Appendix Q Glint and Glare Assessment

Fast Track Approvals Act Application

Foxton Solar Farm

Genesis Energy Limited

SLR Project No.: 810.V14848.00001

13 February 2026

Foxton Solar Farm

Glint and Glare Assessment

Genesis Energy

Level 6, 155 Fanshawe Street, Auckland Central, Auckland 1010

Prepared by:

SLR Consulting Australia

Level 11, 176 Wellington Parade, East Melbourne VIC 3002, Australia

SLR Project No.: 810.14848.00007

Revision: R01-v1.5

10 December 2025

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
R01-v1.5	10 December 2025	Peter Hayman	Dr Peter Georgiou	Nicky Sedgley

Basis of Report

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR), on the instruction of Genesis Energy (the Client), in accordance with the agreed scope of work.

It is intended to support the Client's application under the Fast Track Approvals Act 2024 and may be relied upon by the Expert Panel and relevant administering agencies for the purposes of assessing the application.

While SLR has exercised due care in preparing this report, it does not accept liability for any use of the report beyond its intended purpose. Where information has been supplied by the Client or obtained from external sources, it has been assumed to be accurate unless otherwise stated.

Executive Summary

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Genesis Energy to carry out a Reflective Glare assessment of the proposed 200 MWac Foxton Solar Farm (herein the "Project").

The Project is located at 304-508 Wall Road and 447 Motuiti Road, Foxton (herein the "Site"), approximately 25 km southwest of Palmerston North and approximately 4 km northeast of Foxton.

The Site lies within the Horowhenua District Council (HDC) area where the Operative Horowhenua District Plan 2015 (ODP) applies.

The following potential glare conditions have been considered:

- Daytime reflective glare (and glint) arising from the solar PV panels within the facility.

Aviation Glare (Foxpine Airpark)

- The potential for glare at Foxpine Airpark was assessed.
- The aerodrome lies just over 3 km to the southwest of the nearest Site perimeter and has a single grass runway oriented roughly east-west.
- NIL glare is predicted from the Project at the aerodrome.
- Palmerston North Airport was also considered for potential glare issues. The aerodrome is located over 25 km northeast of the Site, and as such, no glare impacts would be possible.

Road Traffic Disability Glare

The potential for glare was assessed along the nearest surrounding carriageways: Hickford Road, Himatangi Block Road, Motuiti Road, State Highway 1 and Wall Road.

- Baseline Modelling Results
  - The Baseline Modelling did not include the proposed perimeter vegetation, nor the beneficial impact from intervening topography that might block reflections.
  - The Baseline Modelling results showed that Hickford Road, Himatangi Block Road and State Highway 1 will not experience glare from the proposed facility.
  - The Baseline Modelling results indicated that Motuiti Road and Wall Road may receive reflections (at potential glare level) from the proposed facility along some sections of the roadway close to the Site.
- Detailed Analysis
  - In the case of Wall Road, the reflection conditions occur in the early morning (from PV Sub-Array 8) and late in the afternoon (from PV Sub-Array 1). The reflections of interest have low angles of incidence, less than 10°, which do not constitute glare, as a motorist would be looking directly at the sun at the same time as any associated reflections.
  - In the case of Motuiti Road, the reflection conditions occur in the early morning (from PV Sub-Arrays 2, 5 and 6) and late in the afternoon (from PV Sub-Array 10). The early morning reflections have low angles of incidence, less than 10°, which do not cause glare. Examination of the topography close to the reflection location for PV Sub-Array 10 showed that blockage of incoming reflections would occur from the dunes running along the north side of Motuiti Road close to its intersection with Himatangi Block Road.

Residential Nuisance Glare

- Baseline Modelling Results
  - Early morning reflections (at potential glare level) may be experienced at receptor positions: 3 (282 Wall Road), 5 (352A Wall Road), 6 (Himatangi 3A3G1 Block) and 8 (371 Wall Road) from PV Sub-Array 8.
  - Late afternoon reflections (at potential glare level) may be experienced at receptor positions: 9 (office at 447 Motuiti Road) from PV Sub-Array 6.
- Detailed Analysis:
  - In all of the above cases, reflections fall within the NSW LSSE (Large-Scale Solar Energy) Guideline “Low” Impact Category, where no mitigation is recommended. In this category, reflections are experienced for less than 10 minutes on any one day and less than 10 hours total per year.
  - Moreover, the reflections occur for several minutes each day over a limited period during summer around sunrise or sunset, with very low ALTITUDE angles combined with very high INCIDENCE angles.
  - The resulting difference between the angle of incoming direct solar rays and associated reflections would be much lower than 10°. Residents would be looking directly at the sun at the same time as any associated reflections.
  - In addition to the existing dwellings surrounding the site, modelling was undertaken at a proposed new dwelling (refer Residence #39, **Figure 11**) at 187 Motuiti Road. The dwelling would be located on a mound and potentially be a two-storey house. For this receiver, sunrise reflections would be theoretically visible for several minutes per day in mid-summer. Their occurrence would involve solar altitude angles of less than 1°, ie with the solar disc barely visible above the horizon. The accompanying incidence angles would be greater than 88°, ie solar rays almost parallel to the solar panels. A resident (on the second floor of the dwelling) would be looking directly at the sun at the same time. This would not constitute a glare condition.
- On this basis of all of the above, the predicted (minimalist) reflections at the relevant Residential dwellings (3, 5, 6, 8 and 9) would not constitute a glare condition. The conclusion also applies to the future dwelling at 187 Motuiti Road.

Summary of the Stage 1 Modelling

The Stage 1 Modelling demonstrated the following:

- There are no instances of “glare” for all receivers covered:
  - Aviation Glare, Road Traffic Disability Glare and Residential Nuisance Glare.
- There are minor instances, along Motuiti Road and Wall Road and at several dwellings, involving sunrise/sunset reflections which would be theoretically visible but not be considered as “glare” due to their high incidence angles. Observers in this instance would be looking essentially directly at the sun.
- Refer below discussion re Additional Modelling: it is noted that the proposed perimeter planting is estimated to take around 5 years for exotic hedging species and 6 years for taller growing native plant species to reach 4 m (modelled height).
- At that time, the theoretical visibility of sunrise/sunset reflections would be totally eliminated at all surrounding receptor positions.

Overall, the conclusion of the Stage 1 Modelling assessment is that negligible impacts will be generated by the proposal in relation to glint and glare at all surrounding sensitive receptors.

Additional Modelling

Additional glare modelling was carried to eliminate the visibility of non-glare-level reflections.

Rest Angle Adjustment

The SGHAT calculations were re-run with a Back-Tracking Rest Angle of 5° for Sub-arrays 1, 2, 5, 6 and 8.

- The result of the SGHAT calculations was the elimination of ALL visible reflections for ALL receivers (motorists and residents).

Site Perimeter (Vegetation) Screening

The SGHAT calculations were also re-run with the proposed vegetation screening shown in **Figure 17**.

- The modelling height of the screening was conservatively assumed to be 4 m. It is understood that many sections of the proposed screening will be higher.
- The result of the SGHAT calculations with the 4 m high vegetation screening was the elimination of ALL reflections for ALL receivers (motorists and residents).

Note Regarding Interim Vegetation Growth Period

- The modelled perimeter planting is intended to ultimately reach a height of over 4 m, in many sections up to 6 m and in some sections 8-10 m.
- When planted during the construction phase of the Project, the initial height of the perimeter vegetation would be approximately 1.5-2 m.
- Accordingly, there would be a period (estimated to be around 5 years for exotic hedging species and 6 years for taller growing native plant species) while the perimeter planting increases in height, when some minor reflections would theoretically still be visible as discussed above.
- It is reiterated that the reflections experienced by the nearest dwellings would not require mitigation under the NSW LSSE (Large-Scale Solar Energy) Guideline, as the reflections occur for less than 10 minutes on any one day and less than 10 hours on an overall annual basis. Further, their impact (at sunrise/sunset) would be totally masked by the impact of the direct incoming solar rays.
- In summary, there will be no “glare” during the interim vegetation growth period and, once the planned vegetation reaches a height of 4 m, even the theoretical visibility of the minor sunrise/sunset reflections will be totally eliminated. In many areas, the ultimate height of the perimeter vegetation screening is even higher.

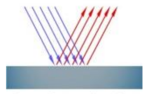
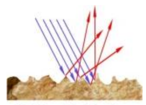
Table of Contents

Tables in Text

Figures in Text

Appendices

Acronyms and Abbreviations

PV Panel	Photovoltaic (PV) panels are designed to absorb solar energy and retain as much of the solar spectrum as possible in order to produce electricity.
Glare	Glare refers to the reflections of the sun off any reflective surface, experienced as a source of excessive brightness relative to the surrounding diffused lighting. Glare covers reflections: . Which can be experienced by both stationary and moving observers (the latter referred to as "glint"). . Which are either specular or diffuse.
Specular	A reflection which is essentially mirror-like – there is virtually no loss of intensity or angle dispersion between the incoming solar ray and outgoing reflection.  Specular Reflection
Diffuse	A reflection in which the outgoing reflected rays are dispersed over a wide ("diffuse") range of angle compared to the incoming (parallel) solar rays, typical of "rougher" surfaces.  Diffuse Reflection
KVP	Key View Points (KVPs) are offsite locations where receivers of interest have the potential to experience adverse reflective glare.
Glare **AS/NZ 1158.2:2020**	Condition of vision in which there is a discomfort or a reduction in the ability to see, or both, caused by an unsuitable distribution or range of luminance, or to extreme contrast in the field of vision. Glare can take the form of: (a) Disability Glare – glare that impairs the visibility of objects without necessarily causing discomfort. This is relevant to Motorist Disability Glare, a safety issue. (b) Discomfort Glare – glare that causes discomfort without necessarily impairing the visibility of objects. This is relevant to Residential Nuisance Glare, an amenity issue.
Threshold Increment (TI) **AS/NZ 4282:2023**	TI is the measure of disability glare expressed as the percentage increase in contrast required between an object and its background for it to be seen equally well with a source of glare present. Higher TI values correspond to greater disability glare.

1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Genesis Energy to carry out a Reflective Glare assessment of the proposed 200 MWac Foxton Solar Farm (herein the "Project").

The Project is located at 304-508 Wall Road and 447 Motuiti Road, Foxton (herein the "Site"), approximately 25 km southwest of Palmerston North and approximately 4 km northeast of Foxton.

The Site lies within the Horowhenua District Council (HDC) area where the Operative Horowhenua District Plan 2015 (ODP) applies.

It will comprise blocks ("sub-arrays") of panels following the various natural and man-made breaks throughout the site and inverter areas and power stations.

The following potential glare conditions have been considered:

- Daytime Reflective glare (and glint) arising from the solar PV panels within the facility.

1.1 Structure of Report

The remainder of this report is structured as follows:

- **Section 2** describes the Project and surrounding environment.
- **Section 3** outlines the requirements of the impact assessment.
- **Section 4** provides background information regarding the calculation of reflectivity and glare.
- **Section 5** presents the analysis, results and proposed mitigations covering
  . Aviation Glare
  . Road and Rail Traffic Disability Glare and
  . Residential Nuisance Glare.

1.2 Statement of Qualifications

Over the past three decades SLR has conducted literally hundreds of reflective glare studies on buildings and solar facilities.

These studies have covered both:

- Daytime Reflective Glint & Glare; and
- Night-Time Illumination Glare.

Potential glare impacts include:

- Aviation Glare;
- Road and Rail Disability Glare; and
- Residential Nuisance Glare.

For reflective glare studies, SLR uses:

- The US FAA-approved ForgeSolar SGHAT software suite; and
- SLR's own in-house software for Threshold Increment (TI) Value computation.

The team lead for this study is SLR's Dr Peter Georgiou.

Dr Georgiou is SLR's Global Technical Director for Solar Glare studies and has appeared as an Expert Witness regarding glare impact for solar facilities in New Zealand, Australia and Canada.

In preparing this report, Dr Georgiou has read the Environment Court of New Zealand Practice Note 2023 and confirms that the report has been written in compliance with Section 9.3 of the Note.

Dr Georgiou's CV is included in **Appendix B**.

