

Before Independent Commissioners Appointed by the Canterbury Regional Council and Selwyn District Council

In the matter of The Resource Management Act 1991

And

In the matter of Applications by **Fulton Hogan Limited** for all resource consents necessary to establish, operate, maintain and close an aggregate quarry (**Roydon Quarry**) between Curraghs, Dawsons, Maddisons and Jones Roads, Templeton

**SUPPLEMENTARY STATEMENT OF KELVYN MARK JOLLY ON
BEHALF OF FULTON HOGAN LIMITED**

OPERATIONS

DATED: 29 JANUARY 2020

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Introduction

1. My name is Kelvyn Mark Jolly. I am the Canterbury Quarries Divisional Manager at Fulton Hogan Limited (**Fulton Hogan**).
2. I previously provided a statement of evidence dated 23 September 2019 and rebuttal evidence dated 21 October 2019 in relation to the Roydon Quarry Proposal. I confirm my qualifications and experience set out in paragraphs 2 to 10 of my primary evidence.
3. The purpose of this supplementary evidence is to address two topics which arose during the course of the hearing:
 - (a) The amount of aggregate crushed in the Central Processing and Storage Area (**CPSA**); and
 - (b) How Fulton Hogan will encourage appropriate driver behaviour.

“Throughput” of the Central Processing Plant

4. I have read the Second Joint Witness Statement (**JWS**) of the air quality experts (dated 9 December 2018), in particular the parts of that statement where the expert witnesses discuss their understanding of the material that will be crushed in the CPSA.¹
5. I understand – from Mr Cudmore and from reading the JWS - the experts proceeded on the basis that half of the annual aggregate extracted each year will be crushed in the CPSA. As I read it, the JWS often refers to the total amount of aggregate crushed in the CPSA as the “total throughput” for the CPSA. In my view the experts proceeded on the correct basis – that is, approximately 50% of all aggregate fed through the processing plant will be crushed.
6. The total weight of aggregate extracted at Roydon is expected to be in the order of 625,000 tonnes per annum.
7. In the CPSA other materials may be added to the raw material, such as glass, silt or clay for grading control / product engineering specifications, recycling or compaction efficiencies. Any additional material will pass

¹ Second joint witness statement of Deborah Ryan, Roger Cudmore, Charles Kirkby and Louise Wickham, Air Quality – Particularly PM10 dated 9 December 2019 at paragraphs 13.1 to 14, Appendix A paragraph 6, Appendix B paragraph 1, Appendix C page 2 and Appendix D page 2 (Crushing – no additional mitigation).

through the screen and will not need to be crushed. This is why the amount produced may be more than the amount extracted.

8. Fulton Hogan has estimated that on average 50 percent of the raw feed (ie 312,500 tonnes per annum) will not be crushed in the CPSA. That raw material will pass through the screens in the CPSA straight to the output belt. The remaining 50 percent (on average) will be crushed in the CPSA.
9. Fulton Hogan is confident about the amount likely to be extracted per annum and the proportion of that which will be crushed, based on current production processes, our knowledge of the raw material and our experience at Pound Road quarry. At Pound Road an average 50 percent of the raw material goes straight to the ground in the screening process, bypassing all of the crushers. Therefore, our expectations for Roydon reflect longstanding industry construction methods and related product sales, in terms of the proportion of crushed materials sold (ie AP65, AP40 and AP20). The raw material at Pound Road and Roydon Quarry are equivalent and we will be producing the same end product (ie top course) for the same market. Like Pound Road, the Roydon Quarry Plant has been designed to produce a range of products between AP65 and AP20. Historically there has been no specification for a top course material smaller than AP20.

Roydon Quarry Transportation Management and Routing Plan

10. Prior to the hearing, Fulton Hogan prepared a draft Transportation Management and Routing Plan to address concerns raised by some submitters about where heavy vehicles would travel once they left the Quarry. Since then we have prepared another version which provides further details, including in relation to:
 - (a) route restrictions (both day and night);
 - (b) a formal induction process for all drivers;
 - (c) codes of practice for all drivers;
 - (d) signage; and
 - (e) monitoring.
11. A copy of the revised Routing Plan is attached as **Annexure A** to this evidence.

