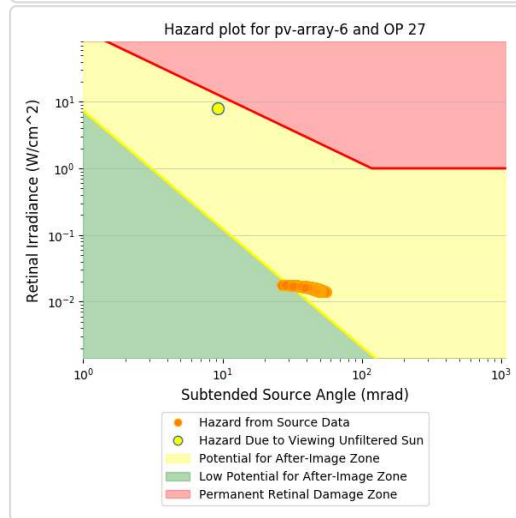
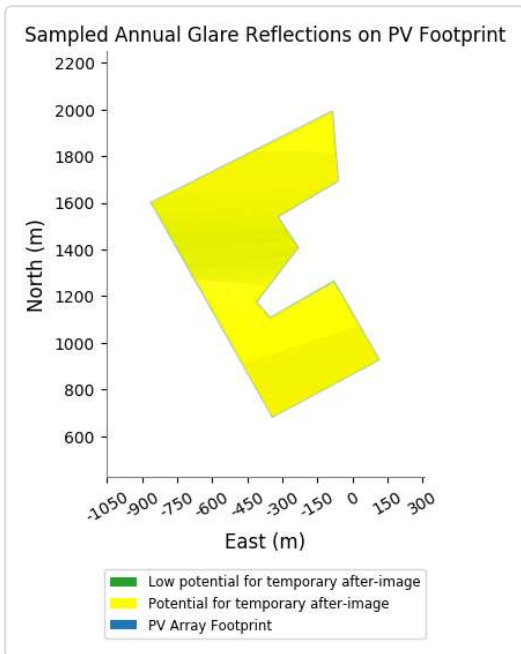
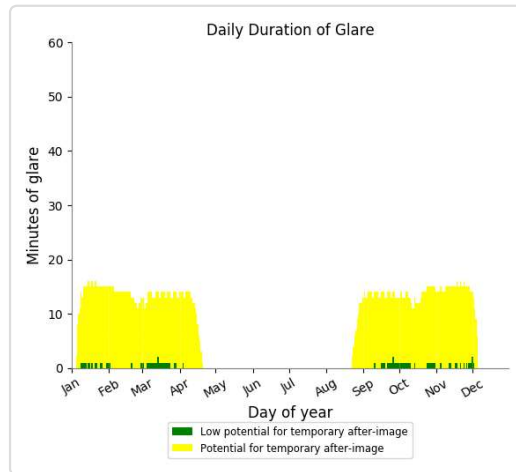
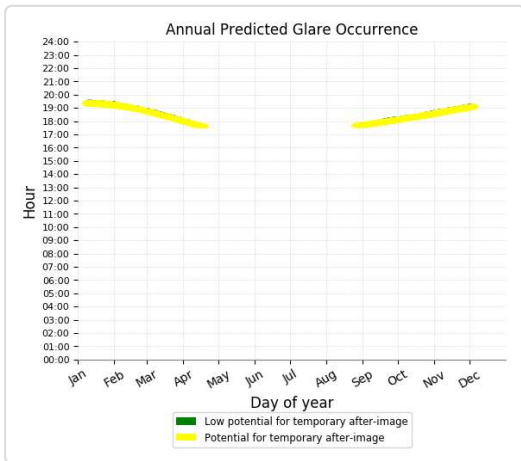
- 217 minutes of "green" glare with low potential to cause temporary after-image.
- 2,534 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 27)

PV array is expected to produce the following glare for receptors at this location:

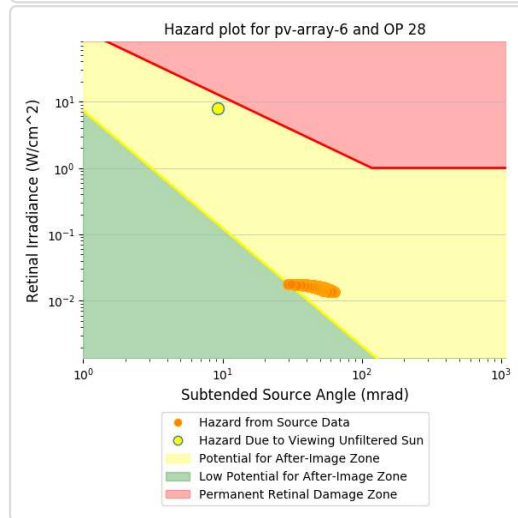
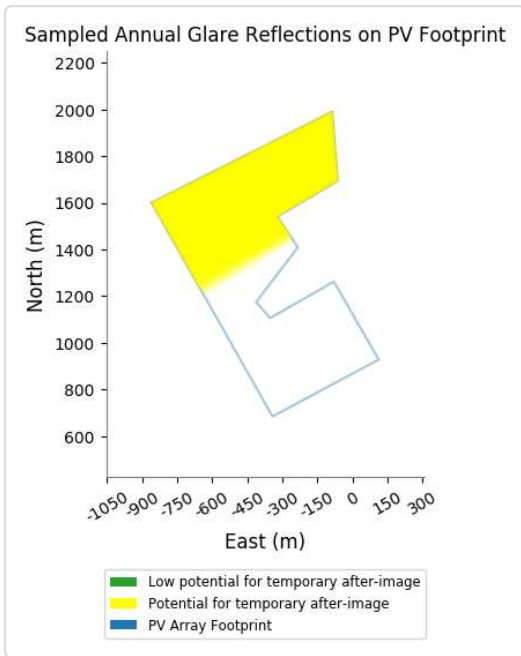
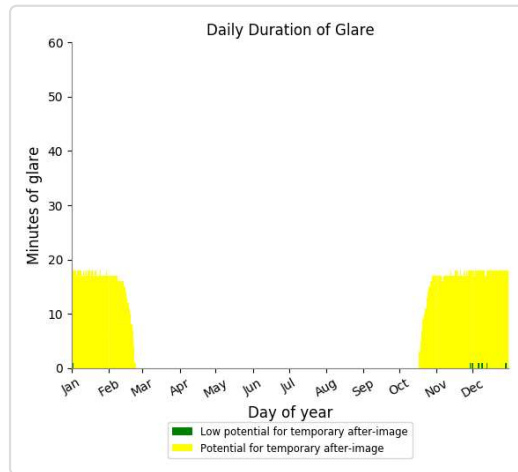
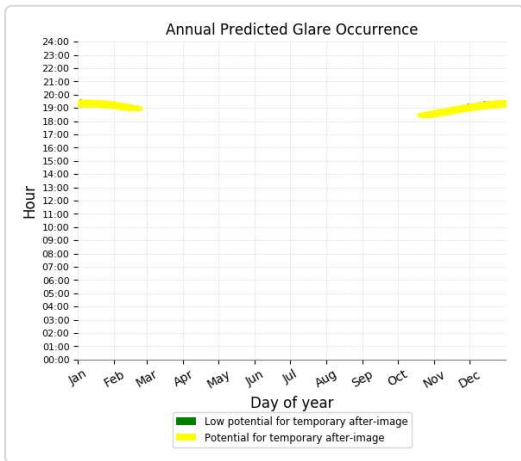
- 95 minutes of "green" glare with low potential to cause temporary after-image.
- 2,694 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 28)

PV array is expected to produce the following glare for receptors at this location:

- 7 minutes of "green" glare with low potential to cause temporary after-image.
- 2,091 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - OP Receptor (OP 29)

No glare found

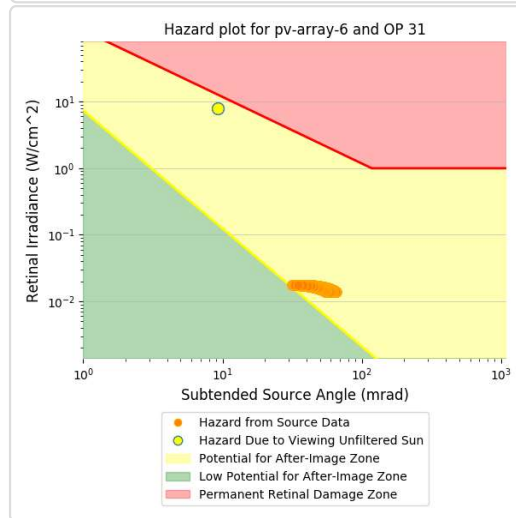
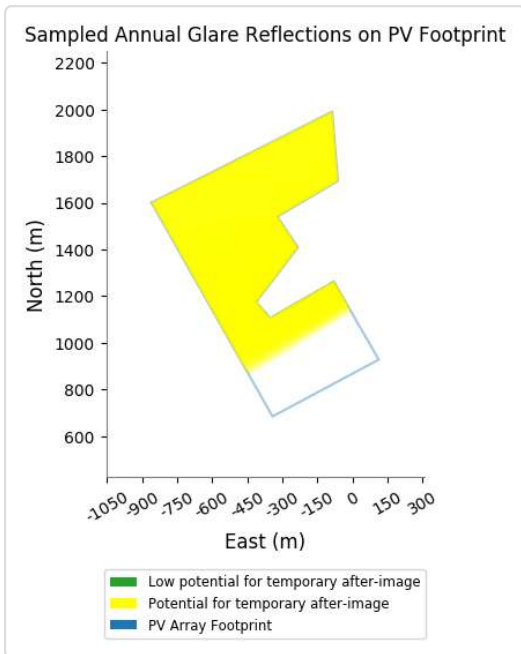
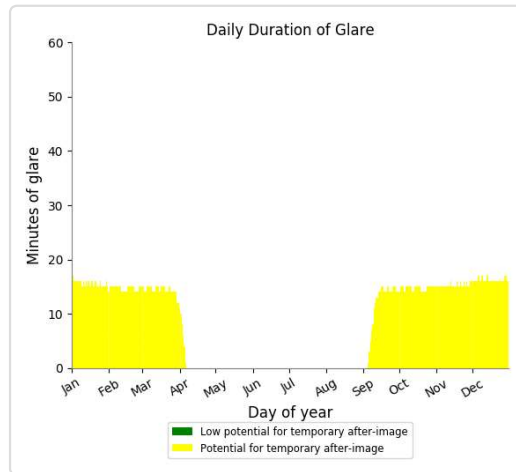
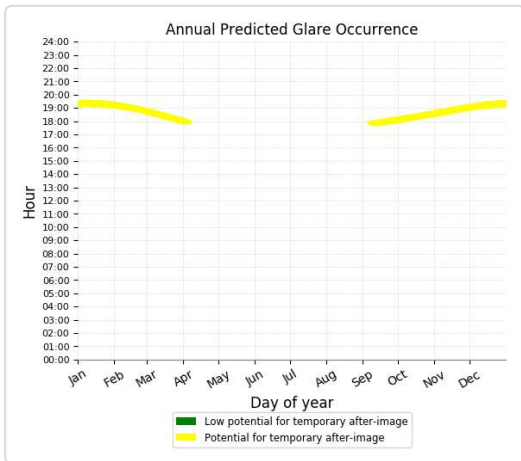
PV array 6 - OP Receptor (OP 30)

No glare found

PV array 6 - OP Receptor (OP 31)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,110 minutes of "yellow" glare with potential to cause temporary after-image.



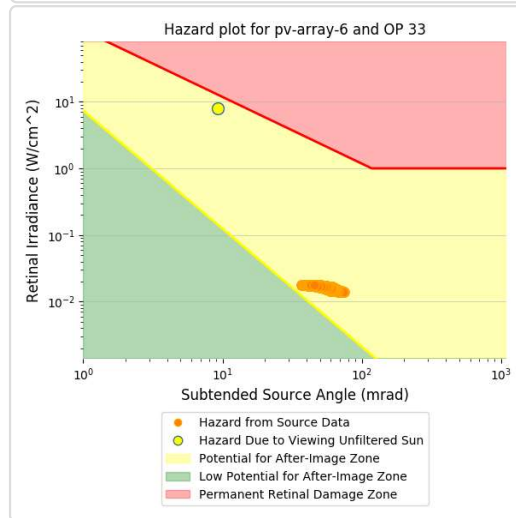
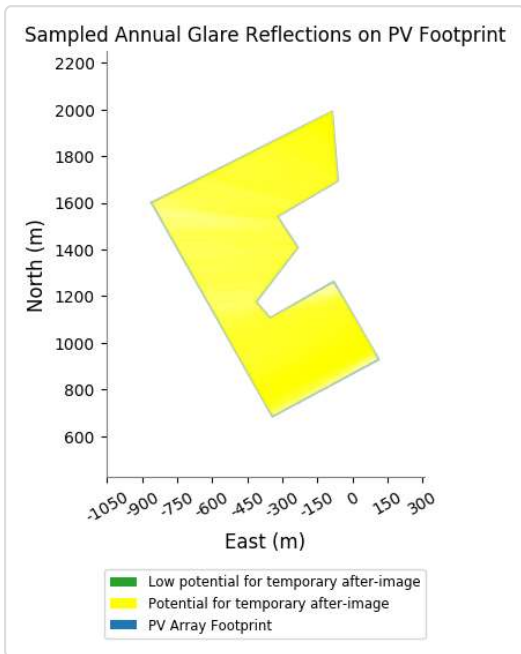
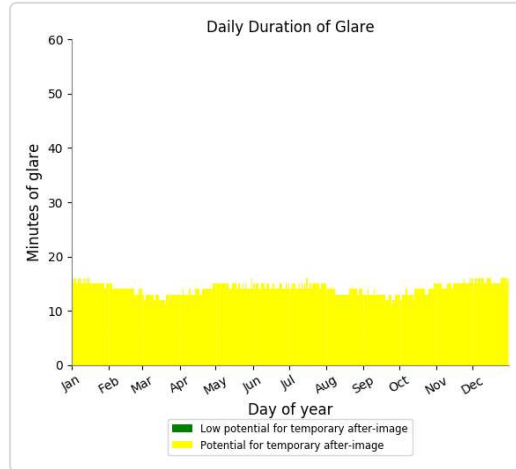
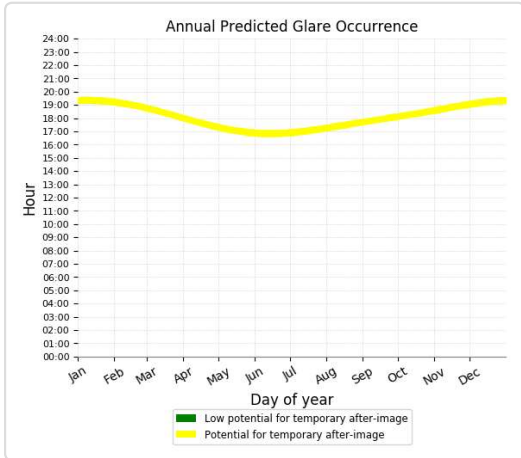
PV array 6 - OP Receptor (OP 32)

No glare found

PV array 6 - OP Receptor (OP 33)

PV array is expected to produce the following glare for receptors at this location:

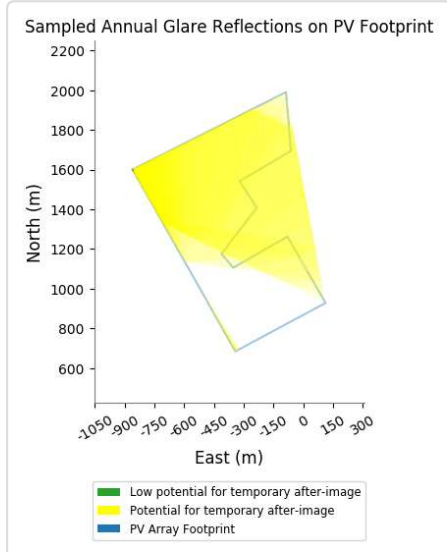
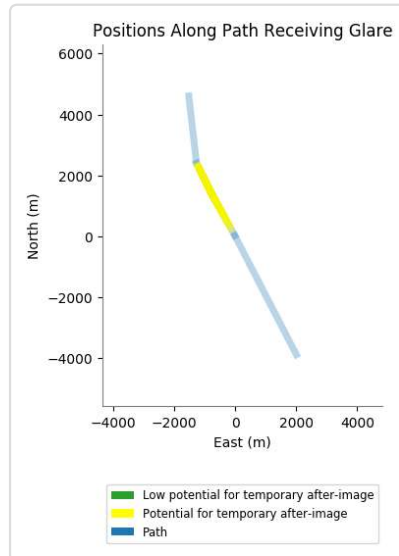
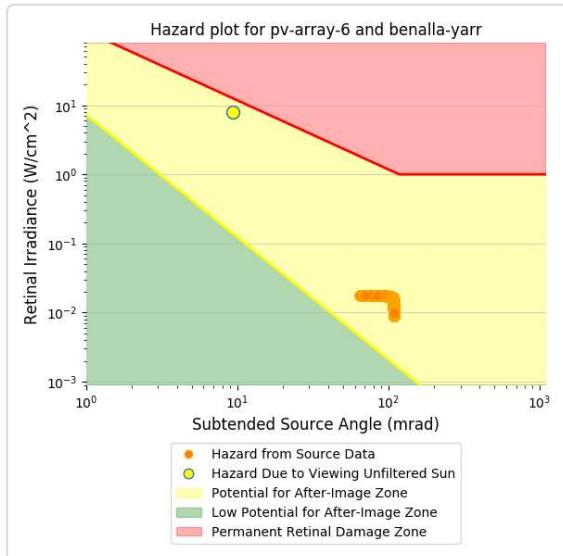
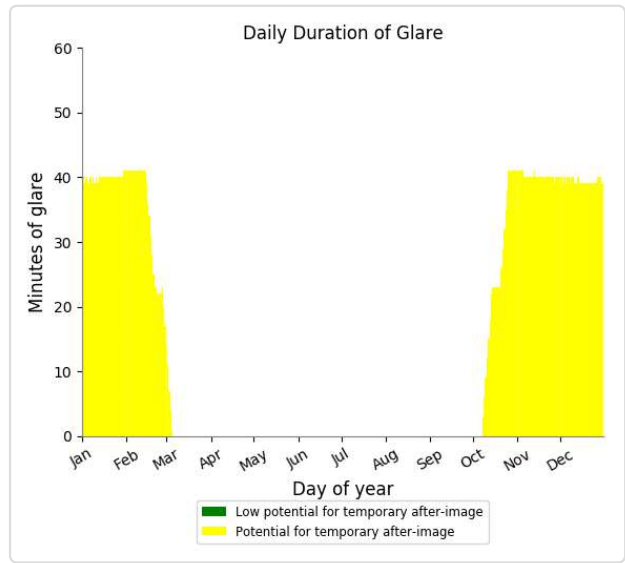
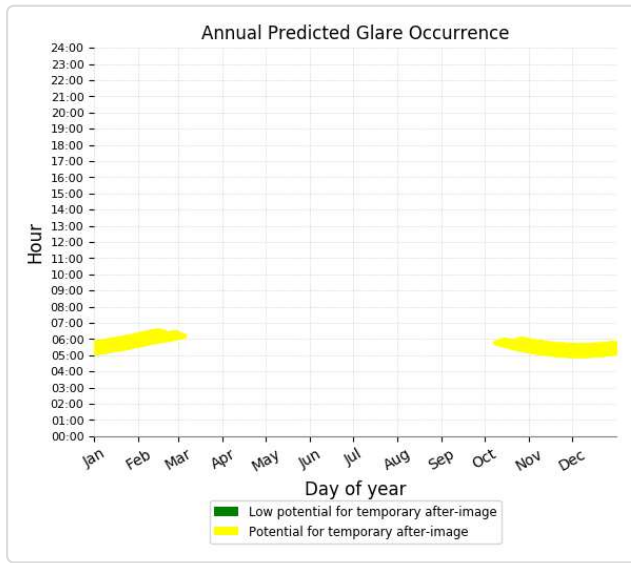
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 5,160 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 5,267 minutes of "yellow" glare with potential to cause temporary after-image.



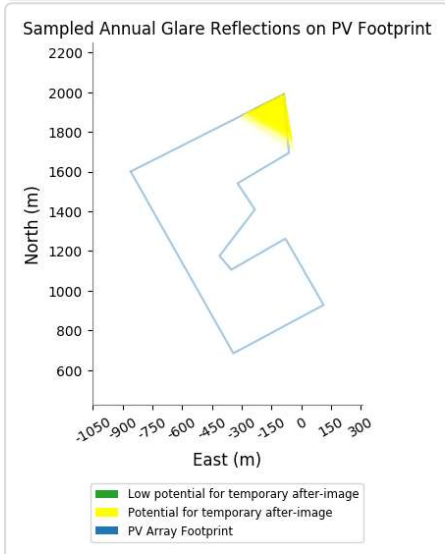
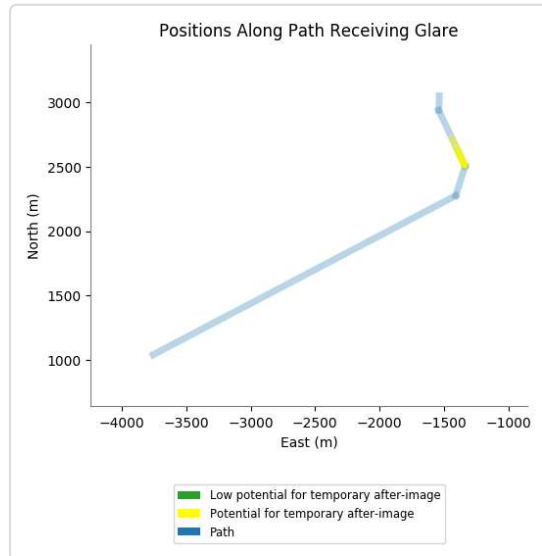
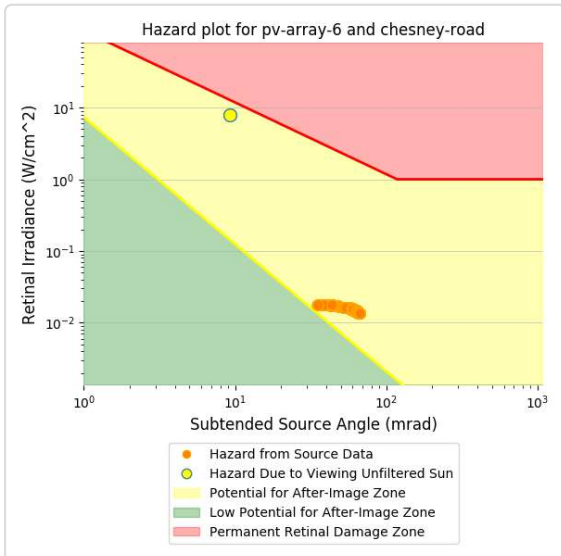
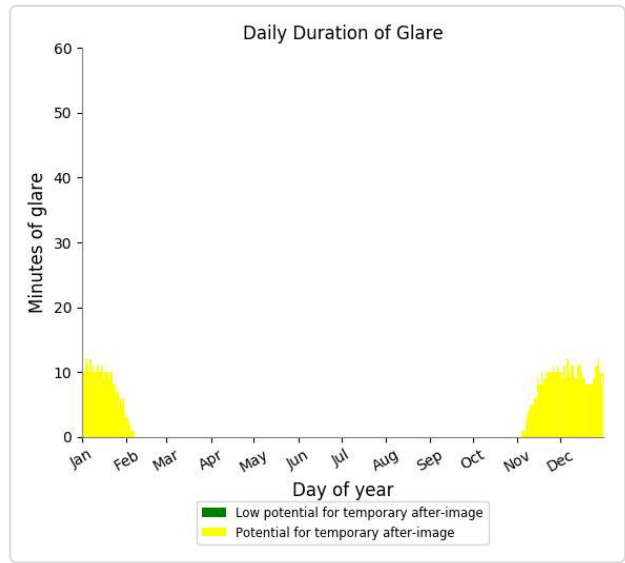
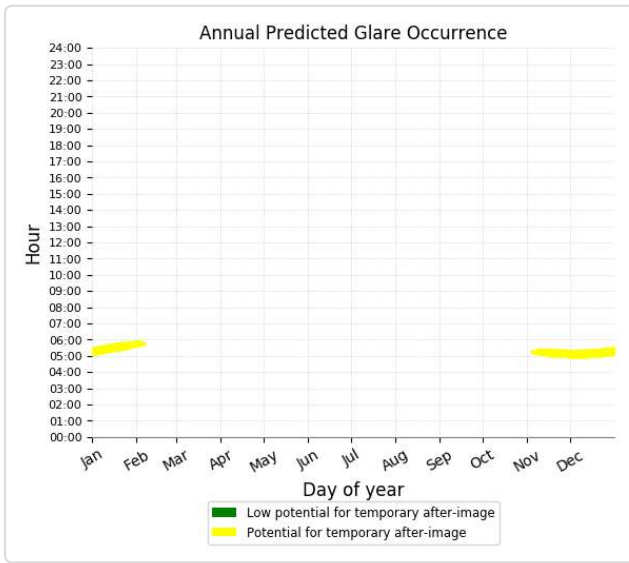
PV array 6 - Route Receptor (Boundary Road)

No glare found

PV array 6 - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

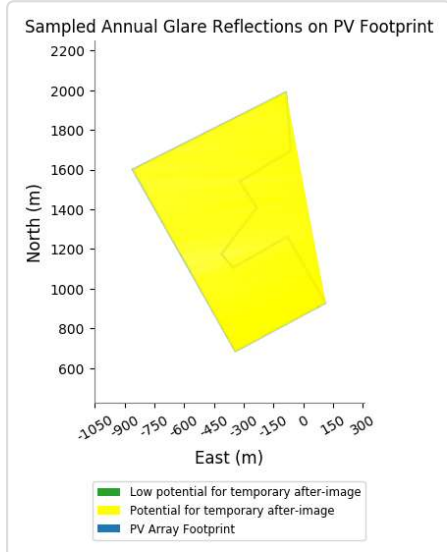
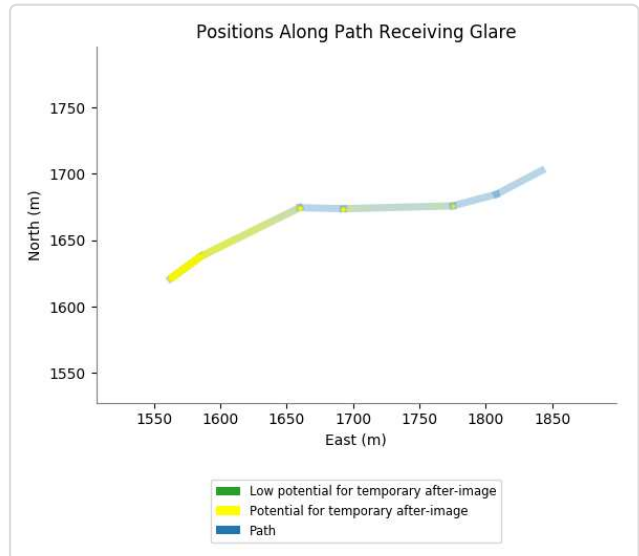
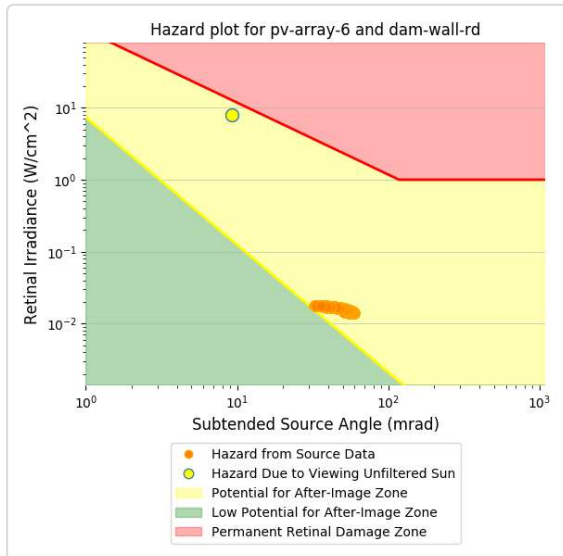
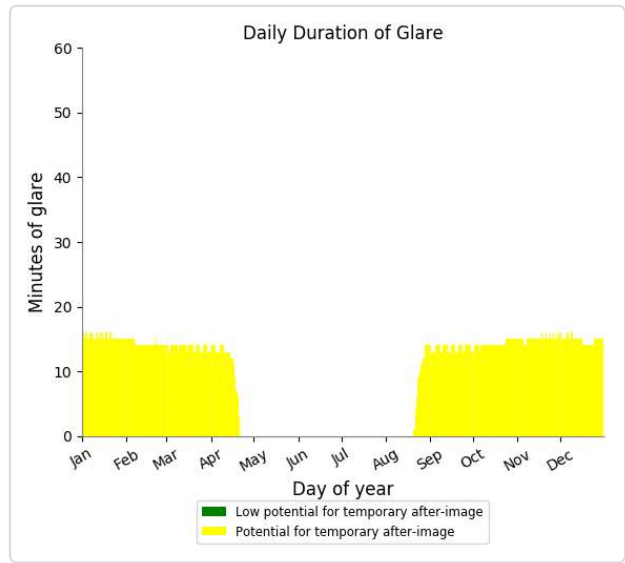
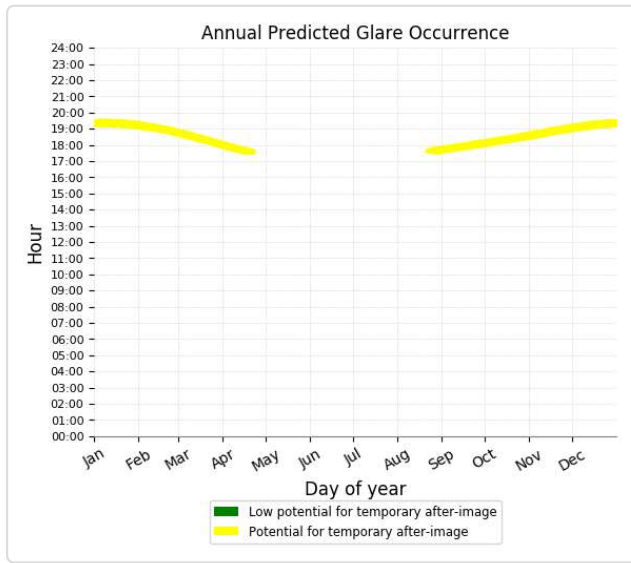
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 790 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (Dam Wall Rd)

PV array is expected to produce the following glare for receptors at this location:

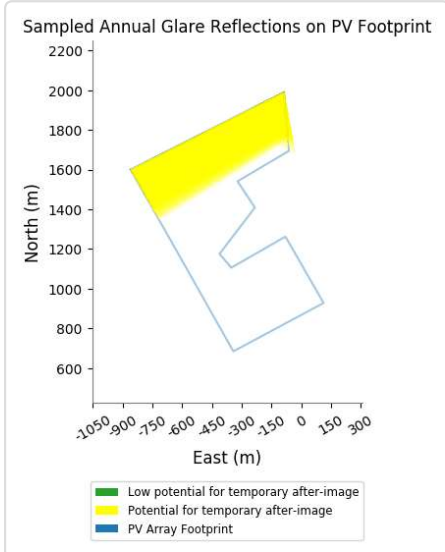
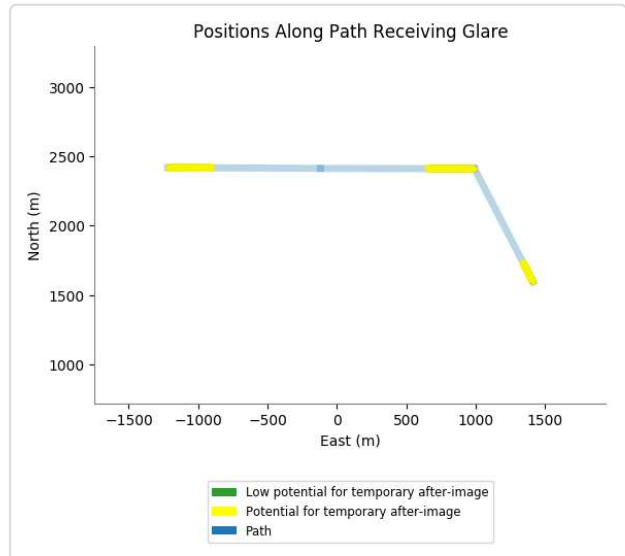
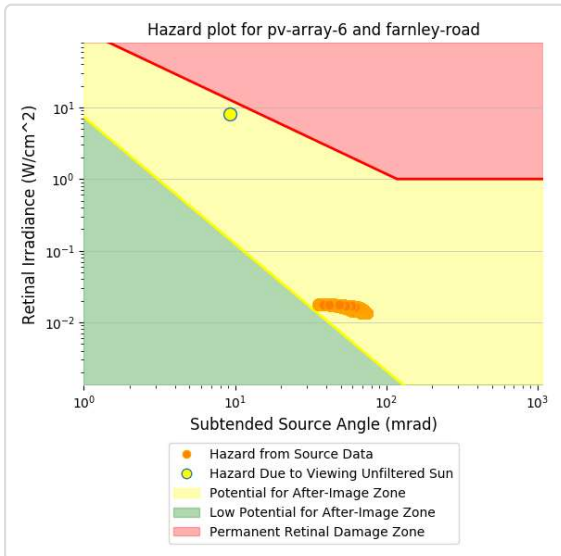
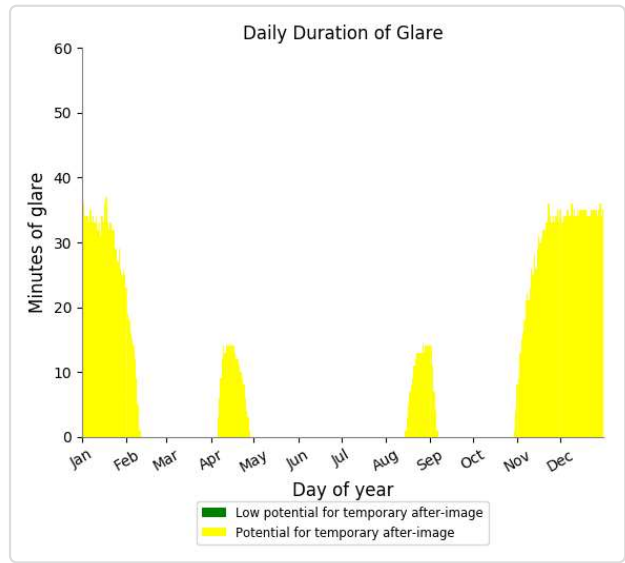
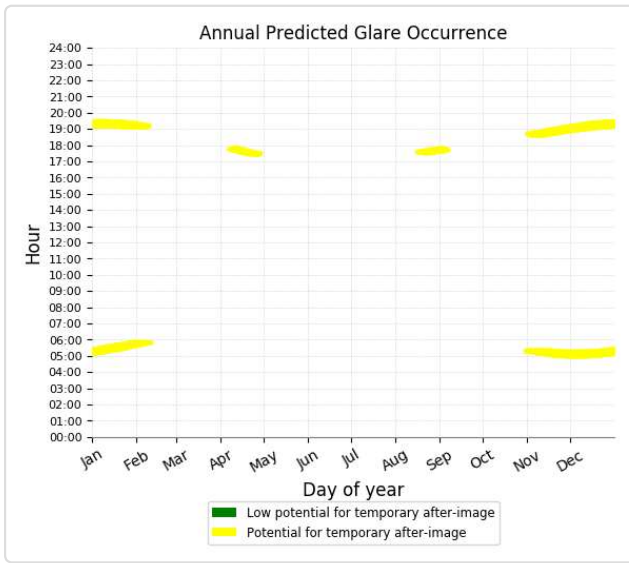
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,416 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (Farnley Road)

PV array is expected to produce the following glare for receptors at this location:

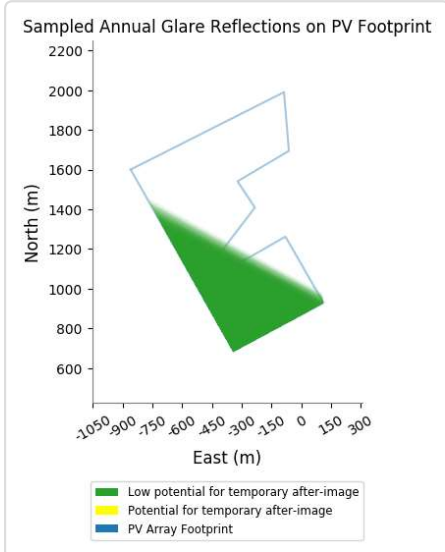
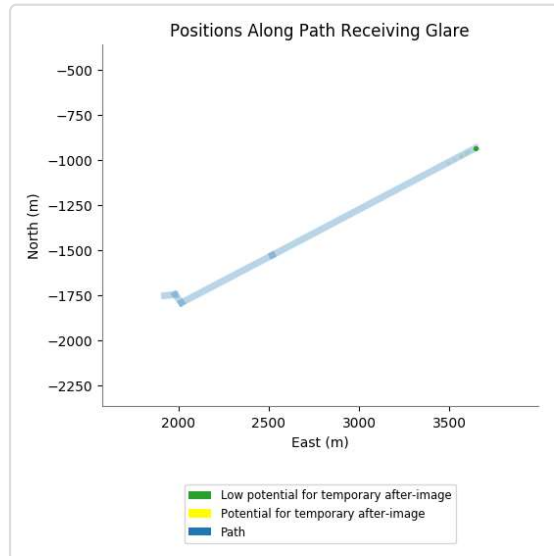
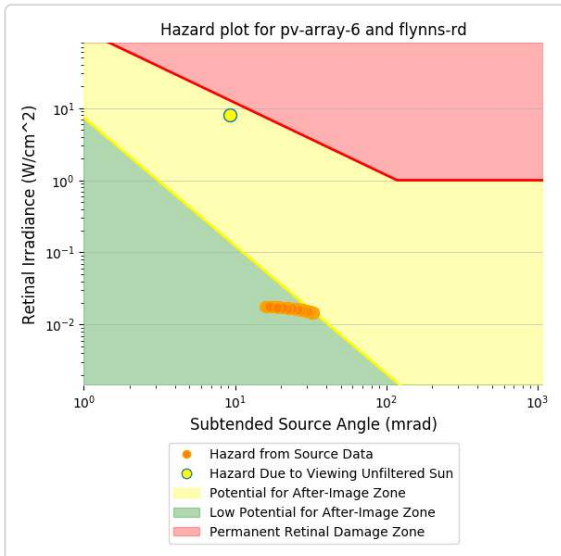
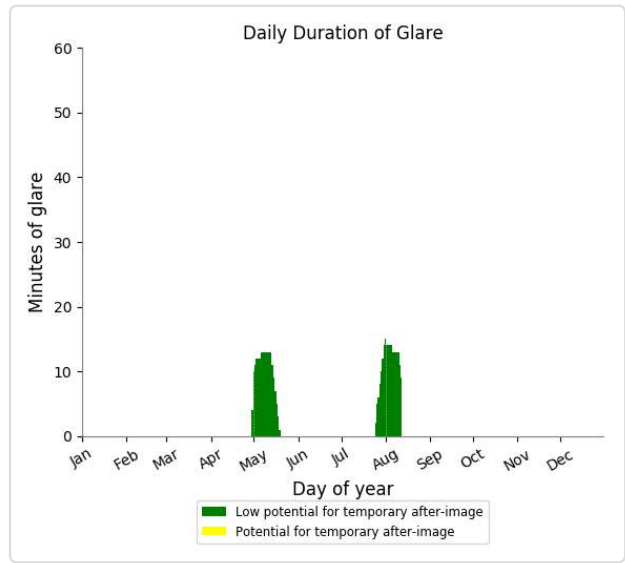
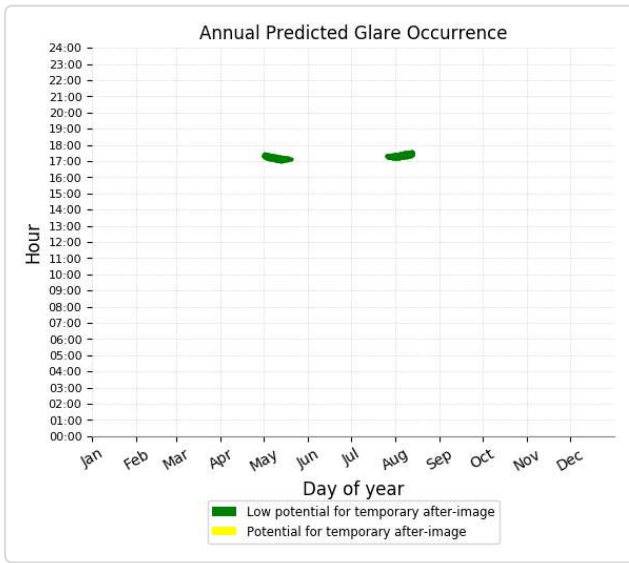
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,449 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (Flynn's Rd)

PV array is expected to produce the following glare for receptors at this location:

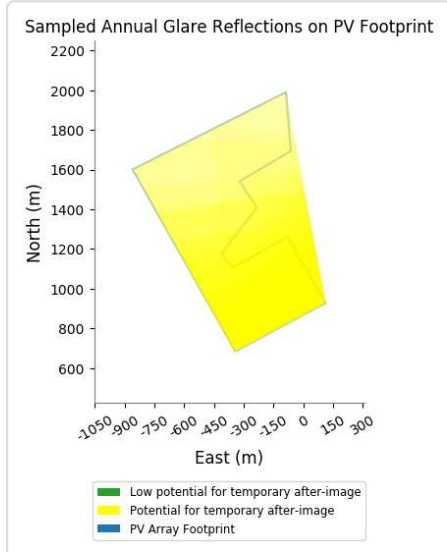
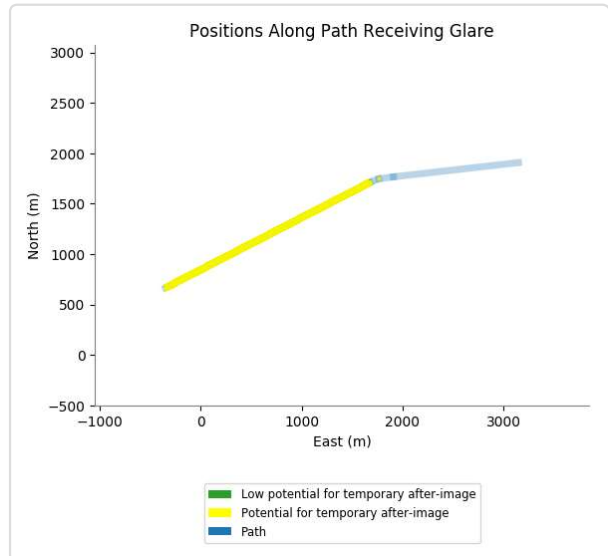
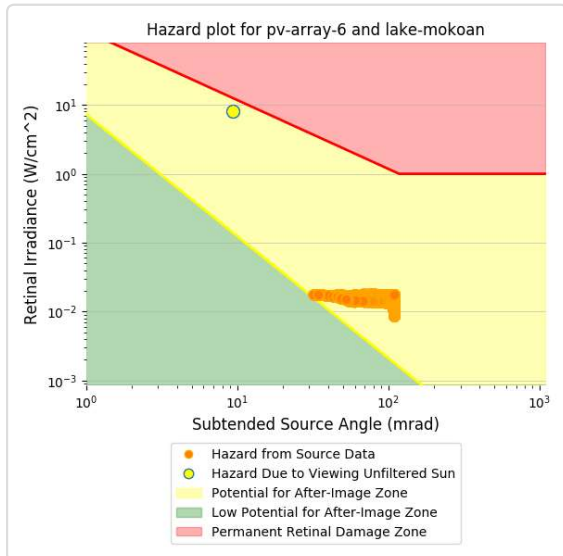
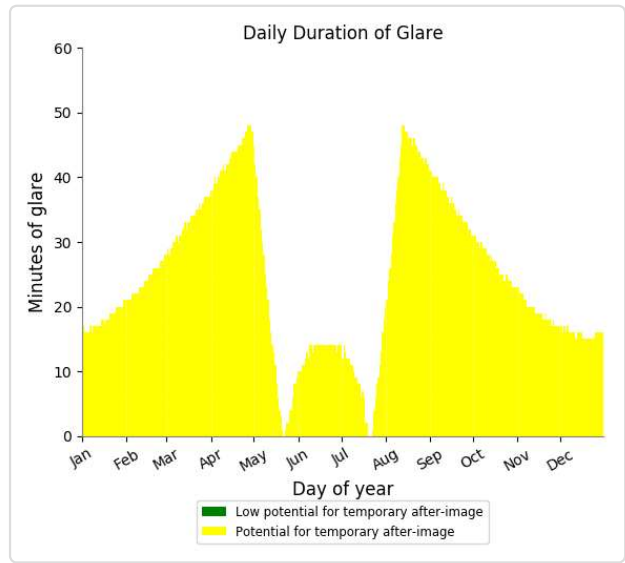
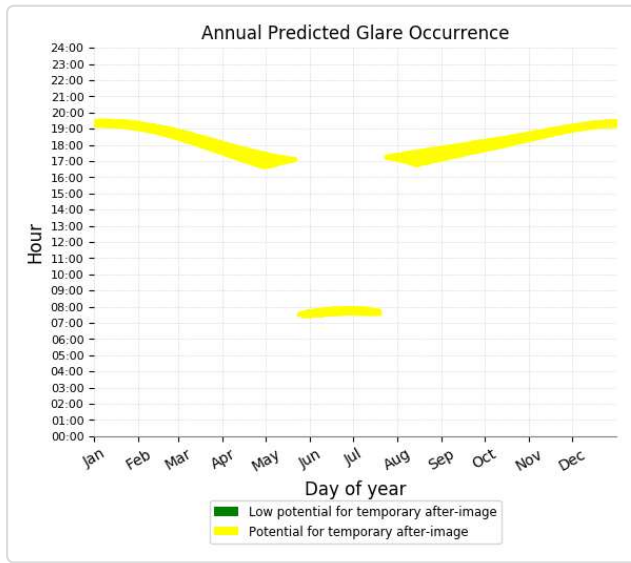
- 414 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