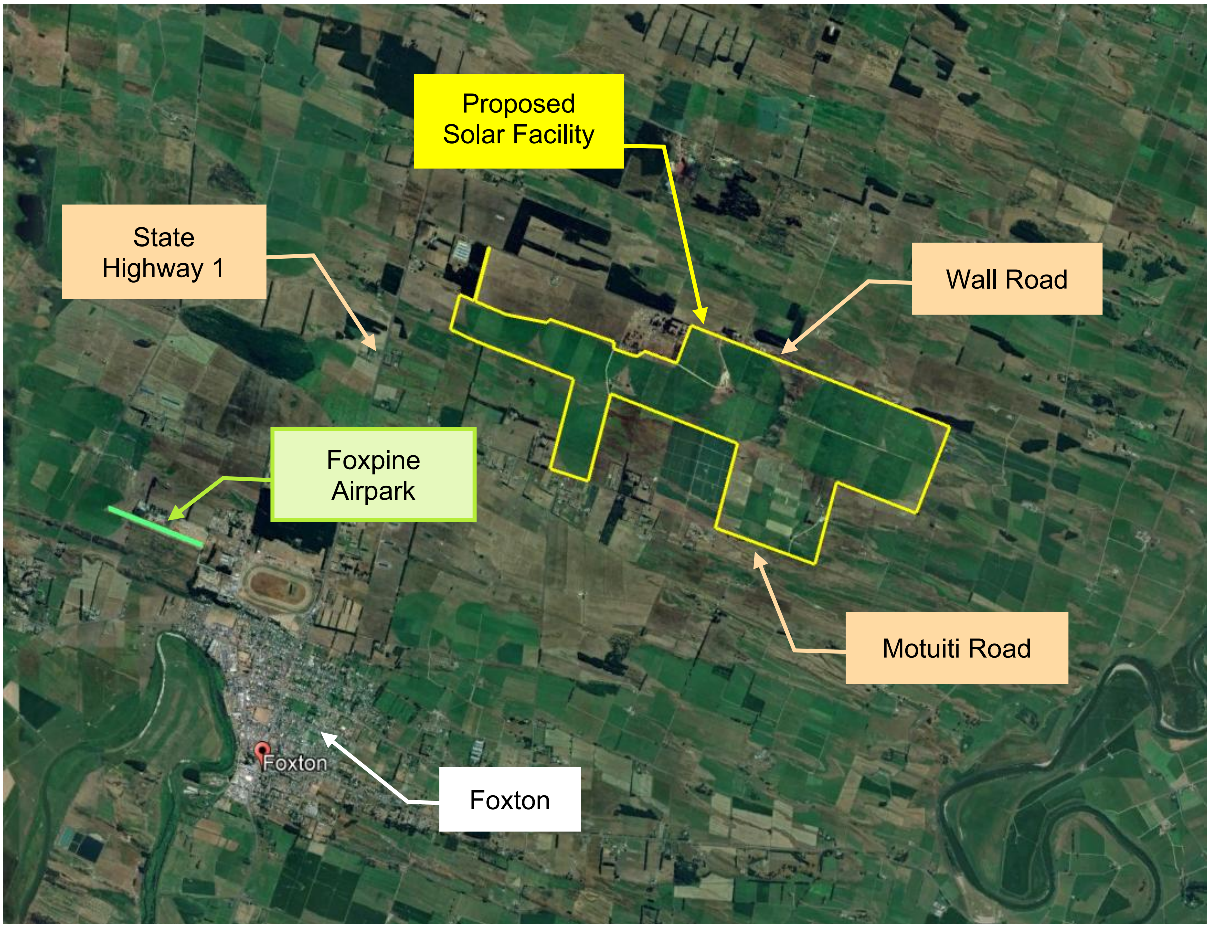
2.0 Proposed Foxton Solar Farm Project

2.1 Site Location

The Project is seeking resource consent for a solar farm (the "Project") at the location shown in **Figure 1**:

- The Project is located at 304-508 Wall Road and 447 Motuiti Road, Foxton (herein the "Site").
- The Site lies approximately 25 km southwest of Palmerston North and approximately 4 km northeast of Foxton.

Figure 1 Foxton Solar Farm – Location Map



2.2 Site Description and Key Project Components

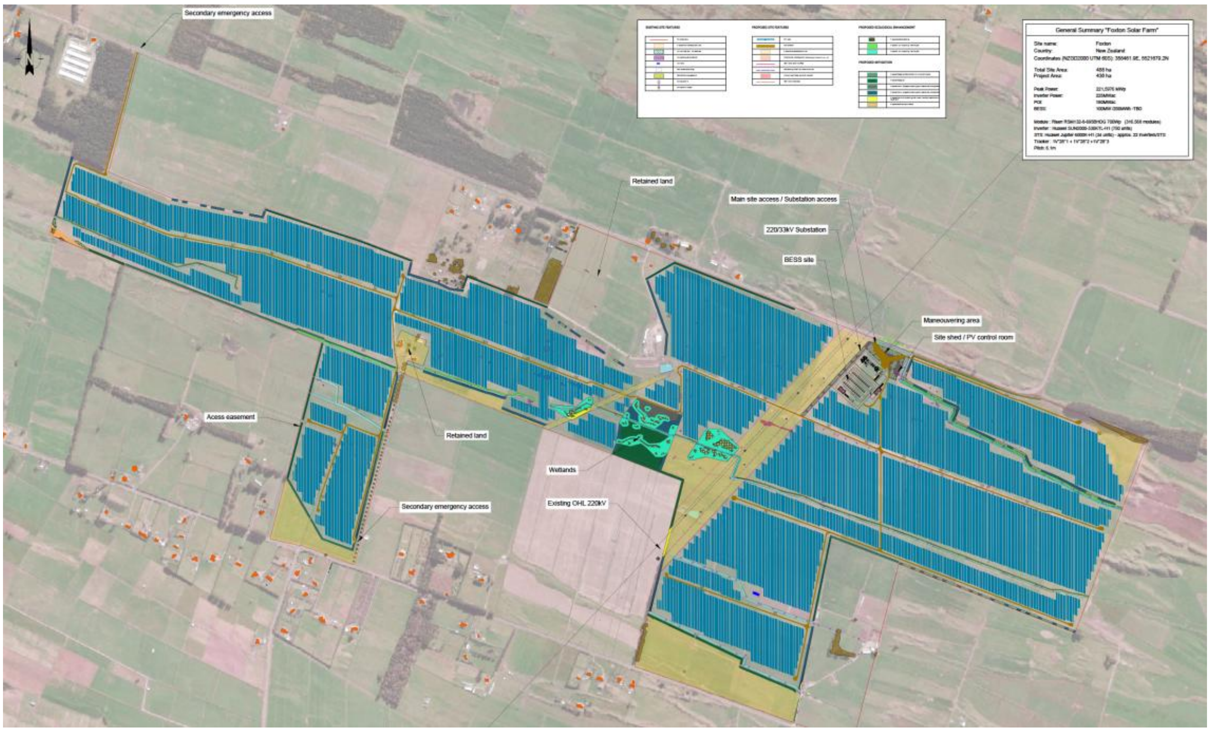
From a Reflective Glare point of view, the key components of the Project are:

- The photovoltaic (PV) modules in relation to their daytime reflective glare potential.

Overall Layout

The proposed ground-mounted arrays (refer **Figure 2**) would consist of solar panels oriented in north-south rows within a number of sub-array "blocks" separated by natural landform features, access roads and transmission cables. .

Figure 2 Site Layout



In terms of the relative heights of the Site and surrounds, ground elevations vary modestly:

- Elevations (m) range from RL20m West to RL30m East.
- Elevations (m) range from RL24-25m South (along Motuiti Road) to RL29-30m North (along Wall Road).

Panel Support System

The rows of panels will be supported by a Single-Axis Tracking (SAT) System with a ±60° maximum tilt, 1-portrait ("1P") configuration refer **Figure 3**) with the following characteristics:

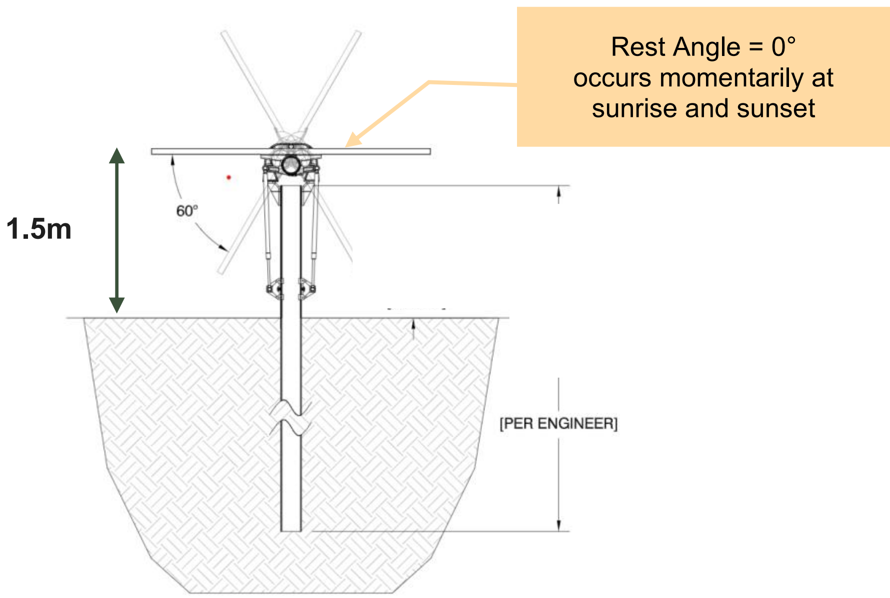
- As noted above, the panels will have a maximum tilt of ±60° facing east and west.
- The ground coverage ratio will be approximately 37%.
- The SAT system will support "Back-Tracking", such that panel orientation at the start and end of the day can have a "Rest" Angle of 0°, ie horizontal. Note that, overnight, panels are "stowed" at a reasonably steep angle (so as to avoid hail damage in the event of a severe storm).

It is understood that the ultimate height above ground of individual panels may vary, depending on the final panel and support structure selection and local ground conditions.

The maximum height above ground of the panels will be 3.5 m.

- The median height of the panels (at the support rotation point) has been modelled as 1.5 m, although it may be higher.
- In general, a HIGHER median point decreases the potential for reflections at surrounding ground-based receivers (roadways, dwellings).
- Accordingly, the 1.5 m median height in this study offers a conservative approach, as panel reflections will likely be over-estimated for this height compared to their ultimate impact.

Figure 3 Sideview of Proposed "1P" Single-Axis Tracking (SAT) Support System



3.0 Requirements

There is currently no known local planning guidance within New Zealand for quantifying the impacts associated with solar reflections from PV panels covering Aviation Glare, Road and Rail Traffic Disability Glare or Residential Nuisance Glare.

Aviation Glare

With regard to aviation glare, the Forge Solar SGHAT software tool has been generally accepted by regulatory bodies throughout New Zealand. The SGHAT impact criteria are:

- Airport Traffic Control Tower (ATCT): NO GREEN or YELLOW Glare
- Aircraft Landing: NO YELLOW Glare (GREEN is permissible)

For this assessment, aviation glare has been assessed at the nearby Foxpine Airpark.

Palmerston North Airport was also considered for potential glare issues. The aerodrome is located over 25 km northeast of the Site, and as such, no glare impacts would be possible.

Residential Nuisance Glare

SLR notes the criteria available in the New South Wales (NSW) Large Scale Solar Energy (LSSE) Guideline (2022). The LSSE Guideline categorises Residential Nuisance Glare as “High”, “Moderate” or “Low” impact, depending on the predicted minutes per day and/or hours per year of glare.

Figure 4 summarises the three impact levels and associated amenity objectives.

- When applying the LSSE Guideline to Residential Nuisance Glare, it is standard industry practice to use the occurrence of predicted SGHAT YELLOW glare, noting that SGHAT GREEN glare:
  a) implies LOW potential for an after-image; and
  b) is acceptable in terms of aviation glare for pilots on final landing approach.

Figure 4 Extract (*Table 2*) from NSW Large-Scale Solar Energy Guideline (2022)

High glare impact	Moderate glare impact	Low glare impact
> 30 minutes per day > 30 hours per year	< 30 minutes & > 10 minutes per day < 30 hours & > 10 hours per year	< 10 minutes per day < 10 hours per year
Significant amount of glare that should be avoided.	Implement mitigation measures to reduce impacts as far as practicable.	No mitigation required.

Road and Rail Traffic Disability Glare

There are no SGHAT nor LSSE Guideline criteria for Road and Rail Traffic Disability Glare.

Accordingly, when considering motorists and/or rail operators, the occurrence of SGHAT YELLOW glare for ANY number of minutes per day or hours per year is taken by SLR as necessitating consideration of mitigation, unless the reflection condition occurs at a time of day when the difference in angle between an incoming solar ray and its associated reflection is less than around 10°, in which case a motorist’s view would be completely dominated by the radiance level of the sun’s direct solar rays.

