

Traffic Management Plan (TMP)

**Gulgong Quarry
Lot 12 Lot 1 DP 1239728,
No. 1848 Castlereagh
Highway, Tallawang, NSW**

for

**Hamish and Sally Drury Talinga Pastoral Company
Pty Ltd**


**19 September 2024
(DRAFT)**

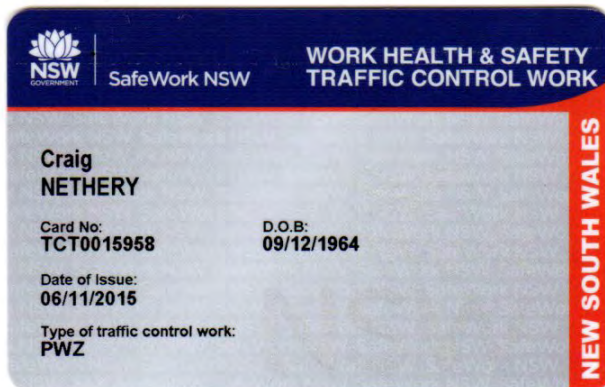


Construction Traffic Management Plan Details

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Endorsement of Construction Traffic Management Plan

Stakeholder			
Client			
Transport for NSW			
Port Stephens Council			
StreetWise Road Safety & Traffic Services (TMP)		19 September 2024	

AUTHORISED ACCREDITATIONS

Craig Nethery
Accredited to Prepare a Work Zone Traffic Management Plan
Accredited Level 3 Road Safety Auditor (RSA-02-0230)



Andy Davis
Accredited to Prepare a Work Zone Traffic Management Plan (TCT 0004364)
Accredited Level 3 Road Safety Auditor (RSA-02-0678)

StreetWise Road Safety & traffic Services Pty Ltd
PO BOX 1395
Port Macquarie
NSW 2444

Mob:- 0412 009 558 (Craig Nethery)
Email:- craig@streetwisersa.com.au

Mob:- 0422 011 353 (Andy Davis)
Email:- andy@streetwisersa.com.au

www.streetwisersa.com.au



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1. INTRODUCTION

1.1 Scope of Work

StreetWise Road Safety and Traffic Services have been engaged by Outline Planning Hamish and Sally Drury Talinga Pastoral Company to prepare a Traffic Impact Assessment (TIA) to commence a quarry operation on Lot 1 DP 1239728, No. 2058 Castlereagh Highway, Tallawang (Gulgong).