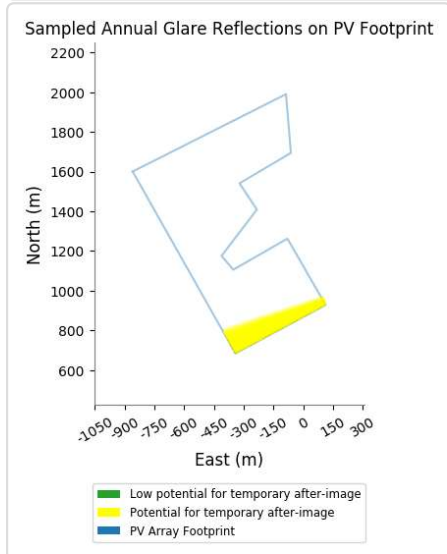
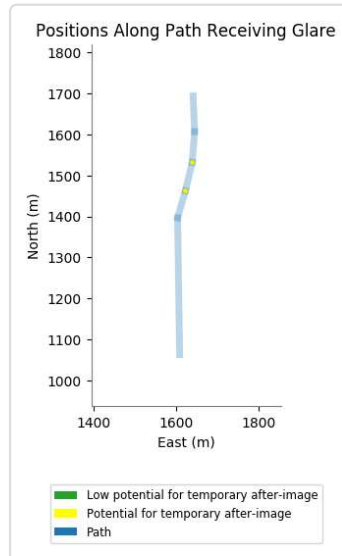
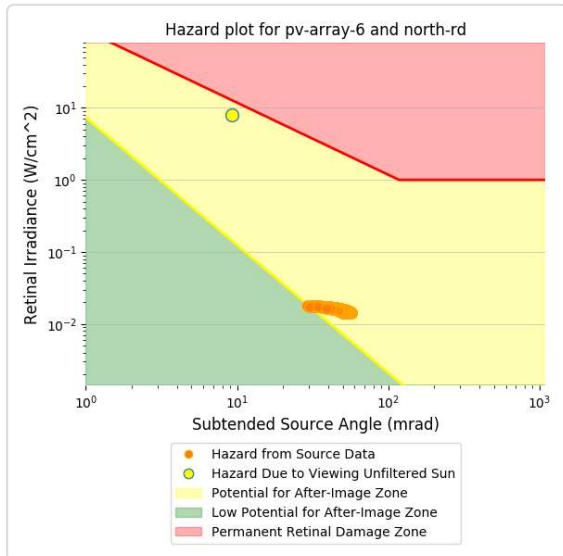
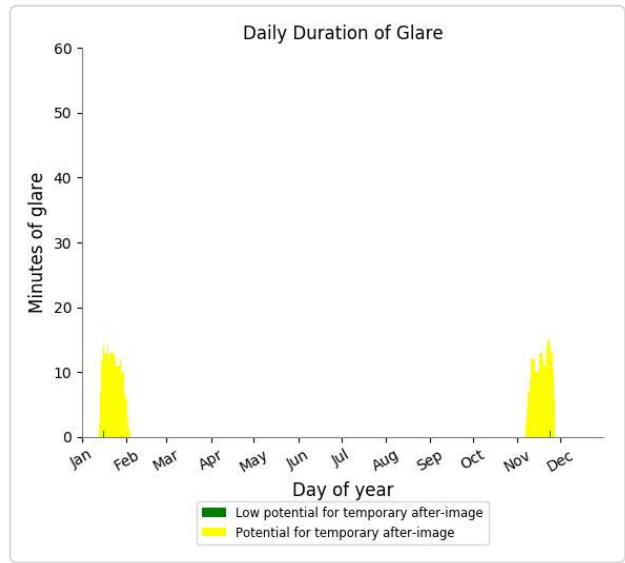
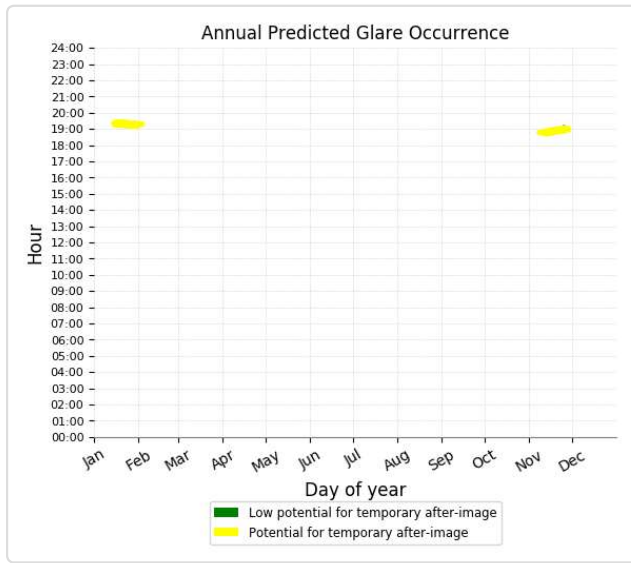
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 8,930 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (North Rd)

PV array is expected to produce the following glare for receptors at this location:

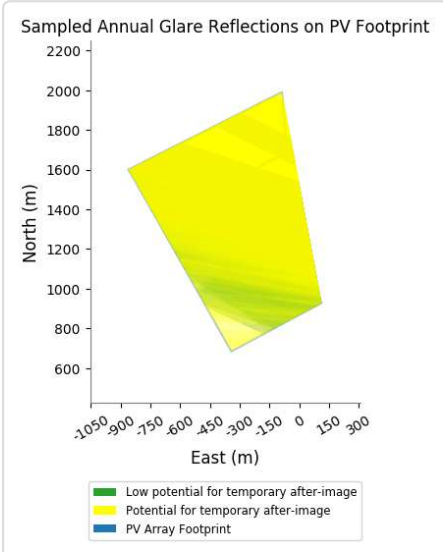
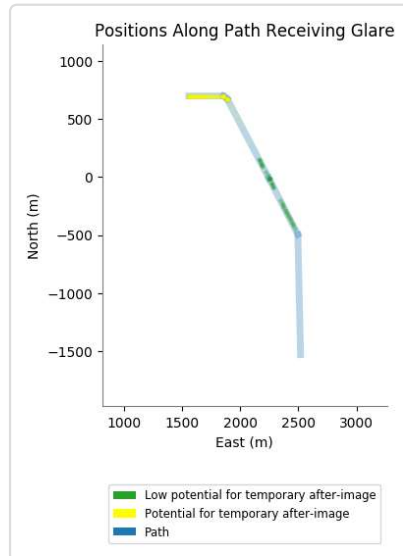
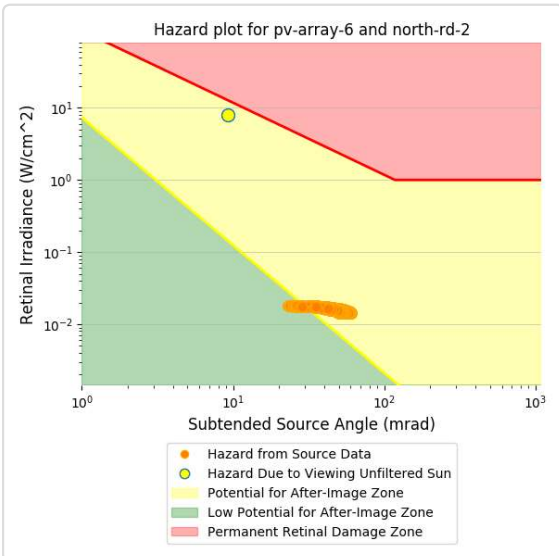
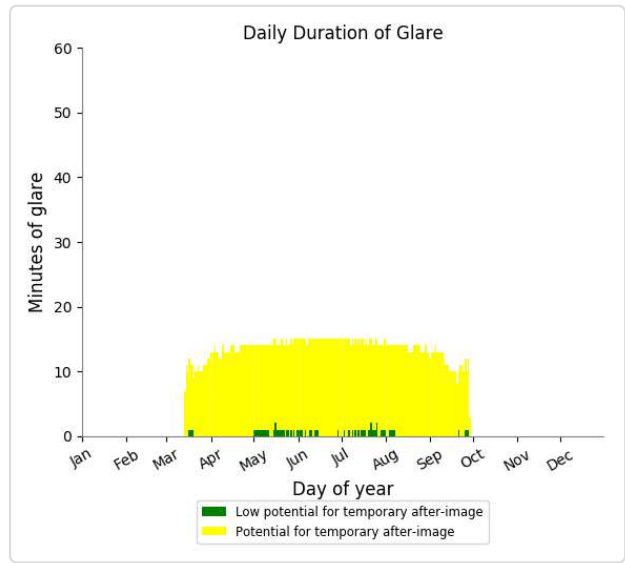
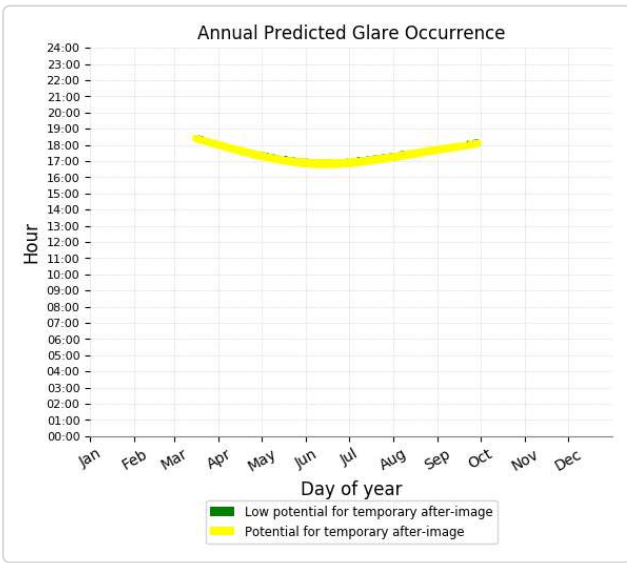
- 2 minutes of "green" glare with low potential to cause temporary after-image.
- 439 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (North Rd - 2)

PV array is expected to produce the following glare for receptors at this location:

- 70 minutes of "green" glare with low potential to cause temporary after-image.
- 2,614 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (Old Thoona Road)*No glare found***PV array 6 - Route Receptor (Route 11)***No glare found***PV array 6 - Route Receptor (Snowy Ln)***No glare found***PV array 7** potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	1783
OP: OP 2	0	665
OP: OP 3	25	1187
OP: OP 4	0	284
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	193	1727
OP: OP 20	157	1862
OP: OP 21	121	2160
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	25	214
OP: OP 25	0	0
OP: OP 26	0	2239
OP: OP 27	0	3298
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	5921
Route: Benalla-Yarrawonga Road	0	335
Route: Boundary Road	0	4007
Route: Chesney Road	0	465

Route: Dam Wall Rd	0	3010
Route: Farnley Road	0	1294
Route: Flynns Rd	60	516
Route: Lake Mokoan Road	0	22685
Route: North Rd	0	3504
Route: North Rd - 2	0	4663
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 7 - Receptor (FP 1)

No glare found

PV array 7 - Receptor (FP 2)

No glare found

PV array 7 - Receptor (FP 3)

No glare found

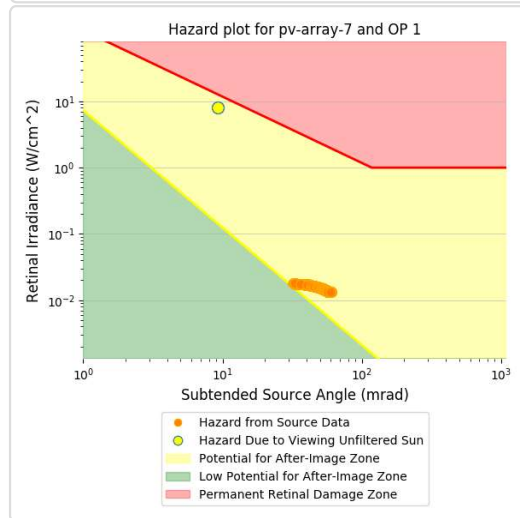
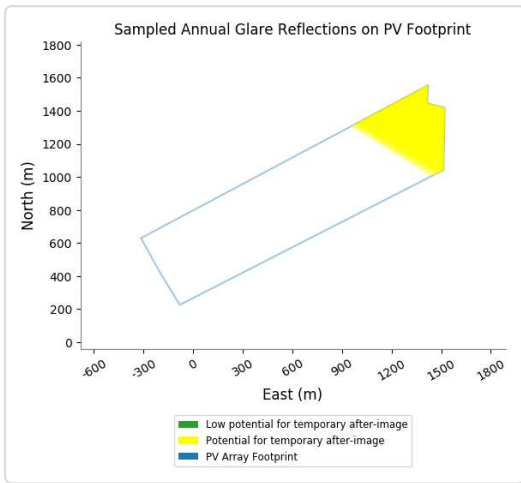
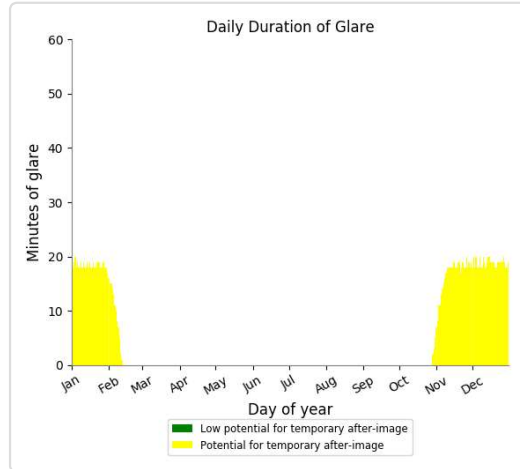
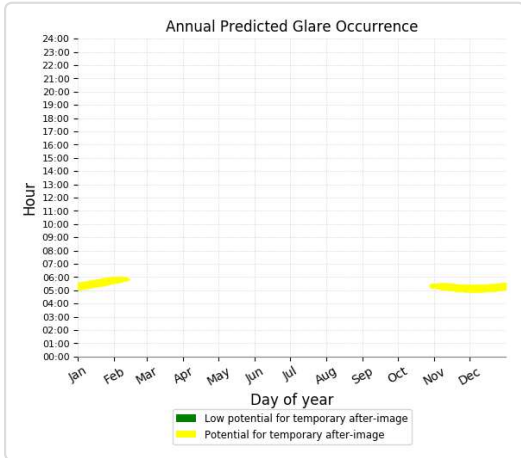
PV array 7 - Receptor (FP 4)

No glare found

PV array 7 - OP Receptor (OP 1)

PV array is expected to produce the following glare for receptors at this location:

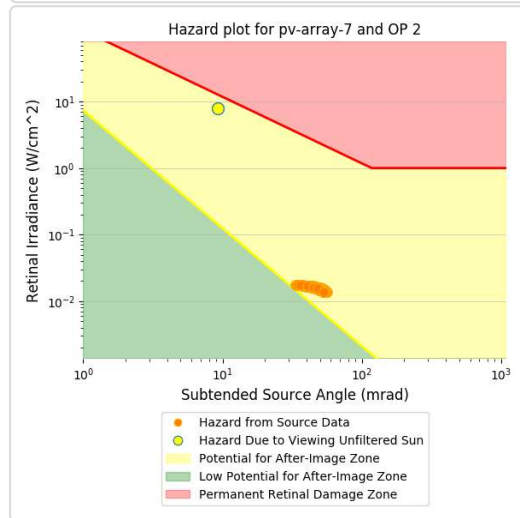
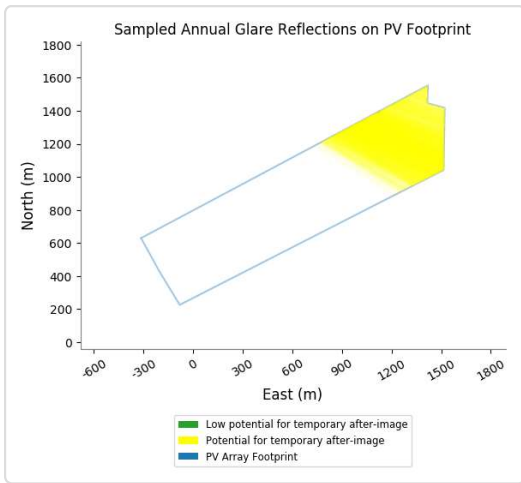
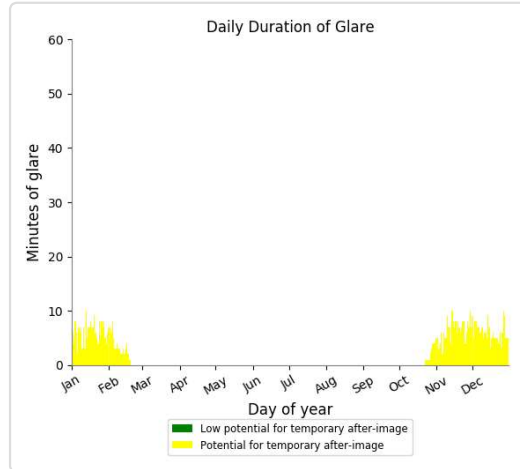
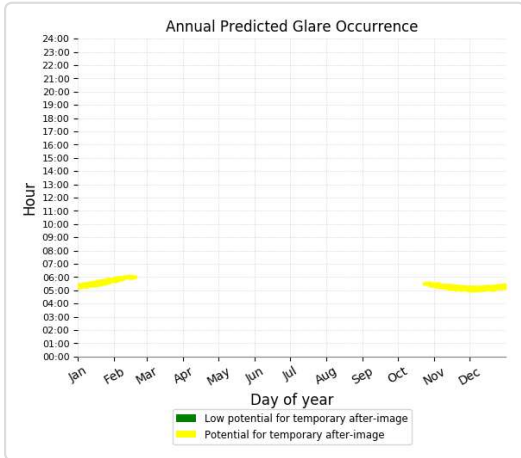
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,783 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 2)

PV array is expected to produce the following glare for receptors at this location:

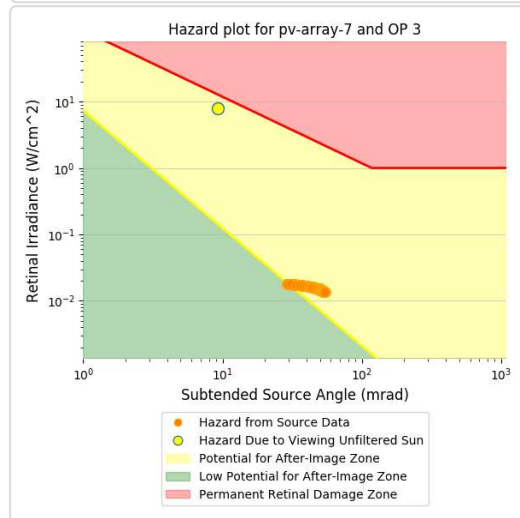
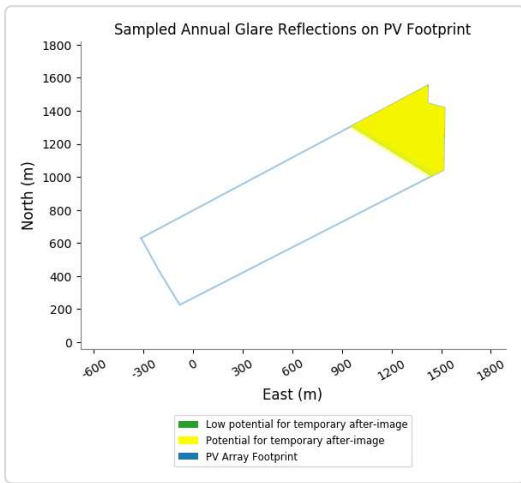
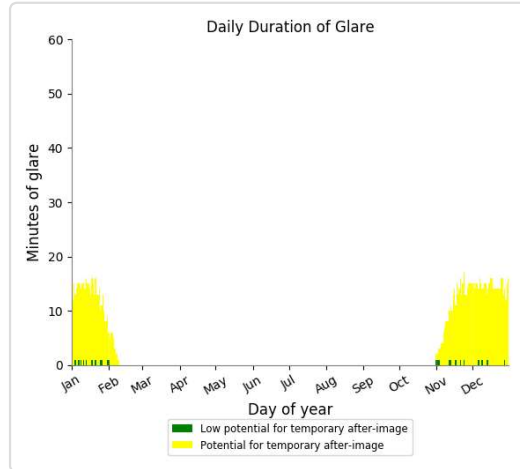
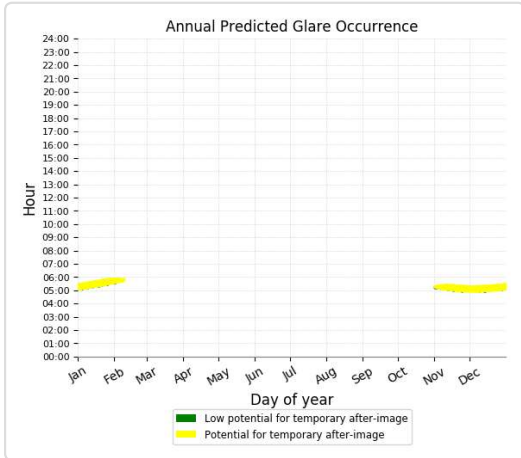
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 665 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 3)

PV array is expected to produce the following glare for receptors at this location:

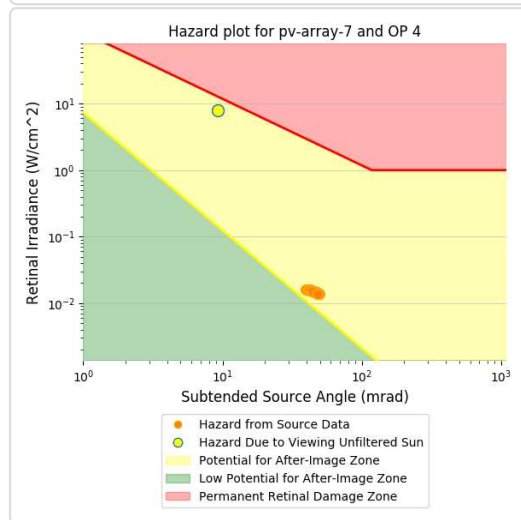
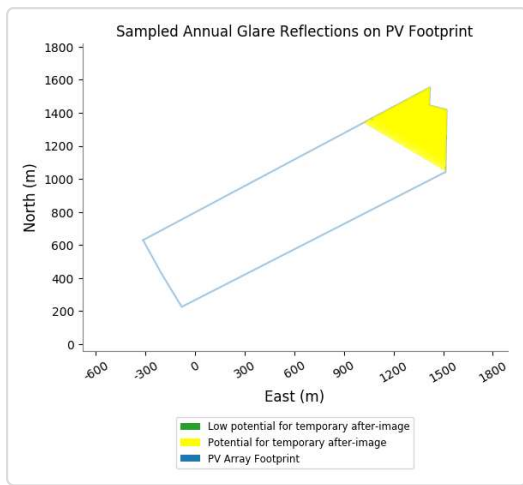
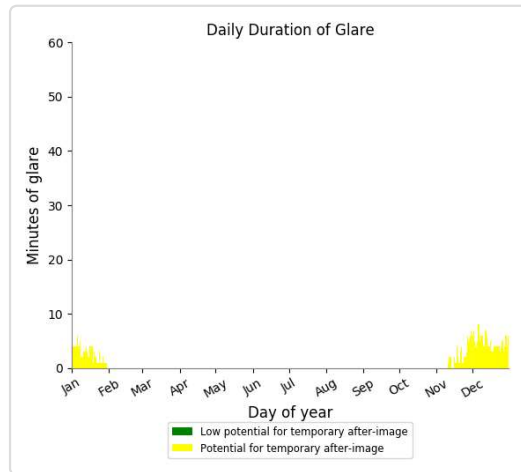
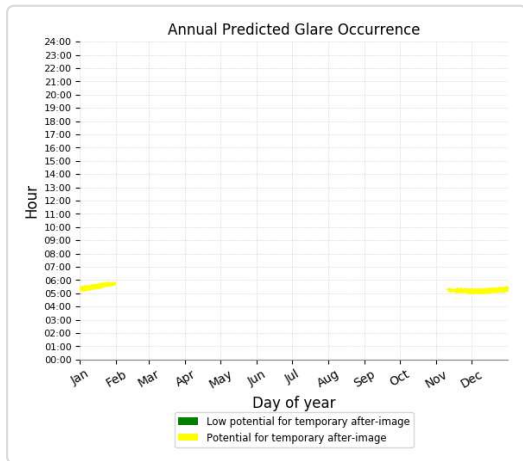
- 25 minutes of "green" glare with low potential to cause temporary after-image.
- 1,187 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 4)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 284 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 5)

No glare found

PV array 7 - OP Receptor (OP 6)

No glare found

PV array 7 - OP Receptor (OP 7)

No glare found

PV array 7 - OP Receptor (OP 8)

No glare found

PV array 7 - OP Receptor (OP 9)

No glare found

PV array 7 - OP Receptor (OP 10)

No glare found

PV array 7 - OP Receptor (OP 11)

No glare found

PV array 7 - OP Receptor (OP 12)

No glare found

PV array 7 - OP Receptor (OP 13)

No glare found

PV array 7 - OP Receptor (OP 14)

No glare found

PV array 7 - OP Receptor (OP 15)

No glare found

PV array 7 - OP Receptor (OP 16)

No glare found

PV array 7 - OP Receptor (OP 17)

No glare found

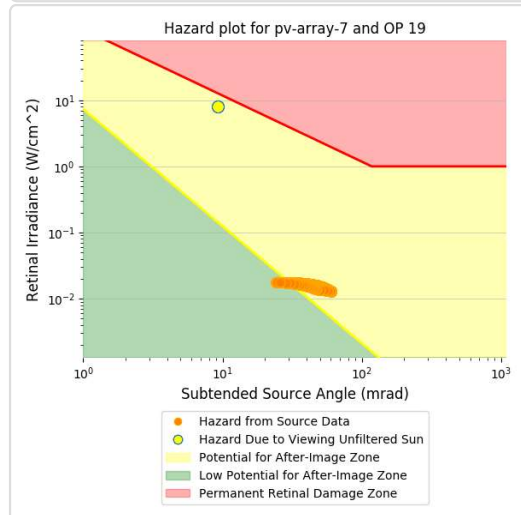
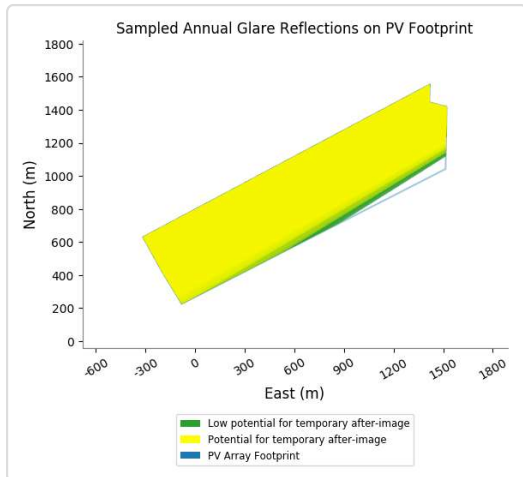
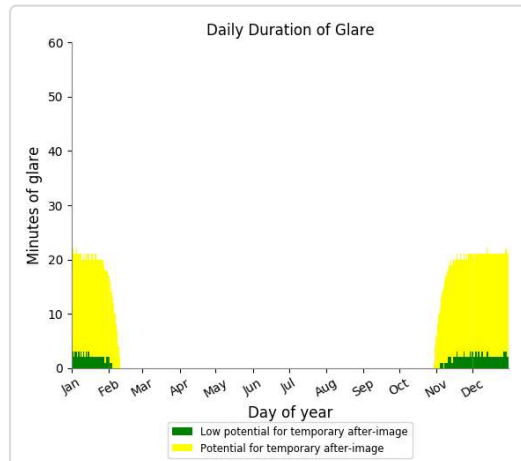
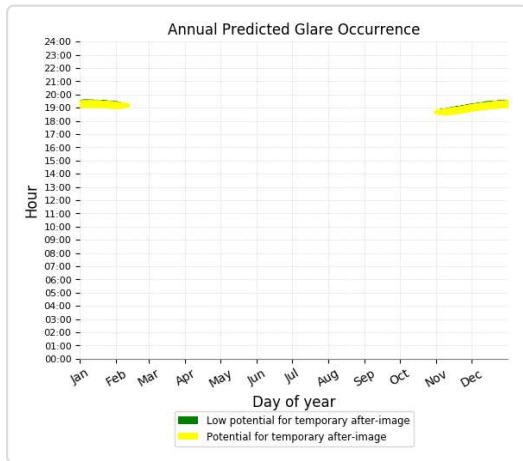
PV array 7 - OP Receptor (OP 18)

No glare found

PV array 7 - OP Receptor (OP 19)

PV array is expected to produce the following glare for receptors at this location:

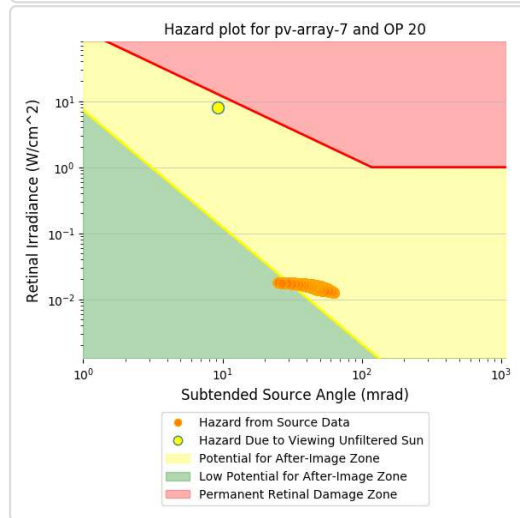
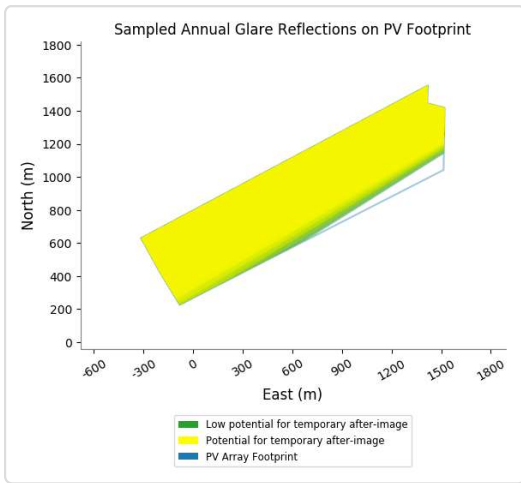
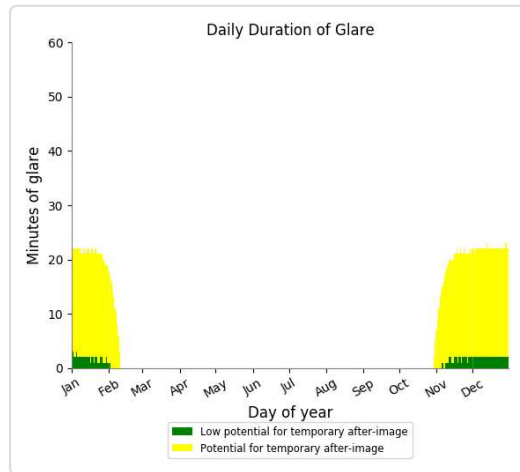
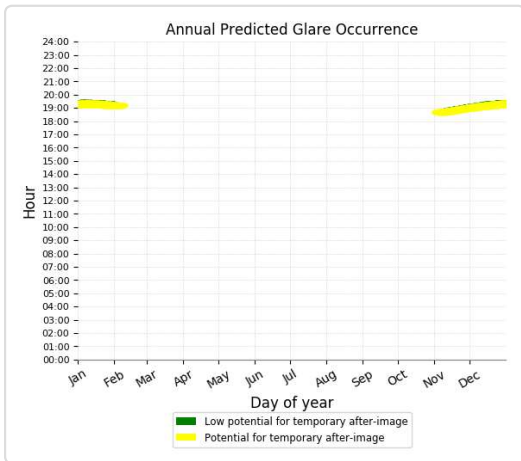
- 193 minutes of "green" glare with low potential to cause temporary after-image.
- 1,727 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 20)

PV array is expected to produce the following glare for receptors at this location:

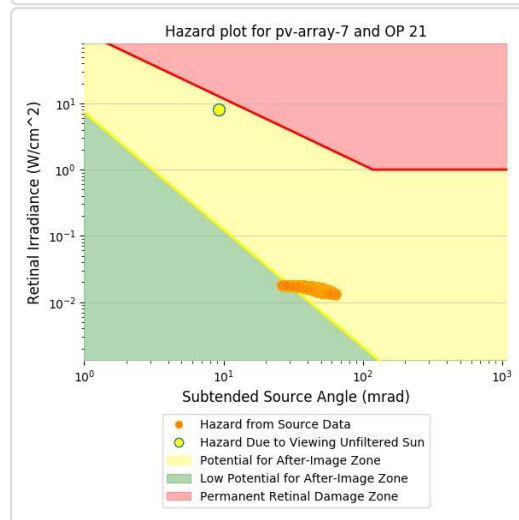
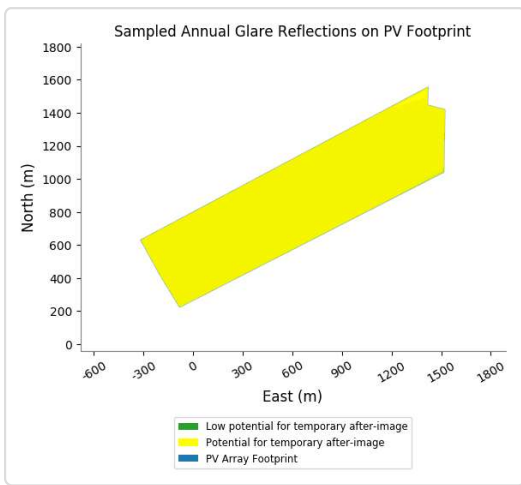
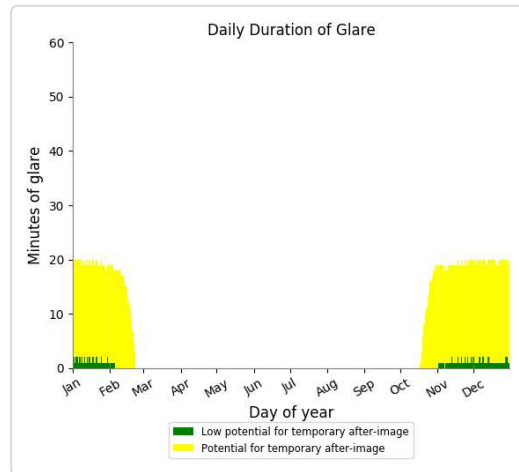
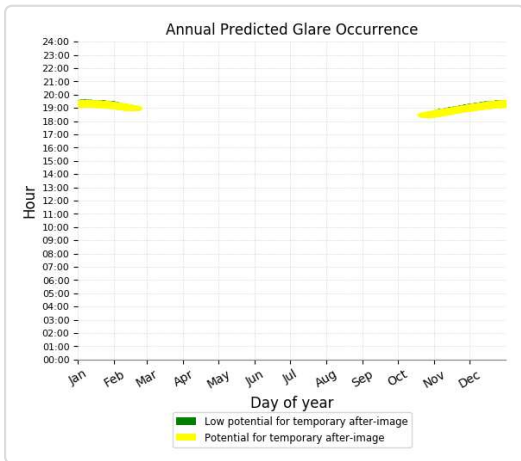
- 157 minutes of "green" glare with low potential to cause temporary after-image.
- 1,862 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 21)

PV array is expected to produce the following glare for receptors at this location:

- 121 minutes of "green" glare with low potential to cause temporary after-image.
- 2,160 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 22)

No glare found

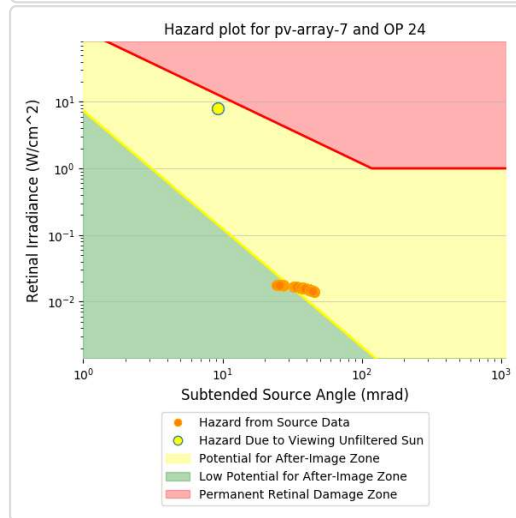
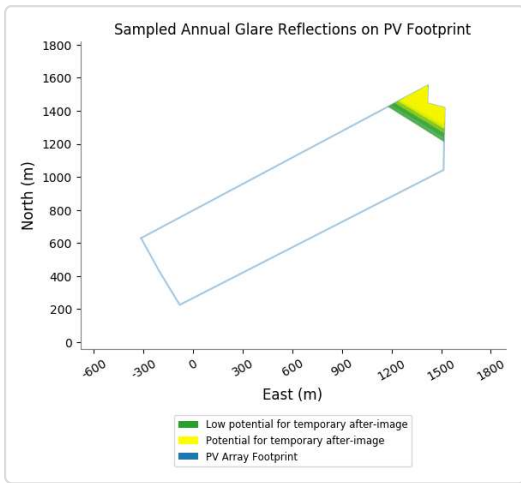
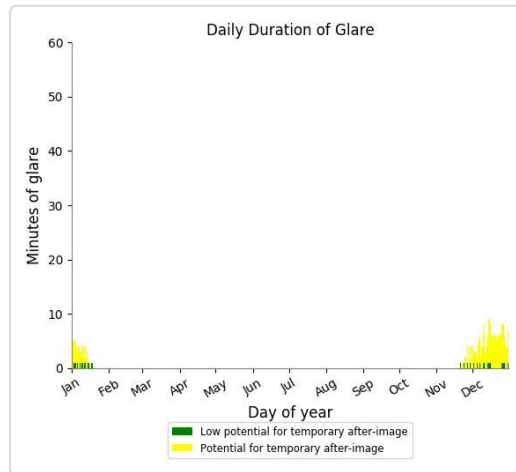
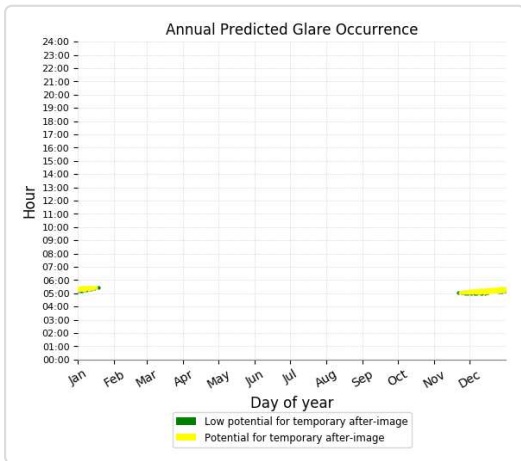
PV array 7 - OP Receptor (OP 23)

No glare found

PV array 7 - OP Receptor (OP 24)

PV array is expected to produce the following glare for receptors at this location:

- 25 minutes of "green" glare with low potential to cause temporary after-image.
- 214 minutes of "yellow" glare with potential to cause temporary after-image.



