

Sapphire Solar Farm

Traffic Management Plan

December 2020



Delivering Energy, Powering Communities.

Document Control

Report Name	Date	Purpose of Revision	Author	Reviewer	CWP Reviewed and Approved By	Milestone
181101_SSF_TMP_D01	01/11/18	-	MF/PM (CWP)	MF (CWP)	EM	Submitted to RMS, GISC and ISC for review and comment
181101_SSF_TMP_D02	22/11/18	Updated consultation table (Table 2-4)	MF/PM (CWP)	MF (CWP)	EM	RMS, GISC and ISC reviewed and approved with no required changes. Submitted to DPE for Secretary satisfaction
181101_SSF_TMP_D03	29/3/19	Response to DPE comments on D02	MF/PM (CWP)	MF (CWP)	EM	Submitted for DPE Secretary's review and approval
190605_SSF_TMP_v01	5/6/19	Response to DPE comments on D03	MF/PM (CWP)	MF (CWP)	PM	Submitted for DPE Secretary's review and approval Version received Secretary approval
201216_SSF_TMP_v02	16/12/20	Amendment to TMP for staging	LC	MF	MF	Submit for Secretary approval

Contents

1	Introduction	1
1.1	Project Staging	3
2	Plan Context	5
2.1	Conditions of Consent	5
2.2	Development Application Commitments	8
2.3	Relevant Previous Studies	9
2.4	Consultation	10
3	Discussion of Transport Routes and Traffic Types	12
3.1	Construction Schedule	12
3.2	Construction Traffic	14
3.2.1	Designated Transport Route	14
3.2.2	Site Access	14
3.2.3	Onsite Traffic Procedures	15
3.2.4	Site Access Procedures for Construction and Maintenance	15
3.2.5	Unloading Construction Vehicles	15
3.2.6	Permanent and Temporary Road Safety Requirements	16
4	Dilapidation Surveys Protocol	17
5	Road Repair Protocol	18
5.1	Prior to commencement of construction	18
5.2	During construction	18
5.3	Emergency Repair Work	18
5.4	Post construction	20
5.5	Temporary Traffic Controls	21
5.6	Managing Adverse Weather Conditions	21
5.6.1	Dust Management	21
5.6.2	Managing excessively wet road conditions	21
5.7	Unformed Crown Roads	21
6	Minimisation of Traffic Safety Issues and Disruptions	22
6.1	Peak Periods	22
6.2	Performance Targets	22
6.3	Speed Limits	23
6.4	Vehicle Sizes	23
6.5	Vehicle Maintenance	23
6.6	Out of Work Hours Protocol	23
6.7	Parking Facilities	24

6.8	Loading and unloading.....	25
6.9	Pedestrians and Cyclists.....	25
6.10	Community consultation.....	25
7	Roles and Responsibilities.....	26
8	Inspection and Monitoring	27
8.1	Site Inspections	27
8.2	Monitoring	27
8.3	Record Keeping.....	27
8.4	Review and Updates	27
	Driver Code of Conduct.....	1
	Haulage Routes and timing of transport.....	1
	Behavioural Requirements	1
	Safety Initiatives for haulage through residential areas.....	2
	School bus routes and local traffic.....	2
	Ilparran Bus Run.....	2
	Woodstock Bus Run	3
	Vehicle Maintenance Requirements.....	3
	Vehicle Hygiene Requirements	3
	Speed Limits.....	3
	Driver Fatigue.....	4
	Complaint resolution procedure.....	6
	Disciplinary procedure	6

Appendix A: Satisfaction of the Secretary

Appendix B: Driver Code of Conduct

Appendix C: Gwydir Highway Waterloo Road intersection (design drawing approved for the SWF: ZX-100-CI-D-2702-3)

Table of Tables

Table 2-1	Conditions of consent relevant to this plan and plan reference location	5
Table 2-2	Development application commitments relevant to this plan and plan reference location ..	8
Table 2-3	Relevant previous studies to the project.....	9
Table 2-4	Consultation required as part of the conditions of consent.....	10
Table 7-1	Roles and responsibilities for the project	26

Table of Figures

Figure 1-1	Project layout.....	2
Figure 1-2	Stage 1 Project layout.....	4

Figure 3-1 Site access points and heavy haulage routes	13
Figure 5-1 Road maintenance flow chart.....	19
Figure 5-2 Post Construction road repair protocol.....	20

Key terms used in this Plan

Term	Definition
CWPR	CWP Renewables Pty Ltd
Development footprint	The area within which it is permissible that impacts can occur. The area is shown in Figure 1-1.
DPIE	NSW Department of Planning, Industry and Environment (formerly Department of Planning and Environment)
EP&A Act	Environmental Planning and Assessment Act (NSW)
EPC	Engineering, procurement, and construction
GISC	Glen Innes Severn Council
ISC	Inverell Shire Council
NHVR	National Heavy Vehicle Regulator
Project	Sapphire Solar Farm (SSF)
Proponent	Sapphire Solar Farm Pty Ltd
Proposed development	The Sapphire Solar Farm as described in the EIS.
RMS	Roads and Maritime Service
Site	Area shown in Figure 1-1
Site Manager	EPC Site Manager unless otherwise stated.
SSF	Sapphire Solar Farm
TMP	Traffic Management Plan (TMP)



This page intentionally left blank

1 Introduction

The Proponent (Sapphire Solar Farm Pty Ltd) has obtained development approval for the Project (Sapphire Solar Farm (SSF); shown in Figure 1-1). The Project involves the construction, operation and decommissioning of a utility-scale photovoltaic (PV) solar farm and battery-based storage at Kings Plains, within the Inverell Shire Local Government Area (LGA) 30 km east of Inverell in northern NSW.

The project has an approved generating capacity of approximately 180 megawatts (MW) and approval to build a battery storage facility with a capacity of 50 MW/100 MW hours.

The project is located on a 2,423 hectare (ha) site that is situated within and adjacent to the Sapphire Wind Farm. The Project will utilise some of the existing wind farm infrastructure including access roads and the grid connection point (the existing Sapphire Wind Farm substation which connects into the 330 kilovolt (kV) TransGrid transmission line).

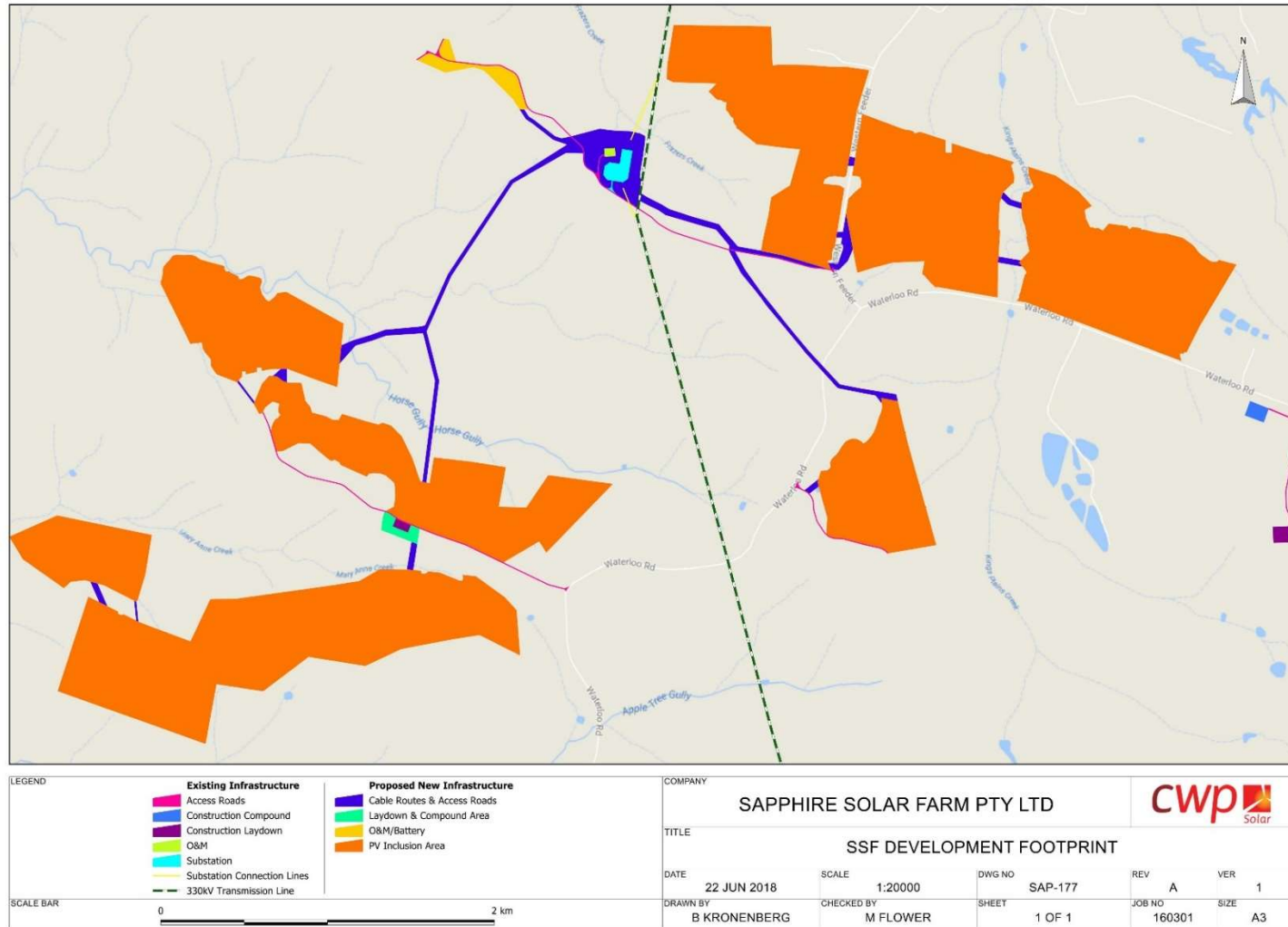
The Project was granted development consent by the Department of Planning, Industry and Environment (DPIE) under the Environmental Planning and Assessment Act (EP&A Act) on 16/8/18. It was granted consent by the Minister for the Environment (according to the EPBC Act) on 15/10/2018

