



# **Holcim ( Australia ) Pty Ltd**

## **Dunloe Sand Quarry Traffic Management Plan**

May 2019

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# 1. Introduction

This Traffic Management Plan (TMP) forms part of the Environmental Management Strategy (EMS) for Dunloe Sand Quarry. This TMP has been prepared to meet the requirements of the Minister's Conditions of Approval (CoA) outlined in Development Consent No. 06\_0030, the mitigation measures outlined in MOD2 (GHD 2017), the Environmental Impact Statement (EIS) (Planit 2007), the Environment Protection Licence 13077 (EPL) and relevant legislation.

## 1.1 Objectives

The key objective of the TMP is to ensure appropriate controls and procedures are implemented in order to minimise the impacts to the environment and local community from traffic associated with the operation of Dunloe Sand Quarry.

## 1.2 Targets

The following targets have been established for the management of traffic impacts during the operational lifetime of Dunloe Sand Quarry:

- Ensure full compliance with the relevant legislative requirements and CoA.
- No justified complaints related to site traffic.
- No road damage from quarry vehicle movements beyond normal wear and tear.

## 1.3 Consultation

Extensive consultation was undertaken with the local community during preparation of the EIS. Concerns identified by relevant stakeholders were addressed in the EIS via mitigation measures and incorporated into this TMP.

As per CoA 35B, Schedule 3, the Roads and Maritime Service (RMS) and Tweed Shire Council (TSC) were consulted during the preparation of the TMP. Evidence of the consultation is provided in Appendix A. A summary of the RMS and TSC responses are provided in Table 1-1, along with how their comments were addressed.

**Table 1-1 Consultation summary**

Agency	Comment	Response
RMS	RMS has been using the Operational TMP for Blakebrook Quarry as an example for other quarries. The only thing missing are the Traffic Control Plans (TCPs) that would be used for specific incidents/contingencies.	The Operational TMP for Blakebrook was reviewed and discussed with RMS. In response a Risk Assessment chapter and additional controls in the Drivers Code of Conduct were included.  To adopt the layout of the Blakebrook example would not be consistent with the other subplans of the EMS.  In regards to the TCP, it was considered more appropriate for these to be prepared by the contractor undertaking the work, once the scope of works are known.

Agency	Comment	Response
TSC	The Traffic Management Plan appears to address the condition. Please note that the speed limit on Pottsville Road is 80 km/h and not 100 km/h. This needs to be changed in your plan.	Reference to 100 km/h on Pottsville Road was revised to 80 km/h.

## 2. Environmental requirements

### 2.1 Regulatory requirements

Regulatory requirements relevant to traffic management includes:

- Roads Act 1993
- Australian Standard 1742.3 2009 - Traffic control for works on roads
- NSW Road Rules

Further discussion of the above legislation is covered in Section 2 of the EMS and in the EIS.

### 2.2 Conditions of approval

The conditions from Development Consent No. 06\_0030 relevant to this TMP are listed in Table 2-1. A cross reference is also included to indicate where the condition is addressed in this TMP or other environmental management documents.

**Table 2-1 Consent conditions relevant to the TMP**

Condition No.	Requirement	Reference
Schedule 3, Condition 33	Prior to commencement of operations the Proponent must: (a) design and construct the haul road and its intersection with Pottsville-Mooball Road; and (b) install advanced truck turning warning signage along Pottsville-Mooball Road, to the satisfaction of Council.	Section 5
Schedule 3, Condition 34	The Proponent must ensure that all loaded vehicles entering or leaving the site have their loads covered.	Section 5 and Appendix B
Schedule 3, Condition 35	The Proponent must ensure all loaded vehicles leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.	Section 5 and Appendix B
Schedule 3, Condition 35A	Within 12 months of approval of Modification 2, unless otherwise agreed by the Secretary, the Proponent must implement and pay the full cost of implementing the recommended treatments listed in Table 3 of the <i>Independent Road Safety Audit</i> prepared by Bitzios Consulting and dated 16 October 2017, and outlined in the Proponent's <i>Response to Road Safety Audit</i> dated March 2018, to the satisfaction of Council, including any additional line marking and signage requested by Council. <i>Note: The Proponent must obtain all necessary approvals under section 138 of the Roads Act 1993 from Council before implementing the recommended treatments.</i>	Council has been consulted to confirm the works required. The consultation is provided in Appendix A and the agreed scope is included in Section 5.

Condition No.	Requirement	Reference
Schedule 3, Condition 35B	<p>The Proponent must prepare a Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> <li>(a) be prepared in consultation with RMS and Council;</li> <li>(b) be submitted to the Secretary for approval prior to the commencement of operations under Modification 2, unless otherwise agreed by the Secretary;</li> <li>(c) describe the processes in place for the management of trucks entering and exiting the site;</li> <li>(d) include a Drivers' Code of Conduct that details: <ul style="list-style-type: none"> <li>• safe and quiet driving practices that must be used by drivers travelling to and from the quarry;</li> <li>• a map of the primary haulage routes highlighting critical locations for application of safe and quiet driving practices, including residential areas and school bus routes;</li> <li>• an induction process for drivers and regular toolbox meetings;</li> <li>• complaint resolution procedures;</li> <li>• any community consultation measures in respect of peak haulage periods; and</li> <li>• consideration of seasonal traffic and events;</li> </ul> </li> <li>(e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and</li> <li>(f) propose measures to minimise the transmission of dust and tracking of material onto public roads from vehicles leaving the site.</li> </ul> <p>The Proponent must implement the plan as approved by the Secretary.</p>	<p>This Plan and Appendix B. The induction and toolbox process and complaint resolution procedures are in the EMS. The community consultation measures during peak haulage periods is in Section 5</p>
Schedule 3, Condition 36	<p>The Proponent must provide sufficient parking on-site for all project-related traffic and visitors, in accordance with Council's parking codes and to the satisfaction of the Secretary. No on street parking must be undertaken.</p>	Section 5
Schedule 5, Condition 1A	<p>The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p>	This plan
	(a) a summary relevant background or baseline data;	Section 3
	(b) a description of: <ul style="list-style-type: none"> <li>• the relevant statutory requirements (including any relevant approval, licence or lease conditions);</li> <li>• any relevant limits or performance measures/criteria; and</li> <li>• the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;</li> </ul>	Section 2.1 NA Section 1.2
	(c) a description of the measures that to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Section 5
	(d) a program to monitor and report on the: <ul style="list-style-type: none"> <li>• impacts and environmental performance of the project; and</li> <li>• effectiveness of any management measures (see (c) above);</li> </ul>	Section 6.1
	(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Section 6.2



Condition No.	Requirement	Reference
	(f) a program to investigate and implement ways to improve the environmental performance of the project over time	Section 7
	(g) a protocol for managing and reporting any: <ul style="list-style-type: none"> <li>• incidents;</li> <li>• complaints;</li> <li>• non-compliances with statutory requirements; and</li> <li>• exceedances of the impact assessment criteria and/or performance criteria; and</li> </ul>	Section 6
	(h) a protocol for periodic review of the plan.	Section 7

## 3. Existing environment

### 3.1 Existing environment

The site is located on an access road that intersects Pottsville Road at a priority controlled intersection, located approximately 2.3 kilometres to the south of Cudgera Creek Road (Figure 3-2).