4.0 Background

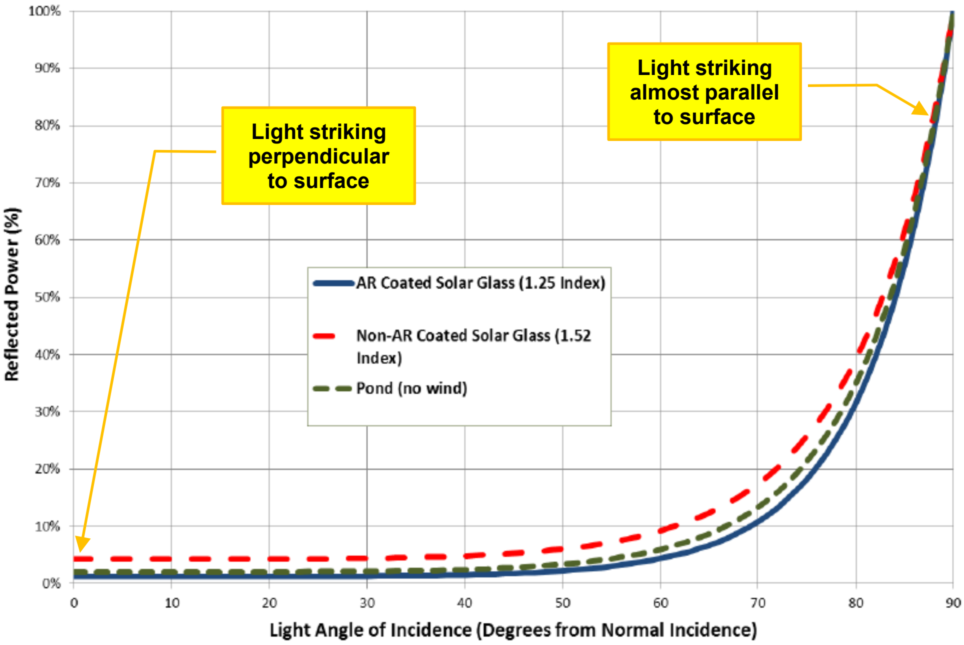
4.1 Solar Panel Reflectivity

Solar PV panels are designed to capture (absorb) the maximum possible amount of light within the layers below the front (external) surface and hence minimise reflections off the surface of each panel. Reflections are a function of:

- the angle at which the light is incident onto the panel (which will vary depending on the specific location, time of day and day of the year); and
- the index of refraction of the front surface of the panel and associated degree of diffuse (non-directional) versus specular (directional or mirror-like) reflection, which is a function of the surface texture of the front module (reflecting) surface.

Representative reflectivity curves are shown in **Figure 5**.

Figure 5 Typical Reflectivity Curves as a Function of Incidence Angle



- When an incoming solar ray strikes the surface of a solar PV panel close to perpendicular to the panel surface (ie LOW angle of "incidence"), reflectivity is minimal, less than 5% for all solar panel surface types.
- It is only when an incoming solar ray strikes the panel at increasingly HIGH "incidence" angles, ie approaching parallel to the panel, that reflectivity values increase. When this happens, reflections become noticeable and potentially at "glare" level – this can occur for all solar panel surface types.
- However, at VERY HIGH incidence angles, it would almost always be the case that an observer (motorist, resident, etc) would perceive reflections coming from virtually the same direction as the incoming solar rays themselves. Such a condition would not constitute a glare situation as the intensity of the incoming solar ray itself would dominate the field of vision perceived by the observer.

4.2 Project Site Solar Angles – Annual Variations

One of the challenging issues encountered with daytime solar panel glare is the varying nature of the associated reflections, whose occurrence will vary with time of day and day of the year as the sun's rays follow varying incoming angles between the two extremes of:

- Summer solstice – sunrise incoming rays from just south of east, maximum angle altitude rays at midday, sunset incoming rays from just south of west.
- Winter solstice – sunrise incoming rays from almost northeast, minimum angle altitude rays at midday, sunset incoming rays from almost northwest.

Any solar glare analysis must take into account the complete cycle of annual reflection variations noted above. The potential range of incoming solar angles at the Project site relevant to daytime glare is shown in **Figure 6**, with critical angles summarised in **Table 1**.

Figure 6 Project Site Incoming Solar Angle Variations

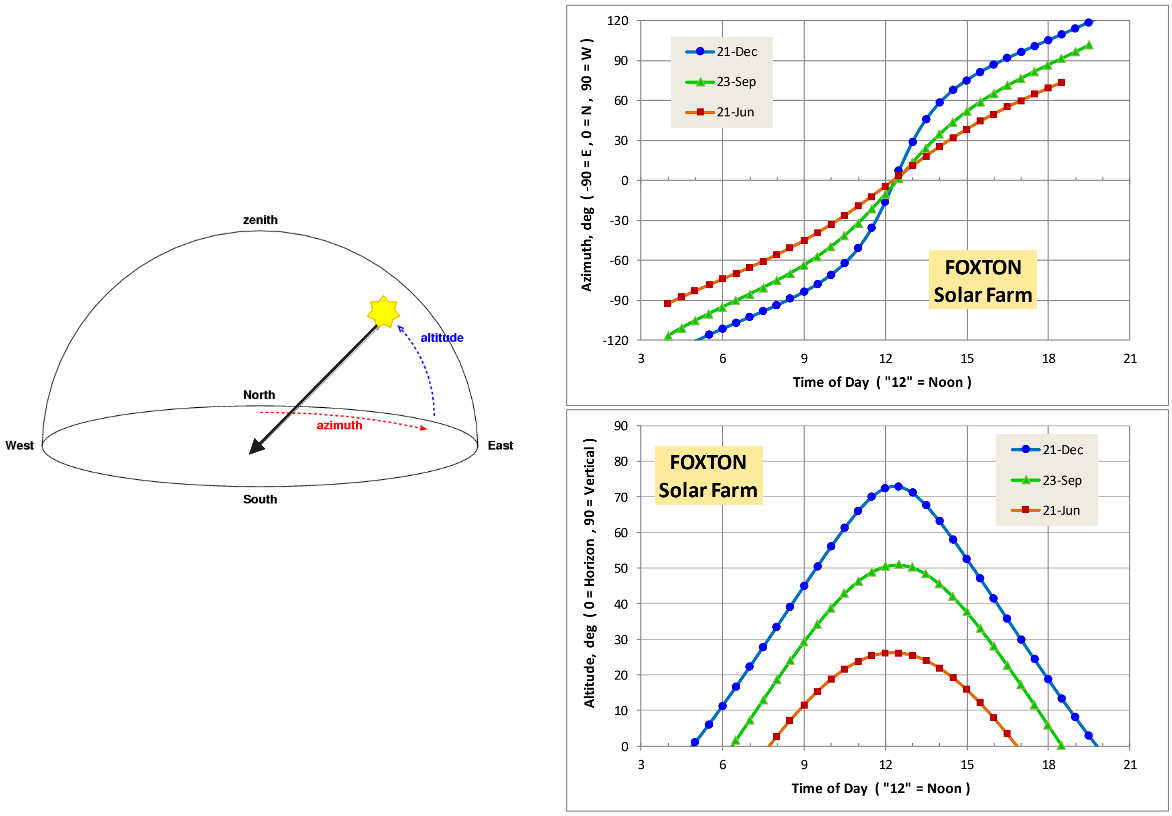


Table 1 Key Annual Solar Angle Characteristics for Project Site

Day of Year	Sunrise	Sunset	Sunrise-Sunset Azimuth Range	Max Altitude
Summer Solstice [1]	4:54 am	7:48 pm	±121.5° East & West of North	72.5°
Equinox	6:22 am	6:31 pm	±91.5° East & West of North	51°
Winter Solstice	7:44 am	4:50 pm	±58.5° East & West of North	26°

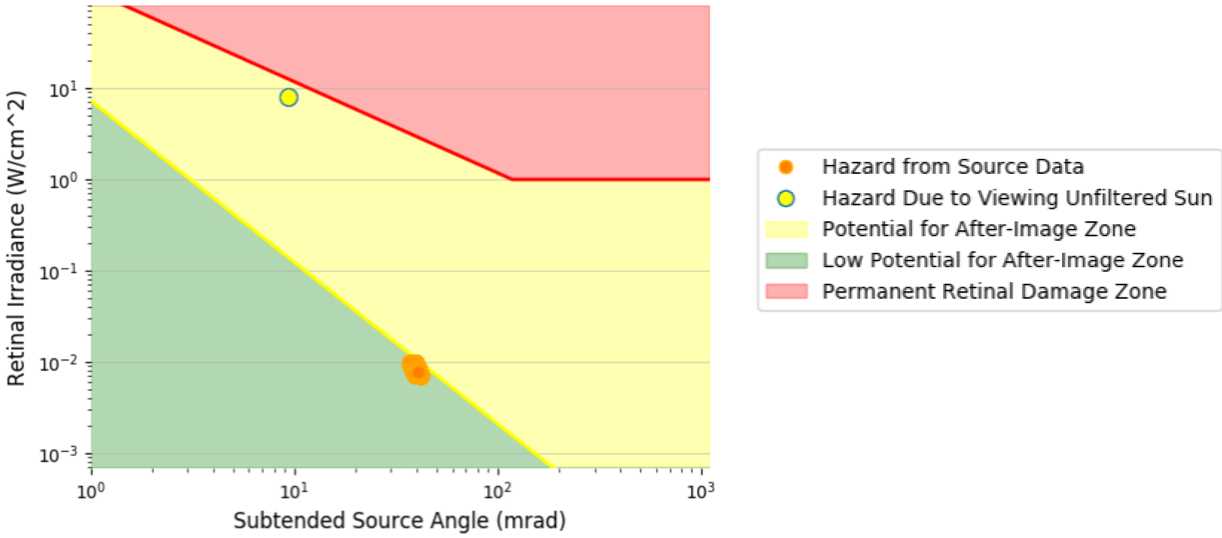
Note 1: Times of day do not take into account Daylight Savings Time

4.3 SGHAT Modelling Outputs

Modelling has been undertaken using the Forge Solar SGHAT software suite. This provides output in the form of an ocular hazard analysis plot, a sample of which is shown in **Figure 7**.

The analysis displayed in this plot is derived from solar simulations that extend over the entire calendar year in 1-minute intervals, sunrise to sunset.

Figure 7 Example Solar Glare Ocular Hazard Plot (SGHAT Software Output)



The following is noted regarding **Figure 7**.

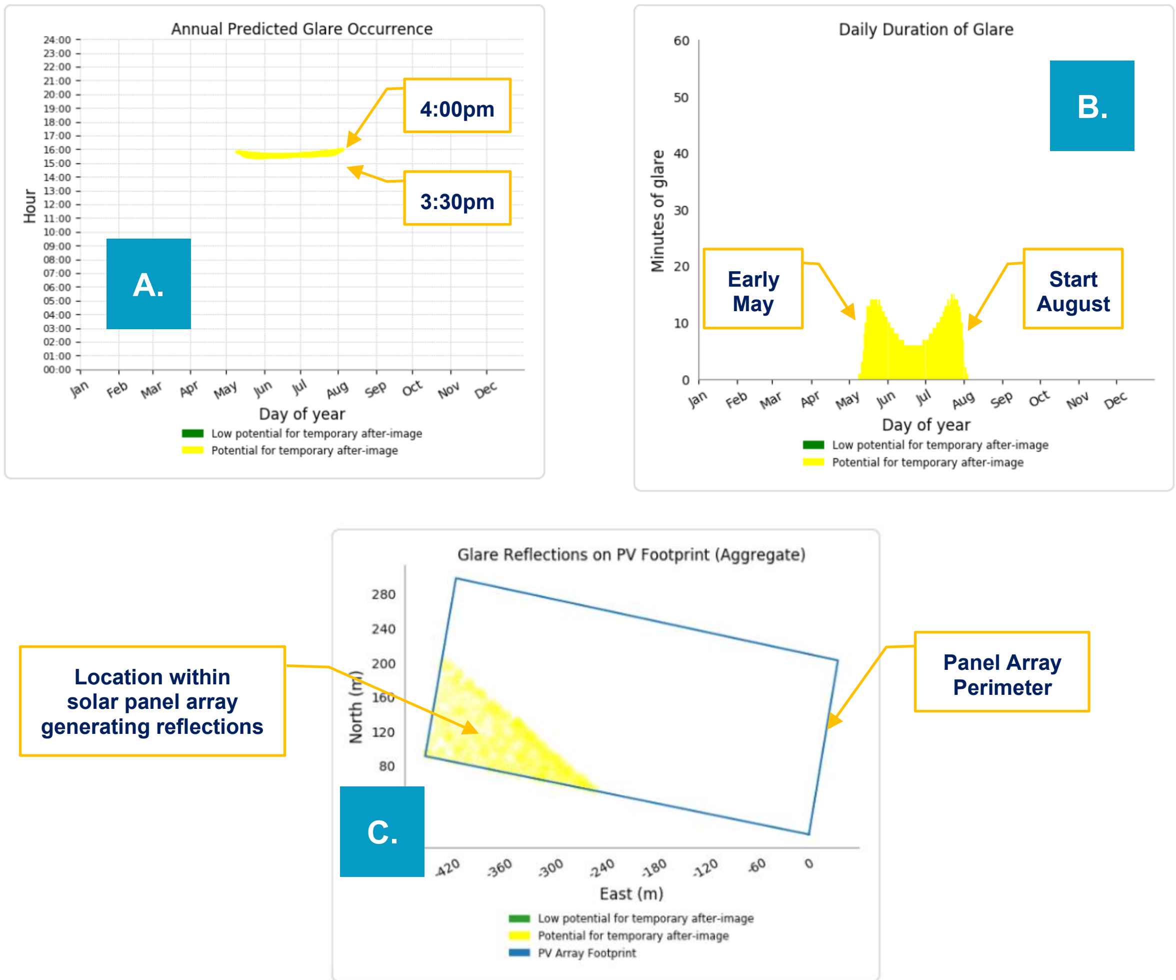
- SGHAT ocular impact is a function of both the "retinal irradiance" (i.e. the light seen by the eye) and "subtended source angle" (i.e. how wide an arc of view the light appears to be arriving from).
- SGHAT ocular impact falls into three categories:
  - GREEN: low potential to cause "after-image"
  - YELLOW: potential to cause temporary "after-image"
  - RED: potential to cause retinal burn (permanent eye damage)
- "After Image" is the term applied to a common retinal phenomenon that most people have experienced at some point or other, such as the effect that occurs when a photo with flash is taken in front of a person who then sees spots in front of their eyes for a few seconds. A more extreme example of "after-image" occurs when staring at the sun. "After-image" (also known as "photo bleaching") occurs because of the de-activation of the cells at the back of the eye's retina when subjected to a very bright light.
- The SGHAT plot provides an indication of the relative intensity of both the incoming reflection and the sources of light itself (i.e. the sun).
  - The occurrence of glare is shown in the plot as a series of **orange circles**, one circle for each minute that a reflection is visible.
  - A reference point is also shown in each SGHAT plot - the **yellow circle** with the **green outline** - representing the hazard level of viewing the sun directly without any filtering, i.e. staring at the sun.
  - In **Figure 7**, it can be seen that the reflection visible by the receiver is roughly 1,000 times less intense than the direct light from the sun itself.