The development approval is therefore conditional based on the consent conditions:

- NSW EP&A Act Development Consent SSD8643; and
- Commonwealth EPBC Act Approval 2017/8121.

This document is the Traffic Management Plan (TMP) required by, and addressing elements of, the relevant approval conditions. Details of the plan context and relevant consent conditions are detailed in this section.

Figure 1-1 Project layout



1.1 Project Staging

It is intended that SSF will be constructed and operated in stages.

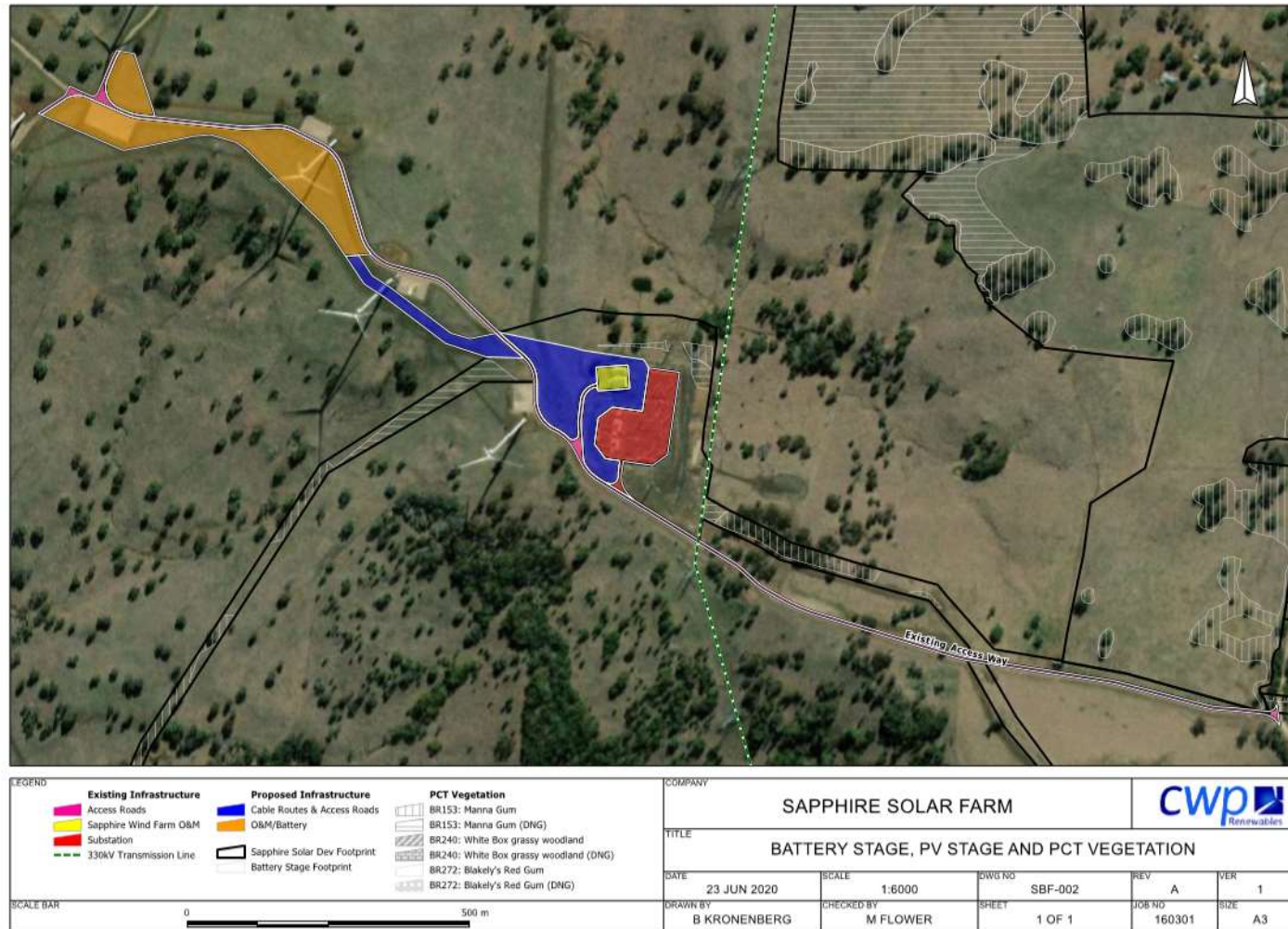
Stage 1 will involve construction and operation of the battery storage component of the solar farm. This Stage will include establishment of electrical cables between the battery and existing Transgrid substation, construction of a site compound and operational maintenance facility. Access to the site will be via Western Feeder Road and the existing internal roads of Sapphire Wind Farm will be used.

Construction is planned to commence in early 2021 and will take approximately 6 months. Once operational, the battery may be upgraded, added to and / or replaced.

Subsequent stage / s of the SSF will be the construction and operation of the solar photovoltaic (PV) component of the project.

Refer to Figure 1-2 for the general location of the Stage 1 infrastructure and the proposed development footprint.

Figure 1-2 Stage 1 Project layout



2 Plan Context

This TMP has been prepared by CWPR on behalf of the project proponent to:

- satisfy the requirements of the conditions of consent (detailed in Section 2.1); and
- enact commitments and management measures made in the Development Application (DA) (detailed in Section 2.2).

The content of the document has been guided by analyses and studies detailed in Section 2.3, as well as consultation required by the Conditions of Consent (Section 2.4).

The structure of the document is designed to create an efficient plan which presents the content required by the conditions of consent and proponent's commitments in DA documents, and links that to a clear and concise list of actions and responsibilities (refer to Section 7).

2.1 Conditions of Consent

The consent conditions relevant to this plan, and the location at which they are addressed are demonstrated in Table 2-1.

Table 2-1 Conditions of consent relevant to this plan and plan reference location

Condition Number Schedule 3	Condition of Consent	Location in this Plan
Schedule 3 Condition 1 Over Dimensional and Heavy Vehicle Restrictions	The Applicant must ensure that the: (a) development does not generate more than: <ul style="list-style-type: none"> • 40 heavy vehicle movements a day during construction, upgrading or decommissioning; • 15 over-dimensional vehicle movements a day during construction, upgrading or decommissioning; and • 10 heavy vehicle movements a day during operations; on the public road network;	Section 3
	(b) number of any vehicles associated with the development utilizing the intersection of the Gwydir Highway and Waterloo Road during peak periods does not exceed 50; and	Section 3 Section 5.1
	(c) length of any vehicles (excluding over-dimensional vehicles) used for the development does not exceed 19 metres, unless the Secretary agrees otherwise.	Section 5.4
Schedule 3 Condition 2 Over Dimensional and Heavy Vehicle Restrictions	The Applicant must keep accurate records of the number of heavy vehicles entering or leaving the site each day	Section 8.3
Schedule 3 Condition 3	All over-dimensional and heavy vehicles associated with the development must travel to and from the site via the Gwydir Highway, Waterloo Road, the Western Feeder	Section 3.2.2