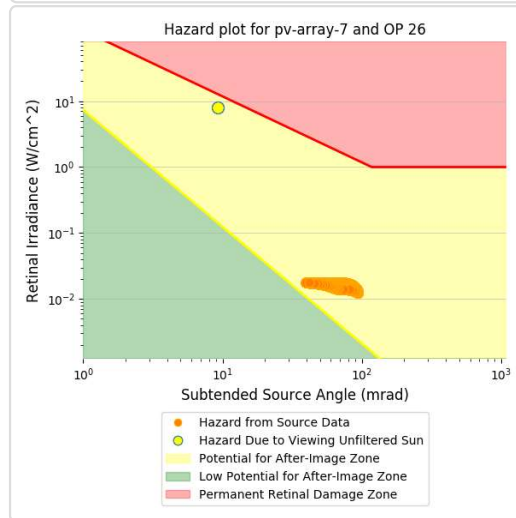
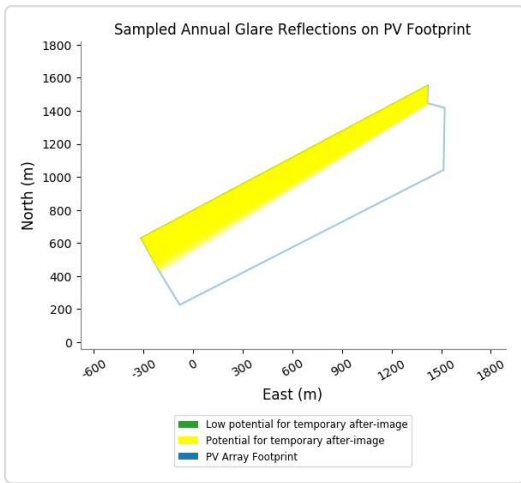
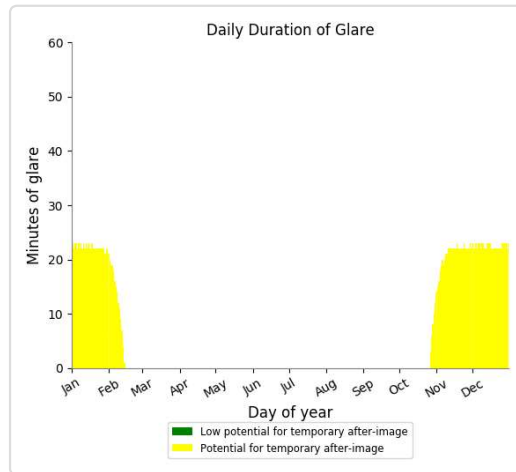
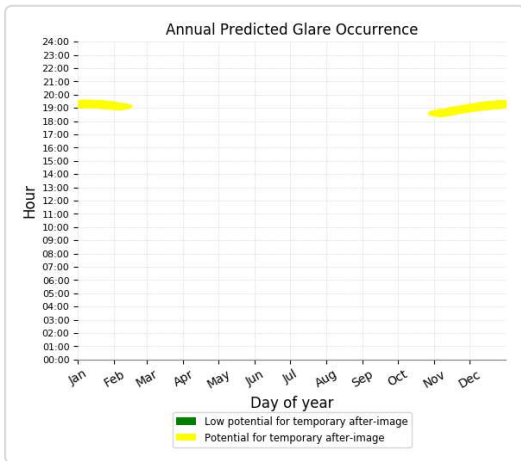
PV array 7 - OP Receptor (OP 25)

No glare found

PV array 7 - OP Receptor (OP 26)

PV array is expected to produce the following glare for receptors at this location:

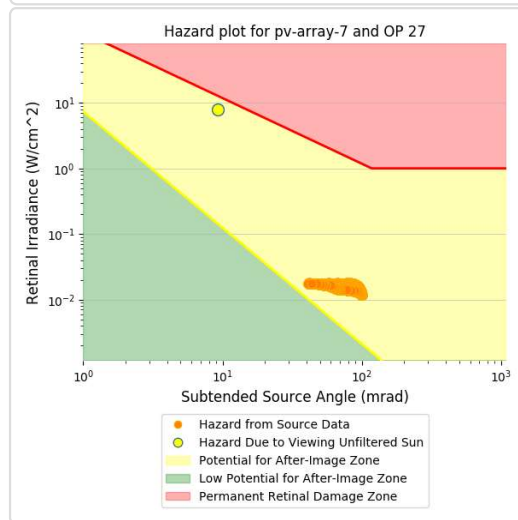
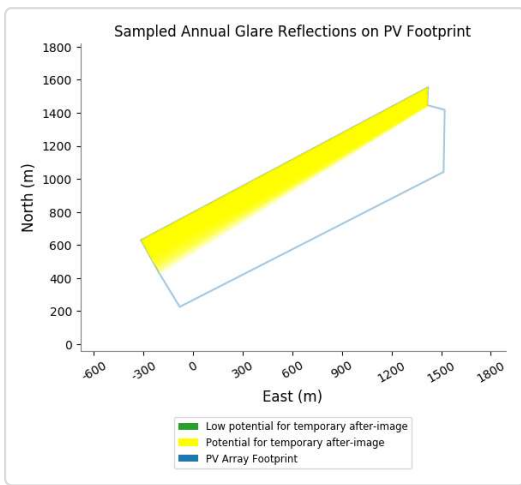
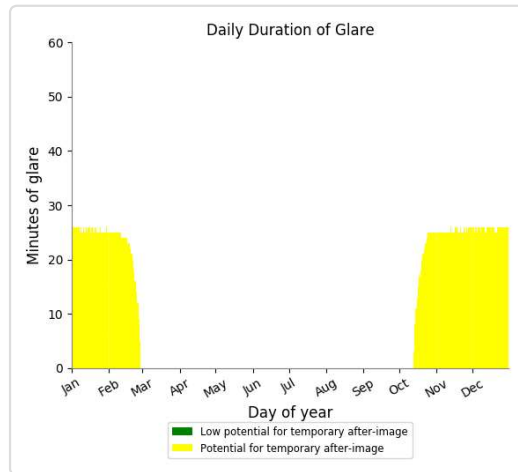
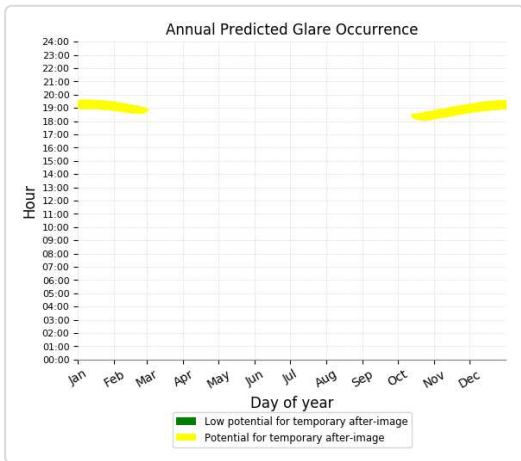
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,239 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 27)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,298 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - OP Receptor (OP 28)

No glare found

PV array 7 - OP Receptor (OP 29)

No glare found

PV array 7 - OP Receptor (OP 30)

No glare found

PV array 7 - OP Receptor (OP 31)

No glare found

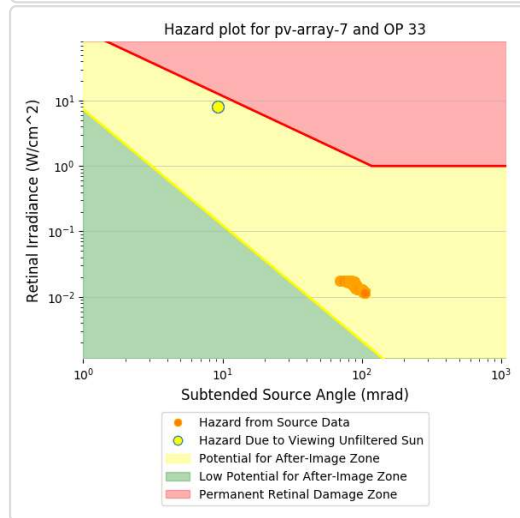
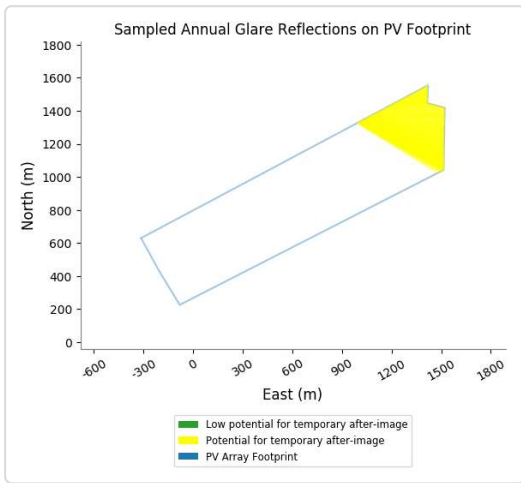
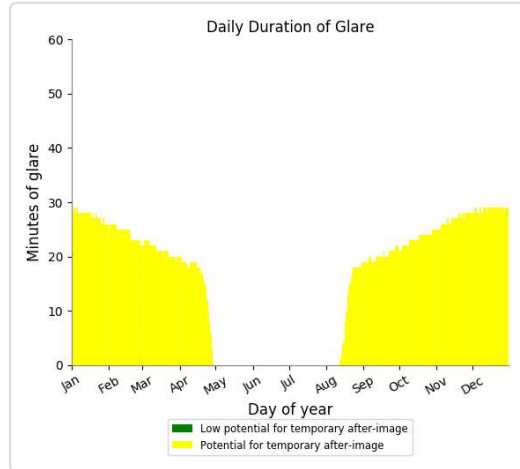
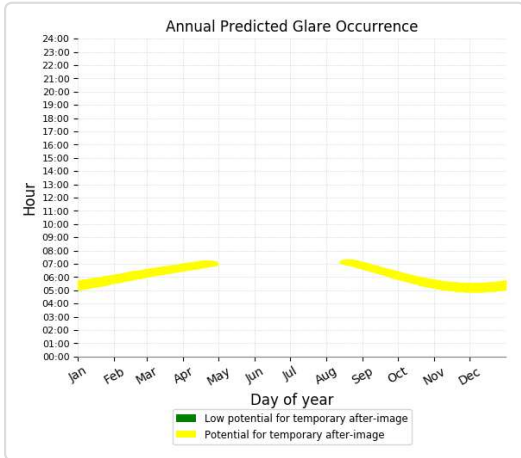
PV array 7 - OP Receptor (OP 32)

No glare found

PV array 7 - OP Receptor (OP 33)

PV array is expected to produce the following glare for receptors at this location:

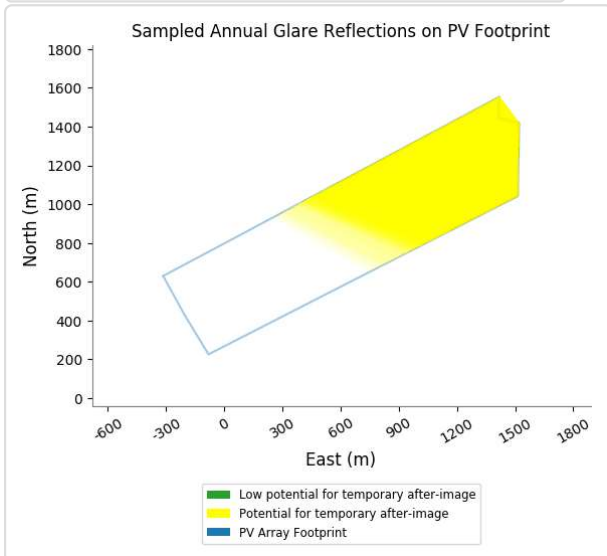
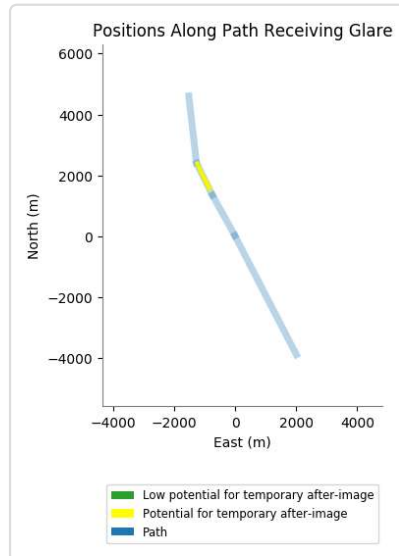
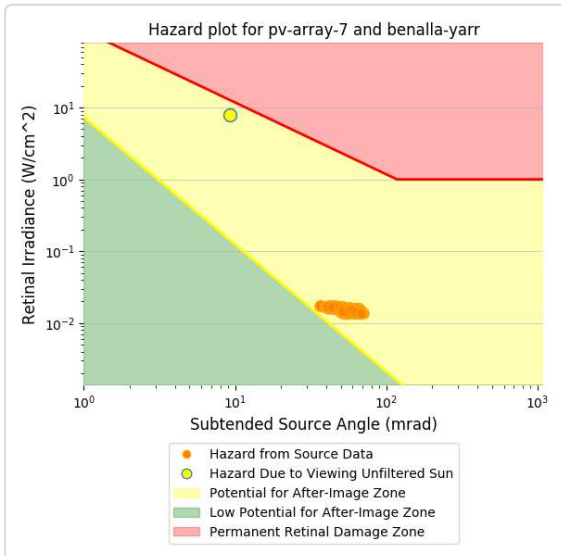
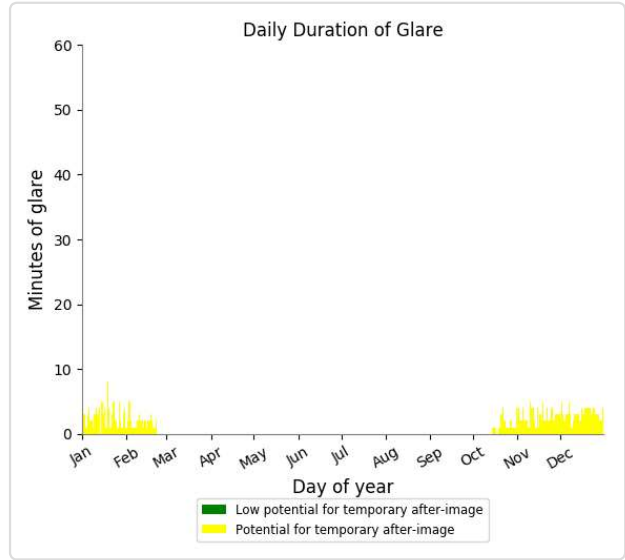
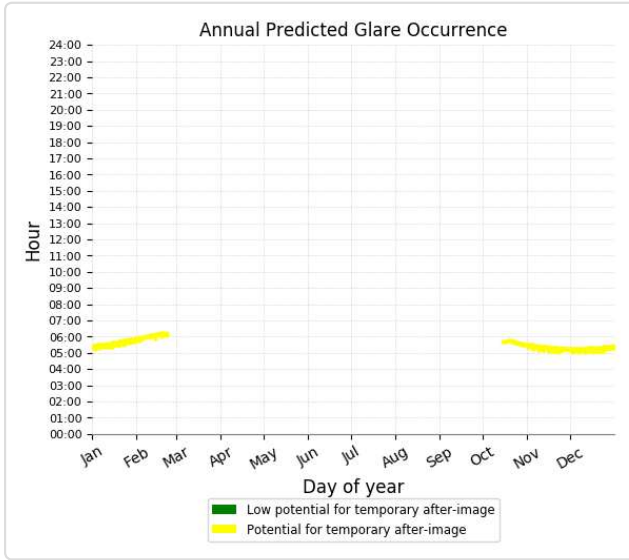
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 5,921 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

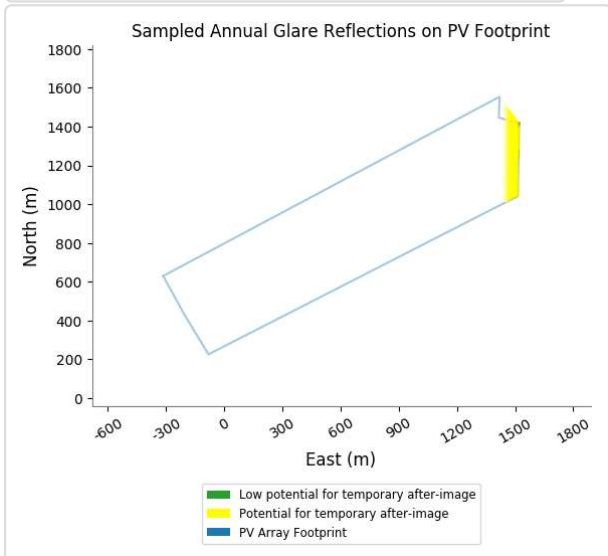
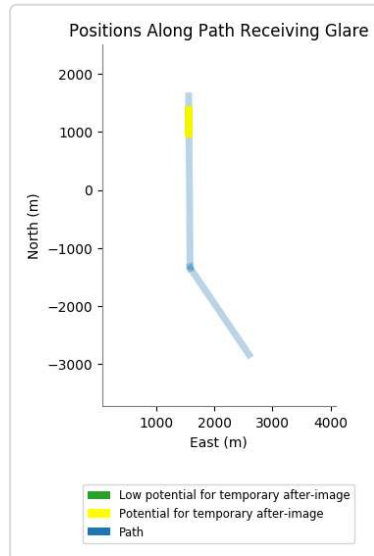
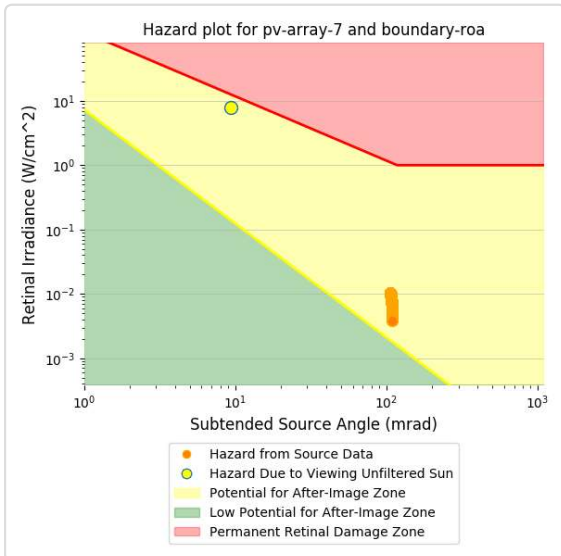
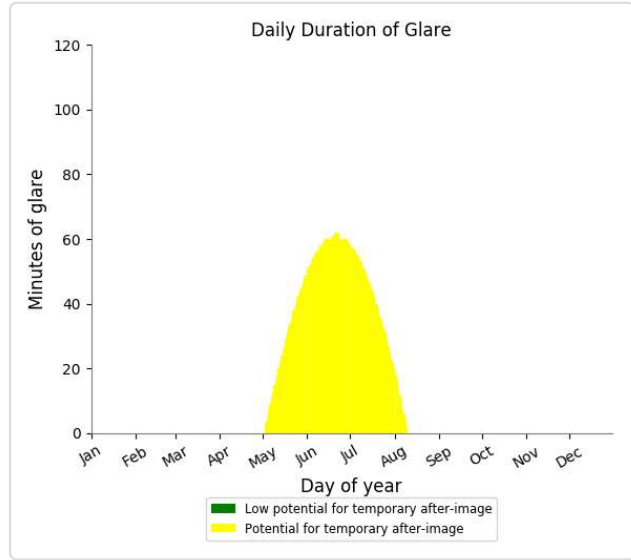
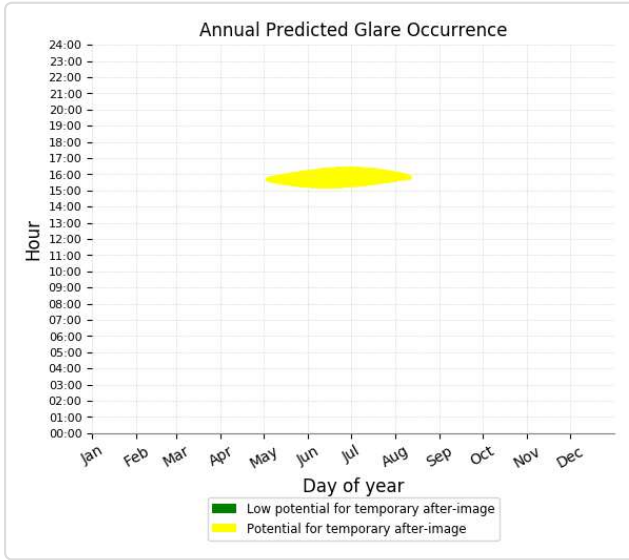
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 335 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Boundary Road)

PV array is expected to produce the following glare for receptors at this location:

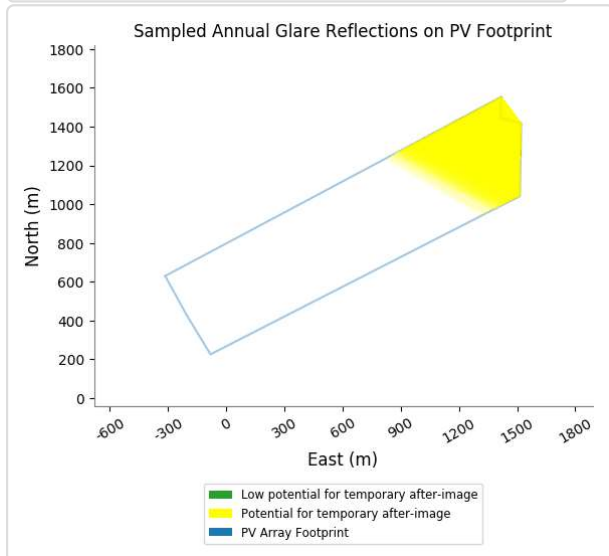
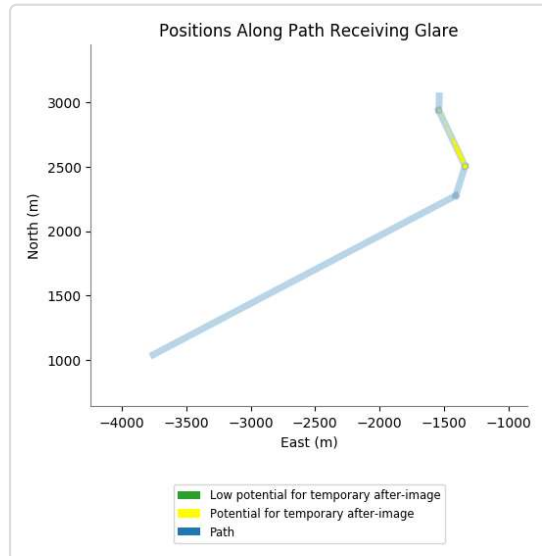
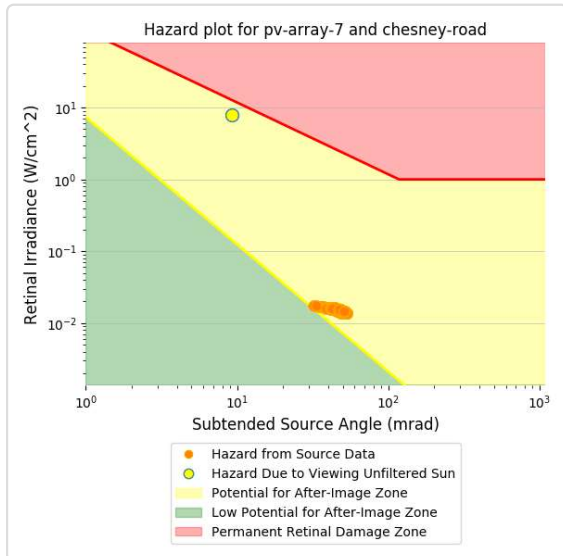
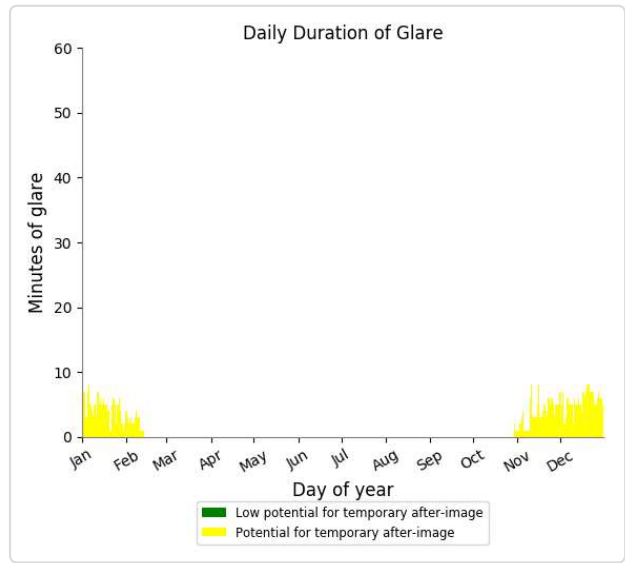
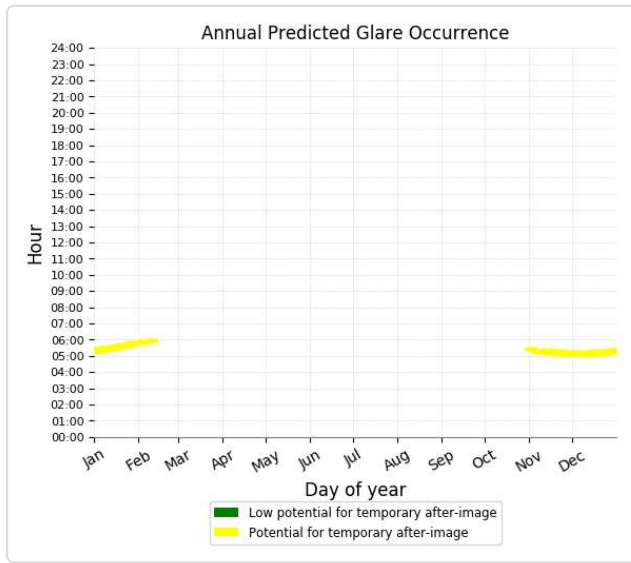
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 4,007 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

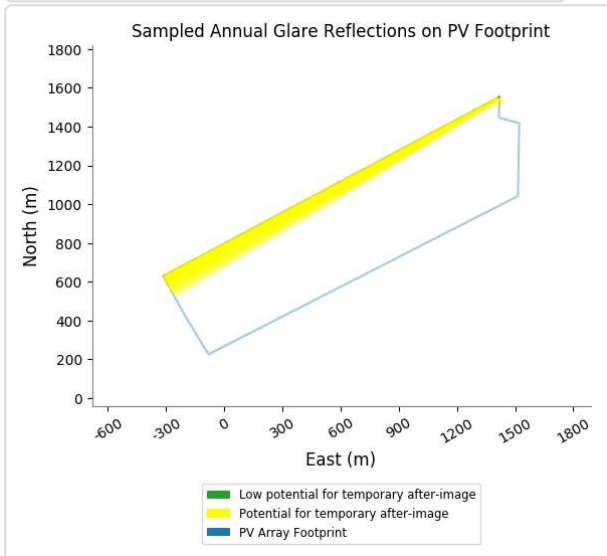
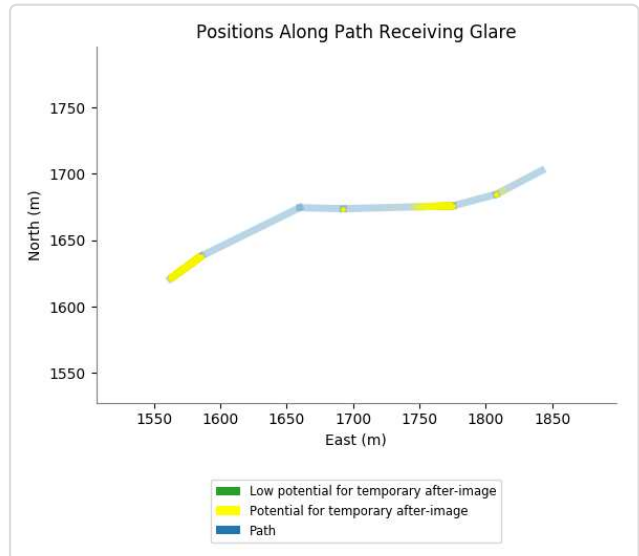
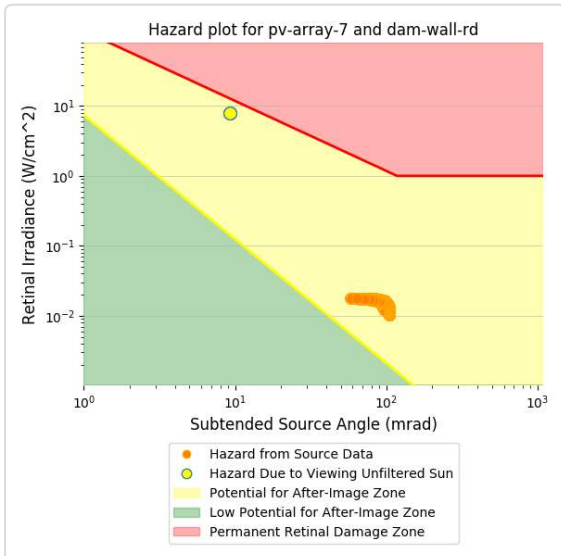
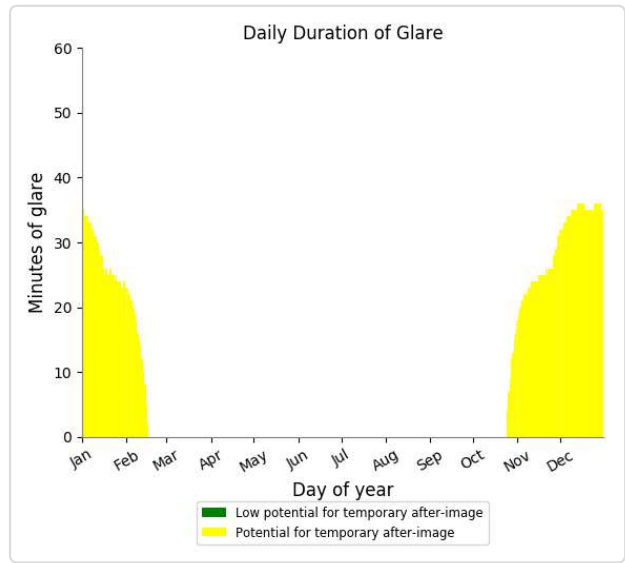
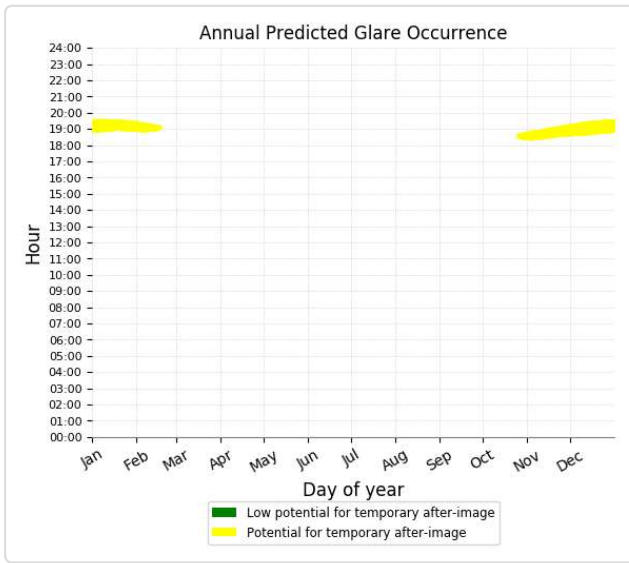
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 465 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Dam Wall Rd)

PV array is expected to produce the following glare for receptors at this location:

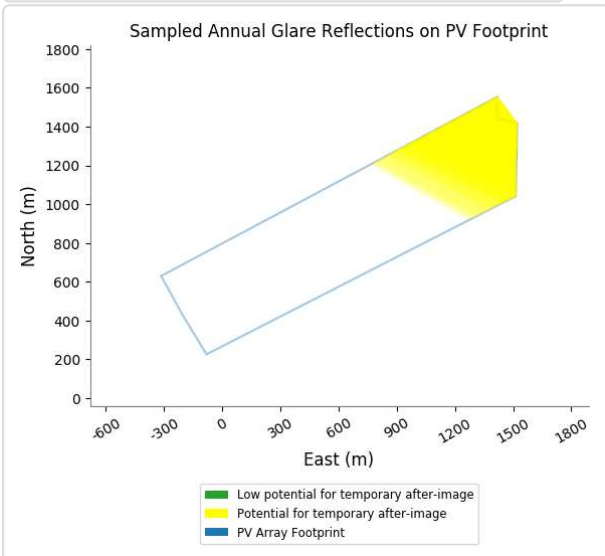
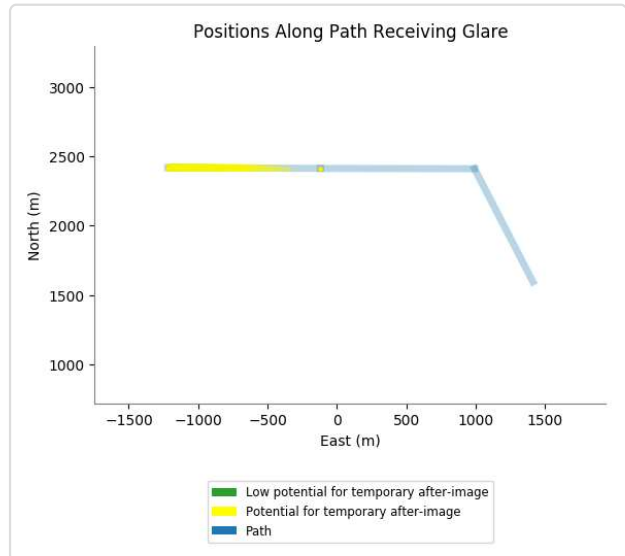
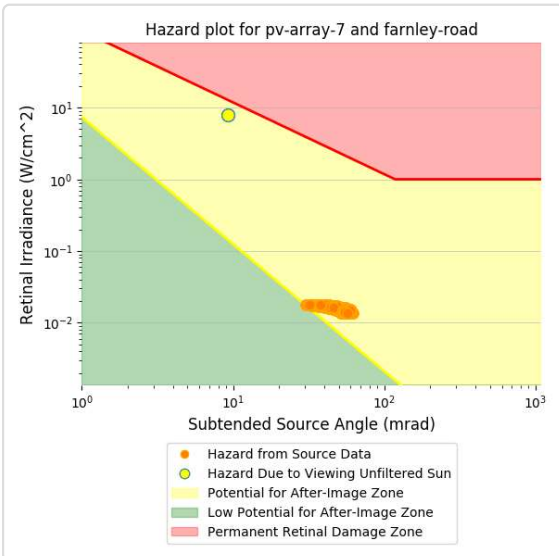
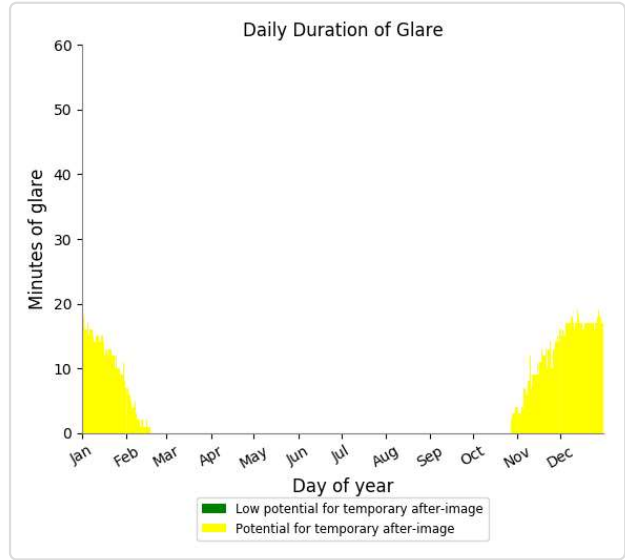
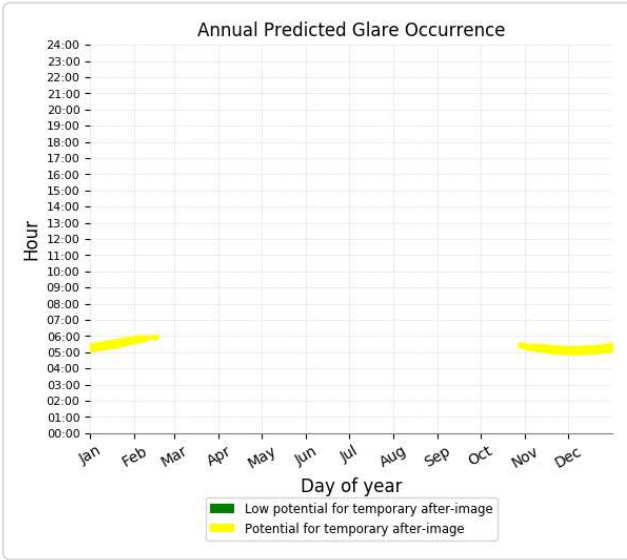
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,010 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Farnley Road)

PV array is expected to produce the following glare for receptors at this location:

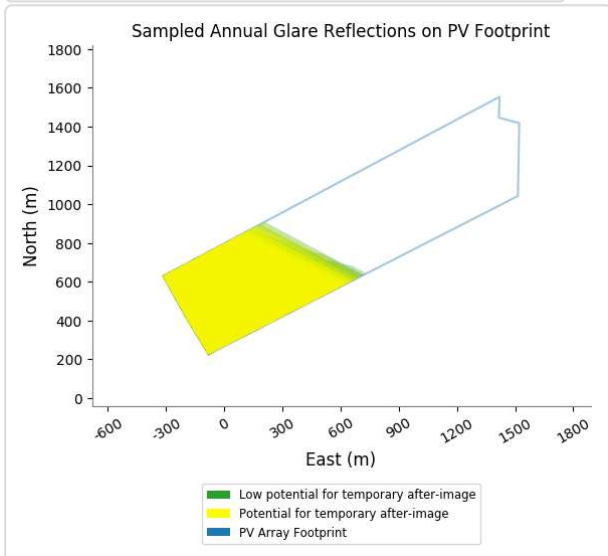
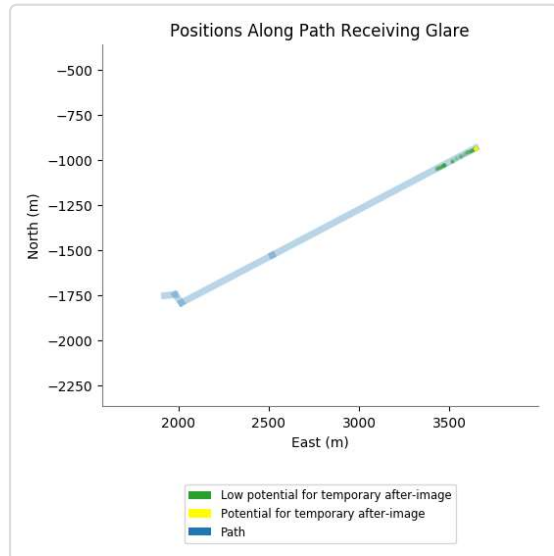
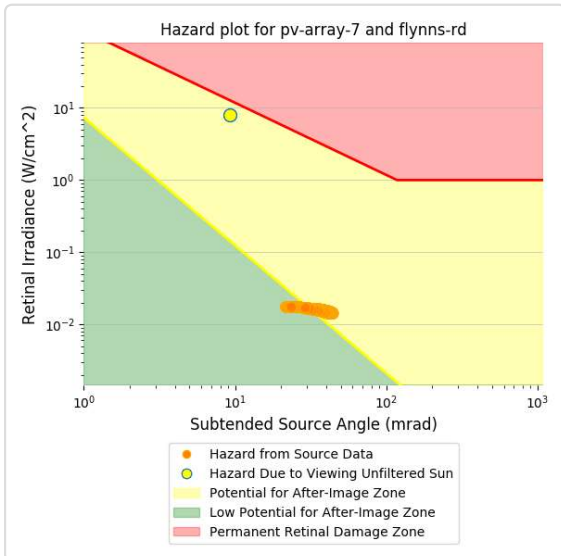
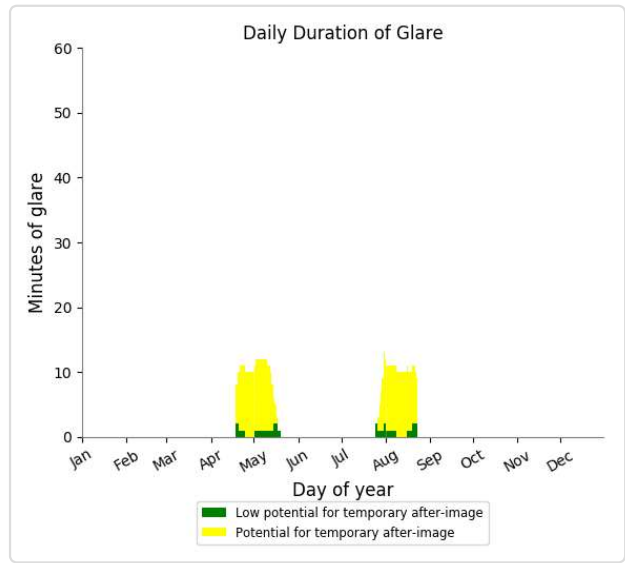
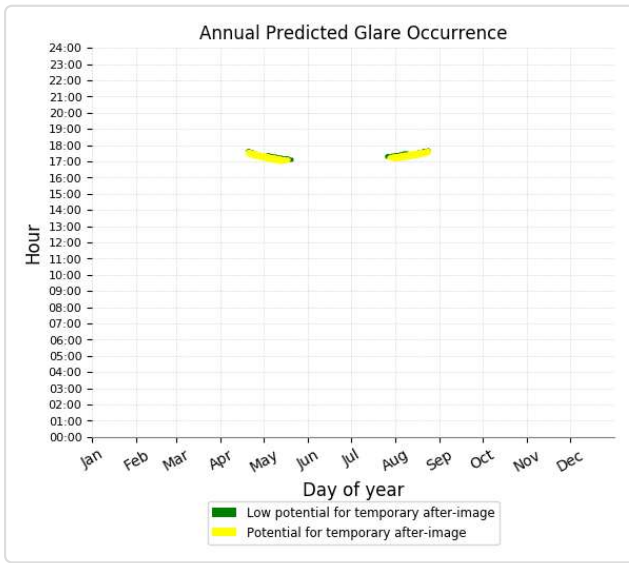
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,294 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Flynn's Rd)

PV array is expected to produce the following glare for receptors at this location:

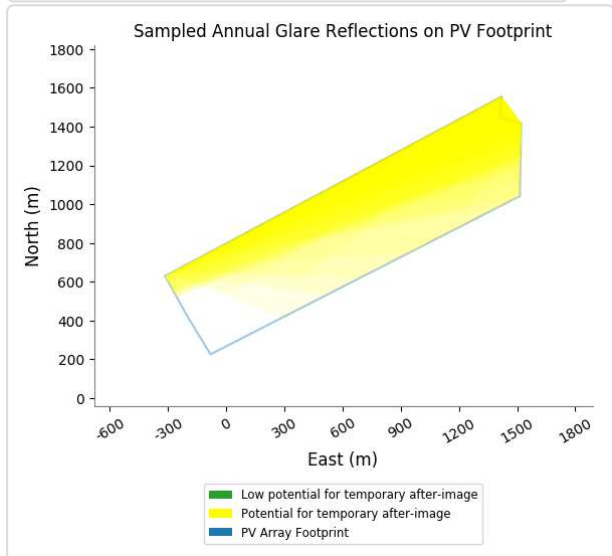
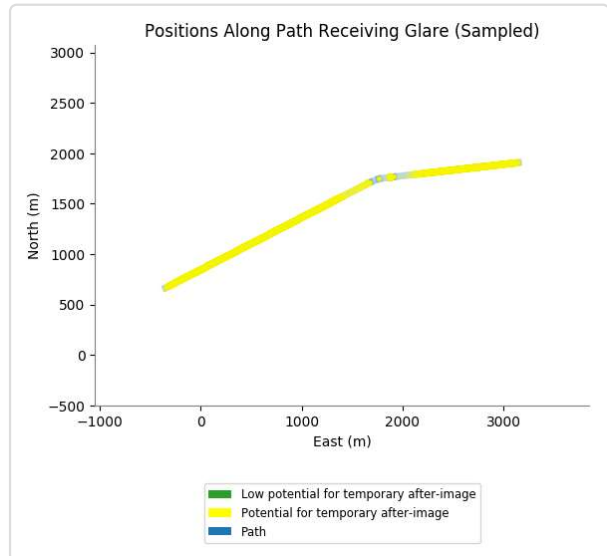
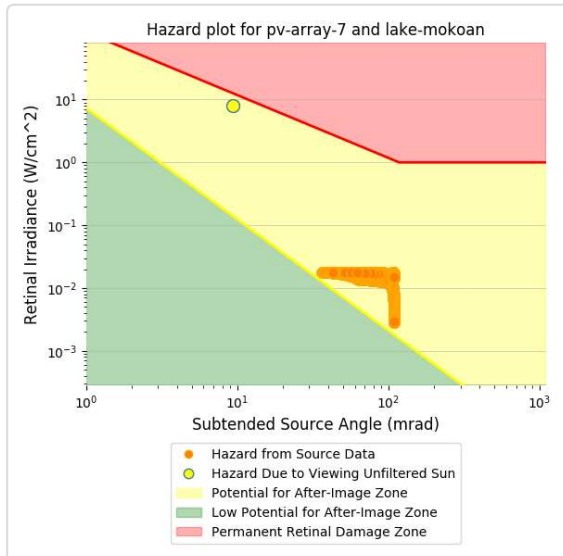
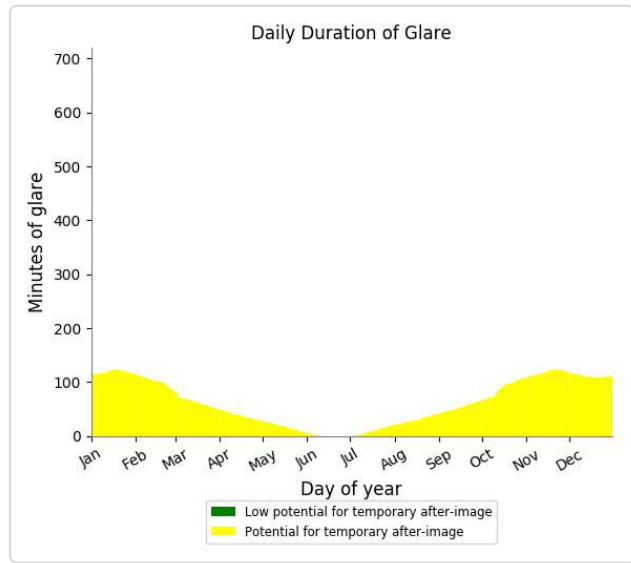
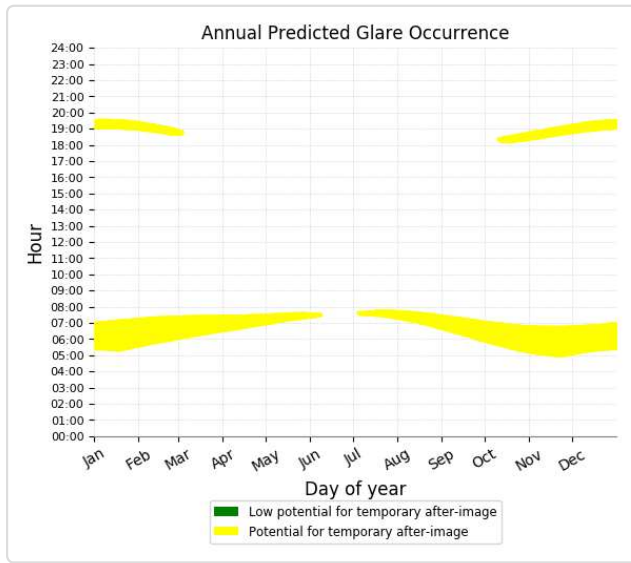
- 60 minutes of "green" glare with low potential to cause temporary after-image.
- 516 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

