


# TRAFFIC MANAGEMENT PLAN

## Beryl Solar Farm (BESF)

Contract Number: 24120135

Document Preparation and Control	Document Review
Prue Lydon – Logistics Manager	Nathan Roworth – Project Manager Natasha Portess – Zero Harm Manager
Document Approval	Signature
Nathan Roworth – Project Manager	

Project Document Version	Date
0	06/08/2018

Document Version History			
Version No.	Date	Document Status	Brief Description of Change(s) from Previous Version
A	16/05/2018	Draft	Initial version development
B	12/07/2018	Draft	Updated to reflect feedback, added reference to 24120135-DOWNER-PLN-LG-0003 Drivers Code of Conduct and Route Management Plan. Edited format to include internal and External Site requirements.
C	27/07/2017	Draft	Updated to reflect feedback from RMS 27/07
0	06/08/2018	Final	Updated to reflect feedback from NSW Department of Planning and Environment

## Contents

<b>1</b>	<b>PURPOSE</b> .....	<b>4</b>
<b>2</b>	<b>DOCUMENT SCOPE</b> .....	<b>4</b>
<b>3</b>	<b>RESPONSIBILITIES</b> .....	<b>5</b>
<b>4</b>	<b>REFERENCED DOCUMENTS</b> .....	<b>5</b>
<b>5</b>	<b>DEFINITIONS</b> .....	<b>6</b>
<b>6</b>	<b>GENERAL REQUIREMENTS</b> .....	<b>7</b>
6.1	Site Security.....	7
6.2	Carpooling & Busing.....	7
6.3	Site Access.....	7
6.4	Noise.....	8
6.5	Dust Control.....	8
6.6	Biosecurity.....	8
6.7	Flora, Fauna and Wildlife.....	9
<b>7</b>	<b>TRAFFIC MANAGEMENT INTERNAL</b> .....	<b>9</b>
7.1	Access.....	9
7.2	Pedestrian Delineation.....	9
7.3	Right of Way.....	9
7.4	Site Communications.....	10
7.5	Speed Restrictions.....	10
7.6	Signage.....	11
7.7	Parking.....	11
7.8	Reversing.....	11
7.9	Safe Following Distances.....	11
7.10	Mobile Phones & PEDs.....	12
7.11	Intersections.....	12
7.12	Exclusion Zones.....	12
7.13	Overhead Services.....	12
7.14	Weather Conditions.....	13
7.15	Excavations.....	13
7.16	Construction Works.....	13
7.17	Rules and Standards.....	13
7.18	Vehicle Movement Plans.....	14
7.19	Authorisation of Vehicle & Plant Operators.....	15
7.20	Laydown Areas.....	15
7.21	Load Security.....	15
7.22	Driving and Road Hazards.....	15
7.23	Incidents, Hazards and Near Misses.....	16
<b>8</b>	<b>EXTERNAL ROAD WORKS</b> .....	<b>16</b>
8.1	Construction of Site Access.....	16

<b>9</b>	<b>TRANSPORT MANAGEMENT</b>	17
9.1	Dilapidation Assessment	17
9.2	Route Assessment	18
9.3	Proposed Heavy Vehicle Movements	18
9.4	Heavy Vehicle Access Restrictions	18
9.5	Heavy Vehicle Driver Requirements	18
<b>10</b>	<b>EMERGENCY PREPAREDNESS</b>	19
10.1	Emergency Service Access	19
10.2	Emergency Protocols	19
10.3	Evacuation	19
<b>11</b>	<b>STAKEHOLDER ENGAGEMENT</b>	19
	Enquiries and Complaints	20
<b>12</b>	<b>TRAINING REQUIREMENTS</b>	21
<b>13</b>	<b>COMPLIANCE MONITORING</b>	21
	Annex A – Site Plan	20
	Annex B – Overhead Services	21
	Annex C – Exclusion Zone Rules for Loading and Unloading	22
	Annex D – Downer Cardinal Rules	23

## 1 PURPOSE

---

The purpose of this Traffic Management Plan is to outline the manner in which vehicular, plant and pedestrian movements will be managed on the Beryl Solar Farm Project during construction, as well as the control measures in place to manage risks associated with Project-related traffic.

Downer acknowledges that the effective management of Project traffic and safety of operators and pedestrians is paramount to the delivery of successful day-to-day activities on site and Downer's overall Zero Harm objectives and targets for the Project. Primary objectives of this sub-plan include:

- Maximising operator and pedestrian safety;
- Minimising wherever possible adverse interfaces between Project vehicles and the general public as a result of construction traffic and activities;
- Minimising impact on the local road network;
- Minimising disruption, delays and congestion to local road users;
- Mitigating risks associated with deliveries to the Project;
- Providing clearly defined instruction and parameters cohesive with construction site traffic protocols to enable compliance to this sub-plan by all Project stakeholders (including visitors);
- Providing a safe Project environment free of hazardous interactions between vehicles, plant, people and infrastructure; and
- Complying with legislative and contractual requirements.

By implementing this plan, Downer is committed to upholding requirements under the following legislation and standards:

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2011
- Heavy Vehicle National Law Act 2012
- NSW Transport Operations Act 2013
- NSW Transport Operations Regulation 2013
- AS 1742.3:2009 Manual of Uniform Traffic Control Devices
- Downer Standard DA-ZH-ST135 Traffic Management
- Downer Standard DA-ZH-ST107 Plant and Pedestrian Interface

It also undertakes to maintain compliance with council, state government and contractual requirements in accordance with conditions stipulated in the necessary approvals.

## 2 DOCUMENT SCOPE

---

This Plan applies to the Beryl Solar Farm Project only, referred to as 'the Project' throughout this document.

This document applies to all aspects of traffic for the Project. The sub-plan Drivers Code of Conduct and Route Management should be reviewed in conjunction with this Plan.

The target audience for this Plan is the Downer and Client Project Management Team, Project Delivery Partners, and any other relevant stakeholders who may have implications on or be impacted by the requirements of this Plan.

This Plan has been prepared in accordance with Project Requirements, Scope of Work, Development Consent, EPC Contract, specific operational needs and quantitative forecast of vehicular traffic on the Project, and shall be reviewed as triggered by risk assessment or changes in operational conditions.

### 3 RESPONSIBILITIES

The requirements of this plan, Downer shall:

- Provide adequate information, instruction and training to enable all Project personnel and other stakeholders to enter, operate across and leave the Project site in a safe manner (including clear installation of signage and training in the requirements of this plan);
- Establish designated pedestrian paths delineated from mobile plant routes wherever possible;
- Ensure all on-site roads established for construction traffic is free of hazards to vehicles and plant requiring access;
- Establish a process to authorise vehicles and mobile plant for operation on site, and likewise vehicle and mobile plant operators;
- Ensure that Project traffic does not cause undue disruption or delays to surrounding public and private roads through planning, risk assessment and scheduling; and
- Review and update this sub-plan as necessary, in consultation with relevant stakeholders.