#### 3.1.1 Pottsville Road

Pottsville Road functions as a collector road that provides connectivity between Mooball (at Tweed Valley Way) and Pottsville. Pottsville Road (in addition to the sand quarry) typically provides access to low density rural dwellings, however, to the north of the site it also provides access to Pottsville golf course.

In the vicinity of the site, Pottsville Road has the following characteristics:

- A two way sealed undivided carriageway of approximately 7.5 metres
- Marked double barrier lines
- A sign posted speed limit of 80 kilometres per hour

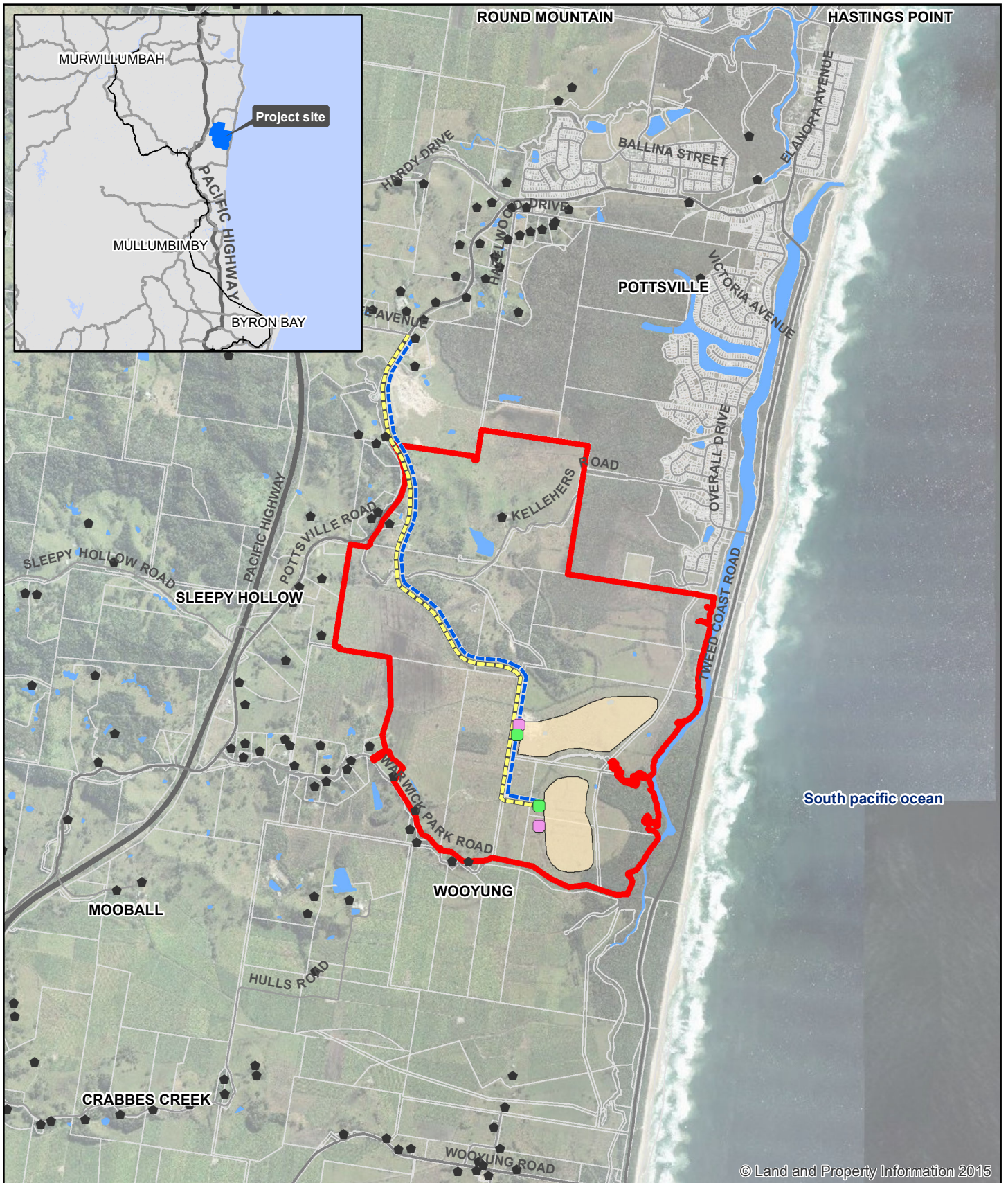


**Figure 3-1 Pottsville Road in proximity to the site access intersection**

To the north of the site, Pottsville Road intersects Cudgera Creek Road at a priority (stop) controlled T-junction (Figure 3-3).

Outputs from Google Traffic indicate that during peak periods of road network operation, the intersection of Pottsville Road and Cudgera Creek Road operates efficiently with only minor delays.

