



OPERATIONS & MAINTENANCE



TRAFFIC MANAGEMENT PLAN

Gunnedah Solar Farm
765 Orange Grove Rd, Orange Grove, NSW 2380

Document Number	Description
AUOM- GUNSF-PLN-005	Traffic Management Plan – Gunnedah Solar Farm (GUNSF)

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Revision 02

All printed copies are uncontrolled, refer to master library for current revision

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1. Introduction

This Traffic Management Plan (TMP) applies to the Gunnedah Solar Farm (the GSF or GUNSF project). This TMP has been prepared by Canadian Solar O&M (Australia) Pty Ltd (AUOM) and reflects traffic management as applicable to the operations stage of the development. This TMP replaces the CTMP for the operation of the solar farm.

1.1. Preamble

Prior to the construction of the GUNSF The Applicant was required to upgrade Old Blue Vale Road to a minimum of 100 metres from its intersection with both Kelvin and Blue Vale Roads to a standard that allowed two-way heavy vehicle movements, in accordance with the *Austroads Guide to Road Design* (as amended by RMS supplements) and the Applicant was also required to remove loose gravel material at the Old Blue Vale Road and Kelvin Road intersection to the satisfaction of the relevant authority. Additionally, the Applicant was obliged to upgrade the site access point off Orange Grove Road with a suitable Rural Property Access type treatment to cater for the largest vehicle accessing the site, including the sealing the on-site access road to a minimum of 30 metres from its intersection with Orange Grove Road, in accordance with the *Austroads Guide to Road Design* and to the satisfaction of the Council. (See SSD-8658 *Gunnedah Solar Farm Independent Audit* by Moss Environmental Post Approval Report for PCL Constructors Pacific Rim P/L (ie. EPC Construction Company) Gunnedah Solar Farm Rev2 final page 5 and page 26/63).

Consequently, the GUNSF obtained all the required permits under the Heavy Vehicle National Law (NSW) for the use of over-dimensional vehicles on the road network and the complete GSF TMP (Rev.4 on 14th April 2020) was approved by NSW Transport (TfNSW) (letter dated on 24/04/2020 and sent by Nicole Brewer, Director Energy Assessments).

After implementing the above, an additional report was produced in relation to undertaking a dilapidation survey of the heavy vehicle transport route along Blue Vale Road, Old Blue Vale Road, Kelvin Road and Orange Grove Road in accordance with any relevant *Austroads* standards and guidelines. (For acceptance and confirmation refer to SSD-8658 PAR for PCL GSF Rev2 final, page 29/63).

The capacity of the roadside Drainage Network has not been reduced to the best of the applicant's knowledge, however this is subject to ongoing Compliance inspections, since the access track is shared with the adjacent landowner (as per confirmation in the report SSD-8658 PAR for PCL GSF Rev2 final page 30/63).

In addition, the Applicant can confirm that the cost of this above road upgrade was resolved with the former Applicant, Orange Grove Solar Farm and there is no outstanding dispute between these two stakeholders regarding the payment of these costs. (For acceptance and confirmation refer to SSD-8658 PAR for PCL GSF Rev2 final, page 27/63).

Additional details are in the emails from Daniel Noble from GSC, stating that they accepted the upgrades.

The Applicant also states that all the internal roads have been constructed as being suitable for all weather conditions and they are built up with sub-grade DGS40 (Compliant with RMS) on top as per confirmation in the report SSD-8658 PAR for PCL GSF Rev2 final page 30/63.

2. Site Overview

All over-dimensional and heavy vehicles associated with the development of GUNSF travel to and from the site via Kamilaroi Highway, Blue Vale Road, Old Blue Vale Road, Kelvin Road, Orange Grove Road and the approved site access point, as identified in Figures 1 to 3 below from the originally approved CTMP.