### 4 REFERENCED DOCUMENTS

#### PLANS

24120135-DOWNER-PLN-ZZ-0002	Project Management Plan
24120135-DOWNER-PLN-ZZ-0014	Construction and Site Management Plan
24120135-DOWNER-PLN-ZZ-0005	Construction Environmental Management Plan
24120135-DOWNER-PLN-ZZ-0015	Emergency Preparedness Management Plan
24120135-DOWNER-PLN-ZZ-0013	Stakeholder and Communications Management Plan
24120135-DOWNER-PLN-LG-0003	Drivers Code of Conduct and Route Management Plan
24120135-DOWNER-PLN-ZZ-0003	Safety Management Plan

#### STANDARDS

DA-ZH-ST135	Traffic Management
DA-ZH-ST107	Plant and Pedestrian Interface
DG-ZH-CG091	Working Hours and Fatigue Management
DG-ZH-CG050	Loading and Unloading
DG-ZH-CG015	Emergency Preparedness and Response

#### FORMS

24130039-CHL-0001-1.0	Plant and Equipment Mobilization Checklist
-----------------------	--

#### REGISTER

24120135-DOWNER-REG-ZZ-0011	Plant and Equipment Register
-----------------------------	------------------------------

## 5 DEFINITIONS

---

The following terms are used in this document and are included in [DA-QA-RG001 Definitions Register](#).

<b>Emergency Vehicle</b>	Any vehicle that is designated and authorised to respond to an emergency in a life-threatening situation, such as police, fire and ambulance vehicles.
<b>Exclusion Zone (EZ)</b>	A restricted access area around mobile plant and vehicular traffic (or may even be defined as the entire Worksite). Persons on foot can only enter an exclusion zone if authorised to do so and if the necessary safety controls are in place. Exclusion zones around operating mobile plant must have a minimum separation distance (e.g. three meters) which would be increased in accordance with the speed and size of the mobile plant/vehicles and any attachments used or loads carried.
<b>IFC</b>	Issued for Construction.
<b>Heavy Vehicle</b>	A road registered vehicle that has a Gross Vehicle Mass (GVM) or Aggregate Trailer Mass (ATM) of more than 4.5 tonnes and a combination that includes a vehicle with a GVM or ATM of more than 4.5 tonnes. Examples of vehicles in this category include haul trucks, semi-trailers, mobile cranes and coach buses.
<b>Laydown Area</b>	An area that has been cleared for the temporary storage of products and materials. A laydown area is usually covered with a suitable surface (e.g. rock or gravel) to ensure accessibility and safe maneuverability for transport and unloading products and materials.
<b>Light Vehicle</b>	A road registered vehicle utilised for transporting people and light loads. Examples of vehicles in this category include sedans, station wagons, 4WDs, utility vehicles, vans and mini buses (carrying no more than 12 persons).
<b>Mobile Plant</b>	A collective term used to describe all rubber tyred and tracked plant and equipment as well as light and heavy vehicles.
<b>MWRC</b>	Mid West Regional Council
<b>PED</b>	Personal Entertainment Device.
<b>OCLEB</b>	Over Centre Lever Binder
<b>RMS</b>	Roads and Maritime Services
<b>Traffic Control Plan (TCP)</b>	A formal document prepared by an appropriately trained and competent person that details the interim layout and nature of traffic control devices necessary to ensure safe movement within a particular area. Also known as a Traffic Guidance Scheme.
<b>Vehicle Movement Plan (VMP)</b>	A site plan/diagram that illustrates the organised movement of mobile plant and vehicles. In addition to vehicular movements and parking arrangements, this plan may also include identified hazards e.g. overhead powerlines, road traffic, trees, bridges, waterways, ignition sources, etc.

## 6 GENERAL REQUIREMENTS

Traffic movement in and around the Project site presents a number of risks to personnel, as well as the potential for property damage to vehicles, plant and infrastructure. As such, the following parameters will be applied to ensure the safe movement of people, vehicles and plant during construction.

There will be designated areas for pedestrians and vehicles. Signage will be placed to direct safe passage around the site and vehicle speed restrictions.

The movement of vehicles to and from the Solar Farm facility on public roads pose a risk to drivers and pedestrians. It is anticipated that the majority of Project based light vehicles will travel to the site early in the morning, this will increase traffic flow on Castlereagh Highway and Beryl Road at a time that will not generally impact the public, nor will it involve school zones. Commuting routes will be predominantly from Mudgee and Gulgong. Travel to Site will be between 6.00am to 7.00am to allow preparation time prior to construction activities commencing at 7:00am, it is anticipated that arrivals of workforce and contractors to site will generally be spread out over the hour preceding this time.

In an effort to reduce the early morning increased traffic movements on the locals roads, contractors will be encouraged to carpool, bus their workers from their depots where possible and, Downer will carpool vehicles from their accommodation. Afternoon traffic increases will occur however, this will be additional flow in the opposite direction from the prevailing traffic in the afternoon. Traffic leaving site in the afternoons will not be released in a single platoon; rather, it will be staggered release in line with different finish times for direct site teams.

### 6.1 Site Security

The Project site will be secured with a fenced perimeter boundary. There will be one main entry and exit point. Security measures will be taken to ensure the safety of the site on a twenty four hour basis.

### 6.2 Carpooling & Busing

Upon commencement of construction Downer will be implementing carpooling for the site based personnel and will be managing our delivery partners to meet these requirements. A suitable location will be determined within the Mudgee/Gulgong area as a transit point for car parking and pick up and drop offs. No private vehicles will be permitted to access Site without prior Downer Management approval.

Driver fatigue will be managed as per the Drivers Code of Conduct Plan and vehicle movements will be factored in to the daily site based allowance as per the Development Consent.

### 6.3 Site Access

The main entry into the Beryl Solar Farm site will be via Castlereagh Highway on to Beryl Road as indicated on the diagram in Annex A- Site Plan.

An upgrade of Beryl Road and Castlereagh Highway intersection is to include a sealed Basic Right turn (BAR) treatment and a sealed Auxiliary Left (AUL) turn treatment, thus the BAR treatment replaces the CHR treatment requirement outlined by RMS submission to DPE (31/07/17).