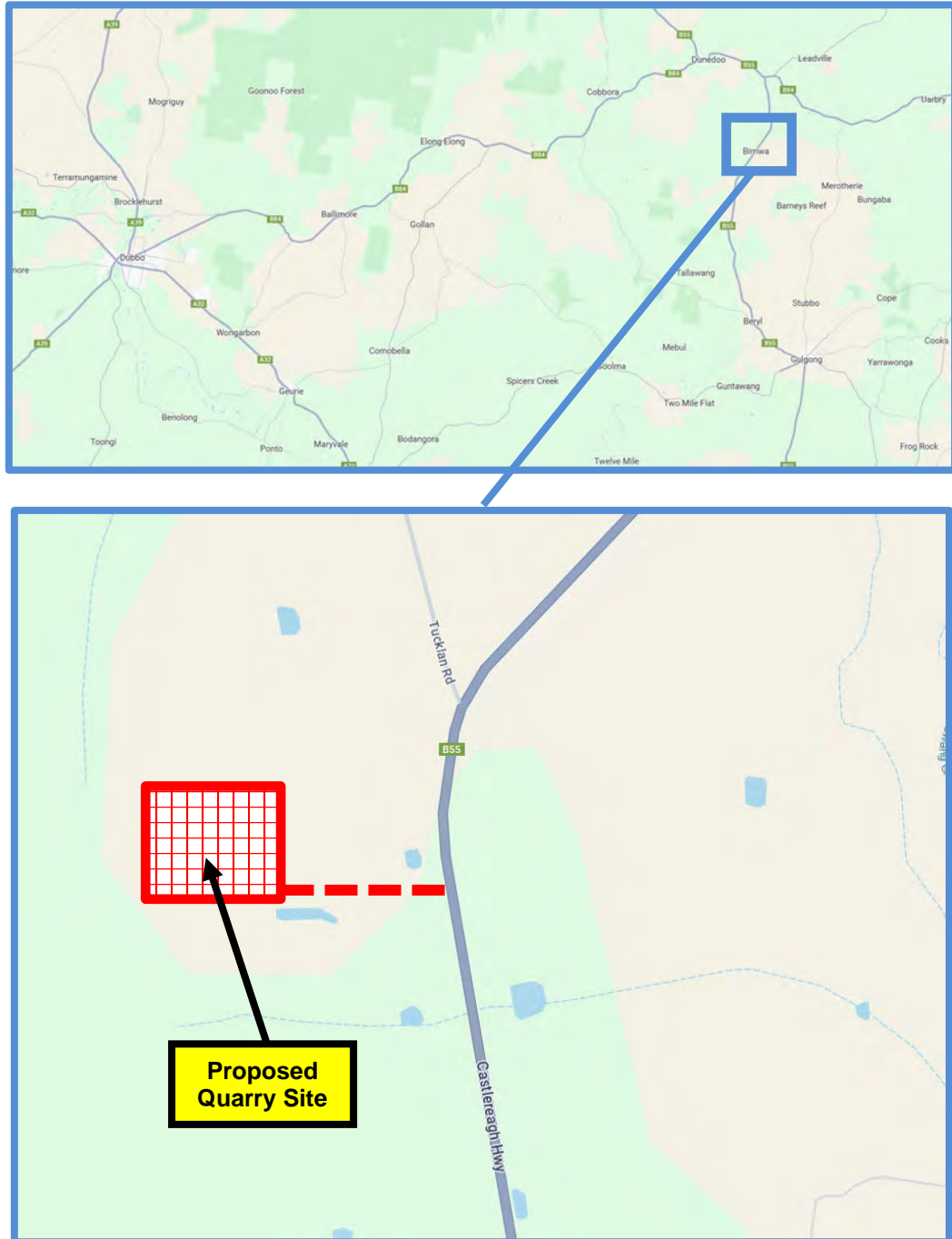


FIGURE 1.10 - Proposed Quarry Location

1.2 Purpose of this TMP

The purpose of this TMP is to outline the requirements for the provision of safe traffic management while undertaking approved quarrying activities at the Gulgong Quarry.

1.3 Duty of Care

In accordance with the NSW Work Health and Safety Act (2011), this TMP has been prepared to ensure, as reasonably practicable, the health and safety of workers and other road users for the day to day roadwork activities to be carried out.

The Traffic Management Plan provided is to be used for the management of traffic to, from and around the work site during approved working hours.

1.4 Site Description

Gulgong Quarry is located at No.1848 (Lot 1 DP 1239728) Castlereagh Highway, Tallawang, New South Wales. The quarry is located approximately 21.5km by road (Castlereagh Highway) to the north of the township of Gulgong in the Mid-Western Regional Council local government area.

The site is contained within a quarry footprint of 7.34 hectares.

Access to the Gulgong Quarry site is from an access intersection with the Castlereagh Highway 0.45km south of the intersection of the Castlereagh Highway and Tucklan Road. (See Figure 1.10)

2. QUARRY OVERVIEW

2.1 Worksite Details

The quarry is known as Gulgong Quarry and located at No.1848 (Lot 1 DP 1239728) approximately 21.5km by road (Castlereagh Highway) to the north of the township of Gulgong. The quarry is accessed from the quarry access location located 0.45km south of Tucklan Road off the Castlereagh Highway.

The resource being extracted is a hard rock known as “phyllite” which has a variety of uses including road base material, construction aggregate, aggregate used in concrete batching, drainage works, fill, landscaping and various other uses.