Figure 1: Site Location and Road Network with heavy vehicle access road with site access point

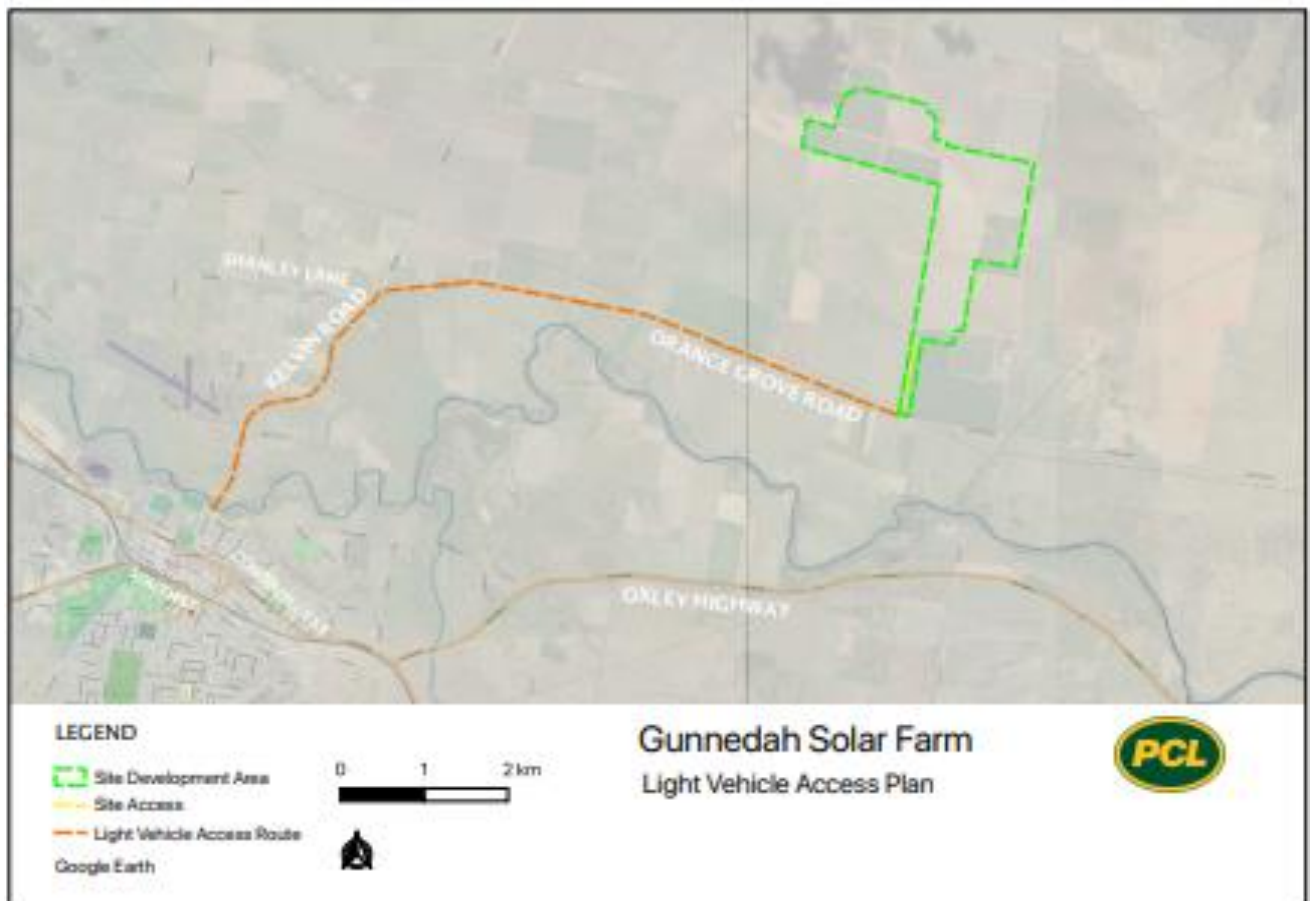


Figure 2: Site Location and Road Network with light vehicle access road and site access points (courtesy of PCL).