Condition Number Schedule 3	Condition of Consent	Location in this Plan
Designated Over Dimensional and Heavy Vehicle Access Route	Road and the approved site access points, as identified in the figure in Appendix 3 of the Conditions of Consent.	
Schedule 3 Condition 4 Road Maintenance	Prior to the commencement of construction, the Applicant must undertake road maintenance works at the intersection of Waterloo Road and the Gwydir Highway, to the satisfaction of RMS and Council, and in accordance with the Austroads Guide to Road Design (as amended by RMS supplements).	Section 5.1
Schedule 3 Condition 5 Unformed Crown Roads	The Applicant must ensure any unformed Crown road reserves affected by the development are maintained for future use, unless otherwise agreed with DoI – L&W.	Section 5.7
Schedule 3 Condition 6 Operating Conditions	The Applicant must ensure:	Section 3.2.3
	(a) the internal roads are constructed as all-weather roads;	
	(b) there is sufficient parking on site for all vehicles, and no parking occurs on the public road network in the vicinity of the site;	Section 3.2.3 Section 6.7
	(c) the capacity of the existing roadside drainage network is not reduced;	Section 3.2.4
	(d) all vehicles are loaded and unloaded on site, and enter and leave the site in a forward direction; and	Section 2.2
	(e) development-related vehicles leaving the site are in a clean condition to minimise dirt being tracked onto the sealed public road network	Appendix B
Schedule 3 Condition 7 Traffic Management Plan	Prior to the commencement of any road maintenance works required under this consent, the Applicant must prepare a Traffic Management Plan for the development in consultation with RMS and Council, and to the satisfaction of the Secretary. This plan must include:	Table 2-4
	(a) details of the transport route/s to be used for all development-related traffic, including the location of access points;	Section 3
	(b) a protocol for undertaking independent dilapidation surveys to assess the: <ul style="list-style-type: none"> existing condition of local roads on the transport route/s prior to construction, upgrading or decommissioning activities; and 	Section 4

Condition Number Schedule 3	Condition of Consent	Location in this Plan
	<ul style="list-style-type: none"> • condition of local roads on the transport route/s following construction, upgrading or decommissioning activities; 	
	(c) a protocol for the repair of any local roads identified in the dilapidation surveys to have been damaged during construction, upgrading or decommissioning works;	Section 5
	(d) a definition for 'peak periods' and measures to ensure development-related vehicles comply with condition 1 of Schedule 3;	Section 6.1
	(e) details of the road maintenance works required by condition 4 of Schedule 3;	Section 4 Section 5
	<p>(f) details of the measures that would be implemented to minimise traffic safety issues and disruption to local users of the transport route/s during construction, upgrading or decommissioning works, including:</p> <ul style="list-style-type: none"> • the movement of vehicles on local road network within the site; • temporary traffic controls, including detours and signage; • notifying the local community about project-related traffic impacts; • procedures for receiving and addressing complaints from the community about development-related traffic; • minimising potential for conflict with school buses and other motorists as far as practicable; • scheduling of haulage vehicle movements to minimise convoy length or platoons; • responding to local climate conditions that may affect road safety such as fog, dust, wet weather; • responding to any emergency repair or maintenance requirements; and • a traffic management system for managing over-dimensional vehicles; and 	Section 5.5 Section 5.6 Section 6

Condition Number Schedule 3	Condition of Consent	Location in this Plan
	(g) a driver's code of conduct that addresses: <ul style="list-style-type: none"> • travelling speeds; • driver fatigue; • procedures to ensure that drivers adhere to the designated transport route/s; and • procedures to ensure that drivers implement safe driving practices 	Appendix B

2.2 Development Application Commitments

In the various application documents the proponent made commitments in regard to environmental management. Table 2-2 presents the commitments made relevant to this plan and the location in this plan at which it is addressed.

Table 2-2 Development application commitments relevant to this plan and plan reference location

Document and Section	Commitment	Location in this Plan
EIS s8.1	The project's management plans will include:	-
	- Identification of the potential impacts of the Proposed Development and the measures identified to mitigate these impacts as described in Section 8.2 of this EIS;	Section 3
	- Details of how environmental safeguards are to be implemented;	Section 4 Section 5
	- Details of the timing of the implementation of the mitigation measures;	Section 4 Section 5 Section 6 Section 6
	- Clearly defined allocations of environmental responsibilities for all staff members and contractors;	Section 7
	- Monitoring and reporting requirements to demonstrate compliance with licensing and approval requirements; and	Section 8
	- Procedures for review and updating of the management plans.	Section 8.4
EIS s8.2: Table 8-1 SoCs	The construction environmental management plan will incorporate a traffic management plan that will detail:	-

Document and Section	Commitment	Location in this Plan
	- All site access for construction workers and delivery vehicles;	Section 3.2.2
	- Any temporary road safety requirements during the construction;	Section 3.2.6
	- All permanent road safety requirements;	Section 2.2
	- Carpooling arrangements to minimise vehicle numbers during construction;	Section 2
	- Procedures to monitor traffic impacts and adapt controls as required;	Section 3
	- How inspections and regular safety checks will be completed; and	Section 4
	- Include a code of conduct for transport drivers to and from site.	Section 6
RtS Table 2.1	A Traffic Management Plan (TMP) shall be developed prior to commencement of work activities, which will specify potential community impacts from traffic movements associated with the scope and the requirements for mitigating these, including any restrictions and approval requirements. The Austroads guidelines and relevant Australian Standards, including AS 1742 Manual of Uniform Traffic Control Devices, or equivalent, will be complied with during development of the TMP.	Whole of this TMP
RtS Table 2.1	Consideration shall be given to managing the impact of construction traffic on school bus services in the Construction Traffic Management Plan, to be developed post approval.	Section 6.4

2.3 Relevant Previous Studies

This TMP builds on relevant information contained in studies and reports listed in Table 2-3.

Table 2-3 Relevant previous studies to the project

Report Name	Date	Author	Study Purpose	Summary
Sapphire Solar Farm Environmental Impact Statement	January 2018	Eco Logical Australia (ELA)	Primary DA and environmental impact assessment document.	Contains detailed project description, environmental impact assessment, environmental management and mitigation measures.
Traffic Engineering: Sapphire Solar	December 2017	TTM Consulting	Traffic assessment (including road safety audit) of the proposed project.	Contains detailed existing environment, proposed traffic volumes caused by the

Farm – Traffic Assessment				project and recommended transport routes.
Sapphire Solar Farm Response to Submissions Report	March 2018	CWP Solar Pty Ltd	Response to submissions received during public exhibition.	Contains detailed response to all public and Government agency submissions.

2.4 Consultation

The Conditions of Consent required consultation with RMS and the relevant Council(s). Table 2.3 demonstrates the consultation undertaken as part of developing this plan, including that required by the conditions of consent.

Table 2-4 Consultation required as part of the conditions of consent

Agency Name	Date	Consultation Format	General Themes of Consultation	Summary of Consultation
Roads and Maritime Service (RMS)	4/10/18	Meeting	Meeting to address Consent Condition: Schedule 3, conditions 4 and 7	RMS agreed in-principle to proposed Gwydir Hwy / Waterloo Rd intersection inspection protocol. Maintenance works to occur prior construction commencement.
Inverell Shire Council	1/11/18	Email	Request for input TMP Consultation pursuant to Condition of Consent: Schedule 3, condition 4	ISC emailed CWP on 12/11/18 their confirmation of review and approval of this TMP requesting no changes.
Glen Innes Severn Council	1/11/18	Email	Request for input TMP Consultation pursuant to Condition of Consent: Schedule 3, condition 4	GISC emailed CWP on 21/11/18 their confirmation of review and approval of this TMP requesting no changes.
RMS	1/11/18	Email	Request for input TMP Consultation pursuant to Condition of Consent: Schedule 3, condition 4	RMS emailed CWP on 19/11/18 their confirmation of review and approval of this TMP requesting no changes.
Department of Planning and Environment (DPE)	14/3/19	Email	Submission of TMP for Secretary satisfaction	DPE sent review table requesting edits to the TMP to more closely demonstrate compliance with Development Consent conditions.
DPE	29/5/19	Email	Resubmission of TMP for Secretary satisfaction	DPE made minor comments. Minor changes completed consistent with the comments.

Agency Name	Date	Consultation Format	General Themes of Consultation	Summary of Consultation
DPE	8/8/19	Email and letter	Approval of TMP.	Secretary approved plan version.
DPIE	September and October 2020	Letter correspondence	Notification of staged approach to the Project.	DPIE acknowledged the staged approach.

3 Discussion of Transport Routes and Traffic Types

Construction and operational access for staff and material deliveries to the site shall be from the Gwydir Highway via Waterloo Road or Western Feeder Road. Over-dimensional loads will access the Site via Waterloo Road only. Site access arrangements will be as identified in Figure 3-1.

All intersections within the vicinity of the Site are priority controlled. The intersection between the Gwydir Highway and Waterloo Road has been upgraded to accommodate over-dimensional equipment associated with the construction of Sapphire Wind Farm (SWF). No further road upgrades would be required for the SSF. A site visit undertaken by TTM Consulting as part of the Road Safety Audit has identified that maintenance works were being regularly undertaken along Waterloo Road and the Gwydir Highway as part of the SWF Project.