- Finally, in relation to PV Solar facilities, it is important to note that the third SGHAT Ocular Plot "RED" category is not possible, since standard PV modules do not focus reflected sunlight (as in a concave mirror).

In addition to the above "assessment" output, SGHAT also produces information which reveals the extent of visibility of reflections at any chosen receiver position, regardless of whether the reflections constitute a glare condition or not – refer example shown in **Figure 8**.

- **Figure 8-A** shows the am/pm time periods when SGHAT YELLOW reflections are predicted to occur at a receptor throughout the year, in this case between around 3:30 pm and 4:00 pm.
- **Figure 8-B** shows the months during the year and the minutes per day when SGHAT YELLOW reflections occur at the same position, in this case from early-May to the start of August, for periods ranging up to 13 minutes per day.
- Finally, **Figure 8-C** shows where within the solar farm panel array the SGHAT YELLOW reflection rays of interest are emanating from, in this case from panels near the southwest corner.

Figure 8 Example Solar Glare Output Plots (SGHAT Software Output)



4.4 Other Factors Relevant to Glare Prediction

Weather

SGHAT model calculations (and indeed all commercially available glare models) assume CLEAR skies all year round.

The Foxton area is either overcast or mostly cloudy for almost 30% of the time throughout the year – refer https://en.climate-data.org/oceania/new-zealand/manawatu-wanganui/foxton-52283/.

This means that the total annual minutes of duration for any potential glare conditions predicted using SGHAT (or any "clear sky" glare model) should be reduced by an appropriate "overcast" factor, resulting in lower overall annual impacts.

- This however would only reduce the likely cumulative impact over the entire year.
- The maximum duration on any one day predicted by SGHAT would not be affected.

Terrain

Terrain features such as natural obstacles (vegetation, tree lines, etc) are not explicitly considered within SGHAT.

These however can be added to the simulation as so-called "SGHAT Obstructions" which can model vegetation/tree lines for example as solid, screening walls.

- In this case, it would be assumed that the screening vegetation has dense coverage and is of an evergreen species.

Topography

Similarly, topography is not modelled within SGHAT.

This can only be overcome by an examination of the Viewshed Analysis often undertaken for such projects, which reveals which surrounding receivers (roadways, houses, etc) will be able to actually "see" the solar panels within a proposed facility and hence experience any potential reflections.

Alternatively, the "Elevation Profile" function available in Google Earth (or alternative mapping tools) may be able to identify surrounding receivers which do not have an unobstructed view of the proposed facility.

5.0 Glare Impacts

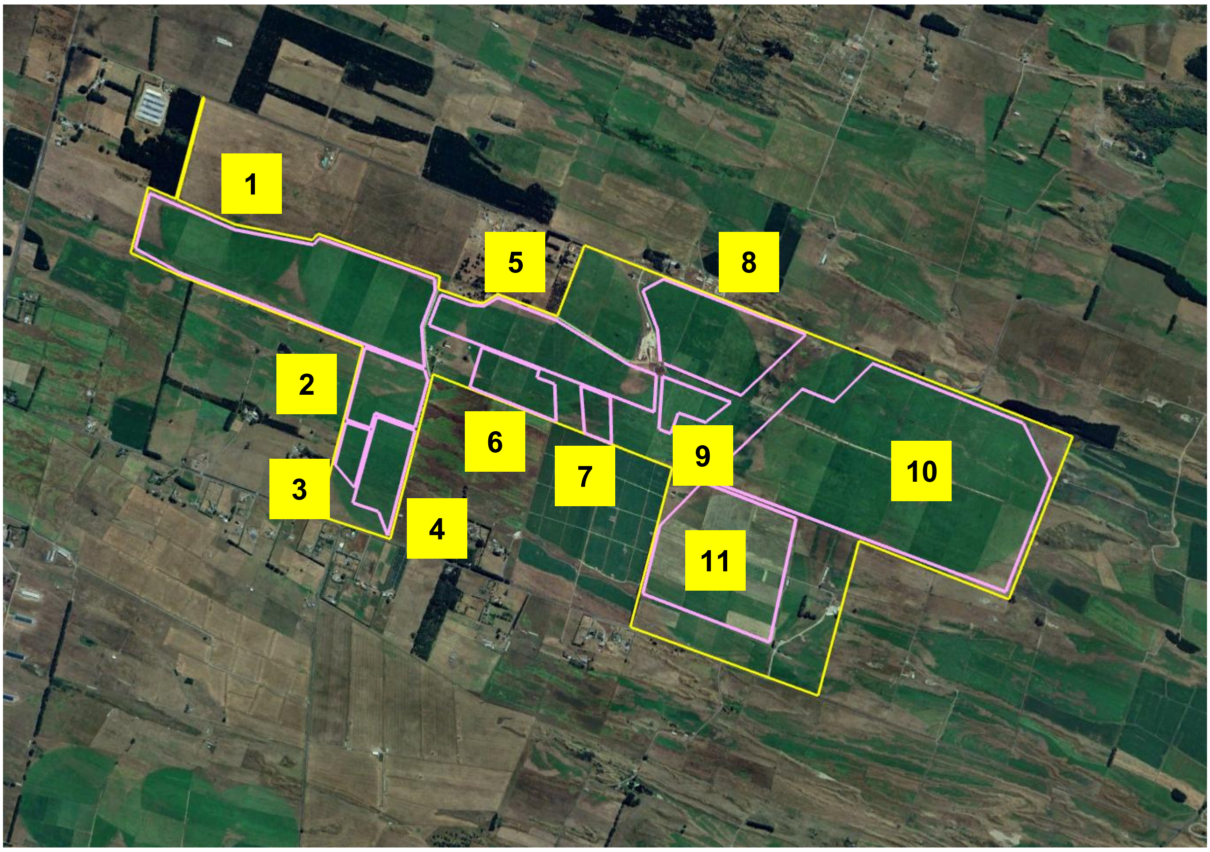
5.1 Modelling Inputs

Panel Sub-Arrays

The Project was modelled as a number of smaller "sub-arrays" – refer **Figure 9**.

- This was done to better follow the terrain of the site and give more detailed information as to which specific sub-areas of the proposed facility were responsible for potential glare occurrences.

Figure 9 Modelling of Project PV Sub-Arrays 1-11



Aviation Inputs

The runway assessed in this study is the operational runway at nearby Foxpine Airpark - refer **Figure 10**:

- Runway 09/27   954 m   grass

As per standard SGHAT protocol, the final approach paths for landing at the runway are modelled as follows:

- Flight path landing length modelled = 3.2 km (measured from runway threshold)
- Flight path landing glide angle = 3°
- Height above threshold = 5 m

The aerodrome does not have an Air Traffic Control Tower (ATCT).

Figure 10 Foxpine Airpark – Assessed Runways

As previously noted, Palmerston North Airport was also considered in this study. The distance separation of the airport from the Site (just over 25 km) means no glare will be possible. Globally, aviation glare assessments only consider impacts for separation distances between solar facilities and landing flight paths no greater than 5-6 km.

Road and Residential Receptors

The roadways included in the analysis are shown in **Figure 11**. The motorist viewing heights for the roadways were based on the expected vehicle categories using the roads, as follows:

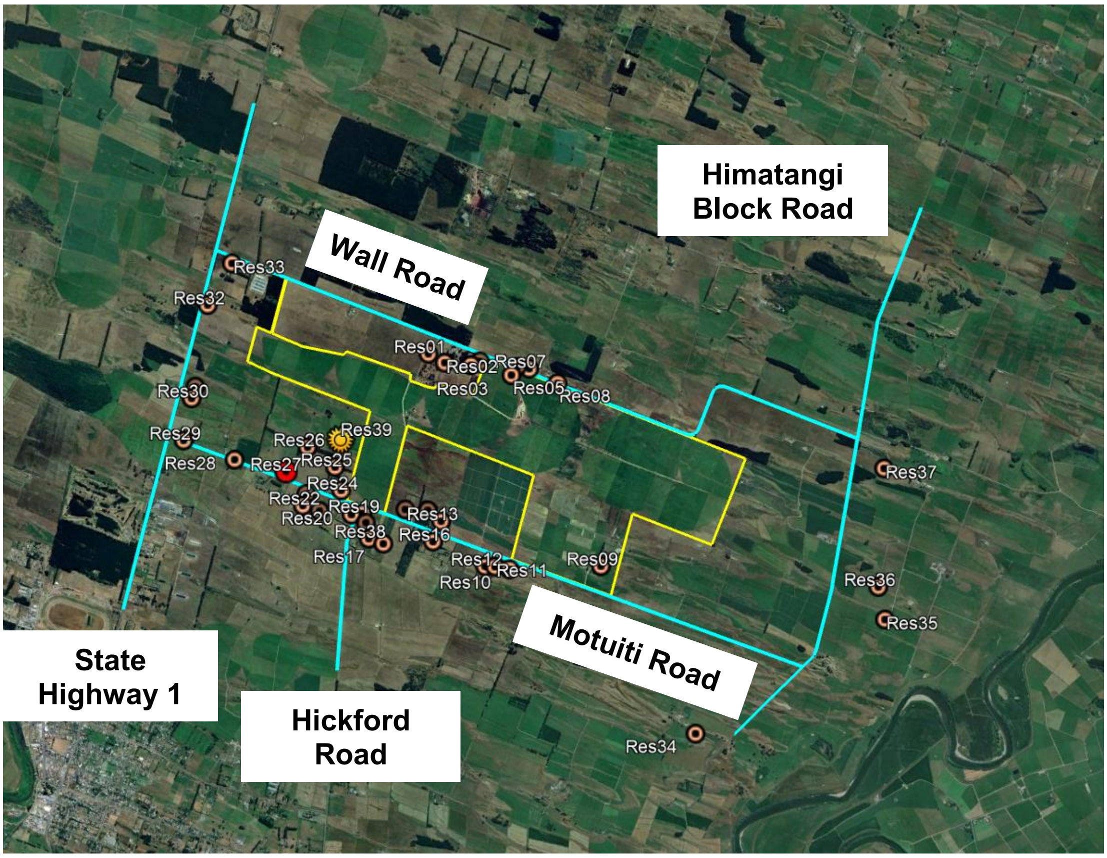
- 2.4 m for State Highway 1 (heavy vehicles expected).
- 1.8 m for Motuiti Road, Wall Road and Himatangi Block Road (medium trucks commonly expected).
- 1.5 m for Hickford Road (passenger vehicles and SUVs expected).

The representative dwellings included in the analysis are also shown in **Figure 11**.

- For surrounding residential dwellings, the observer height was set at 1.5 m and 4.5 m above the ground for single-storey dwellings and two-storey dwellings respectively.

The latitude and longitude coordinates of the representative residential locations shown in **Figure 11** can be found in **Appendix A**.

Figure 11 Roadway and Surrounding Residential Receiver Locations



In addition to the existing dwellings surrounding the site, a future dwelling (refer #39 in **Figure 11**) was included in the analysis: address - 187 Motuiti Road. The dwelling is positioned on a sandy knoll and is hence slightly higher than surrounding nearby residences. The location data for the future (potentially) two-storey residence is:

- Lat / Long: 40.447726°S / 175.316867°E | RL: 26.5m

5.2 Modelling Staging Methodology

The modelling study involved the following stages:

Stage 1 Initial modelling

. baseline modelling to assess influence of Incidence Angle, duration of glare conditions, topographic features of relevance, etc.

