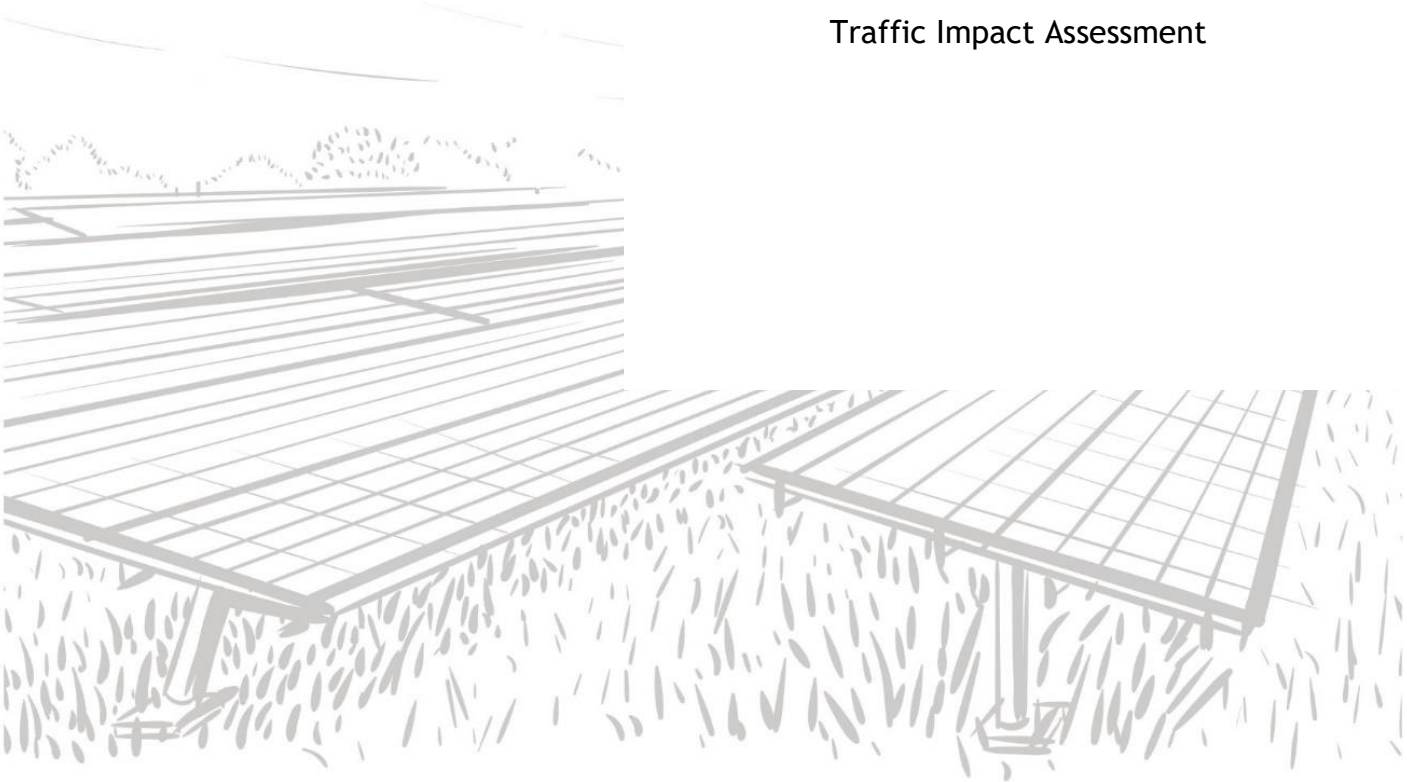
Appendix H

Traffic Impact Assessment



Tamworth solar farm, Somerton

Projecte Pty Ltd

Traffic Impact Assessment

17th October 2019

SECA solution

Solar Farm Project, Tamworth NSW

Traffic Assessment Report

Author: Sean Morgan

Client: Project.e Pty Ltd

Issue: Ver03

Reference: P1239

17 October 2019

Quality Review and Document History

Version	Date	Description	Prepared By	Checked By
Ver01	22/8/19	Draft	S Morgan	C.Thomas
Ver02	13/9/19	Draft	S Morgan	C Thomas
Ver03	17/10/19	Final	S Morgan	C Thomas

Ground Floor, 161 Scott Street Newcastle NSW 2300
Ph (02) 4032 7979
www.secasolution.com.au

Contents

Executive summary

This traffic impact assessment has been prepared for the proposed solar farm in the locality of Somerton, north of Tamworth. The solar farm will have a capacity of 80 megawatts and once constructed will require two full time workers to be on site. During construction, there will be a peak work force demand of 250 people and the overall construction will require approximately 2,800 heavy vehicles to access the site over a 12-month period. It can be seen that once operational the traffic impact will be minimal, but during the construction phase the traffic will need to be managed to ensure minimal impacts upon road safety and the operation of the local road network.

In conjunction with the site inspection a number of different routes were assessed for heavy vehicle access to the site, with access determined to be suitable via Babbinboon Road / Warminster Road and Soldiers Point Road. Access via Prices Road was assessed but the two water crossings along this route would create operational issues for the heavy vehicles accessing the site. The proposed route via Babbinboon Road / Warminster Road / Soldiers Point Road provides the shortest distance between the site and the state road network, the Oxley Highway. This route will be the designated route for all heavy and light vehicle movements associated with the construction work for the project.

This route currently carries negligible traffic flows and is well laid out. This road will be monitored for damage through the construction phase and will be repaired as required in accordance with Council requirements. As part of the project, the intersection of the Oxley Highway and Babbinboon Road will be upgraded to provide a left turn deceleration lane, to allow for the heavy vehicles accessing the site, turning left off the highway at this location. The right turns out of Babbinboon Road can occur safely at this location.

Construction is expected to occur over a 12-month timeframe and at peak construction activities there could be 250 people working on site. Staff will be encouraged and supported to car share, with construction staff being located in Tamworth during the construction work. Parking for staff vehicles can be provided on site as required. The site access is located on Soldiers Settlement Road, approximately 500 metres west of Warminster Road and is currently used as the access to the house on the subject site. This access will be upgraded as required to allow for heavy vehicle movements in and out of the site during construction and will provide the permanent access to the site once the solar farm is operational.

The proposed upgrade works at Babbinboon Road and the Oxley Highway will be designed and constructed in accordance with Austroads Guidelines and in consultation with Council and the RMS. With this upgrade, this intersection cam proved safe and appropriate access between the state road network and the local road network to provide access to the site.

There will be a limited number of oversize over mass vehicles for deliveries to the site as part of the project, and these will require a separate approval from the RMS and Council.

All drivers accessing the site shall operate under the drivers code of conduct, to ensure road safety is maintained for existing road users. The code of conduct includes the designated route to access the site.

Based upon the work completed for the project, it is considered that the construction and operational phase of the proposed solar farm shall have an acceptable impact upon the local road network, subject to the upgrade of the intersection of Babbinboon Road and monitoring / repairing the length of local road between the Oxley Highway and the site access over the duration of the construction work.

1 Introduction

Seca Solution have been commissioned by Projecte Pty Ltd to review the traffic impacts associated with the construction and operational phase of a new Solar Farm development and to determine traffic management measures associated with the construction activities for the project. The project involves construction, operating and eventually decommissioning of an 80 megawatt (MW DC) solar farm to the north-west of Tamworth in NSW.

The following works and infrastructure would be required to support the construction and operation of the solar farm:

- Construction of a main access road for all access and egress for the Site and substation off Warminster Road
- Installation of electrical infrastructure including:
- A 132kV Substation including two transformers and associated 132kV switchgear.
- Inverters to collect and convert DC to AC.
- Cabling and other electrical infrastructure (e.g. security systems).
- A maintenance compound and buildings.
- Fencing, landscaping and environmental works.

The operational life of the solar farm is expected to be 30 years at which point the panels are either replaced and operations continue or removed, and the site is decommissioned and rehabilitated.

An estimated 195,000 PV panels would be installed on a single axis tracker system across the Site.

Construction of the Site will take approximately 12 months.

Power generated by the facility will be transmitted via existing 132kV transmission lines, in an easement owned by TransGrid that traverses the Site.

As part of the development consent, and prior to work on site, a Traffic Management Plan will need to be prepared to the satisfaction of the road authorities (Tamworth Regional Council and the Roads and Maritime Services (RMS)). The busiest period associated with the development with regards to traffic is during construction, with the operational phase of the project only requiring two staff on site for the majority of the time. Seca Solution has prepared this Construction Traffic Management Plan (CTMP) for the project to ensure traffic issues can be safely and efficiently managed during the construction activities on site.

This CTMP has been developed for the construction activity for the project and the potential decommissioning element for the project, which may occur in 30 years time. The potential decommissioning of the project site will require a similar level of activity, although will probably require less staff and would be completed over a shorter timeframe. The requirements and protocols for the decommission stage of the project will be as per the construction phase, although it is acknowledged these may need to be reviewed and altered in 30 years to suit the road conditions at that time as well as the work requirements.

The site is located within the locality of Somerton, north-west of Tamworth and is shown in Figure 1-1 and 1-2 below.

The site is currently arable land and has road frontage to both Warminster Road and Soldiers Settlement Road.

