Kings Quarry Limited
King’s Quarry

Dust Management Plan

Version No: 2

Approval

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Document Control

Revision History

Version No.	**Description of changes**
1	First version issued
2	Reviewed during Stage 2 consent application

Document Control Register

Version No.	**Issued to Name/Position**	**Date**
1	Alexander Semenoff – Operations Manager	Oct-2021
2	Alexander Semenoff – Operations Manager	Oct-2023
3		

Contents

1. Background

Kings Quarry Limited carries out quarry extraction activities at the King's Quarry along Pebble Brook Road, Wainui.
The purpose of this Dust Management Plan (DMP) is to facilitate the avoidance, remediation and mitigation of any adverse effects from the discharge of dust to land, water and air generated from site activities, and to promote proactive solutions to the control of those discharges from the site.

The DMP identifies the following:

- Sources of dust discharge
- Mitigation and prevention methods
- Monitoring methods
- Complaint management and record keeping

The DMP will be reviewed annually and be kept on site for review by Auckland Council during routine compliance visits. If processes change on site the DMP will be updated to reflect these changes.

1.1. Consents held

The site holds a consent to discharge contaminants into air (Consent No. TBC once consent issued) under the following rule of Chapter E14 of the Auckland Council Unitary Plan. This rule states the following:

Rule E14.4.1(A90) in the Auckland Unitary Plan Operative in Part (updated 13 November 2020):

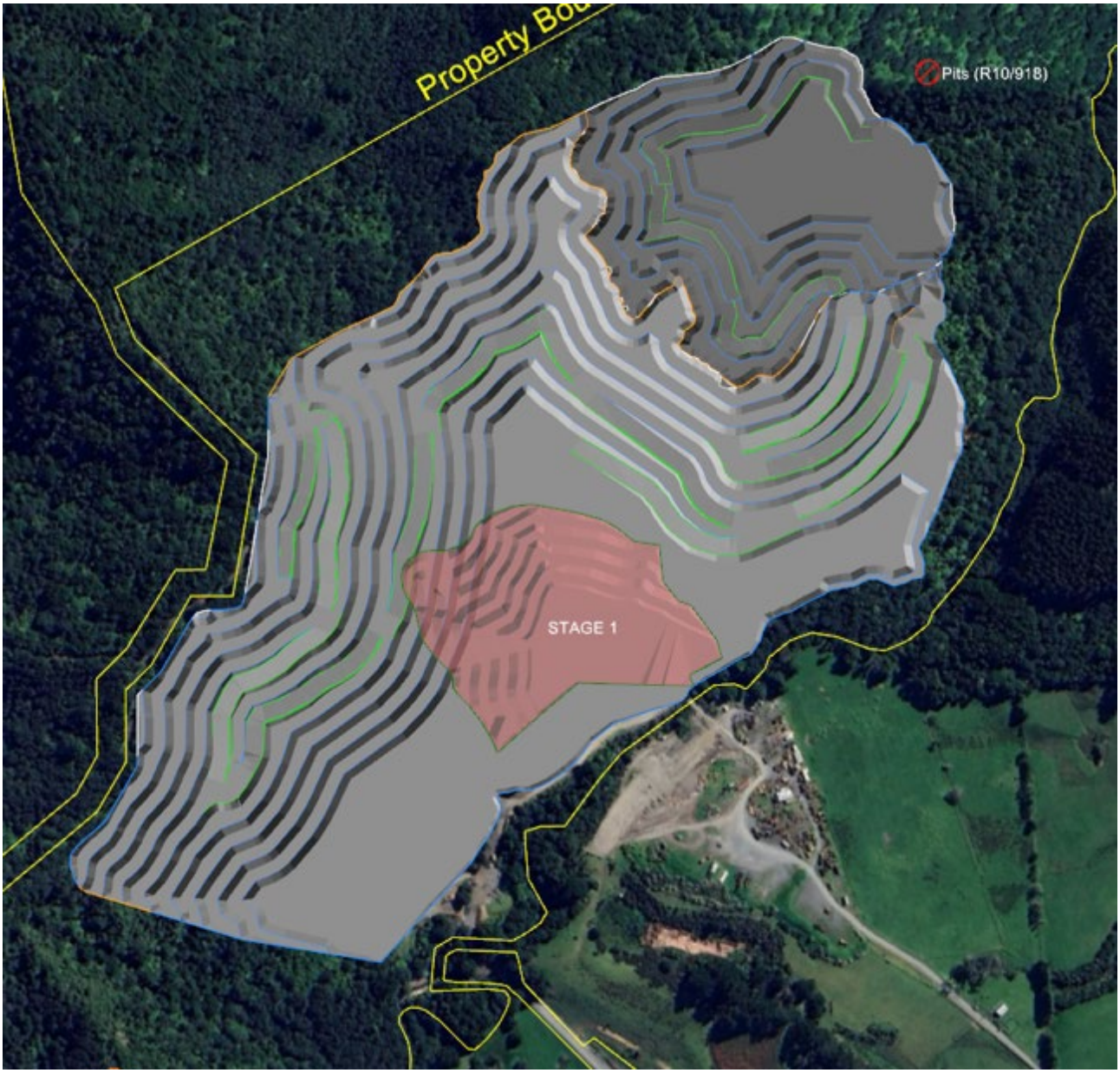
"Mineral extraction activities at a rate of between five and 200 tonnes/hour is a controlled activity in a Special Purpose – Quarry Zone."