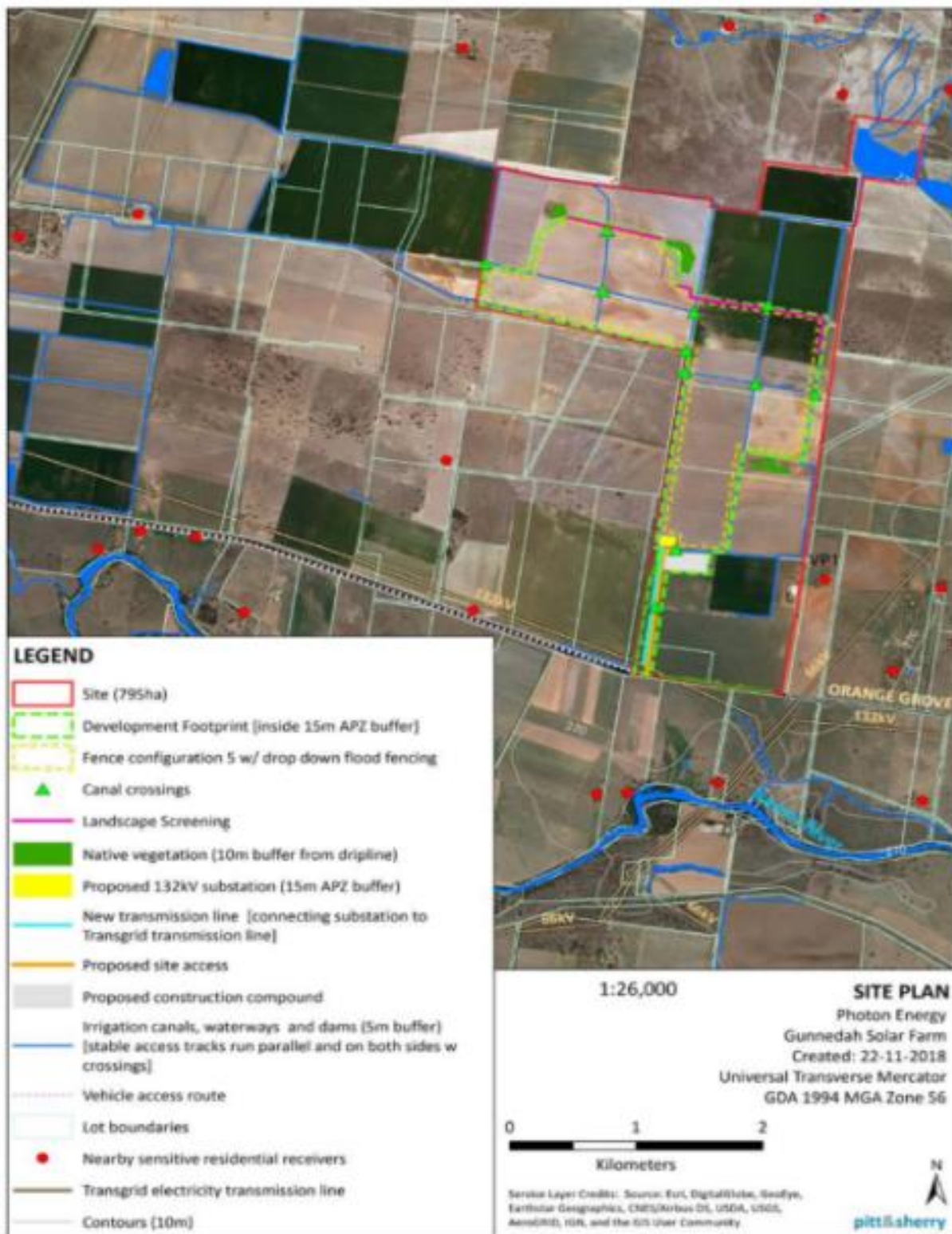


Figure 3: Site detail with Site Access Points

Figure 4 below indicates the actual new loading and unloading points at the Gunnedah site. The loading bay is located next to the storage and workshop shed.