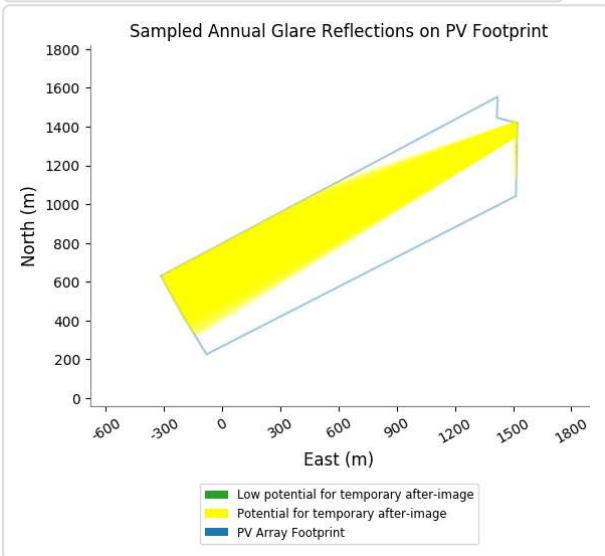
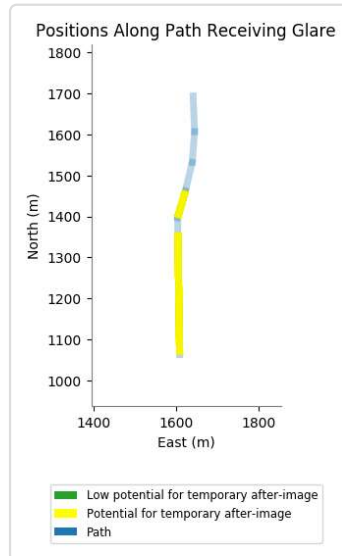
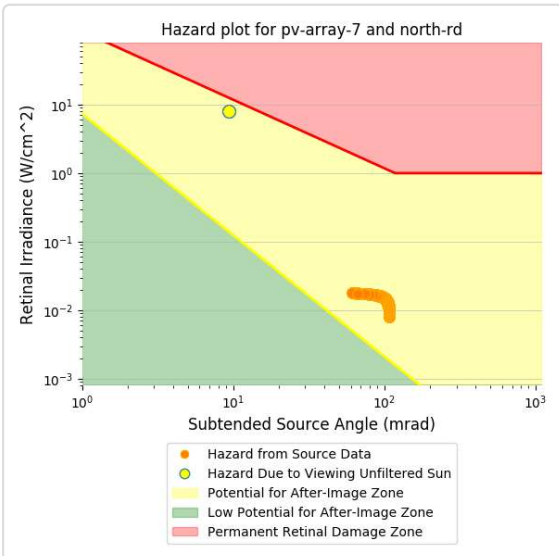
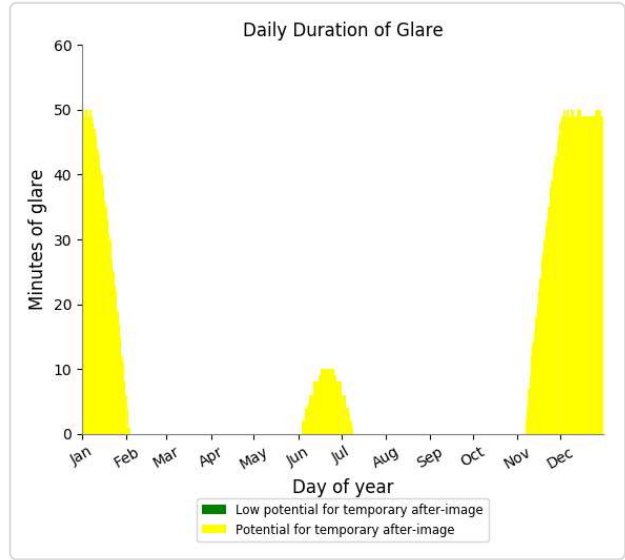
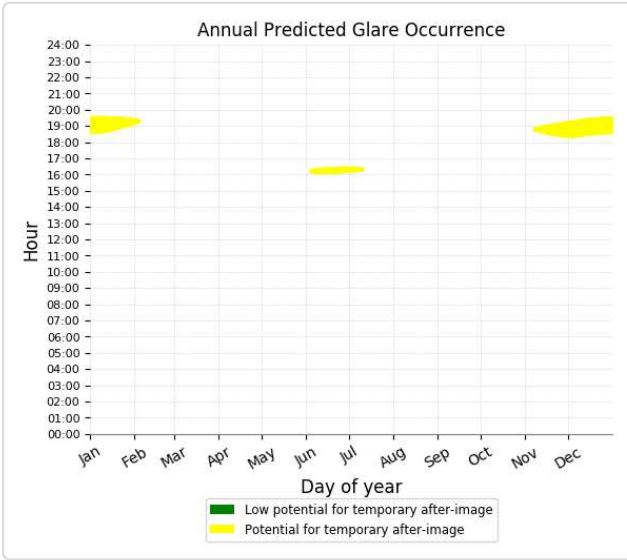
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 22,685 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (North Rd)

PV array is expected to produce the following glare for receptors at this location:

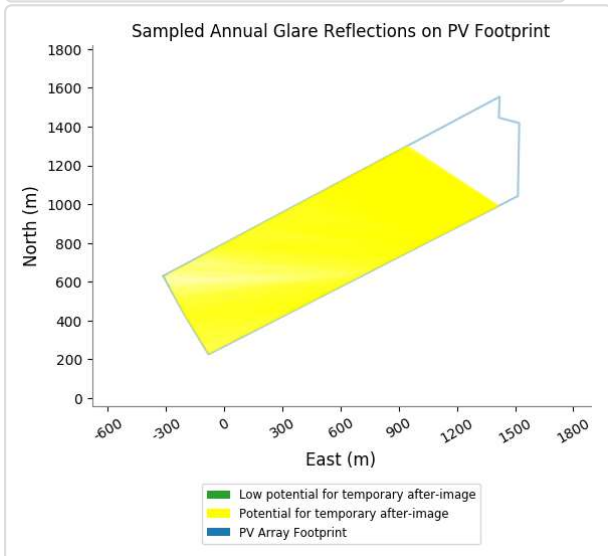
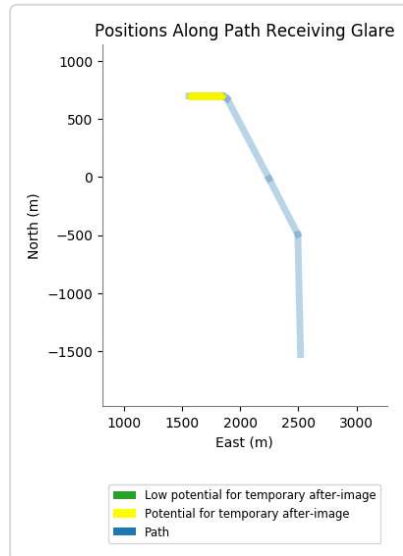
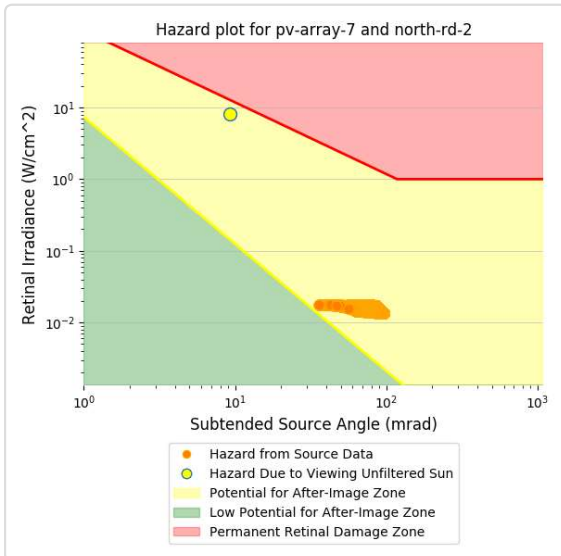
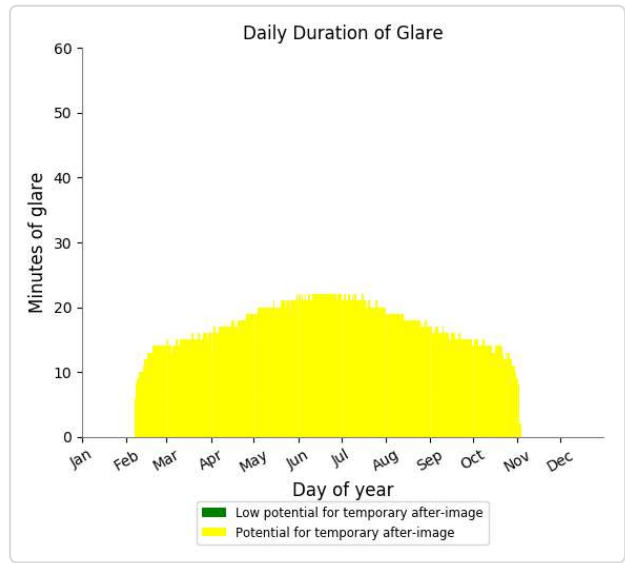
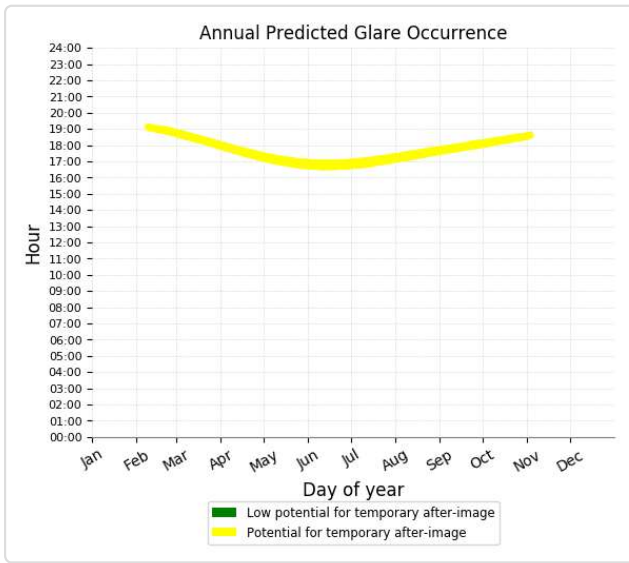
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,504 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (North Rd - 2)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 4,663 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Old Thoona Road)*No glare found***PV array 7 - Route Receptor (Route 11)***No glare found***PV array 7 - Route Receptor (Snowy Ln)***No glare found***PV array 8** potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	381	0
OP: OP 7	544	0
OP: OP 8	549	0
OP: OP 9	329	128
OP: OP 10	373	0
OP: OP 11	269	58
OP: OP 12	239	5
OP: OP 13	156	89
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	776
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrawonga Road	5	559
Route: Boundary Road	0	8422
Route: Chesney Road	293	0

Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	145	2599
Route: Lake Mokoan Road	91	6
Route: North Rd	0	0
Route: North Rd - 2	0	521
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 8 - Receptor (FP 1)

No glare found

PV array 8 - Receptor (FP 2)

No glare found

PV array 8 - Receptor (FP 3)

No glare found

PV array 8 - Receptor (FP 4)

No glare found

PV array 8 - OP Receptor (OP 1)

No glare found

PV array 8 - OP Receptor (OP 2)

No glare found

PV array 8 - OP Receptor (OP 3)

No glare found

PV array 8 - OP Receptor (OP 4)

No glare found

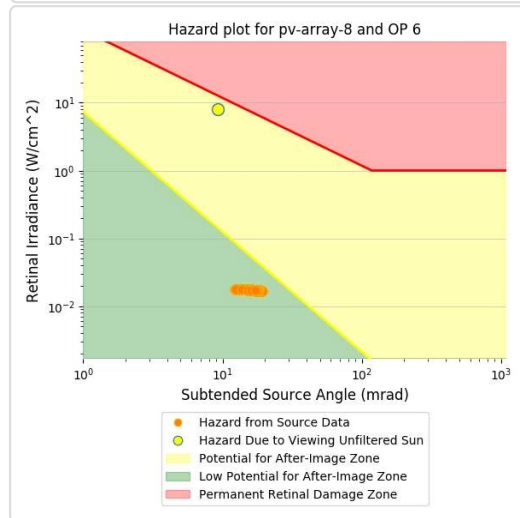
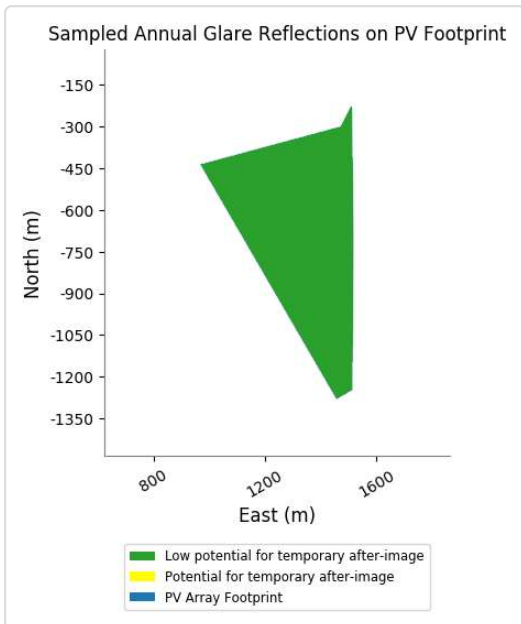
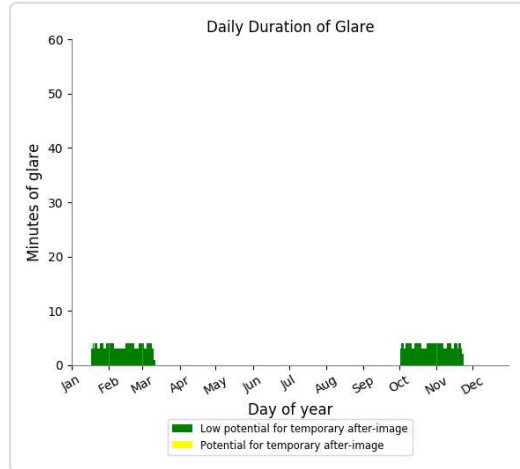
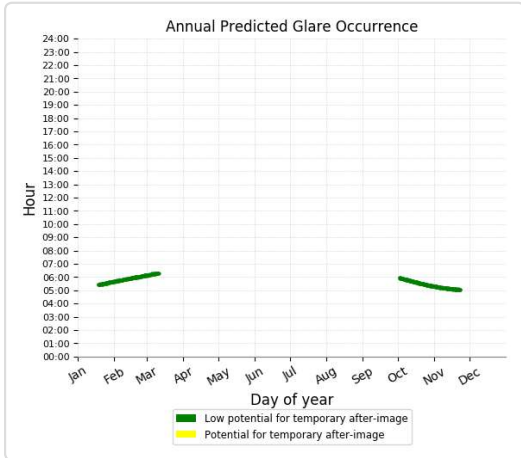
PV array 8 - OP Receptor (OP 5)

No glare found

PV array 8 - OP Receptor (OP 6)

PV array is expected to produce the following glare for receptors at this location:

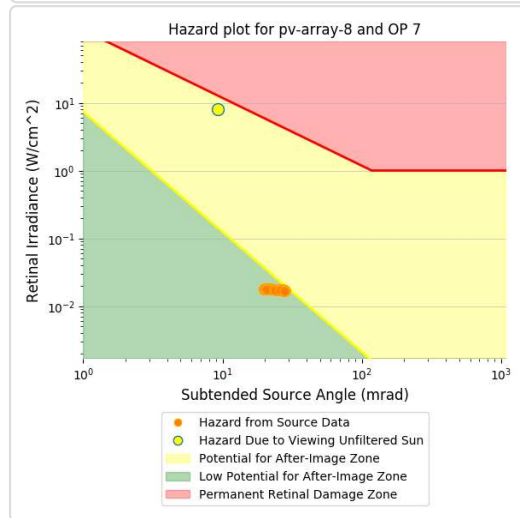
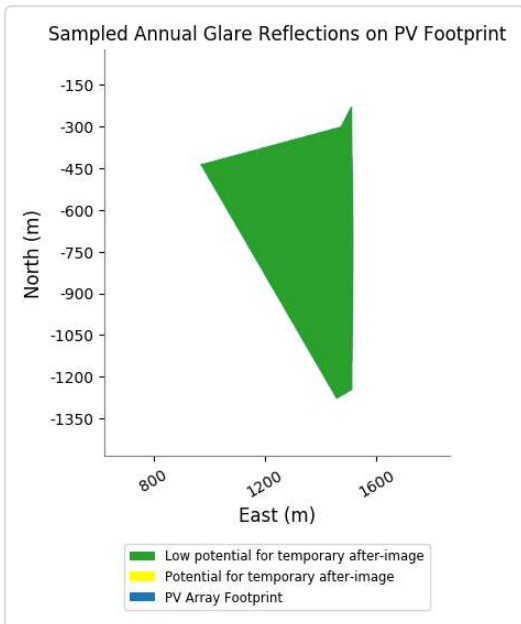
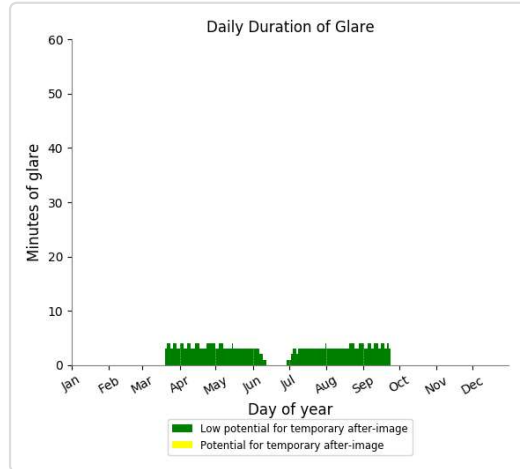
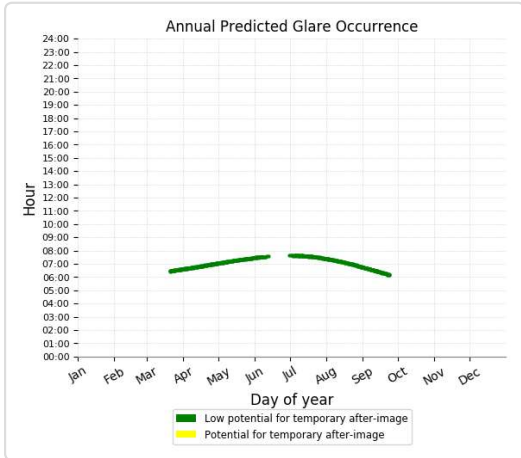
- 381 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 7)

PV array is expected to produce the following glare for receptors at this location:

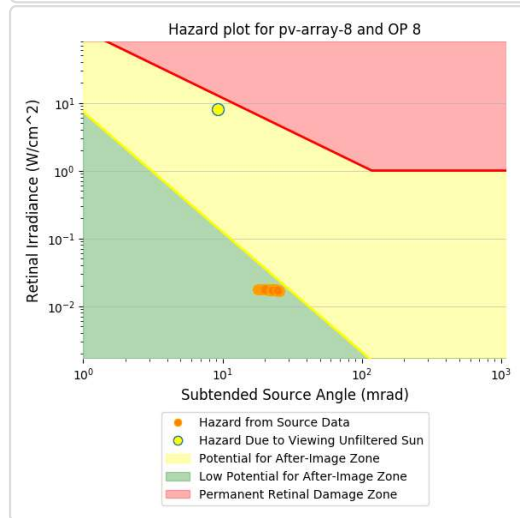
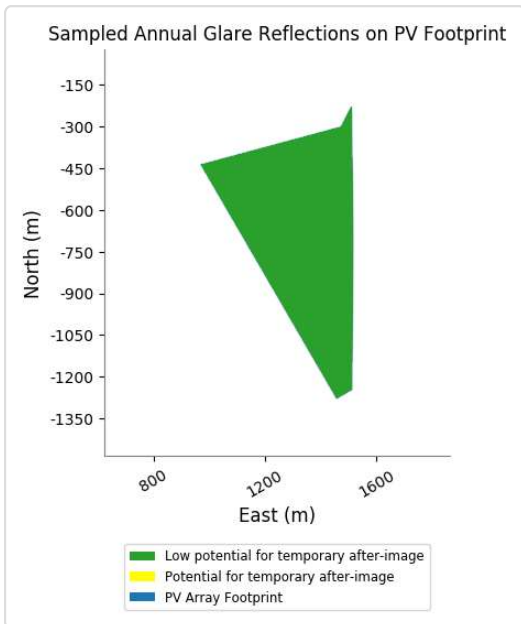
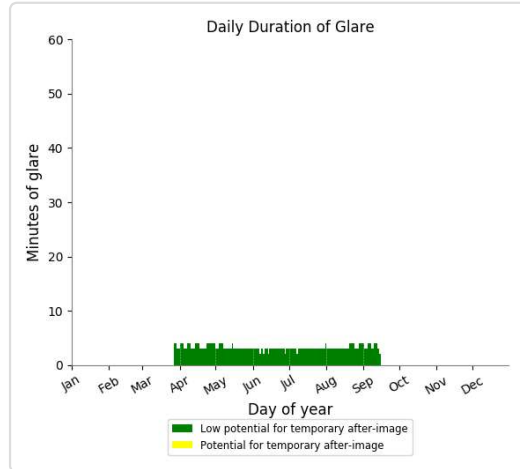
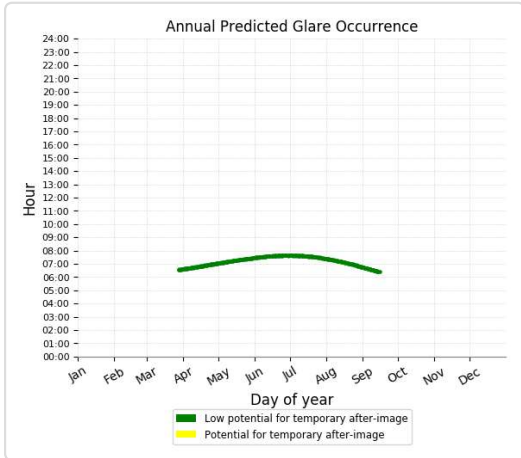
- 544 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 8)

PV array is expected to produce the following glare for receptors at this location:

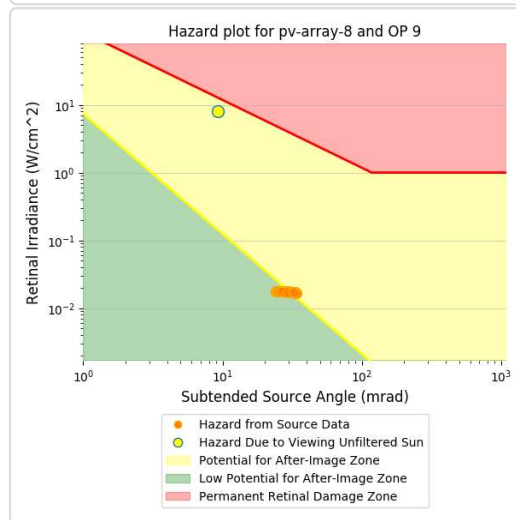
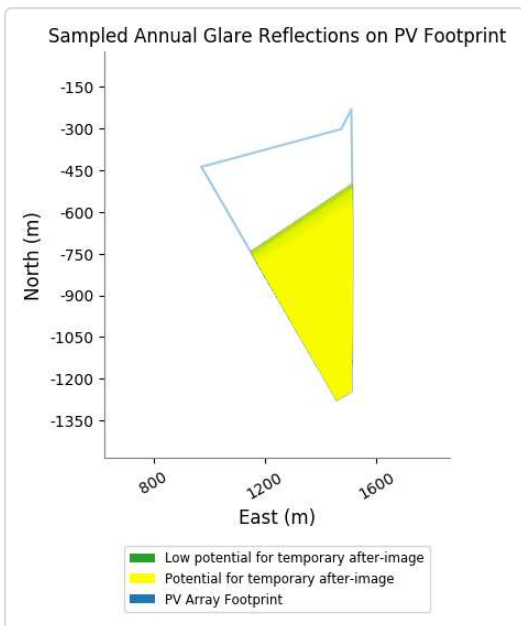
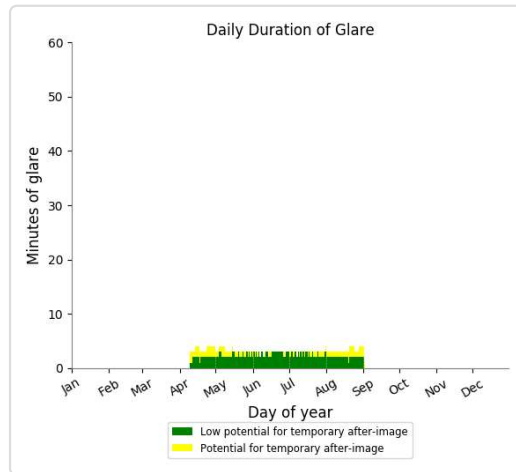
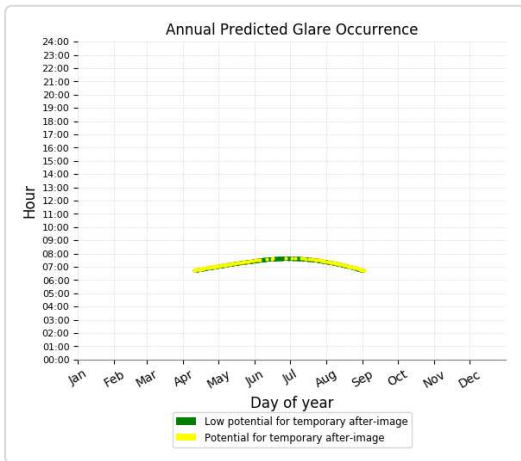
- 549 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 9)

PV array is expected to produce the following glare for receptors at this location:

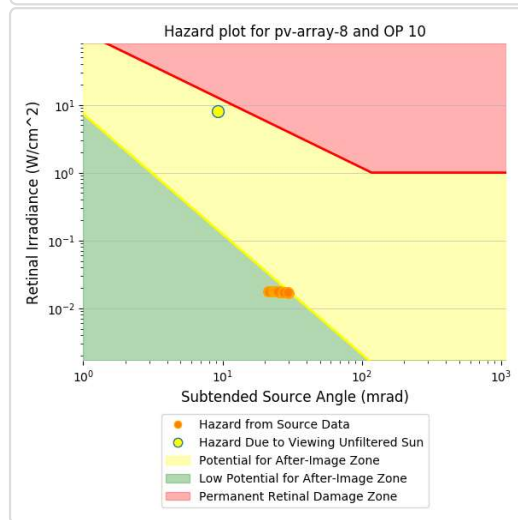
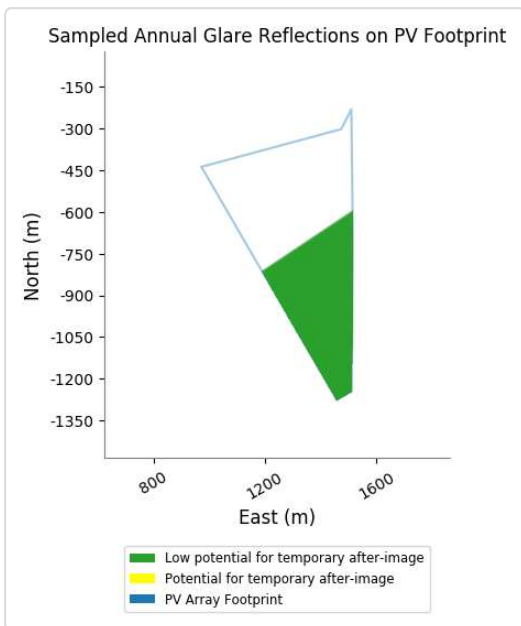
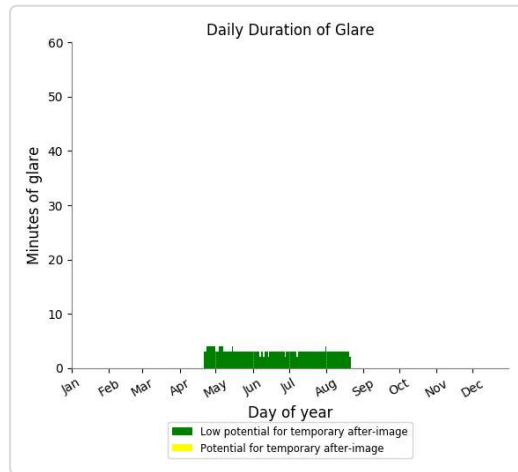
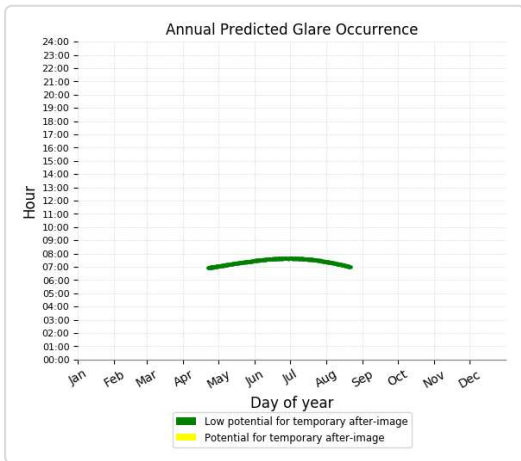
- 329 minutes of "green" glare with low potential to cause temporary after-image.
- 128 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 10)

PV array is expected to produce the following glare for receptors at this location:

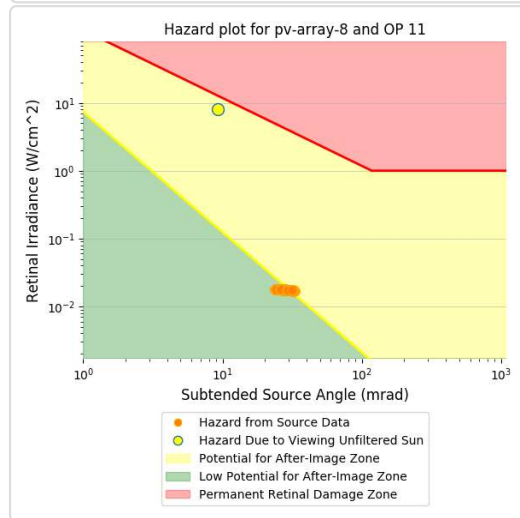
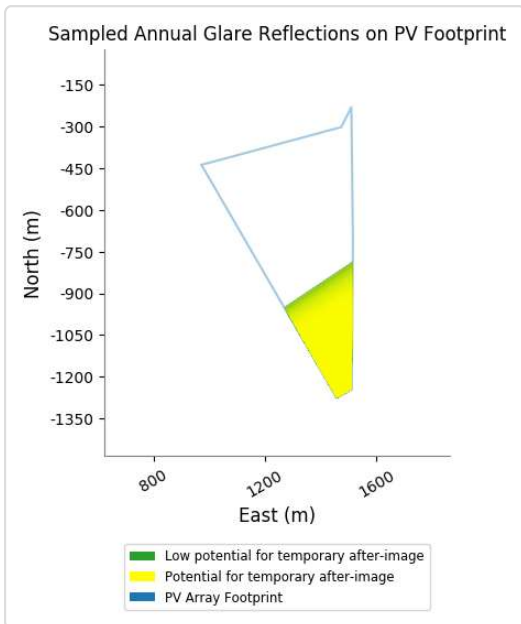
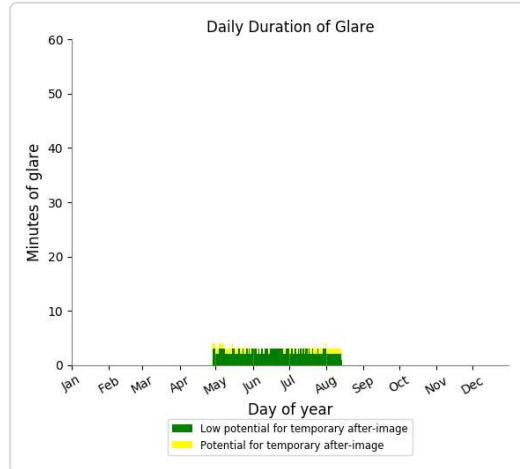
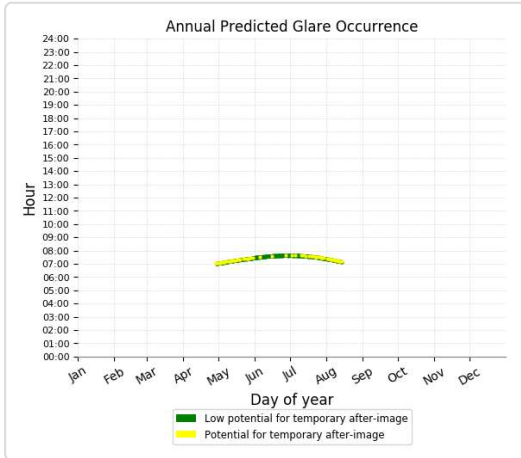
- 373 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 11)

PV array is expected to produce the following glare for receptors at this location:

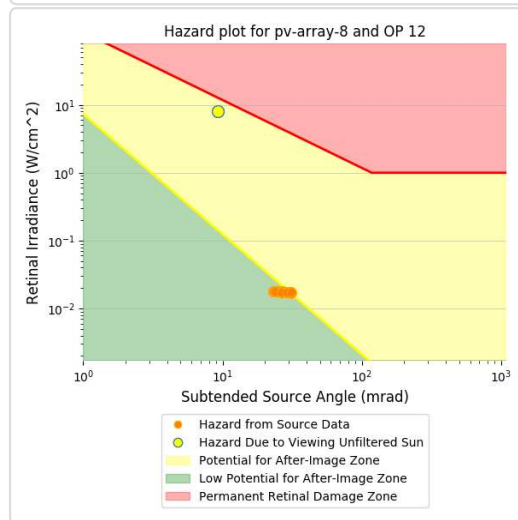
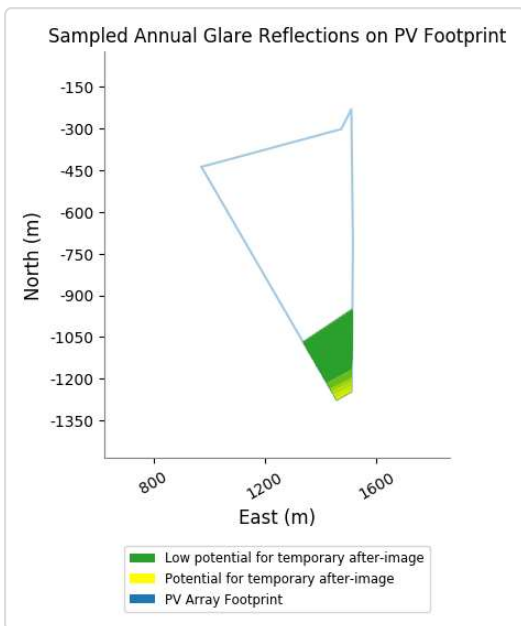
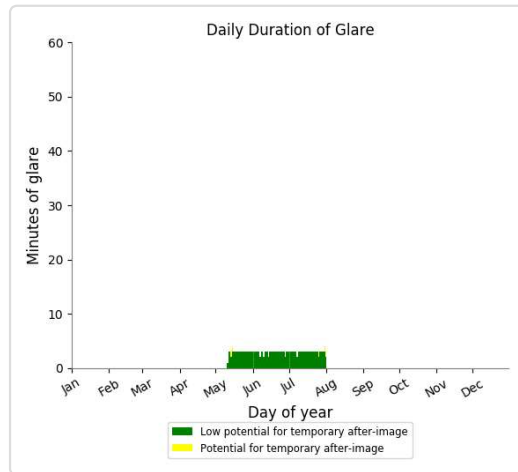
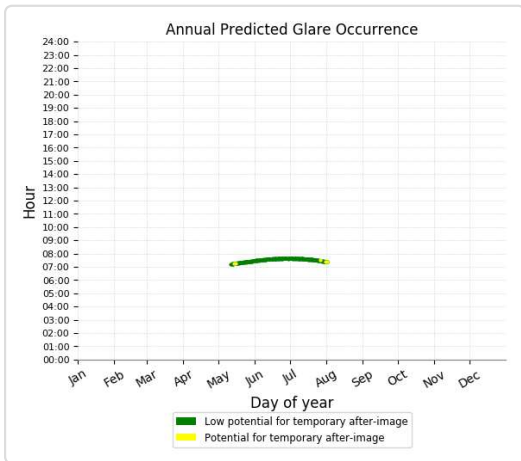
- 269 minutes of "green" glare with low potential to cause temporary after-image.
- 58 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 12)

PV array is expected to produce the following glare for receptors at this location:

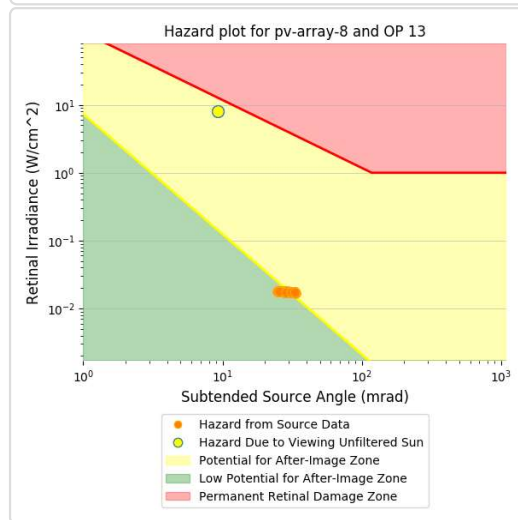
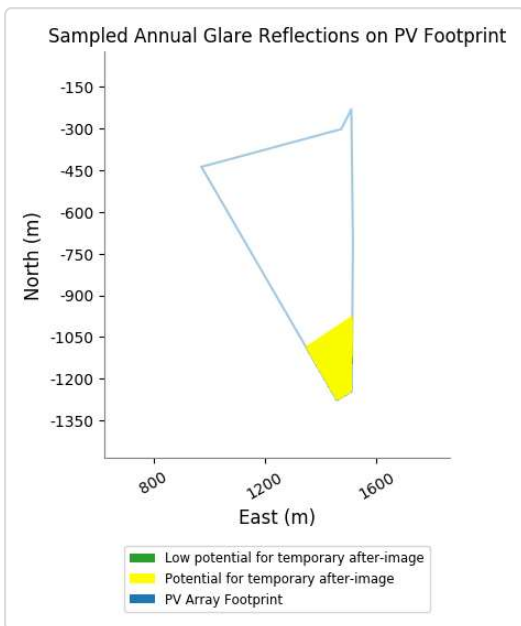
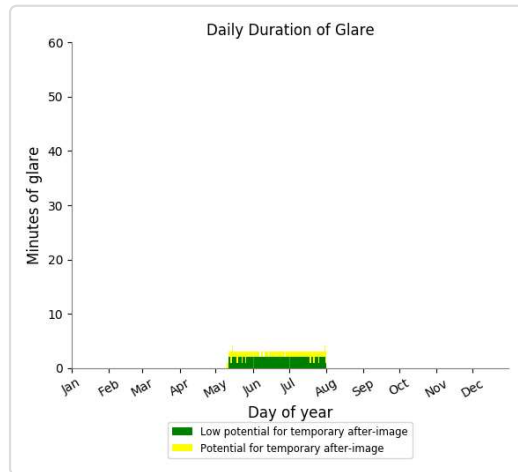
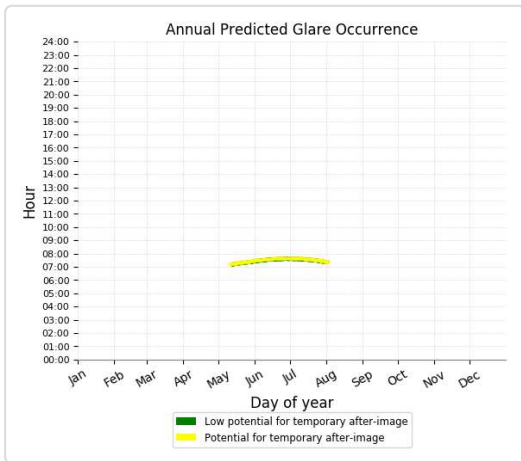
- 239 minutes of "green" glare with low potential to cause temporary after-image.
- 5 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 13)

PV array is expected to produce the following glare for receptors at this location:

- 156 minutes of "green" glare with low potential to cause temporary after-image.
- 89 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 14)

No glare found

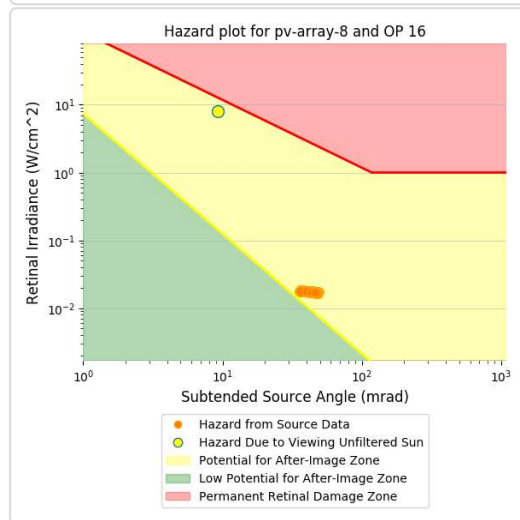
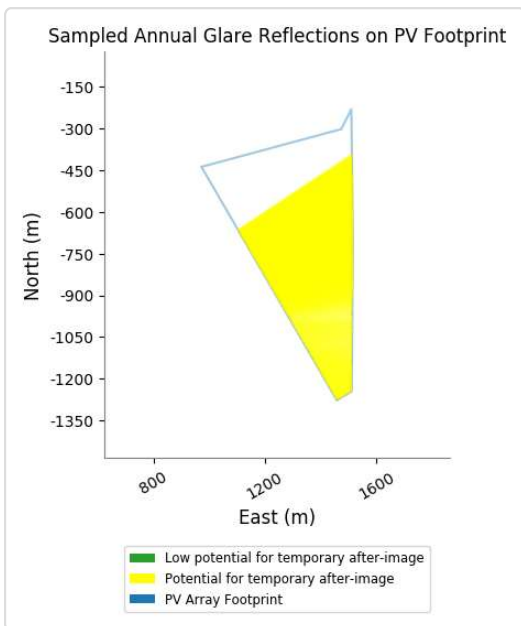
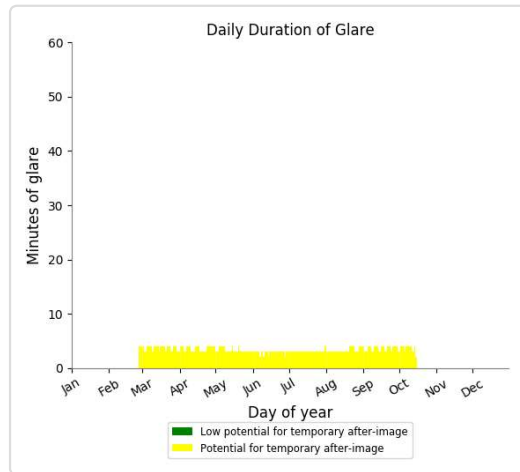
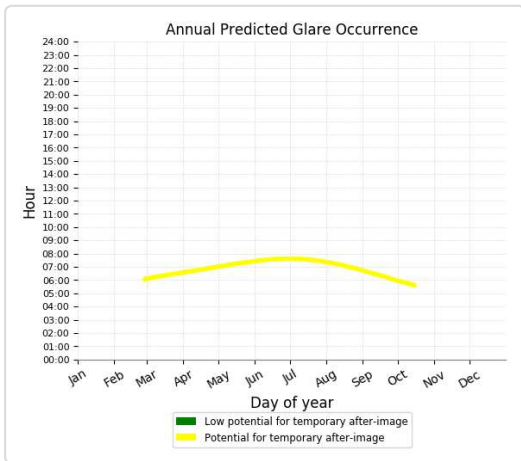
PV array 8 - OP Receptor (OP 15)

No glare found

PV array 8 - OP Receptor (OP 16)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 776 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - OP Receptor (OP 17)

No glare found

PV array 8 - OP Receptor (OP 18)

No glare found

PV array 8 - OP Receptor (OP 19)

No glare found

PV array 8 - OP Receptor (OP 20)

No glare found

PV array 8 - OP Receptor (OP 21)

No glare found

PV array 8 - OP Receptor (OP 22)

No glare found

PV array 8 - OP Receptor (OP 23)

No glare found

PV array 8 - OP Receptor (OP 24)

No glare found

PV array 8 - OP Receptor (OP 25)

No glare found

PV array 8 - OP Receptor (OP 26)

No glare found

PV array 8 - OP Receptor (OP 27)

No glare found

PV array 8 - OP Receptor (OP 28)

No glare found

PV array 8 - OP Receptor (OP 29)

No glare found

PV array 8 - OP Receptor (OP 30)

No glare found

PV array 8 - OP Receptor (OP 31)

No glare found

PV array 8 - OP Receptor (OP 32)