Figure 1-1 – Site location in context of regional road network

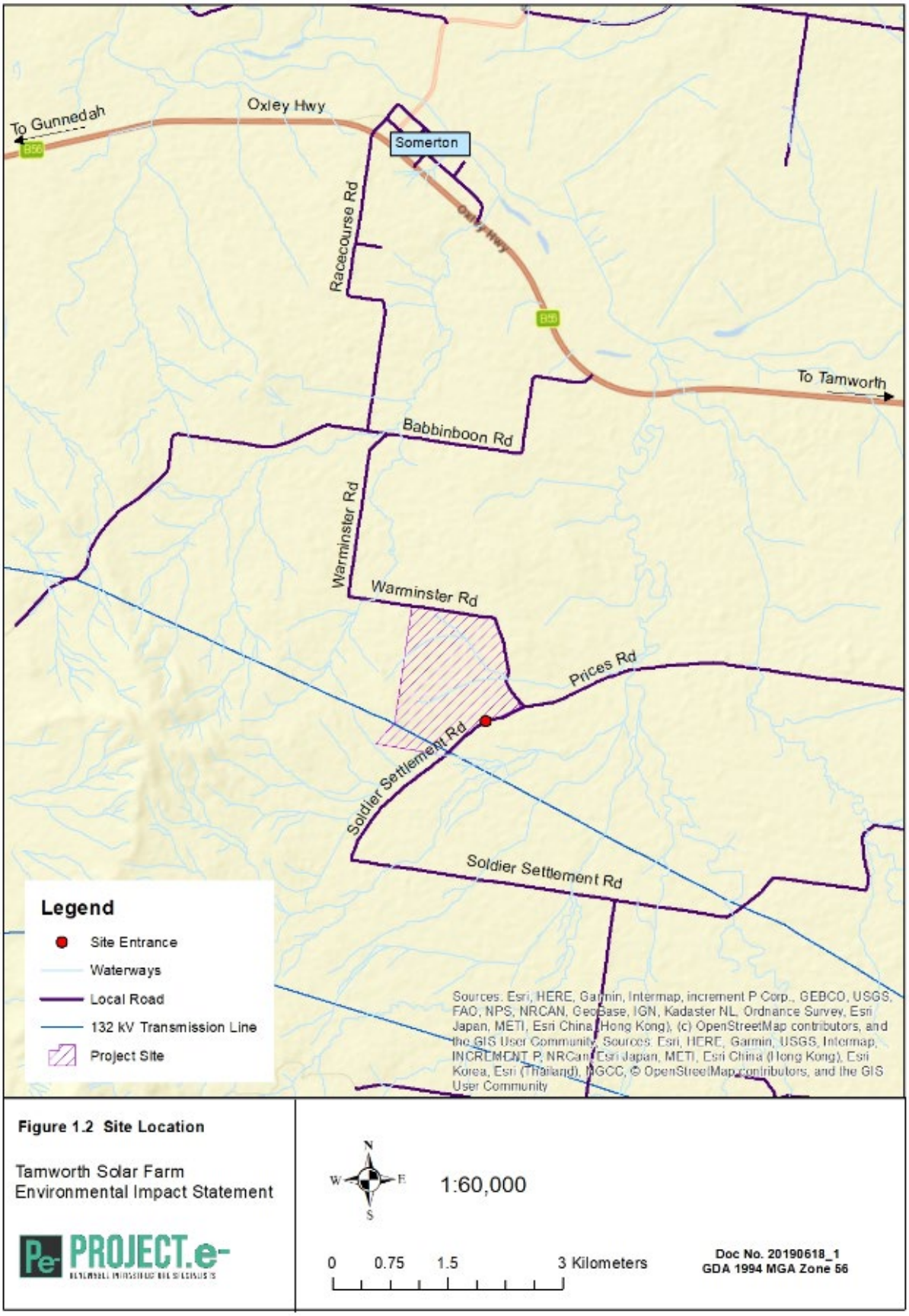


Figure 1-2 – Site access route options

1.1 Consultation and Authority Requirements

As part of the project, there has been consultation with the Department of Planning, Industry and Environment by the project manager and SEARs have been issued. A summary of the EARs as they relate to traffic and access issues is presented below and the response is provided within this table.

EARs issue	Response / Section of report
An assessment of the peak and average traffic generation, including over-dimensional vehicles and construction worker transportation	**Section 3.3, 3.4,3.5**
An assessment of the likely transport impacts to the site access route (including Oxley Highway, Babbinboon Road, Warminster Road, Prices Road, Soldiers Settlement Road and Bective Lane), site access points and any Crown Land, particularly in relation to the capacity and conditions of the roads	**Section 4.1,4.3**
A cumulative impact assessment of traffic from nearby developments	**Section 4.2**
A description of any proposed road upgrades developed in consultation with the relevant road and rail authorities (if required)	**Section 2.3**
A description of the measures that would be implemented to mitigate any transport impacts during construction	**Section 2.3**

Consultation has been held with Tamworth Regional Council by staff from the project team and no specific traffic issues were raised.

RMS Consultation

Consultation has been held via a phone conversation with Andrew McIntyre, manager Land Use Assessment, Western Region with regard to a number of solar farms proposed to be constructed across rural NSW. The relevant outcome of the discussion with Andrew McIntyre is provided below:

- The critical phase for the assessment is the construction activities as this involves heavy vehicle access to the site along regional and local roads as well as a high number of workers;
- Consideration to the movement of staff to and from the site must be given. In remote areas where the solar farms are constructed, there are a large number of staff who can be drive in/drive out re-locating for temporary work from the established east coast centres such as Sydney and Newcastle. This requires staff to drive a long-distance home after working on the site for long hours for a week or more – consideration to controls for staff driving home after working on site should be considered;
- Provide details on the access routes to the site for heavy vehicles and the size / number of heavy vehicle movements associated with the construction and operation of the site;
- Provide details on the operational characteristics of the project – it is recognised that the staff levels and traffic volumes for the operational stage of the project are low;
- Provide comment with regard to the decommissioning stage of the project and the potential traffic impacts;
- Prepare a driver code of conduct for the project to control vehicle access and maintain safety;
- Assess impacts on road safety, including pedestrians and cyclists and any bus routes impacted
- Review alternative transport options for the site including pedestrians, cyclists and bus use
- Provide details on any road upgrades identified as part of the project and include a Road Safety Audit as required

2 Existing Road Network and Local Characteristics

Warminster Road is a local road (managed by Tamworth Regional Council) which fronts the northern boundary of the Site. Warminster Road is a typical country road providing access to a number of rural lots with agricultural use. It is unsealed for much of its length with seal only provided at water crossings to mitigate against washing away during storm events. It allows for 2-way traffic movements with a width of approximately 6 metres (refer photo 1 below) and at the time of the site inspections was in good condition, with grading work having been completed by Council. Warminster Road connects with Babbinboon Road at its northern end via a simple T intersection with Babbinboon Road being the priority road. To the south the road connects with Prices Road and Soldiers Settlement Road via a T intersection.

There is no posted speed limit on this road, indicating that the default NSW rural speed limit of 100 km/h applies. This same limit states that drivers should drive to the conditions and as a gravel road, it can be seen that vehicle speeds could be much lower than this, especially at curves and at water crossing points.

Photo 1 – View along Warminster Road in the general vicinity of the site

Babbinboon Road to the north of the site is an un-sealed two-way road for much of its length with an overall width in the order of 6 metres (refer Photo 2 and 3 below). At its northern end, it connects with the Oxley Highway via a T intersection, where approximately 200 metres of the road is sealed (refer Photo 4). There are a couple of water crossings where road seal has been provided to limit washing away of the road during storm conditions (refer Photo 3). Babbinboon Road provides a generally straight alignment, but follows the boundaries of properties requiring 90 degree bends which limit vehicle speeds accordingly.

Soldiers Settlement Road runs along the southern boundary of the site and provides a similar standard of road as Warminster Road, providing a unsealed surface. The access to the subject site is approximately 500 metres west of the intersection with Warminster Road and this access is currently the main access to the existing farm activities on the land and the homestead.

Photo 2 – view over intersection of Prices Road / Soldiers Settlement Road / Warminster Road

Photo 3 – Typical cross section on Babbinboon Road

Photo 4 – Water crossing on Babbinboon Road showing sealing on approaches

Photo 5 – Babbinboon Road sealed surface at northern end to connect with the Oxley Highway

As part of the project, it is proposed that all heavy vehicles will travel via the roads identified above.

There are a number of rural residential lots and farms located along this route between the subject site and the Oxley Highway. During the site work, no vehicles were observed on these roads, with these roads only providing access for the local population and rural heavy vehicle demands associated with farm activities.

Babbinboon Road connects with the **Oxley Highway** via a simple T intersection, with the Oxley Highway being the priority road. The Oxley Highway forms part of the State road network that is a key freight route in NSW and forms part of the road network designated by the Roads and Maritime to carry oversize, over mass vehicles. It typically provides a single lane of travel in both directions and operates under the posted speed limit of 100 km/h outside of the urban areas where the alignment permits. As part of the regional road network, the Oxley Highway carries a mixture of local and regional traffic with a significant number of trucks including B-double combinations. Based on RMS data from the count station on the Oxley Highway near Bective Reserve Road (station I.D 6194) the road carries a high level (17%) of heavy goods vehicles.

The Oxley Highway provides a direct route to Tamworth to the south and through to connect to the wider state road network. This will provide a connection for staff and local supplies for the project. For specialist supplies via the Port of Newcastle the state road network along the New England Highway provides a connection to Tamworth from the south.

Photo 6 – View along the Oxley Highway showing the typical road cross section

As part of the site work, two other access options were considered for the project.

- Bective Lane which connects with the Oxley Highway then along Prices Road
- Soldiers Settlement Road which connects with the Oxley Highway then along Prices Road.

Whilst both Bective Lane and Soldiers Settlement Road are sealed and provide a good alignment and road surface for access (including heavy vehicles) to the site, Prices Road is not considered to be a valid route for heavy vehicles

to access the site. The width of the unsealed formation of Prices Road is restrictive and would require substantial work to allow for 2-way heavy vehicle movements. The major concern relates to two separate water crossings, which have steep approach and departure ramps. These are unsealed and in the event of a storm would not be passable. The vertical alignment will also create issues for longer vehicles as well as safety concerns relating to sight visibility lines for drivers approaching these water crossings. The straight alignment of Prices Road may also encourage drivers to speed in an inappropriate manner.

Bective Lane connects with the Oxley Highway at a simple T intersection and the vertical alignment of the Oxley Highway restricts the visibility to the right (south) for a driver exiting the side road at this location. Vehicles turning right out of here when leaving the site would create a safety concern for the project.

Soldiers Settlement Road connects with the Oxley Highway via a simple T-intersection and provides good visibility in both directions for a driver exiting onto the Oxley Highway. Whilst there is some shoulder widening on the southern approach to assist the left turn movement into the side road, this is not a full-length left turn deceleration lane and would require road upgrades.

