

Roydon Quarry Draft Spill Management Plan

Proposed Roydon Quarry Templeton, Christchurch.

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Background	1
1.2	Document Purpose	1
1.3	Site Activities	1
1.4	Proposed Consent Conditions	1
1.5	Site Responsibility	3
1.6	Training	3
2.0	SPILL MANAGEMENT CONTROLS	4
2.1	Hazardous Substances Inventory	4
2.2	Storage	4
2.3	Refuelling and Maintenance of Vehicles and Machinery	4
2.4	Servicing and Maintenance of Vehicles and Machinery	4
2.5	Spill Kits	5
2.6	Fixed Diesel Storage	5
3.0	SPILL RESPONSE PROCEDURE	6
4.0	REPORTING	7
5.0	DOCUMENT REVIEW	8



1.0 INTRODUCTION

1.1 Background

Fulton Hogan Limited (Fulton Hogan) is a leading infrastructure, construction, roadworks and aggregate supplier in New Zealand. Fulton Hogan currently has three fixed aggregate quarries located in the greater Christchurch area and began its operations in the Canterbury region over 50 years ago.

The Roydon Quarry site, located in Templeton, is proposed to be another long-term operation. Fulton Hogan has sought resource consents from Canterbury Regional Council and Selwyn District Council to authorise this proposed quarry and the associated activities. This Draft Spill Management Plan (SMP) has been prepared to accompany this consenting process.

The site is located within a block of land bound by Curraghs Road, Dawsons Road, Maddisons Road, and Jones Road, and comprises an area of approximately 170 hectares. The site is located on the edge of the Selwyn District, with the opposite side (east) of Dawsons Road being the western border of Christchurch City. The street addresses for site are 107 Dawsons Road and 220 Jones Road.

1.2 Document Purpose

During the daily operations at the proposed Roydon Quarry, there is some risk that a spill or leak could occur from the use of fuels and oils critical to the quarry's operations. It is everybody's responsibility to ensure that their actions resulting from day-to-day activities do not result in damage to the environment.

Ensuring all spill risks are identified and minimised, and that staff are trained to respond quickly to a spill, are all critical elements that must be in place to ensure adequate management of these activities associated with the Roydon Quarry. This plan has been prepared to ensure that the risk of spills is appropriately controlled and sets out the associated proposed consent conditions and minimum standard expected at this site.

A copy of the SMP shall be provided to the Canterbury Regional Council upon request.

1.3 Site Activities

The key activities that may present a risk of a spill of hazardous substances on this site are the refuelling of equipment, and maintenance of vehicles/machinery such as the repair of a hydraulic hose. The key hazardous substances relating to these activities are fuels and hydraulic fluids. Other hazardous substances that are typical on a quarry site are minimal levels of aerosols, greases, paints, and compressed gases such as oxygen and acetylene.

1.4 Proposed Consent Conditions

The consent conditions set out in Table 1, are proposed for spill management at Roydon Quarry and set out the framework to which this Draft SMP relates.

Table 1 also references the relevant sections of this Draft SMP against each requirement of the proposed conditions as they apply.



Table 1: Draft SMP sections referenced against the Proposed Consent Conditions

Proposed	d Canterbury Regional Council land use consent conditions	Document Reference
-	oydon Quarry	(Section)
Conditio	•	,
	ent holder shall take all practicable measures to prevent leaks and	Section 2.0
	s of fuel or any other hazardous substances in accordance with a	
-	agement Plan. This shall include but not be limited to:	
a)	Refuelling or maintenance of vehicles or machinery	Section 2.3, Section
,	maintenance shall not occur on the quarry pit floor with the	2.6
	exception of generators for mobile plant;	
b)	Appropriate servicing and maintenance of vehicles and	Section 2.4
	machinery such that they do not result in leaks or spills;	
c)	Only undertaking refuelling or maintenance on vehicles or	Section 2.4
	machinery on hardstand surfaces that are roofed;	
d)	A spill kit capable of absorbing all fuel and oil products shall be	Section 1.6, Section
	kept on site and available at all times. All staff involved in the	2.5
	implementation of activities in condition (XX) are to be trained in	
	the use of spill kits.	
Condition		
	ent holder shall prepare and implement a Spill Management Plan	Section 3.0, Section
for the site	e. The Spill Management Plan shall:	1.5
a)	Document the measures to prevent leaks and avoid spills of fuel	Section 2.0
	or any other hazardous substance (including fuel	
	reconciliations);	
b)	Set out the procedure to be undertaken in the event of a spill of	Section 3.0, Figure 1
	fuel of any hazardous substance, in accordance with condition	
- \	(x);	0(
c)	Set out staff training requirements for responding to spills; and	Section 1.6
d) Condition	Be provided to Canterbury Regional Council on request.	Section 1.2
	ent of a spill of fuel or any other hazardous substances:	Continu O.F. Continu
a)	The spill shall be cleaned up as soon as practicable, and	Section 2.5, Section 3.0
b)	measures taken to prevent a recurrence; The Canterbury Regional Council, Attention: Regional Leader -	Section 4.0
b)	Monitoring and Compliance shall be informed within 24 hours of	Section 4.0
	a spill event exceeding four litres and the following information provided:	
i.	The date, time, location and estimated volume of the spill;	Section 4 (1)
ii.	The cause of the spill;	Section 4 (1)
iii.	The type of hazardous substance(s) spilled;	Section 4 (2)
iv.	Clean up procedures undertaken;	Section 4 (4)
V.	Details of the steps taken to control and remediate the effects of	Section 4 (4)
٧.	the spill on the receiving environment;	0000011 + (0)
vi.	An assessment of any potential effects of the spill;	Section 4 (6)
vii.	Measures to be undertaken to prevent a recurrence	Section 4 (7)
• • • • • • • • • • • • • • • • • • • •		