Stage 2 Design Modelling.

. modelling to assess the final design options, including panel Rest Angle and Perimeter Vegetation.

5.3 Stage 1 Modelling

5.3.1 "Baseline" Model

For the "Baseline" model simulation, the following assumptions were made:

- The Project was modelled using the sub-arrays shown in **Figure 9**.
- For all sub-arrays, Back-tracking was implemented with a **Rest Angle of 0°.**
- **No vegetation or other screening** (eg buildings) was included in the model.
- **No allowance** was made for the impact of **intervening sections of topography** which could obscure the view of the facility for passing motorists or residences.

This run was designed to give an initial indication of potential locations of glare prior to considering screening and topographic influences and the need for mitigation.

Table 2 shows the total annual minutes of potential SGHAT YELLOW glare with both the individual sub-array annual minutes of glare and the total over all sub-arrays. Cells in the table with no entry indicate NO occurrence throughout the year of potential glare. Results for the roads include the FULL STRETCH of roadway shown in **Figure 11**.

Table 2 Annual Minutes of SGHAT YELLOW Glare (Baseline Simulation)

Receptor	PV Sub-Array – refer Fig.9											Yearly Total
	1	2	3	4	5	6	7	8	9	10	11	
Runway 09												
Runway 27												
Hickford Road												
Himatangi Block Road												
Motuiti Road		36			35	232				166		**469**
State Highway 1												
Wall Road	944							1578				**2522**
Res01												
Res02												
Res03-								254				**254**
Res04												
Res05								97				**97**
Res06-								92				**92**
Res07												
Res08								71				**71**
Res09						89						**89**

Receptor	PV Sub-Array – refer Fig.9											Yearly Total
	1	2	3	4	5	6	7	8	9	10	11	
Res10												
Res11												
Res12												
Res13												
Res14												
Res15												
Res16												
Res17												
Res18												
Res19												
Res20												
Res21												
Res22												
Res23												
Res24												
Res25												
Res26												
Res27												
Res28												
Res29												
Res30												
Res31												
Res32												
Res33												
Res34												
Res35												
Res36												
Res37												
Res38												
Res39												

Baseline Model Results Summary

Aviation Glare

- NIL glare is predicted for both Runway 09 and Runway 27.

Road and Rail Traffic Disability Glare

- NIL glare is predicted for Hickford Road, Himatangi Block Road and State Highway 1.
- A modest degree of SGHAT YELLOW glare is predicted for Motuiti Road from PV Sub-arrays 2, 5, 6 and 10.
- A moderate degree of SGHAT YELLOW glare is predicted for Wall Road from PV Sub-arrays 1 and 8.

Residential Nuisance Glare

The residential receiver results in **Table 2** are shown with shading of the annual totals so as to identify the relevant LSSE Guideline impact category:

- Green Low Impact < 10min/day OR < 10hr/year
- Orange Moderate Impact 10-30min/day OR 10-30hr/year
- Red High Impact > 30min/day OR > 30hr/year

Dwellings within the LSSE Guideline "High" Impact Category:

- **NIL**

Dwellings within the LSSE Guideline "Moderate" Impact Category:

- **NIL**

Dwellings within the LSSE Guideline "**Low**" Impact Category:

- Receiver 9 (office at 447 Motuiti Road) from PV Sub-array 6.
- Receivers 3 (282 Wall Road), 5 (352A Wall Road), 6 (Himatangi 3A3G1 Block) and 8 (371 Wall Road) from PV Sub-array 8.

Note again that the above three LSSE Guideline impact categories are relevant only to Residential Nuisance Glare and not to Road Traffic Disability Glare nor Aviation Glare.

Observations

- NO allowance was made for existing or planned vegetation screening or topographic blockage, potentially significant for ground-based receivers.
- The most populated area surrounding the Project is along Motuiti Road either side of the Hickson Road intersection. NIL glare is predicted at these locations, due to a combination of:
  - The gentle drop in elevation (east to west) at the location of these houses, compared to the nearest solar panel elevations; and
  - The altitude angles relevant to these positions for the east to northeast incoming direct solar rays able to create reflections in their direction. The higher altitude angles result in reflection being directed upwards, well above the elevation height of these residences.
- The potential to experience reflections for dwellings to the immediate north of the Project (ie along Wall Road) is sensitive to position of the dwelling in relation to the nearest solar panels and the height difference between the two.
  - For example, Residential Receiver 3 (282 Wall Road) may experience reflections from Sub-Array 7 due to its proximity to the nearest panels and its two-storey height. The nearby Residential Receivers 2 (254A Wall Road) and 4 (286 Wall Road) however do not experience reflections due to their relative positions and single-storey height.
  - At the future dwelling at 187 Motuiti Road (#39), sunrise reflections would be theoretically visible for several minutes per day in mid-summer. Their occurrence would involve solar altitude angles of less than 1°, ie with the solar disc barely visible above the horizon. The accompanying incidence angles would be greater than 88°, ie solar rays almost parallel to the solar panels. A resident (on the second floor of the dwelling) would be looking directly at the sun at the same time. This would not constitute a glare condition.

5.3.2 Further Analysis of the Baseline Results

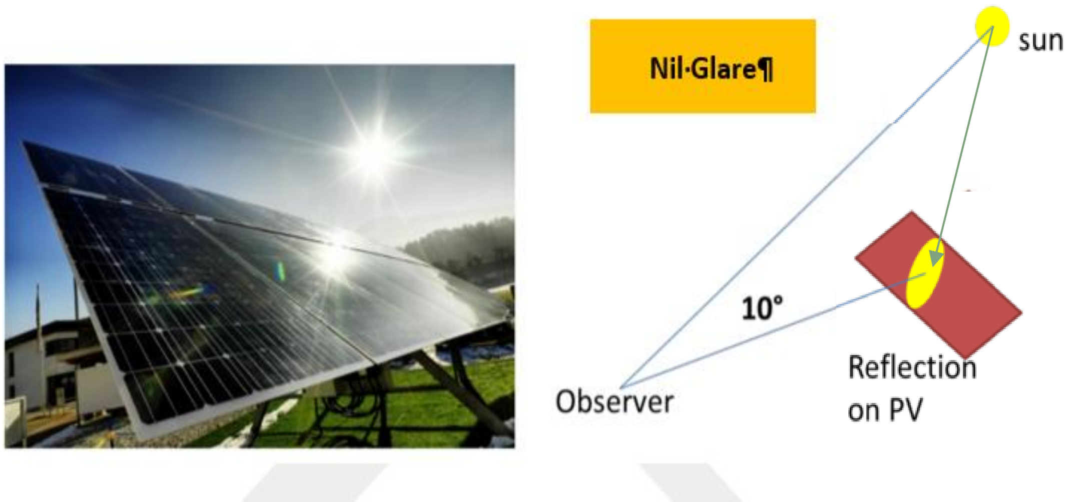
Angle of Incidence

The reflection conditions predicted for Motuiti Road and Wall Road were examined further to assess whether they would constitute Road Traffic Disability Glare.

The context of this assessment was made in light of the observation made in **Section 3**, where it was noted that for very high incidence angles, it would almost always be the case that an observer would perceive reflections coming from virtually the same direction as the incoming solar rays themselves. Such a condition would not constitute a glare situation as the intensity of the incoming solar ray itself would dominate the field of vision perceived by the observer.

In fact, this latter condition has evolved into a globally adopted "acceptability" glare axiom, namely that a glare condition can only exist if the angle difference between an incoming solar ray and its associated reflection is greater than approximately 10° – refer **Figure 12**.

Figure 12 Nil Glare Condition Applicable to High Incidence Angle Reflections



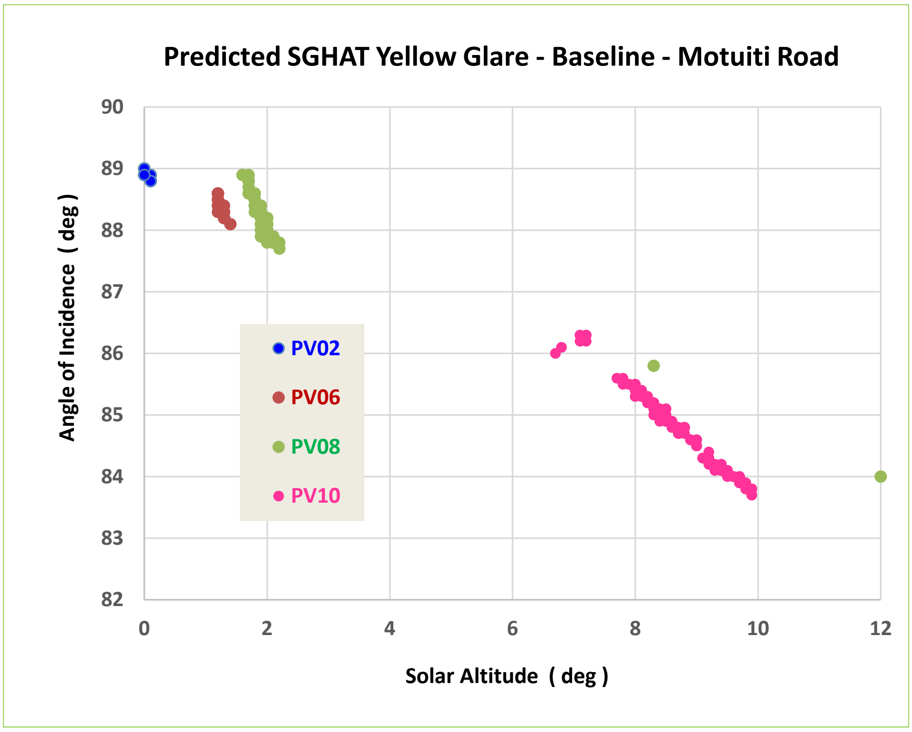
SLR has examined the predicted reflections onto Motuiti Road and Wall Road. The results, shown in **Figure 13**, indicated the following:

- Reflections impacting Motuiti Road for POV Sub-arrays 2, 6 and 8 involve LOW ALTITUDE angles and HIGH INCIDENCE angles, ie right at the time of sunrise.
- The same applies to the reflections impacting Wall Road for sub-arrays 1 and 8 which also occur for LOW ALTITUDE angles and HIGH INCIDENCE angles, ie right at the time of sunrise and sunset depending on position along the roadway.
    - The resulting difference between the angle of incoming direct solar rays and associated reflections for the above would be lower than 10°. The predicted reflections would not constitute a glare condition.
- The remaining reflections of interest are along Motuiti Road for PV Sub-array 10.

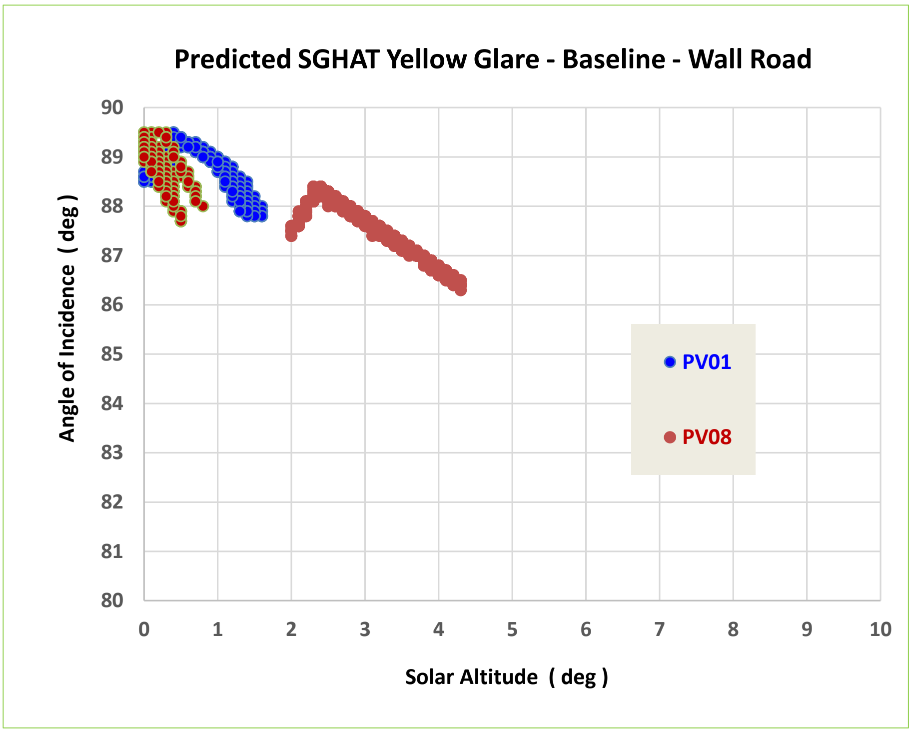
Note again that the above assessment has not relied on the vegetation currently proposed around the Site nor the impact of any intervening topography.