2.1 Traffic Volumes and Road Operation

Traffic volumes in the immediate vicinity of the subject site are very low, reflective of the rural environment. Warminster and Babbinboon Roads provide access to a number of rural land holdings and do not provide a direct access for through traffic movements nor do they provide direct access to a town or village. As such the traffic flows on these road are considered to be less than 100 vehicles per day two-way.

As part of the regional road network, it can be seen that the Oxley Highway carries higher traffic flows, associated with both local and regional demands. The RMS web page for traffic count data shows that in 2019 the 2-way traffic flow north of Bective Reserve Road was 3,264 vehicles per day (count I.D 6194) with 17% heavy vehicle content.

Observations on site during a typical morning peak period (Tuesday 6th August 2019) shows that the current road network in the vicinity of the subject site operates very well with minimal delays and congestion. The local access route proposed to be used for the project carries negligible traffic flows and operates with no delays except for those associated with drivers slowing down to observe traffic flows on the approaches to the various intersections and negotiating the intersections and 90 degree curves.

2.2 Road Safety

It is recognised that as part of the project work, there will be in the order of 2,800 heavy vehicle movements associated with the construction work which will impact along the local road network. All heavy vehicle access to the project site will be via the Oxley Highway – Babbinboon Road – Warminster Road. No alternative route for heavy delivery vehicles is considered appropriate as discussed above.

The major road safety impact is associated with the delivery trucks accessing the site and their impact upon the operation of the intersections. The trucks will be accessing the site from the Port of Newcastle where the solar panels will be shipped to. The trucks will then access Tamworth via the New England Highway, travel through Tamworth and then connect with the Oxley Highway and travel towards the site. These regional roads currently provide a high standard of road and allow for the movement of local, regional and national road freight and carry B-double trucks. It is considered that the additional truck movements associated with the construction activities for the project will have a minimal and acceptable impact upon road safety along these roads.

For the local traffic impacts, consideration has been given to the existing alignment of the road, intersection layouts, current traffic flows and existing users along the route between the Oxley Highway and the site. Observations on site with regard to road safety are summarised below:

- Existing traffic flows on the local road are very low

- The generally un-sealed width of the road allows for two-way traffic movements
- The alignment of the road is good, with 90 degree bends forcing vehicles to slow down
- The 90 degree bends operate at speeds below 100 km/h (the default speed limit) but there are no advisory speed signs provided in advance of these bends
- Heavy vehicles will currently travel along the local roads associated with the farming activities. However, these flows will be very low

This route is provided below (Figure 2-1) and will be included within the Driver's Code of Conduct which will form part of the project inception meeting for the project for all staff and drivers.

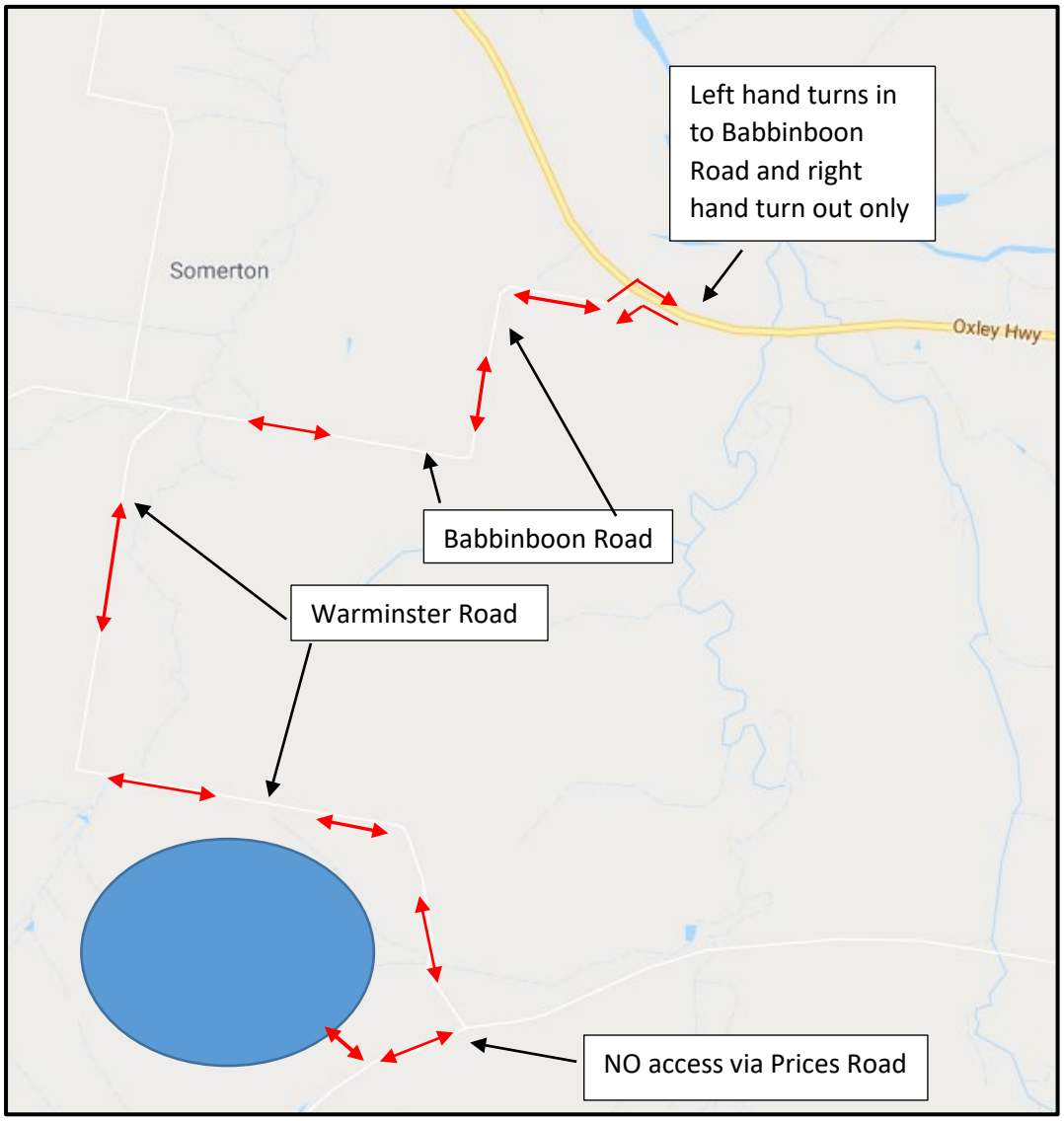


Figure 2-1 – Designated Heavy Vehicle route to project site

The vehicle route through Tamworth currently caters for a large number of heavy vehicles including B-double combinations and allows for safe 2-way movement of trucks along the various roads. The intersections along this route are well laid out and provide good visibility in all directions to allow for the safe turning movements of vehicles. It is considered that this route through the town can safely accommodate the additional traffic movements associated with the project.

2.2.1 Intersection of Oxley Highway and Babbinboon Road

The intersection of the Oxley Highway and Babbinboon Road is controlled by a simple T intersection with no turn lanes. It allows for all turning movements and operates under the posted speed limit of 100 km/h. Whilst no speed surveys have been completed at this location as part of the project, it is considered that drivers will travel at or above the speed limit in this location, due to the good alignment and low traffic demands. The sight distance available is approximately 500 metres in both directions, safely allowing a driver to determine a suitable gap for exiting Babbinboon Road to enter the highway via a right turn.

Austroads Guidelines Part 4a provides advice with regards to safe intersection sight distance (SISD). This distance is the distance required for a driver to safely enter the main road off a side road. For the posted sped limit of 100 km/h, the SISD is 262 metres for a reaction time of 2.5 metres. The sight distance available (500 metres) exceeds the requirements for a design speed of 130 km/h (383 metres) and is therefore considered acceptable.

For the left turn into Babbinboon Road, visibility is good allowing a driver to observe a vehicle braking to turn left into the side road. There is however no left turn deceleration lane provided at this location nor a wide shoulder. The current peak flow at this location could be in the order of 330 vehicles per hour 2-way. Turning traffic currently is very low, however the traffic movements associated with the project could be in the order of 50 vehicles or more during the morning for the left turn in, associated with staff movements and delivery vehicles.

Based on the construction traffic demands and associated increase in heavy vehicle demands, this intersection will need to be upgraded to allow for a left turn deceleration lane. Based upon the warrants provided by Austroads Guidelines Part 4a: unsignalised and signalised intersections (reproduced below) a short Auxiliary Left turn lane is proposed (AUL(S)).

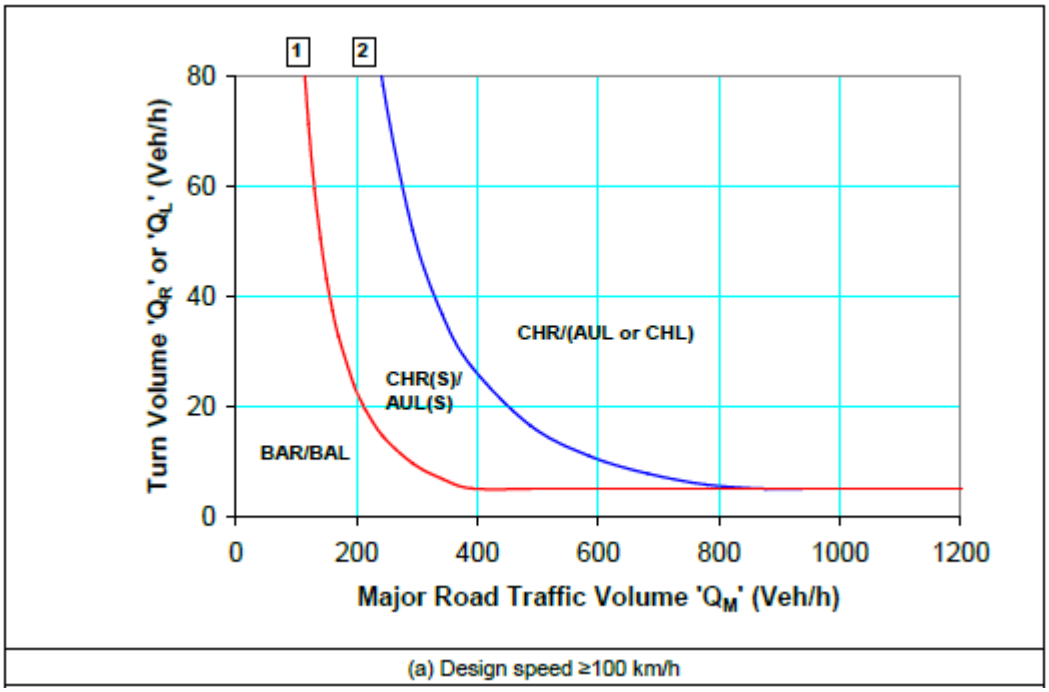


Figure 2-2 – Extract from Austroads Part 4a showing requirements for left turn deceleration lane to be provided (AUL(S))

Photo 7 – View to left for driver exiting Babbinboon Road. A vehicle can be observed for 20 seconds prior to the intersection

Photo 8 - View to right for driver exiting Babbinboon Road. A vehicle can be observed for 20 seconds prior to the intersection

Overall it is considered that this intersection provides an appropriate level of control and, subject to the provision of a short left turn deceleration lane, operates at an acceptable safety standard to accommodate the traffic movements associated with the proposed solar farm (both construction and operation phases).