The approved development includes the following key elements:

- Staged extraction of approximately 4.60 million tonnes of “phyllite” over a 15 year timeframe;
- Extraction of up to 350 000 tonnes of phyllite material per year;
- Removal and stockpiling of an estimated 380,000m³ of overburden approximately 750,000 tonnes) from the quarry extraction area in accordance with the approved Rehabilitation Plan. Removal of overburden is not included in the proposed extraction rate of 1.5 million tonnes of phyllite annually;
- Haulage of up to 350 000 tonnes of phyllite per year from the site to market by haulage trucks via the Castlereagh Highway;
- Up to 60 laden truck loads per day at maximum production (according to approved Traffic and Transport Study, StreetWise Road Safety & Traffic Services, ?? 2024) (To be Finalised)
- Implementation of water management and erosion and sediment control works to ensure no loss of sediment, dust minimisation and to control discharges from the site to ensure that all discharges are within acceptable volumetric and water quality criteria;
- Roadworks to secure access to the site including, realignment of existing internal access road and upgrading of existing site access road at the Castlereagh Highway.

- Employment of 6 on-site staff;
- Drilling and blasting activities;
- Loading, crushing, screening, stockpiling and hauling of extracted material;
- Location of plant on quarry site comprised of office buildings, workshops, parking areas, crushing plant, wash plant, weigh bridge and product storage areas.

2.2 Transportation of Material

2.2.1 Heavy Vehicle Movements

The original traffic assessment estimated the following: *At maximum production, there will be approximately 216 laden truck loads per day, a total of 432 return truck movements per day (Traffic and Transport Study, TPK & Associates – June 2011 and Response Report April 2012). The following assumptions were made with regard to the future proposed truck movements for the expanded quarry operation:*

- The extraction will be controlled at a maximum of 1.5 million tonnes per year;
- The typical truck capacity will be approximately 30 tonne loads;
- Haulage hours as per Condition 7 (Schedule 2) of consent; and
- Haulage year has been calculated as 265 Days (no haulage on Sundays or public holidays; half day Saturday) **(To be Finalised on receiving development approval)**

2.2.2 Internal Haulage Road

The approved Gulgong Quarry includes an internal haul road between the quarry pit site and the Castlereagh Highway.

2.2.3 Haulage Destinations

The Gulgong Quarry provides quarry material to a range of clients and projects. The quarry generally services 3 categories:

- 25% of product goes to concrete batching plants
- 25% of product goes to asphalt plants
- 50% of product goes to civil construction projects

All haulage movements to projects from the quarry pit will be via the weighbridge and access gate, then along the access road to the Castlereagh Highway access location.

When leaving the quarry, approximately 80% of laden vehicles head south, while 20% head north. **(To be Finalised on receiving development approval)**

3. PROJECT ADMINISTRATION

3.1 Planning

The Gulgong Quarry received approval to commence extraction on **?? XX 20??** **(To be Finalised on receiving development approval)**

3.2 Communication of Administrative Procedures

This TMP is to be referenced for the day to day activities required as part of the quarry operation.

The Quarry Manager (or Responsible Officer) will be required to communicate and/or distribute the details of this TMP prior to any commencement of each work day, if required.

It will also be the responsibility of the Quarry Manager (or Responsible Officer) to update / maintain this TMP to a level that reflects the requirements for the operation of the quarry, including:

- Regular inspections of the worksite to ensure the set-up is correct and suitable i.e. all signage is suitable and clearly visible

3.3 Registers

The following registers are to be maintained as part of this TMP for the roadworks:

- Key Personnel Register (See Appendix B for details)
- Incident Register (See Appendix C for details)

3.4 Responsibilities

The following responsibilities are outlined for the key personnel required to manage the operation of the roadworks.

General Role Description	Responsibilities
Quarry Manager or Delegate	<ul style="list-style-type: none"> • Ensure all traffic control measures of the TMP are placed and maintained in accordance with the TMP and the relevant Acts, Codes, Standards and Guidelines. • Ensure suitable communication and consultation with the affected stakeholders is maintained at all times. • Ensure inspections of the traffic controls are undertaken in accordance with the TMP, and results recorded. Detail any variations and reasons for variations. • Review feedback from field inspections, worksite personnel and members of the public, and take action to amend the traffic control measures as appropriate following approval from the road infrastructure manager. • Undertake regular inspections of the site to ensure all signage and linemarking is suitable and clearly visible. Ensure temporary signals and lighting are working satisfactorily. • Arrange and/or undertake any necessary audits and incident investigations.