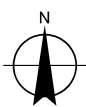




**Legend**

- Project boundary
- Sand extraction areas
- Incoming haul road
- Outgoing haul road
- Site office
- Washplant
- Existing dwelling house

Paper Size A4  
 0 0.25 0.5 1  
 Kilometers  
 Map Projection: Transverse Mercator  
 Horizontal Datum: GDA 1994  
 Grid: GDA 1994 MGA Zone 56



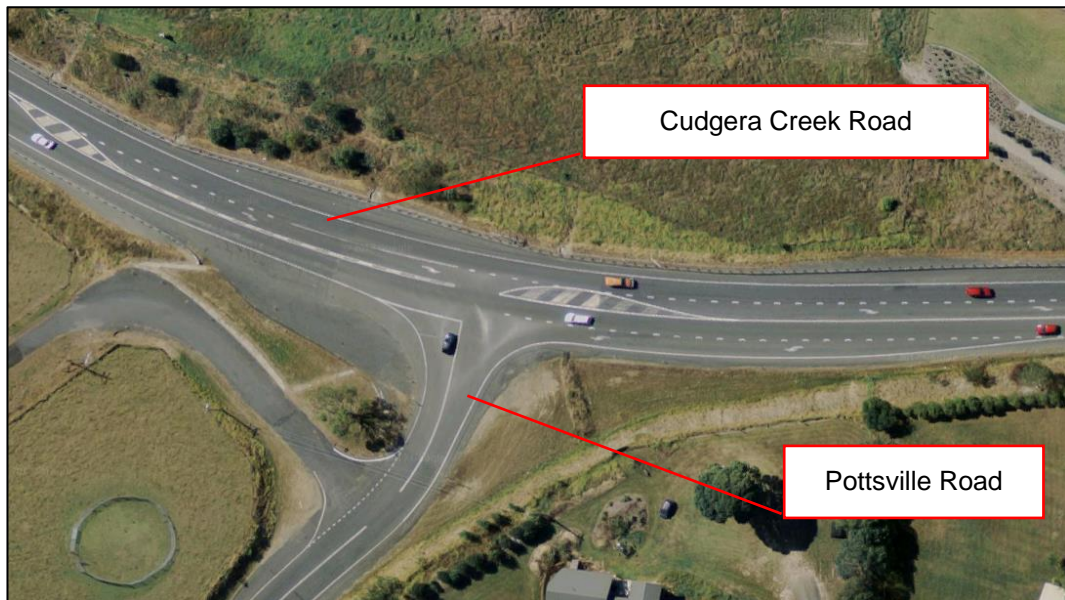
Holcim (Australia) Pty Ltd  
 Dunloe Sand Modification

Job Number | 22-18823  
 Revision | A  
 Date | 10 Apr 2017

Site location and layout

Figure 3-1





**Figure 3-3 Pottsville Road/Cudgera Creek Road intersection**

Source: Google Maps

### **3.1.2 Cudgera Creek Road**

To the east of the Pacific Motorway, Cudgera Creek Road operates as a collector road. However, to the west of the motorway, Cudgera Creek Road operates as a local road that provides access to rural properties.

Cudgera Creek Road intersects the Pacific Motorway at an interchange with grade separated on-ramps and off-ramps.

East of the Pacific Motorway, Cudgera Creek Road has the following characteristics:

- A two way sealed undivided carriageway of approximately 12 metres wide (including shoulders).
- Shoulders that are approximately two metres wide.
- Marked double barrier lines.
- Turning lanes (left and right) at Pottsville Road.
- A sign posted speed limit of 60 kilometres per hour.

### **3.1.3 Dunloe Sands Quarry access road**

Access to the site is provided via a two-way sealed road, with a single travel lane in each direction and a carriageway width of approximately seven metres.

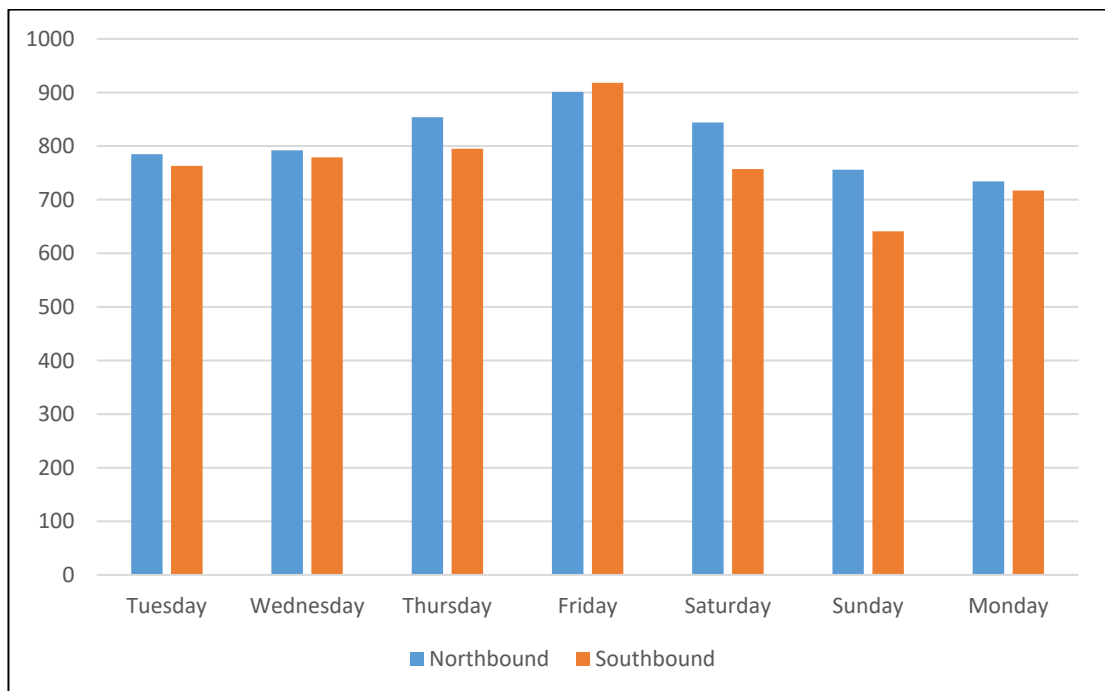


**Figure 3-4 Dunloe Sands Quarry access road**

Heavy vehicles access/egress the site utilising the grade separated Pacific Motorway/Cudgera Creek Road Interchange, Cudgera Creek Road and Pottsville Road.