Material deliveries will depend on day to day operational requirements. Heavy vehicle access to the site are limited to:

- 40 heavy vehicle movements a day during construction, upgrading or decommissioning;
- 15 over-dimensional vehicle movements a day during construction, upgrading or decommissioning; and
- 10 heavy vehicle movements a day during operations;

The number of vehicles associated with the development utilising the intersection of the Gwydir Highway and Waterloo Road during peak periods is also restricted to no more than 50.

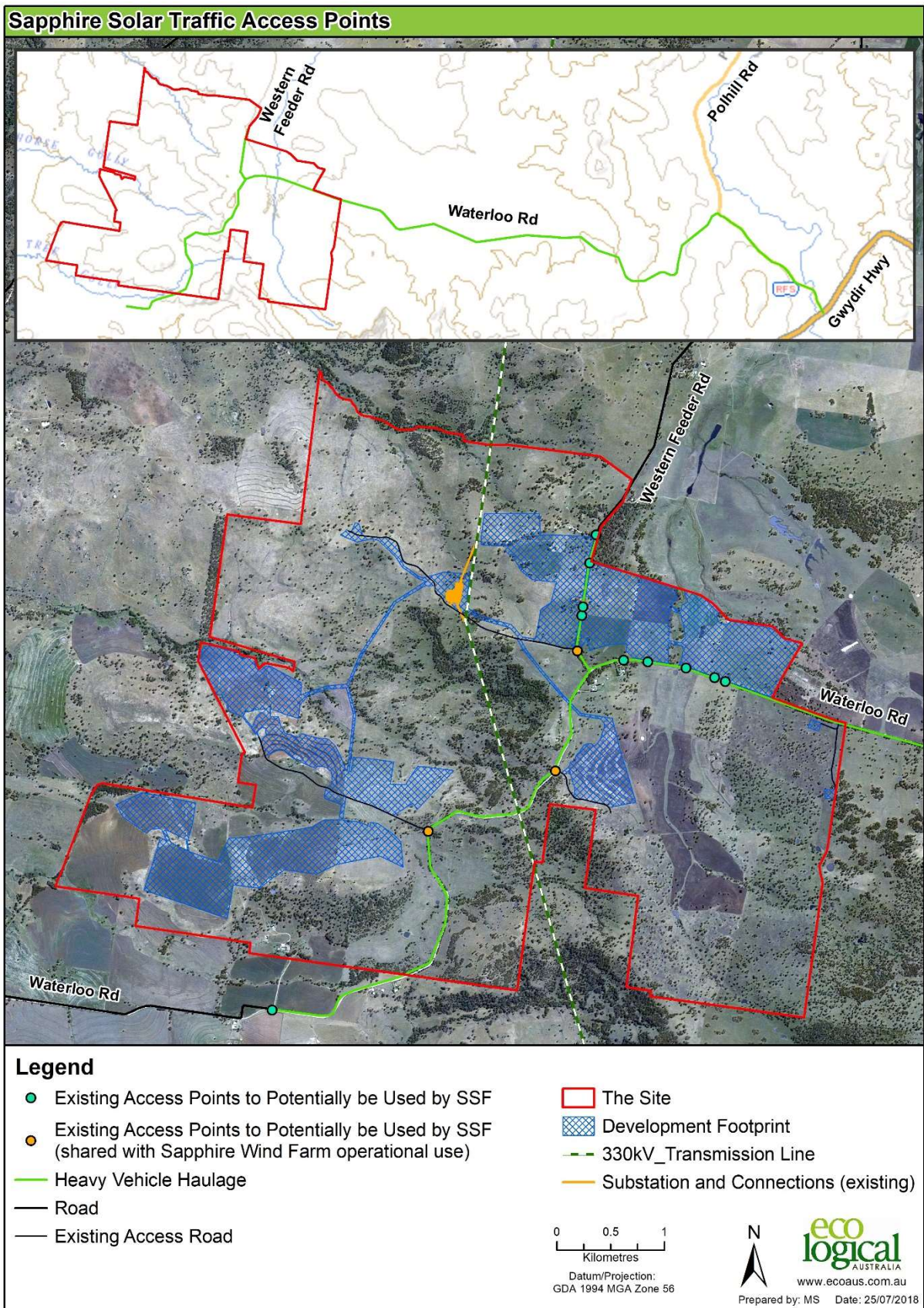
It is anticipated that Stage 1 construction activities will generate no more than 100 light vehicles daily at the peak of construction. Car-pooling and use of buses will be encouraged to reduce daily light vehicle movements. Carpooling and bus arrangements will be determined by the EPC contractor and will be a function of the number of staff, their work roster and their domestic location at any given time within the Project.

3.1 Construction Schedule

The construction commencement date and schedule are dependent on the finalisation of the Project financial and legal arrangements. As such, the commencement date and schedule may change from that presented below, however these are provided as indicative.

Stage 1 construction is expected to take between 6 and 12 months. Construction is scheduled for early to mid 2021.

Figure 3-1 Site access points and heavy haulage routes



3.2 Construction Traffic

All site traffic would be subject to the rules that apply to motor vehicles on public roads in NSW. As such all road signs, safety features and driving requirements that are in use the NSW road network would have the same meaning on site. This includes signs, the use of seatbelts, driving under the influence of drugs and alcohol.

3.2.1 Designated Transport Route

Components for the SSF will be imported to Australia via shipping ports (which may include, but not be limited to, Brisbane or Newcastle) and delivered to the site via road via the Newell, New England and Gwydir Highways. The Newell, Gwydir and New England Highways are identified as “NSW Oversize Overmass Load Carrying Vehicles Network Approved Roads”. There will be few over dimensional deliveries to the Project and these will be subject to (National Heavy Vehicle Regulator) NHVR and RMS permitting procedures.

The only approved access road to the site is the Waterloo Road which turns off the Gwydir Highway approximately 21 km west of Glen Innes. All vehicular traffic to the site will use the Waterloo Road and Gwydir Highway for site access unless approved by CWPR.

3.2.2 Site Access

There are several approved site entries off the Waterloo and Western Feeder Roads. These are shown in Figure 2.1 and are a mixture of existing access roads for the Sapphire Wind Farm, farm access gates and new access points. All access to and from the site will be in a forwards direction.

Heavy vehicle and over dimensional access to the site are covered in Condition 1 of Schedule 3 of the Project Approval. The key design and operational points of this Condition are:

- (a) development does not generate more than:
 - 40 heavy vehicle movements a day during construction, upgrading or decommissioning;
 - 15 over-dimensional vehicle movements a day during construction, upgrading or decommissioning; and
 - 10 heavy vehicle movements a day during operations;
 on the public road network;
- (b) number of any vehicles associated with the development utilising the intersection of the Gwydir Highway and Waterloo Road during peak periods does not exceed 50; and
- (c) length of any vehicles (excluding over-dimensional vehicles) used for the development does not exceed 19 metres,

The EPC Contractor and Transgrid (construction) and Asset Manager (operation) will maintain daily records of heavy vehicles entering and leaving the site to ensure compliance with Schedule 3 Condition 1. The process for this is contained in Section 7.

Condition 4 of Schedule 3 of the Project Approval details the RMS requirements for the Gwydir Highway Waterloo Road intersection maintenance which must be undertaken prior to the commencement of construction. Specifically, the intersection of Waterloo Road and the Gwydir Highway must be in accordance with the *Austrroads Guide to Road Design* (as amended by RMS supplements) and to the satisfaction of RMS and Council.

The initial upgrade of the Gwydir highway Waterloo Road intersection was undertaken by the SWF development. Following the conclusion of heavy haulage to the wind farm, the road intersection was inspected by the RMS prior to the wind farm’s repair work on intersection. A further inspection by the RMS was undertaken by the RMS in March 2019 after the repair work was undertaken. RMS

confirmed that the repair work as completed complies with *Austrroads Guide to Road Design* and compliance with the agreed design drawing (the approved SWF Drawing ZX-100-CI-D-2702-3).

3.2.3 Onsite Traffic Procedures

Once on-site, vehicles will travel on tracks developed and maintained for the project. For Stage 1 of the project, internal access will be on already constructed internal roads. The location of the Stage 2 access tracks have not yet been determined, and will be developed in consultation with respective landowners, with consideration of minimising the environmental impacts of those tracks, and with consideration of constructability and functional accessibility. Internal access tracks will be all weather tracks.

Traffic flow along the access tracks within the Project Area in a two-way fashion and the normal NSW road safety rules will apply. This includes compulsory wearing of seatbelts, zero blood alcohol and zero drug levels, driving on the left-hand side of the road and obeying site speed limits.

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.

Access to the site is through approved site entries only. All employees, subcontractors, suppliers are to report to site office prior to entering the site. No parking will be allowed outside the approved project boundaries. Unless approved by the Site Manager all vehicles are to remain on formed roads within the Project boundaries.

The maximum speed limits within the Project Site are:

- 40 km/hr on formed roads;
- 20 km/hr during foggy/dusty conditions with headlights on;
- 10 km/hr when passing pedestrians on site or within the construction compound parties; and
- 15km/hr on approach to Gwydir Highway Waterloo Road intersection.

3.2.4 Site Access Procedures for Construction and Maintenance

Site access will only occur through existing Wind Farm entrances or entrances constructed in sites identified in the Conditions of Approval. All site entrances will be constructed to Inverell Shire Council's requirements and be compliant with *Austrroads Guide to Road Design*. If required any pavement widening will involve excavation to suitable subgrade depth, placement of compacted imported gravels for select fill, and modified gravels for base and sub-base courses.

Drainage works, table drains, and culvert levels will be designed to tie in with existing drainage works to minimise disturbance.

The EPC is responsible for obtaining all relevant approvals from Council for construction of site entrances and undertaking road maintenance works prior to the commencement of such construction works.

3.2.5 Unloading Construction Vehicles

All vehicles entering or leaving the site will do so in a forward direction to ensure the safety of fellow road users. Vehicles can only be reversed into or out of the site in the case of an emergency or as directed by the NSW Police or other statutory emergency authority.

When loading or unloading goods and materials for the project it is important to do so in a manner which does not interfere with other road users. To achieve this all vehicles will be loaded and unloaded on site. Vehicles can only be loaded or unloaded off site on the road network in the case of an emergency or as directed by the NSW Police or other statutory emergency authority.

3.2.6 Permanent and Temporary Road Safety Requirements

The safety of all vehicles entering or leaving the site is of paramount importance to the Project. This will be achieved through:

- Preparation and implementation of Traffic Control Plans (TCP) at any worksites doing construction within the road reserves along the Waterloo and Wester Feeder Roads. These will identify the relevant safety issues associated with road construction and maintenance and site access construction;
- Implementation of restricted speed zones during construction at the Wellingrove Creek Bridge and near the properties: Waterloo Station, Downfield, Manaroo, Yarrabin and Kingsland;
- Adoption of dust control measures along the Waterloo Road and within the Project;
- Site Induction and Driver's Code of Conduct that ensures driver's attitudes and actions are always conducted in a safe manner; and
- Strong communication with the broader community to ensure that interactions and interfaces between the Project and the community are always conducted in a safe fashion.

4 Dilapidation Surveys Protocol

Road dilapidation surveys will be undertaken prior to the commencement of construction. The road condition survey will be based on visual condition rating and laser profiler testing on selected roads in accordance with Austroads AG:AM/TOO1. This will be done for all sealed roads used by the Project in the control of Glen Innes Severn Council and include that section of the Gwydir Highway from the centreline to the pavement edge consisting of the throat of the intersection (chainage 110 to 180 on ZX-100-CI-D-2702-3).

Laser profiler testing will be undertaken on both directions of all sealed roads and visual condition rating will be undertaken on one direction access route.

This will cover:

- visual condition captured through video cameras and rated into various cracking types, flushing/bleeding, ravelling and potholes
- rut depth (inner, outer and lane)
- roughness (IRI, NAASRA)
- surface texture including sand patch texture depth (SPTD) and sensor measured texture depth (SMTD) for outer and between wheel paths.

All the unsealed routes within Glen Innes Severn and Inverell Shire Council areas will be assessed by recording video footage of the route. This will include:

- Video footage of the roads from a motor vehicle travelling the proposed routes
- GPS coordinates of the route travelled
- Test holes to determine the pavement thickness at intervals no greater than 1,500m
- Review of approaches to causeways and floodways

A post construction dilapidation survey will be undertaken at the conclusion of the project using the techniques described above along the roads described above. A dilapidation survey would also be undertaken prior apply to any upgrading or decommissioning works.

5 Road Repair Protocol

5.1 Prior to commencement of construction

Condition 4 requires that all maintenance works on the Gwydir Highway Waterloo Road intersection will be undertaken prior to the commencement of construction on the Project. The maintenance work will be undertaken to ensure compliance with the *Austrroads Guide to Road Design* (as amended by the RMS supplements). The maintenance will ensure that the intersection complies with the design that was approved for the SWF as shown on ZX-100-CI-D-2702-3 (Appendix C).

The Gwydir Highway Waterloo Road Intersection was upgraded during the construction of the Sapphire Wind Farm. Following the completion of the Wind Farm Project the intersection a range of maintenance activities were undertaken to ensure that the intersection complied with the specifications detailed in ZX-100-CI-D-2702-3.

The RMS indicated that the intersection complies with the provisions ZX-100-CI-D-2702-3 on 19 March 2019. Glen Innes Severn Council indicated that they accepted the section of the intersection on 31 January 2019. This satisfies Condition 4 of Schedule 3.

5.2 During construction

Weekly visual inspections and surveillance will be undertaken by the Site Manager and a record of the inspections will be kept. This inspection will include:

- Visual assessment of the status of the road pavement
- Status of traffic controls if erected
- When changes to traffic controls occurred
- 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.

Informal visual inspections of the Waterloo Road will be carried out daily to determine the condition of the Waterloo Road and will cover the items above, however items will only be reported if a defect is encountered.

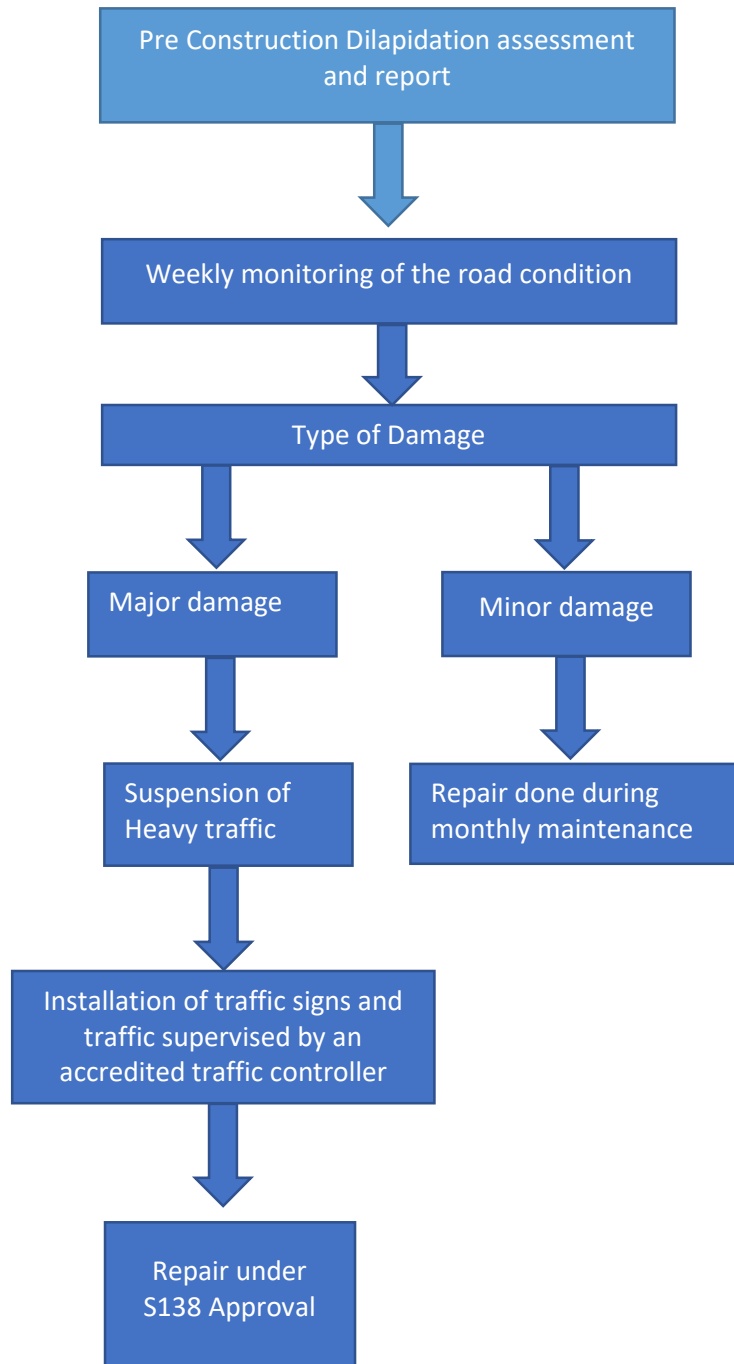
The inspection program shall be adjusted to suit changing circumstances and/or risk environment such as during times of increased traffic flows or speeds, contra-flow arrangements or when changed controls are introduced.

The Project will obtain Section 138 Approvals from the relevant Councils for all works undertaken along the Waterloo Road and Western Feeder Road. Similarly, any works required on the Gwydir Highway Waterloo Road intersection not covered by the SWF Works Approval Deed will be covered separately.

A flow chart for assessment of roads is shown in Figure 5-1 Road maintenance flow chart.

5.3 Emergency Repair Work

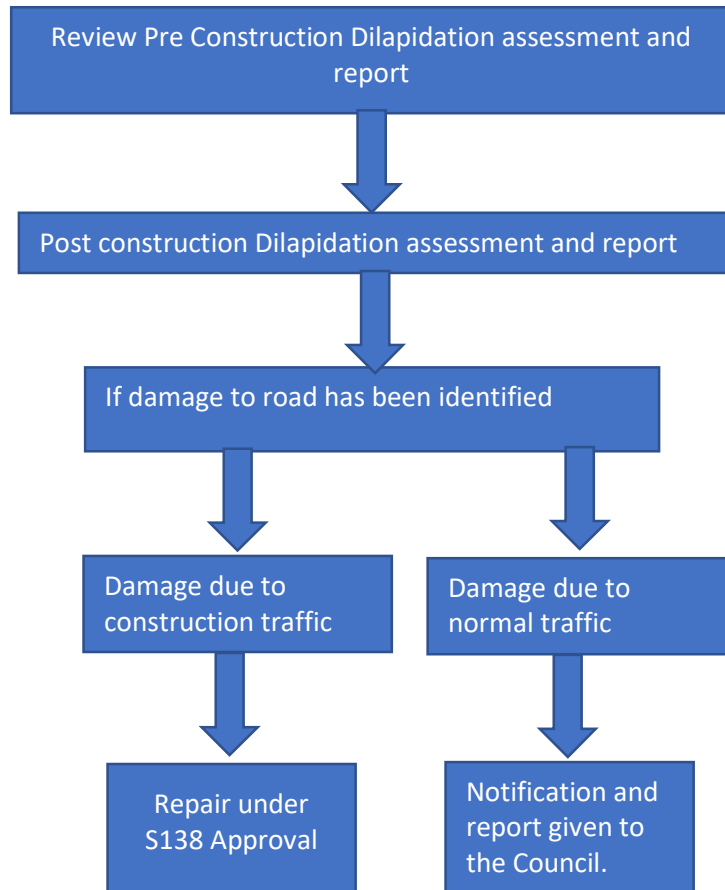
Emergency repair works will be undertaken by the EPC as directed by either SSF, Council or the RMS. All emergency works will be commenced within 24 hours of receiving the direction.

Figure 5-1 Road maintenance flow chart

5.4 Post construction

At the conclusion of construction, dilapidation inspections will be carried out along the Waterloo Road and the Western Feeder Road. Following this all repair works will be carried out in accordance with Figure 5-2 Post Construction road repair protocol.

Figure 5-2 Post Construction road repair protocol



5.5 Temporary Traffic Controls

There are no major construction works planned along the Waterloo and Western Feeder Roads aside from construction of site entrances. However, a range of maintenance activities will be undertaken along the road reserves. These activities could include:

- Jet patching and maintenance along the sealed section of Waterloo Road and Gwydir Highway intersection;
- Routine maintenance and grading along the unsealed sections of Waterloo Road and the Western Feeder;
- Grading of roadside drains;
- Desilting culverts; and
- Installing site entrances.

All of these activities will have a Traffic Control Plan prepared by a suitably qualified consultant in accordance with the RMS Traffic Control at Worksites (TCWS) Guide and submitted to Council for approval prior to the commencement of roadworks.

The community will be kept informed of these activities as outlined in Section 6.9.

5.6 Managing Adverse Weather Conditions

There are two types of adverse weather conditions will impact on the road condition. These are dry road conditions which leads to excessive dust generation and excessively wet conditions which may lead to significant pavement damage.

5.6.1 Dust Management

The Site Manager will monitor weather conditions on a daily basis and adapt the use of dust controls during periods of high wind and / or dry conditions;

During dry and windy conditions, a water cart or alternative (non-chemical) dust suppression would be available and applied to the road surface.

5.6.2 Managing excessively wet road conditions

Periods of above average rainfall can significantly damage the road through flooding the road surface at creek crossings and through weakening the pavement leading to breakup.

The Site Manager will monitor rainfall events. A road inspection and assessment of ongoing heavy vehicular access to the site will be undertaken by the Site Manager under the following conditions:

- Rainfall exceeding 58mm/hr which equates to the 1 hour 2% Annual Exceedance Probability for Project area calculated from the Bureau of Meteorology website. If no weather recording instruments are installed on site, then this is taken to be 57mm/hr measured at the Glen Innes Automatic Weather Station or 61mm/hr measured at the Inverell Automatic Weather Station.
- Where greater than 50mm of rainfall has been recorded in a 24 – hour period at either the Glen Innes or Inverell Automatic Weather Stations.

If in the opinion of the Principal there is the potential for pavement damage as a result of the rainfall events described above then they may suspend vehicular access to the site commencing with any planned over dimensional vehicles, then heavy vehicles and finally light vehicles. Vehicular access to the site would not resume until Waterloo and Western Feeder Roads have been inspected by the Principal and a representative of the respective Council and the pavement verified as being stable.

5.7 Unformed Crown Roads

Former Crown roads within the Project Site have been transferred to Inverell Shire Council. As a result, the Project will not impact on any Crown Land or Crown roads.

6 Minimisation of Traffic Safety Issues and Disruptions

Construction phases of SWF and SSF will not overlap, as such cumulative impacts are not anticipated on local road network. In the event that there is an overlap of developments the potential cumulative impacts would be minimal. Any overlapping work would be minor in nature and would not involve the transport of heavy loads.

6.1 Peak Periods

The project is located in a rural setting with low traffic volumes. There is no formal peak period for traffic flow. There are twenty-three residences located along the road network surrounding the Project, being the Waterloo Road, Eastern Feeder and Western Feeder Roads. The majority of the occupants of these residences are directly employed on farms within the Project area. At the time of preparing this Plan only six occupants had off farm jobs and used the road network to commute to work. Their road usage generally occurred between 7.30am and 8.30am in the morning and 4.45pm and 5.30pm in the evening. This is considered the “Peak Period” for the intersection of the Waterloo Road and the Gwydir Highway to the Eastern Feeder. During these times no more than 50 vehicles will utilise the intersection.

The approved construction hours are contained within Schedule 3 Condition 12 of the Development Consent. It states:

12. Unless the Secretary agrees otherwise, the Applicant may only undertake construction, upgrading or decommissioning activities on site between:

- (a) 7 am to 6 pm Monday to Friday;*
- (b) 8 am to 1 pm Saturdays; and*
- (c) at no time on Sundays and NSW public holidays.*

The approved working hours mean that the majority of workforce will be on site before 7am and not leaving until 6pm avoiding the “Peak Period”. This significantly reduces the potential number of vehicles driving during the “Peak Period”. The delivery of over dimensional vehicles has been prohibited within the identified “Peak Periods” and the total number of heavy vehicles entering the site is restricted in Schedule 3 Condition 1.

The monitoring of vehicle movements during “Peak Periods” will be done through reviewing sign on books to determine when staff are arriving and leaving the site. This will be correlated against the known travel time along the Waterloo Road to the Gwydir Road Intersection. If this number is equal to or larger than the 50 vehicles allowed to utilise the intersection during “Peak Periods” then appropriate action will be taken to reduce the number. This may include staggering arrival or departure times of staff or changes to delivery schedules.

There are two school bus runs that use the Waterloo Road, one which comes from Glen Innes and terminates at the junction of the Waterloo Road and Eastern Feeder. The second comes from Inverell and terminates at the junction of the Waterloo Road and the Western Feeder. These generate up to four vehicle movements twice a day, at 8.00am and 5.00pm as parents / caregivers meet the bus.

6.2 Performance Targets

Targets for traffic and access management issues associated with the construction of the Project are provided below:

- compliance with the Project Approval and relevant legislation, regulations, and licenses that relate to the Project;
- no safety incidents for construction vehicles;
- maximise the safety of all road users and construction staff;

- no significant traffic delays caused by the Project activities;
- consistency with standard industry environmental management practices implemented for traffic management; and
- consistency with measures listed in the Statement of Commitments unless superseded by requirements of the relevant road authorities.

6.3 Speed Limits

All personnel will adhere to site and public road vehicle speed limits and drive to the road conditions.

Along external routes, speed limits will be observed as signposted unless driving conditions or restrictions imposed on the personnel or vehicle.

Internal traffic movements will be restricted to a maximum of 40km/hr on site and 10km/h around personnel or as otherwise signposted.

The speed limit within the Construction Compound is 10 km/hr.

Speed Limit of 15 km/hr on approach to the Gwydir Highway / Waterloo Road intersection.

6.4 Vehicle Sizes

Vehicle entering the site will generally fall into four categories:

- Light vehicles carrying personnel, minor equipment and tools;
- Heavy vehicles up to 19 metres in length such as semi-trailers, water carts, container trucks;
- Heavy vehicles over 19 metres in length as approved by the Secretary; and
- Over Dimensional loads.

Any vehicles entering the site over 19 metres in length will require approval from the Secretary for Planning. The EPC will allow for at least two weeks lead time is required to facilitate the necessary approval mechanisms. All over dimensional vehicles will require NHVR permits.

6.5 Vehicle Maintenance

All vehicles delivering equipment, materials and personnel to the site during the construction phase will be registered vehicles maintained in an appropriate fashion to address the necessary emissions controls (incl. noise, exhaust and fluids).

All vehicles used on site during construction will be required to adhere a minimum site requirements which includes:

- Registered;
- Carry Comprehensive and Third Party Insurance;
- Evidence of regular maintenance;
- Certified weed free; and
- Be fitted with flashing light, reversing beeper / buzzer, uhf radio

6.6 Out of Work Hours Protocol

Certain construction activities may need to be undertaken outside standard hours for improved safety, access and/or to minimise inconvenience to the community.

Construction works required to be undertaken outside of the standard construction hours are only to be undertaken in the following circumstances (unless otherwise agreed by the Secretary):

- For the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- Where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

Where material deliveries are scheduled outside the approved work hours that are not an emergency then the Secretary for Planning's Approval will be sought. At least two weeks lead time will be given for this.

6.7 Parking Facilities

Parking facilities will be supplied at the works compound for private vehicles. On – site parking for vehicles associated with construction will be provided at the work front. No private or site vehicles will be parked on the public road network. The works compound will likely utilise the works compound which was constructed for the Sapphire Wind Farm project. It had a notional carpark capacity of 68 light vehicles and over 0.25 of a hectare of heavy vehicle parking areas along the northern fence. An indicative layout is shown in Figure 5-1. All parking within the Site Compound will be reverse in for all vehicles up to 10 metres in length. All vehicles over 10 metres in length will be parallel parked along the northern fence.

6.8 Loading and unloading

All vehicles entering and leaving the site will do so in a forward direction. When leaving and site access heavy vehicles will come to a complete stop prior to entering the public road network. This will increase safety and allow for any accumulated dust and dirt to drop off the vehicle prior to leaving the site.

Once onsite, vehicles are only allowed to travel along the formed access tracks unless permission is granted by the Site Manager. Onsite traffic will flow in both directions along the internal access tracks with traffic keeping to the left. Traffic flow within the Site Compound will be in a clockwise direction from the access gate.

6.9 Pedestrians and Cyclists

There are no pedestrian or cyclist measures to consider for access to site. The only potential interaction with cyclists is the Grafton to Inverell Cycle Classic held in May each year. The Classic is run on the Gwydir Highway and operates under its own Traffic Management Plan which will not impact on the construction of the Project.

6.10 Community consultation

Community consultation in relation to traffic and access will include on-going consultation with relevant stakeholders including, local landholders, emergency services, business owners and school bus companies.

Community engagement is to be undertaken in consultation with the Project Manager.

Community engagement activities may include:

- prior to commencement of construction and a week prior to any significant works notifications will be given to local residents through local newspapers and on the project website and social media;
- weekly updates on over dimensional haulage will be placed on the webpage and social media
- notifications on construction progress will be made via the project website social media and through the local print media
- written notifications to local councils, local residents, newsletters and the Community Consultative Committee quarterly on construction progress;
- Through direct contact with affected residences along Waterloo Road;
- Transport operators are to provide feedback on:
 - any risks or issues arising from the transport;
 - construction traffic routes and any potential impacts;
 - complaints have received.

Over dimensional loads would be scheduled not to arrive at the Gwydir Highway and Waterloo Road intersection during the peak periods identified in Section 5.1. All contractors and suppliers will be informed of this. Failure to comply may result in access privileges being revoked.

7 Roles and Responsibilities

Table 7-1 Roles and responsibilities for the project

Role	Responsibility
Principal Project Manager / Asset Manager	<ul style="list-style-type: none"> • <i>Responsible for delivery of the Project in accordance with this TMP;</i> • <i>Issue non-conformance notices and to issue actions to avoid or minimise potential environmental impacts, and failing the effectiveness of such steps, order cessation of a specific activity.</i> • <i>Ensure all project personnel attend a site induction prior to commencing work; and</i> • <i>Hold regular project team meetings.</i>
Project Environment Officer	<ul style="list-style-type: none"> • <i>Supervise and review the development and implementation the require plans under this TMP;</i> • <i>Monitor / inspect rehabilitation areas, directing the remedial actions;</i> • <i>Undertake regular internal audits;</i> • <i>Manage record keeping and evidence of compliance;</i> • <i>Prepare reports on compliance;</i> • <i>Be the primary point of contact for regulatory authority liaison;</i>
EPC Project Manager	<ul style="list-style-type: none"> • <i>Overall responsibility for the performance of the EPC Contractor and its sub-contractors against the requirements of this plan and the conditions of the Development Consent and Commonwealth approval as they relate to traffic management;</i> • <i>Ensure adequate resources are available for all contractors and subcontractors to deliver the Project in compliance with the EMS and other relevant documents;</i> • <i>Hold regular project team meetings and toolbox talks, ensuring information is shared between all site personnel; and</i> • <i>Ensure all staff and sub-contractors complete a site induction (which includes outputs of this TMP) prior to commencing work on site.</i> • <i>Undertake emergency remediation works on access roads as required</i> • <i>Maintain register of heavy vehicles entering the site daily</i>
EPC Environment Officer	<ul style="list-style-type: none"> • <i>Undertake dust monitoring as required;</i> • <i>Notify the Project Environment Officer of any environmental incident or non-conformance immediately upon identifying the issue.</i>
All Employees and Contractors	<ul style="list-style-type: none"> • <i>Complete a site induction prior to commencing works on site;</i> • <i>Attend all environmental training as required;</i> • <i>Comply with the specific controls in this TMP and associated plans;</i> • <i>Undertake all activities in accordance with agreed procedures and work methods;</i> • <i>Implement the actions identified in management plans and programs in order to comply with the Development Consent conditions; and</i> • <i>Follow instructions of the Project Environmental Officer.</i>

8 Inspection and Monitoring

8.1 Site Inspections

Road dilapidation survey to be undertaken prior to commencement of Stage 1 construction in accordance with stakeholder consultation as outlined in Schedule 3 Condition 7(b).

The following inspections must be undertaken by the transportation contractor and Project contractor with respect to traffic:

- pre-start and pre-closedown inspections of traffic control devices and signage and the condition of local access roads; and
- weekly inspections of traffic control devices, signage and road condition.

8.2 Monitoring

Monitoring would include daily pre-start visual inspections of vehicles to ensure they are maintained in good working order.

The procedures to monitor traffic impacts on public and internal access tracks during construction, including noise, dust and travel times would include:

- monitoring compliance with TCP's adopted for the work site;
- daily visual inspections to assess vehicle movement and traffic flows to and from the Project site along route networks; and
- check periodically that all project related signs and devices are satisfactory and in their correct position.

8.3 Record Keeping

The EPC Contractor (construction) and Asset Manager (operation) will maintain daily records of heavy vehicles entering and leaving the Site via Waterloo and Western Feeder Roads. This will ensure compliance with Schedule 3 Condition 1. There may be heavy vehicles which travel to site once and remain on site such as cranes, gravel trucks or floats and only travel between Site entrances. The movement of these vehicles will only be recorded on the days that they arrive and leave the Site.

8.4 Review and Updates

The Project Environment Officer will be responsible for reviewing this plan periodically during construction. The plan may also be required to be reviewed in response to the occurrence of an incident, the submission of an audit report, or modification to the conditions of the Development Consent, in accordance with Schedule 4, Conditions 2 and 3 of the Development Consent.

The plan will form the basis of the operational period traffic management plan, although as operation includes quite different traffic scenarios, the plan will be thoroughly reviewed.

Appendices

Appendix A: Satisfaction of the Secretary

Appendix B: Driver Code of Conduct

Appendix C: Gwydir Highway Waterloo Road intersection (design drawing approved for the SWF: ZX-100-CI-D-2702-3)

Appendix A

Satisfaction of the Secretary

Appendix B

Driver Code of Conduct

Driver Code of Conduct

A Transport Code of Conduct will be applied to all traffic and transport construction activities associated with the Project, with emphasis placed on the transport of over-size/over-mass components and delivery vehicles during the construction phase. This draft will form the basis for the Transport Code of Conduct to be finalised prior to construction.

Haulage Routes and timing of transport

Components for the SSF will be imported to Australia via ports in Brisbane or Newcastle and delivered to the site via road via the Newell, New England and Gwydir Highways. The Newell, Gwydir and New England Highways are identified as "NSW Oversize Overmass Load Carrying Vehicles Network Approved Roads". There will be few over dimensional deliveries to the Project and these will be subject to NHVR and RMS permitting procedures.

The only approved access road to the site is the Waterloo Road which turns off the Gwydir Highway approximately 21 km west of Glen Innes. All vehicular traffic to the site will use the Waterloo Road and Gwydir Highway for site access unless approved by CWPR.

. A map of the primary haulage routes highlighting critical locations will be attached to the Final Transport Code of Conduct.

All school bus routes corresponding to the transport routes will be marked on the route maps. Timing of transport will be scheduled to minimise disruption to local traffic and not result in increased safety risks to the community.

Behavioural Requirements

The operators of all vehicles associated with the Project will maintain a high level of conduct and respect for other road users. All operators will undergo an induction prior to undertaking any transport to site and regular toolbox meetings will be held maintain awareness of required controls.

Details of the traffic and access training and induction will focus on:

- objectives of the TMP;
- performance goals;
- mitigation measures required to be implemented;
- traffic and access monitoring and reporting requirements; and
- incident investigation and response.

Training will be provided prior to start-up of any traffic and access related management tasks and updated if task, equipment or procedures are expected to, or have changed.

The following requirements would be exercised always:

- obey all the laws and regulations;
- always wear a seatbelt;
- not handle your mobile phone;

- not drive whilst under the influence of alcohol, drugs, nor any medication which may affect their ability to drive;
- be medically fit to drive at all times and must inform site co-ordinators if they have any medical condition which may affect their ability to drive;
- drive in a considerate manner at all times and respect the rights of others to use and share the road space;
- report all vehicle defects to their employer. Serious defects must be corrected immediately, or an alternative vehicle supplied;
- report any vehicle accident resulting in injury/or damage to property must be reported to the police;
- report any near misses;
- only drive in the construction hours when conducting Project works (unless permission to conduct Project works has been provided);
- securely fasten and cover loads;
- keep their vehicle clean and in good mechanical condition to reduce the environmental impact;
- approach the Gwydir Highway / Waterloo Road intersection below 15km/h;
- not cut the corner on the Gwydir Highway / Waterloo Road intersection; and
- have appropriate identifying signage on vehicles.

The transport contractor is to develop and implement:

- safety initiatives for haulage through residential areas and/or school zones; and
- a maintenance program for the heavy transport vehicles that is consistent with these safety requirements.

Safety Initiatives for haulage through residential areas

Any haulage through residential areas and/or school zones will be undertaken at the speed limit. Whilst total avoidance of travelling through school zones is a desirable outcome it cannot be avoided and impacts on school traffic will be minimised. This will be achieved through careful route selection and movement planning. Care will be taken to minimise the use of exhaust brakes in residential areas and passing residences along the Waterloo Road.

School bus routes and local traffic

There are two school bus runs which may be potentially impacted by the Project's construction.

Ilparran Bus Run

This bus originates from Glen Innes and travels along the Waterloo Road to Eastern Feeder Intersection where it turns around and returns to Glen Innes.

Mornings: No travel of inbound oversize loads between 7:30am and 8:15am. If a load is on route and will not clear the road by this time, then the load is to park up in the causeway over Maids Valley Creek to allow the school bus to pass.

Afternoons: No travel of inbound oversize loads between 4:15pm and 5:00pm. If a load is on route and will not clear the road by this time, then the load is to park up in the causeway over Maids Valley Creek to allow the school bus to pass.

Woodstock Bus Run

This bus originates in Inverell and travels along the Woodstock Road then up the Waterloo Road to the Western Feeder Intersection where it turns around and returns to Inverell.

Mornings: No travel of inbound heavy vehicles west of the Waterloo Road / Western Feeder Road intersection between 7:35am and 8:05am.

Afternoons: No travel of inbound heavy vehicles west of the Waterloo Road / Western Feeder Road intersection between 4:05pm and 4:35pm.

Vehicle Maintenance Requirements

The operators of all vehicles associated with the Project would maintain a high level of maintenance. The following requirements would be exercised at all times:

- ensure their vehicle complies with relevant State legislation in relation to roadworthiness and modifications;
- undergo regular vehicle checks and maintenance;
- ensure their vehicles have correctly fitted mufflers to minimise noise disturbance; and
- all vehicles associated with the site will have site identification numbers.

Vehicle Hygiene Requirements

The operators of all vehicles associated with the Project would maintain a high level of vehicle hygiene. The following requirements would be exercised at all times:

- ensure their vehicle are weed and seed free.
- any vehicles entering the site for the first time to be certified weed and seed free
- vehicles leaving formed roads within the site to be reinspected for weeds and seeds
- vehicles leaving the site will not track dirt onto the sealed public road network. The sealed road network is taken to mean the section of Waterloo Road that has permanent seal on it from the vicinity of the Maids Valley Bridge to the Gwydir Highway. This section of road is approximately 15km from the nearest site entrance so any dirt that is tracked onto it is because of road traffic not site traffic. This section of road will be watered daily to minimise accumulation of dust.

Speed Limits

All vehicles associated with the Project are required to travel within the posted speed limits on public roads. In situations where driver's visibility and traffic safety on public roads is affected by weather related conditions such as heavy rainfall or fog, construction vehicles should reduce their speed limit until visibility and traffic safety has improved.

Adhere to Project Speed Restrictions of 40km/h as they apply to signposted areas along the Waterloo Road.

The site speed limit is 40 km/h where there are no pedestrians present.

The speed limit around pedestrians and within the site compound is 10 km/h.

Monitoring systems will be implemented to ensure speed limits are complied with at the Project site.

Speed Limit of 15 km/hr on approach to the Gwydir Highway / Waterloo Road intersection.

Driver Fatigue

Driver fatigue is identified as a major risk in the transport of project related goods. The National Heavy Vehicle Regulator has a with Basic Fatigue Management (BFM) accreditation process which is recognised as the industry standard for managing fatigue which is outlined below.

BFM Standards

There are six fatigue management standards that you need to comply with for BFM.

- **Scheduling and rostering** – scheduling of individual trips and rostering of drivers are to be in accordance with limits prescribed in legislation
- **Fitness for duty** – drivers are in a fit state to safely perform required duties and meet the specified medical requirements
- **Fatigue knowledge and awareness** – personnel involved in the management, operation, administration, participation and verification of the BFM option can demonstrate competency in fatigue knowledge relevant to their position on the causes, effects and management of fatigue and the operator’s fatigue management system
- **Responsibilities** – the authorisations, responsibilities and duties of all positions involved in the management, operation, administration, participation and verification of their operations under the BFM option are current, clearly defined, documented and carried out accordingly
- **Internal review** – an internal review system is implemented to identify non-compliances and verify that the activities comply with the BFM standards and the operator’s fatigue management system
- **Records and documentation** – the operator will implement, authorise, maintain and review documented policies and procedures that ensure the management, performance and verification of the BFM option in accordance with the standards.

Basic Fatigue Management (BFM)

Operators with Basic Fatigue Management (BFM) accreditation can operate under more flexible work and rest hours, allowing for (among other things) work of up to 14 hours in a 24-hour period. BFM gives operators a greater say in when drivers can work and rest, as long as the risks of driver fatigue are *properly managed*.

Table: Basic Fatigue Management – work and rest hour requirements Solo Drivers

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.

**Stationary rest time is the time a driver spends out of a regulated heavy vehicle or in an approved sleeper berth of a stationary regulated heavy vehicle.*

***Long/night work time is any work time (outside of the period midnight to 6.00 am) that is in excess of 12 hours of work in a 24 hour period or any work time between midnight and 6 am (or the equivalent hours in the time zone of the base of a driver).*

#Night rest breaks are 7 continuous hours stationary rest time taken between the hours of 10pm on a day and 8am on the next day (using the time zone of the base of the driver) or a 24 continuous hours stationary rest break.

Table: Basic Fatigue Management – work and rest hour requirements *two-up drivers*.

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...
24 hours	14 hours work time	No limit has been set
82 hours	No limit has been set	10 continuous hours stationary rest time
7 days	70 hours work time	24 continuous hours stationary rest time and 24 hours stationary rest time in blocks of at least 7 continuous hours of stationary rest time
14 days	140 hours work time	4 night rest breaks#

**Stationary rest time is the time a driver spends out of a regulated heavy vehicle or in an approved sleeper berth of a stationary regulated heavy vehicle.*

#Night rest breaks are 7 continuous hours stationary rest time taken between the hours of 10pm on a day and 8am on the next day (using the time zone of the base of the driver) or a 24 continuous hours stationary rest break.

Complaint resolution procedure

All traffic related complaints will be managed in accordance with the Project complaints handling procedures described in the Environmental Management Strategy. All complaints will:

- be recorded in the Complaints Register and made available on line;
- be investigated by the Site Manager within 24 hours of receiving the complaint;
- have a report prepared on the circumstances of the complaint, risks arising and any non-compliance with project procedures.; and
- record all remedial actions recorded in the Complaints Register;

Disciplinary procedure

The failure to comply with any procedures for safe transport outlined in this Plan including not following the approved haulage and transport route may result in:

- removal of driving privileges on site; or
- dismissal from the project

Appendix C

**Gwydir Highway Waterloo Road intersection (design drawing
approved for the SWF: ZX-100-CI-D-2702-3)**