Note: similar conditions (55 to 58) are included in the Selwyn District Council resource consent and this plan will help ensure compliance with these conditions as well.

1.5 Site Responsibility

The overall management of the site will be the responsibility of the Roydon Quarry Manager or delegated authority and will include:

- Ensuring compliance with relevant resource consent conditions.
- Communicating the relevant resource consent requirements to staff, contractors and all other relevant parties.
- Ensuring compliance with the SMP and all other associated documents.
- Maintaining the hazardous substance inventory, stock reconciliations and ensuring adequate controls are implemented.
- Investigating effectiveness of operating procedures and communicating if any changes need to be made.
- Inspection and maintenance activities.
- Reviewing environmental incidents.
- Leading staff to ensure environmental responsibility is being practiced.
- Ensuring that spills on access roads onto the site are immediately addressed where they are
 a result of site activities and/or vehicles entering or exiting the site.

1.6 Training

All operational staff who will be undertaking works at this site will be trained and equipped to identify and minimise spill-related hazards, be capable of responding safely to all incidents, and shall be trained in the use of the spill kits.

To facilitate this, all Fulton Hogan employees will attend Fulton Hogan's internal comprehensive "Enviro Wise" programme which provides a three to four hour introduction to key environmental hazards, their controls and sustainability. Specifically, during this training programme, staff will be involved in a controlled practical spill response session where they are shown examples of spilt materials such as oil and cement, and the appropriate clean-up method to be used from a typical spill kit.



2.0 SPILL MANAGEMENT CONTROLS

The key approach to the management of hazardous substances on site is to reduce the risk of spills occurring. Attention in this area will significantly reduce the risk of business interruption, costs and wastage by minimising the occurrence of spills in the work area.

The following measures will be implemented for the storage and handling of hazardous substances and will be in line with the Health and Safety at Work Act (Hazardous Substances) Regulations.

2.1 Hazardous Substances Inventory

- An inventory of all hazardous substances, stating maximum volumes will be maintained on site.
- All Safety Data Sheets (SDS) for each substance will be available to ensure that the appropriate
 personal protective equipment (PPE) and clean-up/disposal methods can be referred to in the
 event of spill.

2.2 Storage

- The volumes of hazardous substances stored will be reduced as far as practicable. Any materials deemed surplus to requirements will be disposed of at an appropriate disposal facility.
- All hazardous substances will be stored within a designated area, separated by the prescribed separation distances and appropriate controls implemented as outlined in the Hazardous Substance Regulations.

2.3 Refuelling and Maintenance of Vehicles and Machinery

• Refuelling or maintenance of vehicles/machinery will not occur on the quarry pit floor with the exception of generators for mobile plant. In the case that mobile plant must be refuelled within the quarry pit floor, a drip tray will be used during the refuelling process, with an appropriately-trained person supervising this process.

2.4 Servicing and Maintenance of Vehicles and Machinery

- The servicing and maintenance of vehicles will be undertaken within the designated hardstand area which is rooved, bunded and houses an oil-water separator system¹.
- The maintenance of fixed and mobile crushing plant will be undertaken within the quarry pit area. Controls such as drip trays will be in place for activities that are at risk of spilling a hazardous substance.
- All maintenance of vehicles and machinery will be undertaken by a person that has been assessed as 'competent to operate' for this task.

Page 4

¹ In the case of a machine/vehicle breaking down on site where it is unable to be moved, emergency maintenance may need to occur on site prior to a full service being undertaken in the designated area.



2.5 Spill Kits

- A spill kit capable of absorbing all fuel and oil products shall be available at all times.
- Spill kits capable of absorbing fuel and oil products will be placed in critical areas such as at the workshop and during refuelling/maintenance of equipment within the quarry pit floor.
- Spill kits will be regularly inspected to ensure they are fully stocked.

2.6 Fixed Diesel Storage

- Where any above ground, fixed storage tank occurs, it will be located on an impervious platform.
- All fixed tanks will have an integrated secondary containment system in the form of a double skin with a secondary containment volume not less than 110 percent of the total fuel storage volume of the tank.
- All fixed tanks will be fitted with an overfill protection device. All fittings will have dry break
 couplings and manual dips or checks of the capacity of the tanks will be taken prior to the
 delivery of fuel.
- All vehicle refuelling will take place on a bunded impervious hard stand, within an enclosed rooved area that houses an oil-water separator. This area will be designed to enable a refuelling truck to be located on the rooved hardstand area.
- During diesel delivery and refuelling, staff trained in the delivery of hazardous substances will supervise the filling process to ensure overflowing does not occur.
- Only approved personnel with fuel cards will have access to the fuel within this system.
- A monthly visual inspection for leaks and spills of the tank connections, pipework and ancillaries for leaks and system integrity will be undertaken by the Quarry Manager or delegate.
- Fuel stock reconciliation will be undertaken within 24 hours of any diesel being delivered and thereafter on a fortnightly basis. A monthly review of cumulated variances between the quantities of fuel used, use and stock on hand will be undertaken. If a discrepancy of more than 100 L or 0.5 percent is identified, whichever is smaller, then the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager will be notified within 24 hours.



3.0 SPILL RESPONSE PROCEDURE

In the event of a spill, the spill shall be cleaned up as soon as practicable in accordance with the following Spill Response Procedure set out in Figure 1.

occurred Raise the alarm at any stage: Supervisor/Managei Env Manager / SQTE Regional Office **Assess** the spill for safety. Regional Council 0800 765 588 If need be, call Identify the chemical and determine if you can control, contain and clean up the spill Fire Service 111 safely and whether any external help will be required. Follow their instructions and implement the appropriate Response Procedures for the specific substance / location Stop the Source Stop or plug the leak. Notes: Turn off taps, valves & pumps. Oil-absorbent materials do not work Stand / roll the container to prevent on spills that are in solution, such as further discharge. emulsion or cement / lime run-off For large spills, check-dams could be constructed to contain spilled material. Diverting spilled material to a Contain so the spill cannot spread using temporary containment area may absorbents, sand, dirt, rags. also be an option. Protect drains and waterways by blocking access to storm water drains culverts or blocking the outlets if the spill has entered drains. Dam roadside drains The Regional Council must be notified where the spilled substance or runoff has entered stormwater drain/s or a waterway. Where the receiving waterway is not immediately apparent, contact the Notify your supervisor or manager Immediately inform Supervisor/ and inform other agencies if necessary local council or water authority for Manager of incident details (see contact numbers on reverse) drainage information and assistance. location Council staff often have drainage time of occurrence plans available. material type and estimated quantity spilt / runoff Clean up within the contained area so as weather conditions not to spread the spill. Pump or sweep into a affected drains / waterways For large incidents, consideration should safe container. Clean out cesspits / ponded For material that has spilt over land, be given to appointing an Incident liquid using a vacuum tanker and sweep / spread spill containment and clean-up material (crusher dust, sand, kitty Controller to control the response activities scrape up contaminated soil / ground. litter etc) over and around the spill. Position spill booms/spill containment material, soil or other suitable **Dispose** of material used to clean material on the lower side of the spill up the spill and any contaminated soil / to form a dam. ground by an appropriate method at an approved location/facility. **Manager Responsibilities** Ensure the following action is undertaken Notes: if necessary, consistent with FH Appropriate disposal method will vary Re-stock spill kits/ emergency response procedures: according to the quantity and containment materials properties of the spilt substance and Dispatch additional response materials / equipment, i.e. local spill materials used in the clean up. response trailer, spill response If temporary storage is necessary. service provider facilities will need to prevent escape Report Contact sucker truck provider into the environment, e.g. skips, Contact regional Environmental Fill out and submit drums, bunded sealed area an OFI Manager or SQTE aggregate storage bin with suitable Contact Regional Council Pollution bund across the entrance. Hotline Contact senior management Contact the Regional Environment Initiate Part A or B Incident Manager / SQTE for advice on appropriate investigation and reporting **END** disposal methodology and location.

Figure 1: Spill Response Procedure

A Spill has



4.0 REPORTING

The Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance will be informed within 24 hours of a spill event exceeding 4 L, and the following information will be provided:

- 1. The date, time, location and estimated volume of the spill.
- 2. The cause of the spill.
- 3. The type of hazardous substance(s) spilled.
- 4. The clean-up procedures undertaken.
- 5. Details of the steps taken to control and remediate the effects of the spill on the receiving environment.
- 6. An assessment of any potential effects of the spill.
- 7. Measures to be undertaken to prevent recurrence.

Internally, this information will be reported on Fulton Hogan's Opportunity for Improvement (OFI) Form and raised in the Case Action Management System (CAMs). If a major spill (>100 L), or recurring smaller spills occur, then this will be investigated using the Part B process to prevent recurrence.



5.0 DOCUMENT REVIEW

Fulton Hogan will review this document on a five-yearly basis, or under the following circumstances:

- For the purpose of improving the efficacy of spill management control measures at the site.
- For ensuring consistency and compliance with the conditions of Canterbury Regional Council and Selwyn District Council resource consent requirements.
- Following significant environmental incidents.
- At the completion of environmental audits.