Driver Behaviour - Induction and Driver Code of Practice

12. In my primary evidence, I discussed the need for all Fulton Hogan staff and all contractors visiting Roydon Quarry to undergo a site specific induction.² This was also provided for in the earlier version of the Routing Plan. The revised Route Plan contains further details about the induction process, including the Driver Code of Practice that will form part of the induction process and be committed to by all drivers using Roydon Quarry. A copy of the draft Driver Code of Practice is attached as Appendix A to the revised Route Plan.
13. The induction process and Driver Code of Practice will address, among other things, route restrictions and engine braking restrictions, site speed limits, safe driving practices and site operating hours. Any driver that has not been through the induction process will not be allowed to enter Roydon quarry. This will be controlled at the quarry entrance by a driver identification system, a barrier arm and signage. The driver identification system will be used to identify any non-inducted drivers. If a non-inducted driver arrives at the entrance, the barrier arm will prevent them from accessing the site and there is also a flashing neon sign that will tell the driver to pull into the lay-area and wait for further instructions from Fulton Hogan. These features are shown in the entrance diagram attached to Mr Chittock's supplementary evidence.³
14. Site specific inductions are routinely carried out at Fulton Hogan quarry sites. We are confident about our procedures for the site induction process for Roydon Quarry based on our experience at other sites.

Signage

15. In my primary evidence, I explained that Fulton Hogan would display prominent signs at appropriate locations in Roydon Quarry to remind drivers of our expected driving behaviours (paragraph 94(c)). The revised Routing Plan provides further details of the signs that will be displayed at appropriate locations. Requirements and directions are frequently included in induction processes and then reinforced by signs at Fulton Hogan quarries.

² Statement of evidence dated 23 September 2019 at paragraph 67 and paragraphs 101-103.

³ Supplementary statement of Donald Gordon Chittock on behalf of Fulton Hogan Limited – Diagrams – dated 29 January 2020, Appendix A, Entrance Diagram.

Monitoring and compliance

16. My primary evidence summarised how Fulton Hogan would monitor driver behaviour, primarily through GPS tracking systems for Fulton Hogan drivers and also by acting upon any feedback from the public. The revised Routing Plan now includes provision for recording and monitoring traffic to allow Fulton Hogan to monitor all traffic movement and, if necessary, consider any non-compliance or complaints.
17. For example:
 - (a) the Routing Plan says that Fulton Hogan will record the dates and times that quarry trucks have been required to travel to/from the Templeton urban area. This will allow any complaints about quarry traffic in the Templeton urban area to be investigated and addressed. Fulton Hogan is to collect data about the type of vehicles, the times of vehicle movements and vehicle destinations as standard practice (Section 7 of the revised Routing Plan);
 - (b) route monitoring in the form of CCTV cameras at specific locations and traffic surveys. Data collected by Fulton Hogan is proposed to be collated as well as further traffic surveys, which include video recording so they can be independently verified (Sections 8.1 and 8.2 of the revised Routing Plan);
 - (c) further details are provided about the GPS monitoring Fulton Hogan will undertake for the Fulton Hogan fleet equipped with GPS capability (Section 8.3 of the revised Routing Plan).
18. Fulton Hogan has also considered what the consequences might be if a driver fails to comply with route restrictions or any other requirements communicated to drivers by Fulton Hogan for Roydon Quarry.
19. For Fulton Hogan employees, the direction to comply with the route restriction is a lawful direction by Fulton Hogan so if it is not complied with, Fulton Hogan will follow its usual employment procedures. Normally this would entail an investigation and may result in the employee being subject to disciplinary action.
20. For non-Fulton Hogan drivers, there will be an investigation if any non-compliance is identified. If the investigation confirms a non-compliance,

Fulton Hogan will follow an appropriate process. The below table indicates the type of process that could be followed:

First offence	Verbal warning and email sent to driver's employer
Second offence	Written warning, email sent to driver's employer and the driver is excluded for the day
Third offence	Written warning, email sent to the driver's employer and the driver will be excluded from site for one month

Kelvyn Jolly

29 January 2020



Roydon Quarry Transportation Management and Routing Plan

This report has been prepared for the benefit of Fulton Hogan Limited. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person.

This disclaimer shall apply notwithstanding that the report may be made available to Selwyn District Council and other persons for an application for permission or approval or to fulfil a legal requirement.