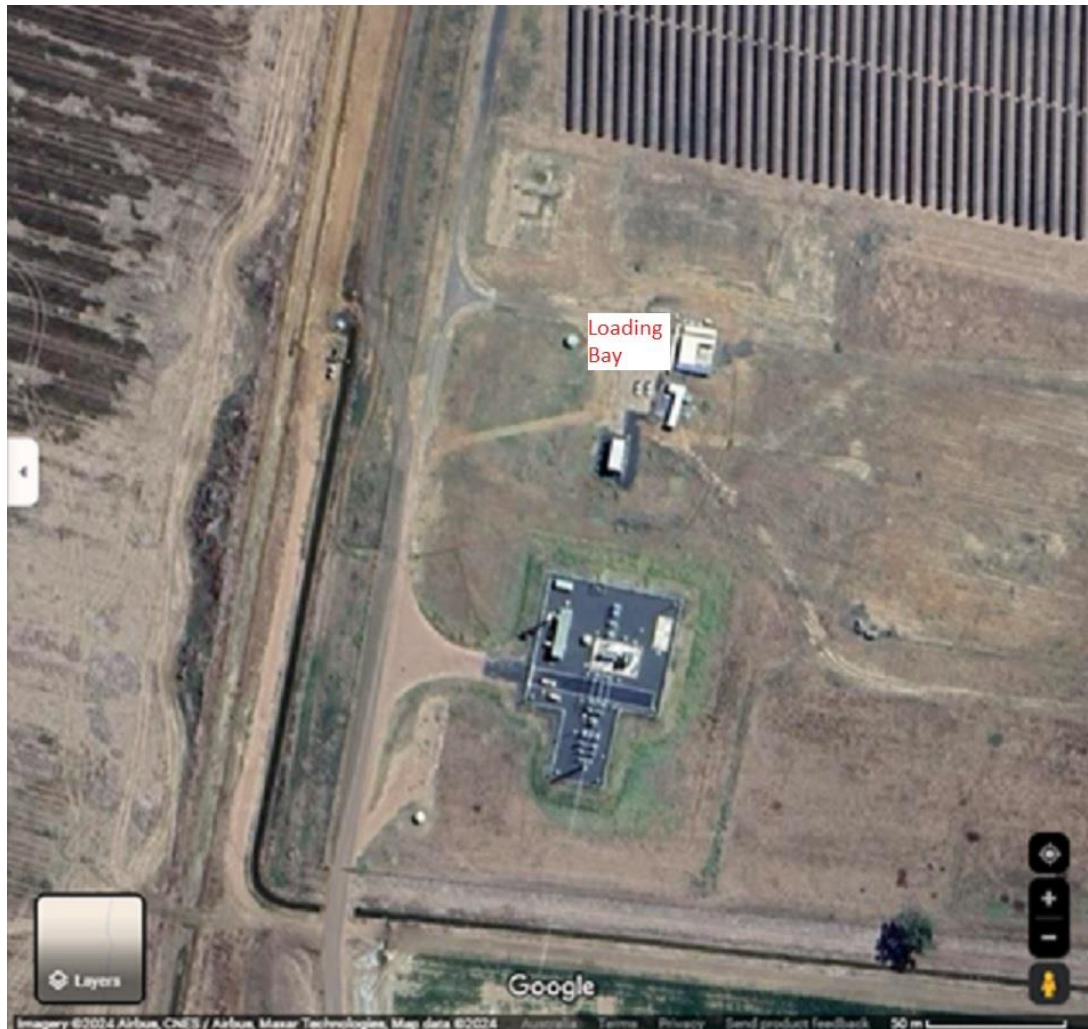


Figure 4: Site detail with Loading and Unloading Point (Loading Bay).

The Gunnedah Solar Farm was constructed to be able to provide sufficient on-site parking spaces next to the O&M Building for permanent staff and also for occasional visitors. Parking on the public road network is not permitted for operations phase activities. (Please refer to Figure 5 below for details of O&M building and parking).