2.2.2 Intersection of Babbinboon Road and Warminster Road

This intersection operates as a T intersection with Babbinboon Road being the priority road. This intersection is well laid out and provides good visibility for vehicles turning in and out of the side road (Warminster Road). It is currently un-sealed and rutting occurs due to the turning movements of traffic. It is proposed that this intersection be upgraded to allow for a sealed road surface, to reduce the wear to the road surface especially when wet. This will also reduce the potential issue of dust associated with heavy vehicles turning. As part of the traffic management measures during construction, a Traffic Control Plan will be prepared for this location to advise drivers of trucks turning associated with the construction with an appropriate speed limit.

A tree is located to the west of this intersection which will need to be removed to allow for improved visibility.

Photo 9 – View to left for drivers turning out of Warminster Road onto Babbinboon Road

Photo 10 - View to right for drivers turning out of Warminster Road onto Babbinboon Road

2.2.3 Intersection of Warminster Road and Soldiers Settlement Road

This intersection is a simple 3-way give way controlled intersection, with no priority signage to delineate controls at this location. It is well laid out and there are no trees in this location to impact upon sight lines for drivers. Traffic associated with the project will require right turns from Warminster Road into Soldiers Settlement Road for inbound traffic and the reverse left hand turn from Soldiers Settlement Road for outbound movements.

2.2.4 Alignment of Warminster Road and Babbinboon Road

The alignment of both of these roads is generally straight and allows for 2-way traffic movements. However, it provides an un-sealed surface which will suffer from wear associated with the significant increase in vehicles movements, especially the heavy vehicles. There are 90 degree bends on these roads that discourage drivers from speeding, together with the un-sealed surface.

The impacts of the construction work on this road need to be discussed and agreed with Council with the following options put forward for consideration:

- Provide sealed road surface at bends and intersections together with a water cart to limit dust
- Provide a full sealed pavement along the length of the route between the subject site access and the Oxley Highway

2.2.5 Site access point on Soldiers Settlement Road

The access to the site will be via the existing access to the subject site off Soldiers Settlement Road, approximately 500 metres west of the intersection with Warminster Road. This access point will provide access for the construction work as well as form the permanent access for the substation and is located on a straight and flat length of road, ensuring good visibility is provided in both directions. Drivers accessing the site will be right turns in and then left turns out along Soldiers Settlement Road, with this road operating under the default speed limit of 100 km/h.

As part of the project construction work, a TCP will be provided to highlight the site access and provide a speed reduction through the access location on Soldiers Settlement Road to maintain road safety.

This site access will allow for a length of sealed section of driveway within the site together with a shaker to stop dirt being carried from the site onto the road.

2.3 Mitigation Measures

From the details above the following mitigation measures are proposed.

- Upgrade the intersection of Babbinboon Road and the Oxley Highway to allow for a short length left turn deceleration lane;
- Provide a temporary TCP on the site frontage on Warminster Road adjacent to the site access for construction work associated with upgrading the access and for traffic entering and exiting the site. A Traffic Control Plan will also be prepared for the intersection of Warminster Road and Babbinboon Road to advise drivers of trucks turning associated with the construction with an appropriate speed limit.

  These TCPs shall only be in place during construction and signs shall be removed or covered outside of construction activities on the site. Once the construction work is complete this TCP shall be fully removed. This TCP will be prepared in accordance with “Traffic Control at work sites” published by the RMS dated July 2018;
- Provide regular community updates for residents along Warminster Road and Babbinboon Road (between Oxley Highway and site access) to advise of construction activities and increased heavy vehicle movements along these two roads;
- Agree a maintenance schedule with Tamworth Regional Council for the construction period to allow for increased wear along the road or agree extend of sealed pavement required along the route between the Oxley Highway and the site access due to the increased passage of heavy vehicles;

2.3.1 Light Vehicle Route

For light vehicles associated with workers, the proposed access route will be via the designated heavy vehicle shown in Figure 2-1 above. This route provides a safe and acceptable route for light vehicles which can safely and conveniently access the site.

The project will be utilising workers local to the site from Tamworth who will use this route. Additional specialist staff may be required, and these staff members would be located in temporary accommodation in Tamworth who will also use the designated heavy vehicle route to the site.

3 Construction Activities

The construction and commissioning phase is expected to last approximately 9 to 12 months. The main construction activities would include:

- Site establishment and preparation for construction:
  - Installation of security measures including fencing.
  - Establishment of site compound and material layout areas.
  - Ground preparation.
- Installation of environmental controls
  - A detailed Construction Environmental Management Plan (CEMP) would outline the environmental controls required.
- Minor vegetation clearing of isolated paddock trees.
  - Establishment of tree and vegetation protection measures as required.
  - Establishment of sedimentation and erosion controls as required.
- Preliminary civil works including:
  - Drainage works
  - Setting up foundations for the substation
  - Earthing works
- Installation of steel post and rail foundation system for the solar panels.
- Installation of PV panels and DC wiring beneath the panels.
- Installation of underground cabling (trenching) and installation of inverter stations.
- Construction of 132kV substation.
  - Site Establishment and clearing (if required)
  - Bulk earthworks via a range of plant that may include scrapers, bulldozers, excavators, rollers, trucks and loaders
  - Detailed civil works including drainage, earthing, foundations etc. generally using excavators, piling rigs, trucks and cranes
  - Erection of steelwork, equipment, demountable buildings and transformer generally using trucks, EWP's and cranes
  - Electrical connections generally EWP's and other minor plant
  - Testing and commissioning generally EWP's and other minor plant
- Connection of substation to existing 132 kV transmission line
- Testing of electrical infrastructure
- Removal of temporary construction facilities and rehabilitation of disturbed areas.

The project does not require any concrete footings to be provided for the solar panel construction. The substation will require a hardstand base with material imported for this.

A site office and compound will be established on site for the duration of the works with temporary access tracks provided to allow for access across the site as required.

All staff vehicles will be able to park within the site adjacent to the site office and adjacent to the works area as required, with no external parking demands. This area will have solar panels installed towards the end of the construction phase requiring vehicles to be parked away from this area. The size of the overall site footprint however will allow for all construction staff vehicles to park on site. As part of the project construction it is proposed to maximise the local workers content from Tamworth and car-pooling will be encouraged and supported as part of these trips. With 3 or 4 people arriving in a single vehicle it can be seen that the parking demands can be contained within the site.

The construction access road to the site will be via a minor upgrade of the existing access to the site off Soldiers Settlement Main, and the future access to the substation will use this access when the site is operational.

3.1 Timing

The construction of the solar farm is expected to be completed within a 9-12 month timeframe.

The first stage of the project works requires the road upgrade work for access to Soldiers Settlement Road to be completed prior to commencement of construction activities on site.

3.2 Working Hours

Construction hours are in accordance with the *Interim Construction Noise Guidelines* (DECC 2009) (ICNG) with standard construction hours being

- 7:00am and 6:00pm Monday to Friday
- 8.00 AM to 1.00 PM on a Saturday
- No construction work is to be carried out on a Sunday or public holiday.

No construction work, upgrading or decommissioning activities will be undertaken outside of these hours with the exception of:

- The delivery of material as requested by the NSW Police Force to other authorities for safety reasons; or
- Emergency work to avoid the loss of life, property and / or material harm to the environment.

3.3 Construction staff numbers

Peak demand levels for the construction work will vary with a potential peak of 250 people for a 6 month duration and a lower level outside of this peak period. The staff will be sourced locally where appropriate with some specialist and project management staff being temporarily located in Tamworth. Staff will be encouraged and supported to car-pool as appropriate with other staff transferred to and from the site via mini coaches to reduce vehicle demands. Due to the size of the site footprint, these same vehicles will also be used on site to move staff across the site.

With a potential peak of 250 staff, a vehicle occupancy rate of 4 people per vehicle has been assumed based upon carpooling and the use of a mini bus e.g. Toyota Coaster. This would give 65 vehicle movements inbound and outbound for staff movements.

All construction light vehicles will be able to park on site, near the laydown area or the office compound area as required.

3.4 Heavy vehicle requirements

The level and type of heavy vehicles accessing the site will vary throughout the project timeframe. At the beginning of the project there will be a requirement for some earthwork moving equipment to construct the access road and some minor earthworks across the site as required. This may require a scraper or bull dozer which will be transported to site on a low loader. This machinery will remain on site for the duration of the earthworks portion of the project construction work.

While extensive earthworks are not proposed, some land forming (including localised cut and fill areas) may be undertaken to achieve more consistent gradients beneath the PV modules. Additionally, earthworks are required for trenching works.

In total, approximately

- Approximately 2,200 m^3 of gravel would be required to cap the access road
- Approximately 18,000 m^3 of sand (subject to detailed design) would be required for the bedding of cables that are to be buried throughout the site

Once the earthworks have been completed, the balance of the construction work will commence requiring machinery including:

- Pile driver (10)
- Piling rig
- All terrain fork-lift (10)
- All terrain utility vehicles (5)
- Backhoe (5)
- Flatbed trucks (5)
- Mobile crane (1)

Other equipment if required may include an elevated work platform, scraper, roller and winches. All of the plant will be located on site and will therefore be only required to access the site once for the construction works.

The solar panels are expected to be transported from the Port of Newcastle or Port Botany in Sydney. Other specialist equipment is generally sourced from Newcastle as required whilst consumables such as concrete and general material supplies will be local from Tamworth.

A summary of the expected vehicle movements associated with the construction work is provided below and shows the full movements for the duration of the project. These movements are spread out across the project, with the site set up and earthworks commencing at the beginning of the project. Once this work is complete, the balance of the construction work will commence with deliveries of the specialist equipment etc with the import of backfill material being over a number of weeks to suit the construction timeframe.

3.5 Vehicle movements

A summary of the vehicle movements is provided below.

Phase	Purpose	Vehicle Type / Trailer Type	No. of one-way vehicle movements
Site Set-Up and Demobilisation	Portacabin delivery and removal	Low loader	20
	Skip delivery and removal	Low loader	220
	Generator delivery and removal	Semi-trailer	4
	General deliveries	Semi-trailer	20
	Crane mobilization and demobilization	Crane	4
	Water tank delivery and removal		4
Roads and hardstands	Delivery of imported capping for road laydowns and crane hardstands	Truck and dog	70
	Plant delivery and removal: excavators, compactors drill rig	Low loader	20
	Concrete deliveries for maintenance container hardstands	Concrete agitator	50
Generating Equipment	Tool container delivery and removal	Low loader	4
	Module deliveries	Semi-trailer	500
	Mounting structure and pile deliveries	Semi-trailer	500
	Inverter Station deliveries	Low loader	10
	DC cabling trays and combiner boxes	Semi-trailer	100
AC Cable Installation	AC Cable delivery	Semi-trailer	100
	Backfill material delivery	Dump Truck	900
Plant delivery and removal	Telescopic handler and excavator	Low loader	25
Other	Miscellaneous deliveries	Light vehicle	20
	Monitoring equipment fibre SCADA servers etc	Truck	2
	Waste Collection	Truck	200
	Consumables (Oil and Fuel)	Truck	20
		TOTAL	**2,793**

The traffic numbers provided above are based on the concept design work for the project and could alter through the detailed design phase of the project.

In summary, typical daily vehicle movements are in the order of 70 light and 20 heavy vehicles two-way (70/20 inbound, 70/20 outbound) per day at peak construction times. For the light vehicles, the vast majority of these will be inbound movements in the morning bringing workers to the site with these vehicles then remaining on site for the full working day before leaving at the end of the working day. It is expected that there will be limited light vehicle movement outside of these periods, other than support staff e.g. office staff or the occasional visitor to the site.

Outside of the peak construction activities, there will be less construction staff and a reduction in light vehicles accessing the site per day accordingly.

For the heavy vehicles, these will typically be spread out across the working day. For the solar panel deliveries, these trucks are travelling from the Port of Newcastle or Port Botany in Sydney and the journey length will be 5 hours or more, seeing a spread of these vehicles not all arriving at the same time. Allowing for each truck to be emptied on site one at a time, the outbound movements will also be spread out and not all leave at the same time. All other heavy vehicles will also be spread out over the normal working day with no concentration of heavy movements expected.

4 Traffic Management Assessment

The proposed traffic management measures allow for all access off Soldiers Settlement Road only. The access to be used will be for the construction traffic movements as well as the future on-site operational demands. This access is to be provided in accordance with the requirements for the site operations (including swept path requirements for delivery vehicles) and take into account the design requirements of Tamworth Regional Council.

The designated access route to the site will be used by both light and heavy vehicles.

All vehicle movements in and out of the site are as shown below in Figure 4-1.

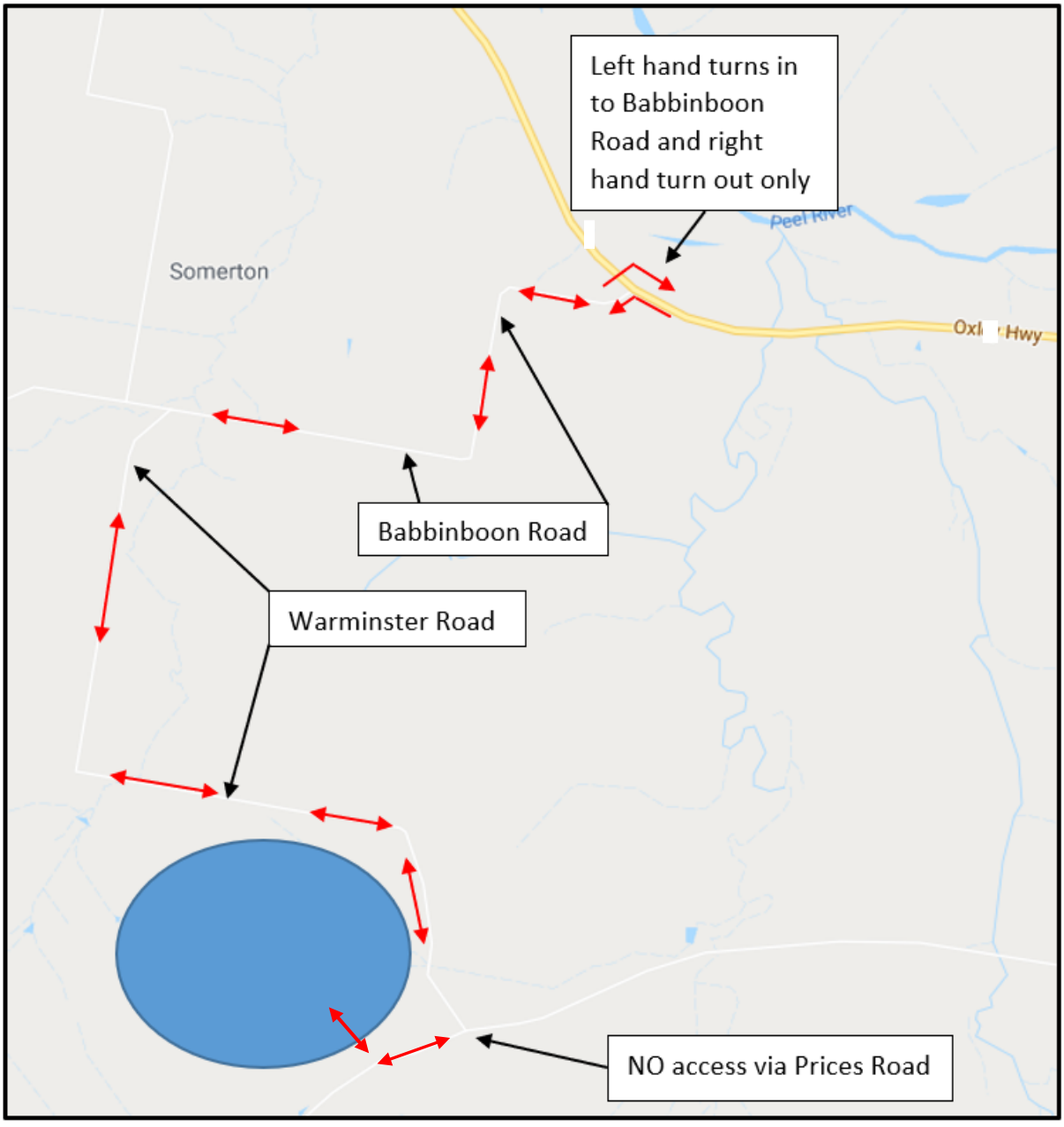


Figure 4-1 – Heavy and Light Vehicle access route to subject site

4.1 Impact Assessment

The project will require the delivery of the solar panels and other specialist equipment from Newcastle with the access route via:

- Newcastle metropolitan regional road network
- Sydney metropolitan regional road network
- M1 Pacific Motorway
- Hunter Expressway / New England Highway
- New England Highway to Tamworth
- New England Highway in Tamworth to Oxley Highway (approved B-double route)
- Oxley Highway from Tamworth to Babbinboon Road and nominated access route above (Figure 4-1).

These roads all form part of the road freight routes within the State road network and all currently carry heavy vehicle movements including B-double access for the full length of the routes. These routes will be documented as the Haulage Route for all delivery vehicles to enter and exit the site for the vehicles associated with haulage of the solar panels for the project site.

These roads carry a high number of heavy vehicles, including B-doubles associated with local and regional agricultural demands. These agricultural demands are seasonal in nature and occur 24 hours a day often involving night travel and operations. There are a number of farms in the general locality of the project site as well as in the wider Tamworth area that use these local and regional roads during these seasonally high demand periods. Due to the seasonal nature of this work and the requirement for quick turnaround of crop deliveries it is considered that it is not appropriate to limit truck movements for these existing farms. Similarly, it is considered that it is not appropriate to limit truck movements to and from the project site at these times as the traffic movements on the local roads will continue to remain low.

For the regional road network e.g. Oxley Highway and New England Highway / Hunter Expressway the total traffic flows will remain well within acceptable limits and as such will continue to operate to a good level of service for all road users. Current daily traffic flows on these highways are summarised below, based on data available from the RMS web page:

Road	Location	Daily flow	Heavy vehicle content (%)	Peak hour flows (based on 10% daily flows)
Oxley Highway	North of Tamworth	3,405 (2018)	18	340
New England Highway	Aberdeen	10,311 (2018)	17	1,031
Hunter Expressway	Sawyers Gully	22,800 (2018)	15	2,280
Hunter Expressway	Buchanan	31,782 (2019)	11	3,180

The RMS Guide to Traffic Generating Developments indicates that for rural roads, allowing for 15% heavy vehicles the 2-way flow for a level of service of B is 530 vehicles. This value is considered appropriate for the Oxley Highway. With the additional traffic associated with the critical construction period on the site the level of service on these roads will remain at B.

The traffic flows along the local roads giving access for the heavy and light vehicle movements associated with the project are currently very low based on-site observations. Therefore, the additional 70 light vehicle movements associated with the staff movements and 20 daily truck movements (per direction) will have a minimal and acceptable impact upon the operation of these local roads during construction. Once operational, the traffic movements are much lower with 2 staff on site per day typically and as such the impact will be negligible.

For the length of the New England Highway and the Hunter Expressway, the additional truck movements will have a minimal and acceptable impact on the daily and hourly flows. The increase in flows created by the delivery vehicles will be less than 2% and as such existing drivers will experience a negligible increase in any delays.

There is minimal background traffic growth in this location. The RMS count data from the station north of Tamworth on the Oxley Highway (Station I.D. 6194) shows traffic flows of 3,264 in 2019 and 3,116 in 2015, representing an increase of around 1.1% per annum. Other counts along the regional road network show similar or lower increases. For the assessment of the future impacts in 10 years-time, it can be seen that the site at that time will be operational with 2 staff located on the site. The impact of these 2 staff vehicles will be negligible on the local road network.

The site is expected to be operational for more than 10 years so that the impact of the decommissioning of the site cannot be assessed in detail at this stage. The site could remain operational beyond 10 years and the impact will remain low beyond the10 year design horizon.

There will be no public vehicle access within the work site during the construction works, with a fence provided at the commencement of the project along the entire site boundary. This fence will remain once the project is constructed for security purposes with a locked gate to be provided at the site access off Soldiers Settlement Road.

There will be no pedestrian access to the site for the general public. There are no pedestrian paths in the locality of the site or expected demands in this remote rural area so there will be no impacts for pedestrians created by the project works.

The upgrade of the intersection of Babbinboon Road and the Oxley Highway will significantly improve the safety of this intersection and will provide a significant safety benefit to the existing road users at this intersection.

There will be no impact upon public transport services with no diversions required. There are no bus stops impacted upon by the proposal or a school bus.

There will be minimal impact for emergency vehicles and heavy vehicles with no diversions for vehicles required.

There will be minimal impact upon any other development within the locality of the site.

There will be minimal impact upon adjoining Council areas. Traffic routes in and out of the locality will be along the arterial road network which will experience minimal impacts due to the works.

There are no residential dwellings in the immediate locality of the site access that will be impacted upon by the project and construction work. There are a number of residences along the heavy and light vehicle access routes and these residents will be notified in writing of the construction works and the activities as required.

Construction vehicle movement on internal roads could lead to dust generation. A water truck will be used for dust suppression to minimise the production of dust, with the amount of water spreading adjusted accordingly to reflect the conditions. Additionally, any significant deposits of dirt and other construction materials will be promptly removed from public roadways.

Post construction, the traffic numbers generated by the project are very low, with staffing levels varying daily with a maximum on-site workforce of ten people on any one day. There will not be any need for regular heavy vehicle access to the site once the solar farm is operational except for the occasional heavy vehicle for emergency repairs or irregular maintenance.

4.2 Cumulative impacts

A search of the Major Projects Register on the DPE website was undertaken on the 28th August 2019 to identify any other major projects within the vicinity of the development site which would likely contribute to cumulative impacts. A search was completed for the Tamworth LGA and no projects are nominated.

Given the rural setting of the project, it is considered that there are no impacts created by other developments.

4.2.1 Delivery vehicles

All deliveries for the project will be via 19 metres semi-trailers. Whilst the regional road network permits the use of B-double combinations it is not considered appropriate to use these vehicles along the access route between the Oxley Highway and the site access. The access routes along the regional / state road network to the site are all along approved B double routes whilst the local roads between the Oxley Highway and the project site carries semi-trailers associated with local agricultural demands and as such the use of semi-trailer trucks for deliveries to the site are considered appropriate.

Delivery vehicles would be required throughout the project period. The travel time between the Port of Newcastle and the site for the solar panels is approximately 5 hours and these deliveries will be spaced out over the construction period, to minimise the impact upon the road network and to reduce the need to store the panels on site. Other deliveries will include the metal structures for the solar panels, sand and gravel for the foundations and internal tracks and cabling. There will also be some deliveries of specialist equipment such as photovoltaic boxes or skids and delivery stations.

The trucks associated with the delivery of the supplies will all travel along the State and regional road network. There are a number of schools located along these routes, however all have marked school zones and speed limit restrictions as per State guidelines. As these routes are all on the State and regional road network it can be seen that heavy vehicles currently operate on these roads safely. It is considered that there will be no noticeable impact upon road safety adjacent to these schools associated with the additional truck movements associated with the construction work.

There is no requirement to divert traffic as part of this construction work.

4.2.2 Construction staff movements

For the construction work, the staffing levels will potentially peak at 250 on site and as part of the project, staff will be encouraged and supported to carpool as part of the Code of Conduct for the project and use mini buses provided to allow for shared trips from shared accommodation in Tamworth to the site, approximately 38 kilometres from the site. There will be 70 vehicles inbound in the morning associated with on-site staff and a similar number departing at the end of the working day.

The site is located approximately 38 kms from the centre of Tamworth and no construction staff will walk to the site. Similarly, it is considered that construction staff will not cycle to the site.

The vehicle numbers associated with the construction work are relatively low and it is considered that the movement of vehicles in and out of the site for construction works can occur in a safe manner. No limitation on truck access times is considered appropriate for the project. Given the journey length between the port and the subject site, the vehicles as they are approaching the site will be spread out ensuring the impact is not occurring all together. With unloading of vehicles taking 30 minutes or more, trucks exiting the site will also be spread out.

All construction staff will operate in accordance with safe construction activities and Work Health and Safety regulations. Guidelines for these are provided in Appendix A to this document.

4.3 Impacts on road pavement

A protocol will be provided for both undertaking dilapidation surveys and making any necessary repairs following construction to Babbinboon Road and Warminster Road (refer Figure 4-2 below). The dilapidation surveys will assess the existing condition of road surface prior to construction and the repair of the road pavement should it be identified in the dilapidation surveys to have been damaged during construction.

With regards to any emergency repairs required, the contractor on site would contact the relevant authorities and will ensure the road is safe. Repairs will be made in accordance with the relevant authority standard.

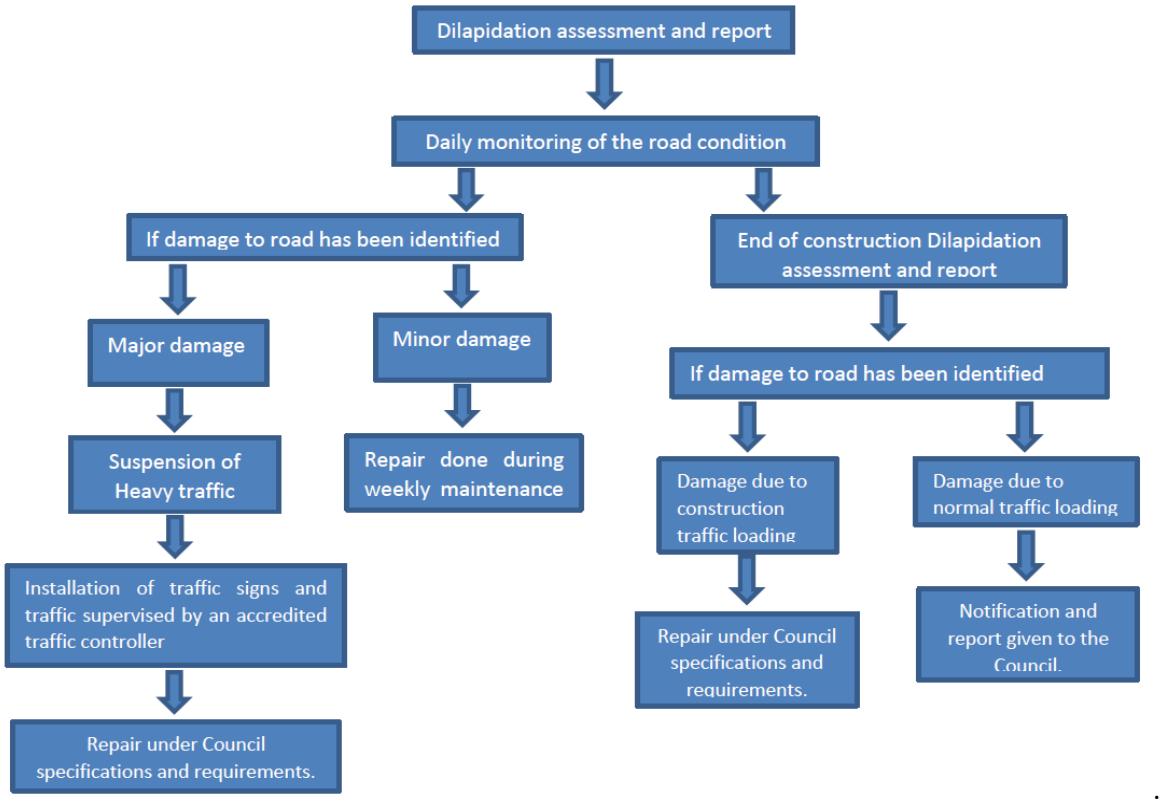


Figure 4-2 Dilapidation Assessment Protocol

Appendix A. Safe Construction Actvities

The contractor on site is responsible for the management of all traffic in connection with its activities and the construction works conducted on the site. The Contractor will provide all traffic management, safety warnings and signage including such persons as necessary to direct traffic, as required by AS 1742:2009 – Manual of uniform traffic control devices.

External traffic movements

The Contractor will:

Ensure traffic management controls are established, maintained and monitored to underpin the safety of workers, other personnel and the general public

Establish traffic management controls in consultation with relevant stakeholders

Ensure traffic management controls comply with regulatory and legislative requirements

Ensure traffic management controls comply with the contract

Ensure traffic management controls maintain the flow of traffic within the site and on surrounding public roads

Reinstate any areas affected by the temporary construction access requirements to their original condition

The primary drivers for determining the traffic management controls during the construction period are:

- Safety of personnel, the general public and construction workers
- Minimising impact (if any) on operations
- Contractual requirements (including site access)
- Road traffic authority and local government requirements
- OHS requirements in relation to the movement of all vehicular traffic and pedestrians either within or adjacent to sites
- Environmental management requirements
- The impact construction traffic has on the local community in the surrounding area, and
- The need to meet construction requirements (including any schedule and cost constraints)

The traffic management controls will be communicated to appropriate stakeholders which will include the local community in the site vicinity via a letter box drop.

The Contractor will ensure:

Any significant deposit of dirt and other materials caused by construction traffic and other operations (in relation to the works) will be promptly removed from existing public roadways

Suitable precautions are taken to ensure no rock is dislodged onto any roadway from construction vehicles

Construction plant and equipment do not park on or within the pavement or shoulders of any existing trafficked roadway

Construction vehicles (when loaded) comply with the mass, loading and access requirements of the road traffic authority

Construction traffic will cause the least possible obstruction to public and other traffic

Directional signage will be installed to direct construction traffic, and warn other motorists of construction traffic.

This signage is positioned in accordance with the approved Traffic Control Plans.

All drivers will be provided with a copy of the access routes to and from the site as part of their induction for the project;

A Vehicle Movement Strategy has been developed to eliminate the impact on local roads arising from additional construction traffic (e.g. solar panel delivery vehicles). The Vehicle Movement Strategy directs all drivers to access the site from the Oxley Highway to eliminate the impact on the local roads. There is no requirement to restrict the direction of flow and/or time of day for movements.

The Contractor will comply with any client or Road Traffic Authority signage requirements for traffic control. Where construction work is to be undertaken either on or adjacent to a public roadway that is open to traffic, the work must be undertaken in accordance with all regulatory and legislative requirements that govern the movement of vehicles and pedestrians on any public roadway.

Within the Worksite

All employees, subcontractors, suppliers and any other persons connected with the project must adhere to all such Statutory Requirements and comply with all lawful directions. Any breach of such requirements may result in disciplinary action of the persons concerned.

The maximum speed limits within the Worksite are:

40 kph on formed roads
20 kph during foggy/dusty conditions with headlights on
10 kph when passing pedestrians

The Contractor will manage access to and from the site by all employees, subcontractors, suppliers and any other persons connected with its activities and the works; and all occupants within the worksite and through each area of the site.

The Contractor shall provide for safe and continuous operation of normal pedestrian and vehicular traffic along all roads, pedestrian paths and vehicular access to the worksite and must provide and maintain all necessary watchmen, lights, barriers, notices and signs.

The Contractor will not unnecessarily obstruct any side road, branch track, drain or watercourse and will not break down or remove any fences or gates without prior notification to the client. If unavoidable, the Contractor will remove such obstruction or repair such breakage as soon as possible, or as directed by the Client.

A Vehicle and Traffic Management Procedures briefing will be included in the Project Site Induction.

Pedestrian Traffic

The Contractor may encounter pedestrian traffic at and near to the site. The Contractor will ensure that sites are appropriately isolated and secured from unauthorised entry; and that the Site is appropriately sign-posted and controlled. Given the location of the site it is considered that any pedestrian activity will be negligible.

Site Construction Traffic

Traffic within the Site will be managed in accordance with the Site Management Plan. The Sites Layout Plans will indicate site access and egress points and detail any required separation of construction plant and personnel. These plans will be communicated during Tool Box Meetings and/or Daily Pre-start Meetings.

The Site Layout Plan will incorporate details of parking arrangements for the site construction workers, speed limits within the construction works or through access roads established for vehicular and plant construction traffic.

The Sites Layout Plan will detail traffic management controls that are appropriate within each site.

Traffic controls shall be regularly reviewed for effectiveness and will be amended to maintain or improve a safe work environment. Traffic management controls established for sites will be inspected at ***weekly intervals*** to verify that a safe work environment is being maintained. Records of inspections shall be maintained.

Access Roads and Site Movement

Unless sign-posted otherwise, load limits on public roads adjoining the sites apply within them.

If required the Contractor shall request approval from the client prior to any over-dimensional load, or load in excess of load limits entering the site, or using the roads within the site.

All workers must travel to and from the site via the nominated access roads.

Parking

All workers must park in the Designated Parking Areas as specified in the Site Management Plan. The Contractor shall ensure no persons (in connection with its activities) parks in any other area of the site or in any other area without prior written consent.

Monitoring, Measurement and Review

The purpose of Monitoring and Measurement is to ensure that all construction works, including subcontracted activities, are being performed in accordance with the contract requirements, statutory requirement and in a controlled and safe environment. Ongoing monitoring and audit of Traffic Management procedures and the worksite implementation of traffic control shall be conducted.

Audits of the Traffic Control measures under differing operating conditions are to be carried out including during overcast and rainy weather, at night or at any other restrictive times where conditions may change in accordance with the requirements of AS1742.3.

Results of audits, inspections and improvements are to be reported in the reporting cycle of the contract to enable assessment of the adequacy of the implementation of the Traffic Control within contract performance and system review meetings.

Inspection and Auditing of Traffic Control Plan (TCP)

Regular Site Inspections by designated supervisory and field staff of worksite protection are to be arranged on a ***daily frequency*** depending on the complexity of traffic control on the site.

Site Inspections will be carried out and the following Traffic Management Forms completed:

Traffic Control Daily Checklist
Traffic Control Weekly Checklist

A daily record of the inspections should be kept. This should include:

- When traffic controls were erected
- When changes to controls occurred and why the changes were undertaken
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties
- Where significant changes to the work or traffic environment or adverse impacts are observed, the controls should be reviewed as a matter of urgency.

The monitoring program should generally incorporate inspections:

- Before the start of work activities on site
- During the hours of work
- Closing down at the end of the shift period

The inspection program shall be adjusted to suit changing circumstances and/or risk environment such as during times of increased traffic flows or speeds, contra-flow arrangements or when changed controls are introduced.

The Audits of the implemented Traffic Management features will be undertaken following setup in accordance with the TCP and prior to the TCP being put into service.

Appendix B. Drivers Code of Conduct

1.1 General Requirements

All vehicles / drivers accessing the site must:

i) Be registered and hold a valid driver's licence for the class of vehicle being operated;
ii) Operate the vehicle in a safe and appropriate manner whilst travelling to / from the site or when operating within the site. This includes obeying all New South Wales state road rules.
iii) ALL heavy vehicles must adhere to the designated heavy vehicle routes as far as practical;
iv) Comply with the directions of authorised personnel when operating within the site and obey any relevant signage installed along the internal roads.
v) Not use a mobile phone while operating any vehicle.
vi) Must always wear a seatbelt when operating any vehicle.

1.2 Vehicle Speeds

Drivers shall observe the posted speed limit along the designated transport route and adjust their vehicle speed as required to suit the road environment and prevailing weather conditions. Vehicle speeds must be appropriate to ensure the safe movements of the vehicle with consideration to the vehicle configuration.

Maximum speeds limits within the project site shall be as follows:

i) 40 km/hr along formed roads.
ii) 20 km/hr during foggy / dusty conditions. Headlights must be on.
iii) 10 km/hr when passing pedestrians or any plant equipment.

1.3 Driver Fatigue

Drivers shall not be permitted to operate a vehicle or plant equipment when impaired by fatigue. If you suspect that you or someone else is experiencing fatigue, please inform your supervisor.

Operators of heavy vehicles shall be aware of the requirements relating to fatigue as outlined in the Heavy Vehicle National Law. Drivers shall also be aware of their adopted fatigue management scheme (shown below) and ensure that they are operating within its requirements.

i) Standard Hours of Operation
ii) Basic Fatigue Management (BFM)
iii) Advanced Fatigue Management (AFM)

Basic Fatigue Management (single driver)

Time	Work	Rest
In any period of…	A driver must not work for more than a maximum of…	And must have the rest of that period off work with at least a minimum rest break of…
6 ¼ hours	6 hours work time	15 continuous minutes rest time
9 hours	8 1/2 hours work time	30 minutes rest time in blocks of 15 continuous minutes
12 hours	11 hours work time	60 minutes rest time in blocks of 15 continuous minutes
24 hours	14 hours work time	7 continuous hours stationary rest time
7 days	36 hours long/night work time	No limit has been set
14 days	144 hours work time	24 continuous hours stationary rest time taken after no more than 84 hours work time and 24 continuous hours stationary rest time and 2 x night rest breaks# and 2 x night rest breaks taken on consecutive days.

Advanced Fatigue management:

The seven principles are grouped into three categories:

Work-related rest breaks (such as short rest breaks):

1. Reduce the time spent continuously working in the work opportunity

2. The more frequent breaks from driving, the better

Recovery breaks (such as major rest breaks):

1. Ensure an adequate sleep opportunity in order to obtain sufficient sleep

2. Maximise adequate night sleep

3. Minimise shifts ending between 00:00-06:00

4. Minimise extended shifts

Reset breaks (such as long periods of rest or extended leave):

1. Prevent accumulation of fatigue with reset breaks of at least 30hrs (and include two night periods, 00:00 – 06:00) between work sequences

ALL details relating to fatigue management for delivery vehicles are covered by the National Heavy Vehicle Regulator

1.4 Operating Hours

Construction

Construction is to be in completed in accordance with the *Interim Construction Noise Guideline* (DECC 2009) which defined standard construction work hours as:

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sunday and Public holidays: No work

The following construction, upgrading and decommissioning activities may be undertaken outside these hours without the approval of the secretary:

- The delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- Emergency work to avoid loss of life, property and / or material harm to the environment.

Vehicle movements shall be undertaken during standard construction hours (or just before to allow workers to get to site). Oversize vehicles up to 26 metres long may require access to the site after hours however this would be subject to the requirements of Roads and Maritime, Tamworth Regional Council or NSW Police.

Normal Operations

Daily operations and maintenance by site staff would be undertaken during standard working hours:

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sunday and Public holidays: No work

During normal operations, all vehicle movements shall be undertaken during the standard operating hours (or just before to allow workers to get to site). There may be a requirement for vehicles to access the site after hours during an emergency however these would be infrequent.

Vehicles which arrive at the site prior to commencement of working hours shall have the engine turned off to minimise noise impacts on surrounding residences.

1.5 Transport Routes

All vehicles must travel to and from the project site via the route as shown below (Figure 1).

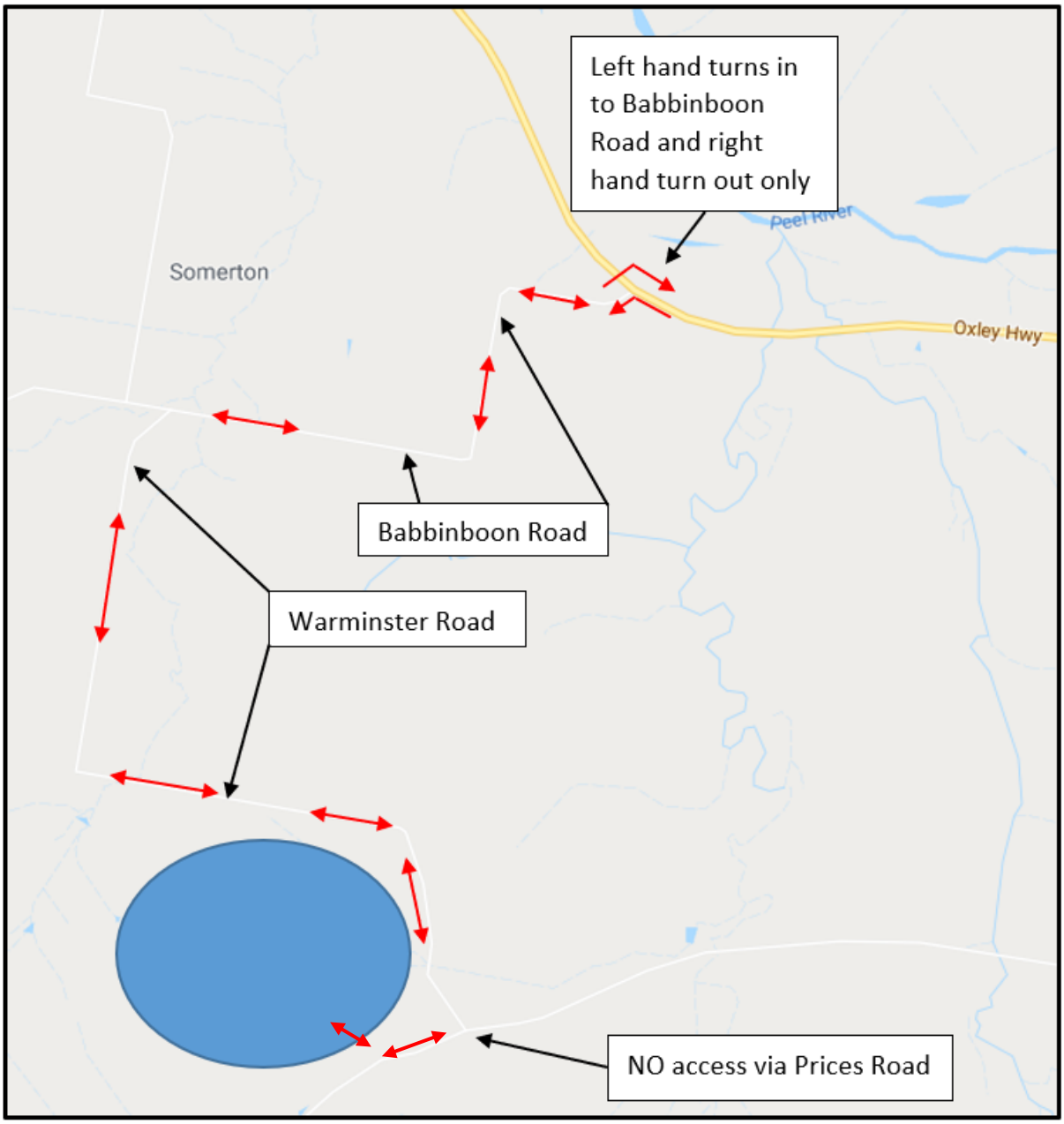


Figure 1 - Transport route to/from the site for ALL

1.6 Vehicle Departure and Arrival

Heavy vehicles departing the site shall have a minimum 5 minute separation to reduce the impacts upon the local road network.

Always maintain a minimum separation of at least 50 metres between vehicles when travelling within the site.

Drivers must contact the site supervisor upon arrival and await further instructions or direction before proceeding.

Drivers must also report to the site supervisor prior to departure.

All vehicles must enter and exit the site in a forward direction. Vehicles that are muddy will be washed down prior to leaving the site.

1.7 Overtaking

Overtaking shall not be permitted within the site unless the intention to overtake has been communicated to the driver of the leading vehicle and consent to overtake granted.

1.8 Breakdowns and Incidents

Heavy Vehicles

In the case of a breakdown, the vehicle must be towed to the nearest breakdown point as soon as possible. All breakdowns must be reported to the RMS Transport Management Centre on 131 700 and the vehicle protected in accordance with the Heavy Vehicle Drivers Handbook. The relevant shift manager on site shall also be notified.

If a breakdown occurs on-site please remain with your vehicle, notify the shift manager of your location and await further instruction.

If you are involved in an accident, please notify the shift manager immediately and contact emergency services if required.

Light Vehicles

In the case of a breakdown, ensure that the vehicle is secure, notify the shift manager of your location and await further instruction.

If you are involved in an accident, please notify the shift manager immediately and contact emergency services if required.

1.9 Penalties and Disciplinary Action

Any driver who fails to comply with the above requirements will have their details recorded and may be subject to disciplinary action.

1.10 Emergency Contact Numbers

i)	RMS Transport Management Centre	131 700
ii)	Tamworth Regional Council	(02) 6767 5555
iii)	NSW Polic Service (Tamworth)	(02) 6768 2999
iv)	Site Office	_____
v)	Shift Manager on Duty	_____

1.11 Driver Declaration

I, the undersigned, hereby agree to abide by this Driver Code of Conduct for the transport of equipment or personnel to / from the Tamworth Solar Farm, located off Warminster Road, Somerton, NSW. I have read and understand the requirements outlined in the attached document and will, to the best of my ability, comply and assist with their implementation, requirements or ongoing administration.

The subject document to which this declaration relates is included as part of this overall document and signing of this declaration confirms that the signee has read and understood their requirements as outlined throughout.

Driver Details

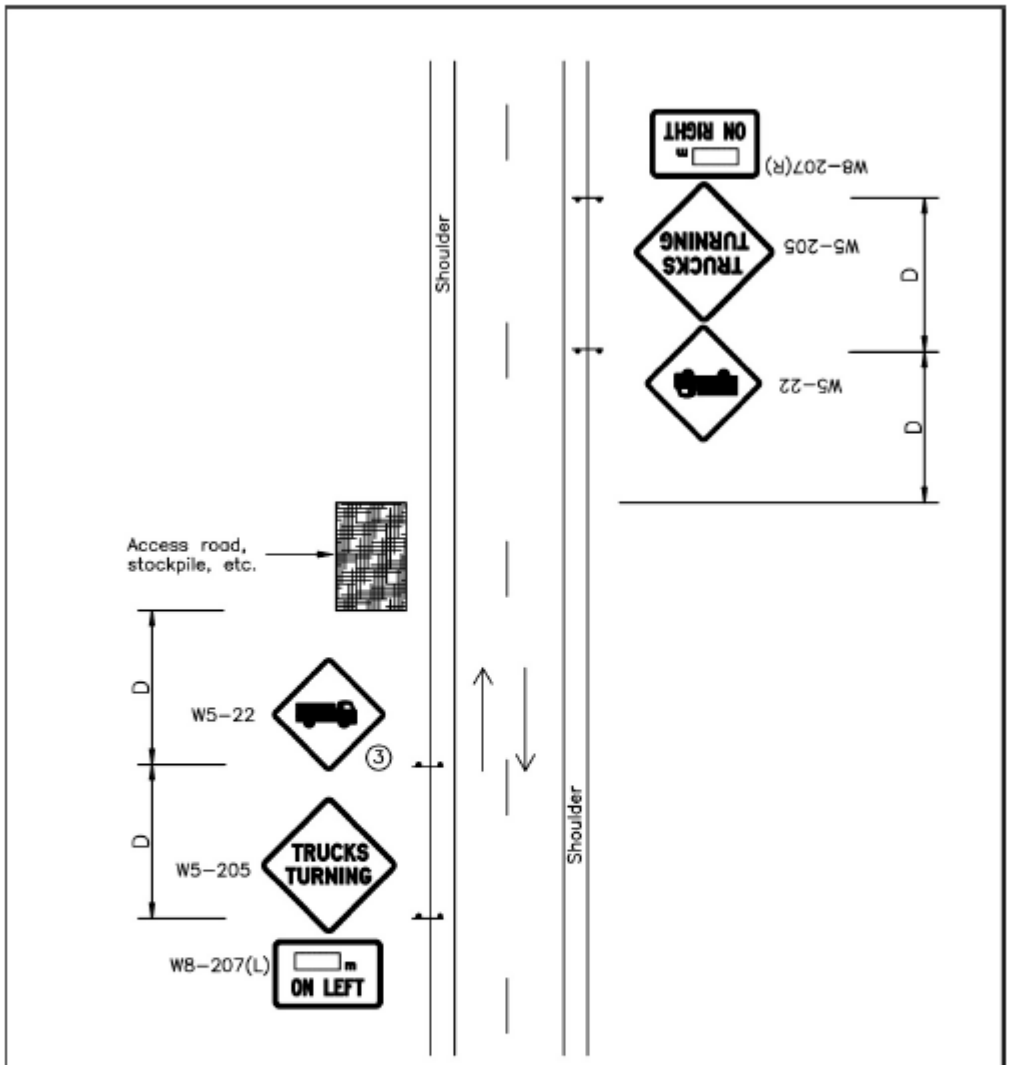
Full Name	
Organisation	
Signature	
Date	

Representative of:

Full Name	
Signature	
Date	

Appendix C. Traffic Control Plan for Works at Site Access on Soldiers Settlement Road

TCP 195



NOTE:

① For use where roadside is generally undeveloped, ADT is more than 1,500 vehicles per day, sight distance is restricted and there are more than 20 truck movements per shift.

② See ***Traffic control at work sites***, Section 7.7, ***Signs for depots, stockpiles, quarries, gravel pits etc.***

③ For short term works use T2–25.

ACCESS TO DEPOT, STOCKPILE, QUARRY, GRAVEL PIT ETC.
ALL ROADS
LONG TERM USE

T000195