No glare found

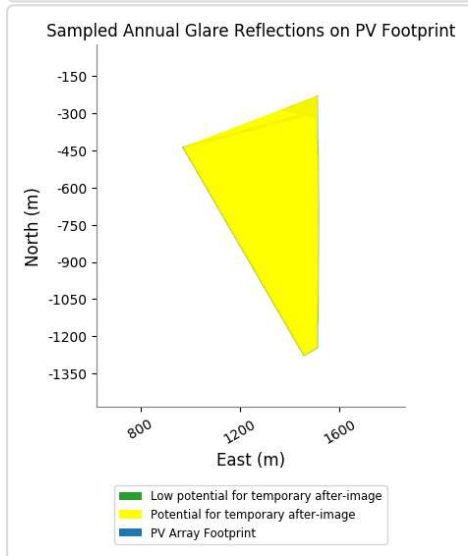
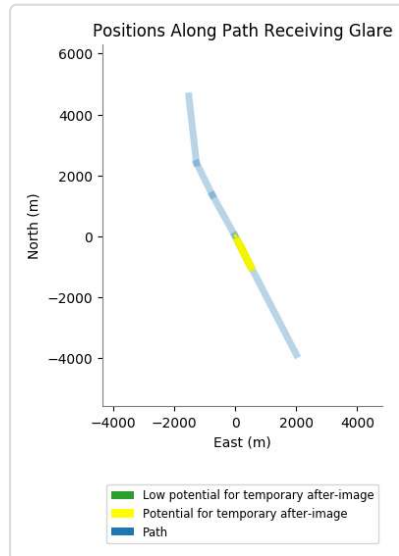
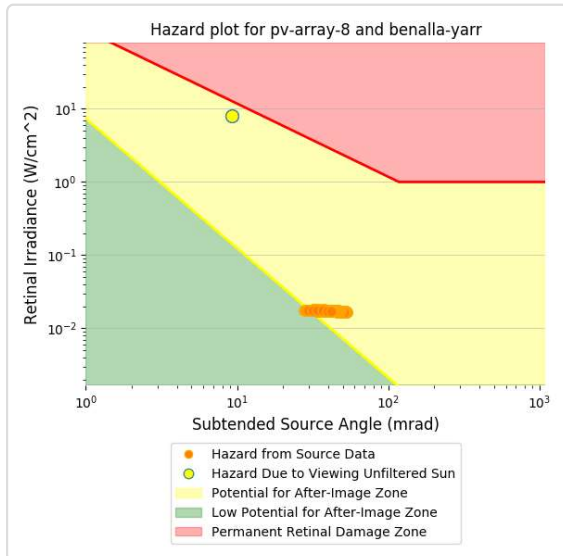
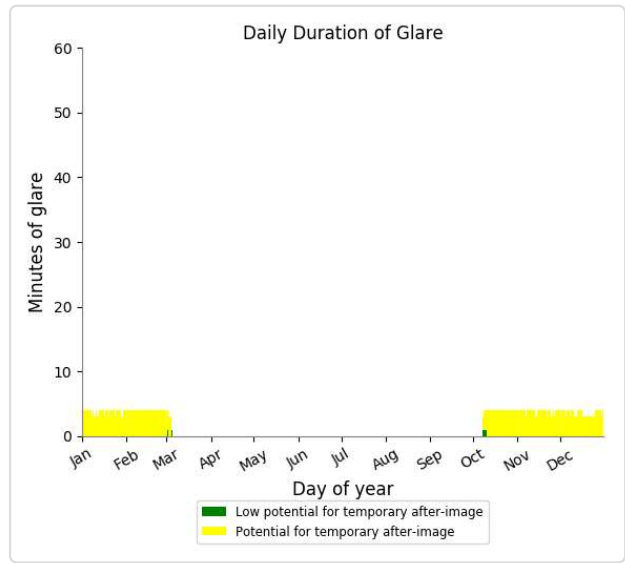
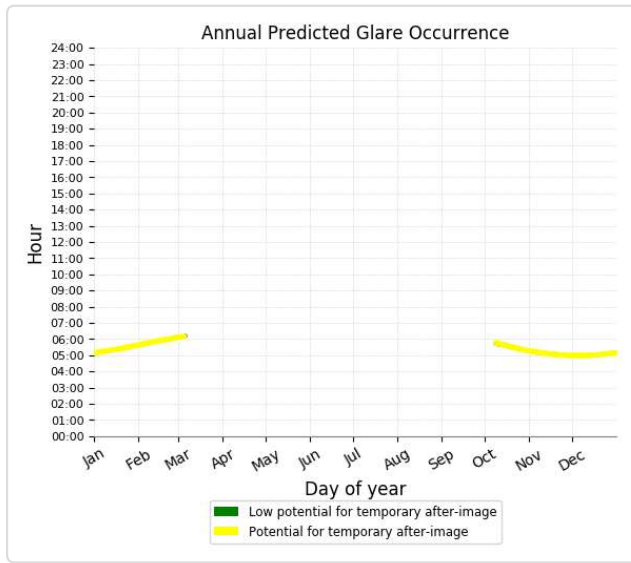
PV array 8 - OP Receptor (OP 33)

No glare found

PV array 8 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

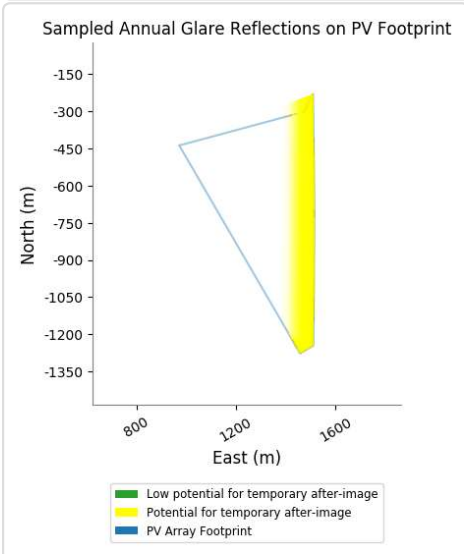
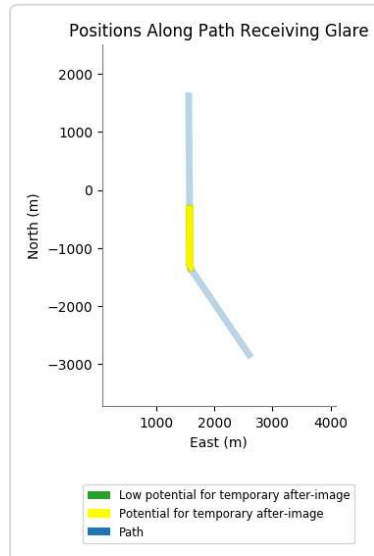
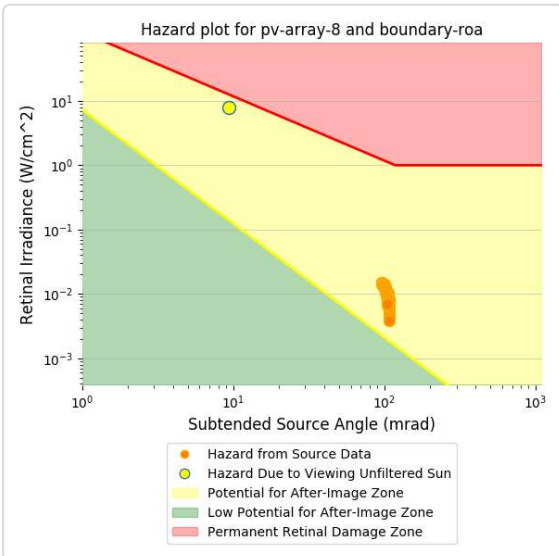
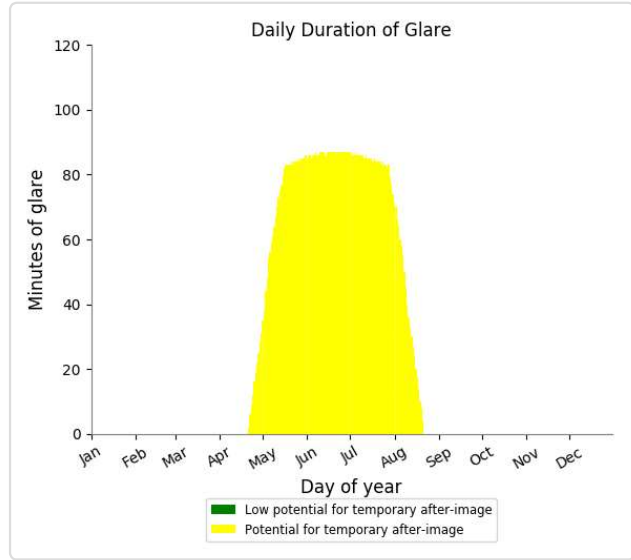
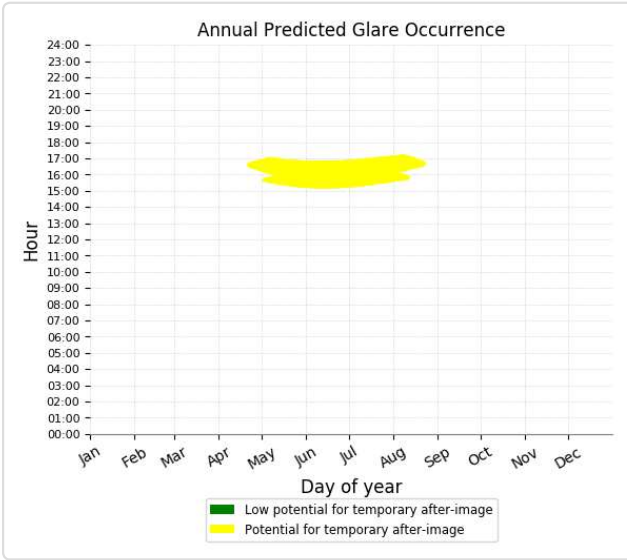
- 5 minutes of "green" glare with low potential to cause temporary after-image.
- 559 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - Route Receptor (Boundary Road)

PV array is expected to produce the following glare for receptors at this location:

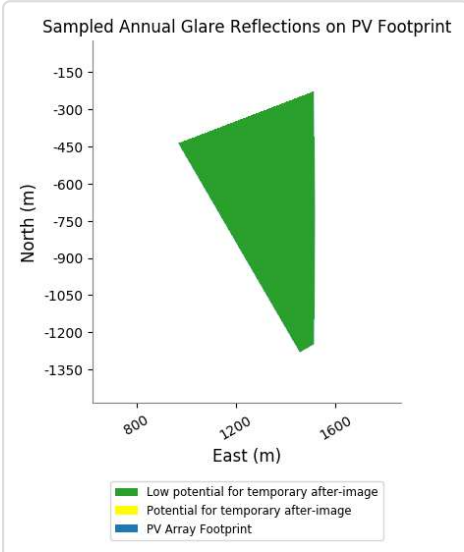
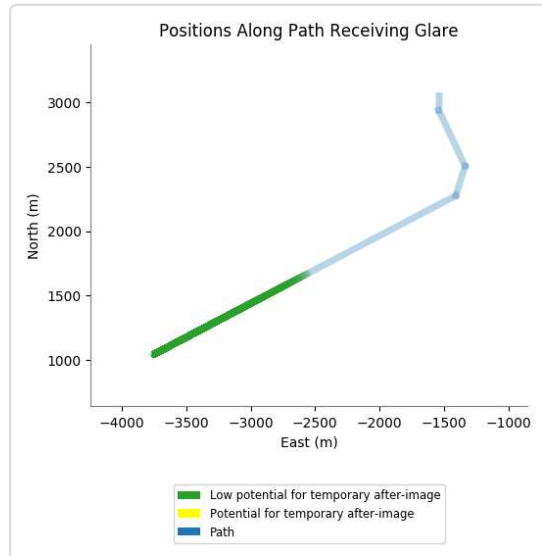
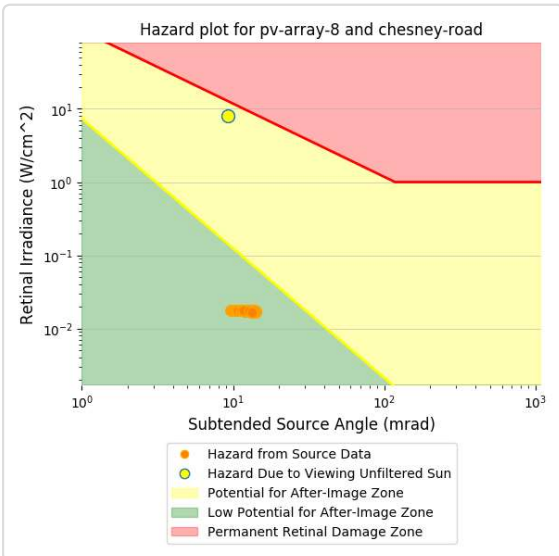
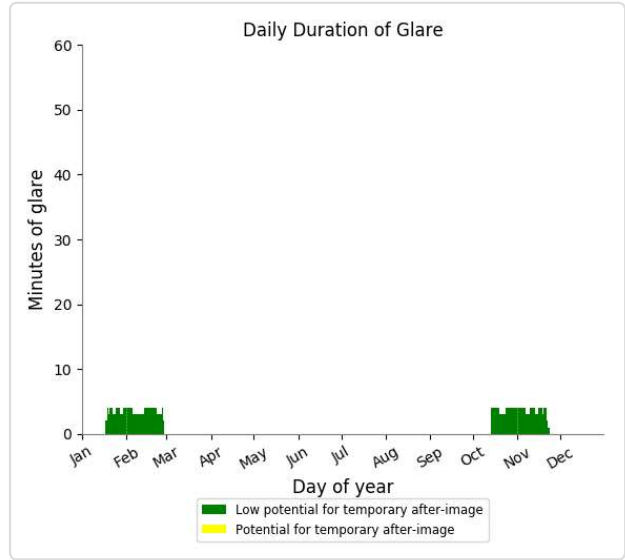
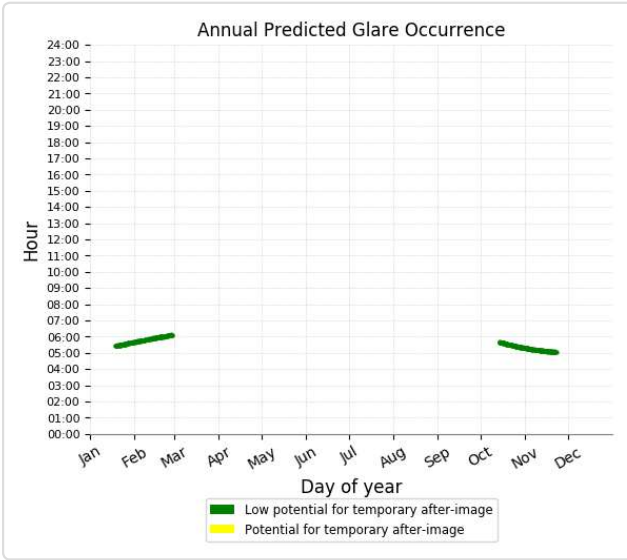
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 8,422 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - Route Receptor (Chesney Road)

PV array is expected to produce the following glare for receptors at this location:

- 293 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - Route Receptor (Dam Wall Rd)

No glare found

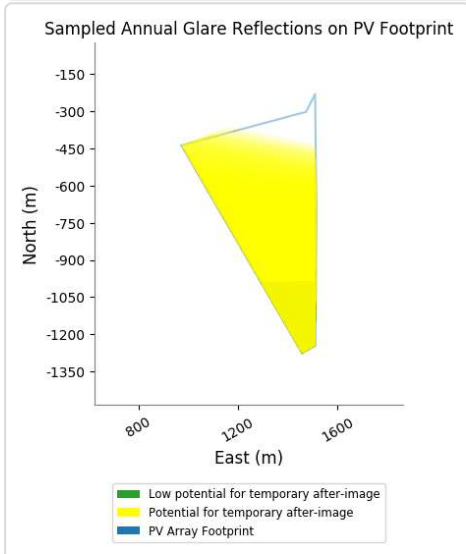
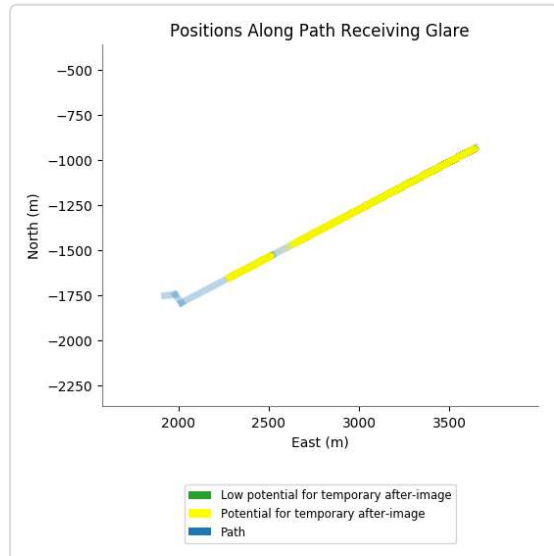
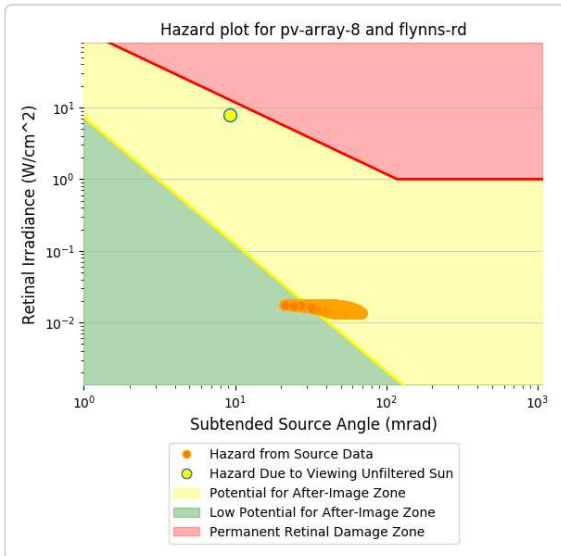
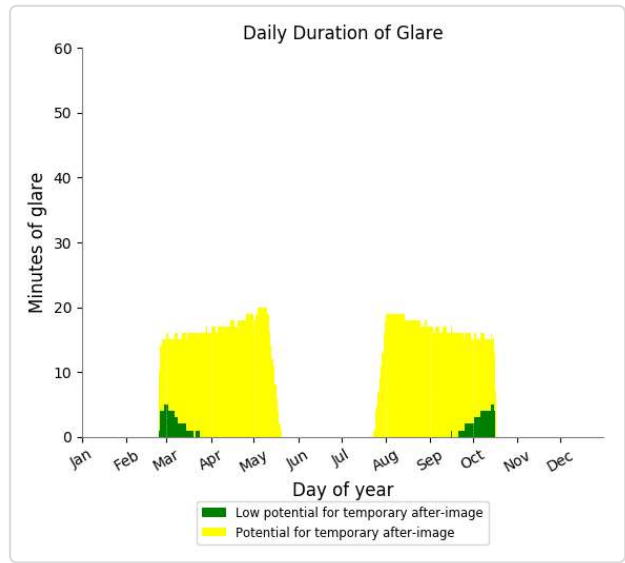
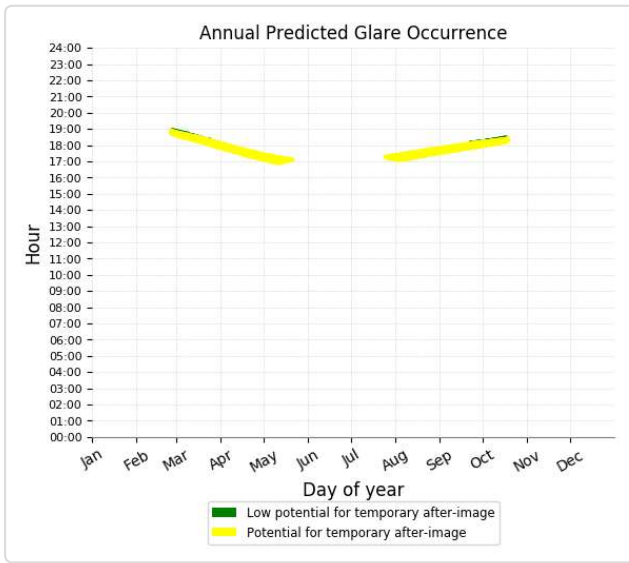
PV array 8 - Route Receptor (Farnley Road)

No glare found

PV array 8 - Route Receptor (Flynn's Rd)

PV array is expected to produce the following glare for receptors at this location:

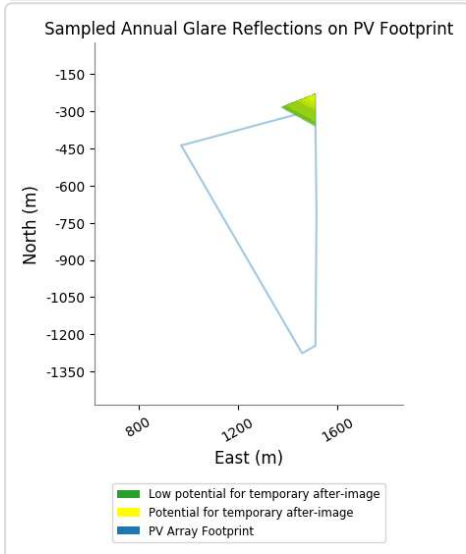
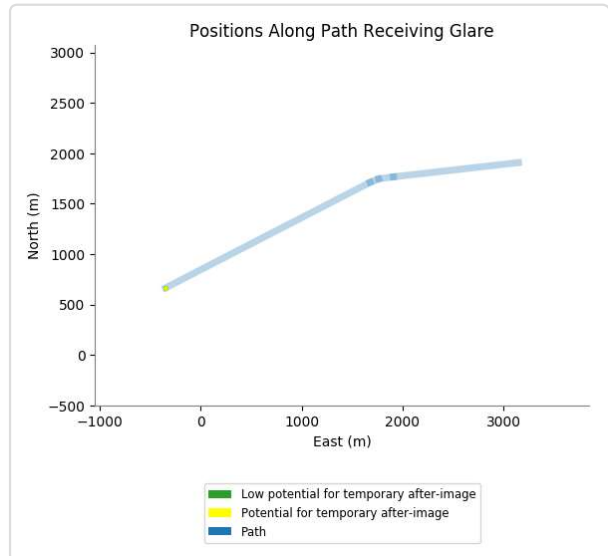
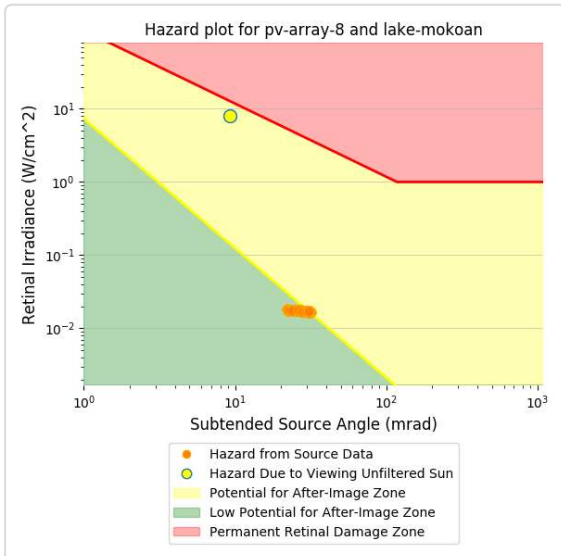
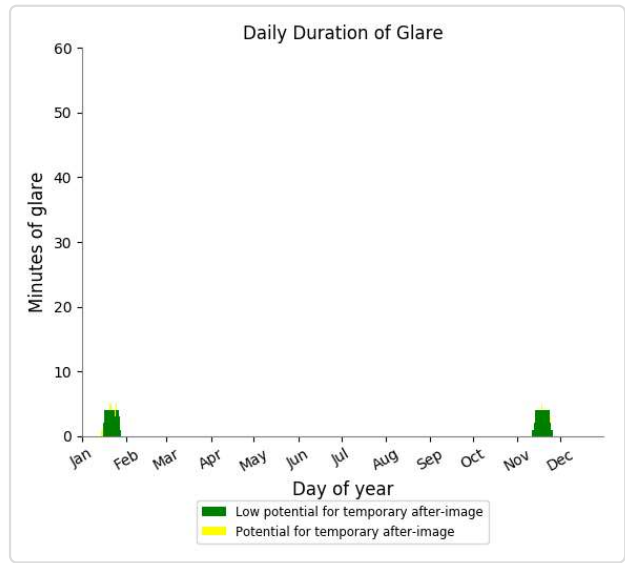
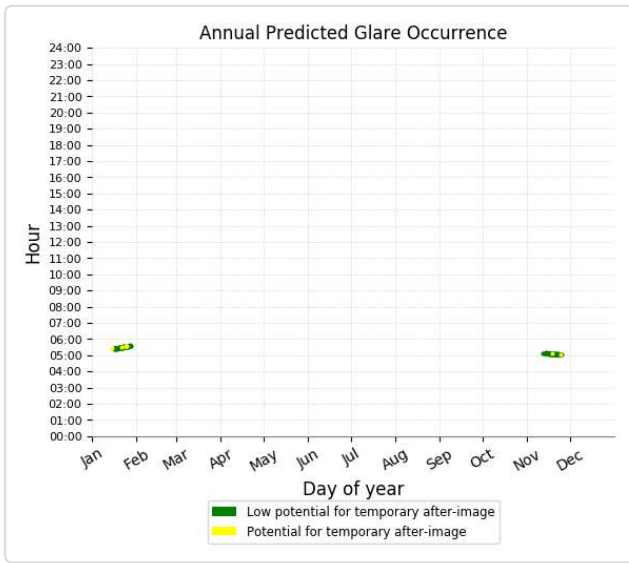
- 145 minutes of "green" glare with low potential to cause temporary after-image.
- 2,599 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 91 minutes of "green" glare with low potential to cause temporary after-image.
- 6 minutes of "yellow" glare with potential to cause temporary after-image.



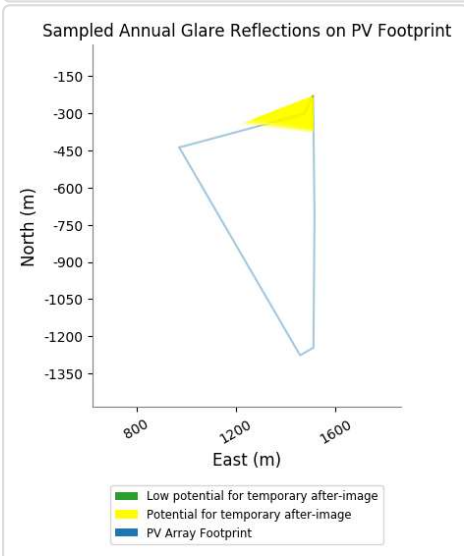
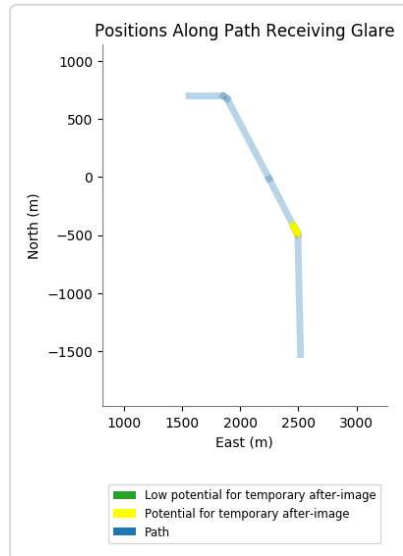
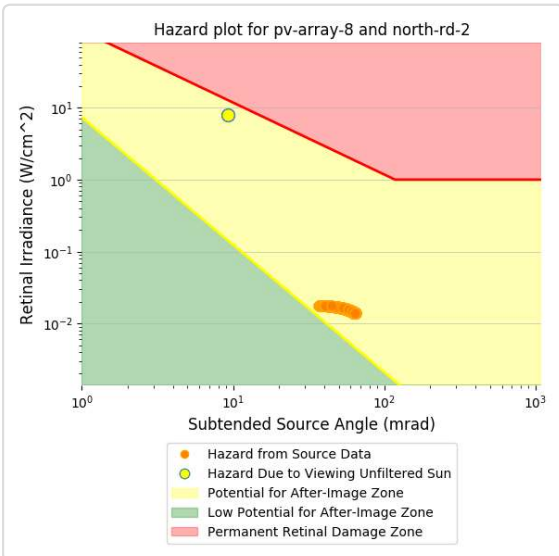
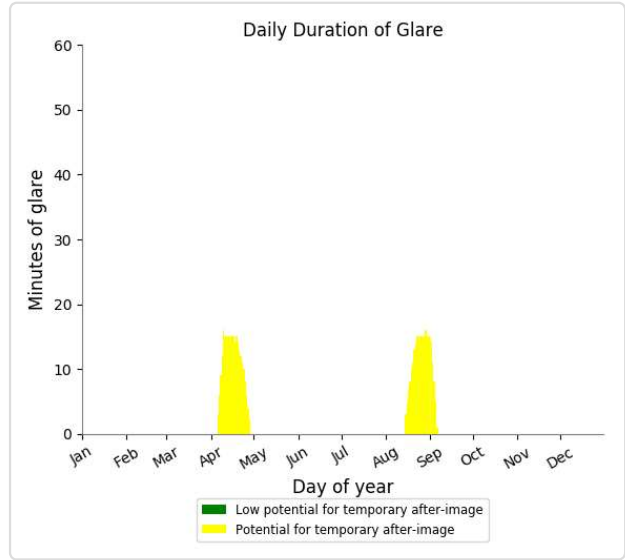
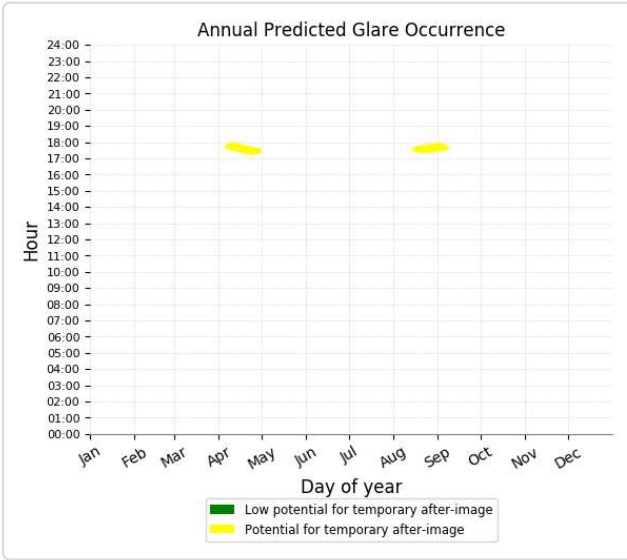
PV array 8 - Route Receptor (North Rd)

No glare found

PV array 8 - Route Receptor (North Rd - 2)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 521 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - Route Receptor (Old Thoona Road)

No glare found

PV array 8 - Route Receptor (Route 11)

No glare found

PV array 8 - Route Receptor (Snowy Ln)

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Appendix B

GlareGauge Reports for Varying Resting Angles

West Mokoan - updated 2021

West Mokoan - 5 degrees with coating

Created April 22, 2021
Updated April 22, 2021
Time-step 1 minute
Timezone offset UTC+10
Site ID 52863.9446

Project type Advanced
Project status: active
Category 100 MW to 1 GW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
 Ocular transmission coefficient: 0.5
 Pupil diameter: 0.002 m
 Eye focal length: 0.017 m
 Sun subtended angle: 9.3 mrad

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results

Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	SA tracking	SA tracking	0	0	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-
PV array 3	SA tracking	SA tracking	0	1,194	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-
PV array 5	SA tracking	SA tracking	0	0	-
PV array 6	SA tracking	SA tracking	0	22	-
PV array 7	SA tracking	SA tracking	0	10,347	-
PV array 8	SA tracking	SA tracking	0	3,130	-

Component Data

PV Array(s)

Total PV footprint area: 3,534,994 m²

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 266,969 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.470800	146.003130	161.96	2.44	164.41
2	-36.468610	146.008690	164.37	2.44	166.81
3	-36.480130	146.016890	162.67	2.44	165.12
4	-36.474440	146.011650	163.15	2.44	165.59
5	-36.471790	146.006530	162.05	2.44	164.49
6	-36.472690	146.004550	161.78	2.44	164.22



Name: PV array 2 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 469,172 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472650	146.004600	163.12	2.77	165.89
2	-36.471780	146.006530	164.37	2.77	167.14
3	-36.474440	146.011650	164.96	2.77	167.73
4	-36.480130	146.016890	161.70	2.77	164.47
5	-36.480980	146.013910	163.61	2.77	166.38
6	-36.477880	146.007890	162.90	2.77	165.66



Name: PV array 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 311,412 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.477900	146.007870	163.83	2.44	166.27
2	-36.480990	146.013900	161.74	2.44	164.18
3	-36.480130	146.016910	170.18	2.44	172.62
4	-36.482550	146.018900	165.36	2.44	167.81
5	-36.485290	146.012560	167.59	2.44	170.03



Name: PV array 4 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 436,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472440	146.011850	160.98	2.77	163.75
2	-36.469770	146.011800	161.35	2.77	164.12
3	-36.466860	146.017570	162.00	2.77	164.77
4	-36.468740	146.019260	164.50	2.77	167.27
5	-36.473490	146.019580	166.31	2.77	169.08
6	-36.474750	146.013990	165.32	2.77	168.08



Name: PV array 5
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 289,046 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.468470	146.009460	162.65	2.44	165.09
2	-36.464740	146.018280	161.71	2.44	164.15
3	-36.464620	146.020190	165.09	2.44	167.53
4	-36.470550	146.020105	165.55	2.44	167.99
5	-36.473580	146.019590	165.38	2.44	167.82
6	-36.468710	146.019230	161.97	2.44	164.41
7	-36.466880	146.017600	162.34	2.44	164.78
8	-36.469800	146.011740	163.97	2.44	166.41
9	-36.472470	146.011820	162.60	2.44	165.04



Name: PV array 6
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 554,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.456383	145.993541	173.09	2.44	175.54
2	-36.452868	146.002163	176.68	2.44	179.12
3	-36.455535	146.002436	173.66	2.44	176.10
4	-36.456916	145.999549	170.45	2.44	172.89
5	-36.458109	146.000525	174.90	2.44	177.34
6	-36.460211	145.998535	171.24	2.44	173.68
7	-36.460838	145.999198	170.29	2.44	172.74
8	-36.459426	146.002241	169.09	2.44	171.53
9	-36.462439	146.004387	166.30	2.44	168.75
10	-36.464635	145.999315	169.00	2.44	171.45

Name: PV array 7
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 919,599 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.465122	145.999611	169.38	2.44	171.82
2	-36.456798	146.018969	169.57	2.44	172.01
3	-36.457771	146.018930	168.80	2.44	171.24
4	-36.458022	146.020101	169.32	2.44	171.76
5	-36.461410	146.020023	165.96	2.44	168.41
6	-36.468762	146.002221	166.71	2.44	169.15
7	-36.466942	146.000851	169.23	2.44	171.68

Name: PV array 8
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 5.0 deg
Footprint area: 288,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.474760	146.013970	163.89	2.44	166.34
2	-36.473540	146.019570	165.38	2.44	167.82
3	-36.472899	146.019975	167.50	2.44	169.94
4	-36.477228	146.020037	164.15	2.44	166.60
5	-36.482020	146.019990	165.02	2.44	167.47
6	-36.482300	146.019390	166.38	2.44	168.82

2-Mile Flight Path Receptor(s)

Name: FP 1
Description:
Threshold height : 15 m
Direction: 273.0 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.552472	146.018036	173.07	15.24	188.31
2-mile point	-36.553985	146.054021	176.94	180.06	357.00

Name: FP 2
Description:
Threshold height : 15 m
Direction: 94.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.551877	146.007064	171.04	15.24	186.28
2-mile point	-36.549659	145.971137	172.00	182.96	354.96

Name: FP 3
Description:
Threshold height : 15 m
Direction: 173.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.548520	146.004514	172.19	15.24	187.43
2-mile point	-36.519799	146.000373	168.43	187.69	356.11

Name: FP 4
Description:
Threshold height : 15 m
Direction: 357.6 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.557814	146.006108	174.03	15.24	189.27
2-mile point	-36.586701	146.007617	178.02	179.94	357.96



Route Receptor(s)

Name: Benalla-Yarrowonga Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.429270	145.986090	195.35	1.50	196.85
2	-36.449160	145.988920	181.34	1.50	182.84
3	-36.458620	145.994720	174.09	1.50	175.59
4	-36.470610	146.002930	162.03	1.50	163.53
5	-36.505920	146.025470	168.59	1.50	170.09

Name: Boundary Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456180	146.020460	170.11	1.50	171.61
2	-36.482720	146.020720	170.10	1.50	171.60
3	-36.483040	146.020810	169.97	1.50	171.47
4	-36.496460	146.032090	168.76	1.50	170.26

Name: Chesney Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.443340	145.985990	186.75	1.50	188.25
2	-36.444340	145.985940	184.86	1.50	186.36
3	-36.448240	145.988220	181.96	1.50	183.46
4	-36.450300	145.987410	176.61	1.50	178.11
5	-36.461420	145.961230	163.94	1.50	165.44

Name: Dam Wall Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456194	146.020561	170.15	1.50	171.65
2	-36.456041	146.020820	170.26	1.50	171.76
3	-36.455712	146.021649	170.48	1.50	171.98
4	-36.455720	146.022015	170.49	1.50	171.99
5	-36.455700	146.022936	170.85	1.50	172.35
6	-36.455622	146.023302	170.71	1.50	172.21
7	-36.455461	146.023682	170.89	1.50	172.39

Name: Farnley Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.449010	145.989530	180.71	1.50	182.21
2	-36.449060	146.001810	179.29	1.50	180.79
3	-36.449080	146.014190	182.24	1.50	183.74
4	-36.456430	146.018890	169.97	1.50	171.47

Name: Flynn's Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.486586	146.024583	166.13	1.50	167.63
2	-36.486531	146.025236	166.24	1.50	167.74
3	-36.486939	146.025626	166.73	1.50	168.23
4	-36.484570	146.031235	163.00	1.50	164.50
5	-36.479223	146.043807	163.00	1.50	164.50

Name: Lake Mokoan Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464800	145.999220	169.49	1.50	170.99
2	-36.455370	146.021850	170.02	1.50	171.52
3	-36.455060	146.022800	171.00	1.50	172.50
4	-36.454880	146.024430	172.09	1.50	173.59
5	-36.453610	146.038270	175.33	1.50	176.83

Name: North Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.455546	146.021446	170.24	1.50	171.74
2	-36.456327	146.021485	171.30	1.50	172.80
3	-36.457002	146.021422	171.54	1.50	173.04
4	-36.457625	146.021236	170.23	1.50	171.73
5	-36.458216	146.021025	168.27	1.50	169.77
6	-36.461218	146.021081	167.39	1.50	168.89

Name: North Rd - 2
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464511	146.020533	166.67	1.50	168.17
2	-36.464511	146.023810	163.00	1.50	164.50
3	-36.464730	146.024200	163.00	1.50	164.50
4	-36.470927	146.028219	163.00	1.50	164.50
5	-36.475267	146.030982	163.00	1.50	164.50
6	-36.484605	146.031243	163.00	1.50	164.50

Name: Old Thoona Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.473170	145.972080	165.67	1.50	167.17
2	-36.471000	145.972410	166.76	1.50	168.26
3	-36.465250	145.976500	167.24	1.50	168.74
4	-36.457540	145.982700	169.86	1.50	171.36
5	-36.449620	145.988610	181.27	1.50	182.77
6	-36.429670	145.998520	228.93	1.50	230.43

Name: Route 11
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.488119	146.014258	167.02	1.50	168.52
2	-36.485421	146.018071	163.43	1.50	164.93
3	-36.484700	146.019242	164.89	1.50	166.39

Name: Snowy Ln
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.495849	146.019037	167.11	1.50	168.61
2	-36.492367	146.021739	164.19	1.50	165.69
3	-36.487930	146.024870	167.17	1.50	168.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	-36.449450	145.994600	193.91	1.50	195.41
OP 2	-36.450050	145.991370	179.53	1.50	181.03
OP 3	-36.448190	145.992090	183.99	1.50	185.49
OP 4	-36.445990	145.987840	182.94	1.50	184.44
OP 5	-36.444980	145.986880	181.39	1.50	182.89
OP 6	-36.467900	145.976260	163.92	1.50	165.42
OP 7	-36.483190	145.993200	163.99	1.50	165.49
OP 8	-36.484980	145.990270	162.56	1.50	164.06
OP 9	-36.485840	146.000300	165.00	1.50	166.50
OP 10	-36.488180	145.997550	162.08	1.50	163.58
OP 11	-36.488150	146.000840	163.52	1.50	165.02
OP 12	-36.489780	146.000490	164.43	1.50	165.93
OP 13	-36.489080	146.002260	165.85	1.50	167.35
OP 14	-36.490040	146.007970	168.27	1.50	169.77
OP 15	-36.491050	146.006450	165.34	1.50	166.84
OP 16	-36.480935	146.007630	163.90	1.50	165.40
OP 17	-36.494190	146.019500	165.18	1.50	166.68
OP 18	-36.495640	146.021960	166.78	1.50	168.28
OP 19	-36.449630	146.041960	200.29	1.50	201.79
OP 20	-36.450118	146.040630	203.77	1.50	205.27
OP 21	-36.452030	146.039564	186.99	1.50	188.49
OP 22	-36.441860	146.015430	204.20	1.50	205.70
OP 23	-36.440810	146.015082	206.52	1.50	208.02
OP 24	-36.442680	145.986200	186.87	1.50	188.37
OP 25	-36.442030	146.005170	204.56	1.50	206.06
OP 26	-36.455370	146.023940	171.02	1.50	172.52
OP 27	-36.456160	146.022360	170.94	1.50	172.44
OP 28	-36.449440	146.017320	182.53	1.50	184.03
OP 29	-36.484270	146.018820	166.16	1.50	167.66
OP 30	-36.501000	146.026770	166.45	1.50	167.95
OP 31	-36.453870	146.016460	174.38	1.50	175.88
OP 32	-36.491530	146.025840	165.54	1.50	167.04
OP 33	-36.458187	146.012754	169.04	1.50	170.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	SA tracking	SA tracking	0	0	-	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 3	SA tracking	SA tracking	0	1,194	-	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 5	SA tracking	SA tracking	0	0	-	-
PV array 6	SA tracking	SA tracking	0	22	-	-
PV array 7	SA tracking	SA tracking	0	10,347	-	-
PV array 8	SA tracking	SA tracking	0	3,130	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv-array-3 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-3 (yellow)	216	320	9	0	0	0	0	0	0	240	239	170
pv-array-6 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-6 (yellow)	0	0	0	0	12	0	10	0	0	0	0	0
pv-array-7 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-7 (yellow)	1807	1388	825	135	88	678	311	27	539	1296	1814	1439
pv-array-8 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-8 (yellow)	0	0	0	0	532	1529	1044	25	0	0	0	0

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 2 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 3 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrawonga Road	0	1194
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0

Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 3 - Receptor (FP 1)*No glare found***PV array 3 - Receptor (FP 2)***No glare found***PV array 3 - Receptor (FP 3)***No glare found***PV array 3 - Receptor (FP 4)***No glare found***PV array 3 - OP Receptor (OP 1)***No glare found***PV array 3 - OP Receptor (OP 2)***No glare found***PV array 3 - OP Receptor (OP 3)***No glare found***PV array 3 - OP Receptor (OP 4)***No glare found***PV array 3 - OP Receptor (OP 5)***No glare found***PV array 3 - OP Receptor (OP 6)***No glare found***PV array 3 - OP Receptor (OP 7)***No glare found***PV array 3 - OP Receptor (OP 8)***No glare found***PV array 3 - OP Receptor (OP 9)***No glare found***PV array 3 - OP Receptor (OP 10)***No glare found***PV array 3 - OP Receptor (OP 11)***No glare found*

PV array 3 - OP Receptor (OP 12)*No glare found***PV array 3 - OP Receptor (OP 13)***No glare found***PV array 3 - OP Receptor (OP 14)***No glare found***PV array 3 - OP Receptor (OP 15)***No glare found***PV array 3 - OP Receptor (OP 16)***No glare found***PV array 3 - OP Receptor (OP 17)***No glare found***PV array 3 - OP Receptor (OP 18)***No glare found***PV array 3 - OP Receptor (OP 19)***No glare found***PV array 3 - OP Receptor (OP 20)***No glare found***PV array 3 - OP Receptor (OP 21)***No glare found***PV array 3 - OP Receptor (OP 22)***No glare found***PV array 3 - OP Receptor (OP 23)***No glare found***PV array 3 - OP Receptor (OP 24)***No glare found***PV array 3 - OP Receptor (OP 25)***No glare found***PV array 3 - OP Receptor (OP 26)***No glare found***PV array 3 - OP Receptor (OP 27)***No glare found***PV array 3 - OP Receptor (OP 28)***No glare found***PV array 3 - OP Receptor (OP 29)***No glare found***PV array 3 - OP Receptor (OP 30)***No glare found*