Rev. no	Date	Description	Prepared by	Checked by	Reviewed by	Approved by
A	23/9/2019	Attached to Evidence of Andrew Metherell	AL	AM	AM	AM
B	29/1/2020	For Consent Hearing Right of Reply	AM	AL	AL	AM

1 Introduction

1.1 Background

Fulton Hogan is seeking resource consent for a new quarry to be accessed from Jones Road to the west of Dawsons Road. In broad terms, the consent application is to allow for maximum quarry traffic generation of up to 1,200 heavy vehicle movements per day (600 movements inwards, 600 movements outwards), and a lesser 800 vehicles per day averaged over 60 calendar days.

The assessments prepared as part of the consent application have set out the anticipated traffic distribution on the surrounding transport network based on detailed assessments of the material origin/destination, and assessment of potential routes to reach the origins /destinations. The assessment determined that the majority of traffic will utilise the direct route from the site access to SH1 via Jones Road and Dawsons Road. Through the consent process submitters have raised concerns that truck drivers could choose to use different traffic routes, including local roads in the road network, either as a direct route, or as a general preference to avoid busier intersections and roads. If that was to occur regularly, the level of traffic effect of the additional quarry traffic could be different to that assessed.

A management plan approach has been put forward as a response to addressing submitters' concerns about heavy vehicle use of local roads, as well as providing a means for the road controlling authorities to monitor transport route choice associated with the quarry. The primary intention is to include management responses that support the implementation of conditions of consent around transport route management.

Conditions of Consent are proposed that require the preparation of a Transportation Management and Routing Plan (TRMP). The TMRP will be prepared and certified by Council.

1.2 Document Purpose

This report sets out a draft management plan approach to addressing heavy vehicle routing through the local transport network, that enable conditions of consent to be achieved.

Conditions of Consent are proposed that require the preparation of a Transportation Management and Routing Plan (TRMP), and are included in Appendix A. These address the following matters:

- a. Heavy vehicles associated with the operations of the quarry shall not travel on parts of any roads within the Templeton urban area north of SH1, unless the vehicle movement is for a delivery to a site within the urban area;
- b. Heavy vehicle movements leaving or accessing the quarry between the hours of 8:00pm and 6:00am shall not travel on Jones Road west of the access, Dawsons Road north of Jones Road or Jones Road east of Dawsons Road;
- c. To ensure all truck operators are aware of the potential safety hazards present on roads in the vicinity of the quarry, including safe travel procedures across the Dawsons Road railway level crossing;
- d. Heavy vehicles associated with the operations of the quarry do not use engine brakes when onsite and while on Jones Road approaching or leaving the site;
- e. Formal codes of practice for all drivers,
- f. Formal induction processes for all drivers;
- g. A requirement for non-consent holder controlled truck drivers accessing the site to sign on to codes of practice;
- h. Appropriate on-site signage; and
- i. The process for review of the Transportation Management and Routing Plan

This document further outlines the route restrictions, information on site inductions and heavy traffic monitoring to be carried out.

2 Objectives of the Management Plan

The objectives of this management plan are:

- a. To avoid use of Jones Road east of Dawsons Road by quarry heavy traffic other than for deliveries to the immediate vicinity,
- b. To minimise effects of heavy vehicle traffic on nearby sensitive local roads, road safety, and residential activity.

3 Route and Vehicle Operating Restrictions

3.1 Templeton Route Restrictions

There is community concern that heavy vehicles generated by the quarry will travel through the Templeton urban area north of the railway line, in preference to using SH1. This is only likely to be associated with heavy vehicles accessing the Christchurch urban area.

SH1 is a high standard of road with a function of carrying high volumes of heavy vehicles. Local road improvements are being put in place to accommodate safe and efficient access to and from the SH1 via Dawsons Road. The parallel route along Jones Road (and other roads in Templeton including Railway Terrace and Waterloo Road) are less suited to high volumes of heavy vehicle traffic due to the proximity of the residential urban area in Templeton.

The conditions of consent require that heavy vehicles associated with the operations of the quarry shall not travel on parts of any roads within the Templeton urban area north of SH1, unless the vehicle movement is for a delivery to a site within the urban area. This requirement will need to be conveyed to all drivers accessing the quarry.

The area of exclusion is shown by the yellow dotted line in Figure 1 below.