Table 3.4 – SUMMARY OF KEY PERSONNEL RESPONSIBILITIES

3.5 WH & S

All workers are required to complete all tasks as directed by the Quarry Manager (or delegate) in accordance with required Safety Management Plans.

All workers are to be made aware of the requirements of the implemented safety system. As a minimum a Pre-Start Meeting or a site safety induction is to be completed prior to the commencement of a shift.

3.6 Incident Procedures

As part of any incident procedures, the outcomes shall be communicated back to the personnel responsible for the implementation of the TMP for day-to-day quarry activities, and the document updated, if required. The outcome of the incident procedure shall include timeframes for addressing the cause of the incident and documented on the Incident Register. (See Appendix C for details)

4. RISK MANAGEMENT

The following issues and associated risks have been identified for the operation of the Gulgong Quarry, under this TMP.

Issue	Potential Risk	Example of site-specific impact of risk
Access issues		
Quarry-generated vehicle movements increase the likelihood of conflict with local traffic when turning to and from the Castlereagh Highway.	<ul style="list-style-type: none"> • Conflict with local traffic as heavy vehicles enter/exit the local road network between the quarry and M1 Pacific Highway. 	<ul style="list-style-type: none"> • Potential collisions or incidents between vehicles. • Lack of acceleration or deceleration lanes = impacts on traffic flows
Highway traffic Impacts		
<p>Laden trucks accessing the highway and accelerating too slowly to merge safely with high speed traffic.</p> <p>Similarly, haulage vehicles require a much longer deceleration length to slow and exit from the highway when returning to quarry.</p>	<ul style="list-style-type: none"> • Possible conflict when merging if there is a significant difference in travel speeds. • Possible rear end collisions. 	<ul style="list-style-type: none"> • Minor to severe injuries as a result of possible vehicle collisions.
Rocks & debris on roads		
Potential for rocks, dirt, mud and debris to be spread on the local road network by quarry-generated vehicles.	<ul style="list-style-type: none"> • Potential for rocks and other materials to be dropped or spread on local roads, which may result in vehicle damage or loss of control. 	<ul style="list-style-type: none"> • Damage to vehicles. • Minor to severe injuries as a result of losing control of vehicle.
Environmental impacts		
Quarry generated vehicles producing noise & dust issues for neighbours. when the quarry is operating.	<ul style="list-style-type: none"> • Potential for generation of noise and dust by haulage vehicles, particularly by movement on unsealed roads. 	<ul style="list-style-type: none"> • Nuisance effect on local residents.

Table 5.0 – SUMMARY OF ISSUES AND ASSOCIATED RISKS

4.1 Site Risk Rating

In accordance with Figure 2.3 of the Austroads Guide to Temporary Traffic Management, Part 10 – Supporting Guidance the site risk rating has been determined as being **Low**.

4.1.1 Summary of Site Risk Rating Assessment

Road Category	Category 2 @ >1000vpd 60kmh (Section 2.2, Austroads Guide to Temporary Traffic Management, Part 8 – Processes and Procedures.
Posted Speed	Castlereagh Highway - 100km/h
Clearance	Low traffic volumes.
Traffic Lane & Workers	Not applicable

4.2 Site Required Level of Planning

In accordance with assessed Site Risk Rating and Table 2.1 of the Austroads Guide to Temporary Traffic Management, Part 10 – Supporting Guidance the level of TMP required is assumed to be:-

Low Site Risk Rating

Level of Traffic Management Planning

Required but minimal

Generic TGS Suitability

Generally, directly suited for most quarry activities with minimal amendments

Site Specific TGS

Not required.

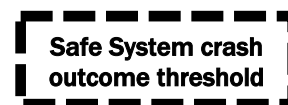
4.3 Risk at the worksite

In accordance with Section 2.4.4 of the Austroads Guide to Temporary Traffic Management, Part 10 – Supporting Guidance, the following work site risks have been assessed and given a risk rating.