**Existing traffic volumes**

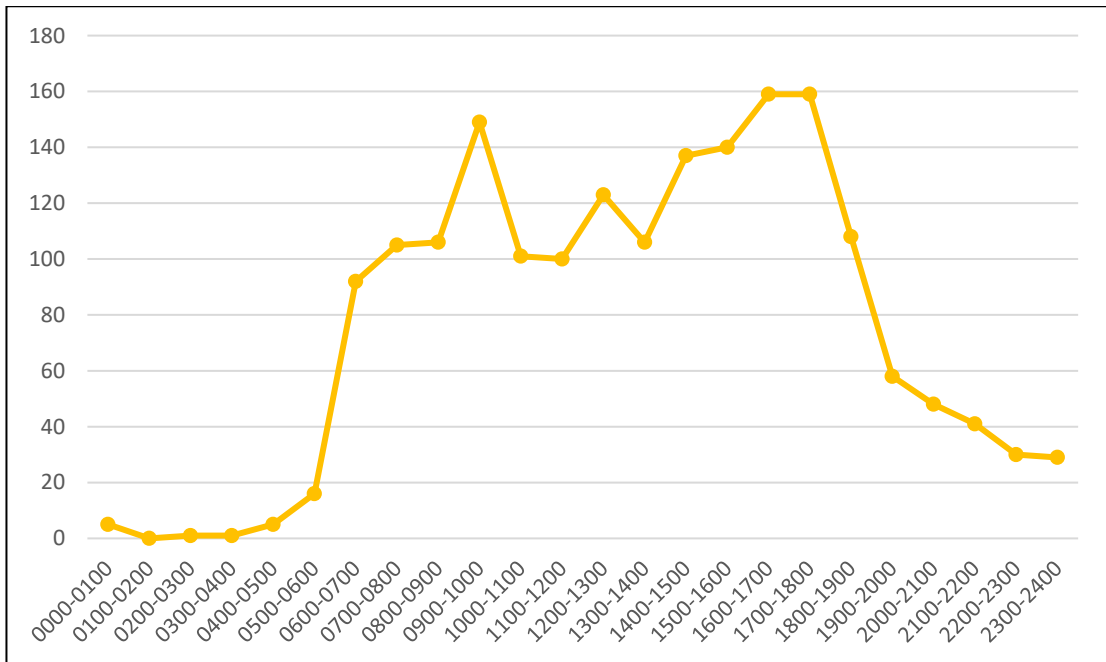
The identified traffic volumes (per day and direction) on Pottsville Road south of Cudgera Creek Road are displayed in Figure 3-5.



**Figure 3-5 Daily traffic volumes on Pottsville Road**

The data in Figure 3-5 indicates that daily (two-way) traffic volumes on Pottsville Road are currently in the order of 1,400 – 1,800 vehicles, with peak demand recorded on Friday 10 March 2017.

The hourly (two-way) traffic volumes recorded on Pottsville Road on Friday 10 March 2017 are displayed in Figure 3-6.



**Figure 3-6 Hourly traffic profile for Pottsville Road (Friday 10 March 2017)**

The data in Figure 3-6 indicates that peak hour (two-way) traffic activity on Pottsville Road was:

AM Peak (9:00 am – 10:00 am) -149 vehicles per hour

PM Peak (4:00 pm – 5:00 pm) - 159 vehicles per hour

The survey data indicates that approximately seven per cent of vehicles on Pottsville Road consist of heavy vehicles.

## 4. Risk assessment

During the development application process, a Road Safety Audit (Bitzios 2017) was completed which identified a few road safety issues. GHD provided a response with options on how to address the significant safety issues highlighted in the Road Safety Audit (Bitzios 2017):

- Item 1.4 and Item 1.5 – Safe Intersection Sight Distance and Stopping Sight Distance.
- Item 1.16 to 1.19 and Item 1.22 – Unprotected hazards in clearzone (embankment, trees) on inside of curve (eastern and western side of Pottsville Road).

Council reviewed the options presented and provided advice in a letter dated 30 April 2018. Council's advice was clarified in an email dated 19 February 2019 (see Appendix A).

Based on the advice from Council, the mitigation measures required to address the safety issues identified, include:

- Install traffic signs referred to in Council's email dated 19 February 2019.
- Line marking and installation of road edge guide posts.

The above mitigation measures have been included in Section 4.

## 5. Environmental control measures

Environmental requirements and control measures are identified in the CoA of Development Consent No. 06\_0030 and the EIS. Specific measures and requirements to address traffic impacts are outlined in Table 5-1.

**Table 5-1 Environmental controls and mitigation measures**

Ref.	Environmental Management Measures	Timing	Responsibility
T01	Implement a site Induction Procedure (Refer to EMS).	Operation	Quarry Manager
T02	All drivers will be required to agree to and sign the Drivers Code of Conduct (Appendix B) for the transport of materials on public roads.	Operation	Quarry Manager and Drivers
T04	Haulage of quarry materials from the site will be limited to the approved hours of operation and EPL.	Operation	Quarry Manager and Drivers
T05	Design and construct the haul road and its intersection with Pottsville-Mooball Road.	Pre operation	Quarry Manager
T06	Install advanced truck turning warning signage along Pottsville-Mooball Road, to the satisfaction of Council.	Pre operation	Quarry Manager
T07	All loaded vehicles entering or leaving the site will have their loads covered.	Operation	Quarry Manager and Drivers
T08	All loaded vehicles leaving the site will be cleaned of materials that may fall on the road before they are allowed to leave the site.	Operation	Quarry Manager and Drivers
T09	Within 12 months of approval of Modification 2, Holcim will: Install traffic signs and line marking, including road edge guide posts to the satisfaction of Council.	Operation	Quarry Manager
T10	Install a rumble grid at the weighbridge.	Operation	Quarry Manager
T11	When mud tracking on to Pottsville Road is observed a street sweeper will be engaged to clean the road.	Operation	Quarry Manager
T12	Plant and equipment are to be operated and maintained in a proper and efficient manner.	Operation	Quarry Manager and Drivers
T13	Provide sufficient parking on-site for all project-related traffic and visitors, in accordance with Council's parking codes and to the satisfaction of the Secretary. No on street parking must be undertaken.	Operation	Quarry Manager
T14	Truck speeds on internal roads is to be limited to a maximum of 40km/h.	Operation	Quarry Manager and Drivers
T15	Accurate records of truck numbers and the amount of material transported will be maintained.	Operation	Quarry Manager
T16	At each Community Consultative Committee meeting, Holcim will report on the number of peak haulage periods (i.e., greater than 20 trucks per hour) since the last meeting and any forecast peak haulage periods in the future.	Operation	Quarry Manager



# 6. Compliance management

## 6.1 Environmental inspections and monitoring

Routine weekly inspections by the Quarry Manager (or delegate) will occur throughout the operational lifetime of the quarry to identify any ad-hoc traffic issues such as speeding, tracking of mud and silt and uncovered loads.