Figure 13 Altitude and Incidence Angles for Predicted Road Reflections

Motuiti Road



Wall Road



Discussion – Residential Nuisance Glare

The following is also noted with respect to reflections predicted at Residential Receivers 3, 5, 6, 8 and 9. For these receivers:

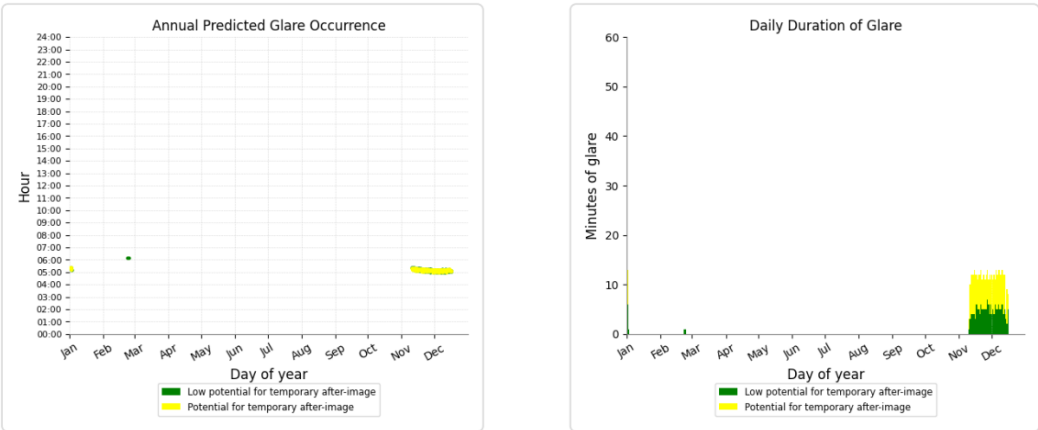
- All of these reflections fall within the LSSE Guideline "Low" Impact Category, where no mitigation is recommended by the guideline.
- Moreover, SGHAT YELLOW category reflections occur for several minutes each day over a limited period during summer in the early morning, ie around sunrise, with very LOW ALTITUDE angles combined with very HIGH INCIDENCE angles – refer **Figure 14**.
- The resulting difference between the angle of incoming direct solar rays and associated reflections would be much lower than 10°. Observers would be looking directly at the sun at the same time as the associated reflections.

On this basis of all of the above, the predicted (minimalist) reflections at Receivers 3, 5, 6, 8 and 9 would not constitute a glare condition.

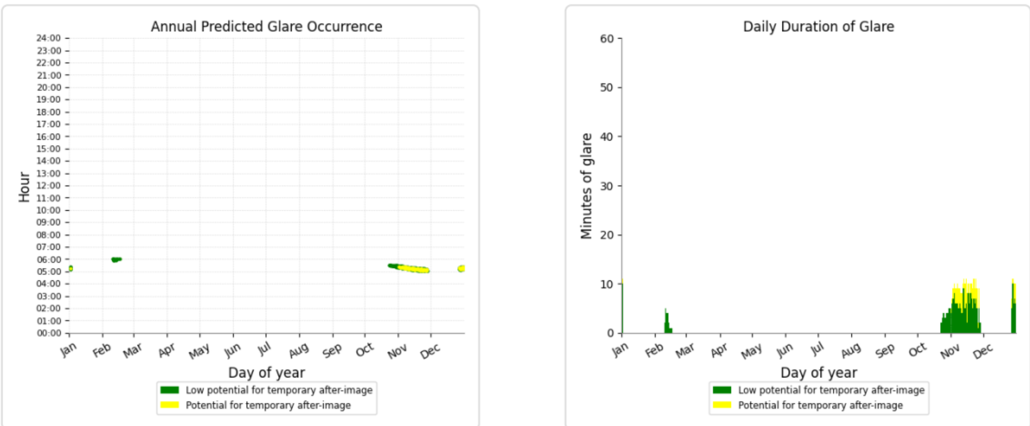
Finally, it is noted again that the above assessment has not relied on the vegetation currently proposed for the perimeter of the Site, which would entirely eliminate even the visibility of these minimalist reflections.

Figure 14 Reflection Occurrence Characteristics – Residences 3, 5, 6, 8 and 9

Residential Receiver 3 (282 Wall Road)

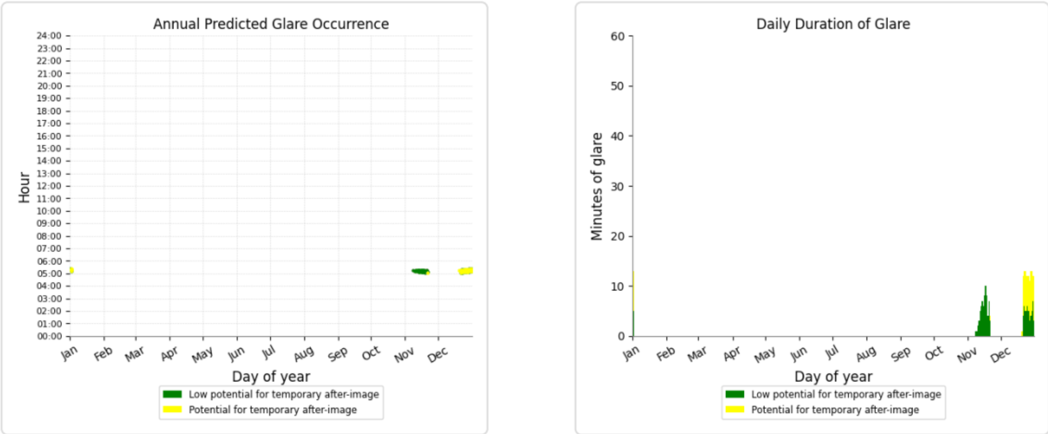


Residential Receiver 5 (352A Wall Road)

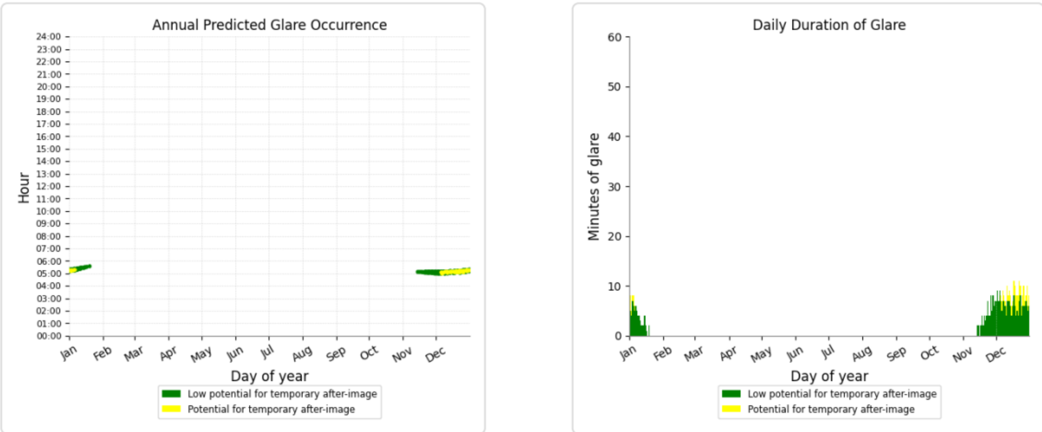


(Fig.14 cont'd)

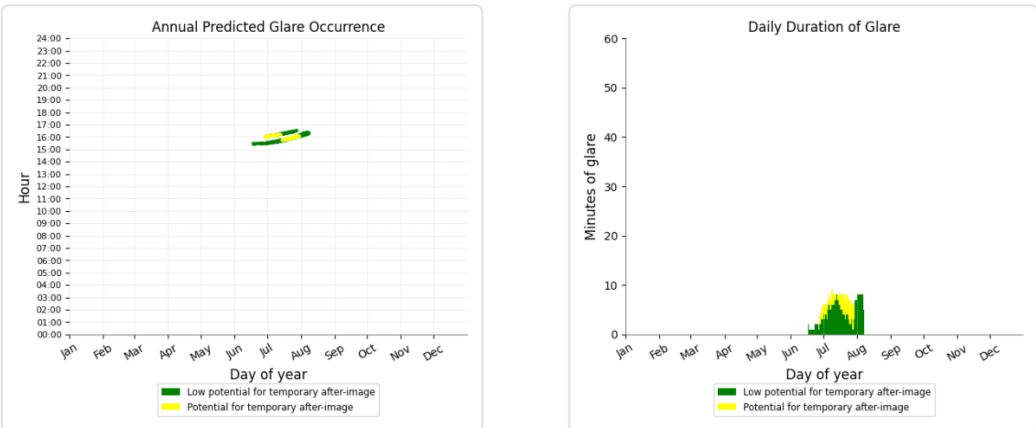
Residential Receiver 6 (Himatangi 3A3G1 Block)



Residential Receiver 8 (371 Wall Road)



Residential Receiver 9 (office at 447 Motuiti Road)



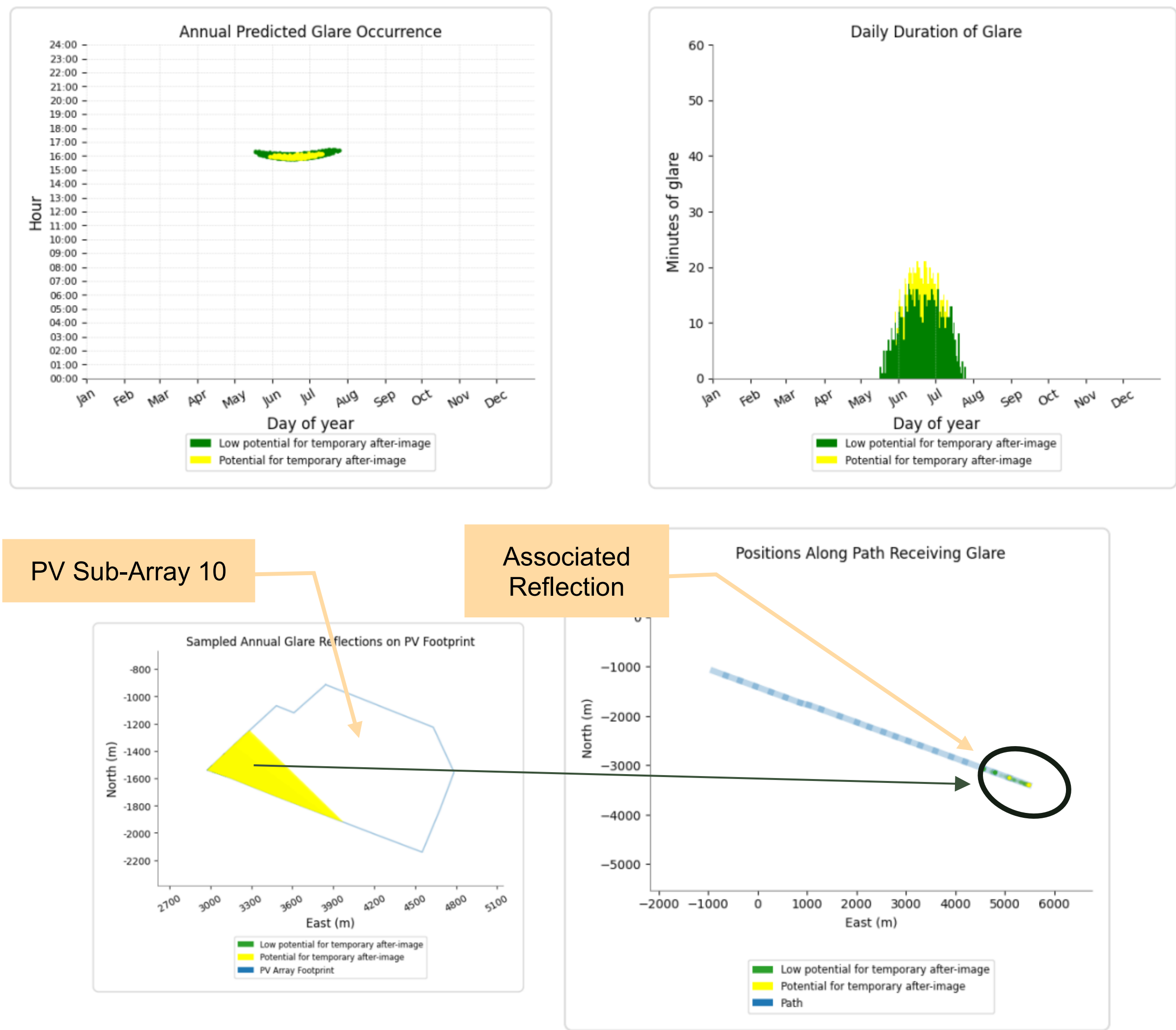
Topography

Following on from the above “Angle of Incidence” considerations, the only remaining sources of potential glare are predicted to occur along Motuiti Road from PV Sub-Array 10.