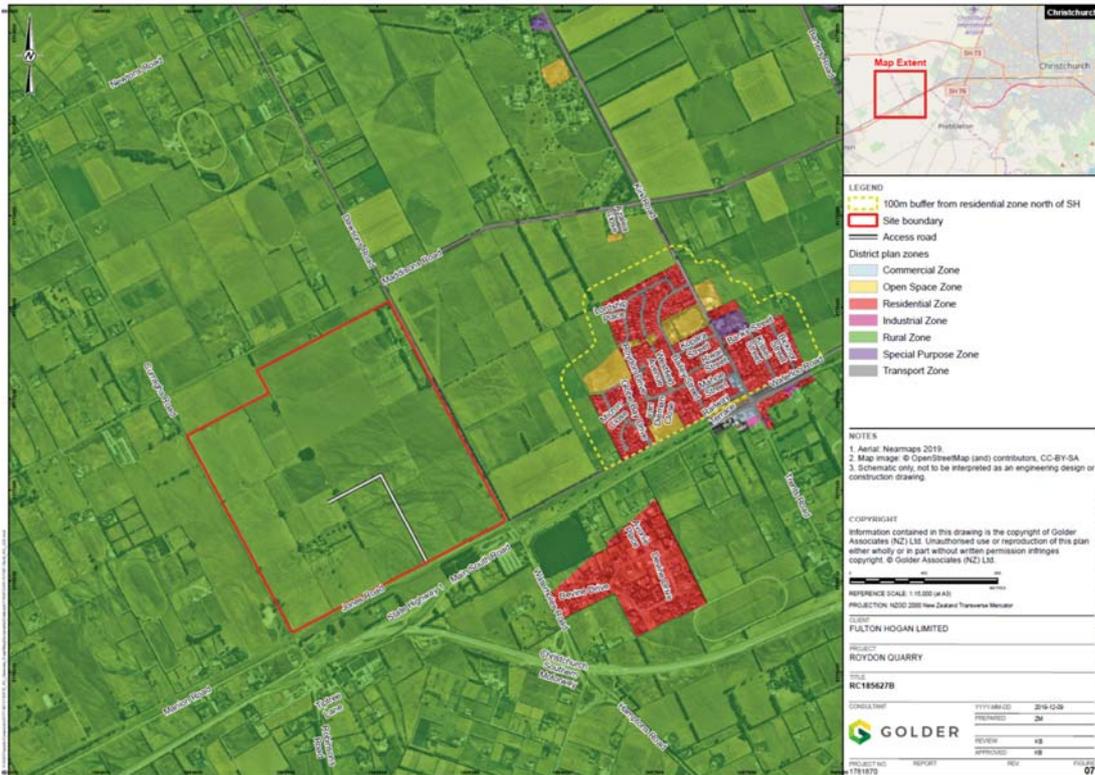


Figure 1: Templeton Urban Area Restricted Heavy Vehicle Routes

Figure 2 shows the proposed messaging to drivers that at all times, all quarry associated heavy vehicle travel to/from Christchurch City urban area is to be via the SH1 / Dawsons Road roundabout.



Figure 2: Proposed Route Restriction (Shown by Red Crosses)

The only exception for the use of Jones Road, east of Dawsons Road, is for deliveries to/from the Templeton urban area.

This will be implemented through the Code of Practice and signage.

3.2 Night-Time Route Restrictions

There is community concern that heavy vehicles generated by the quarry will travel through the local road network surrounding the quarry at night-time. Noise experts have agreed that local roads should be avoided at night-time to avoid concerns with noise effects on residential amenity.

The conditions of consent require that heavy vehicle movements leaving or accessing the quarry between the hours of 8:00pm and 6:00am shall not travel on Jones Road west of the access, Dawsons Road north of Jones Road or Jones Road east of Dawsons Road. In essence, all heavy traffic generated by the quarry in the night-time period must access the site (both inwards or outwards) via Dawsons Road south of Jones Road, and Jones Road between Dawsons Road and the site access. No other local routes to or from the site are permitted.

Figure 3 shows night-time (8:00pm-6:00am) restrictions that will apply. All quarry heavy traffic will be required to travel directly between SH1 and the quarry access.