Truck movements to and from the site (including time of arrival and dispatch) will be monitored and recorded using the Dunloe Daily Sales register.

Holcim trucks and machinery are to be checked daily before use, using the pre-start check in Appendix C.

## 6.2 Contingency plan

If the above monitoring detects an impact or there is a justified community or traffic related complaint, a contingency plan or trigger and response plan is to be implemented, as shown below.

**Table 6-1 Contingency plan**

Trigger	Response
Traffic incident on a public road	<ul style="list-style-type: none"> <li>• Contact emergency services, if required.</li> <li>• Investigate the cause of the incident.</li> <li>• Reassess the mitigation measures employed at the site to avoid the issue reoccurring, including consultation with drivers.</li> <li>• Consult RMS, Council and DPE, if required.</li> <li>• Conduct toolbox talks/meetings with drivers on the outcomes of the investigation.</li> <li>• Monitor the issue to ensure the mitigation measures are effective.</li> </ul>
Mud/debris deposited on Pottsville Road	<ul style="list-style-type: none"> <li>• Section of road to be swept.</li> <li>• Check rumble grid and maintain, if necessary.</li> <li>• Toolbox talks/meetings with drivers on the expectations regarding tracking.</li> </ul>
Traffic related complaint	<ul style="list-style-type: none"> <li>• Investigate the issue in accordance with the EMS.</li> <li>• Reassess the mitigation measures employed at the site to avoid the issue reoccurring, including consultation with drivers.</li> <li>• Consult RMS, Council and DPE, if required.</li> <li>• Conduct toolbox talks/meetings with drivers on the outcomes of the investigation.</li> <li>• Monitor the issue to ensure the mitigation measures are effective.</li> </ul>

## 6.3 Reporting

The general reporting requirements are described in the EMS. The routine traffic monitoring will be recorded on the *Environmental Inspection Checklist*, in the *Environmental Management and Monitoring Plan* and Dunloe Daily Sales register.

A summary of these results will be presented in the *Annual Report* (refer to the EMS). All records will be:

- Maintained in a legible form.
- Kept for at least 4 years.
- Produced to any authorised officer of the EPA and/or DPE upon request.

## 7. Review and improvement

Continuous improvement of this TMP will be achieved in accordance with the EMS, through the ongoing evaluation of environmental management performance against environmental policies, objectives and targets.

The continuous improvement process is designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement; and make comparisons with objectives and targets.

## **Appendices**

# **Appendix A** – Consultation

## Ben Luffman

---

**From:** SCIFFER Greg <Greg.SCIFFER@rms.nsw.gov.au>  
**Sent:** Monday, 8 April 2019 3:18 PM  
**To:** Ben Luffman  
**Subject:** TMP for Dunloe Sand Quarry  
**Attachments:** Operational Traffic Management Plan - Blakebrook Quarry.pdf

**CompleteRepository:** 2220056  
**Description:** Dunloe EMP  
**JobNo:** 20056  
**OperatingCentre:** 22  
**RepoEmail:** 2220056@ghd.com  
**RepoType:** Job

Ben

Reference is made to discussions on 8 April 2019 concerning the required consultation for the required Traffic Management Plan (TMP) for Dunloe Sand Quarry. Attached is a copy of the Operational TMP for Blakebrook Quarry for your information. RMS has been using this as an example for other quarries. The only thing missing are the Traffic Control Plans (TCPs) that would be used for specific incidents/contingencies. Typical plans can be acquired from RTAs "Traffic Control at Worksites Manual" which is available online. They can be modified to suit the situation.

RMS would be happy to provide further comments on your TMP before submitting and appreciate a final copy for future reference as these plans evolve with experience..

Thanks  
Greg Sciffer  
Development Assessment Officer Northern



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**From:** Ray Clark <[rayc@tweed.nsw.gov.au](mailto:rayc@tweed.nsw.gov.au)>  
**Sent:** Tuesday, 19 February 2019 9:47 AM  
**To:** Bernie Samson  
**Cc:** Danny Conaghan  
**Subject:** RE: Holcim Dunloe Sands Quarry Access/ Pottsville Road - Response to Road Safety Audit Report

Hi Bernie  
Sorry for tardiness in reply.  
I have included comments against each item in red below.  
Regards

---

**Ray Clark**  
Traffic Engineer  
Roads and Stormwater



p (02) 6670 2578 m 0439 223 094

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**From:** Bernie Samson [<mailto:Bernie.Samson@ghd.com>]  
**Sent:** Monday, 18 February 2019 12:15 PM  
**To:** Ray Clark  
**Subject:** Re: Holcim Dunloe Sands Quarry Access/ Pottsville Road - Response to Road Safety Audit Report

Hi Ray,

As per our previous discussion, you would provide a response on 15/02/2019. May I request some updates regarding this request (as per email below)?

Regards,

Bernie

**From:** Bernie Samson  
**Sent:** Friday, 1 February 2019 5:48 PM  
**To:** Ray Clark  
**Cc:** Ashleigh Douglas; Sharon Denlay  
**Subject:** RE: Holcim Dunloe Sands Quarry Access/ Pottsville Road - Response to Road Safety Audit Report

Hi Ray,

As per our previous discussion, below is the summary of GHD's understanding of the attached letter from Council and the resulting scope of works (for Pottsville Road improvement works) after the completion of Road Safety Audit (RSA), GHD's assessment and recommendations and Council's review of RSA and GHD's report (as per attached letter). GHD would like to request Tweed Shire Council's review of this understanding and the proposed scope of works.

1. The main reference for the preparation of scope of works is the following clause from the attached letter from Council:

*The Proponent must implement all recommended road improvement works listed in Option 1 of Section 3.4 Clear Zone Assessment of the (Draft) Response to Road Safety Audit prepared by GHD, dated March 2018, in consultation with Council. Additional signage (as required by Council) shall also be installed. The works must be implemented prior to any increase in truck movements associated with Mod 2.*

correct

2. GHD's understanding of this clause is that Option 1 of Section 2.4 (sight distance assessment) in GHD's report is not supported by Council

correct

3. GHD's understanding of this clause is that Option 2 of Section 2.4 (sight distance assessment) in GHD's report is not supported by Council and Council would instead recommend the installation of the following signs. The installation of these signs is to be included in the scope of works.

correct



S/B approach		N/B approach	
W2-4 (L)	W5-22	W2-9(R)	W5-22

4. Council to confirm Items 2 and 3. Note that the recommendations in Option 2 of Section 2.4 (sight distance assessment) in GHD's report also include the review of existing auxiliary lane (left turn lane) at the southbound direction. With the current understanding of GHD, the only works required for the existing auxiliary lane is to provide the appropriate AUL linemarkings and pavement arrows which will form part of the following Item no. 5.

correct

5. GHD's understanding of this clause is that Option 1 of Section 3.4 (Clear Zone assessment) in GHD's report is supported by Council. The following recommendations of GHD in Option 1 of Section 3.4 are to be included in the scope of works.