The intention will be for project related traffic to access Beryl Road from the northbound direction on Castlereagh Highway (HW18), traffic turning right from the Castlereagh HW (HW18) into Beryl Road will be kept to a minimum. Please note all other requirements provided in that submission stand. This will be communicated to the transport contractors via driver inductions and to the overall Project workforce via Site inductions and toolbox talks.

The site entry will be designed to accommodate entry and exit of all anticipated vehicles and other mobile

plant requiring site access for construction and operational maintenance phases.

Internal roads will consist of all-weather roads with an overall width of 4.2m. On-site turnaround areas will accommodate the turning circle of a 25m truck and trailer combination.

The site access points are shown on Annex A – Site Plan.

## 6.3.1 Entry Requirements

As a minimum, to enter the Beryl Solar Farm Project construction area it is expected that all personnel meet the following requirements:

- Completion of Downer Zero Harm Induction
- Completion of Site Delivery Drivers Induction (Transport Contractors Only)

Delivery drivers and visitors can enter Beryl Solar Farm construction area without the above requirements if they are escorted by a person who is authorised to operate on the Site.

Note: All persons shall wear the site specific PPE at all times (e.g. helmets, safety boots and high visibility clothing, gloves, safety glasses etc.) including delivery drivers. Any delivery driver failing to adhere to this will be refused access to the Site.

## 6.4 Noise

It is Downer's responsibility to comply with planning requirements, permits and any applicable regulations in relation to noise levels produced during construction activities. Best practice requirements are outlined in the Interim Construction Noise Guideline (DECC, 2009).

Noise generation from plant activities, piling etc shall be minimised as far as reasonably practicable. Idle time – vehicles and mobile plant that are queued or temporarily parked up whether it be on Site or off Site will be turned off to reduce noise and greenhouse gas emissions.

Compression braking shall be avoided near residential areas and sensitive receptors.

Any complaints regarding nuisance noise will be managed in accordance with the Communication and Stakeholder Management Plan and noise monitoring shall be conducted in the case of action requirement.

## 6.5 Dust Control

All operators must use vehicles and plant in a manner that minimises dust generation on the site, including using designated roads wherever possible and observing speed restrictions at all times.

As the primary means for managing dust on site, a water cart will be engaged to water access roads and work areas generating dust across the site. Additional measures will be taken if necessary.

For further details on dust management for the Project, please refer to the Construction Environmental Management Plan.

## 6.6 Biosecurity

All vehicles and plant to be operated on site shall be thoroughly washed or cleaned to remove all soil, mud and plant material that may pose a weed hygiene risk to the Project site prior to arriving. Upon arrival at site the vehicle or plant shall be visually inspected by a nominated Downer representative who will complete the Pre-Site Inspection. Compliant vehicles will be provided with a windscreen sticker as evidence of Weed and Seed Inspection prior to accessing Site.



Any vehicles or plant deemed non-compliant during this inspection will be required to be cleaned and re-inspected before being permitted access to the Project site.

For further details on management of biosecurity for the Project, please refer to the Construction Environmental Management Plan for further details.

## 6.7 Flora, Fauna and Wildlife

All operators and vehicle drivers should be aware of local wildlife within and outside the construction area while driving on public roads, site roads and access roads.

Drivers shall only drive vehicles on purpose made site roads to avoid necessary erosion and sediment issues and harm to flora, fauna and wildlife. Any damage, injury or death of wildlife is to be reported to the Downer Site Management Team. This will be communicated via Site based inductions, driver packs and toolbox talks.

## 7 TRAFFIC MANAGEMENT INTERNAL

---

An assessment of implications of work activities on safe traffic movement on site will be undertaken in accordance with forward planning and risk assessment for each work activity. Safe work methods statements shall document risk control measures where potential for interaction between mobile plant, vehicles, pedestrians or infrastructure exists, with the relevant VMP and/or TCP referenced where applicable.

When assessing traffic-related risks, considerations should include (but not be limited to):

- Passing of high vehicles and loads under overhead power lines;
- Maintaining forward motion of vehicles and plant wherever possible to reduce reversing on site;
- Parking locations which do not obstruct access;
- Access for emergency vehicles;
- Unobstructed access to emergency assembly areas;
- Adequacy and visibility of signage;
- Delineation between mobile plant and pedestrians using physical barriers; and
- Clearance from nearby infrastructure.

Supervisors will meet daily to plan and review construction works for the following day and where required will communicate any changes in traffic management for activities under their supervision via pre-start meetings.

### 7.1 Access

All access to the Site will be through the main left hand entry via Beryl Road. The site offices and laydown area will be located within the Site boundary and will be clearly signposted.

Refer to Annex A – Site Plan

### 7.2 Pedestrian Delineation

Delineation between pedestrian and mobile plant access routes will be established using separation methods such as star pickets and flagging wherever possible, particularly around site amenities, facilities and car parking areas. Signage will otherwise be implemented to advise of unrestricted pedestrian areas and exclusion zones.

Signage for exclusion zones and restricted access areas must identify the area supervisor to be contacted in the case of persons requiring entry into the area.

### 7.3 Right of Way

Emergency vehicles entering the Project site will have right of way at all times. Additionally:

- Mobile plant shall have right of way over heavy and light vehicles;
- Light vehicles shall give way to mobile plant and heavy vehicles; and
- Pedestrians shall give way to all vehicles and mobile plant.

The above rules may be superseded where positive communication has been established to acknowledge entry into an area.

## 7.4 Site Communications

The Project site will operate on a uniform UHF channel. It is anticipated the laydown areas will operate on a separate Channel. UHF Channel numbers shall be communicated through Inductions and signage on the Project.

As construction activities progress and personnel numbers increase, work parties across the site may opt to operate on a separate radio channel (however this will be kept to a minimum). On these occasions, consultation must occur with respective Downer Supervisors. Communication of any additional Radio Channels shall be communicated across all Site Personnel via Induction/Toolbox/Prestart Meetings and Signage at entrance to the work zone.

In all circumstances, personnel must ensure the correct UHF Channel is selected for the applicable work area they are entering.

A nominated UHF Channel shall be identified as the Primary UHF Channel for use in the case of Emergencies. This Channel shall be monitored at all times by the Zero Harm Team.

Any person working remotely or in isolation (e.g. conducting walkdowns) must carry a Mobile Phone as well as a fully charged UHF Radio.

The following protocols are to be followed to ensure effective radio communications across the Project.

- Notify personnel responsible for the work area if entering on foot;
- Identify your vehicle/plant and the person or mobile plant being addressed;
- Note intention to move into the area;
- Acknowledge call-ups and message (e.g. "Copy");
- Keep communications brief; and
- Only proceed once positive communication (affirmative response) has been established, otherwise wait for and follow further instructions.

Idle chatter over radio channels shall be avoided.