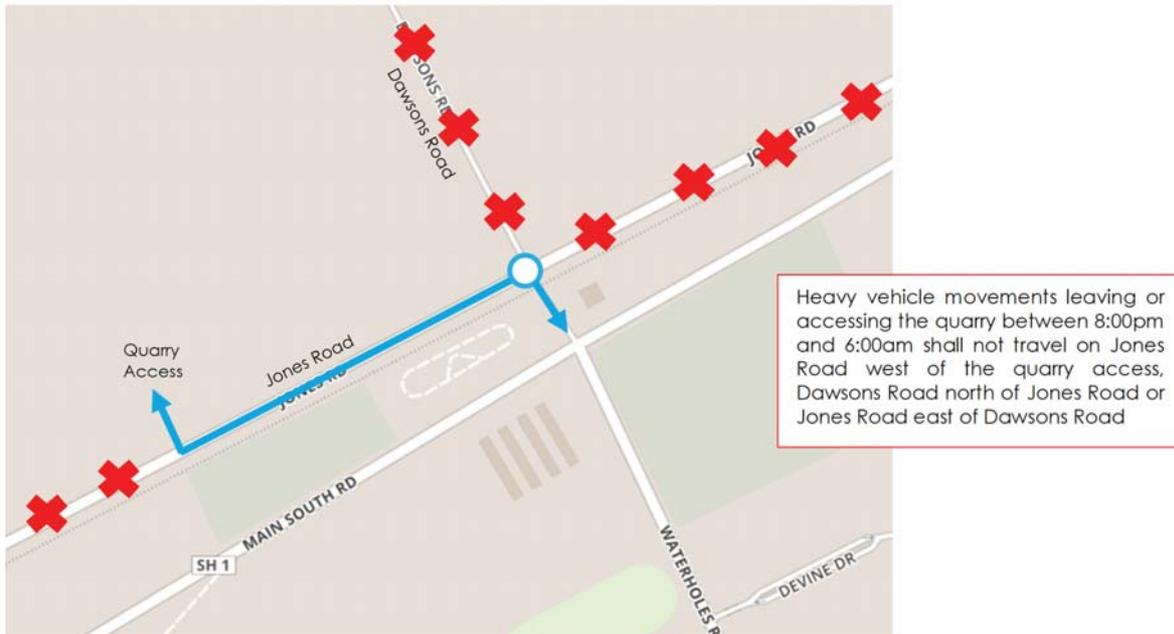


Figure 3: Night-Time Heavy Traffic Restriction

This will be implemented through the Code of Practice and signage.

3.3 Engine Braking Restrictions

Engine brakes can produce a very distinctive impulsive noise when activated which can annoy residents near major heavy vehicle routes. Noise experts have agreed that noise generated by the quarry site can be minimised if heavy vehicles associated with the operations of the quarry do not use engine brakes in certain locations. Noise associated with engine braking can vary significantly across the vehicle fleet, and it is used as a supplementary means of achieving road safety. Operating without engine brakes can safely be managed where speeds are lower and road design does not require sharp braking.

In this case it is proposed that this requirement covers the following areas:

- Within the site
- On Jones Road on approach to and exit from the site (i.e. in the vicinity of the access intersection).

This will be implemented through the Code of Practice and signage.

4 Heavy Vehicle Safe Driving Practice

The large volume of heavy vehicles on the local road network warrants site specific hazard identification for drivers accessing the quarry. The proposed condition of consent requires the management plan to ensure all truck operators are aware of the potential safety hazards present on roads in the vicinity of the quarry, including safe travel procedures across the Dawson's Road railway level crossing;

Key provisions of the Safe Driving Practice provisions are set out below:

Site and Access

- Obey all quarry operator instructions within the quarry, including safe speeds
- Turn from and into defined lanes at the access intersection
- Ensure safe gaps in traffic when entering the road from the quarry access
- No parking on Jones Road prior to entry or after exiting the site

Use of Local Roads

- Be familiar with route restrictions, and obey any restrictions
- Travel at speeds appropriate for the conditions

- Slow down and give lots of space when passing cyclists, pedestrians and horses.

Railway Crossing

- Obey all railway crossing closures
- Use extra caution when crossing the railway to ensure there is sufficient space downstream of the railway for your vehicle at all times. Do not cross if you are not sure.

5 Site Induction

The effectiveness of the Transportation Management and Routing Plan is reliant on all drivers accessing the site being aware of the contents, and their obligations. Fulton Hogan will establish site induction processes to enable implementation of the Transportation Management and Routing Plan.

Frequency of induction is set out below:

- Site induction is a mandatory requirement before entering the quarry for the first time and will also encompass the on-site health and safety induction.
- Contractors will have an annual repeat induction, and
- Non-inducted contractors will be treated as visitors and require additional on-site briefing.