- Apply new and clear pavement markings (i.e., no overtaking barrier lines, edge lines, auxiliary lane continuity line)

already in place, needs to be confirmed on site, left turn arrows required

- Consider audio-tactile edge lines

Consider against RMS guidelines (further guidance from our road safety officer Alana Brooks on 0266702586)

- Apply new road edge guide posts (REGP)

Review against RMS delineation guidelines Part 16

- ○ Apply retroreflective raised pavement markers (RRPM)

Review against RMS delineation guidelines Part 16

- Install relevant signages such as W1-3 on approaches to bend and D4-6 (chevron alignment markers)



As per AS1742.2

6. The clear zone assessment in Section 3.4 of GHD's report did not consider the installation of safety barriers for the following reason:

- The RSA identified hazards (i.e. trees, embankment) are mostly located on the inside of the road horizontal curve. Installation of safety barriers at this location would cause further stopping sight distance issues (i.e. safety barrier would obstruct SSD sight line). Refer Section 3.4 of GHD's report.

correct

7. GHD will include the pavement mill and resheet in the scope of works. New road surfacing will provide a complete visibility of the proposed linemarkings and RRPM.

Pottsville road has been recently reline marked. Milling and resheet is not required or supported.

8. In summary, GHD is proposing the following scope of works:

- Signs and linemarking design works, including the installation of REGP

correct Limited new linemarking expected. A review should be carried out against RMS delineation guidelines and submitted before s138 application is made

- Pavement mill and resheet along Pottsville Road. Please note that this scope is a preparation work for linemarkings and RRPM installation only (i.e. pavement rehabilitation works not included).

Not supported

Furthermore, GHD would like to request the following from Council in relation to the proposed Pottsville Road improvement works

1. lidar survey (if detailed survey is not available) sorry not available



2. a documented process of S138 application for the proposed road improvement works.

Documents attached

Kind Regards,

**Bernie Samson**  
CPEng, MIEAust, RPEQ, NER, BSCEng  
Technical Director - Transport

**GHD**

*Proudly employee owned*

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## Ben Luffman

---

**From:** Ray Clark <rayc@tweed.nsw.gov.au>  
**Sent:** Thursday, 18 April 2019 3:17 PM  
**To:** Ben Luffman  
**Cc:** Colleen Forbes  
**Subject:** FW: Dunloe Sand Quarry Traffic Management Plan  
**Attachments:** 2220056\_RPT-B\_Dunloe Traffic Management Plan.pdf

**CompleteRepository:** 2220056  
**Description:** Dunloe EMP  
**JobNo:** 20056  
**OperatingCentre:** 22  
**RepoEmail:** 2220056@ghd.com  
**RepoType:** Job

Ben  
The Traffic Management Plan appears to address the condition.  
Please note that the speed limit on Pottsville Road is 80km/h and not 100km/h. This needs to be changed in your plan.  
Regards

---

**Ray Clark**  
Traffic Engineer  
Roads and Stormwater



p (02) 6670 2578 m 0439 223 094

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**From:** Ben Luffman [mailto:Ben.Luffman@ghd.com]  
**Sent:** Thursday, 4 April 2019 10:44 AM  
**To:** development.northern@rms.nsw.gov.au; Ray Clark  
**Cc:** Victoria Musgrove; luke.edminson@lafargeholcim.com  
**Subject:** Dunloe Sand Quarry Traffic Management Plan

Hi,

Please find attached the Draft Dunloe Sand Quarry Traffic Management Plan. Condition 35B, Schedule 3 of Project Application 06\_0030 (as reproduced below), requires the Traffic Management Plan to be prepared in consultation with Council and RMS. To satisfy this requirement, could you please review the attached and provide any comments by 19 April 2019.

Let me know if you have any questions.

The Proponent must prepare a Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must:

- (a) be prepared in consultation with RMS and Council;
- (b) be submitted to the Secretary for approval prior to the commencement of operations under Modification 2, unless otherwise agreed by the Secretary;
- (c) describe the processes in place for the management of trucks entering and exiting the site;
- (d) include a Drivers' Code of Conduct that details:
  - safe and quiet driving practices that must be used by drivers travelling to and from the quarry;
  - a map of the primary haulage routes highlighting critical locations for application of safe and quiet driving practices, including residential areas and school bus routes;
  - an induction process for drivers and regular toolbox meetings;
  - complaint resolution procedures;
  - any community consultation measures in respect of peak haulage periods; and
  - consideration of seasonal traffic and events;
- (e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and
- (f) propose measures to minimise the transmission of dust and tracking of material onto public roads from vehicles leaving the site.

The Proponent must implement the plan as approved by the Secretary.

Regards

**Ben Luffman | A GHD Associate**

B App Sc (Hons) | Grad Dip Urban and Regional Planning  
Technical Director - Environment

**GHD**

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## **Appendix B** – Driver's Code of Conduct

# Driver's Code of Conduct

## 1. Objective

The objectives of the Driver's Code of Conduct are:

- To assist in the management of traffic to ensure the safety and health of work personnel, contractors, operators of mobile plant, heavy vehicles, light vehicles and the public who will be impacted by traffic activities.

## 2. General

Drivers are to:

- Complete the site induction (including this Driver's Code of Conduct) the first time they enter site.
- Be fit, not suffering from fatigue, nor under the influence of drugs or alcohol and will cooperate in the undertaking of random drug and alcohol testing, if required.
- Monitor their own performance and take regular breaks and rest times as required by road safety legislation and requirements.
- Inspect their vehicle prior to start up and report any issues before proceeding with work.
- Ensure the heavy vehicle is appropriate for the load to be carried in it.
- Ensure that all safety equipment fitted to the vehicle works properly.
- Not operate the vehicle unless the UHF radio attached to the vehicle is working properly.
- Listen carefully and abide by instructions on the UHF radio, particularly advice from the Quarry Manager.
- Use good road manners and operate the heavy vehicle safely and responsibly while considering the safety of himself/herself and the general public, in particular school children on the designated route.
- Complete all work diaries and timesheets properly and accurately and supply all necessary and appropriate paper work to the operator of the quarry if required.
- Ensure they are wearing the appropriate personal and protective equipment, including steel capped safety boots, high visibility clothing/vests and hearing protection.