PV array 3 - OP Receptor (OP 31)

No glare found

PV array 3 - OP Receptor (OP 32)

No glare found

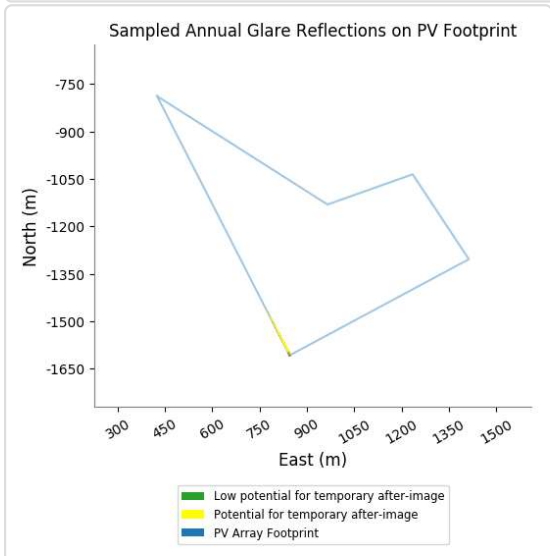
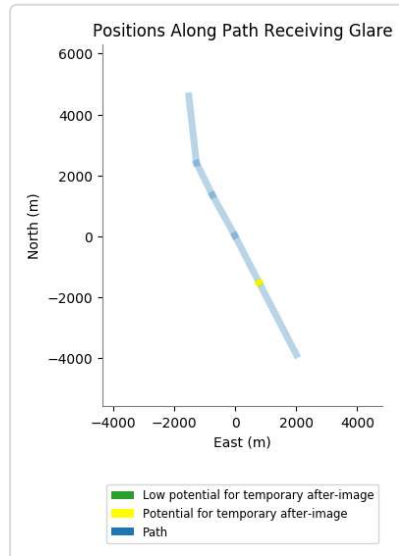
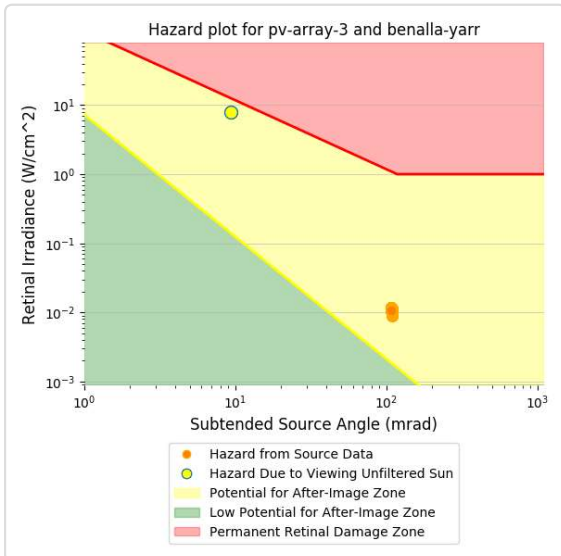
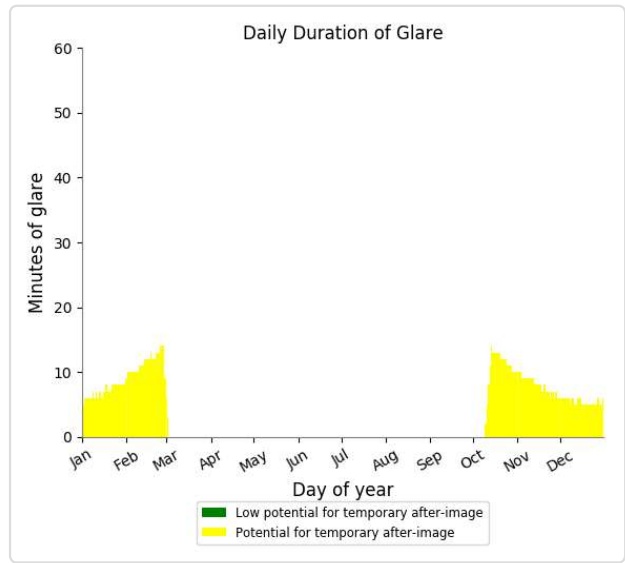
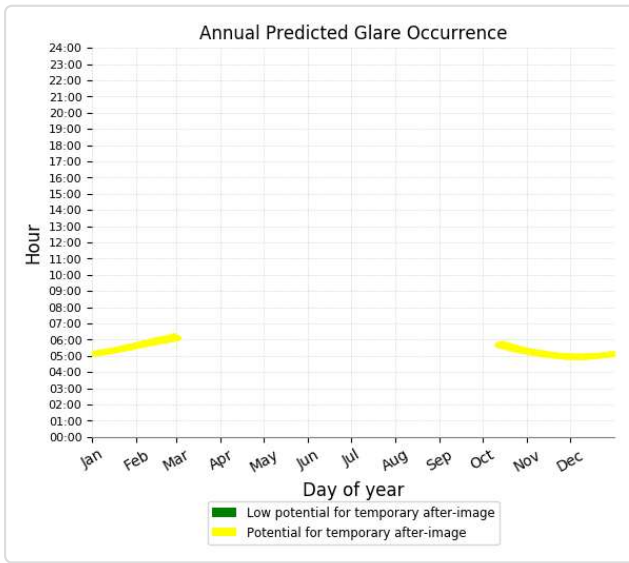
PV array 3 - OP Receptor (OP 33)

No glare found

PV array 3 - Route Receptor (Benalla-Yarrawonga Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,194 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 3 - Route Receptor (Boundary Road)

No glare found

PV array 3 - Route Receptor (Chesney Road)

No glare found

PV array 3 - Route Receptor (Dam Wall Rd)

No glare found

PV array 3 - Route Receptor (Farnley Road)

No glare found

PV array 3 - Route Receptor (Flynn's Rd)

No glare found

PV array 3 - Route Receptor (Lake Mokoan Road)

No glare found

PV array 3 - Route Receptor (North Rd)

No glare found

PV array 3 - Route Receptor (North Rd - 2)

No glare found

PV array 3 - Route Receptor (Old Thoona Road)

No glare found

PV array 3 - Route Receptor (Route 11)

No glare found

PV array 3 - Route Receptor (Snowy Ln)

No glare found

PV array 4 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrawonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 5 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 6 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrawonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	22

Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 6 - Receptor (FP 1)*No glare found***PV array 6 - Receptor (FP 2)***No glare found***PV array 6 - Receptor (FP 3)***No glare found***PV array 6 - Receptor (FP 4)***No glare found***PV array 6 - OP Receptor (OP 1)***No glare found***PV array 6 - OP Receptor (OP 2)***No glare found***PV array 6 - OP Receptor (OP 3)***No glare found***PV array 6 - OP Receptor (OP 4)***No glare found***PV array 6 - OP Receptor (OP 5)***No glare found***PV array 6 - OP Receptor (OP 6)***No glare found***PV array 6 - OP Receptor (OP 7)***No glare found***PV array 6 - OP Receptor (OP 8)***No glare found***PV array 6 - OP Receptor (OP 9)***No glare found***PV array 6 - OP Receptor (OP 10)***No glare found***PV array 6 - OP Receptor (OP 11)***No glare found*

PV array 6 - OP Receptor (OP 12)*No glare found***PV array 6 - OP Receptor (OP 13)***No glare found***PV array 6 - OP Receptor (OP 14)***No glare found***PV array 6 - OP Receptor (OP 15)***No glare found***PV array 6 - OP Receptor (OP 16)***No glare found***PV array 6 - OP Receptor (OP 17)***No glare found***PV array 6 - OP Receptor (OP 18)***No glare found***PV array 6 - OP Receptor (OP 19)***No glare found***PV array 6 - OP Receptor (OP 20)***No glare found***PV array 6 - OP Receptor (OP 21)***No glare found***PV array 6 - OP Receptor (OP 22)***No glare found***PV array 6 - OP Receptor (OP 23)***No glare found***PV array 6 - OP Receptor (OP 24)***No glare found***PV array 6 - OP Receptor (OP 25)***No glare found***PV array 6 - OP Receptor (OP 26)***No glare found***PV array 6 - OP Receptor (OP 27)***No glare found***PV array 6 - OP Receptor (OP 28)***No glare found***PV array 6 - OP Receptor (OP 29)***No glare found***PV array 6 - OP Receptor (OP 30)***No glare found*

PV array 6 - OP Receptor (OP 31)

No glare found

PV array 6 - OP Receptor (OP 32)

No glare found

PV array 6 - OP Receptor (OP 33)

No glare found

PV array 6 - Route Receptor (Benalla-Yarrowonga Road)

No glare found

PV array 6 - Route Receptor (Boundary Road)

No glare found

PV array 6 - Route Receptor (Chesney Road)

No glare found

PV array 6 - Route Receptor (Dam Wall Rd)

No glare found

PV array 6 - Route Receptor (Farnley Road)

No glare found

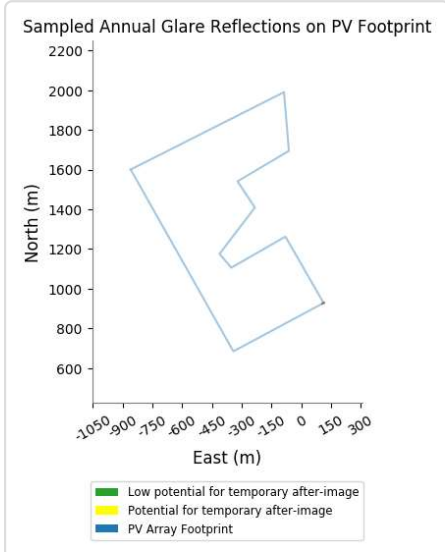
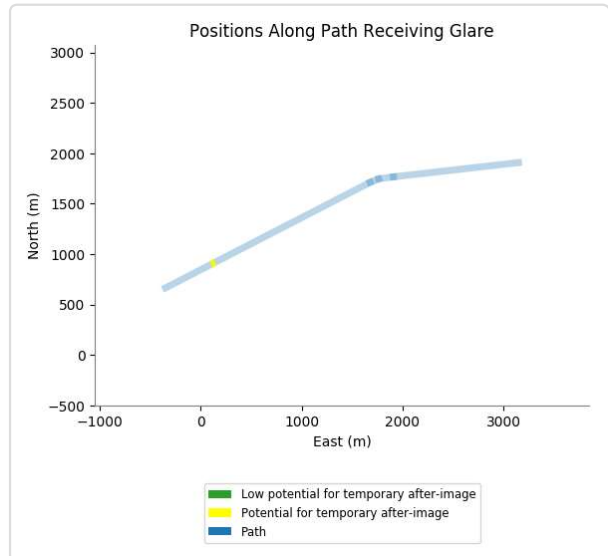
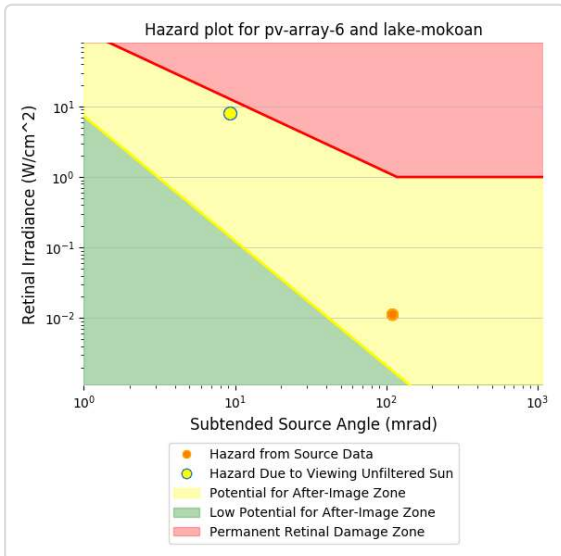
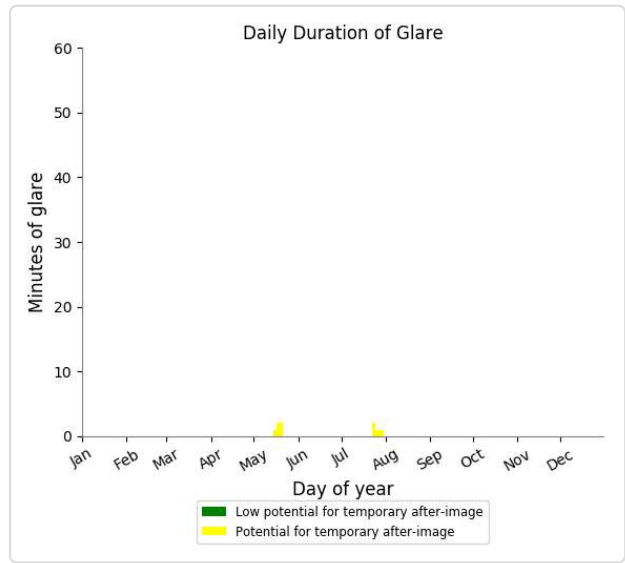
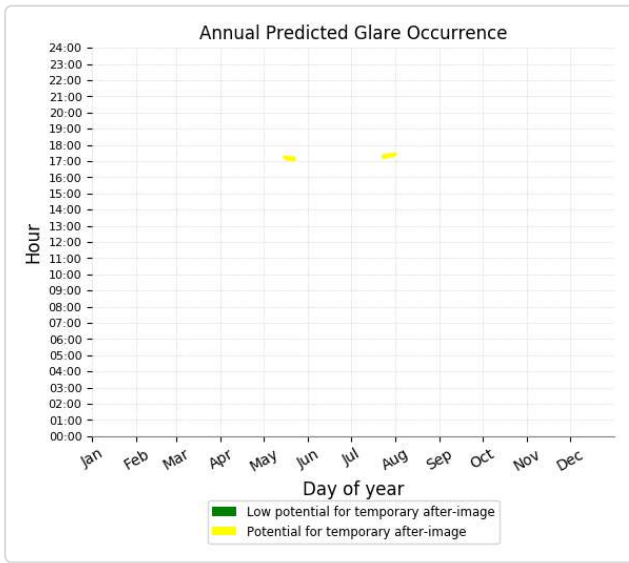
PV array 6 - Route Receptor (Flynn's Rd)

No glare found

PV array 6 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 22 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 6 - Route Receptor (North Rd)

No glare found

PV array 6 - Route Receptor (North Rd - 2)

No glare found

PV array 6 - Route Receptor (Old Thoona Road)

No glare found

PV array 6 - Route Receptor (Route 11)

No glare found

PV array 6 - Route Receptor (Snowy Ln)

No glare found

PV array 7 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0

OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	1077
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	9106
Route: North Rd	0	164
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 7 - Receptor (FP 1)

No glare found

PV array 7 - Receptor (FP 2)

No glare found

PV array 7 - Receptor (FP 3)

No glare found

PV array 7 - Receptor (FP 4)

No glare found

PV array 7 - OP Receptor (OP 1)

No glare found

PV array 7 - OP Receptor (OP 2)

No glare found

PV array 7 - OP Receptor (OP 3)

No glare found

PV array 7 - OP Receptor (OP 4)

No glare found

PV array 7 - OP Receptor (OP 5)

No glare found

PV array 7 - OP Receptor (OP 6)

No glare found

PV array 7 - OP Receptor (OP 7)

No glare found

PV array 7 - OP Receptor (OP 8)

No glare found

PV array 7 - OP Receptor (OP 9)*No glare found***PV array 7 - OP Receptor (OP 10)***No glare found***PV array 7 - OP Receptor (OP 11)***No glare found***PV array 7 - OP Receptor (OP 12)***No glare found***PV array 7 - OP Receptor (OP 13)***No glare found***PV array 7 - OP Receptor (OP 14)***No glare found***PV array 7 - OP Receptor (OP 15)***No glare found***PV array 7 - OP Receptor (OP 16)***No glare found***PV array 7 - OP Receptor (OP 17)***No glare found***PV array 7 - OP Receptor (OP 18)***No glare found***PV array 7 - OP Receptor (OP 19)***No glare found***PV array 7 - OP Receptor (OP 20)***No glare found***PV array 7 - OP Receptor (OP 21)***No glare found***PV array 7 - OP Receptor (OP 22)***No glare found***PV array 7 - OP Receptor (OP 23)***No glare found***PV array 7 - OP Receptor (OP 24)***No glare found***PV array 7 - OP Receptor (OP 25)***No glare found***PV array 7 - OP Receptor (OP 26)***No glare found***PV array 7 - OP Receptor (OP 27)***No glare found*

PV array 7 - OP Receptor (OP 28)

No glare found

PV array 7 - OP Receptor (OP 29)

No glare found

PV array 7 - OP Receptor (OP 30)

No glare found

PV array 7 - OP Receptor (OP 31)

No glare found

PV array 7 - OP Receptor (OP 32)

No glare found

PV array 7 - OP Receptor (OP 33)

No glare found

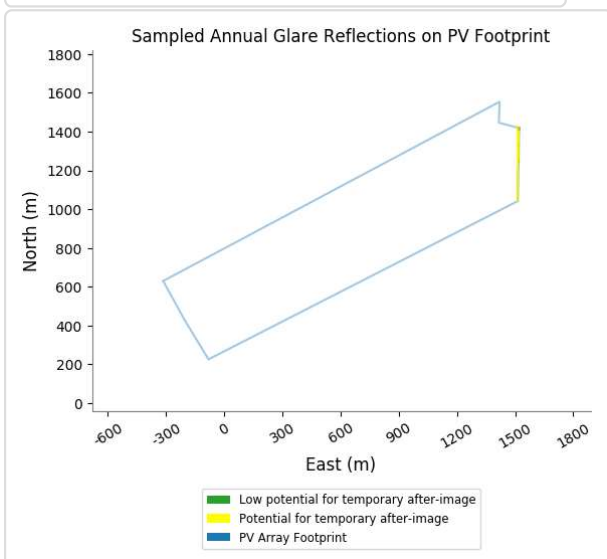
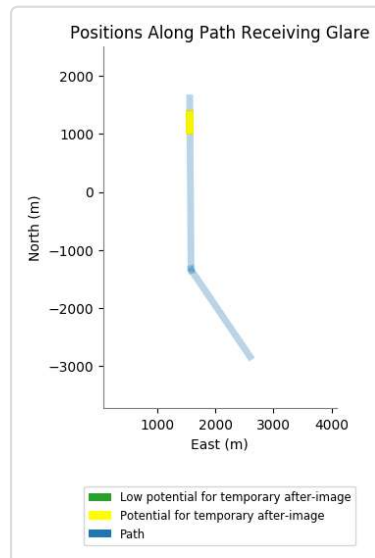
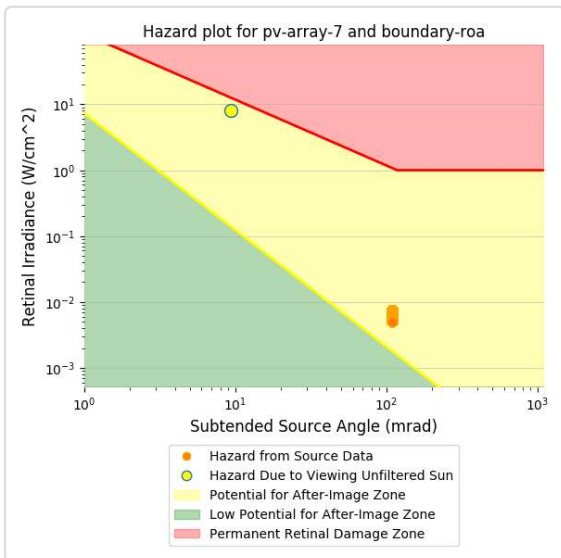
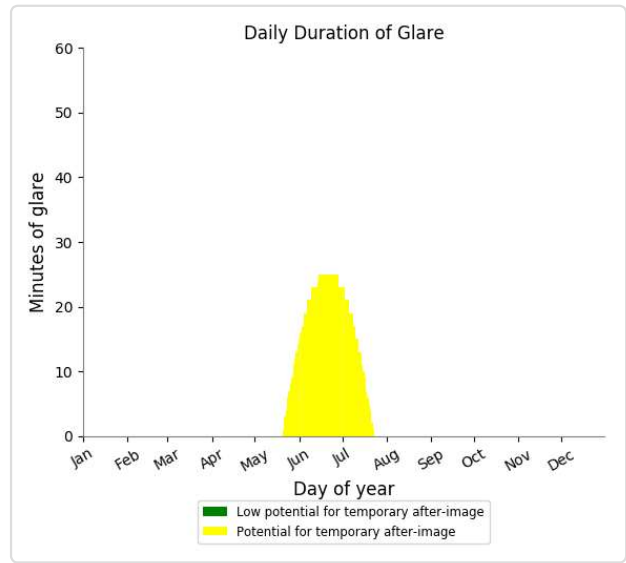
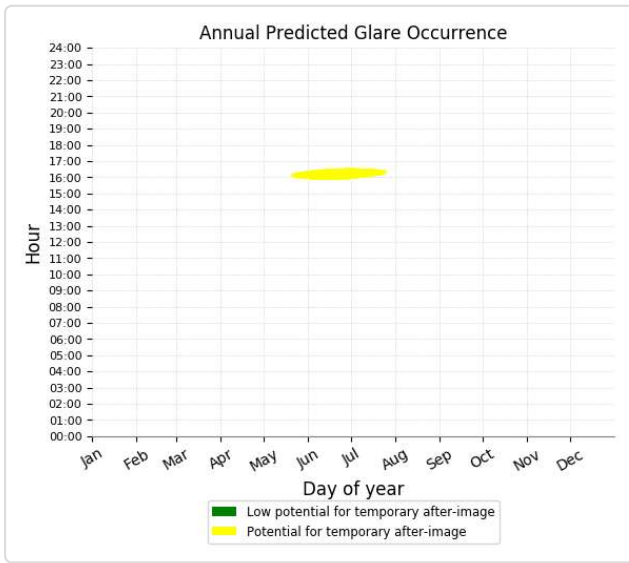
PV array 7 - Route Receptor (Benalla-Yarrawonga Road)

No glare found

PV array 7 - Route Receptor (Boundary Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,077 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (Chesney Road)

No glare found

PV array 7 - Route Receptor (Dam Wall Rd)

No glare found

PV array 7 - Route Receptor (Farnley Road)

No glare found

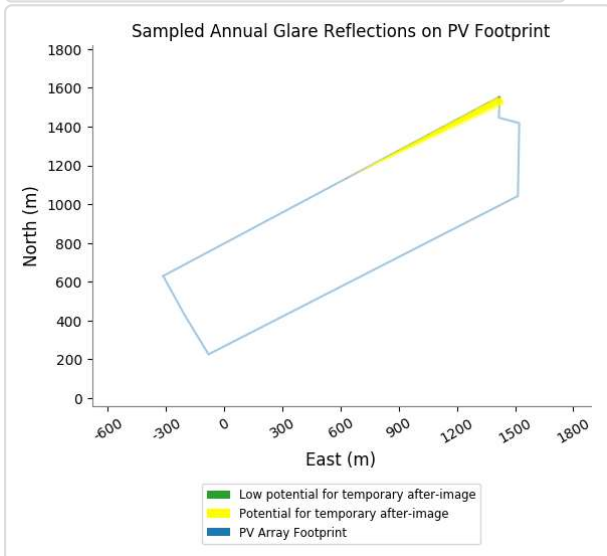
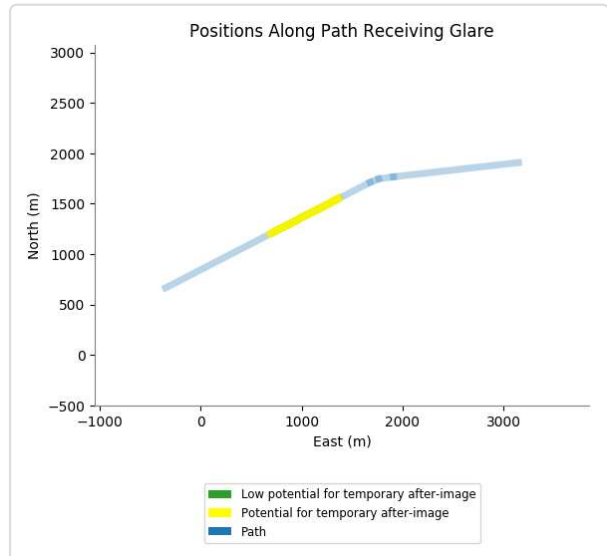
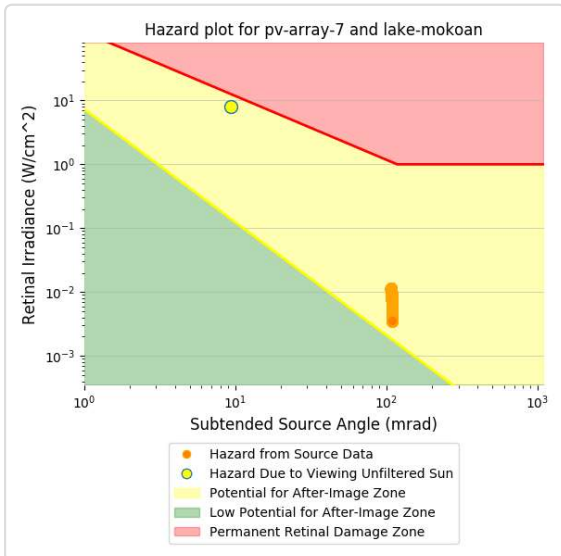
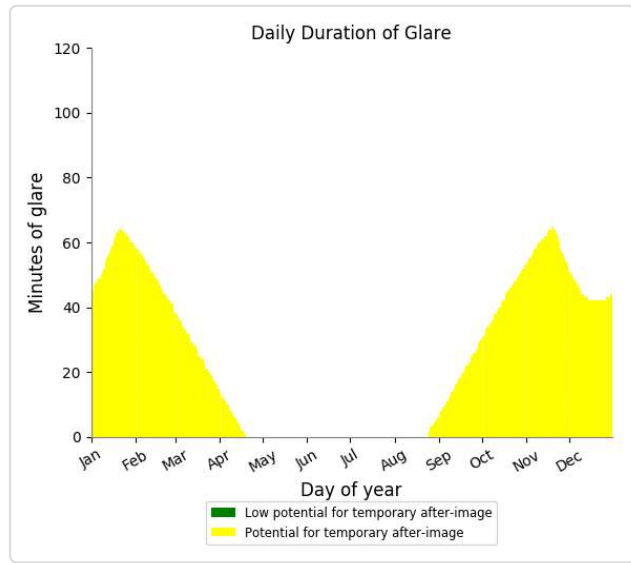
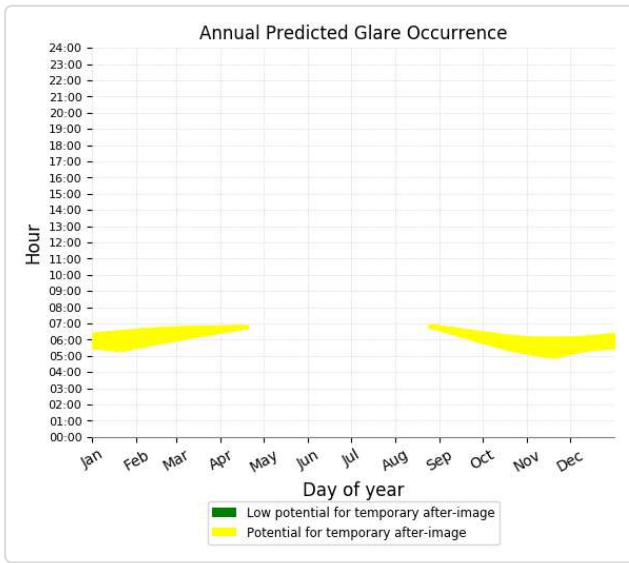
PV array 7 - Route Receptor (Flynn's Rd)

No glare found

PV array 7 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

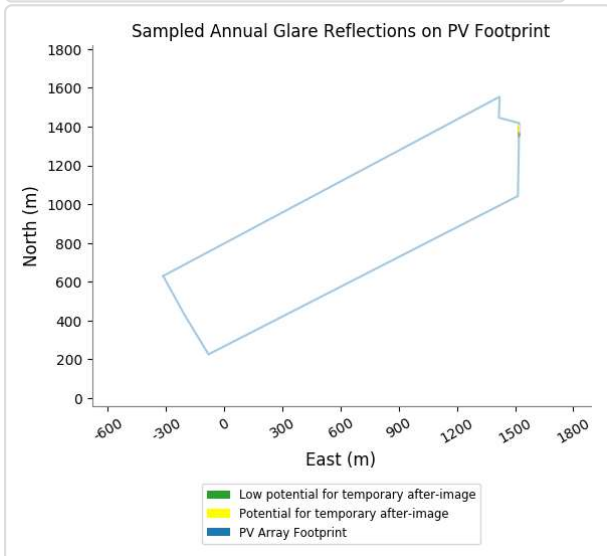
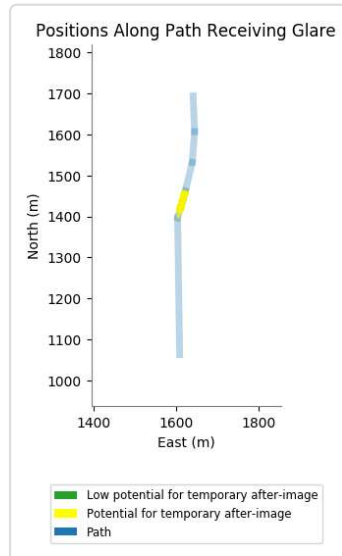
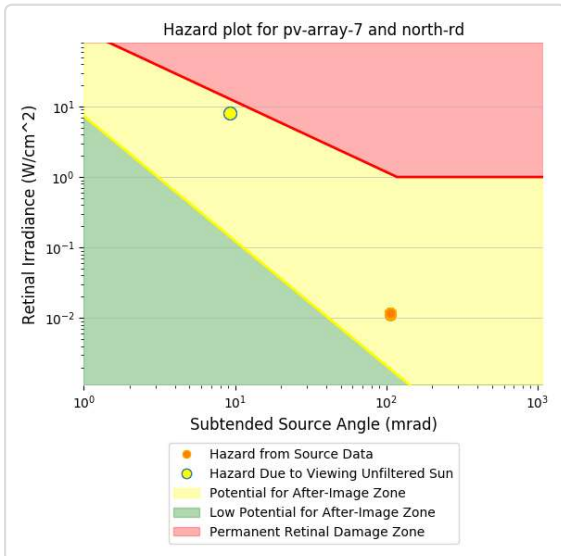
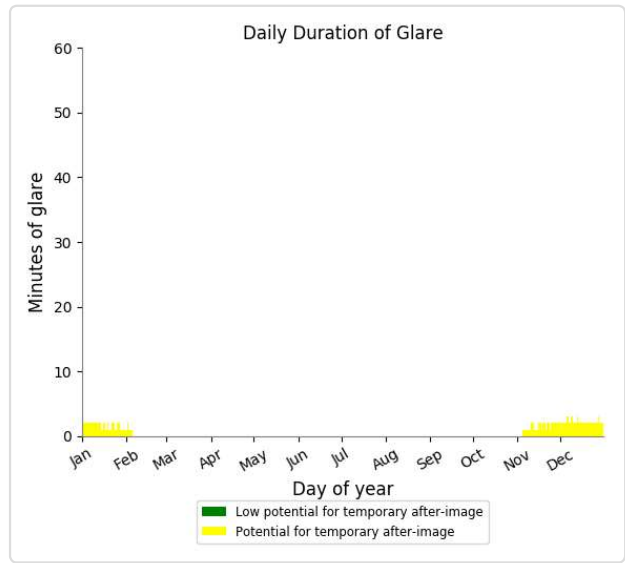
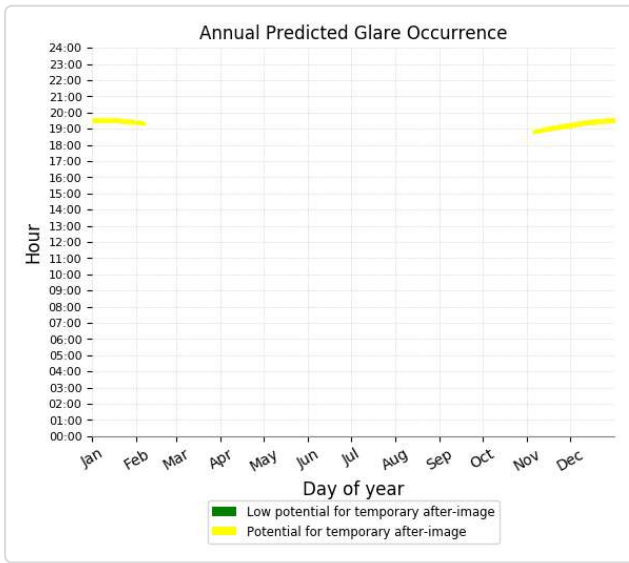
- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 9,106 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (North Rd)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 164 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (North Rd - 2)

No glare found

PV array 7 - Route Receptor (Old Thoona Road)

No glare found

PV array 7 - Route Receptor (Route 11)

No glare found

PV array 7 - Route Receptor (Snowy Ln)

No glare found

PV array 8 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0

Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	3130
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 8 - Receptor (FP 1)*No glare found***PV array 8 - Receptor (FP 2)***No glare found***PV array 8 - Receptor (FP 3)***No glare found***PV array 8 - Receptor (FP 4)***No glare found***PV array 8 - OP Receptor (OP 1)***No glare found***PV array 8 - OP Receptor (OP 2)***No glare found***PV array 8 - OP Receptor (OP 3)***No glare found***PV array 8 - OP Receptor (OP 4)***No glare found***PV array 8 - OP Receptor (OP 5)***No glare found***PV array 8 - OP Receptor (OP 6)***No glare found***PV array 8 - OP Receptor (OP 7)***No glare found***PV array 8 - OP Receptor (OP 8)***No glare found***PV array 8 - OP Receptor (OP 9)***No glare found*

PV array 8 - OP Receptor (OP 10)*No glare found***PV array 8 - OP Receptor (OP 11)***No glare found***PV array 8 - OP Receptor (OP 12)***No glare found***PV array 8 - OP Receptor (OP 13)***No glare found***PV array 8 - OP Receptor (OP 14)***No glare found***PV array 8 - OP Receptor (OP 15)***No glare found***PV array 8 - OP Receptor (OP 16)***No glare found***PV array 8 - OP Receptor (OP 17)***No glare found***PV array 8 - OP Receptor (OP 18)***No glare found***PV array 8 - OP Receptor (OP 19)***No glare found***PV array 8 - OP Receptor (OP 20)***No glare found***PV array 8 - OP Receptor (OP 21)***No glare found***PV array 8 - OP Receptor (OP 22)***No glare found***PV array 8 - OP Receptor (OP 23)***No glare found***PV array 8 - OP Receptor (OP 24)***No glare found***PV array 8 - OP Receptor (OP 25)***No glare found***PV array 8 - OP Receptor (OP 26)***No glare found***PV array 8 - OP Receptor (OP 27)***No glare found***PV array 8 - OP Receptor (OP 28)***No glare found*

PV array 8 - OP Receptor (OP 29)

No glare found

PV array 8 - OP Receptor (OP 30)

No glare found

PV array 8 - OP Receptor (OP 31)

No glare found

PV array 8 - OP Receptor (OP 32)

No glare found

PV array 8 - OP Receptor (OP 33)

No glare found

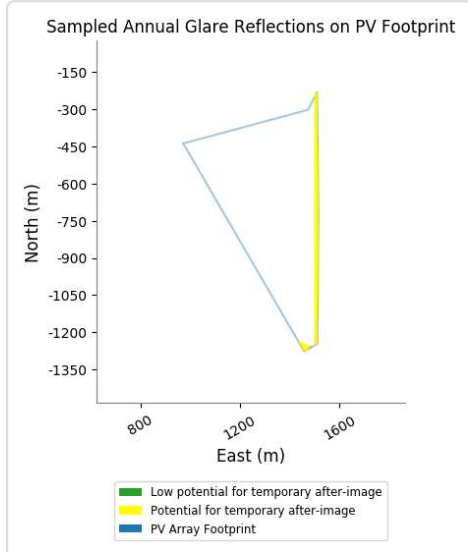
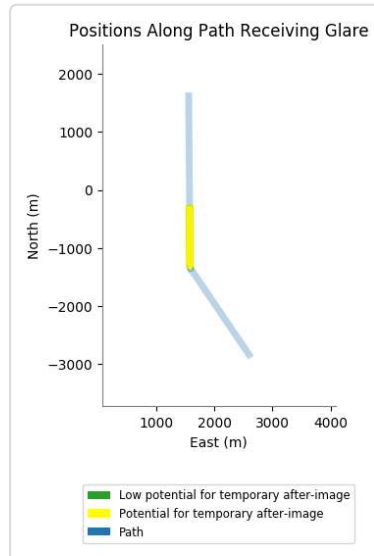
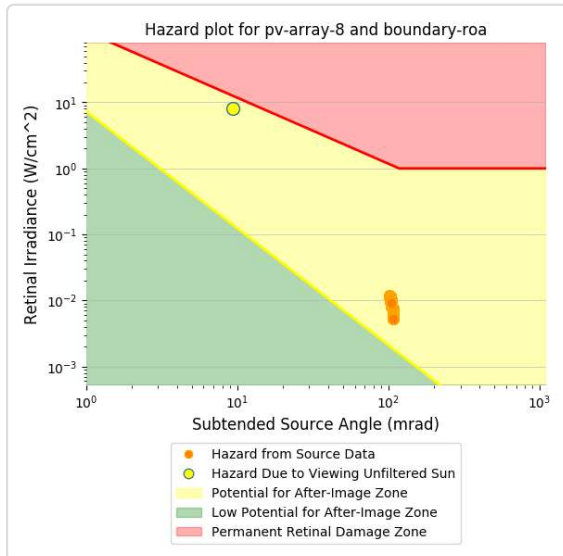
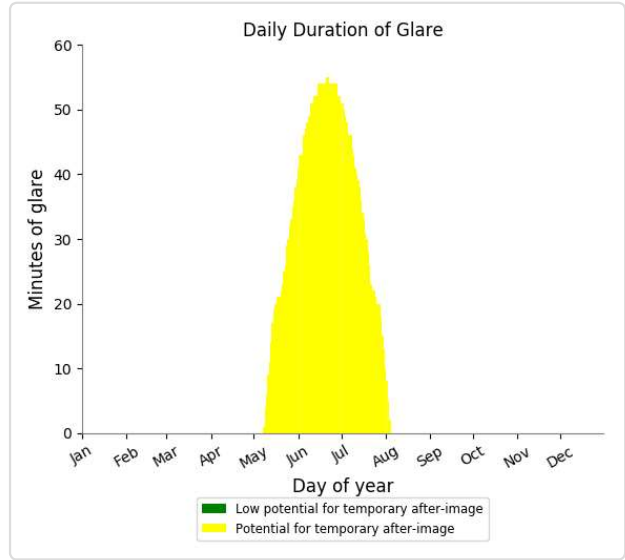
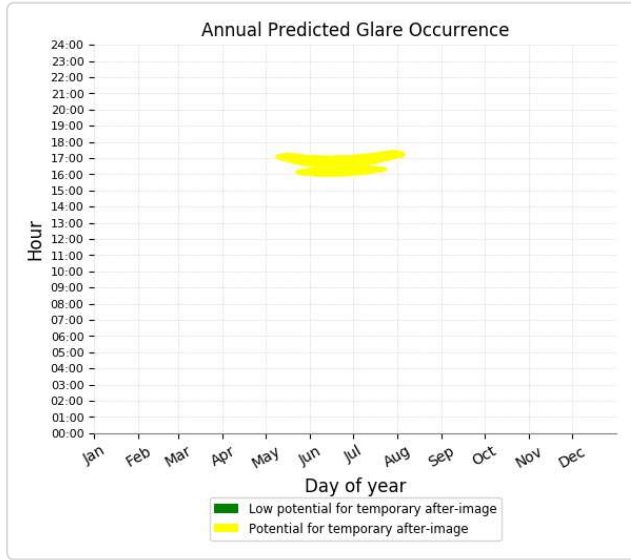
PV array 8 - Route Receptor (Benalla-Yarrawonga Road)

No glare found

PV array 8 - Route Receptor (Boundary Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,130 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 8 - Route Receptor (Chesney Road)

No glare found

PV array 8 - Route Receptor (Dam Wall Rd)

No glare found

PV array 8 - Route Receptor (Farnley Road)

No glare found

PV array 8 - Route Receptor (Flynn's Rd)

No glare found

PV array 8 - Route Receptor (Lake Mokoan Road)

No glare found

PV array 8 - Route Receptor (North Rd)

No glare found

PV array 8 - Route Receptor (North Rd - 2)

No glare found

PV array 8 - Route Receptor (Old Thoona Road)

No glare found

PV array 8 - Route Receptor (Route 11)

No glare found

PV array 8 - Route Receptor (Snowy Ln)

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

West Mokoan - updated 2021

West Mokoan - 10 degree with coating

Created April 24, 2021
Updated April 24, 2021
Time-step 1 minute
Timezone offset UTC+10
Site ID 52889.9446

Project type Advanced
Project status: active
Category 100 MW to 1 GW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
 Ocular transmission coefficient: 0.5
 Pupil diameter: 0.002 m
 Eye focal length: 0.017 m
 Sun subtended angle: 9.3 mrad

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results

Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	SA tracking	SA tracking	0	0	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-
PV array 3	SA tracking	SA tracking	0	0	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-
PV array 5	SA tracking	SA tracking	0	0	-
PV array 6	SA tracking	SA tracking	0	0	-
PV array 7	SA tracking	SA tracking	0	1,397	-
PV array 8	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 3,534,994 m²

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 266,969 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.470800	146.003130	161.96	2.44	164.41
2	-36.468610	146.008690	164.37	2.44	166.81
3	-36.480130	146.016890	162.67	2.44	165.12
4	-36.474440	146.011650	163.15	2.44	165.59
5	-36.471790	146.006530	162.05	2.44	164.49
6	-36.472690	146.004550	161.78	2.44	164.22



Name: PV array 2 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 469,172 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472650	146.004600	163.12	2.77	165.89
2	-36.471780	146.006530	164.37	2.77	167.14
3	-36.474440	146.011650	164.96	2.77	167.73
4	-36.480130	146.016890	161.70	2.77	164.47
5	-36.480980	146.013910	163.61	2.77	166.38
6	-36.477880	146.007890	162.90	2.77	165.66



Name: PV array 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 311,412 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.477900	146.007870	163.83	2.44	166.27
2	-36.480990	146.013900	161.74	2.44	164.18
3	-36.480130	146.016910	170.18	2.44	172.62
4	-36.482550	146.018900	165.36	2.44	167.81
5	-36.485290	146.012560	167.59	2.44	170.03



Name: PV array 4 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 436,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472440	146.011850	160.98	2.77	163.75
2	-36.469770	146.011800	161.35	2.77	164.12
3	-36.466860	146.017570	162.00	2.77	164.77
4	-36.468740	146.019260	164.50	2.77	167.27
5	-36.473490	146.019580	166.31	2.77	169.08
6	-36.474750	146.013990	165.32	2.77	168.08



Name: PV array 5
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 289,046 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.468470	146.009460	162.65	2.44	165.09
2	-36.464740	146.018280	161.71	2.44	164.15
3	-36.464620	146.020190	165.09	2.44	167.53
4	-36.470550	146.020105	165.55	2.44	167.99
5	-36.473580	146.019590	165.38	2.44	167.82
6	-36.468710	146.019230	161.97	2.44	164.41
7	-36.466880	146.017600	162.34	2.44	164.78
8	-36.469800	146.011740	163.97	2.44	166.41
9	-36.472470	146.011820	162.60	2.44	165.04



Name: PV array 6
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 554,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.456383	145.993541	173.09	2.44	175.54
2	-36.452868	146.002163	176.68	2.44	179.12
3	-36.455535	146.002436	173.66	2.44	176.10
4	-36.456916	145.999549	170.45	2.44	172.89
5	-36.458109	146.000525	174.90	2.44	177.34
6	-36.460211	145.998535	171.24	2.44	173.68
7	-36.460838	145.999198	170.29	2.44	172.74
8	-36.459426	146.002241	169.09	2.44	171.53
9	-36.462439	146.004387	166.30	2.44	168.75
10	-36.464635	145.999315	169.00	2.44	171.45

Name: PV array 7
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 919,599 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.465122	145.999611	169.38	2.44	171.82
2	-36.456798	146.018969	169.57	2.44	172.01
3	-36.457771	146.018930	168.80	2.44	171.24
4	-36.458022	146.020101	169.32	2.44	171.76
5	-36.461410	146.020023	165.96	2.44	168.41
6	-36.468762	146.002221	166.71	2.44	169.15
7	-36.466942	146.000851	169.23	2.44	171.68