Induction will include, as a minimum, driver code of practice material including:

- Off site maps showing local route restrictions and engine braking restrictions,
- Site operating hours,
- Restrictions for night-time works including the night-time route restriction,
- Entrance procedures for contractors and visitors,
- Site speed limits,
- Safe driving practices,
- Traffic management plan for Roydon Quarry,
- Emergency procedures and responses,
- A brief instructional video,
- A form to be signed confirming completion of induction.

At completion of induction the quarry operator will supply key reference cards setting out the transportation management measures in place for the quarry.

Advice on enforcement procedures will also to be included.

A record of drivers inducted is to be kept, including:

- Name
- Company
- Drivers licence number
- Date Inducted
- Contact Details
- Date of Repeat Induction

A draft Driver Code of Practice intended to be used for driver inductions is contained in Appendix A. It outlines both night-time and day-time route restrictions as well as on-site requirements and information.

6 Signage

Prominent signs will be established at appropriate locations on-site reminding truck drivers of the route requirements outlined in the Trucking Code of Practice / driver induction information.

Figure 4 is a draft directional sign with the main purpose of ensuring all quarry travel to Christchurch uses Main South Road / SH1 rather than Jones Road east of Dawsons Road. This is to satisfy the resource consent condition restricting the use of that section of Jones Road.

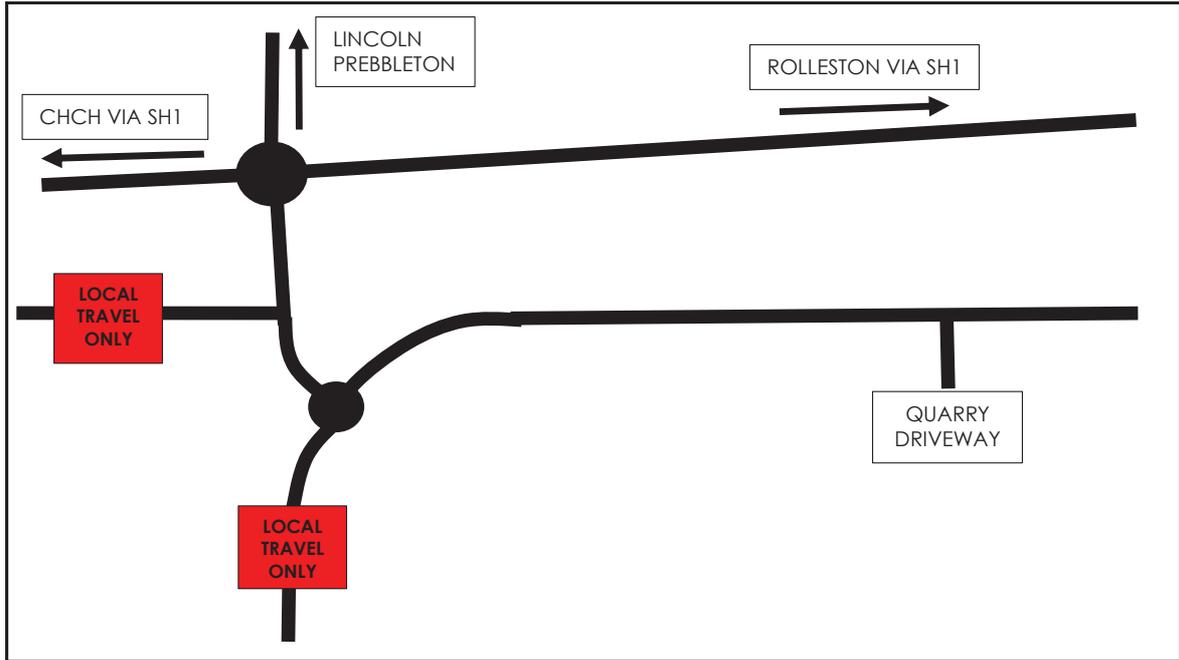


Figure 4: Draft Quarry Directional Sign

7 Records of Travel To/From Templeton

Fulton Hogan will record dates and times that quarry trucks have been required to travel to/from the Templeton urban area at the weighbridge or administration office. This will allow any complaints about quarry travel along Jones Road east of Dawsons Road or through Templeton to be considered and responded to. As Fulton Hogan collect data on vehicles, times and destinations as standard practice, this data can be collated.