The controlled activity standard (E14.6.2.3) that applies to this rule requires a separation distance of 200m between crushing activities and dwellings located outside the Special Purpose – Quarry zone.

The information provided in the following sections of this EMP will detail how the activities on site will comply with conditions of consent or permitted activity standards.

2. Environmental Setting

The site is located on Pebble Brook Road, Wainui.
The following aerial photograph shows the proposed layout of the quarry area.
The receiving environment around the site is covered by a quarry buffer overlay but it is currently zoned Rural – Rural Production and has dwellings located primarily near accessways into the quarry.



3. Environmental Policy

Kings Quarry Limited have the following relevant Environmental Policies relevant to discharges to air.

- TBC

4. Description of Activity and Contaminants

The following table details the activities on site that have the potential to create a discharge of dust. Controls to mitigate the discharges are detailed in Section 5.3.

4.1. Discharges into air

Table 4.1: Site activities with the potential to generate discharges into air

Activity	Timescale/Duration	Discharge
Quarry operations – extraction, crushing, overburden removal etc.	Operating hours (60hrs per week)	Nuisance dust (>PM_{10})
Vehicle movements over unsealed roads (peak of 188 truck movements per day)	Operating hours (60hrs per week)	Nuisance dust (>PM_{10})

Quarry operations will primarily occur in the main pit and this location is approximately 600m from the nearest dwelling. The area to the north-east will be used as a fill site for overburden once its excavation has occurred with this area closest to residents on Haruru Road.

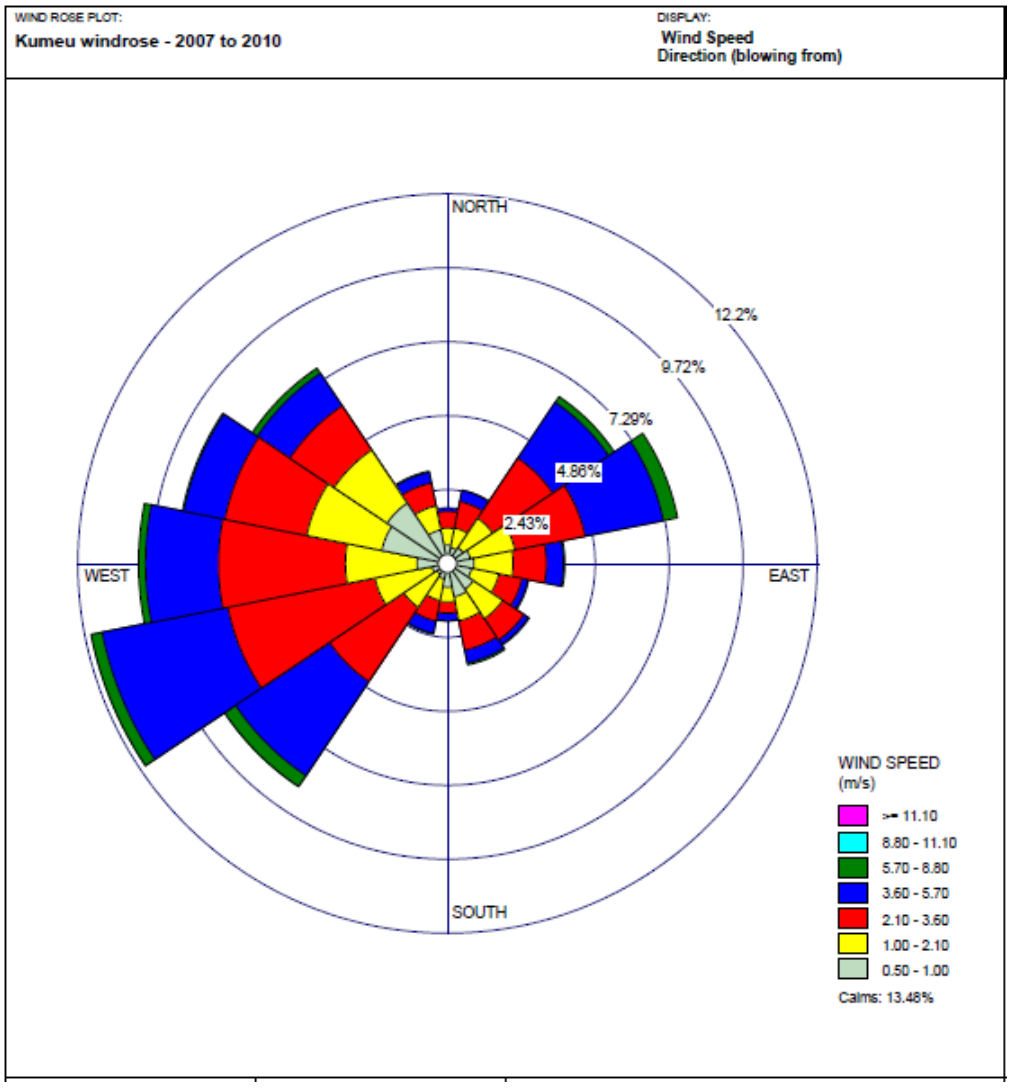
Vehicle movements will occur across unsealed roads with the main access to the site having been newly established upon the reopening of quarry operations and directly South of the main quarry pit. A dwelling is positioned 150m from the end of the new unsealed accessway and will be potentially the most affected by traffic generated dust.

4.2. Meteorology

The prevailing wind direction in Auckland is from the south-west. The second most common direction (and commonly in the summer months) is from north (north-west through north-east). The local meteorology is important to understand when trying to control discharges of dust from stockpiles of aggregate.

A wind rose has been created (refer Figure 4.2) from Kumeu meteorological data collected at an old Auckland Regional Council monitoring station from 2007 to 2010. This data is used to give an indication of prevailing wind conditions in a location close to the site.

Figure 4.2: Kumeu windrose – 2007 to 2010



Any neighbour positioned in a direction from south-west to south-east of the quarry operations or unsealed roads are most likely to be impacted by any dust generated by the site. However, also those in the south-west can be impacted but likely much less frequently.

5. Implementation and Operation

5.1. Staff structure and responsibilities

All staff working on site have responsibility for following the requirements of resource consent conditions and the DMP. Specific responsibilities are as follows:

Staff member	Role	Responsibilities
Alexander Semenoff	Manager	Site manager
Daron Turner	Supervisor	Health and safety, staff induction and monitoring
TBC	Worker/Operator	
TBC	Worker/Operator	

5.2. Training

Environmental training for all staff will be undertaken as part of the site induction programme. Staff are run through Standard Operating Procedures (SOP) on starting at King's Quarry. The SOP's include environmental aspects that include the following information:

- Information about the activities that may cause discharges into land, air and water
- Controls relating to discharges into air and water
- Monitoring requirements for the site e.g., water testing and monitoring wind conditions

5.3. Dust mitigation controls

The following Table 5.3 details the dust controls that are employed on site and detail around them to ensure they are effective at continually controlling emissions from the site.

Note: these may be further refined and detailed once the site is established and details are known. These details are considered the minimum level of detail around the controls for the site.

Table 5.3: Sources of dust and recommended controls to be employed

Source of Dust	Control
Stockpiles	• Limit the height and slope of stockpiles to <5m to reduce wind entrainment. • Maximise shelter from winds through the use of the contour of the quarry pit as far as practicable.
Unpaved surfaces (yards and roads)	• Keep unpaved roads and exposed surfaces damp through the use of a water cart. Application rate will be 1 litre of water per square meter per hour. • This will occur most regularly during windy & drier months (Spring (Sept-Dec) to Summer (Dec-Mar)). • A preferential focus of water cart use will be placed on the length of unsealed road leading onto Pebble Brook Road as this area has the greatest likelihood of impact on neighbouring dwellings. • A record of water cart use (times and water volume) is logged and kept in the document management system.

	• Unpaved surfaces will be covered with coarse materials where practicable to limit entrainment of fine dusts. • Road will be regularly maintained by grading and the laying of fresh gravel. *Frequency to be determined and updated once site established.*
Vehicles	• Limit vehicle speeds on unsealed surfaces to 15km/hr. • Limit load sizes to avoid spillages. • Cover loads of fine materials. • Vehicle speeds will be a regular item raised at daily toolbox talks. • All truck drivers entering site will be made aware of the site speed limits and the reason they are at this level.
Crusher/Screen	• The on-site crusher and screener/washer is located within the quarry pit and bounded by elevations much higher than the units themselves. • A small proportion of extracted rock will need to be crushed (~15%) limiting its effects. • The crusher has water suppression at hoppers and transfer points. *(More detail about location and usage once established)* • The operation of the crusher will be limited when wind speeds are not conducive to its operation. That is wind speeds greater than ~5 m/s. *(More detail included once established)*
Meteorological monitor	• The site continuously monitors wind conditions (speed and direction) at the site. *The monitor will likely be located at the site office but this will be updated once established.* • When winds increase above 5 m/s an alert will be sent to the site manager. • The alert will result in the following action by the Site Manager/Supervisor: ➢ Immediate check of unsealed surfaces dampness levels and require water cart use if not sufficiently wet. ➢ Immediate visual monitoring of dust produced by the crusher and other quarry operations. ➢ Active review of vehicle speeds on site.
Dust monitor	• *To be updated once further detail has been prepared regarding an appropriate monitor. Likely location will be on the boundary near the Haruru Road residential properties as the most likely to be potentially impacted but the monitor will have the ability to be moved to other boundary sites.*
Wind protection	• The site primarily uses natural land features to mitigate the effect of dust emissions by wind. Where these are insufficient then windbreaks will be employed but their

	installation will be assessed if activity and stockpile placement warrant them. • This will be reviewed by the Site Manager/Supervisor three months after the site has been established and at a period to be set thereafter.

5.4. Complaints

The procedure for managing complaints associated with discharges is detailed as follows.

The Manager/Site Supervisor has the responsibility to respond to and follow up all complaints regarding discharges from the site, and furthermore to ensure that suitable trained personnel are available to respond to complaints at all times.

Actions to be taken as soon as possible by the Manager/Site Supervisor:

- Fill out the complaint record form.
- Note the time and date of the complaint/s and (unless the complainant refuses to provide them) the identity and contact details of the complainant. Ask the complainant to describe the discharge: is it constant or intermittent, how long has it been going on for, is it worse at any time of day, does it come from an identifiable source. Wind direction and strength and weather conditions are to be recorded. Note if the complaint has been referred to the Auckland Council.
- As soon as possible after receipt of a complaint, undertake a site inspection. Note all activities taking place that could give rise to the discharge described and the mitigation methods being used. If the complaint was related to an event in the recent past, if possible, note any activities that were underway at that time. Initiate any remedial action necessary.
- As soon as possible (within 2 hours, where practicable), visit the area from where the complaint originated to ascertain if the discharge to land, water or air is still a problem.
- If it becomes apparent that there may be a source other than the construction project causing the complaint, it is important to verify this. Photograph the source and emissions.
- As soon as possible after initial investigations have been completed, contact the complainant to explain any problems found and remedial actions taken.
- If necessary, update any relevant procedures to prevent any recurrence of problems and record any remedial action taken.

Follow-up actions:

- Advise the Auckland Council within 24 hours that a complaint has been received, what the findings of the investigation were and any remedial action taken.
- Advise site personnel as soon as is practicable that a complaint has been received, what the findings of the investigation were and any remedial action taken.

5.5. Emergency contacts

- Auckland Council – Northern Compliance Team – 09 301 0101
- Alexander Semenoff
- Daron Turner

6. Monitoring and review

6.1. Items to monitor

Table 6.1 outlines the regular monitoring items that the site undertakes. The monitoring is the responsibility of the Site Manager/Supervisor or the delegated staff member.

The results of the monitoring will be kept in the site document management system.

Table 6.1: Monitoring requirements

Monitoring activities	Frequency
Water cart use (times and volume used)	Daily
Dust controls discussed in daily toolbox meeting	Daily
Wind speed and direction (monitors automatic data log)	Continuous log
Boundary dust monitor	Continuous log
Wind speed alarm triggers (items actioned)	As required
Complaints (investigation completed)	As required
Wind protection review	Quarterly

6.2. Reporting

All records of the monitored activities in Table 6.1 above will be available to Auckland Council staff during compliance visits or as requested.

7. Audits

The DMP will be reviewed and updated annually by the Site Manager/Supervisor. The review will take into consideration the following:

- Any significant changes to activities on site
- Key changes to roles and responsibilities
- Changes in industry best practise standards or recommended dust controls
- Changes in legal or other requirements
- Results of inspection and maintenance programmes, logs of incidents, corrective actions, internal or external assessments
- The outcome of investigations into discharges

Reasons for making changes to the DMP will be documented.

A copy of the original DMP document and subsequent versions will be kept for records, and marked as obsolete.

Each new/updated version of the DMP documentation will be issued with a version number and date to eliminate obsolete DMP documentation being used.

Appendix 1 – Complaints form

Complaint Received by: Staff member	

Complaint details

Received: Date _____ Time	**Complainant Details (if provided):** Name _____ Address _____ _____ Phone # _____ Email
How received: ☐ Phone ☐ Email ☐ Letter / fax ☐ Other (Specify)	

Nature of complaint

☐ Odour ☐ Dust over boundary

☐ Visual ☐ Other (Specify) _____

Complaint Details

Specific Location: _____
Description: _____
Weather conditions:

Actioned by

Referred to Director/Manager	**Date / Time:**

Action taken by Semenoff Group:

Complainant notified of action

Date / Time:	**Managers signature:**