## 7.5 Speed Restrictions

The following speed restrictions apply across the Project site:

- Site entry/exit – 20km/h;
- Laydown areas – 5 km/h;
- Satellite facilities and carpark – 5km/h;
- Main car park – 10km/h; and
- Access roads – 30km/h or as Sign Posted

Any adjustments to speed limits will be communicated via updated VMP and prestart.

**Note:** personnel found to be in breach of the site speed limits will be subject to disciplinary actions, which may include removal of access to site.

## 7.6 Signage

All appropriate signage will be installed for the direction of construction-related traffic and the safety of pedestrians.

Temporary and permanent signage on site should be positioned for maximum visibility to inform operators of speed restrictions, warnings and other critical traffic information for the area. Signage outside the Project site during construction must be in accordance with the specifications under *AS 1742.3:2009 Manual of Uniform Traffic Control Devices*, and is to be erected only once council approval is granted.

All signage should be made of durable material to withstand deterioration in visibility and condition, and mounted to endure adverse weather events. They must not restrict the drivers' line of vision, particularly on approach to intersections, and must not be obscured by trees, equipment, parked vehicles or plant, or other road signage.

Signage no longer applicable must be promptly removed.

## 7.7 Parking

Project designated parking areas shall be established with the main car park located adjacent to the administration area. Additional parking locations will be established on site as construction progresses away from the administration area.

Vehicles are to be reverse-parked at all times within car parking areas to minimise potential for interaction with people, infrastructure and other plant when moving off at a later time.

Parking at specific work locations shall only be permitted if parked in a manner which does not obstruct access or work activities. The number of vehicles required at work fronts is to be kept to a minimum via carpooling and limited to those containing tools and equipment required for the day's tasks.

All car parking locations will be marked on the site Vehicle Movement Plan (VMP) (posted on notice boards at the main office facilities).

Centralized parking location within the Mudgee/Gulgong area shall be identified for carpooling and busing requirements. Once this location has been confirmed, in consultation with the Mid-West Regional Council Downer shall notify RMS of the details.

## 7.8 Reversing

Vehicles and plant shall maintain a forward motion wherever possible when travelling around the Project site. Worksite locations shall be established in a way that minimises reversing wherever possible. In the event this is not possible for heavy vehicles and other mobile plant and reversing is required, a spotter shall be in place to direct the safe movement of the vehicle or plant until such time as it is able to resume forward motion. All vehicles and other mobile plant must have operational reversing alarms fitted and these shall be activated at all times whilst on site.

## 7.9 Safe Following Distances

Mobile plant blind spots and risks associated with heavy vehicle or mobile plant operator visibility and fields of vision need to be considered and addressed when managing risks associated with operations near other vehicles, pedestrians or other structures. All light vehicles, heavy vehicles and mobile plant will maintain a safe working distance of 20 metres unless controls to manage plant interaction are risk assessed and are agreed through the SWMS process.

## 7.10 Mobile Phones & PEDs

Use of mobile phones and PEDs is restricted to administration areas and crib rooms unless authorised by the Downer Project Manager.

Only authorised Project personnel are permitted to carry or use mobile phones in Project work areas. Under no circumstances are personnel permitted to use mobile phones or PEDs whilst operating vehicle, plant and equipment – Refer Cardinal Rule 10. Non-compliance with this requirement will be considered a breach of Cardinal Rule and shall result in Incident Investigation and may incur removal of access to site.

If required to use a mobile phone as a pedestrian, persons must ensure they are positioned in a safe location away from construction activities and in a safe area clear of mobile plant and equipment and construction activities, before making or receiving a call. Persons should remain stationary and remain observant to activities occurring in their vicinity.

## 7.11 Intersections

To access various areas on the Project, particularly the laydown areas, vehicles and plant will be required to travel through intersections where gates and 'Stop' signs are encountered. These areas are considered high risk due to the increased potential for interaction with other vehicles, plant and pedestrians.

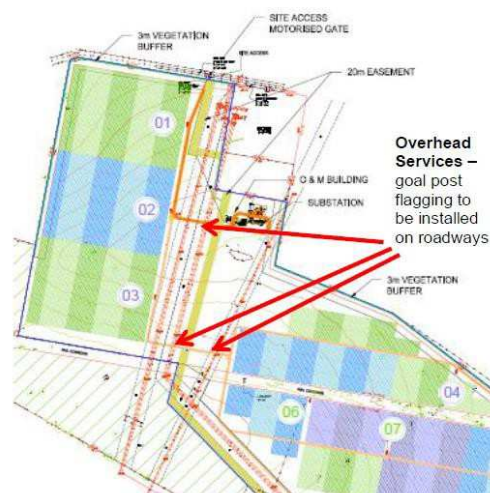
To ensure the safety of all persons in and around intersections the following points are to be observed:

- Ensure the road is clear prior to crossing intersections;
- Establish positive communication when entering into designated work areas or on approach to other mobile plant;
- Slow down and obey 'Give Way' signs;
- Come to a full stop at all times where 'Stop' signs are in place

## 7.12 Exclusion Zones

Exclusion Zones shall be established to maintain control of a work area or where separation is required e.g. between mobile plant and pedestrians. Such areas will be controlled via implementation of exclusion zones (flagging, bollards etc) and appropriate signage. This shall include specific operational areas, such as those areas where forklifts will be frequently used.

## 7.13 Overhead Services



Signage stating 'Danger: High Voltage Powerlines Ahead' shall be installed along access roads where vehicular traffic is to pass underneath Overhead Services. Height restriction flagging shall be installed as per safety requirements. Height restrictions are to be adhered to at all times.

In the event there is potential for an exclusion zone to be encroached by any vehicle, plant or equipment as part of any work activity (including deliveries), a formal risk assessment must be conducted to ensure adequate controls are in place (e.g. safety observers).

The Project Electrical Engineer shall lead any risk assessment associated with work near overhead powerlines in consultation with the Project Management Team.

## 7.14 Weather Conditions

Weather forecast will be checked by Downer Management and all site personnel will be advised of limitations and restrictions on vehicle movements and site access if applicable. Driving in wet conditions on unsealed roads can cause rutting, trigger mud tracking on site roads and pose physical risk to plant, equipment and site personnel.

Refer to the Safety Management Plan for further details on working in wet conditions.

*Note: For external traffic weather management please refer to the Drivers Code of Conduct and Route Management Plan.*

## 7.15 Excavations

Traffic routes shall be established a safe distance away from edges of excavations, trenches and bore holes (i.e. outside the 'zone of influence'), in accordance with excavation depths, to prevent ground collapse. Example – Trench at 600mm depth to have a clearance of 600+mm

**Note:** the zone of influence will vary across different soil types.

All open excavations shall be barricaded to prevent inadvertent access by vehicles and pedestrians and at all times when unattended. Backfilling and compacting (or installation of associated infrastructure) shall be completed as soon as possible to minimise open excavations within the work areas.