The reflection condition of interest is shown in **Figure 15:**

- Reflections occur late afternoon during mid-winter (2 months duration).
- Reflections impact Motuiti Road at its very eastern end close to its intersection with Himatangi Block Road.

Figure 15 Motuiti Road - Reflection Characteristics for Sub-Array 10

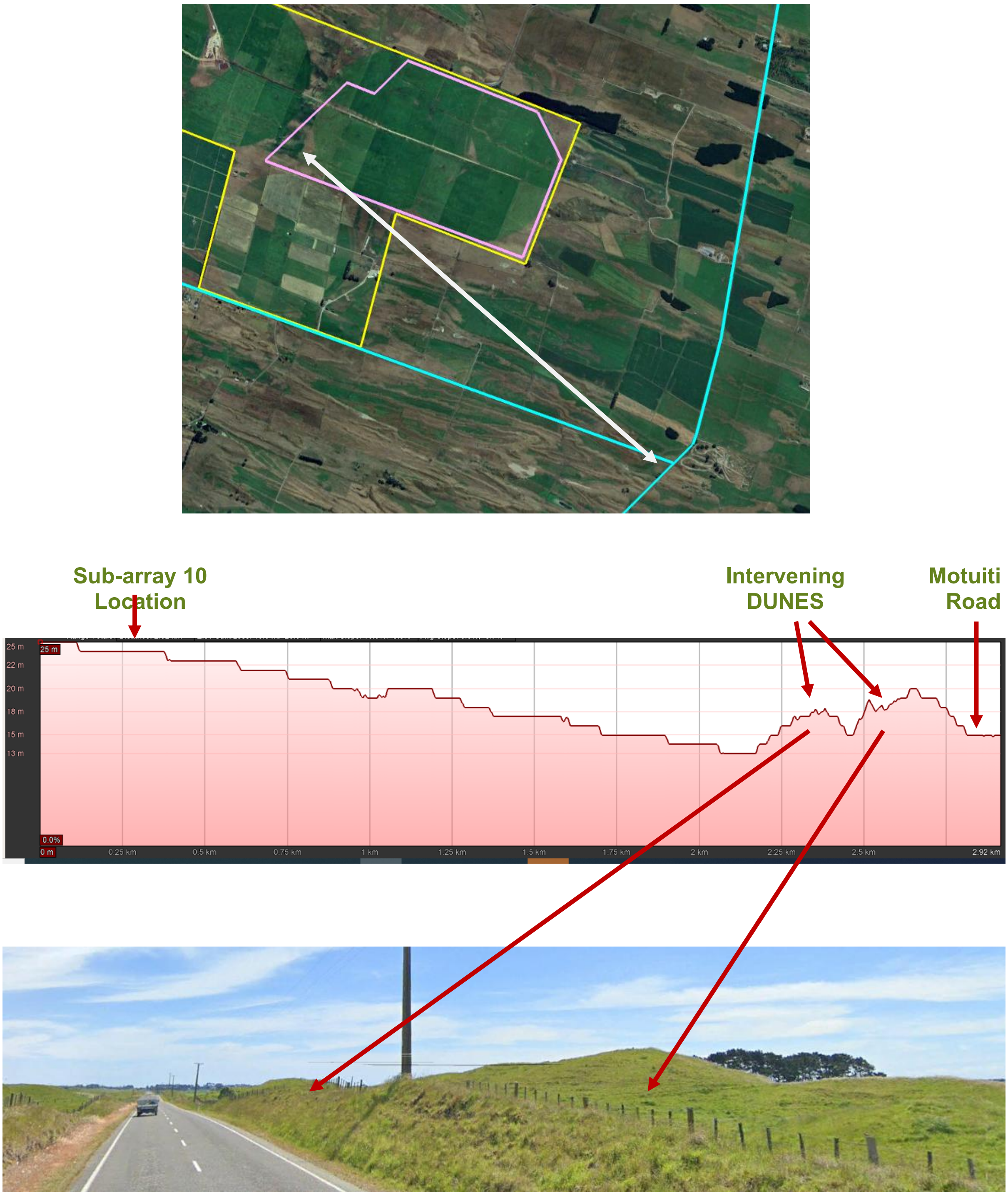


For the above reflection condition, a Google Earth Elevation Profile was sought between PV Sub-array 10 and the impacted stretch of Motuiti Road close to its intersection with Himatangi Block Road., The elevation profile is shown in **Figure 16**.

- It can be seen that any reflections from sub-array would be blocked by the dunes that exist on the north side of Motuiti Road close to the intersection with Himatangi Block Road.

Accordingly, there would be NIL glare along Motuiti Road for this reflection occurrence.

Figure 16 Intervening Topography at Motuiti Road Reflection Area



Driving west along Motuiti Road close to the intersection with Himatangi Block Road. The Intervening dunes can be seen along the north side of the roadway.

5.4 Stage 2 Modelling

The Stage 1 modelling demonstrated the following:

- There are no instances of "glare" for all receivers covered: Aviation Glare, Road Traffic Disability Glare and Residential Nuisance Glare.
- There are instances involving theoretically visible reflections which would not be considered glare due to their high incidence angles.

Overall, the conclusion of the Stage 1 Modelling assessment is that negligible impacts will be generated by the proposal in relation to glint and glare at all surrounding sensitive receptors.

Additional modelling was carried out to examine scenarios which would eliminate the visibility of all reflections, regardless of whether they constituted glare or not.

Mitigation via Rest Angle

The SGHAT calculations were re-run with a Back-Tracking Rest Angle of 5° for sub-arrays 1, 2, 5, 6 and 8.

- The result of the SGHAT calculations was the elimination of ALL visible reflections for ALL receivers (motorists and residents).

Mitigation via Site Perimeter Screening

The SGHAT calculations were also re-run with the proposed vegetation screening shown in **Figure 17**.

- The modelling height of the screening was conservatively assumed to be 4 m. It is understood that many sections of the proposed screening will be higher.
- The result of the SGHAT calculations with the 4 m high vegetation screening was the elimination of ALL reflections for ALL receivers (motorists and residents).

Note Regarding Interim Vegetation Growth Period

As noted above, the Baseline modelling for the Project showed that there would be no glare for aviation operations, road traffic and dwellings surrounding the Site.

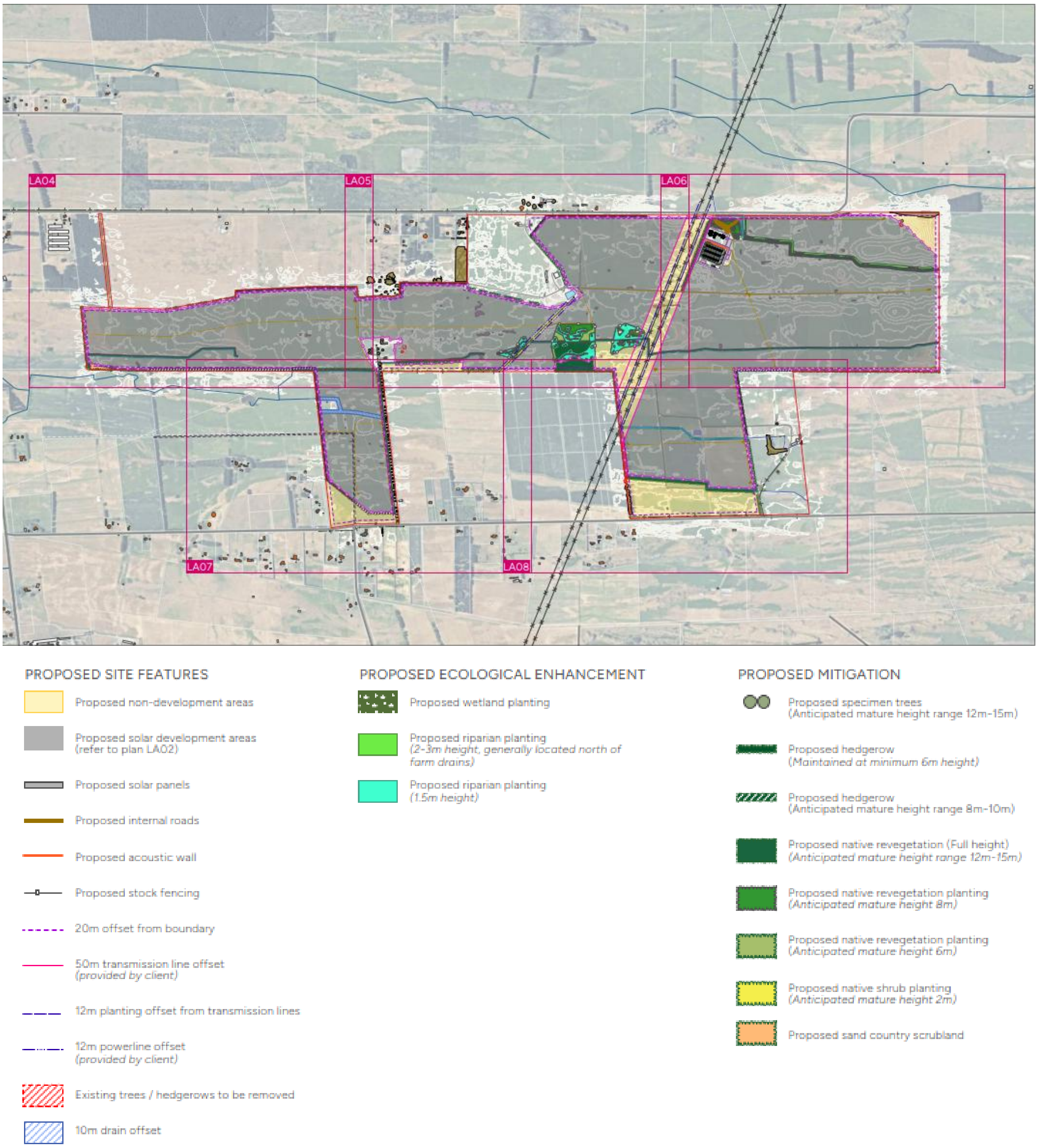
There were minor instances (typically around sunrise and sunset) when small duration reflections may be theoretically visible along sections of two roadways and a small number of dwellings.

The planned perimeter landscaping for the Project (refer **Figure 17**) will totally eliminate the visibility of these reflections.

- The modelled perimeter planting is intended to ultimately reach a height of over 4 m, in many sections up to 6 m and in some sections 8-10 m.
- When planted during the construction phase of the Project, the initial height of the perimeter vegetation would be approximately 1.5-2 m.
- Accordingly, there would be a period (estimated to be around 5 years for exotic hedging species and 6 years for taller growing native plant species) while the perimeter planting increases in height, when some minor reflections would theoretically still be visible as discussed above.
- It is reiterated that the reflections experienced by the nearest dwellings would not require mitigation under the NSW LSSE (Large-Scale Solar Energy) Guideline, as the reflections occur for less than 10 minutes on any one day and less than 10 hours on an overall annual basis. Further, their impact (at sunrise/sunset) would be totally masked by the impact of the direct incoming solar rays.

- In summary, there will be no “glare” during the interim vegetation growth period and, once the planned vegetation reaches a height of 4 m, even the theoretical visibility of the minor sunrise/sunset reflections will be totally eliminated. In many areas, the ultimate height of the perimeter vegetation screening is even higher.

Figure 17 Proposed Site Perimeter Screening



6.0 Feedback

At SLR, we are committed to delivering professional quality service to our clients. We are constantly looking for ways to improve the quality of our deliverables and our service to our clients. Client feedback is a valuable tool in helping us prioritise services and resources according to our client needs.

To achieve this, your feedback on the team's performance, deliverables and service are valuable and SLR welcome all feedback via https://www.slrconsulting.com/en/feedback. We recognise the value of your time and we will make a $10 donation to our Charity Partner - Lifeline, for every completed form.

Appendix A Residential Receiver Coordinates

Foxton Solar Farm

Glint and Glare Assessment

Genesis Energy

SLR Project No.: 810.14848.00007
Revision: R01-v1.5

10 December 2025

The latitude and longitude coordinates, and elevation heights of the representative locations examined in this study are shown in **Table A-1**.