Name: PV array 8
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 10.0 deg
Footprint area: 288,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.474760	146.013970	163.89	2.44	166.34
2	-36.473540	146.019570	165.38	2.44	167.82
3	-36.472899	146.019975	167.50	2.44	169.94
4	-36.477228	146.020037	164.15	2.44	166.60
5	-36.482020	146.019990	165.02	2.44	167.47
6	-36.482300	146.019390	166.38	2.44	168.82

2-Mile Flight Path Receptor(s)

Name: FP 1
Description:
Threshold height : 15 m
Direction: 273.0 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.552472	146.018036	173.07	15.24	188.31
2-mile point	-36.553985	146.054021	176.94	180.06	357.00

Name: FP 2
Description:
Threshold height : 15 m
Direction: 94.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.551877	146.007064	171.04	15.24	186.28
2-mile point	-36.549659	145.971137	172.00	182.96	354.96

Name: FP 3
Description:
Threshold height : 15 m
Direction: 173.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.548520	146.004514	172.19	15.24	187.43
2-mile point	-36.519799	146.000373	168.43	187.69	356.11

Name: FP 4
Description:
Threshold height : 15 m
Direction: 357.6 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.557814	146.006108	174.03	15.24	189.27
2-mile point	-36.586701	146.007617	178.02	179.94	357.96



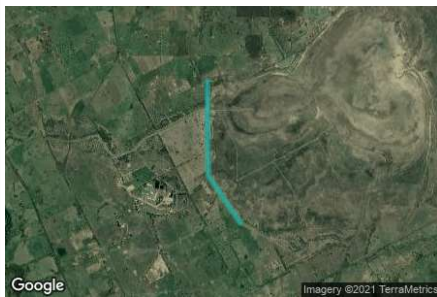
Route Receptor(s)

Name: Benalla-Yarrowonga Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.429270	145.986090	195.35	1.50	196.85
2	-36.449160	145.988920	181.34	1.50	182.84
3	-36.458620	145.994720	174.09	1.50	175.59
4	-36.470610	146.002930	162.03	1.50	163.53
5	-36.505920	146.025470	168.59	1.50	170.09

Name: Boundary Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456180	146.020460	170.11	1.50	171.61
2	-36.482720	146.020720	170.10	1.50	171.60
3	-36.483040	146.020810	169.97	1.50	171.47
4	-36.496460	146.032090	168.76	1.50	170.26

Name: Chesney Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.443340	145.985990	186.75	1.50	188.25
2	-36.444340	145.985940	184.86	1.50	186.36
3	-36.448240	145.988220	181.96	1.50	183.46
4	-36.450300	145.987410	176.61	1.50	178.11
5	-36.461420	145.961230	163.94	1.50	165.44

Name: Dam Wall Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456194	146.020561	170.15	1.50	171.65
2	-36.456041	146.020820	170.26	1.50	171.76
3	-36.455712	146.021649	170.48	1.50	171.98
4	-36.455720	146.022015	170.49	1.50	171.99
5	-36.455700	146.022936	170.85	1.50	172.35
6	-36.455622	146.023302	170.71	1.50	172.21
7	-36.455461	146.023682	170.89	1.50	172.39

Name: Farnley Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.449010	145.989530	180.71	1.50	182.21
2	-36.449060	146.001810	179.29	1.50	180.79
3	-36.449080	146.014190	182.24	1.50	183.74
4	-36.456430	146.018890	169.97	1.50	171.47

Name: Flynns Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.486586	146.024583	166.13	1.50	167.63
2	-36.486531	146.025236	166.24	1.50	167.74
3	-36.486939	146.025626	166.73	1.50	168.23
4	-36.484570	146.031235	163.00	1.50	164.50
5	-36.479223	146.043807	163.00	1.50	164.50

Name: Lake Mokoan Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464800	145.999220	169.49	1.50	170.99
2	-36.455370	146.021850	170.02	1.50	171.52
3	-36.455060	146.022800	171.00	1.50	172.50
4	-36.454880	146.024430	172.09	1.50	173.59
5	-36.453610	146.038270	175.33	1.50	176.83

Name: North Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.455546	146.021446	170.24	1.50	171.74
2	-36.456327	146.021485	171.30	1.50	172.80
3	-36.457002	146.021422	171.54	1.50	173.04
4	-36.457625	146.021236	170.23	1.50	171.73
5	-36.458216	146.021025	168.27	1.50	169.77
6	-36.461218	146.021081	167.39	1.50	168.89

Name: North Rd - 2
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464511	146.020533	166.67	1.50	168.17
2	-36.464511	146.023810	163.00	1.50	164.50
3	-36.464730	146.024200	163.00	1.50	164.50
4	-36.470927	146.028219	163.00	1.50	164.50
5	-36.475267	146.030982	163.00	1.50	164.50
6	-36.484605	146.031243	163.00	1.50	164.50

Name: Old Thoona Road
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.473170	145.972080	165.67	1.50	167.17
2	-36.471000	145.972410	166.76	1.50	168.26
3	-36.465250	145.976500	167.24	1.50	168.74
4	-36.457540	145.982700	169.86	1.50	171.36
5	-36.449620	145.988610	181.27	1.50	182.77
6	-36.429670	145.998520	228.93	1.50	230.43

Name: Route 11
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.488119	146.014258	167.02	1.50	168.52
2	-36.485421	146.018071	163.43	1.50	164.93
3	-36.484700	146.019242	164.89	1.50	166.39

Name: Snowy Ln
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.495849	146.019037	167.11	1.50	168.61
2	-36.492367	146.021739	164.19	1.50	165.69
3	-36.487930	146.024870	167.17	1.50	168.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	-36.449450	145.994600	193.91	1.50	195.41
OP 2	-36.450050	145.991370	179.53	1.50	181.03
OP 3	-36.448190	145.992090	183.99	1.50	185.49
OP 4	-36.445990	145.987840	182.94	1.50	184.44
OP 5	-36.444980	145.986880	181.39	1.50	182.89
OP 6	-36.467900	145.976260	163.92	1.50	165.42
OP 7	-36.483190	145.993200	163.99	1.50	165.49
OP 8	-36.484980	145.990270	162.56	1.50	164.06
OP 9	-36.485840	146.000300	165.00	1.50	166.50
OP 10	-36.488180	145.997550	162.08	1.50	163.58
OP 11	-36.488150	146.000840	163.52	1.50	165.02
OP 12	-36.489780	146.000490	164.43	1.50	165.93
OP 13	-36.489080	146.002260	165.85	1.50	167.35
OP 14	-36.490040	146.007970	168.27	1.50	169.77
OP 15	-36.491050	146.006450	165.34	1.50	166.84
OP 16	-36.480935	146.007630	163.90	1.50	165.40
OP 17	-36.494190	146.019500	165.18	1.50	166.68
OP 18	-36.495640	146.021960	166.78	1.50	168.28
OP 19	-36.449630	146.041960	200.29	1.50	201.79
OP 20	-36.450118	146.040630	203.77	1.50	205.27
OP 21	-36.452030	146.039564	186.99	1.50	188.49
OP 22	-36.441860	146.015430	204.20	1.50	205.70
OP 23	-36.440810	146.015082	206.52	1.50	208.02
OP 24	-36.442680	145.986200	186.87	1.50	188.37
OP 25	-36.442030	146.005170	204.56	1.50	206.06
OP 26	-36.455370	146.023940	171.02	1.50	172.52
OP 27	-36.456160	146.022360	170.94	1.50	172.44
OP 28	-36.449440	146.017320	182.53	1.50	184.03
OP 29	-36.484270	146.018820	166.16	1.50	167.66
OP 30	-36.501000	146.026770	166.45	1.50	167.95
OP 31	-36.453870	146.016460	174.38	1.50	175.88
OP 32	-36.491530	146.025840	165.54	1.50	167.04
OP 33	-36.458187	146.012754	169.04	1.50	170.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	SA tracking	SA tracking	0	0	-	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 3	SA tracking	SA tracking	0	0	-	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 5	SA tracking	SA tracking	0	0	-	-
PV array 6	SA tracking	SA tracking	0	0	-	-
PV array 7	SA tracking	SA tracking	0	1,397	-	-
PV array 8	SA tracking	SA tracking	0	0	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv-array-7 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-7 (yellow)	376	326	0	0	0	0	0	0	0	162	528	5

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 2 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 3 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 4 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 5 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 6 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 7 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	1397

Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 7 - Receptor (FP 1)*No glare found***PV array 7 - Receptor (FP 2)***No glare found***PV array 7 - Receptor (FP 3)***No glare found***PV array 7 - Receptor (FP 4)***No glare found***PV array 7 - OP Receptor (OP 1)***No glare found***PV array 7 - OP Receptor (OP 2)***No glare found***PV array 7 - OP Receptor (OP 3)***No glare found***PV array 7 - OP Receptor (OP 4)***No glare found***PV array 7 - OP Receptor (OP 5)***No glare found***PV array 7 - OP Receptor (OP 6)***No glare found***PV array 7 - OP Receptor (OP 7)***No glare found***PV array 7 - OP Receptor (OP 8)***No glare found***PV array 7 - OP Receptor (OP 9)***No glare found***PV array 7 - OP Receptor (OP 10)***No glare found***PV array 7 - OP Receptor (OP 11)***No glare found*

PV array 7 - OP Receptor (OP 12)*No glare found***PV array 7 - OP Receptor (OP 13)***No glare found***PV array 7 - OP Receptor (OP 14)***No glare found***PV array 7 - OP Receptor (OP 15)***No glare found***PV array 7 - OP Receptor (OP 16)***No glare found***PV array 7 - OP Receptor (OP 17)***No glare found***PV array 7 - OP Receptor (OP 18)***No glare found***PV array 7 - OP Receptor (OP 19)***No glare found***PV array 7 - OP Receptor (OP 20)***No glare found***PV array 7 - OP Receptor (OP 21)***No glare found***PV array 7 - OP Receptor (OP 22)***No glare found***PV array 7 - OP Receptor (OP 23)***No glare found***PV array 7 - OP Receptor (OP 24)***No glare found***PV array 7 - OP Receptor (OP 25)***No glare found***PV array 7 - OP Receptor (OP 26)***No glare found***PV array 7 - OP Receptor (OP 27)***No glare found***PV array 7 - OP Receptor (OP 28)***No glare found***PV array 7 - OP Receptor (OP 29)***No glare found***PV array 7 - OP Receptor (OP 30)***No glare found*

PV array 7 - OP Receptor (OP 31)

No glare found

PV array 7 - OP Receptor (OP 32)

No glare found

PV array 7 - OP Receptor (OP 33)

No glare found

PV array 7 - Route Receptor (Benalla-Yarrowonga Road)

No glare found

PV array 7 - Route Receptor (Boundary Road)

No glare found

PV array 7 - Route Receptor (Chesney Road)

No glare found

PV array 7 - Route Receptor (Dam Wall Rd)

No glare found

PV array 7 - Route Receptor (Farnley Road)

No glare found

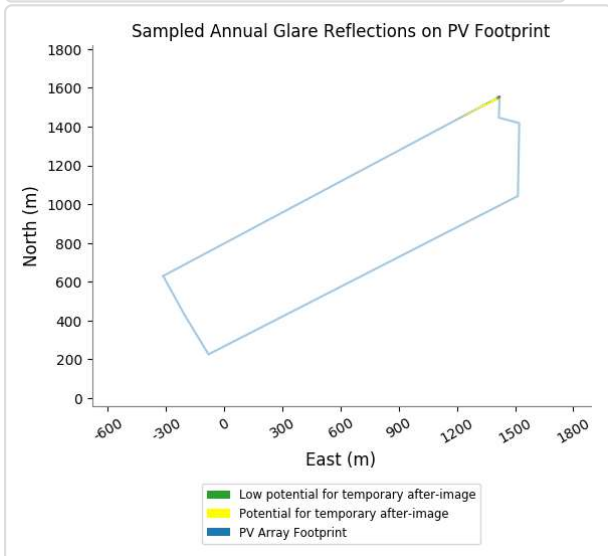
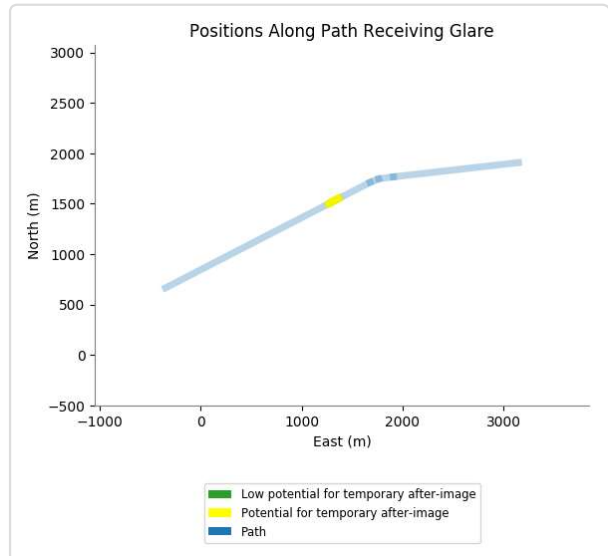
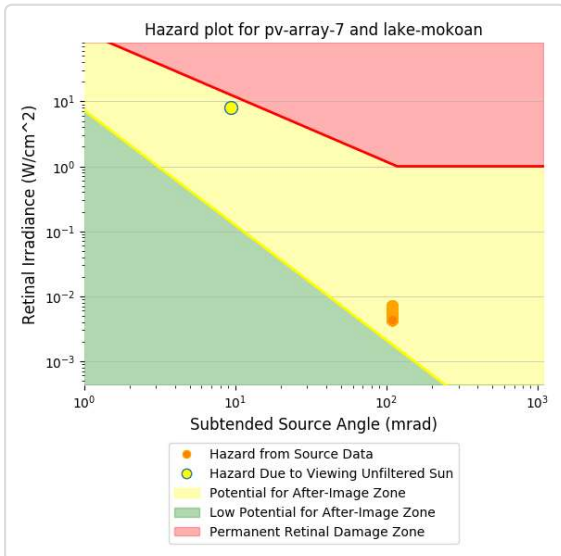
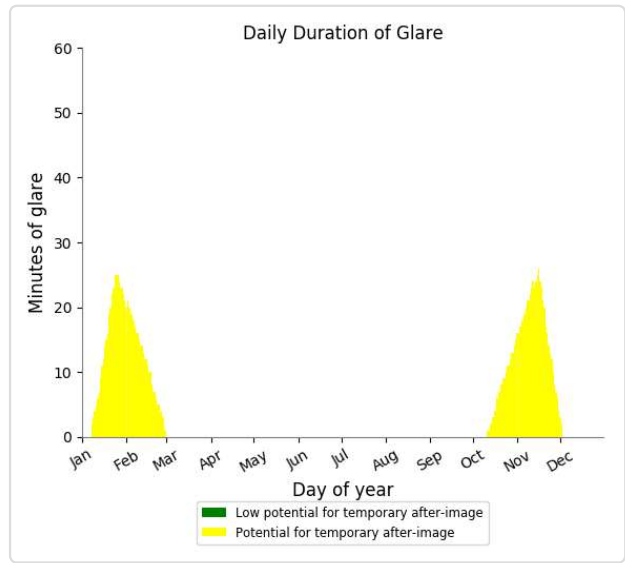
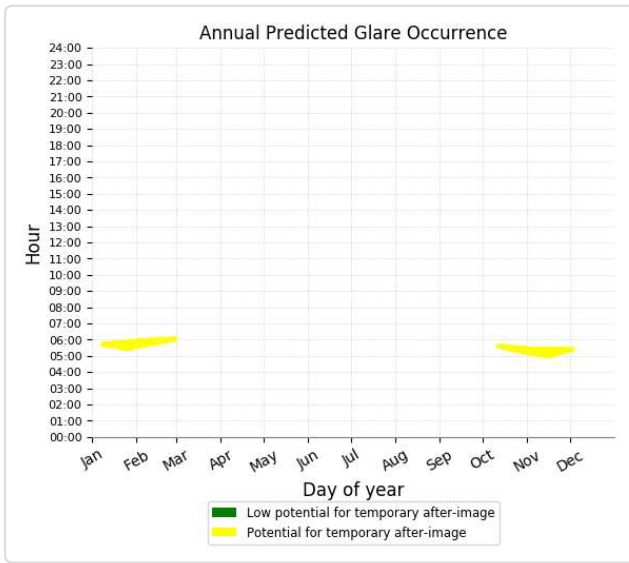
PV array 7 - Route Receptor (Flynn's Rd)

No glare found

PV array 7 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,397 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (North Rd)

No glare found

PV array 7 - Route Receptor (North Rd - 2)

No glare found

PV array 7 - Route Receptor (Old Thoona Road)

No glare found

PV array 7 - Route Receptor (Route 11)

No glare found

PV array 7 - Route Receptor (Snowy Ln)

No glare found

PV array 8 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

West Mokoan - updated 2021

West Mokoan - 13 degrees with coating

Created April 22, 2021
Updated April 23, 2021
Time-step 1 minute
Timezone offset UTC+10
Site ID 52865.9446

Project type Advanced
Project status: active
Category 100 MW to 1 GW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
 Ocular transmission coefficient: 0.5
 Pupil diameter: 0.002 m
 Eye focal length: 0.017 m
 Sun subtended angle: 9.3 mrad

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results

Glare with potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	SA tracking	SA tracking	0	0	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-
PV array 3	SA tracking	SA tracking	0	0	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-
PV array 5	SA tracking	SA tracking	0	0	-
PV array 6	SA tracking	SA tracking	0	0	-
PV array 7	SA tracking	SA tracking	0	8	-
PV array 8	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 3,534,994 m²

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 266,969 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.470800	146.003130	161.96	2.44	164.41
2	-36.468610	146.008690	164.37	2.44	166.81
3	-36.480130	146.016890	162.67	2.44	165.12
4	-36.474440	146.011650	163.15	2.44	165.59
5	-36.471790	146.006530	162.05	2.44	164.49
6	-36.472690	146.004550	161.78	2.44	164.22



Name: PV array 2 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 469,172 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472650	146.004600	163.12	2.77	165.89
2	-36.471780	146.006530	164.37	2.77	167.14
3	-36.474440	146.011650	164.96	2.77	167.73
4	-36.480130	146.016890	161.70	2.77	164.47
5	-36.480980	146.013910	163.61	2.77	166.38
6	-36.477880	146.007890	162.90	2.77	165.66



Name: PV array 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 311,412 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.477900	146.007870	163.83	2.44	166.27
2	-36.480990	146.013900	161.74	2.44	164.18
3	-36.480130	146.016910	170.18	2.44	172.62
4	-36.482550	146.018900	165.36	2.44	167.81
5	-36.485290	146.012560	167.59	2.44	170.03



Name: PV array 4 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 436,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472440	146.011850	160.98	2.77	163.75
2	-36.469770	146.011800	161.35	2.77	164.12
3	-36.466860	146.017570	162.00	2.77	164.77
4	-36.468740	146.019260	164.50	2.77	167.27
5	-36.473490	146.019580	166.31	2.77	169.08
6	-36.474750	146.013990	165.32	2.77	168.08



Name: PV array 5
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 289,046 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.468470	146.009460	162.65	2.44	165.09
2	-36.464740	146.018280	161.71	2.44	164.15
3	-36.464620	146.020190	165.09	2.44	167.53
4	-36.470550	146.020105	165.55	2.44	167.99
5	-36.473580	146.019590	165.38	2.44	167.82
6	-36.468710	146.019230	161.97	2.44	164.41
7	-36.466880	146.017600	162.34	2.44	164.78
8	-36.469800	146.011740	163.97	2.44	166.41
9	-36.472470	146.011820	162.60	2.44	165.04



Name: PV array 6
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 554,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.456383	145.993541	173.09	2.44	175.54
2	-36.452868	146.002163	176.68	2.44	179.12
3	-36.455535	146.002436	173.66	2.44	176.10
4	-36.456916	145.999549	170.45	2.44	172.89
5	-36.458109	146.000525	174.90	2.44	177.34
6	-36.460211	145.998535	171.24	2.44	173.68
7	-36.460838	145.999198	170.29	2.44	172.74
8	-36.459426	146.002241	169.09	2.44	171.53
9	-36.462439	146.004387	166.30	2.44	168.75
10	-36.464635	145.999315	169.00	2.44	171.45

Name: PV array 7
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 919,599 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.465122	145.999611	169.38	2.44	171.82
2	-36.456798	146.018969	169.57	2.44	172.01
3	-36.457771	146.018930	168.80	2.44	171.24
4	-36.458022	146.020101	169.32	2.44	171.76
5	-36.461410	146.020023	165.96	2.44	168.41
6	-36.468762	146.002221	166.71	2.44	169.15
7	-36.466942	146.000851	169.23	2.44	171.68

Name: PV array 8
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 13.0 deg
Footprint area: 288,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.474760	146.013970	163.89	2.44	166.34
2	-36.473540	146.019570	165.38	2.44	167.82
3	-36.472899	146.019975	167.50	2.44	169.94
4	-36.477228	146.020037	164.15	2.44	166.60
5	-36.482020	146.019990	165.02	2.44	167.47
6	-36.482300	146.019390	166.38	2.44	168.82

2-Mile Flight Path Receptor(s)

Name: FP 1
Description:
Threshold height : 15 m
Direction: 273.0 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.552472	146.018036	173.07	15.24	188.31
2-mile point	-36.553985	146.054021	176.94	180.06	357.00

Name: FP 2
Description:
Threshold height : 15 m
Direction: 94.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.551877	146.007064	171.04	15.24	186.28
2-mile point	-36.549659	145.971137	172.00	182.96	354.96

Name: FP 3
Description:
Threshold height : 15 m
Direction: 173.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.548520	146.004514	172.19	15.24	187.43
2-mile point	-36.519799	146.000373	168.43	187.69	356.11

Name: FP 4
Description:
Threshold height : 15 m
Direction: 357.6 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.557814	146.006108	174.03	15.24	189.27
2-mile point	-36.586701	146.007617	178.02	179.94	357.96



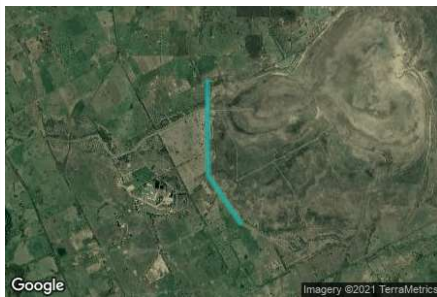
Route Receptor(s)

Name: Benalla-Yarrowonga Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.429270	145.986090	195.35	1.50	196.85
2	-36.449160	145.988920	181.34	1.50	182.84
3	-36.458620	145.994720	174.09	1.50	175.59
4	-36.470610	146.002930	162.03	1.50	163.53
5	-36.505920	146.025470	168.59	1.50	170.09

Name: Boundary Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456180	146.020460	170.11	1.50	171.61
2	-36.482720	146.020720	170.10	1.50	171.60
3	-36.483040	146.020810	169.97	1.50	171.47
4	-36.496460	146.032090	168.76	1.50	170.26

Name: Chesney Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.443340	145.985990	186.75	1.50	188.25
2	-36.444340	145.985940	184.86	1.50	186.36
3	-36.448240	145.988220	181.96	1.50	183.46
4	-36.450300	145.987410	176.61	1.50	178.11
5	-36.461420	145.961230	163.94	1.50	165.44

Name: Dam Wall Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456194	146.020561	170.15	1.50	171.65
2	-36.456041	146.020820	170.26	1.50	171.76
3	-36.455712	146.021649	170.48	1.50	171.98
4	-36.455720	146.022015	170.49	1.50	171.99
5	-36.455700	146.022936	170.85	1.50	172.35
6	-36.455622	146.023302	170.71	1.50	172.21
7	-36.455461	146.023682	170.89	1.50	172.39

Name: Farnley Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.449010	145.989530	180.71	1.50	182.21
2	-36.449060	146.001810	179.29	1.50	180.79
3	-36.449080	146.014190	182.24	1.50	183.74
4	-36.456430	146.018890	169.97	1.50	171.47

Name: Flynn's Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.486586	146.024583	166.13	1.50	167.63
2	-36.486531	146.025236	166.24	1.50	167.74
3	-36.486939	146.025626	166.73	1.50	168.23
4	-36.484570	146.031235	163.00	1.50	164.50
5	-36.479223	146.043807	163.00	1.50	164.50

Name: Lake Mokoan Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464800	145.999220	169.49	1.50	170.99
2	-36.455370	146.021850	170.02	1.50	171.52
3	-36.455060	146.022800	171.00	1.50	172.50
4	-36.454880	146.024430	172.09	1.50	173.59
5	-36.453610	146.038270	175.33	1.50	176.83

Name: North Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.455546	146.021446	170.24	1.50	171.74
2	-36.456327	146.021485	171.30	1.50	172.80
3	-36.457002	146.021422	171.54	1.50	173.04
4	-36.457625	146.021236	170.23	1.50	171.73
5	-36.458216	146.021025	168.27	1.50	169.77
6	-36.461218	146.021081	167.39	1.50	168.89

Name: North Rd - 2
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464511	146.020533	166.67	1.50	168.17
2	-36.464511	146.023810	163.00	1.50	164.50
3	-36.464730	146.024200	163.00	1.50	164.50
4	-36.470927	146.028219	163.00	1.50	164.50
5	-36.475267	146.030982	163.00	1.50	164.50
6	-36.484605	146.031243	163.00	1.50	164.50

Name: Old Thoona Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.473170	145.972080	165.67	1.50	167.17
2	-36.471000	145.972410	166.76	1.50	168.26
3	-36.465250	145.976500	167.24	1.50	168.74
4	-36.457540	145.982700	169.86	1.50	171.36
5	-36.449620	145.988610	181.27	1.50	182.77
6	-36.429670	145.998520	228.93	1.50	230.43

Name: Route 11
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.488119	146.014258	167.02	1.50	168.52
2	-36.485421	146.018071	163.43	1.50	164.93
3	-36.484700	146.019242	164.89	1.50	166.39

Name: Snowy Ln
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.495849	146.019037	167.11	1.50	168.61
2	-36.492367	146.021739	164.19	1.50	165.69
3	-36.487930	146.024870	167.17	1.50	168.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	-36.449450	145.994600	193.91	1.50	195.41
OP 2	-36.450050	145.991370	179.53	1.50	181.03
OP 3	-36.448190	145.992090	183.99	1.50	185.49
OP 4	-36.445990	145.987840	182.94	1.50	184.44
OP 5	-36.444980	145.986880	181.39	1.50	182.89
OP 6	-36.467900	145.976260	163.92	1.50	165.42
OP 7	-36.483190	145.993200	163.99	1.50	165.49
OP 8	-36.484980	145.990270	162.56	1.50	164.06
OP 9	-36.485840	146.000300	165.00	1.50	166.50
OP 10	-36.488180	145.997550	162.08	1.50	163.58
OP 11	-36.488150	146.000840	163.52	1.50	165.02
OP 12	-36.489780	146.000490	164.43	1.50	165.93
OP 13	-36.489080	146.002260	165.85	1.50	167.35
OP 14	-36.490040	146.007970	168.27	1.50	169.77
OP 15	-36.491050	146.006450	165.34	1.50	166.84
OP 16	-36.480935	146.007630	163.90	1.50	165.40
OP 17	-36.494190	146.019500	165.18	1.50	166.68
OP 18	-36.495640	146.021960	166.78	1.50	168.28
OP 19	-36.449630	146.041960	200.29	1.50	201.79
OP 20	-36.450118	146.040630	203.77	1.50	205.27
OP 21	-36.452030	146.039564	186.99	1.50	188.49
OP 22	-36.441860	146.015430	204.20	1.50	205.70
OP 23	-36.440810	146.015082	206.52	1.50	208.02
OP 24	-36.442680	145.986200	186.87	1.50	188.37
OP 25	-36.442030	146.005170	204.56	1.50	206.06
OP 26	-36.455370	146.023940	171.02	1.50	172.52
OP 27	-36.456160	146.022360	170.94	1.50	172.44
OP 28	-36.449440	146.017320	182.53	1.50	184.03
OP 29	-36.484270	146.018820	166.16	1.50	167.66
OP 30	-36.501000	146.026770	166.45	1.50	167.95
OP 31	-36.453870	146.016460	174.38	1.50	175.88
OP 32	-36.491530	146.025840	165.54	1.50	167.04
OP 33	-36.458187	146.012754	169.04	1.50	170.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	SA tracking	SA tracking	0	0	-	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 3	SA tracking	SA tracking	0	0	-	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 5	SA tracking	SA tracking	0	0	-	-
PV array 6	SA tracking	SA tracking	0	0	-	-
PV array 7	SA tracking	SA tracking	0	8	-	-
PV array 8	SA tracking	SA tracking	0	0	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv-array-7 (green)	0	0	0	0	0	0	0	0	0	0	0	0
pv-array-7 (yellow)	4	0	0	0	0	0	0	0	0	0	4	0

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 2 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 3 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 4 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 5 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 6 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 7 potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	8

Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

PV array 7 - Receptor (FP 1)*No glare found***PV array 7 - Receptor (FP 2)***No glare found***PV array 7 - Receptor (FP 3)***No glare found***PV array 7 - Receptor (FP 4)***No glare found***PV array 7 - OP Receptor (OP 1)***No glare found***PV array 7 - OP Receptor (OP 2)***No glare found***PV array 7 - OP Receptor (OP 3)***No glare found***PV array 7 - OP Receptor (OP 4)***No glare found***PV array 7 - OP Receptor (OP 5)***No glare found***PV array 7 - OP Receptor (OP 6)***No glare found***PV array 7 - OP Receptor (OP 7)***No glare found***PV array 7 - OP Receptor (OP 8)***No glare found***PV array 7 - OP Receptor (OP 9)***No glare found***PV array 7 - OP Receptor (OP 10)***No glare found***PV array 7 - OP Receptor (OP 11)***No glare found*

PV array 7 - OP Receptor (OP 12)*No glare found***PV array 7 - OP Receptor (OP 13)***No glare found***PV array 7 - OP Receptor (OP 14)***No glare found***PV array 7 - OP Receptor (OP 15)***No glare found***PV array 7 - OP Receptor (OP 16)***No glare found***PV array 7 - OP Receptor (OP 17)***No glare found***PV array 7 - OP Receptor (OP 18)***No glare found***PV array 7 - OP Receptor (OP 19)***No glare found***PV array 7 - OP Receptor (OP 20)***No glare found***PV array 7 - OP Receptor (OP 21)***No glare found***PV array 7 - OP Receptor (OP 22)***No glare found***PV array 7 - OP Receptor (OP 23)***No glare found***PV array 7 - OP Receptor (OP 24)***No glare found***PV array 7 - OP Receptor (OP 25)***No glare found***PV array 7 - OP Receptor (OP 26)***No glare found***PV array 7 - OP Receptor (OP 27)***No glare found***PV array 7 - OP Receptor (OP 28)***No glare found***PV array 7 - OP Receptor (OP 29)***No glare found***PV array 7 - OP Receptor (OP 30)***No glare found*

PV array 7 - OP Receptor (OP 31)

No glare found

PV array 7 - OP Receptor (OP 32)

No glare found

PV array 7 - OP Receptor (OP 33)

No glare found

PV array 7 - Route Receptor (Benalla-Yarrawonga Road)

No glare found

PV array 7 - Route Receptor (Boundary Road)

No glare found

PV array 7 - Route Receptor (Chesney Road)

No glare found

PV array 7 - Route Receptor (Dam Wall Rd)

No glare found

PV array 7 - Route Receptor (Farnley Road)

No glare found

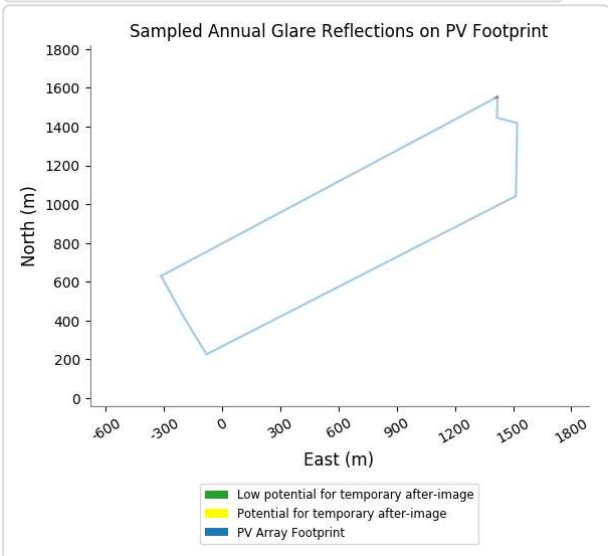
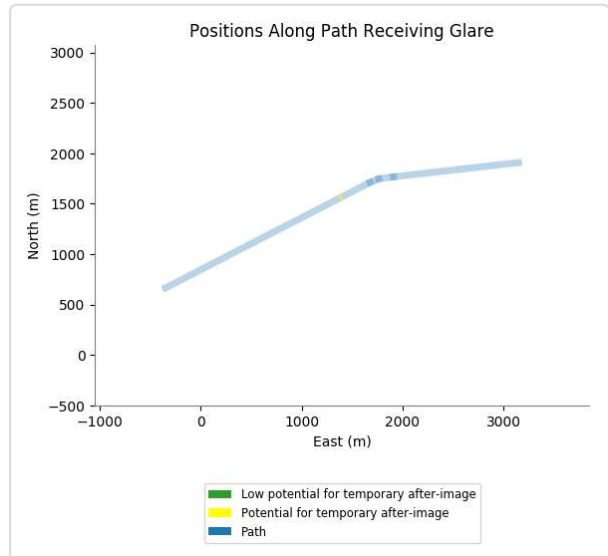
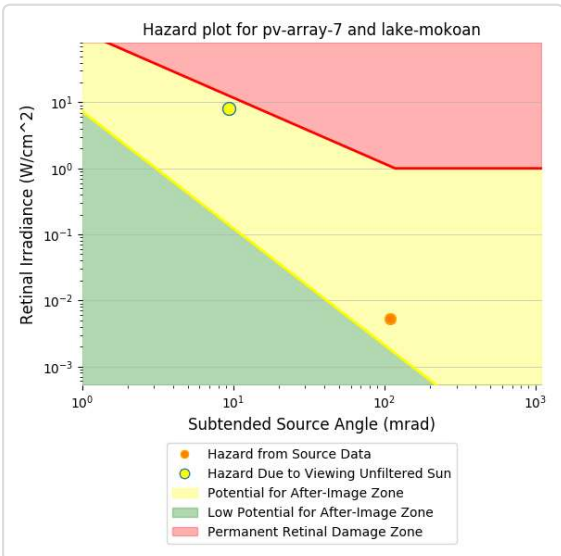
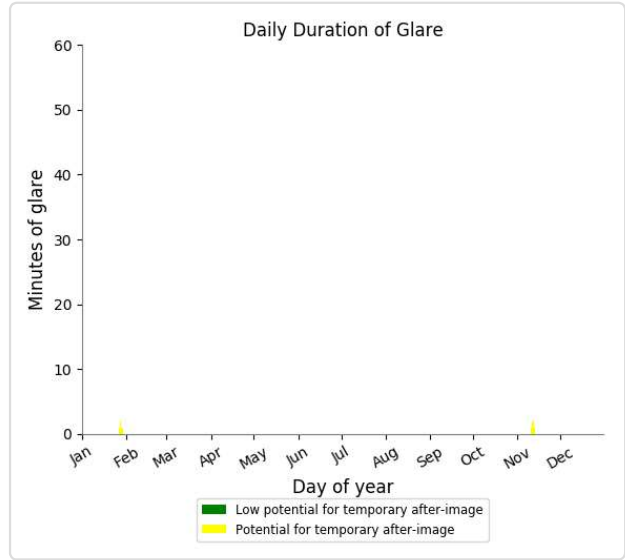
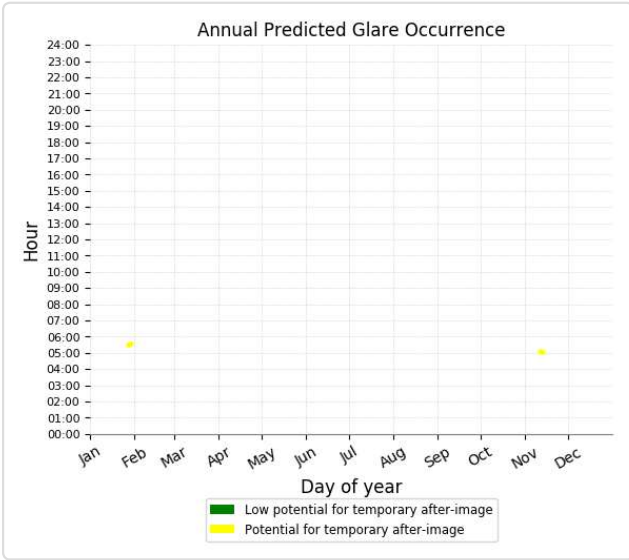
PV array 7 - Route Receptor (Flynn's Rd)

No glare found

PV array 7 - Route Receptor (Lake Mokoan Road)

PV array is expected to produce the following glare for receptors at this location:

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 8 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 7 - Route Receptor (North Rd)

No glare found

PV array 7 - Route Receptor (North Rd - 2)

No glare found

PV array 7 - Route Receptor (Old Thoona Road)

No glare found

PV array 7 - Route Receptor (Route 11)

No glare found

PV array 7 - Route Receptor (Snowy Ln)

No glare found

PV array 8 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

West Mokoan - updated 2021

West Mokoan - 14 degrees with coating

Created April 23, 2021
Updated April 23, 2021
Time-step 1 minute
Timezone offset UTC+10
Site ID 52887.9446

Project type Advanced
Project status: active
Category 100 MW to 1 GW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
Ocular transmission coefficient: 0.5
Pupil diameter: 0.002 m
Eye focal length: 0.017 m
Sun subtended angle: 9.3 mrad

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	SA tracking	SA tracking	0	0	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-
PV array 3	SA tracking	SA tracking	0	0	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-
PV array 5	SA tracking	SA tracking	0	0	-
PV array 6	SA tracking	SA tracking	0	0	-
PV array 7	SA tracking	SA tracking	0	0	-
PV array 8	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 3,534,994 m²

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 266,969 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.470800	146.003130	161.96	2.44	164.41
2	-36.468610	146.008690	164.37	2.44	166.81
3	-36.480130	146.016890	162.67	2.44	165.12
4	-36.474440	146.011650	163.15	2.44	165.59
5	-36.471790	146.006530	162.05	2.44	164.49
6	-36.472690	146.004550	161.78	2.44	164.22



Name: PV array 2 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 469,172 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472650	146.004600	163.12	2.77	165.89
2	-36.471780	146.006530	164.37	2.77	167.14
3	-36.474440	146.011650	164.96	2.77	167.73
4	-36.480130	146.016890	161.70	2.77	164.47
5	-36.480980	146.013910	163.61	2.77	166.38
6	-36.477880	146.007890	162.90	2.77	165.66



Name: PV array 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 311,412 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.477900	146.007870	163.83	2.44	166.27
2	-36.480990	146.013900	161.74	2.44	164.18
3	-36.480130	146.016910	170.18	2.44	172.62
4	-36.482550	146.018900	165.36	2.44	167.81
5	-36.485290	146.012560	167.59	2.44	170.03



Name: PV array 4 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 436,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472440	146.011850	160.98	2.77	163.75
2	-36.469770	146.011800	161.35	2.77	164.12
3	-36.466860	146.017570	162.00	2.77	164.77
4	-36.468740	146.019260	164.50	2.77	167.27
5	-36.473490	146.019580	166.31	2.77	169.08
6	-36.474750	146.013990	165.32	2.77	168.08



Name: PV array 5
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 289,046 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.468470	146.009460	162.65	2.44	165.09
2	-36.464740	146.018280	161.71	2.44	164.15
3	-36.464620	146.020190	165.09	2.44	167.53
4	-36.470550	146.020105	165.55	2.44	167.99
5	-36.473580	146.019590	165.38	2.44	167.82
6	-36.468710	146.019230	161.97	2.44	164.41
7	-36.466880	146.017600	162.34	2.44	164.78
8	-36.469800	146.011740	163.97	2.44	166.41
9	-36.472470	146.011820	162.60	2.44	165.04



Name: PV array 6
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 554,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.456383	145.993541	173.09	2.44	175.54
2	-36.452868	146.002163	176.68	2.44	179.12
3	-36.455535	146.002436	173.66	2.44	176.10
4	-36.456916	145.999549	170.45	2.44	172.89
5	-36.458109	146.000525	174.90	2.44	177.34
6	-36.460211	145.998535	171.24	2.44	173.68
7	-36.460838	145.999198	170.29	2.44	172.74
8	-36.459426	146.002241	169.09	2.44	171.53
9	-36.462439	146.004387	166.30	2.44	168.75
10	-36.464635	145.999315	169.00	2.44	171.45

Name: PV array 7
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 919,599 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.465122	145.999611	169.38	2.44	171.82
2	-36.456798	146.018969	169.57	2.44	172.01
3	-36.457771	146.018930	168.80	2.44	171.24
4	-36.458022	146.020101	169.32	2.44	171.76
5	-36.461410	146.020023	165.96	2.44	168.41
6	-36.468762	146.002221	166.71	2.44	169.15
7	-36.466942	146.000851	169.23	2.44	171.68

Name: PV array 8
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 14.0 deg
Footprint area: 288,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.474760	146.013970	163.89	2.44	166.34
2	-36.473540	146.019570	165.38	2.44	167.82
3	-36.472899	146.019975	167.50	2.44	169.94
4	-36.477228	146.020037	164.15	2.44	166.60
5	-36.482020	146.019990	165.02	2.44	167.47
6	-36.482300	146.019390	166.38	2.44	168.82

2-Mile Flight Path Receptor(s)

Name: FP 1
Description:
Threshold height : 15 m
Direction: 273.0 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.552472	146.018036	173.07	15.24	188.31
2-mile point	-36.553985	146.054021	176.94	180.06	357.00

Name: FP 2
Description:
Threshold height : 15 m
Direction: 94.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.551877	146.007064	171.04	15.24	186.28
2-mile point	-36.549659	145.971137	172.00	182.96	354.96

Name: FP 3
Description:
Threshold height : 15 m
Direction: 173.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.548520	146.004514	172.19	15.24	187.43
2-mile point	-36.519799	146.000373	168.43	187.69	356.11

Name: FP 4
Description:
Threshold height : 15 m
Direction: 357.6 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.557814	146.006108	174.03	15.24	189.27
2-mile point	-36.586701	146.007617	178.02	179.94	357.96



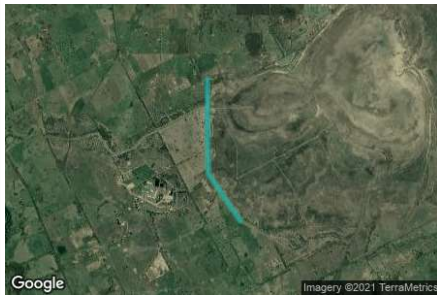
Route Receptor(s)

Name: Benalla-Yarrowonga Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.429270	145.986090	195.35	1.50	196.85
2	-36.449160	145.988920	181.34	1.50	182.84
3	-36.458620	145.994720	174.09	1.50	175.59
4	-36.470610	146.002930	162.03	1.50	163.53
5	-36.505920	146.025470	168.59	1.50	170.09

Name: Boundary Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456180	146.020460	170.11	1.50	171.61
2	-36.482720	146.020720	170.10	1.50	171.60
3	-36.483040	146.020810	169.97	1.50	171.47
4	-36.496460	146.032090	168.76	1.50	170.26

Name: Chesney Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.443340	145.985990	186.75	1.50	188.25
2	-36.444340	145.985940	184.86	1.50	186.36
3	-36.448240	145.988220	181.96	1.50	183.46
4	-36.450300	145.987410	176.61	1.50	178.11
5	-36.461420	145.961230	163.94	1.50	165.44

Name: Dam Wall Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456194	146.020561	170.15	1.50	171.65
2	-36.456041	146.020820	170.26	1.50	171.76
3	-36.455712	146.021649	170.48	1.50	171.98
4	-36.455720	146.022015	170.49	1.50	171.99
5	-36.455700	146.022936	170.85	1.50	172.35
6	-36.455622	146.023302	170.71	1.50	172.21
7	-36.455461	146.023682	170.89	1.50	172.39

Name: Farnley Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.449010	145.989530	180.71	1.50	182.21
2	-36.449060	146.001810	179.29	1.50	180.79
3	-36.449080	146.014190	182.24	1.50	183.74
4	-36.456430	146.018890	169.97	1.50	171.47