## 7.16 Construction Works

The TMP encompasses the traffic management throughout all stages of construction and associated vehicle movements being undertaken by Downer and its subcontractors.

Downer shall implement, monitor and update this TMP during the contract. Specific elements of work in the project include but are not limited to:

- Clearing and Grubbing;
- Earthworks;
- Pile installation
- Structural concrete framing, tying of steel and pouring of concrete;
- Delivery of mechanical and electrical equipment;
- General site access and egress;
- Laydown

## 7.17 Rules and Standards

All vehicles and mobile plant must be fit for purpose and maintained to a safe and legal standard at all times, including roadworthy standards for vehicles and plant intended for use on a public road.

Where applicable, vehicles, mobile plant with attachments shall conform to the relevant Australian Design

Regulation (ADR) and Australian Standards;

Applicable plant and vehicles shall be fitted with a seat belt conforming to AS2596; Seat Belt Assemblies for Motor Vehicles.

Where required by Legislation earthmoving equipment shall be fitted with compliant Roll-over Protection Systems (ROPS) and/or Falling Object Protection Systems (FOPS).

All ROPS/FOPS must conform to AS2294 – Earth Moving Machinery – Protective Structures.

Mobile plant and heavy vehicles in areas of operation within the project worksite shall be supported with the following documentation:

- Plant Risk Assessment;
- Latest Service Record;
  
- Operators Manual;
- Pre-Start Daily Inspection Book

Mobile plant in areas of operation within the project worksite shall be fitted with the following equipment:

- A flashing amber warning beacon clearly visible to approaching persons and traffic;
- An audible reversing alarm
- Emergency stop buttons;
- Fire extinguisher (minimum 1kg DCP) or appropriate to foreseeable risks (e.g. handling or transport of flammable liquids, gases or vapours);
- First Aid kit;
- Snake Bite kit;
- Guarding for pinch and crush zones in line with Manufacturer design;
- Two way radio;
- A spill kit is required to be in accessible locations of all Mobile Plant & Equipment. Piling machines shall have a >30litre Spill Kit bag within the Machine at all times. Where applicable, Service Truck/ Fuel Trailer shall have a >30 Litre Spill Kit carried on the Plant at all times.

Light vehicles in areas of operation within the project worksite shall be fitted with the following equipment:

- A flashing amber warning beacon clearly visible to approaching persons and traffic;
- An audible reversing alarm
- Fire extinguisher (minimum 1kg DCP);
- First Aid kit;
- Snake Bite kit;
- Two way radio;
- Weekly inspection book

Light vehicles which don't meet the above requirements shall remain escorted at all times within the Construction Areas or remain within the designated carpark area.

Ensure all modifications to plant or vehicles are subject to approval processes detailed in DA-ZH-PR031 Zero Harm Change Management.

Offsite vehicle operations will operate as per the New South Wales legal regulations and standards.

## 7.18 Vehicle Movement Plans

As construction activities progress, changes in traffic routing, access, parking and standby areas will trigger the development of an updated VMP illustrating new arrangements prior to being implemented. These shall be developed in consultation with representatives of work parties who may be impacted by changes so as to ensure required access to work fronts is maintained and interface is minimised. A copy of this VMP will be displayed at the main office compound and will be included as a sub plan to this Management Plan.



VMPs are to be developed by Downer Supervisors in consultation with relevant stakeholders by overlaying traffic arrangements onto the designated VMP site drawing which is maintained in an accessible location for all Site personnel to view. New VMPs along with clear indication of when changes are to take effect will be further communicated via email to relevant stakeholders and during pre-start meetings to all personnel.

## 7.19 Authorisation of Vehicle & Plant Operators

A person may only operate a vehicle or item of plant on the Project if they:

- Hold the appropriate licence (or statement of attainment for plant not covered by a licence) for the class of vehicle/plant being operated;
- Have completed the Project induction
- Have undertaken a verification of competency assessment and been approved by a content expert;
- Are fit for work; and

Are under escort of an authorised person where access to work fronts is required (Delivery Drivers & Visitors only).

## 7.20 Laydown Areas

The Project will have distinct lay down area for receiving, storing and distributing all incoming cargo. These will be high volume traffic areas, with ongoing deliveries and operation of lifting equipment (frannas, forklifts and telehandlers) for loading and unloading activities.

In addition to standard requirements, the following measures will be applied to ensure safe traffic movement in these areas:

- All personnel accessing the Laydown areas shall have completed the applicable Induction (Site Induction, Delivery Driver Induction, Visitor Induction). Delivery Drivers & Visitors shall be under direction at all times by their nominated Site Contact.
- All drivers will be required to stop at the front gate and wait for instructions;
- Any Driver not inducted shall be escorted by an approved person

Loading/unloading plant will be operating in all directions within laydowns as required however the route taken by delivery trucks to both areas will be one way in order to allow these vehicles to drive in, be unloaded and drive out. Positive communications shall be maintained at all times between Plant/Equipment operating simultaneously within the Laydown areas.

Temporary on site laydown areas will be constructed to accommodate direct deliveries with exclusion zones and escorts in place.

## 7.21 Load Security

It is essential that any equipment and cargo being transported is secured using the correct load restraint techniques for safe haulage.

To prevent other objects and materials from falling off trays or trailers, all loads entering and exiting site must be secured using fit for purpose restraining methods, e.g. cargo barriers, ratchet straps, etc.

All vehicles will be loaded and unloaded within the site perimeter. NOTE: OCLB's are strictly prohibited

## 7.22 Driving and Road Hazards

During travel there will be hazards on and near roadways. Always be alert for hazards, changes to conditions and make your adjustments as necessary.

Examples of hazards are:

- Rough/slippery/icy surfaces
- Flooded roads
- High winds
- Fog and smoke haze
- Sunset and sunrise
- Narrow or winding roads
- Low bridges, tunnels etc
- Crossings, rail/people
- Wildlife

Vehicles & Mobile Plant shall use the designated roads at all times where possible. In the case a vehicle becomes bogged on site Supervision is to be notified immediately to allow for safe retrieval. Personnel shall not attempt to retrieve the vehicle without Supervision approval and appropriate risk controls including a SWMS.

## 7.23 Incidents, Hazards and Near Misses

All incidents, hazards and near misses, whether resulting in an injury or not, MUST be reported to the Downer contact person immediately. This includes incidents, hazards and near misses which have occurred on or while travelling to and from the Project site. This will be captured as per the Project Safety Management Plan.

## 8 EXTERNAL ROAD WORKS

---

The road upgrade is scheduled for completion prior to construction works commencing on site. Work on public roads will be as per the relevant approvals and will be in progressive consultation with the RMS, MWRC and the project stakeholders and project delivery partners.

All approvals and appropriate traffic management methods will be identified prior to works being undertaken.

In the event of emergency road repairs caused by construction traffic, appropriate permits and traffic management shall be adopted to complete the work with Council approval prior to works commencing.

### 8.1 Construction of Site Access

Construction work and traffic control associated with the establishment of site entry/exit points will be carried out in accordance with RMS and MWRC requirements and *AS 1742.3:2009 Manual of Uniform Traffic Control Devices*, as necessary.

TCPs developed by an appropriately trained and competent person for these works will be submitted to First Solar for information.

Beryl Road shall be kept clear at all times. All vehicles entering the Project site shall park only in designated parking areas within the Project boundary.

Additionally, any work on or adjacent to a public road shall be undertaken in accordance with a Safe Work Method Statement developed for this high risk activity.



## 9 TRANSPORT MANAGEMENT

This section details the transport management initiatives to ensure all major equipment arrives intact as planned. It covers all transport from the shipping port of receipt to the final installed location (also refer to the Drivers Code of Conduct and Route Management Plan 24120135-DOWNER-PLN-LG-0003).

There is an expected average of 12 bulk cargo deliveries per day over the course of the Project, with a peak of 18 deliveries per day anticipated during the main construction months. No more than 100 heavy vehicle movements are expected per week.

The Site hours are from 7:00am to 6:00pm, while these are the full hours, heavy vehicle movements will not arrive at the extremes of these times.

As outlined in the Drivers Code of Conduct and Route Management Plan, it is recognised that school bus service MP07 runs on Castlereagh Highway between Gulgong and Mudgee.

It has been identified that the following bus stops are situated on the main route to Site.

- Stop A2 – Corner of Fisher/Grevillea Streets – 7.56am
- Stop A4 – Corner of Wilbetree Road/Goree Land – 8.12am
- Stop A2 – Radio 2MG, Mudgee – 3.45pm

Students are expected on Castlereagh Highway between the hours of 7.30am and 8.30am to account for the available morning bus services that stop on this route. The afternoon bus services will proceed along Castlereagh Highway between 3.30pm and 4.00pm.

The Drivers Code of Conduct and Route Management Plan identifies the routes that heavy vehicles will take, approved stopping locations for heavy vehicles and outline the expected driver behaviours through a code of conduct for delivery drivers. Where possible, trucks will not be on the stretch of Castlereagh Highway between Mudgee and Gulgong at the same time as the school buses. This will be achieved by the management of release times at the logistics staging yard in Sydney.

Risks are identified and control measures are implemented to safe guard the drivers, staff onsite and the public. New South Wales road rules apply to all vehicles involved with the Project while not on site and travelling to and from the site, driver behaviour expectations will apply.

Transport Management of major equipment includes the following:

- PV Tracker Equipment
- PV Modules
- Cable Drums

### 9.1 Dilapidation Assessment

An initial dilapidation assessment of local access roads used for Project site access has been undertaken to monitor, mitigate and remedy any deterioration in road conditions as a result of deliveries and other construction activities.

As per the CoA Section 8, visual inspections of the Project traffic route will be undertaken periodically throughout the duration of the Project, a register will be maintained to record any observations and upon completion of the Project the relevant assessment will be undertaken.

Upon completion of the construction works a follow up dilapidation assessment of the local roads will be undertaken and where it is determined that public roads have incurred such deterioration through Project-related heavy haulage, Downer shall take appropriate steps to reinstate to at least pre-Project surface conditions, in accordance with project approvals.

Any remedial works deemed necessary on public roads shall not commence without express council approval.

## 9.2 Route Assessment

The nominated delivery route has been identified for all major equipment coming to Site in consultation with the Supplier and transporter. As stated above, Drivers Code of Conduct and Route Management Plan outlines the preferred routes.

The preferred route will be predetermined with consideration to surface type, overhead lines, traffic volumes, height and weight restrictions. Where required traffic control will be implemented. Disruption to residents will be minimised as much as possible. This will be through timing of deliveries, minimised approved stopping locations and driver behaviour expectations.

Access to Beryl Road shall be via Castlereagh Highway and the site entry will be on Beryl Road with entry and exit from the approved main entrance only.

## 9.3 Proposed Heavy Vehicle Movements

A detailed table of proposed vehicle movements for the duration of the construction period is outlined in the Code of Conduct and Route Management Plan.

Accurate daily heavy vehicle records will be kept, including but not limited to:

- The amount of construction materials transported to and from the site
- The number of laden vehicle movements from the site (per hour, day, week)
- Incident Reporting

For example vehicle movement details please refer to the Drivers Code of Conduct and Route Management Plan. Heavy Vehicle movements will be limited to the acceptable volume as outlined in the Development Consent and will be monitored on a daily basis. Staggering of heavy vehicles to ensure safe travel will be monitored and enforced on a daily basis.

## 9.4 Heavy Vehicle Access Restrictions

The total vehicle movements will not exceed that outlined in SSD 8183 schedule 3 "Transport" section 1 (a) and (b) and the Times will be in accordance with schedule 3 "Amenity" section 16 (a) thru (c) inclusive. The traffic numbers including averages and peaks included within this document are consistent with those nominated in the project EIS and development consent.

Development will not generate more than:

- 30 heavy vehicle movements a day during construction, upgrading or decommissioning; or
- 5 heavy vehicle movements a day during operations;
- Length of any vehicle used for development does not exceed 25 metres unless agreed to otherwise.

Accurate records will be kept on daily volume of heavy vehicles entering or leaving the site. Additional detail surrounding this is included in the Code of Conduct and Route Management Plan.

## 9.5 Heavy Vehicle Driver Requirements

A site delivery driver pack will be created and submitted to all truck drivers destined for Beryl Solar Farm. This will contain all relevant information regarding designated routes, site access, site contacts, PPE requirements, load restrictions, travelling speeds and safe driving procedures.

Delivery Drivers will also undergo a Delivery Driver Induction upon arrival on site. This induction shall include the following information:

- Site Layout including Amenities

- Emergency Muster Points
- Load Management responsibilities while on site
- Access to the Rear of Trailers/Trucks (prohibited at all times)

The nominated Site Contact shall be responsible for presenting the Delivery Driver Induction, escorting the Delivery Vehicle throughout the delivery, and ensuring Sign In/ Sign Out of the Delivery Driver Register.

Additional detail surrounding the expectations of the delivery drivers and Fatigue Management is outlined in the Drivers Code of Conduct and Route Management Plan.

## 10 EMERGENCY PREPAREDNESS

---

The following sub-sections detail emergency considerations in relation to requirements associated with traffic management. For further details on emergency preparedness on the Project, please refer to the Emergency Preparedness Management Plan.

### 10.1 Emergency Service Access

In the unlikely event the main internal roads are inaccessible the alternate Gate entries shall be used.

Access routes must be kept clear at all times to allow uninhibited emergency vehicle access should these services be required. However should any part of the emergency access be blocked for construction reasons an alternative route will be made available.

Emergency vehicle access routes are shown on Annex A – Site Plan.

### 10.2 Emergency Protocols

In the event of an emergency whilst on the Project site, raise the alarm by calling “emergency, emergency, emergency” over the radio and stay within the vehicle cabin if safe to do so. Once a responder has copied, proceed to communicate the following details:

- Identify yourself;
- Identify your location;
- Notify of any injured persons;
- Advise of the nature of the emergency, i.e. ambulance/medical assistance required, fire, etc; and
- Wait for further instructions.

For site emergencies relating to other work parties on site, personnel are to follow the instructions of Downer personnel and monitor the nominated UHF Channel for further instructions. During an emergency, radio silence shall be maintained to allow emergency responders/controllers to communicate with persons immediately involved in the emergency situation, until the all-clear is given.

### 10.3 Evacuation

Should evacuation be required at any time whilst operating vehicles or plant on site, operators shall ensure their vehicle or plant item is parked fundamentally stable in a safe location where it is not obstructing access, shutdown the engine and move swiftly to the nearest emergency assembly area.

## 11 STAKEHOLDER ENGAGEMENT

---

Consultation will be made with neighbouring residents in the event of any temporary road restrictions or closures that may impact their access to/from property, with this communicated as early as possible in advance

via letter drop, email and/or noticeboards. Restrictions shall only occur following exhaustion of all other reasonable options for site access or management of traffic around specific work activities and in consultation with First Solar and Local Authorities.

Any traffic-related incidents or concerns arising directly or indirectly from an interface between construction activities and the general public will be managed in accordance with the Stakeholder & Communications Management Plan. Complaints are handled under 24120135-DOWNER-PLN-ZZ-0017-Stakeholder and Communications Management Plan Section 11.6 as follows. The Excerpt from the Stakeholder and Communications Management Plan is as follows:

## Enquiries and Complaints

The primary point of contact for general enquiries is the enquiries number provided by Downer (0439 742 832). Downer have also set up a dedicated email address: [berylsolarfarm@downergroup.com](mailto:berylsolarfarm@downergroup.com).

The following table outlines the proposed management process and response times for different types of enquiries and complaints:

Enquiry / complaint source	Management	Response time
<b>Downer team member</b>	<ul style="list-style-type: none"> <li>Receive enquiry / complaint directly.</li> <li>Advise the Project Manager</li> <li>Manage the enquiry / complaint directly, investigate and close out as soon as practical.</li> <li>Enquiry / complaint and management actions are uploaded into the stakeholder register.</li> <li>Council representatives / elected representatives of the enquiry / complaint as appropriate.</li> </ul>	<p>Acknowledge the enquiry/complaint within one working day</p> <p>Investigate and draft initial response within one working day</p> <p>Project Manager reviews and respond within one working day.</p>
<b>Project Stakeholders</b>	<ul style="list-style-type: none"> <li>Acknowledge the enquiry / complaint from stakeholder.</li> <li>Refer enquiry / complaint to the Downer enquiry phone number.</li> <li>Downer investigates and manages response or,</li> <li>Downer provides an appropriate response draft for First Solar to review, update or approve.</li> <li>Downer responds directly to party who made the enquiry / complaint if the interaction is approved by First Solar.</li> <li>Enquiry / complaint, actions and response are uploaded into the stakeholder register.</li> </ul>	<p>Acknowledge enquiry/complaint.</p> <p>Investigate and draft initial response.</p> <p>First Solar reviews, updates, approve draft response.</p> <p>Downer responds to enquiry/complaint (only if permitted to do so).</p>
<b>Media</b>	<ul style="list-style-type: none"> <li>Receive enquiry / complaint directly.</li> <li>Record stakeholder contact details and nature of enquiry and refer immediately to media representative. Notify the Project Manager.</li> <li>Provide support to manage and close out the enquiry as required.</li> </ul>	<p>Advise First Solar media representatives within 4 hours of enquiry/complaint.</p> <p>Downer representative to respond accordingly.</p>
<b>Urgent calls</b>	<ul style="list-style-type: none"> <li>Check if the caller requires emergency assistance. If so either supply the relevant emergency services contact details or call emergency services on behalf of the caller.</li> <li>OR</li> <li>If the caller is reporting an environmental incident, record the stakeholder's details and issue, and refer immediately to the Project Manager and Environmental Advisor for action. Advise the caller that the matter has been reported and that an investigation and/or clean-up crew will be mobilised as soon as possible.</li> <li>OR</li> </ul>	<p>Respond as soon as possible but no greater than two hours from initial contact.</p> <p>Advise First Solar of the incident.</p> <p>Provide incident report to First Solar.</p>

- If the caller is reporting a safety incident / unsafe situation, record the stakeholder's contact details and the issue and refer immediately to the Project Manager Zero Harm Safety Advisor for action.
- Manage the enquiry / complaint with the approval of First Solar.
- Enquiry / complaint and associated management actions are uploaded into the stakeholder register.
- Advise First Solar representatives and elected representatives of the enquiry / complaint as appropriate.

## 12 TRAINING REQUIREMENTS

Personnel shall be trained in the requirements of this plan where applicable. Additional training such as VOC's shall be conducted in line with the Training Needs Analysis for the Project.

## 13 COMPLIANCE MONITORING

Compliance to this plan shall be monitored through audit and assurance activities led by Project Zero Harm and Downer Management. Moreover, effectiveness of the requirements for managing safe traffic movements on the Project shall be evaluated for continual improvement. For additional information please refer to the Driver Code of Conduct and Route Management Plan.