8 Route Monitoring

8.1 Monitoring Cameras

Fulton Hogan will establish CCTV cameras at the following locations to allow monitoring of traffic movement:

- Looking to the Jones Road access so that directional movement can be determined. The camera(s) will provide enough resolution to allow vehicles to be identified against weighbridge records.
- Overlooking the Jones Road / Dawsons Road roundabout intersection to provide a video record of movements that will allow tracking of heavy vehicle movements, and review against the site access video records to isolate out quarry trucks when required by the monitoring programme.

Data from the cameras shall be retained for at least a four-week period in case a review is required. Such a review may be required for responding to community feedback, additional analysis of routes in addition to the surveys (set out in the next section of this report), possibly in response to Council comments or testing responsiveness to TRMP modifications.

8.2 Traffic Surveys

In order for Fulton Hogan to confirm the route restriction is being adhered to, it is proposed that in the first year of operation records are collated of heavy vehicle movement patterns to and from the quarry at the site access, and at the Dawsons Road / Jones Road intersection.

These should be undertaken as point in time surveys covering at least 4 hours between 8am and 5pm on a weekday, and identify:

- The volume and proportion travelling to/from the east, and the proportion travelling to/from the west at the access; and
- The volume and proportion turning to and from the direction of SH1 at Dawsons Road / Jones Road.

The surveys are to include a video recording to allow the results to be independently verified, if required as a part of consent review processes. The recording shall be kept for a period of 1 year.

If a high proportion of traffic (approximately 90%) is not identified as using Dawsons Road to access SH1, measures to remedy this should be implemented by the quarry operators e.g. through further communications with drivers and/or adjustment to signage.

Repeat surveys shall be undertaken every two years for the first six years of operation to confirm adherence to the Transportation Management and Routing Plan. The actions taken shall be included in a log attached to the Plan.

8.3 GPS Monitoring

Some vehicles accessing the Fulton Hogan site operate with GPS technology that monitors vehicle travel characteristics. The level of information available is dependent on the system used, the purpose it is used for, and usually the subscription service signed up to with a third party. Fulton Hogan has capacity within parts of its fleet to analyse travel routes.

As part of the route monitoring in Section 8.2 it is proposed that an analysis will be carried out of the Fulton Hogan fleet equipped with the GPS capability. From that the local routes taken to access the quarry can be determined, and compared with the routes assessed through the consent process.

9 Document Updates

This Transportation Management and Route Plan should be considered an active document. Management measures should be updated as necessary, ensuring that the objectives of the management plan are being achieved.

The reviews should at least coincide with assessment of data from the route monitoring surveys.

Amendments to the Plan are to be documented and made available on request to the Manager of Planning at the Selwyn District Council.

Appendix A: Draft Driver Code of Practice

The Local Road Network

General

- Travel at speeds appropriate for the conditions
- Slow down and give lots of space when passing cyclists, pedestrians and horses.
- Pass stationary school buses at speeds not exceeding 20km/h.

Route Restrictions

Heavy vehicle route restrictions apply around the quarry to limit effects on neighbours.

- Be familiar with route restrictions, and obey any restrictions

During the day-time (between 6:00am and 8:00pm)-

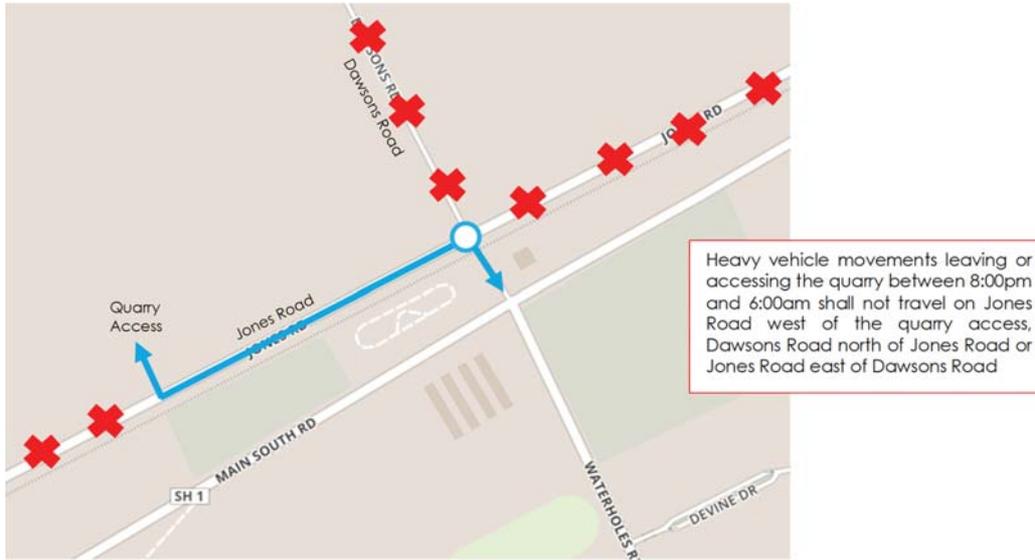
- No travel through the Templeton urban area north of SH1, unless a delivery is being made there.
- As outlined in the diagram below, all travel to/from the Christchurch urban area is to be via the SH1 / Dawsons Road roundabout, .