Name: Flynn's Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.486586	146.024583	166.13	1.50	167.63
2	-36.486531	146.025236	166.24	1.50	167.74
3	-36.486939	146.025626	166.73	1.50	168.23
4	-36.484570	146.031235	163.00	1.50	164.50
5	-36.479223	146.043807	163.00	1.50	164.50

Name: Lake Mokoan Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464800	145.999220	169.49	1.50	170.99
2	-36.455370	146.021850	170.02	1.50	171.52
3	-36.455060	146.022800	171.00	1.50	172.50
4	-36.454880	146.024430	172.09	1.50	173.59
5	-36.453610	146.038270	175.33	1.50	176.83

Name: North Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.455546	146.021446	170.24	1.50	171.74
2	-36.456327	146.021485	171.30	1.50	172.80
3	-36.457002	146.021422	171.54	1.50	173.04
4	-36.457625	146.021236	170.23	1.50	171.73
5	-36.458216	146.021025	168.27	1.50	169.77
6	-36.461218	146.021081	167.39	1.50	168.89

Name: North Rd - 2
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464511	146.020533	166.67	1.50	168.17
2	-36.464511	146.023810	163.00	1.50	164.50
3	-36.464730	146.024200	163.00	1.50	164.50
4	-36.470927	146.028219	163.00	1.50	164.50
5	-36.475267	146.030982	163.00	1.50	164.50
6	-36.484605	146.031243	163.00	1.50	164.50

Name: Old Thoona Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.473170	145.972080	165.67	1.50	167.17
2	-36.471000	145.972410	166.76	1.50	168.26
3	-36.465250	145.976500	167.24	1.50	168.74
4	-36.457540	145.982700	169.86	1.50	171.36
5	-36.449620	145.988610	181.27	1.50	182.77
6	-36.429670	145.998520	228.93	1.50	230.43

Name: Route 11
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.488119	146.014258	167.02	1.50	168.52
2	-36.485421	146.018071	163.43	1.50	164.93
3	-36.484700	146.019242	164.89	1.50	166.39

Name: Snowy Ln
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.495849	146.019037	167.11	1.50	168.61
2	-36.492367	146.021739	164.19	1.50	165.69
3	-36.487930	146.024870	167.17	1.50	168.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	-36.449450	145.994600	193.91	1.50	195.41
OP 2	-36.450050	145.991370	179.53	1.50	181.03
OP 3	-36.448190	145.992090	183.99	1.50	185.49
OP 4	-36.445990	145.987840	182.94	1.50	184.44
OP 5	-36.444980	145.986880	181.39	1.50	182.89
OP 6	-36.467900	145.976260	163.92	1.50	165.42
OP 7	-36.483190	145.993200	163.99	1.50	165.49
OP 8	-36.484980	145.990270	162.56	1.50	164.06
OP 9	-36.485840	146.000300	165.00	1.50	166.50
OP 10	-36.488180	145.997550	162.08	1.50	163.58
OP 11	-36.488150	146.000840	163.52	1.50	165.02
OP 12	-36.489780	146.000490	164.43	1.50	165.93
OP 13	-36.489080	146.002260	165.85	1.50	167.35
OP 14	-36.490040	146.007970	168.27	1.50	169.77
OP 15	-36.491050	146.006450	165.34	1.50	166.84
OP 16	-36.480935	146.007630	163.90	1.50	165.40
OP 17	-36.494190	146.019500	165.18	1.50	166.68
OP 18	-36.495640	146.021960	166.78	1.50	168.28
OP 19	-36.449630	146.041960	200.29	1.50	201.79
OP 20	-36.450118	146.040630	203.77	1.50	205.27
OP 21	-36.452030	146.039564	186.99	1.50	188.49
OP 22	-36.441860	146.015430	204.20	1.50	205.70
OP 23	-36.440810	146.015082	206.52	1.50	208.02
OP 24	-36.442680	145.986200	186.87	1.50	188.37
OP 25	-36.442030	146.005170	204.56	1.50	206.06
OP 26	-36.455370	146.023940	171.02	1.50	172.52
OP 27	-36.456160	146.022360	170.94	1.50	172.44
OP 28	-36.449440	146.017320	182.53	1.50	184.03
OP 29	-36.484270	146.018820	166.16	1.50	167.66
OP 30	-36.501000	146.026770	166.45	1.50	167.95
OP 31	-36.453870	146.016460	174.38	1.50	175.88
OP 32	-36.491530	146.025840	165.54	1.50	167.04
OP 33	-36.458187	146.012754	169.04	1.50	170.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	SA tracking	SA tracking	0	0	-	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 3	SA tracking	SA tracking	0	0	-	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 5	SA tracking	SA tracking	0	0	-	-
PV array 6	SA tracking	SA tracking	0	0	-	-
PV array 7	SA tracking	SA tracking	0	0	-	-
PV array 8	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 2 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 3 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 4 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 5 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 6 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 7 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 8 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

West Mokoan - updated 2021

West Mokoan - 15 degree with coating

Created April 23, 2021
Updated April 23, 2021
Time-step 1 minute
Timezone offset UTC+10
Site ID 52886.9446

Project type Advanced
Project status: active
Category 100 MW to 1 GW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
Ocular transmission coefficient: 0.5
Pupil diameter: 0.002 m
Eye focal length: 0.017 m
Sun subtended angle: 9.3 mrad

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	SA tracking	SA tracking	0	0	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-
PV array 3	SA tracking	SA tracking	0	0	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-
PV array 5	SA tracking	SA tracking	0	0	-
PV array 6	SA tracking	SA tracking	0	0	-
PV array 7	SA tracking	SA tracking	0	0	-
PV array 8	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 3,534,994 m²

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 266,969 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.470800	146.003130	161.96	2.44	164.41
2	-36.468610	146.008690	164.37	2.44	166.81
3	-36.480130	146.016890	162.67	2.44	165.12
4	-36.474440	146.011650	163.15	2.44	165.59
5	-36.471790	146.006530	162.05	2.44	164.49
6	-36.472690	146.004550	161.78	2.44	164.22



Name: PV array 2 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 469,172 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472650	146.004600	163.12	2.77	165.89
2	-36.471780	146.006530	164.37	2.77	167.14
3	-36.474440	146.011650	164.96	2.77	167.73
4	-36.480130	146.016890	161.70	2.77	164.47
5	-36.480980	146.013910	163.61	2.77	166.38
6	-36.477880	146.007890	162.90	2.77	165.66



Name: PV array 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 311,412 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.477900	146.007870	163.83	2.44	166.27
2	-36.480990	146.013900	161.74	2.44	164.18
3	-36.480130	146.016910	170.18	2.44	172.62
4	-36.482550	146.018900	165.36	2.44	167.81
5	-36.485290	146.012560	167.59	2.44	170.03



Name: PV array 4 - elevated
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 436,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.472440	146.011850	160.98	2.77	163.75
2	-36.469770	146.011800	161.35	2.77	164.12
3	-36.466860	146.017570	162.00	2.77	164.77
4	-36.468740	146.019260	164.50	2.77	167.27
5	-36.473490	146.019580	166.31	2.77	169.08
6	-36.474750	146.013990	165.32	2.77	168.08



Name: PV array 5
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 289,046 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.468470	146.009460	162.65	2.44	165.09
2	-36.464740	146.018280	161.71	2.44	164.15
3	-36.464620	146.020190	165.09	2.44	167.53
4	-36.470550	146.020105	165.55	2.44	167.99
5	-36.473580	146.019590	165.38	2.44	167.82
6	-36.468710	146.019230	161.97	2.44	164.41
7	-36.466880	146.017600	162.34	2.44	164.78
8	-36.469800	146.011740	163.97	2.44	166.41
9	-36.472470	146.011820	162.60	2.44	165.04



Name: PV array 6
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 554,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.456383	145.993541	173.09	2.44	175.54
2	-36.452868	146.002163	176.68	2.44	179.12
3	-36.455535	146.002436	173.66	2.44	176.10
4	-36.456916	145.999549	170.45	2.44	172.89
5	-36.458109	146.000525	174.90	2.44	177.34
6	-36.460211	145.998535	171.24	2.44	173.68
7	-36.460838	145.999198	170.29	2.44	172.74
8	-36.459426	146.002241	169.09	2.44	171.53
9	-36.462439	146.004387	166.30	2.44	168.75
10	-36.464635	145.999315	169.00	2.44	171.45

Name: PV array 7
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 919,599 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.465122	145.999611	169.38	2.44	171.82
2	-36.456798	146.018969	169.57	2.44	172.01
3	-36.457771	146.018930	168.80	2.44	171.24
4	-36.458022	146.020101	169.32	2.44	171.76
5	-36.461410	146.020023	165.96	2.44	168.41
6	-36.468762	146.002221	166.71	2.44	169.15
7	-36.466942	146.000851	169.23	2.44	171.68

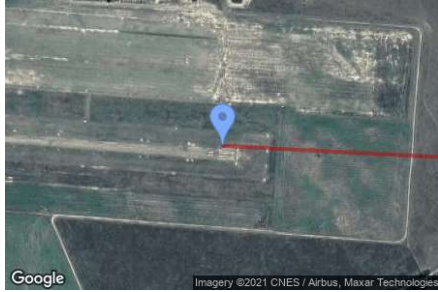
Name: PV array 8
Axis tracking: Single-axis rotation
Tracking axis orientation: 0.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 15.0 deg
Footprint area: 288,265 m²
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.474760	146.013970	163.89	2.44	166.34
2	-36.473540	146.019570	165.38	2.44	167.82
3	-36.472899	146.019975	167.50	2.44	169.94
4	-36.477228	146.020037	164.15	2.44	166.60
5	-36.482020	146.019990	165.02	2.44	167.47
6	-36.482300	146.019390	166.38	2.44	168.82

2-Mile Flight Path Receptor(s)

Name: FP 1
Description:
Threshold height : 15 m
Direction: 273.0 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.552472	146.018036	173.07	15.24	188.31
2-mile point	-36.553985	146.054021	176.94	180.06	357.00

Name: FP 2
Description:
Threshold height : 15 m
Direction: 94.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.551877	146.007064	171.04	15.24	186.28
2-mile point	-36.549659	145.971137	172.00	182.96	354.96

Name: FP 3
Description:
Threshold height : 15 m
Direction: 173.4 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg



Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.548520	146.004514	172.19	15.24	187.43
2-mile point	-36.519799	146.000373	168.43	187.69	356.11

Name: FP 4
Description:
Threshold height : 15 m
Direction: 357.6 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
Threshold	-36.557814	146.006108	174.03	15.24	189.27
2-mile point	-36.586701	146.007617	178.02	179.94	357.96



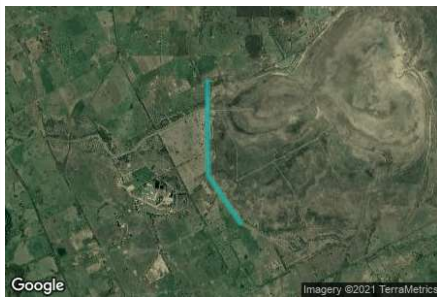
Route Receptor(s)

Name: Benalla-Yarrowonga Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.429270	145.986090	195.35	1.50	196.85
2	-36.449160	145.988920	181.34	1.50	182.84
3	-36.458620	145.994720	174.09	1.50	175.59
4	-36.470610	146.002930	162.03	1.50	163.53
5	-36.505920	146.025470	168.59	1.50	170.09

Name: Boundary Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456180	146.020460	170.11	1.50	171.61
2	-36.482720	146.020720	170.10	1.50	171.60
3	-36.483040	146.020810	169.97	1.50	171.47
4	-36.496460	146.032090	168.76	1.50	170.26

Name: Chesney Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.443340	145.985990	186.75	1.50	188.25
2	-36.444340	145.985940	184.86	1.50	186.36
3	-36.448240	145.988220	181.96	1.50	183.46
4	-36.450300	145.987410	176.61	1.50	178.11
5	-36.461420	145.961230	163.94	1.50	165.44

Name: Dam Wall Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	-36.456194	146.020561	170.15	1.50	171.65
2	-36.456041	146.020820	170.26	1.50	171.76
3	-36.455712	146.021649	170.48	1.50	171.98
4	-36.455720	146.022015	170.49	1.50	171.99
5	-36.455700	146.022936	170.85	1.50	172.35
6	-36.455622	146.023302	170.71	1.50	172.21
7	-36.455461	146.023682	170.89	1.50	172.39

Name: Farnley Road
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.449010	145.989530	180.71	1.50	182.21
2	-36.449060	146.001810	179.29	1.50	180.79
3	-36.449080	146.014190	182.24	1.50	183.74
4	-36.456430	146.018890	169.97	1.50	171.47

Name: Flynn's Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.486586	146.024583	166.13	1.50	167.63
2	-36.486531	146.025236	166.24	1.50	167.74
3	-36.486939	146.025626	166.73	1.50	168.23
4	-36.484570	146.031235	163.00	1.50	164.50
5	-36.479223	146.043807	163.00	1.50	164.50

Name: Lake Mokoan Road
Route type: Two-way
View angle: 50.0 deg



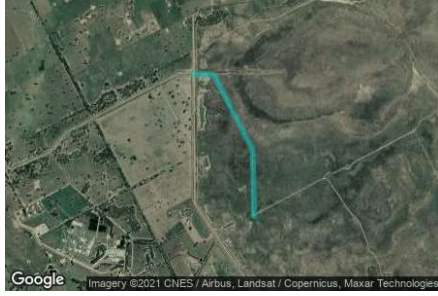
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464800	145.999220	169.49	1.50	170.99
2	-36.455370	146.021850	170.02	1.50	171.52
3	-36.455060	146.022800	171.00	1.50	172.50
4	-36.454880	146.024430	172.09	1.50	173.59
5	-36.453610	146.038270	175.33	1.50	176.83

Name: North Rd
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.455546	146.021446	170.24	1.50	171.74
2	-36.456327	146.021485	171.30	1.50	172.80
3	-36.457002	146.021422	171.54	1.50	173.04
4	-36.457625	146.021236	170.23	1.50	171.73
5	-36.458216	146.021025	168.27	1.50	169.77
6	-36.461218	146.021081	167.39	1.50	168.89

Name: North Rd - 2
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.464511	146.020533	166.67	1.50	168.17
2	-36.464511	146.023810	163.00	1.50	164.50
3	-36.464730	146.024200	163.00	1.50	164.50
4	-36.470927	146.028219	163.00	1.50	164.50
5	-36.475267	146.030982	163.00	1.50	164.50
6	-36.484605	146.031243	163.00	1.50	164.50

Name: Old Thoona Road
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.473170	145.972080	165.67	1.50	167.17
2	-36.471000	145.972410	166.76	1.50	168.26
3	-36.465250	145.976500	167.24	1.50	168.74
4	-36.457540	145.982700	169.86	1.50	171.36
5	-36.449620	145.988610	181.27	1.50	182.77
6	-36.429670	145.998520	228.93	1.50	230.43

Name: Route 11
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.488119	146.014258	167.02	1.50	168.52
2	-36.485421	146.018071	163.43	1.50	164.93
3	-36.484700	146.019242	164.89	1.50	166.39

Name: Snowy Ln
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	-36.495849	146.019037	167.11	1.50	168.61
2	-36.492367	146.021739	164.19	1.50	165.69
3	-36.487930	146.024870	167.17	1.50	168.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	-36.449450	145.994600	193.91	1.50	195.41
OP 2	-36.450050	145.991370	179.53	1.50	181.03
OP 3	-36.448190	145.992090	183.99	1.50	185.49
OP 4	-36.445990	145.987840	182.94	1.50	184.44
OP 5	-36.444980	145.986880	181.39	1.50	182.89
OP 6	-36.467900	145.976260	163.92	1.50	165.42
OP 7	-36.483190	145.993200	163.99	1.50	165.49
OP 8	-36.484980	145.990270	162.56	1.50	164.06
OP 9	-36.485840	146.000300	165.00	1.50	166.50
OP 10	-36.488180	145.997550	162.08	1.50	163.58
OP 11	-36.488150	146.000840	163.52	1.50	165.02
OP 12	-36.489780	146.000490	164.43	1.50	165.93
OP 13	-36.489080	146.002260	165.85	1.50	167.35
OP 14	-36.490040	146.007970	168.27	1.50	169.77
OP 15	-36.491050	146.006450	165.34	1.50	166.84
OP 16	-36.480935	146.007630	163.90	1.50	165.40
OP 17	-36.494190	146.019500	165.18	1.50	166.68
OP 18	-36.495640	146.021960	166.78	1.50	168.28
OP 19	-36.449630	146.041960	200.29	1.50	201.79
OP 20	-36.450118	146.040630	203.77	1.50	205.27
OP 21	-36.452030	146.039564	186.99	1.50	188.49
OP 22	-36.441860	146.015430	204.20	1.50	205.70
OP 23	-36.440810	146.015082	206.52	1.50	208.02
OP 24	-36.442680	145.986200	186.87	1.50	188.37
OP 25	-36.442030	146.005170	204.56	1.50	206.06
OP 26	-36.455370	146.023940	171.02	1.50	172.52
OP 27	-36.456160	146.022360	170.94	1.50	172.44
OP 28	-36.449440	146.017320	182.53	1.50	184.03
OP 29	-36.484270	146.018820	166.16	1.50	167.66
OP 30	-36.501000	146.026770	166.45	1.50	167.95
OP 31	-36.453870	146.016460	174.38	1.50	175.88
OP 32	-36.491530	146.025840	165.54	1.50	167.04
OP 33	-36.458187	146.012754	169.04	1.50	170.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	SA tracking	SA tracking	0	0	-	-
PV array 2 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 3	SA tracking	SA tracking	0	0	-	-
PV array 4 - elevated	SA tracking	SA tracking	0	0	-	-
PV array 5	SA tracking	SA tracking	0	0	-	-
PV array 6	SA tracking	SA tracking	0	0	-	-
PV array 7	SA tracking	SA tracking	0	0	-	-
PV array 8	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 2 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 3 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrawonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 4 - elevated no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 5 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 6 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 7 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynns Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

PV array 8 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: FP 1	0	0
FP: FP 2	0	0
FP: FP 3	0	0
FP: FP 4	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
Route: Benalla-Yarrowonga Road	0	0
Route: Boundary Road	0	0
Route: Chesney Road	0	0
Route: Dam Wall Rd	0	0
Route: Farnley Road	0	0
Route: Flynn's Rd	0	0
Route: Lake Mokoan Road	0	0
Route: North Rd	0	0
Route: North Rd - 2	0	0
Route: Old Thoona Road	0	0
Route: Route 11	0	0
Route: Snowy Ln	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Appendix C

Discussion of Results

Appendix C Discussion of Results

OP 1 - OP 5 and OP 24

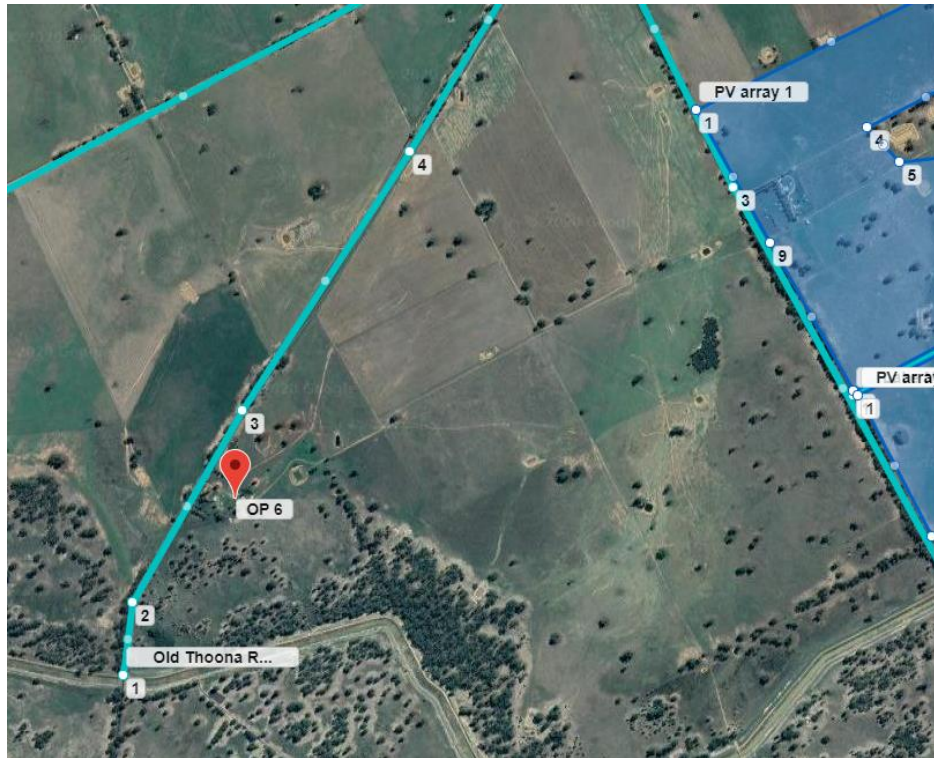
The modelling results indicate that these OPs are subject to moderate potential for after image from the north-eastern portion of the array between 5AM-6AM. A diagram showing the PV array area causing glare reflections can be found in the GlareGauge Report attached in Appendix A. As previously described, the software runs a simplified model of backtracking, indicating that the glare occurring during sunrise and sunset hours may be over predicted. The concept design shown in section 2.1 indicates the proposed planting of a 10m wide vegetation screen along the northern border of the Site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 9 Locations of OP 1 - OP 5 and OP 24



OP 6

OP 6 is predicted to be exposed to glare with moderate potential for after image during the early morning 5AM-8AM from the southern portion of the PV array as indicated by the GlareGauge Report attached in Appendix C. There is existing vegetation between the OP and the PV array as shown in Figure 10, particularly between the dwelling and portion of the PV array where glare is expected to reflect from, which can assist in reducing glare impacts. The concept design shown in section 2.1 proposes infill planting to the existing boundary vegetation, with additional planting of 5m and 10m wide screening vegetation. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 10 Location of OP 6**OP 7 – OP 13**

The modelling results indicate that these OPs are predicted to experience moderate potential for after image between 5:30AM-8AM. Figure 11 shows the existence of trees and other obstacles that lie between the dwellings and the PV array, which can aid in minimising the incidence of glare from the PV array. Additionally, the concept design shown in section 2.1 indicates the proposed planting of 10m wide screening vegetation along the western and southern border of the site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

OP 16

The modelling results indicate that OP 16 is predicted to experience moderate potential for after image between 5AM – 8AM. There is existing vegetation between the OP and the PV array as shown in Figure 11 which can assist in reducing glare impacts. The concept design shown in section 2.1 proposes the planting of 10m wide screening vegetation along the western border of the array. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 11 Location of OP 7 – OP 13 and OP 16

**OP 19 - OP 21**

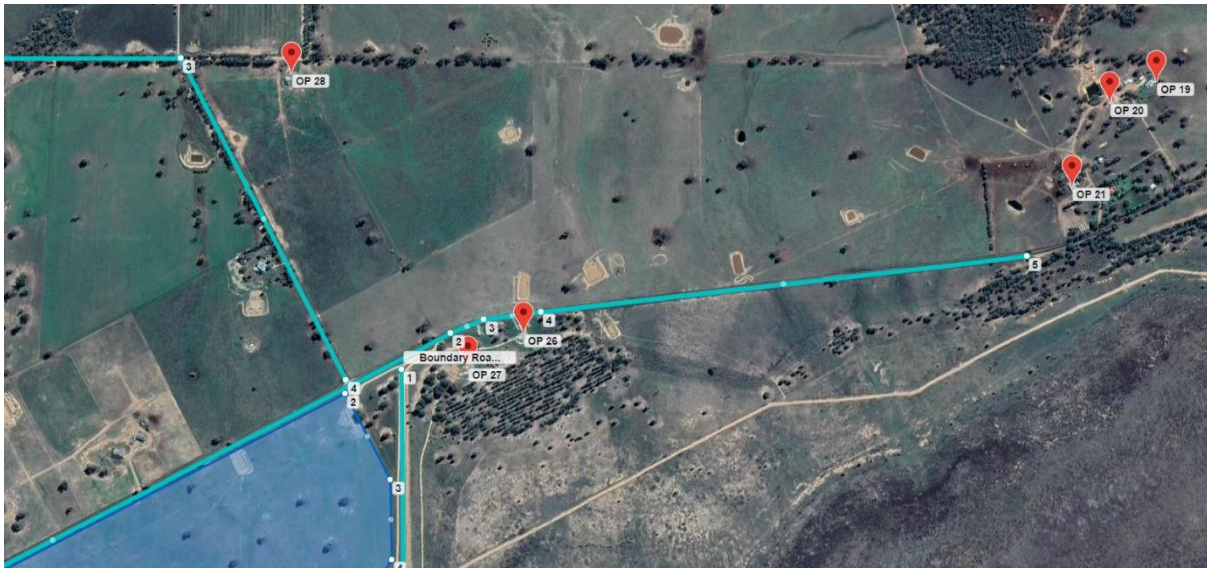
The modelling results indicate that these OPs are predicted to experience moderate potential for after image between 6PM-8PM. Figure 12 shows the existence of trees and other obstacles that lie between the dwellings and the PV array, which can aid in minimising the incidence of glare from the PV array. Additionally, the concept design shown in section 2.1 indicates the proposed planting of 5m and 10m wide screening vegetation along the eastern border of the site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees. As OP 19 – OP 21 are slightly elevated above the proposed array, screening methods to reduce glare may not be as effective as it is on OPs on the same level as the array. Since OP 19 – OP 21 are further than 1 km away from the boundary of the proposed array any glare predicted at these points isn't likely to be significant and additional glare mitigation is not expected to be necessary.

OP 26 - OP 27

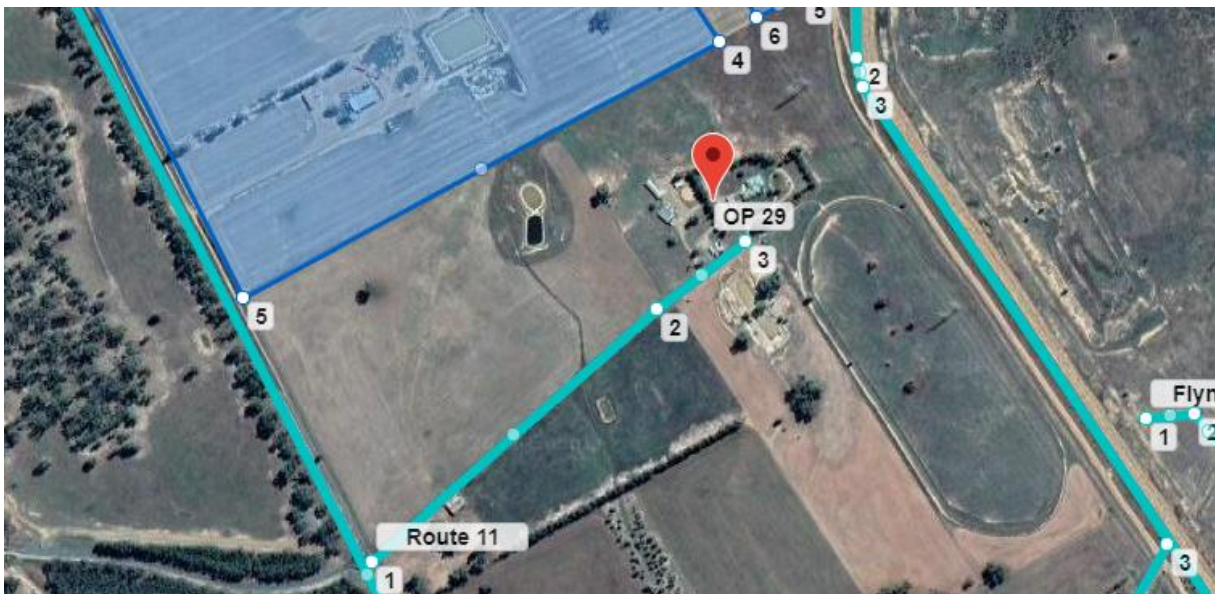
The modelling results indicate that these OPs are predicted to experience moderate potential for after image between 5PM-8PM. Figure 12 shows the existence of trees and other obstacles that lie between the dwellings and the PV array, which can aid in minimising the incidence of glare from the PV array. Additionally, the concept design shown in section 2.1 indicates the proposed planting of 5m and 10m wide screening vegetation along the eastern border of the site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

OP 28

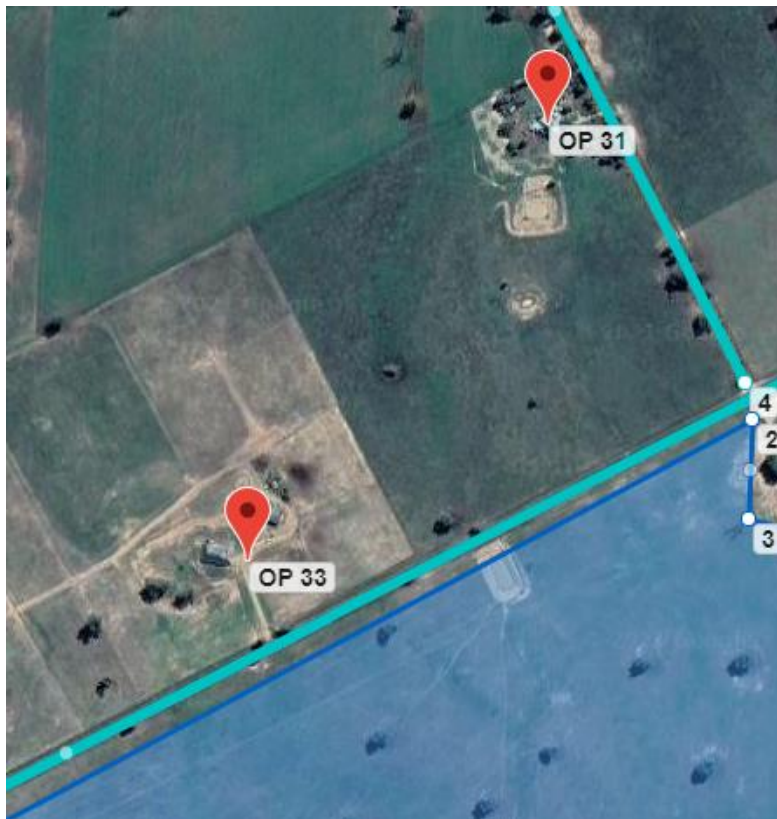
OP 28 is located to the north-east of the PV array as shown in Figure 12 and is predicted to experience glare with moderate potential for after image between 6PM – 8PM. The concept design shown in section 2.1 indicates the proposed planting of 5m and 10m wide screening vegetation along the northern and eastern border of the site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 12 Locations of OP 19 - OP 21, OP 26 - OP 27 and OP 28**OP 29**

OP 28 is located to the north-east of the PV array as shown in Figure 13 and is predicted to experience glare with moderate potential for after image between 5:30PM – 8PM. The concept design shown in section 2.1 indicates the proposed planting of 5m and 10m wide screening vegetation along the northern and eastern border of the site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

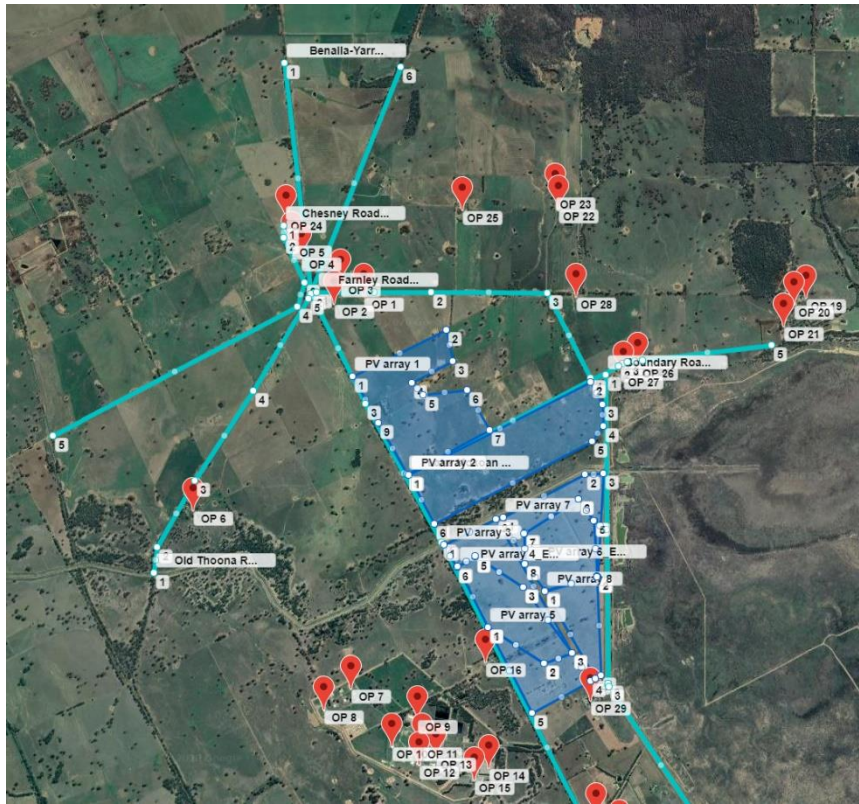
Figure 13 Location of OP 29**OP 31 and OP 33**

OP 31 and OP 33 are located to the north of the PV array as shown in Figure 14 and are predicted to experience glare with moderate potential for after image between 5AM-7Am and 4PM – 8PM throughout the year. The concept design shown in section 2.1 indicates the proposed planting of a 10m wide screening vegetation along the northern border of the site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 14 Location of OP 31 and OP 33**Benalla-Yarrowonga Road**

Modelling results show that Benalla-Yarrowonga Road is predicted to experience glare with moderate potential for after image emanating from the southern portion of the array from 5AM-7AM. The concept design shown in section 2.1 proposes the infill planting of the existing boundary vegetation along Benalla-Yarrowonga Road, in addition to the planting 10m wide screening vegetation. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

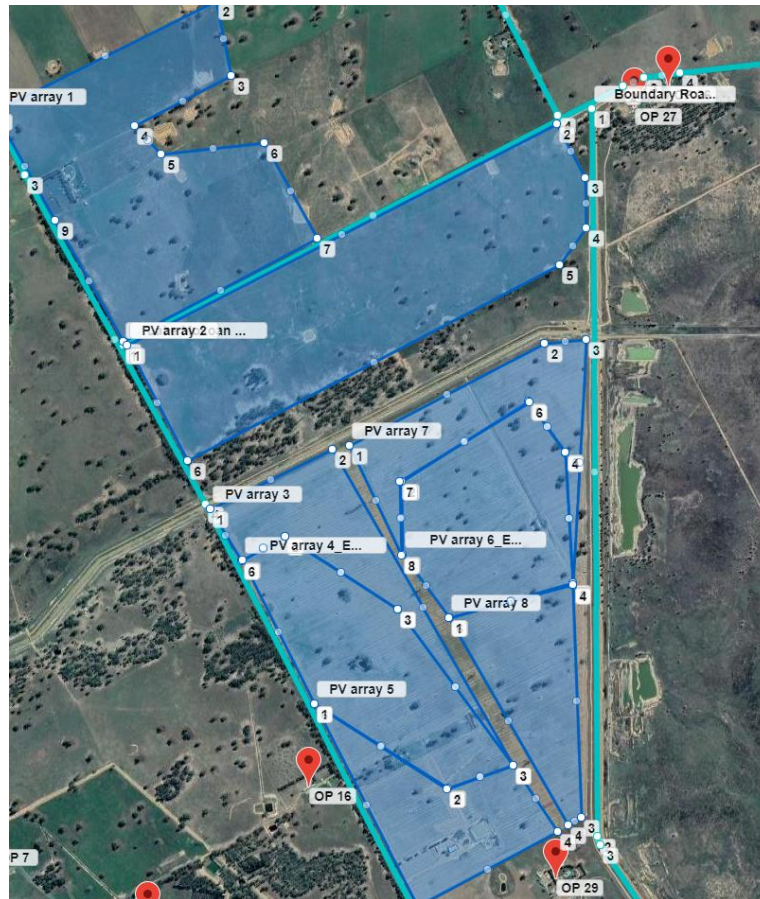
Figure 15 Location of Benalla-Yarrowonga Road



Boundary Road

Modelling results show that Boundary Road is predicted to experience glare with moderate potential for after image between 3PM-6PM. The concept design shown in section 2.1 shows the proposed planting of 5m wide screening vegetation along the eastern border of the Site. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 16 Location of Boundary Road



Chesney Road

Chesney Road is predicted to experience glare with moderate potential for after-image between 4AM – 6AM. Figure 17 shows that there is some existing vegetation between the location of Chesney Road and the Site. Additionally, 10m wide screening vegetation is proposed along the northern border of the array as shown in the concept design in section 2.1. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 17 Location of Chesney Road



Farnley Road

Modelling shows that Farnley Road is predicted to experience glare with moderate potential for after image between 4AM – 6AM and between 5PM – 8PM. Farnley Road is located to the north of the array as shown in Figure 18. As the concept plan shown in section 2.1 proposes a 10m wide vegetation buffer along the northern border of the array, additional glare mitigation is not expected to be necessary. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 18 Location of Farnley Road



Lake Mokoan Road

Lake Mokoan Road traverses the northern section of the array as shown in Figure 19. Modelling results show that Lake Mokoan Road is predicted to experience glare with moderate potential for after image emanating from the southern portion of the array. The glare is predicted to occur between 5AM-8AM and between 4PM – 8PM, which can largely be attributed to the operation of backtracking. The concept design shown in section 2.1 indicates the proposed planting of 5m wide screening vegetation along the southern border of Lake Mokoan Road. The glare impacting Lake Mokoan Road is expected to emanate from the portion of the array located to the south of the Road. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 19 Location of Lake Mokoan Road



Old Thoona Road

Old Thoona Road is predicted to experience glare with moderate potential for after image between 6AM – 7AM. Figure 20 shows the existing vegetation between the array and Old Thoona Road. In addition to the 10m wide vegetation buffers proposed along the western border of the array, as indicated in the concept plan in section 2.1, additional glare mitigation is not anticipated to be necessary.

Figure 20 Location of Old Thoona Road

Dam Wall Road

Dam Wall Road is predicted to experience glare with moderate potential for after image between 5PM – 8PM. Figure 21 shows the existing vegetation between the array and Dam Wall Road. In addition to the 5m wide vegetation buffers proposed along the western border of the array, as indicated in the concept plan in section 2.1. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

North Road

North Road is predicted to experience glare with moderate potential for after image between 4PM – 5PM and 6PM to 8PM. Figure 21 shows the existing vegetation between the array and North Road. In addition to the 5m wide vegetation buffers proposed along the western border of the array, as indicated in the concept plan in section 2.1. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

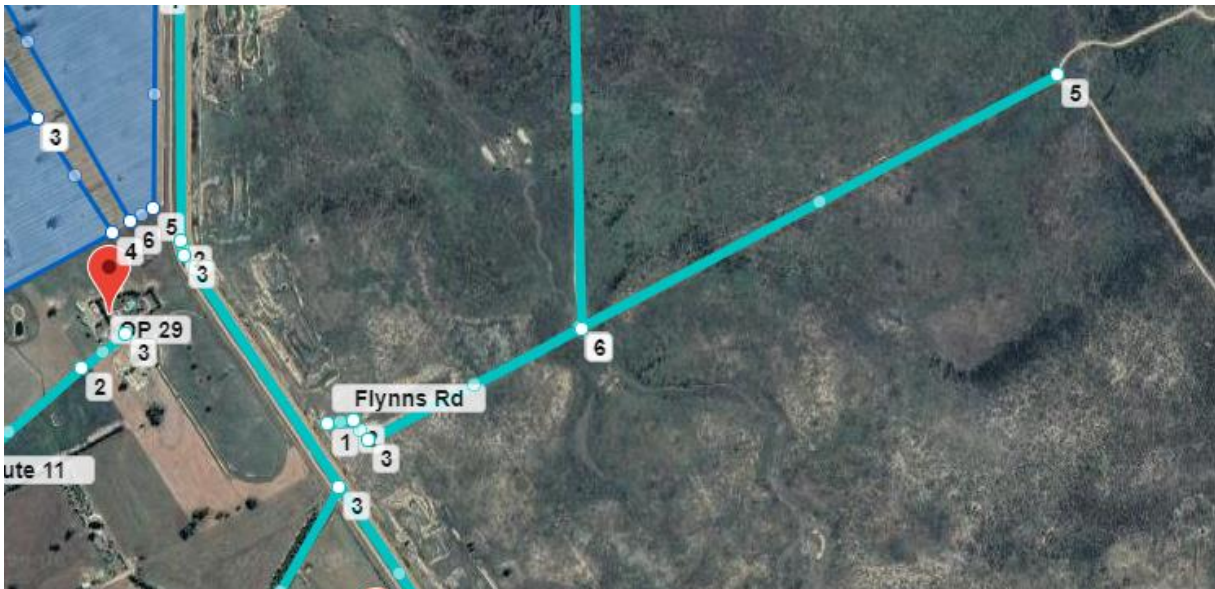
Figure 21 Location of North Road and Dam Wall Road



Flynns Road

Flynns Road is predicted to experience glare with moderate potential for after image between 4:30PM – 7PM. Figure 22 shows the existing vegetation between the array and Flynns Road. In addition to the 5m wide vegetation buffers proposed along the western border of the array, as indicated in the concept plan in section 2.1. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

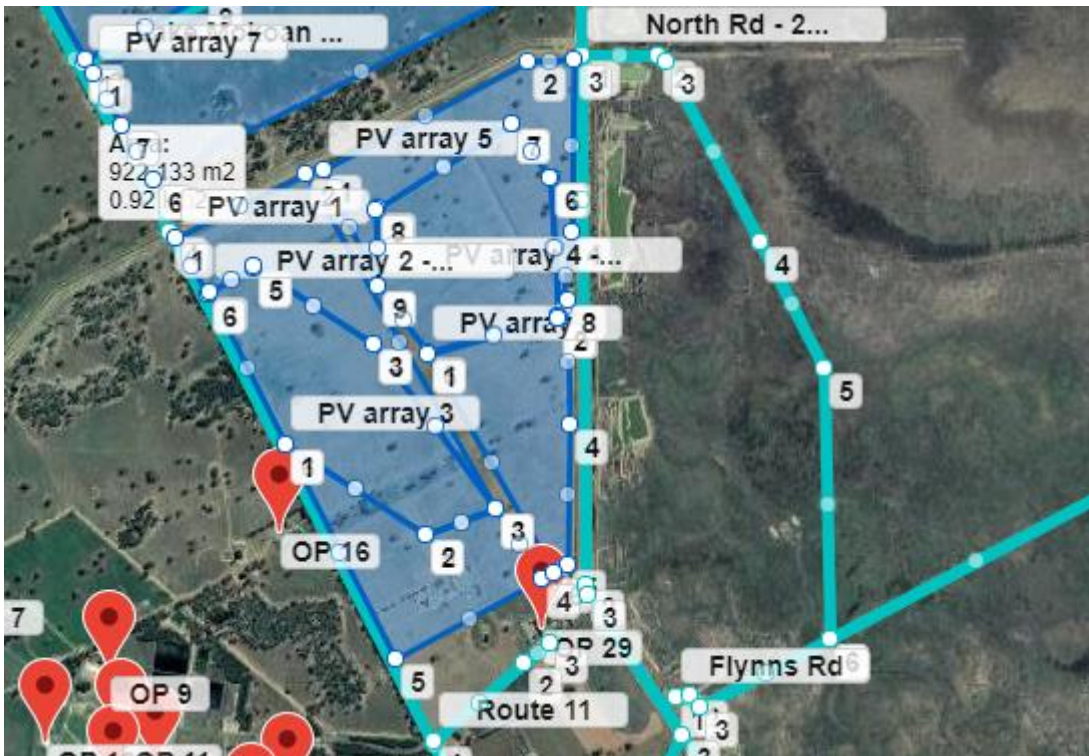
Figure 22 Location of Flynns Road



North Road – 2

North Road - 2 is predicted to experience glare with moderate potential for after image between 4:30PM – 7:30PM. Figure 23 shows the existing vegetation between the array and North Road 2. In addition to the 5m wide vegetation buffers proposed along the western border of the array, as indicated in the concept plan in section 2.1. Until the vegetation is sufficiently established to a height of 3.5 m, the panel resting angle should be limited to 14 degrees.

Figure 23 Location of North Road 2



Route 11

Route 11 (an unnamed private driveway) is predicted to experience glare with moderate potential for after image between 5PM – 7PM. Figure 24 shows the existing vegetation between the array and Route 11. In addition to the 10m wide vegetation buffers proposed along the southern border of the array, as indicated in the concept plan in section 2.1, additional glare mitigation is not anticipated to be necessary.

Figure 24 Location of Route 11