Austroads RSA Risk Matrix

			Severity*				
			Insignificant	Minor	Moderate	Serious	Fatal
			Property Damage	Minor First Aid	Major First Aid and/or presents to Hospital	Admitted to Hospital	Death within 30 days of crash
Likelihood (includes exposure)	Almost Certain	One per Quarter	Medium	High	High	Extreme (FSI)	Extreme (FSI)
	Likely	Quarter to 1 Year	Medium	Medium	High	Extreme (FSI)	Extreme (FSI)
	Possible	1 to 3 Years	Low	Medium	High	High (FSI)	Extreme (FSI)
	Unlikely	3 to 7 Years	Negligible	Low	Medium	High (FSI)	Extreme (FSI)
	Rare	7 Years Plus	Negligible	Negligible	Low	Medium	High (FSI)

*See Severity Guidance Sheet



Austrroads Severity Guidance Sheet

Austrroads Severity Guidance Sheet

		Crash Speed (km/h)									
		<10	10	20	30	40	50	60	70	80	90
Crash Type	Pedestrian (vs HV)										
	Motorcyclists (vs HV)										
	Pedestrian (vs Car)										
	Cyclist (vs Car)										
	Pole / Tree Impact (Car)										
	Motorcyclist (vs Car)										
	Side Impact (HV v Car)										
	Side Impact (Car vs Car)										
	Head On (HV vs Car)										
	Head On (Car vs Car)										

Note

It is stressed that the information contained within the severity guidance sheet is a general indication only and that professional engineering judgement is required with its usage.

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Austrroads Priorities for Mitigation

Risk	Suggested Action
Negligible	No action required.
Low	Should be corrected or the risk reduced, if the treatment cost is low.
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high.
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high.
Extreme	Must be corrected regardless of cost.

Risk Event	Cause	Consequence	Risk Matrix															
			Likelihood					Consequence					Consequence / Likelihood					
			Almost Certain	Likely	Possible	Unlikely	Rare	Insignificant	Minor	Moderate	Major	Catastrophic	Very High	High	Medium	Low		
Impact on local traffic flows	<ul style="list-style-type: none"> Potential conflict with local traffic between entry to quarry and M1 Motorway i.e. heavy vehicles movements 	<ul style="list-style-type: none"> Conflict with other vehicles Congestion Driver frustration Damage to other vehicles Loss of control by local vehicles 				X					X						Low	
	<ul style="list-style-type: none"> Conflict with highway traffic when entering or exiting the Pacific Motorway at adjacent interchange i.e. laden haulage trucks slow to accelerate and merge with high-speed traffic 					X						X						Medium
	<ul style="list-style-type: none"> Potential for rocks, mud and debris to be spread on local roads by haulage vehicles. 				X							X						
Impact on surrounding residences	<ul style="list-style-type: none"> Heavy vehicle noise 	<ul style="list-style-type: none"> Long-term nuisance to neighbours 				X					X							Low
	<ul style="list-style-type: none"> Dust 					X			X									
Deterioration of local road network	<ul style="list-style-type: none"> Significant volume of movements by laden heavy vehicles. 	<ul style="list-style-type: none"> Damage to local road. May reduce road safety for local drivers 		X							X							Medium

Table 4.3 – SUMMARY OF RISK ASSESSMENT

In summary the risk assessment completed in Table 4.3 above indicates the majority of the risk events in relation to the proposed roadworks have a Risk Level from Low to Medium, where both ratings “Should be corrected or the risk reduced”, in accordance with Table 2.6 of the Austroads Guide to Temporary Traffic Management, Part 10 – Supporting Guidance.

4.1 Future Risks

For whatever reason, not all risks are identified at the planning stage. Risks may arise once the TMP has been implemented. Therefore, the following should be undertaken to minimise these unforeseen risks into the future.