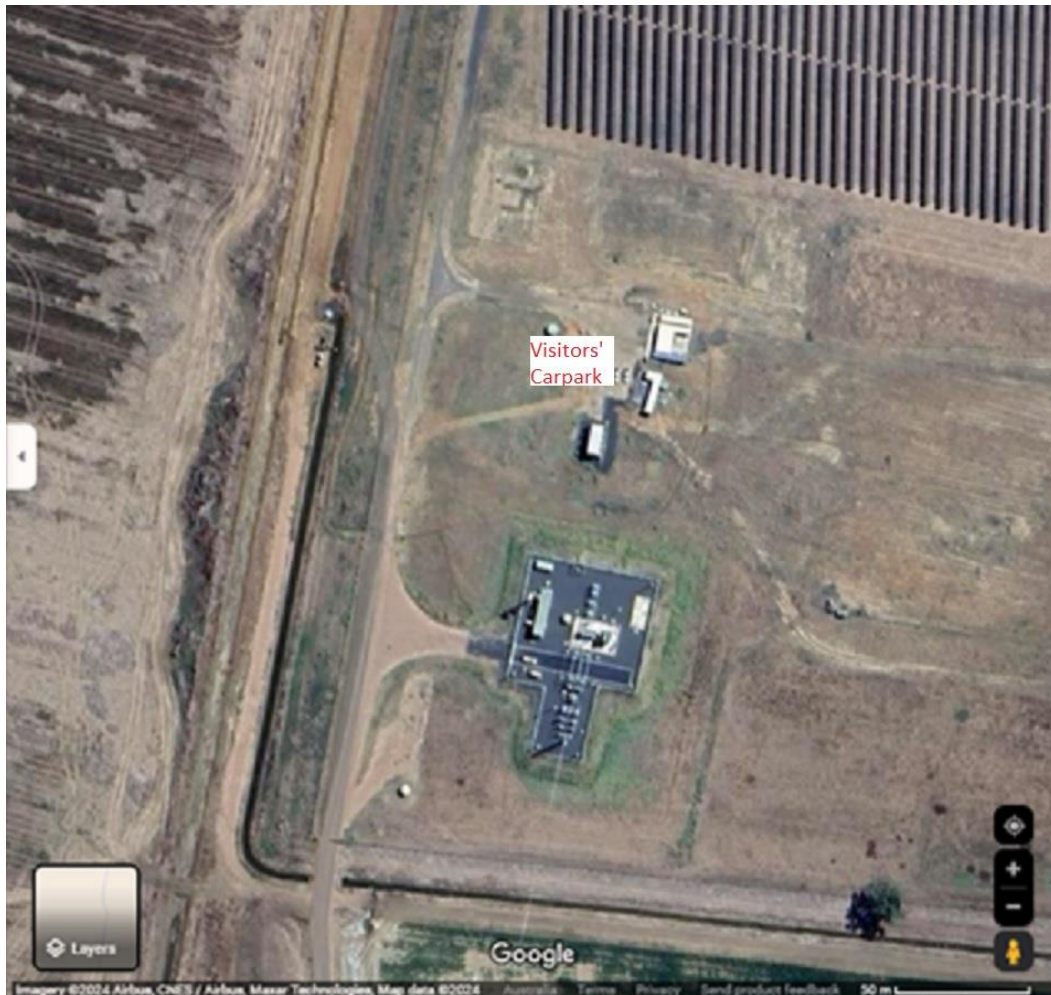


Figure 5: Google map showing O&M Building and surroundings with visitors' car park next to office.

3. Purpose and Objective

3.1. Purpose

The purpose of this plan is to describe how traffic, transport and access impacts are minimised, within the scope permitted by the Development Approval, during the operation of the GUNSF, which will be accessed by all personnel (employees, contractors, and deliveries) from two-lane local road.

3.2. Objective

The key objective of this TMP is to ensure that traffic, transport, and access impacts are minimised, and activities undertaken are within the scope permitted by the planning approval, including:

- Complying with Conditions of Approval (COAs)
- Minimising traffic delays
- Maintaining satisfactory property access
- Minimising disturbance to the receiving environment, and
- Ensuring safety of employees, contractors, and the public.

4. Reference Documents

This document is to be read in conjunction with the following site-specific documents:

Document	Designation
Safety Management Plan	AUOM- GUNSF-PLN-001
Environment Management Plan	AUOM- GUNSF-PLN-002
Quality Management Plan	AUOM- GUNSF-PLN-003
Site Management Plan	AUOM- GUNSF-PLN-004
Traffic Management Plan	AUOM- GUNSF-PLN-005
Emergency Management Plan	AUOM- GUNSF-PLN-006
Bush Fire Management Plan	AUOM- GUNSF-PLN-007
Services Management Plan	AUOM- GUNSF-PLN-008
Organizational Chart	AUOM- GUNSF-PLN-010

*This document

5. Legislative Requirements

5.1. Legislation and Guidelines

Legislation and Guidelines refer (The Department of Transport and Main Roads) relevant to Traffic Management for this site.