**Non-compliance with this code of conduct will result in a review by the Quarry Manager and may result in a refusal to load in future.**

### **3. Operating hours**

Heavy vehicles are not to arrive or leave the quarry outside of the proposed operating hours of:

- Weekdays - 7.00 am - 5.00 pm
- Saturdays -7.00 am – 12.00 pm

No heavy vehicles are to enter or leave the quarry on a Sunday or a public holiday.

### **4. Public roads**

- The designated haulage routes are shown on Figure 1.
- The current intersection arrangement does not support heavy vehicles accessing the site south of Pottsville Road and undertaking a right turn into the access road. **All heavy vehicles are to access and egress the site to/from Cudgera Creek Road.**
- **Slow to 40km/h when bus lights flash.** Drivers should look out for children who are crossing the road or waiting to cross. Drive to the conditions but do not exceed the posted speed limit of 80km/h.
- Understand and abide by all road rules, including speed limits, road signs, use of seatbelts, avoiding taking unnecessary risks, avoiding overhead obstructions, not driving in a convoy and always parking well off the road.

### **5. Seasonal traffic**

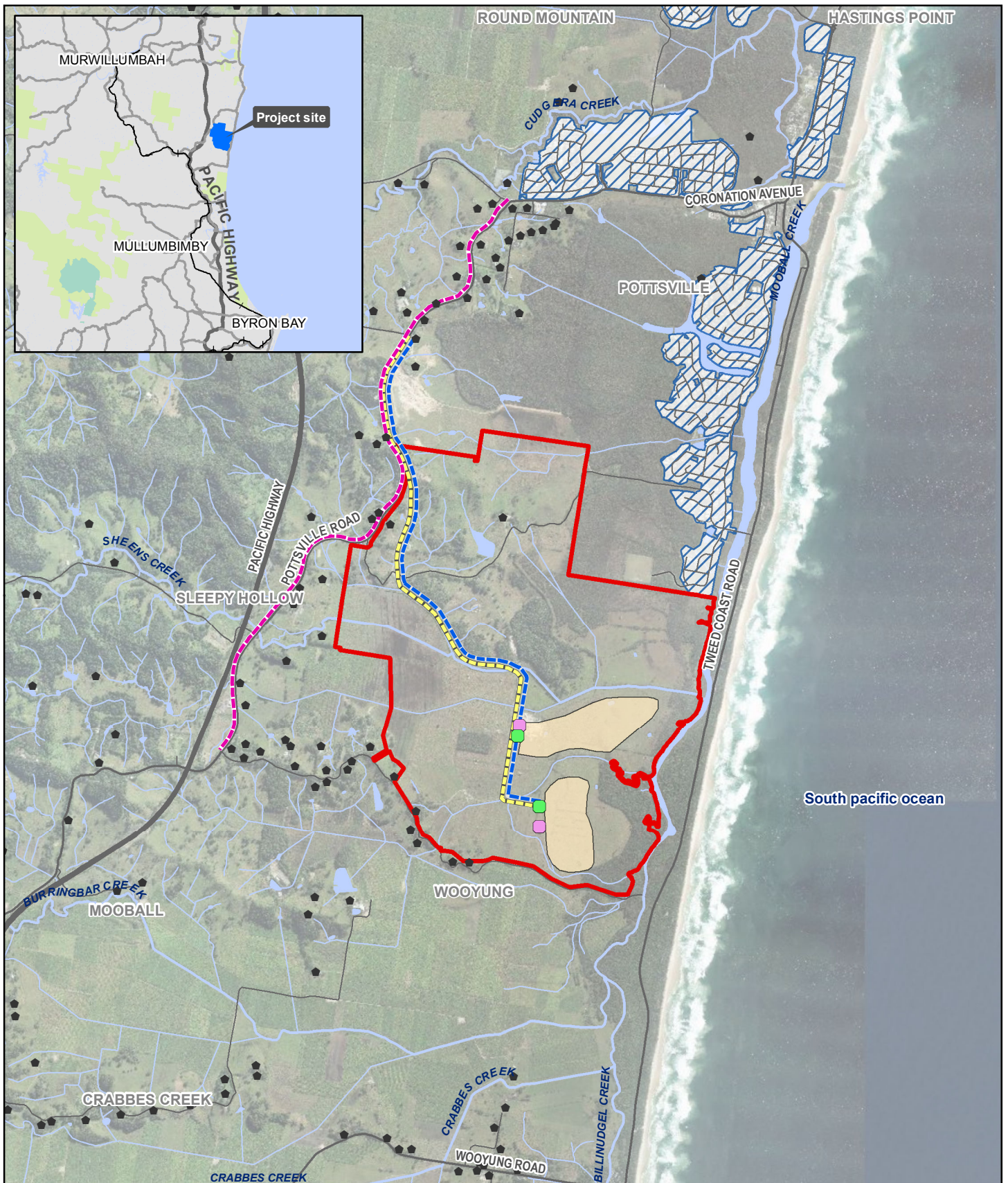
During seasonal traffic (e.g. cane harvest) or events, drivers must:

- Proactively communicate, via UHF, with other quarry truck drivers and other heavy vehicles regarding location and hazards.
- Stagger arrival and departure times to avoid congestion.
- Drive to the road conditions, which may mean slowing down.
- Be courteous to other road users.

### **6. Entry to the site**

- All vehicles with UHF capabilities are to communicate entry to the site via UHF channel 39 upon entry from Pottsville Road.
- All drivers must call up through the zones until reaching the quarry entrance i.e 1 to 2, 2 to 3, 3 to 4, as signposted on route.
- All speed limits are to be obeyed on the access road.
- No overtaking any vehicle at any stage on access road.
- Give way to vehicles exiting the site on two culvert bridges both signposted.
- No texting or mobile phone use unless mobile hands free kit available.

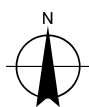




**Legend**

- |                       |                  |                           |
|-----------------------|------------------|---------------------------|
| Project boundary      | Site office      | <b>Critical locations</b> |
| Sand extraction areas | Washplant        | Existing dwelling house   |
| Incoming haul road    | School bus route | Residential areas         |
| Outgoing haul road    |                  |                           |

Paper Size A4  
 0 0.25 0.5 1  
 Kilometers  
 Map Projection: Transverse Mercator  
 Horizontal Datum: GDA 1994  
 Grid: GDA 1994 MGA Zone 56



Holcim (Australia) Pty Ltd  
 Dunloe Sand Quarry

Job Number | 22-20056  
 Revision | A  
 Date | 21 Mar 2019

**Haulage routes and critical locations**

**Figure 1**





**Figure 2 Zone signs on entry and exit**

## **7. On site**

- Communicate position at all times within the site and receive acknowledgement.
- Before passing any mobile plant, drivers must inform operators of their intention and receive acknowledgement before passing and communicate once passed.
- Do not enter any area of the quarry where you are not required or is not your usual place of work. If you do have to be in a different area drivers must call up and wait for acknowledgement before proceeding.
- Drivers must obey all traffic signs within the site.
- Use of mobile phones outside of a vehicle is prohibited unless in a designated area i.e. office.
- Use of mobile phones while driving within the site is prohibited unless using a hands free kit.
- If waiting to be loaded, or being loaded, drivers must wait in their vehicle.
- To receive a docket, drivers must wait in their vehicle until loader driver informs them it's safe to walk over to the loader. The loader must be stationary and bucket on the ground.
- Park vehicles in designated parking areas only.





**Figure 3** Example of on site sign

## **8. Tarp station**

- Appropriately cover/secure loads before leaving the quarry site.
- Ensure drawbars, tailgates, side combing rails and duals are clear of rocks before leaving the quarry site.
- Only tarp trucks at the designated tarping station on the exit road.
- No tarping within the sand plant load out area.

## **9. Livestock**

- Quarry Manager to communicate to all vehicles via UHF Channel 39 of livestock on roadway.
- All drivers to reduce speed and be prepared to stop until livestock cleared.
- Never sound any horns, rev engines or try to drive through livestock (unless stockman has indicated it is safe to do so).

## **10. Exiting the site**

- Only exit quarry over the sand grate bars unless given permission by Quarry Manager to use an alternative exit.
- All vehicles with UHF capabilities are to communicate exit of the site via UHF channel 39 to Pottsville Road. Those without must have either site office staff or loader driver communicate on UHF that a vehicle is leaving site and heading for the exit.



## **Appendix C** – Pre-start check

### FA5.4.001

Week Start Date:				Machine Location:					
SMU Reading Start of the Week:				Machine Model:					
SMU Reading End of the Week:				Unit Number:			Day - A/Noon - Night		
Note: Please fill in each space		<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Total =</b>
* Requires Attention	SMU Hrs								Total:
✓ Tick if Ok	Shift Hrs								Total:
N/A Not Applicable	Utilisation	%	%	%	%	%	%	%	Total: %
In Shift Planned Downtime		Hrs:	Hrs:	Hrs:	Hrs:	Hrs:	Hrs:	Hrs:	Total:
In Shift Unplanned Downtime		Hrs:	Hrs:	Hrs:	Hrs:	Hrs:	Hrs:	Hrs:	Total:
<b>Walk Around Inspections</b>									
1. Ground Engaging Tools									Last Service Hrs: _____ <input type="checkbox"/> 250 <input type="checkbox"/> 1000 <input type="checkbox"/> 500 <input type="checkbox"/> 2000 <input type="checkbox"/> 750 <input type="checkbox"/> 3 Monthly Next Service Hrs: _____ <input type="checkbox"/> 250 <input type="checkbox"/> 1000 <input type="checkbox"/> 500 <input type="checkbox"/> 2000 <input type="checkbox"/> 750 <input type="checkbox"/> 3 Monthly
2. Tyres / Rims / Wheel Nuts									
3. Fluid Leaks(engine oil, coolant, hyd, etc.)									
4. Steps / Ladders / Handrails									
5. Mirrors and Windows									
6. Clean Pre-Cleaner									
7. Air filter Restriction Indicator									
8. Air Leaks / Drain Air Tanks									
9. Loose Bolts									
10. Grease Machine									
<b>Check Fluids</b>									
	Ok / Amount Added	Ok / Amount Added	Ok / Amount Added	Ok / Amount Added	Ok / Amount Added	Ok / Amount Added	Ok / Amount Added	Ok / Amount Added	
11. Fuel									
12. Engine Oils									
13. Engine Coolant									
14. Transmission Oils									
15. Hydraulic Oils									
16. Pump Drive Oils (Excavator)									
<b>Operation Check</b>									
17. EMS / Gauges / Horn									
18. Lights (eg. brake, reverse, etc.)									
19. Backup Alarm / Camera / Proximity									
20. Wipers / Washer									
21. Air Conditioner									
22. Supplemental Steering System									
23. Steering System									
24. Braking System and Park Brake									
25. Secondary / Emergency Brake									
26. Seat and Seat Belts									
27. Two Way Radio									
28. Body/Hoist Up Warning Devices									
<b>Operator's Name:</b>									
<b>Signature:</b>									
<b>General Cleanliness</b>									
29. Clean Cab, Windows, Mirrors, Lights									
30. No Loose Items in Cab									
<b>Weekly Operator Check</b>									
31. Clean Battery Box / Terminals		32. Check Belly Guards		37. Check Auto Lube					
33. Check Tyre Pressure		34. Clean Machine / Washdown		38. Check Battery Fluid Levels					
35. Check Fire Extinguishers Charge		36. Tyre Chains		39. Fire Suppression System					
Operator's Signature:			Supervisor's Signature:			Workshop Supervisor's Signature:			
Date:			Date:			Date:			
Comments & Reasons for Downtime & Repairs:									

**Note:**

COPIES: (White – Maintenance Supervisor)  
(Pink – Remains in log book)

NOTE: Add Operator comments on back of White Copy if required.  
Maintenance comments to be entered on back of Pink Copy.

NOTE: "SMU" stands for –Service Meter Units.  
"Shift Hrs" is regular site hours each day (normally 8 to 10)  
"Utilisation" SMU Hrs / Shift Hrs

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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	B Luffman	S Lawer		S Lawer		20/05/2019
1	B Luffman	S Lawer		S Lawer		29/05/2019

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