Table A-1 Latitude and Longitude of Sensitive Receivers Surrounding Site

Name	Property Address	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 1	252 Wall Road	-40.438317	175.327631	28.00	1.50
OP 2	254A Wall Road	-40.439028	175.329481	29.00	1.50
OP 3	282 Wall Road	-40.439456	175.332469	29.00	4.50
OP 4	286 Wall Road	-40.439130	175.333505	29.00	1.50
OP 5	352A Wall Road	-40.440099	175.337256	28.00	1.50
OP 6	Himatangi 3A3G1 Block	-40.439569	175.337991	28.00	1.50
OP 7	337 Wall Road	-40.439765	175.339509	27.00	1.50
OP 8	371 Wall Road	-40.441042	175.342744	25.00	1.50
OP 9	Office at 447 Motuiti Road	-40.457433	175.347921	22.00	1.50
OP 10	368 Motuiti Road	-40.457645	175.337045	30.00	1.50
OP 11	350 Motuiti Road	-40.457416	175.335498	31.00	1.50
OP 12	346 Motuiti Road	-40.457412	175.334320	31.00	1.50
OP 13	293 Motuiti Road	-40.453334	175.329067	29.00	1.50
OP 14	279 Motuiti Road	-40.452484	175.327550	28.00	1.50
OP 15	251 Motuiti Road	-40.452428	175.324710	27.00	1.50
OP 16	284 Motuiti Road	-40.455195	175.328147	29.00	1.50
OP 17	240 Motuiti Road	-40.455312	175.322028	25.00	1.50
OP 18	516 Hickford Road	-40.453623	175.319936	24.00	1.50
OP 19	212 Motuiti Road	-40.452656	175.319904	24.00	1.50
OP 20	525 Hickford Road	-40.452668	175.318391	23.00	1.50
OP 21	172 Motuiti Road	-40.452450	175.314767	22.00	1.50
OP 22	152A Motuiti Road	-40.451946	175.312670	22.00	1.50
OP 23	150 Motuiti Road	-40.450866	175.312860	22.00	1.50
OP 24	185 Motuiti Road	-40.450699	175.317264	23.02	1.50
OP 25	171 Motuiti Road	-40.448575	175.316256	23.00	1.50
OP 26	125 Motuiti Road	-40.446812	175.313332	22.00	1.50
OP 27	123 Motuiti Road	-40.449026	175.310585	21.00	1.50
OP 28	73 Motuiti Road	-40.447868	175.304352	20.00	1.00
OP 29	13 Motuiti Road	-40.446171	175.298427	18.00	1.50
OP 30	Himatangi 5B Block	-40.442361	175.299167	22.00	1.50
OP 31	Himatangi 5B Block	-40.441211	175.299929	23.00	1.50
OP 32	360 State Highway 1	-40.433877	175.301420	23.00	1.50
OP 33	18 Wall Road	-40.430174	175.304196	19.00	1.50
OP 34	31 Bowe Road	-40.472534	175.359311	21.00	1.50
OP 35	56 Chesham Road	-40.462195	175.381720	11.00	1.50
OP 36	41 Chesham Road	-40.459270	175.380859	14.00	1.50
OP 37	Himatangi 3A3D Block	-40.448532	175.381613	17.00	1.50
OP 38	220 Motuiti Road	-40.454868	175.320470	24.00	4.50
OP 39	187 Motuiti Road	-40.447726	175.316867	26.50	4.50

Appendix B Dr Peter Georgiou – CV for Solar Studies

Foxton Solar Farm

Glint and Glare Assessment

Genesis Energy

SLR Project No.: 810.14848.00007

Revision: R01-v1.5

10 December 2025

Peter Georgiou, BSc, BEng(HonsI), MESc, PhD
Technical Director | Specialist Climate Science, Wind Engineering & Hazard Studies |
Asia - Pacific

Peter graduated from the University of Sydney (BSc, BEng-Civil HonsI) and spent the next 12 years at the University of Western Ontario's BLWT Laboratory, where he was engaged in post-graduate studies, R&D and consulting on a wide range of engineering projects (mainly high-rise buildings, long-span bridges and transmission line design) in North America, Southeast Asia and Europe. At BLWTL, Dr Georgiou was also involved in post-disaster investigations following major, destructive storm events. Using his studies into climatology and the potential influence of climate change, Peter assisted BLWT's Director, Professor Alan Davenport in the formative stages of the IDNDR (International Decade of Natural Disaster Reduction) - Professor Davenport was an influential driver of the IDNDR and one of Canada's key members.

In subsequent stints at the University of Sydney, and now at SLR (since 1999), Peter has led and carried out literally hundreds of commissions involving Climate and Climate Change, Wind Engineering, ESD and Sustainability, Hazard and Risk, and Solar (Reflectivity, Glare, Illumination) for projects located throughout Australasia, Southeast Asia, North and South America, Europe and the Middle East.

Peter is an APAC Global Technical Leader for Glare Studies. Peter has been involved for over three decades in studies (globally) in Daytime Reflective Glint & Glare and Night-Time Illumination Glare. These include SLR's SGHAT-related studies, involving aviation glare risk, and SLR's studies covering Road and Rail Disability Glare and Residential Nuisance Glare using SLR's special in-house software (developed by Peter) for Threshold Increment (TI) Value computation.

Aligned with these glare studies, Peter has been involved in many of SLR's renewable energy projects, also undertaking specialist Hazard & Risk Studies for Wind, Solar and BESS facilities as well as specialist work in EMR-EMI, Shadow Flicker, Blade Throw and Aviation Safeguarding.

Education and Certifications

- Bachelor of Science, University of Sydney (1975)
- Bachelor of Civil Engineering (HONS I), University of Sydney (1977)
- Master of Engineering Science, University of Western Ontario (1979)
- Doctor of Philosophy, University of Western Ontario (1984)

Project Experience – Solar Farm Glint and Glare

Australian Projects

New South Wales

- Amaroo Solar Farm, Moree – 8MW — FRANC Energy Systems
- Ashley Solar Farm – 8MW — FRANC Energy Systems
- Baiada Oakburn Facility Rooftop Solar, Tamworth – 1MW — Richard Crookes Construction
- Blind Creek Solar Farm, Bungendore – 350MW — Stride Renewables
- Boggabri Solar Farm – 5MW — Providence Asset Group
- Bomen Solar Farm – 100MW — Bomen Solar Power Trust
- Back Henty Solar Farm, Culcairn – 8MW — FRANC Energy Systems
- Coonamble Solar Farm, Warialda – 5MW — Providence Climate Capital
- Finley Solar Farm – 5MW — KDC Planners

• Glen Innes Solar Farm – 5MW	Providence Asset Group
• Gunnedah Solar Farm – 5MW	KDC Planners
• Gunning Solar Farm – 250MW	Canadian Solar
• Guyra Solar Farm – 5MW	KDC Planners
• Manilla Solar Farm – 7MW	KDC Planners
• Narrabri Solar Farm – 5MW	Providence Asset Group
• Narromine Solar Farm - 5MW	FRANC Energy Systems
• Oxley Park Solar Farm, Nevertire – 5MW	Providence Climate Capital
• Pine Ridge Solar Farm, West Wyalong – 5MW	Providence Asset Group
• South Tamworth Solar Farm – 5MW	KDC Planners
• Taminda Solar Farm, Tamworth – 9MW	ELTON Consulting
• Warialda Solar Farm – 5MW	Providence Climate Capital
• Warral Solar Farm – 5MW	Providence Asset Group
• Wee Waa Solar Farm – 5MW	FRANC Energy Systems
• Yarrabee Solar Farm – 900MW	Reach Solar Energy
Queensland	
• Broadsound Solar Farm – 377MW	Hadstone Energy
• Chinchilla Solar Farm – 20MW	Impact Investment Group
• North Creek Solar Facility, Coppabella – 150MW	TILT Renewables
• Eumundi Landfill Solar Farm – 5MW	Noosa Shire Council
• Lower Wonga Solar Farm – 350MW	LightsourceBP
• Gurambillbara Energy Hub, Pinnacles – 400MW	365 Future Energy Pty Ltd
• Toowoomba Aerodrome Rooftop Solar – 2MW	ITP Renewables
South Australia	
• Oodnadatta Solar Farm – 1MW	SA Department of Energy & Mining
• Parafield Airport Rooftop Solar Facility – 0.2MW	Regen Energy
• Robertstown East Solar Farm – 236MW	AMP Power Australia
• Yalata Solar Farm – 1MW	SA Department of Energy & Mining
Tasmania	
• Weasel Solar Farm – 219MW	Robert Luxmoore
Victoria	
• Hazelwood Solar Farm – 500MW	Manthos Investments / Robert Luxmoore
• Laverton North Solar Farm – 2MW	Kuga Energy
• Melbourne Airport Mace Way Rooftop Solar – 0.5MW	Kuga Energy
• Springvale South Solar Farm - 30MW	Maddocks Lawyers
• Wangaratta Solar Farm – 40MW	Countrywide Energy / CleanPeak Energy
• Winton Refuelling Solar Facility, - 1MW	Lochard Energy
Western Australia	
• Broome Airport Hangar Solar Facility – 0.5MW	Royal Flying Doctor Service
• Collgar WEX Solar Farm, Norpa – 7.5MW	Avora Energy
• Gudai-Darri Solar Farm, Koodaideri – 34MW	Balance Service Group (for RIO TINTO)

- Narrogin Solar Farm – 300MW — Land Insights
- Ngaangk Boodja Solar Farm, Merredin – 158MW — Nomad Energy / Land Insights
- Perth Airport Terminal Building Solar Facility – 1MW — Georgiou Group Pty Ltd
- Perth Airport Northern Precinct Solar Facility – 5MW — NDY Management
- Port Hedland Solar Farm – 90MW — Prestons Consulting (for ALINTA Energy)
- Project CERES Solar Farm, Burrup Peninsula – 24MW — Perdaman Chemicals & Fertilisers

Overseas Projects

New Zealand

- Ahuroa Valley Solar Farm – 3MW — Tie Trustee Ltd
- Auckland Surf Park I Solar Facility – 5MW — AWH Holdings 2021 (LP)
- Auckland Surf Park II Solar Facility – 7MW — INOVO
- Brook Road Solar Farm – 4MW — DYang Trust
- Carterton Solar Farm – 150MW — 4Sight Consulting
- Christchurch Airport Kowhai Park – 168MW — Lightsource Development
- Dannevirke Solar Farm I – 20MW — Tararua Council
- Dannevirke Solar Farm II – 76MW — Tararua Council
- Drury Quarry Solar Farm – 9MW — 4Sight Consulting
- Ford Road Solar, Waihi Solar Farm – 32MW — Ford Road Solar LP
- Foxton Solar Farm – 200MW — Solar-Gen JV
- Hawke's Bay Airport Solar Farm – 45MW — Hawkes Bay Airport Ltd
- Ireland Road Solar Farm – 20MW — Huachen Investment Holdings
- Marton Solar Farm Whales Line – 74MW — 4Sight Consulting
- Marton Solar Farm Whales Line II – 103MW — Harmony Energy
- Marton Solar Farm Pukepapa Road – 25MW — Rangitikei Council
- Massey University Solar Facility – 8MW — Energy Bay Ltd
- Opunake Solar Farm – 100MW — 4Sight Consulting
- Pukemoremore Solar Farm – 202MW — Waikato Regional Council
- Stratford Solar Farm – 180MW — Stratford Solar LP
- Tauhara North Solar Farm – 55MW — Energy Bay Ltd
- Tauhei Solar Farm – 185MW — 4Sight Consulting
- UAWA Solar Farm Tolaga Bay – 12MW — Eastland Generation Ltd
- Wairoa Solar Farm – 12MW — Eastland Generation Ltd

North America

- Clearfield County Solar Farm (Pennsylvania, USA) – 400MW — Mineral Basin Solar Power
- Gleichen Solar Project (California, USA) – 17MW — TIU Canada
- Palmdale Regional Airport, Northrop Grumman Solar (California, USA) – 8MW — Catalyze
- Stanislaus County Solar Farm (California, USA) – 128MW — Elevated Entitlements
- Timberlea Reservoir Solar (Alberta, CANADA) – 0.5MW — Associated Engineering Alberta

South America

- Japeados Solar Farm (CHILE) - 226MW — ENVIS Consulting
- Limonares Solar Farm (CHILE) – 125MW — ENVIS Consulting
- Park Algarrobal Solar Farm (CHILE) – 224MW — ENVIS Consulting

Middle East

- Majmaah Solar Energy Park (SAUDI ARABIA) - 1,540MW — ILF Consulting
- Tumair Solar Energy Park (SAUDI ARABIA) - 924MW — ILF Consulting

Europe

- Manchester Airport - World Logistics Rooftop Solar (UK) – 1MW — MAG / Stofford

Expert Witness

- AUC Proceedings 27077 - Vauxhall Solar Farm - Glint & Glare
- AUC Proceedings 27842 – Aira Solar Farm - Glint & Glare
- AUC Proceedings 27885 – Airport City Solar Farm - Glint & Glare
- AUC Proceedings 29274 – Hanna Aerodrome Solar Farm - Glint & Glare
- LEC Matter (MWRC v ITP) Mudgee (NSW, AU) Solar Farm - Glint & Glare
- Tararua District Council Hearing Panel - Mangamaire Road Solar Farm - Glint & Glare
- Waikato District Council Hearing Panel - Tauwhare Solar Farm - Glint & Glare

Making Sustainability Happen