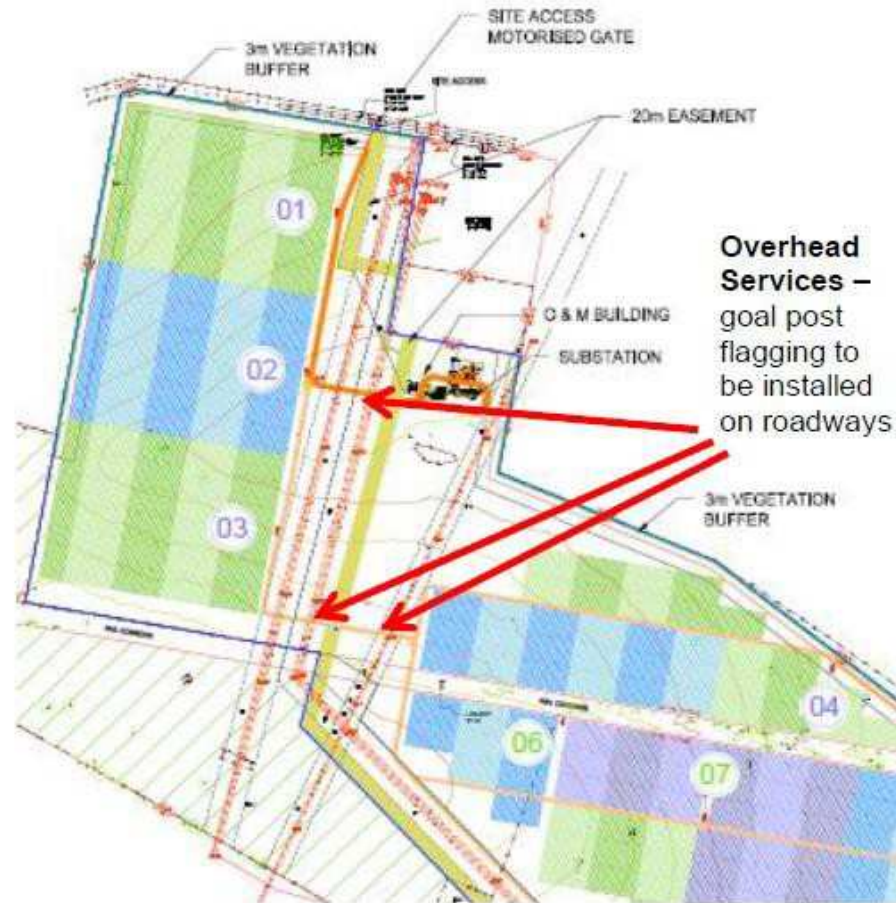
Non-compliance to this Plan shall be recorded within the INX database and reported to relevant stakeholders as necessary, with implementation of corrective actions and review of this Plan undertaken as required.



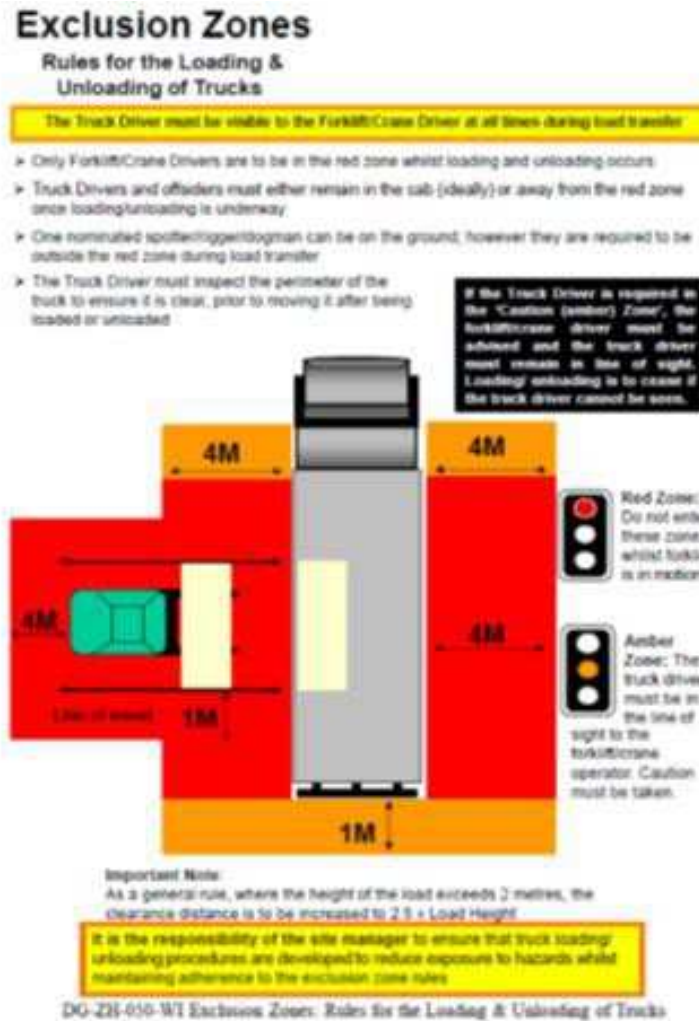
**Annex A – Site Plan**



## Annex B – Overhead Services



**Annex C – Exclusion Zone Rules for Loading and Unloading**





**Annex D – Downer Cardinal Rules**

**ZERO HARM**

# 10 CARDINAL RULES

WORKPLACE RULES THAT WILL SAVE YOUR LIFE. ALL WORKERS HAVE AN OBLIGATION TO STOP AND REPORT UNSAFE WORK.

- 1 **NEVER** WALK DIRECTLY BEHIND OR IN THE PATH OF A REVERSING VEHICLE
- 2 **NEVER** WORK AT A HEIGHT WITHOUT FALL PROTECTION
- 3 **NEVER** ENTER A DESIGNATED CONFINED SPACE WITHOUT TRAINING AND A PERMIT
- 4 **NEVER** BE UNDER A SUSPENDED LOAD
- 5 **NEVER** ENTER A DESIGNATED EXCLUSION ZONE WITHOUT AUTHORISATION
- 6 **NEVER** WORK ON PLANT AND EQUIPMENT WITHOUT VERIFYING ISOLATION, TAGGING AND TESTING
- 7 **NEVER** TAMPER WITH, REMOVE OR BYPASS ANY SAFETY DEVICE
- 8 **NEVER** OPERATE PLANT OR MOBILE EQUIPMENT UNLESS LICENSED/COMPETENT OR UNDER SUPERVISED TRAINING
- 9 **NEVER** OPERATE A VEHICLE WHILE USING A HANDHELD MOBILE PHONE OR WITHOUT WEARING A SEATBELT, WHERE FITTED
- 10 **NEVER** CONSUME OR BE UNDER THE INFLUENCE OF ALCOHOL OR NON-APPROVED DRUGS IN THE WORKPLACE

**BREACHES OF THESE RULES WILL PUT YOUR LIFE IN IMMINENT DANGER, WILL BE INVESTIGATED AND MAY RESULT IN DISCIPLINARY ACTION OR DISMISSAL.**

**Downer**  
Relationships creating success