- Regularly monitor traffic management implementation,
- Where an unforeseen risk arises document the same as an incident so there is evidence of a formal record to be acted upon at a later date,
- Review incident report as soon as possible after it is submitted to determine if and what action may need to be taken to minimise any further exposure to the risk.
- Update documentation relating to the risk (i.e. TMP, Safety Plan, etc) should it be found procedures need to be updated / changed to minimise any further exposure to the risk.
- Communicate these updates / changes to the documentation via:-
 - a) Site Safety Induction for new workers and subcontractors,
 - b) At a Pre-Start or Toolbox meeting,
- At the completion of each of the maintenance procedures hold a review of the procedures and implementation processes undertaken to determine if they were adequate or need to be modified to address any short comings in the procedures or implementation process.

5. TRAFFIC MANAGEMENT MEASURES

5.1 Drivers Code of Conduct

The quarry will utilise a Driver’s Code of Conduct. Drivers regularly accessing the Quarry Site will be required to review and sign the Driver’s Code of Conduct as part of their induction and are required to be re-inducted and re-sign the code regularly. The Driver’s Code of Conduct is the primary tool that is used by the Quarry to ensure that inducted drivers are aware of their responsibilities and the importance of minimising traffic related impacts on stakeholders.

The Driver’s Code of Conduct covers the following key areas:

- general requirements;
- heavy vehicle speeds;
- heavy vehicle driver fatigue;
- heavy vehicle compression braking;
- heavy vehicle noise;
- covering loads;
- heavy vehicle departure and arrival times;
- heavy vehicle breakdowns and incidents;
- school bus and pedestrian constraints;
- compliance measures and monitoring; and
- emergency contact numbers.

Further, the requirements under the Driver's Code of Conduct will be included in any contract, or similar agreement, for the provision of transportation related services to the Quarry or where transportation utilising heavy vehicles is required for the carrying out any quarry-related activities.

5.2 Operating Hours

All loading and despatch operations will be undertaken in accordance with the approved hours of operation specified by Condition 7 (Schedule 2) of Project Approval 09-0175 (as amended). **(To be Finalised on receiving development approval)**

5.3 Internal Speed Limits

All heavy vehicles on internal roads will be limited to a speed no greater than 30km/hr. This would have the following intended benefits for the operation.

- Reduce the risk of incidents involved other vehicles, employees or native fauna.
- Reduce the generation of dust on any unsealed roads.
- Reduce traffic noise.

5.4 Logistical Transport Planning

Where it is feasible to do so, logistical planning of transport activities would be used to reduce truck queuing (convoying), unnecessary idling of trucks and unnecessary trips. An objective of transport planning will be to allow a satisfactory gap (say two minutes) between departing vehicles.

5.5 Laden Truck Covers

All trucks entering and leaving the site shall have their loads covered. This requirement has been included in the Driver's Code of Conduct and will be visually monitored on a regular basis by the Quarry Manager (or delegate). All trucks should have truck bodies and trailers with powered covers, which assist the truck drivers in ensuring that the loads are covered at all times, except during loading and unloading.

6. EMERGENCY ARRANGEMENTS AND CONTINGENCIES

6.1 Emergency Arrangements

The following emergency contact details are to be used in the instance there is an incident while undertaking quarry activities.

Emergency Department	Location / Contact Details
NSW Police Department	000 or 112 (For Mobile Phones)
NSW Ambulance	000 or 112 (For Mobile Phones)
Rural Fire Services (Gulgong)	??
Mid-Western Regional Council	(02) 7955 7777
NSW EPA	131 555
Quarry Management	??
Quarry Transport Manager	??

6.2 Contingency Planning

Note that unforeseen risks may surface during the implementation of this TMP, which could not have been predicted at the time of its preparation.

APPENDIX A INCIDENT REGISTER

<u>Incident Register</u>	Nature of Incident:	Person Reporting:	Date:	Brief Description of Incident:	Root Cause:

**APPENDIX B
VARIATIONS REGISTER**

<u>Variations Register</u>	Purpose of Variation:	Date:	Authorised by:	Brief Description of Varied Works:

APPENDIX C COMPLAINTS REGISTER

<u>Complaints Register</u>	Person Reporting:	Date:	Brief Description of Complaint:

