



**Tai Poutini**  
RESOURCES



**BARRYTOWN MINERALS PROJECT**  
**SOUTHERN BLOCK**

---

**DUST MANAGEMENT PLAN**

**Project:** Barrytown Minerals Project - Southern Resource Block

**Prepared for:** Tāiko Critical Minerals Ltd

<b>Details</b>			
Prepared by:	Luke McNeish Tai Poutini Resources Limited	March 2026	
Reviewed by:			
Approved by:			

<b>Revision schedule</b>		
<b>Rev. Number</b>	<b>Date</b>	<b>Description</b>
0.		

© Tai Poutini Professional Services Ltd

This report has been prepared by Tai Poutini Professional Services Ltd on the specific instructions of our Client. It is solely for our Client's use for the purpose for which it is intended in accordance with the agreed scope of work. Any use or reliance by any person contrary to the above, to which Tai Poutini Professional Services Ltd has not given its prior written consent, is at that person's own risk.

## **Contents**

1.	Introduction	4
2.	Resource consent requirements	5
3.	Receiving environment and sensitive receptors	5
4.	Description of dust generating activity	8
5.	Regional Air Plan	8
6.	Sources of dust	8
7.	Truck loading and vehicle movements	9
8.	Management procedures and mitigation measures	10
9.	Dust inspections and meteorological monitoring	13
12.	Complaints	14
13.	Roles and responsibilities	14
14.	Training	15
15.	Reporting	15
16.	Review	16
17.	Dust monitoring	16
	Attachment A: Daily dust inspection log	17

## 1. Introduction

1.1 This draft Dust Management Plan (**DMP**) sets out the procedures to be adopted to control the effects of dust in regard to Tāiko's mineral project on the Southern Block, Barrytown flats (**the Project**).

### **Purpose and objectives of the DMP**

1.2 The DMP has been prepared to manage, mitigate, and monitor dust emissions during construction and mining. To ensure that dust generating activities on site comply with the requirements of the West Coast Regional Council's (**WCRC**) Air Quality Plan. The DMP applies to all personnel on the project site, including subcontractors and visitors.

1.3 The objectives of the DMP are to:

- Ensure the best practicable options are employed to avoid dust nuisance being caused by mining works; and,
- Ensure that there shall be no noxious, dangerous, objectionable or offensive dust beyond the boundary of the site.

1.4 The DMP identifies the following:

- Potential sources of dust that may be created during the mining project;
- Sensitive receptors in the vicinity of identified potential sources of dust for targeted dust management;
- Dust management and mitigation methods;
  - Avoid, remedy or mitigate any effects of discharges of dust
  - Promote proactive solutions for controlling and monitoring dust.
- Monitoring methods;
- Training of staff in relation to dust management; and
- Methods for managing complaints regarding discharges into air and keeping compliance records.

1.5 In preparing this DMP, information has been drawn from practical experience with the management of dust emissions from other mining projects, and from the *Good Practice Guide for Assessing and Managing Dust*, prepared by the Ministry for the Environment (November 2016), particularly Appendix 4 (Dust Management Plans)<sup>1</sup>.

1.6 This DMP will form part of the Appendix to the Annual Work Program for the Project and will be monitored annually for effectiveness.

---

<sup>1</sup> [good-practice-guide-dust-2016.pdf](#)

## Review and updates to the DMP

- 1.7 This DMP is a live document that will be reviewed and updated during the site’s operation to reflect any significant changes associated with construction techniques, mitigation, monitoring results or the natural environment. The review process is set out in Section 11.

## 2. Resource Consent Requirements

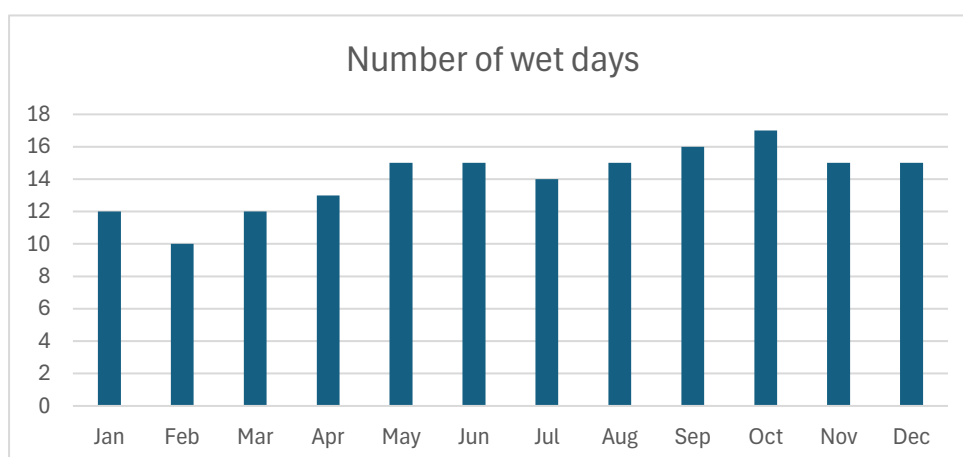
- 2.1 **Table 1** sets out the consent requirements for the Southern Block.

**Table 1: Southern Block Consent Conditions**

*To include once confirmed conditions*

## 3. Receiving environment and sensitive receptors

- 3.1 The site is located in a rural area. Given the size of the application area there are a number of residential houses to the east of the proposal. Dwellings are located on the flat on the western side of the state highway and at elevated positions to the east of the state highway.
- 3.2 Indigenous vegetation, the coastal marine area, wetlands and surface waterways outside of the Application Area should be treated as areas sensitive to dust. Mining activities will be set back by a minimum of at least 20m from these.
- 3.3 Average annual rainfall at the nearest approximate rain gauge is 2046mm (Westport). There is an average of 171 wet days per year. NIWA classifies ‘wet days’ as those in which 1mm of rainfall occurs.



**Figure 1: Number of ‘wet days’ per month (Westport weather gauge)**

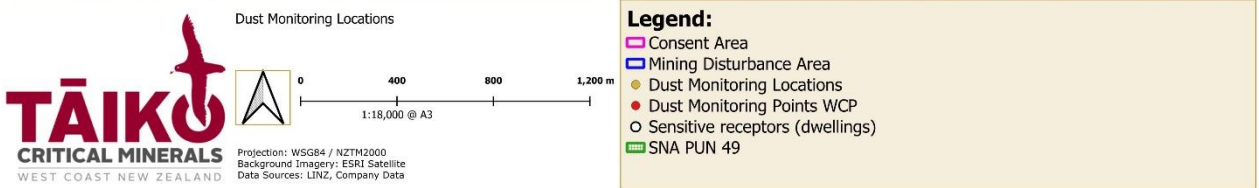
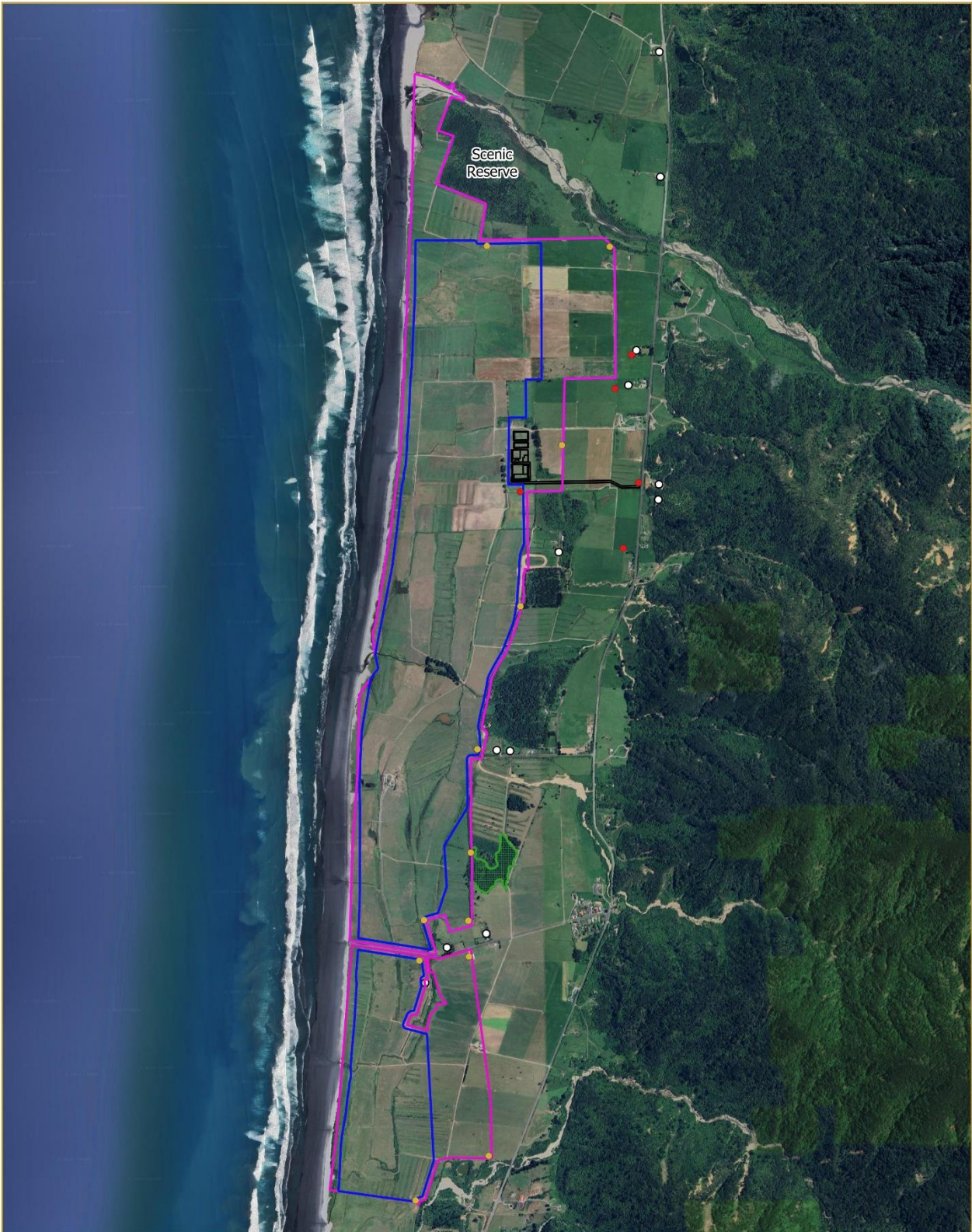
- 3.4 A wind rose, shown in **Figure 2**, highlights the frequency of wind from each direction as well as the respective strength. Lighter winds occur predominately from the south-southeast while the