Templeton Route Restriction

During night-time hours (between 8:00pm and 6:00am)-

- ALL quarry heavy traffic is to travel directly to and from Main South Road / SH1.
- As indicated below, there is to be NO heavy vehicle travel along Jones Road, west of the quarry access, Dawsons Road, north of Jones Road, or Jones Road east of Dawsons Road.



Night-time Route Restriction

The following are preferred routes for major destinations

- Travel to Christchurch via Main South Road / SH1 (not Jones Road east of Dawson's Road and/or Kirk Road)
- Travel to Prebleton and Lincoln via Waterholes Road
- Travel to Rolleston via Main South Road / SH1

Dawsons Road Railway Crossing

- Obey all railway crossing closures
- Use extra caution when crossing the railway to ensure there is sufficient space downstream of the railway for your vehicle at all times.

Site Access

- Turn from and into defined lanes at the access intersection
- Ensure safe gaps in traffic when entering the road from the quarry access
- No parking on Jones Road prior to entry or after exiting the site- layby areas are available within the quarry site
- Heavy vehicles associated with the operations of the quarry do not use engine brakes while on Jones Road approaching or leaving the site near the access

Within Roydon Quarry

- Heavy vehicles associated with the operations of the quarry do not use engine brakes when onsite
- When entering and exiting the quarry, quarry trucks must keep left
- The speed limit inside the quarry is 15km/h, or as otherwise specified
- All vehicles must comply with the Traffic Management Plan for the site
- Quarry truck drivers must stay inside their trucks whilst the trucks are being loaded
- Follow the emergency procedures for the site

Load Security

- Quarry truck drivers must ensure their load security before exiting the quarry.

Appendix B: Proposed Conditions of Consent

Operational

General

21) Heavy vehicle movements leaving or accessing the Roydon Quarry between the hours of 8.00 pm and 6.00 am shall not travel on the following roads:

- (a) Jones Road west of access (between the access and Curraghs Road)
- (b) Dawsons Road north of Jones Road (between Jones Road and Maddisons Road)
- (c) Jones Road east of Dawsons Road (between Dawsons Road and Railway Terrace)

Traffic

32) The Consent Holder shall take all practicable steps to ensure:

- (a) heavy vehicles associated with the operations of the quarry shall not travel on those parts of any roads within the area identified on Figure RC185627B, unless the vehicle movement is for a delivery to a site within the area identified on Figure RC185627B; and
- (b) heavy vehicles associated with the operations of the quarry do not use engine brakes when onsite and while on Jones Road approaching or leaving the site.

Transportation Management and Routing Plan

33) The consent holder shall prepare a Transportation Management and Routing Plan for certification by the Selwyn District Council in accordance with condition [TBC]. The purpose of the Transportation Management and Routing Plan is to provide detail on how condition [21) and condition 21) will be achieved, and to ensure all truck operators are aware of the potential safety hazards present on roads in the vicinity of the quarry, including safe travel procedures across the Dawsons Road railway level crossing. Quarry operations shall not occur until Selwyn District Council has certified the Transportation Management and Routing Plan in accordance with condition [TBC]

The Transportation Management and Routing Plan shall include, as a minimum:

- (a) Formal codes of practice for all drivers;
- (b) Formal induction processes for all drivers;
- (c) A requirement for non-consent holder controlled truck drivers accessing the site to sign on to codes of practice;
- (d) Appropriate onsite signage; and
- (e) The process for review of the Transportation Management and Routing Plan.

The consent holder shall ensure that all quarry activities are undertaken in a general accordance with the certified Transport Management and Routing Plan.