5.2. Site Induction

AUOM will provide site inductions for all visitors that will include but not be limited to the following:

- Entry and Exit points
- Temporary traffic controls, including detours and signage
- Responding to any emergency including emergency vehicle access
- As part of the project induction process, AUOM have a Safe Driving Program that includes the following:
 - Vehicle Maintenance requirements
 - Licences and training required, and
 - Traveling speed limits for public roads and for the operational site.
- Outlines that all drivers must be:
 - Trained and competent
 - Medically fit
 - Well rested
 - Observant of all speed limits, signs, etc.
 - Not under the influence of drugs or alcohol.
- Load requirements including restraints
- The use of mobile phones is prohibited whilst driving
- Reversing vehicles and spotter responsibilities

AUOM disciplinary procedures include processes for management of employees and subcontractors that do not adhere to the driver's code of conduct (BMW-I-012-028 and Vehicle Usage Policy BMW-I-012-074).

6. Operations Traffic Activities

6.1. Traffic Movement Forecast

During the operations phase of the project there is expected to be the following traffic movements:

- Permanent Site based technician's vehicles x2 (4x4 Ute).
- Delivery of maintenance equipment will be limited to a maximum of five heavy vehicles movements per day on the public road.
- Visitors' vehicles

6.2. Traffic Safety Mitigation Measures

The operational phase of the Gunnedah Solar Farm will result in a minimal increase in the volume of traffic movement surrounding the Site. The primary objective of the traffic management is to ensure safe and efficient movement of operation-related vehicles onto, off and around the site, whilst minimising disruptions/impacts and maintaining a safe environment for vehicular and pedestrian traffic external to the site.

- In addition to comply; a vehicle tracking register has been implemented on site in order to accurately record the number of heavy vehicles entering and leaving site daily.
- During the operation phase of the solar farm, it is not anticipated that there will be any over-dimensional vehicles used at the site (that exceed 26 metres) unless the Secretary agrees otherwise.

Following are the identified Traffic Control measures to be implemented throughout the project's operational phase:

Traffic and Transport Mitigation Measures

Action	Responsibility	Timing
<p>The on-site Traffic Control Plan (TCP) will be developed and outline but not limited to the below:</p> <ul style="list-style-type: none"> • A Traffic Flow Diagram • Speed Limits (onsite 20km/h or as posted) • Signs of the size and type that comply with Australian Standards • Radio Channels to be used onsite • The requirement for all vehicles to give way to the right • Larger vehicles will have right of way • All vehicles will always require flashing beacons on whilst driving • Site vehicles an audible reversing alarm • Reverse Parking only in parking areas • Emergency Access Plans <p>All AUOM employees and Subcontractors must comply with the approved Traffic Control Plan.</p>	Regional O&M Manager	Prior to commencement of operation
<p>Details for delivery and storage arrangements to be in place, including clearly defined loading and unloading areas (which are to be separated from vehicle access and pedestrian routes), crane pick areas, distribution routes and methods, and designated storage areas. Any deviation from these</p>	HSE Manager	Prior to commencement of operation

Action	Responsibility	Timing
procedures, including changing the designated loading and unloading areas, must be planned, and conducted in accordance with the requirements for High-Risk Activities, with any changes to loading/unloading areas or protocols adequately communicated and signposted.		
Controls to be in place to ensure vehicles are appropriately braked, chocked, or stabilised before any unloading or loading occurs.	AUOM, Subcontractors	Project Duration
Controls to manage reversing are to be in place. Where reversing needs to occur, suitable controls include the use of pedestrian exclusion zones, spotters to direct drivers and visibility aids fitted on vehicles, e.g., reversing sensors and mirror systems.	AUOM, Subcontractors	Project Duration
High visibility reflective clothing to be provided for all persons working adjacent to vehicles and onsite traffic routes.	All onsite Personnel	Project Duration
All Traffic Management requirements to be communicated through the AUOM On-site Induction.	Lead field technician	Prior to commencement of operation
Regular checks of the Traffic Flow Diagram to be completed to ensure changes are documented.	HSE Manager	Project Duration