stronger winds tend to originate from the southwest with a mean wind speed of 13.7km/h (3.8 m/s).



**Figure 2:** Windrose (Westport weather gauge)

- 3.5 The closest sensitive receptor is located approximately 80m to the east of the proposed mining area. The location and extent of the mining proposed mining area (blue polygon), sensitive receptors (orange dots) are shown in Figure 3.
- 3.6 There is some risk that dust generated on site will be carried towards sensitive receptors (dwellings) located northeast of the mining area as shown in Figure 3. Appropriate mitigation including bunding and planting between receptors and the source of dust, makes it extremely unlikely that any dust will be discharged beyond the application area.
- 3.7 Submissions made in relation to mineral sand mining at the Northern Block north of Canoe Creek identified the strong easterly winds that occur on occasion on the West Coast. These winds could potentially blow dust towards the Canoe Creek Lagoon and the proposed SNA. As outlined above planting and other vegetation are located between likely dust generating areas and these sensitive receptors and it is unlikely dust will be discharged beyond the application area. These sensitive receptors are located much closer to the beach and are likely to receive fine sand particles mobilized on the prevailing wind as opposed to dust from the mining activity.



**Figure 3: Sensitive Receptors Map**

## **4. Description of Dust Generating Activity**

4.1 In summary the mining activity involves one primary potential dust generating activity, the mining of in-situ sand and rehabilitation work.

### *Mining of in-situ sand*

4.2 Mining of in-situ sand will be undertaken within the mining disturbance area (as shown by the blue line on Figure 3) and includes the following activities:

- Removal of vegetation (primarily pasture)
- Excavation / stripping of topsoil (minimal as resource is located in close proximity to the surface)
- Excavation of mineral sand via floating suction cutting dredge
- Back filling of tailings from WCP
- Take of material from borrow areas for rehabilitation
- Progressive levelling, recontouring and rehabilitation as mining advances across the application area.

4.3 These activities are proposed to occur during daylight hours each day.

## **5. Regional Air Plan**

5.1 Unless covered by another Rule in the Regional Air Plan, the discharge of any contaminant into air arising from earthworks, quarrying operations, mining, or clean fill operations is a permitted activity provided that the following conditions are met:

- a. any discharge of smoke, dust, gas or odour is not noxious, dangerous, offensive or objectionable beyond the boundary of the subject property; or
- b. in the case of public amenity areas, any discharge of smoke, dust, gas or odour is not offensive or objectionable beyond the boundary or beyond 50 metres of the discharge, whichever is the lesser.

5.2 Compliance with the above conditions is required to remain a permitted activity.

5.3 The overall objective of this plan is to ensure that there is no offensive or objectionable dust beyond the boundary of the site and avoid adverse effects at neighbouring dwellings.

## **6. Sources of Dust**

6.1 The primary construction activities that may generate dust includes:

- Earthmoving activities, such as the creation of bunds, site levelling and material transfer, excavation and trenching
- Clearing of pasture and topsoil

- Load and haul operations of material around the site
  - Vehicle movement on tracks
  - Wind erosion of exposed areas and stockpiles.
- 6.2 A dust and contaminant control program will then be implemented and monitored for effectiveness. The risk assessment will consider:
- Health exposure risks to silica, asbestiform minerals and other inspirable contaminants
  - Potential risks to flora and fauna, surface water ways, building infrastructure and the community
  - Ongoing operational costs for dust and contaminant suppression strategies.
- 6.3 A documented review of the workplace survey and risk assessment will occur on a scheduled three-monthly basis, or more frequently where new work fronts or changes to existing mine plans occur. Risk assessment controls will be assessed to ensure their ongoing validity and effectiveness.
- 6.4 Changes to dust and contaminant control strategies will be introduced through a formal documented change management process.
- 6.5 Areas of the operations identified as being high risk for the generation of dust will be included in daily shift plans to ensure they are attended to throughout the course of the shift.
- 6.6 The processing plant (previously consented) uses a fully wet process, eliminating dust generation during HMC production. HMC stockpiles will be enclosed within buildings and kept damp to further minimise dust mobilisation.

## **7. Truck Loading and Vehicle Movements**

- 7.1 All trucks will access the site via a newly constructed entrance way from the state highway (shown on attached plans). The site access and internal ring road around the WCP will be sealed.
- 7.2 All other roads across the site will remain unsealed but will have the ability for dust suppression to be undertaken via the application of water through a sprinkler system or water cart, or by the application of dust suppression sealants.
- 7.3 There will be limited opportunities for dust to be mobilised from vehicle movements.

## 8. Management procedures and mitigation measures

### Overview

- 8.1 The overall approach to dust management for the Project is primarily based on visual monitoring, combined with good management of the mine area, and a quick response to the triggers identified in **Table 2** and complaints received. Taking a proactive approach to dust management and implementing the controls below as “routine” will help avoid significant dust emissions or, if dust emissions occur, help mitigate any adverse effects.

### General dust management measures

- 8.2 The dust management measures outlined in **Table 2** will be used as appropriate across the Project depending on the activity undertaken, weather conditions and proximity to sensitive receptors. Additional methods may be found to be effective and implemented during construction.

**Table 2: Dust management measures**

Source of Dust	Control
<b>General mitigation measures</b>	<ul style="list-style-type: none"> <li>• Site personnel trained in dust management controls.</li> <li>• Monitoring of site conditions (weather/soil conditions) to anticipate and prevent dust effects.</li> <li>• Limiting operations which have the potential to cause high dust during high wind events.</li> <li>• Use of water cart and sprays to keep surfaces damp as required near sensitive receptors. A critical part of this control measure is identification of a sufficient water supply at the site for this purpose with adequate volume.</li> <li>• Maintain good grass cover outside disturbed areas.</li> </ul>
<b>Earthworks activities</b>	<ul style="list-style-type: none"> <li>• Drop heights of materials to be minimised to reduce dust generation.</li> <li>• Monitoring and managing earthworks activities to limit dust generation during dry or windy weather conditions.</li> <li>• Vegetation clearance will be minimised with areas no longer required stabilised and progressively rehabilitated as soon as is reasonably practicable within the mine's operations.</li> <li>• The removal of vegetation and topsoil will be controlled and limited to the amount necessary for mining operations.</li> <li>• Soil disturbance during unfavourable meteorological conditions (such as high wind speed events) will be avoided if dust emissions cannot be controlled.</li> </ul>

Source of Dust	Control
<b>Stockpiles</b>	<ul style="list-style-type: none"> <li>• Ensuring stockpiles exist for the shortest possible time.</li> <li>• Stockpiles are positioned as far as practicable away from sensitive receptors.</li> <li>• Limiting the height and slope of stockpiles to reduce wind entrainment.</li> <li>• Surfaces of stockpiles to be kept damp to reduce dust emissions (e.g., through wet suppression systems) or covered or stabilised to reduce dust generation in areas adjacent to sensitive receptors.</li> </ul>
<b>Bunds</b>	<ul style="list-style-type: none"> <li>• Topsoil will be placed on completed bund surfaces as soon as practicable following construction to promote rapid stabilisation.</li> <li>• Bunds will be hydroseeded or grassed promptly after topsoiling to establish vegetation cover and reduce wind erosion. Where bunds face neighboring properties, planting will also be undertaken to provide additional surface stabilisation.</li> <li>• During bund construction and shaping, water carts or other dust suppression methods will be used during dry or windy conditions to prevent dust becoming airborne.</li> <li>• Where practicable, bund construction will be timed to avoid periods of strong winds, particularly when works are occurring close to sensitive receivers.</li> <li>• Bund surfaces will be inspected regularly and re-stabilised (e.g., reseeded, watering, or surface treatment) if areas of bare or loose material develop.</li> <li>• If dust from bund construction or maintenance is observed to be travelling beyond the site boundary, additional suppression measures (e.g., increased watering) will be implemented.</li> </ul>
<b>Unpaved surfaces such as haul roads and stripped areas</b>	<ul style="list-style-type: none"> <li>• Unsealed surfaces kept damp to reduce dust emissions in areas near sensitive receptors (e.g. by use of water carts and using water trucks fitted with pumps and sprays to dampen the roads sufficiently enough to suppress dust).</li> <li>• Where practicable, unconsolidated surfaces will be compacted to minimise dust.</li> <li>• Stabilisation of surfaces when works are completed by grassing to reduce dust emissions.</li> </ul>
<b>Vehicle movements</b>	<ul style="list-style-type: none"> <li>• 15 km vehicle speed limits on unsealed surfaces on all internal roads.</li> <li>• Reducing transportation of dust through regular cleaning of vehicles.</li> </ul>
<b>Material handling and loading</b>	<ul style="list-style-type: none"> <li>• Minimising drop height of material from loaders into trucks.</li> </ul>

*Contingency measures*

- 8.3 A range of standard dust controls will be used to manage and mitigate the effects of discharges of dust during mining. Additional mitigation may be required in the event that:
- Monitoring indicates that significant dust emissions are occurring;
  - Weather conditions are changing such that dust emissions are more likely; and / or
  - Complaints are received regarding dust.
- 8.4 If the available mitigation methods are unsuccessful in controlling dust emissions and adverse effects on receptors beyond the Project boundary occur, the activities causing the discharge shall be suspended until adequate mitigation can be put in place.
- 8.5 Proposed contingency measures are outlined in **Table 3**.

**Table 3: Contingency measures**

Source of Dust	Control
<b>Dust discharges cause deposition at sensitive receptors</b>	<ul style="list-style-type: none"> <li>• Stop activities that are generating dust until mitigation is reviewed and additional mitigation measures are in place.</li> <li>• Initiate an investigation and any remedial action as necessary.</li> </ul>
<b>Equipment Malfunction i.e. breakdown of water cart / sprays</b>	<ul style="list-style-type: none"> <li>• Assess rainfall and wind forecasts. Stop work if forecast conditions are particularly dry or windy.</li> <li>• Repair water cart/sprays as soon as practicable.</li> </ul>
<b>Forecast high winds</b> Wind speed above 20km/h	<ul style="list-style-type: none"> <li>• Limit the activities that generate dust upwind of sensitive activities.</li> <li>• Undertaken additional visual inspections of exposed areas and activities.</li> <li>• Assess the need for additional controls such as increased water application rates.</li> </ul>
<b>Visible dust discharges from stockpiles / areas of uncovered soil</b>	<ul style="list-style-type: none"> <li>• Dampen stockpiles or exposed areas of soil.</li> <li>• Cover or stabilise areas to reduce dust generation.</li> </ul>

- 8.6 Water to be used for dust mitigation measures will be sourced from the mining void (dredge pond). Depending on the weather conditions, water required for dust mitigation measures may equate to 800m<sup>3</sup> per day.

## 9. Dust inspections and meteorological monitoring

- 9.1 Visual monitoring of dust across all mining and rehabilitation areas will be undertaken on a daily basis, or more frequently if conditions change.
- 9.2 Weather forecasts will be checked daily (wind speed, wind direction and rainfall) from the meteorological weather station installed onsite to inform implementation of the appropriate dust controls.
- 9.3 **Table 4** below outlines the visual dust monitoring program to be implemented during construction. A daily log shall be kept of dust inspections and weather observations as set out in **Appendix A**.

**Table 4: Dust inspection program**

Monitoring Activities	Frequency
Check weather forecasts for strong winds and rainfall to plan appropriate dust management response (7-day forecasts available on <a href="http://www.metvuw.co.nz">www.metvuw.co.nz</a> ).	Daily
Inspect land adjacent to the site, surface water bodies and associated vegetation, and adjoining State Highway 6 for the presence of dust deposits caused by Project.	Daily
Observe weather conditions, wind via observations and data outputs from weather stations, and presence of rain.	Daily and as conditions change
Inspect all unsealed surfaces for dampness and to ensure that surface exposure is minimised, check for visible clouds being generated on site or carried off site.	Daily and as conditions change
Inspect stockpiles to ensure enclosure, covering, stabilisation or dampness. Ensure stockpiles and bunds are appropriately stabilised.	Daily and as conditions change
Inspect dust generating activities to ensure dust emissions are effectively controlled.	Daily and as new activities commence
Inspect watering systems (sprays and water carts) to ensure equipment is maintained and functioning to effectively dampen exposed areas.	Weekly
Additional visual monitoring of dust generating activities and water application rate.	In winds over 5 m/s
Ensure site windbreak fences, if used, are intact.	Weekly

## 10. Reporting

### *Sample Results*

- 10.1 Sample results will be documented in the Dust Monitoring Register and maintained by Tāiko.
- 10.2 Where sample analysis reports levels outside the acceptable limits, advice will be provided to the Project Manager on the appropriate response with consideration to;

- What has been analysed;
- The analysis levels reported; and
- Response recommendations to ensure the health and safety of personnel and the wider public exposed to the airborne contaminant.

10.3 The Project Manager will ensure that an appropriate response to levels exceeding those recommended is implemented. This may include:

- Re-testing
- Reviewing existing dust control measures
- Implementing controls where existing controls are not adequate
- Implement an awareness program for personnel who perform tasks in the area where exceedances occurred.

#### *Exceedance Reporting*

10.4 Where an exposure standard has been exceeded, the Project Manager is to submit a report to WCRC that details the:

- Contaminant type
- Contaminant level
- Investigation undertaken
- The controls implemented to minimise further exposure to the contaminant.

## **11. Complaints**

11.1 A record of complaints and remedial actions will be kept and provided to the West Coast Regional Council on request. Complaints are to be addressed as soon as reasonably practicable.

## **12. Roles and responsibilities**

12.1 Roles and responsibilities are set out in Table 5.

**Table 5: Roles and responsibilities**

<b>Role</b>	<b>Responsibility</b>
<b>Mine Manager</b>	<ul style="list-style-type: none"> <li>• Identify the resources and equipment required for the management of dust;</li> <li>• Ensure staff are aware of the DMP and operations are performed in accordance with it;</li> <li>• Incorporate dust management strategies into mine project planning;</li> <li>• Ensure the effective implementation and ongoing review of the DMP for continuous improvement.</li> </ul>

<b>Mine supervisor</b>	<ul style="list-style-type: none"> <li>• Implement the DMP;</li> <li>• Ensuring personnel under their control are trained in, aware of and abide by the requirements of the DMP;</li> <li>• Undertake daily inspections to identify and control potential sources of dust;</li> <li>• Be responsible to ensure any proposed changes to the work environment comply with the DMP through a formal change management process.</li> </ul>
<b>All Personnel</b>	<ul style="list-style-type: none"> <li>• Comply with the provisions of the DMP;</li> <li>• Proactively assist in the application of strategies to prevent dust;</li> <li>• Participate in dust and other contaminant health monitoring programs as directed.</li> </ul>
<b>Health &amp; Safety Manager</b>	<ul style="list-style-type: none"> <li>• Dust monitoring sample results are reported to the Project Manager and recorded in the Dust Monitoring Register.</li> <li>• Environmental training (see section 13 below);</li> <li>• Review and updating DMP annually;</li> <li>• Reporting to site management and Councils;</li> <li>• Management of complaints.</li> </ul>

## 13. Training

13.1 Environmental training for all staff will be undertaken as part of the site induction program prior to the commencement of work on the mine site. The environmental induction and training will include the following information specific to the DMP:

- Information about the activities and stages of mining that may cause dust;
- Consent requirements;
- Complaints management procedures;
- Dust management procedures;
- The requirement to participate in dust minimisation strategies;
- Dust monitoring and reporting of incidents.

13.2 Personnel carrying out duties specific to dust management and monitoring will be specifically trained in relation to their roles and responsibilities in addition to the project induction.

## 14. Reporting

14.1 The procedures for recording daily dust inspections are as follows:

- The mine manager or mine supervisor will fill out a daily Dust Inspection Log form (**Attachment A**) each day and maintain the record on site.
- The following information will be recorded:
  - Any dust control equipment malfunctions and any remedial action(s) taken;
  - Results of the visual inspections of dust emissions;
  - General weather conditions during the day (i.e. windy, calm, warm, rain, etc.);
  - The frequency of watercart and/or water sprinkling system use; and
  - The date and signature of the person entering the information.

## 15. Review

### *Review process*

15.1 A review of the DMP will be undertaken at least annually by the Management team. The review will take into consideration:

- Compliance with the DMP and consent conditions;
- Any significant changes to mining activities or methods;
- Key changes to roles and responsibilities within the management team;
- Results of inspections, monitoring and reporting procedures associated with the management of dust;
- Any comments from the West Coast Regional Council or Grey District Council;
- Any complaints received and remedial actions.

15.2 The outcomes of this review will be provided to West Coast Regional Council.

15.3 Where the DMP is updated as part of a review, the on-site version shall also be updated.

### *Reasonable amendment*

15.4 In accordance with the consent conditions, reasonable amendments may be made to the finalised DMP at any time. Reasonable amendment is any amendment where the adverse environmental effect arising from the amendment is the same or less than the effect anticipated in the final DMP.

15.5 Any changes to the DMP shall remain consistent with the overall intent of the original version of the finalized DMP, as described in the relevant consent condition.

## 16. Dust monitoring

16.1 Individual dust monitoring will be undertaken in accordance with consent conditions.

Monitoring of dust will be undertaken throughout the duration of mining activity. Samples will be recorded monthly and reported yearly to the consent authorities as part of annual work programme requirements. Exceedances will be notified to the consent authority within 10 working days of the company becoming aware of the exceedance.

16.2 Monitoring will only be conducted by an authorised and competent person. Monitoring results will be recorded by Tāiko.

# Attachment A: Daily dust inspection log

Date: .....

Time: .....

Inspection by.....

Current Weather Condition (e.g. sunny, cloudy, rain):

.....

Wind Direction / Strength (e.g. strong, moderate, light, still)

.....

Area(s) Inspected:

.....

SCOPE OF INSPECTION	Circle the relevant item	COMMENTS
Is there visible dust from site work activities, stockpiles, earthworks areas or haul roads?	Y N N/A	
Are haul roads visibly dry and need spraying with water truck?	Y N N/A	
Are any exposed earthworks, stockpile areas or bunds visibly dry and need water spray?	Y N N/A	
Are there any signs of dust going off site as a result of site activities? Land adjacent to the site to be inspected (including vegetation, residential properties and cars), and adjoining SH6 for the presence of dust deposits.	Y N N/A	
If wind speeds are strong are additional inspection and mitigation measures being put in place? (e.g. increase water application, restrictions on dusty activities)	Y N N/A	
Are watering systems (e.g. water carts) operating effectively to minimise dust?	Y N N/A	