6.3. Site Deliveries

All site entries will be via site entrance. The delivery vehicles will only deliver the materials and will not be allowed to park permanently onsite at any time. The following process will be implemented onsite to mitigate the impact of deliveries:

- The truck arrives at the onsite reception/security area
- Upon arrival onsite, the onsite representative leads the truck to an offload point that may be in the staging area or a particular block.
- The AUOM representative manages the unloading process and conducts product receiving procedures.
- Receiving procedures include inspection and documentation of product conditions, logging quantities and reporting damage
- Upon completion of the offload process and proper disposition of the materials, the representative closes out the shipment with the truck driver and retains the proper records
 - All vehicles are loaded and unloaded on site, and enter and leave the site in a forward direction; and
 - Vehicles leaving the site are in a reasonably clean condition and do not result in dirt being tracked onto the public road network.
 - The onsite representative is also notified of completion and leads the truck offsite to confirm safe exit from the site.

6.4. Emergency Vehicle Access

Emergency vehicle access for the project will be provided via the designated site entry. A separate Emergency Management Plan has been produced to manage emergencies onsite.

7. Traffic Control Plans

AUOM prohibits working in or immediately adjacent to publicly accessible roads. Where persons are required to work near traffic the work shall be in accordance with a Traffic Control Plan (TCP) developed and certified by a competent person holding a prescribed qualification that will be issued when needed. Figure 6 below indicates the direction of traffic on the solar farm. During the operational phase the following rules will apply for the TCP:

- the movement of vehicles on the local road network within the site;
- temporary traffic controls, including detours and signage;
- notifying the local community about project-related traffic impacts;
- procedures for receiving and addressing complaints from the community about development-related traffic;
- minimising potential for conflict with school buses and other motorists as far as practicable;
- scheduling of haulage vehicle movements to minimise convoy length or platoons;
- responding to local climate conditions that may affect road safety such as fog, dust, wet weather;
- responding to any emergency repair or maintenance requirements;
- a traffic management system for managing over-dimensional vehicles; and a driver's code of conduct that addresses:
 - travelling speeds;
 - driver fatigue;
 - procedures to ensure that drivers adhere to the designated transport route/s; and
 - procedures to ensure that drivers implement safe driving practices
- a program to ensure drivers working on the development receive suitable training on the **code of conduct** (*Work Instructions: Site Visit Protocol BMWI-012-028 and Vehicle Usage Policy BMWI-012-074*) and
- any other relevant obligations under the Traffic Management Plan;
- a flood response plan detailing procedures and options for safe access to and from the site in the event of flooding.



Figure 6: Direction of driving on internal road

8. Document Review

A review of this manual will be conducted in line with contractual and standard maintenance requirements, after a traffic incident, or when business deliverables change.

9. Record & Data Requirements

Record Name	Storage Location	Owner	Retention	Access Restrictions
AUOM-GUNSF-PLN-005 Traffic Management Plan	SharePoint	Regional O&M Manager	3 years	Regional O&M Manager/Supervisor

Appendix A – Definitions

Acronym/Term	Meaning
AUOM	Canadian Solar O&M (Australia) Pty Ltd.
COA	Conditions of Approval
GUNSF or GSF	Gunnedah Solar Farm
EPC	Engineering, Procurement and Construction
PCL	PCL Constructors Pacific Rim Pty. Ltd.
HSE	Health, Safety & Environment
ISEPP	Infrastructure State Environmental Planning Policy
LEP	Local Environment Plan
LGA	Local Government Area
NSW	New South Wales
O&M	Operations & Maintenance
RU1	Rural Zone 1
TCAWS	Traffic Control at Work Sites Manual
TCP	Traffic Control Plan
CTMP	Construction Traffic Management Plan
TMP	Traffic Management Plan
PAR	Post Approval Audit
SSD	State Significant Development
RMS	Roads and Maritime Services in NSW
DGS40	Densely Graded Sub-base crushed recycled concrete top particle size 40mm