



Mt Cass Wind Farm Dust Management Plan



Revision 6 - 31 May 2026

Revision History

Version	Description	Date	Prepared by	Approved By
Rev 1	Draft	03 Mar 21	HW	SB
Rev 2	Draft – with AECOM inputs	14 Apr 2021	JW	SB
Rev 3	Draft - with MCD inputs	8 Nov 2022	CB	MC
Rev 4	MCD Updates post-SQIP and MCWF Review.	23 Feb 2023	CB	MC
Rev 5	Post CLG comments for HDC submission	22 Mar 2023	MC	GG
Rev 6	Annual Review	31 May 2026	LB	JC

TABLE OF CONTENTS

1.	Introduction	1
1.1	Purpose and Objectives	1
1.2	Resource Consent Conditions	1
2.	Air Quality Impact on Surrounding Environment	3
2.1	Potential Dust Sources	3
2.2	Hours of Construction	3
2.3	Meteorology	3
2.4	Receiving Environment	6
2.4.1	Sensitive Receptors	6
3.	Implementation and Operation	8
3.1	Training	8
3.2	Dust Controls and Sources	8
3.3	Monitoring and Review	9
4.	Reporting	10
4.1	MCWF to Relevant Contractors Project Manager:	10
4.2	Contractor to MCWF	10
4.3	MCWF to ECan & HDC Compliance Officers	10
4.4	ECan & HDC Compliance Officers to MCWF	10
4.5	Amendments	10

1. Introduction

This Dust Management Plan (DMP) has been prepared to support the Construction Management Plan and resource consents for Mt Cass Wind Farm.

This plan forms part of the Construction Management Plan (CMP) and must be read in conjunction with the CMP. The project description, roles and responsibilities and complaint procedures are contained in the CMP.

1.1 Purpose and Objectives

This DMP relates to construction of the Mt Cass wind farm. It does not cover operation of the concrete batching plant located within Kate Valley landfill which will provide concrete for the wind farm site. The concrete batching plant is authorised under resource consent CRC264706 and is subject to a separate DMP.

The purpose of this DMP is to:

- Provide a framework for dust management during construction of the wind farm.
- Outline the consent conditions related to dust management.
- Provide a source document for relevant procedures and reference documents to inform project personnel.
- Document the methods used to monitor and manage dust.
- Document the methods for managing complaints and keeping records related to compliance, and
- Document the responsibilities and reporting framework for dust management

The objective of this DMP is to:

- Detail the dust monitoring and mitigation measures which will be implemented on the site to reduce impacts on the receiving environment.
- Provide a workplace where visibility is not impaired by dust, and
- Ensure compliance with the Canterbury Air Regional Plan 2017 (CARP), specifically:
 - The discharge of odour, dust or smoke into air does not cause or is not likely to cause an adverse effect beyond the boundary of the property of origin, and
 - The discharge does not cause an offensive or objectionable effect beyond the boundary of the property of origin when dust/odour generating activities onsite are managed and mitigated in accordance with Schedule 2 outlined in CARP.

1.2 Resource Consent Conditions

The consent conditions relevant to dust management are summarised in the tables below:

HDC Consent RC260077 (Previously RC2501117)		
Condition Number	Requirement	Control for Condition
35.	Implementation of mitigation measures – Construction Phase:	This Plan

HDC Consent RC260077 (Previously RC2501117)		
Condition Number	Requirement	Control for Condition
	There shall be no objectionable or offensive dispersal or deposition of dust beyond the boundary of the site.	Section 0 & 3.3
63.	Construction traffic - e. ii) The provision for dust suppression, if necessary, on the routes used for the transport of goods to the site so that safe stopping sight distance is maintained at all times.	Section 3.2
154.	The Consent Holder shall maintain and keep a Complaints Register for any complaints about the construction activities and operation of the wind farm received by the Consent Holder including complaints in relation to traffic, noise, dust, shadow flicker or blade glint. The Register shall record, where this information is available: a. The date, time and duration of the incident that has resulted in a complaint; b. The location of the complainant when the incident was detected; c. The possible cause of the incident; d. Any corrective action undertaken by the Consent Holder in response to the complaint, including timing of that corrective action; e. The date and details of the response given to each complainant. The Complaints Register shall be available to the Council and the Community Liaison Group at all reasonable times upon request.	Appendix A of CMP

2. Air Quality Impact on Surrounding Environment

2.1 Potential Dust Sources

A summary of the Project construction operations which could result in dust emissions are as follows:

- Earthworks activities associated with the construction of roading, hardstands, buildings, laydown areas, disposal sites and erosion sediment control works onsite.
- Transportation of project materials such as:
 - On-site cut materials.
 - Clean gravels or filter materials from local quarries; and,
 - General fill from cut locations.
 - Spoil to disposal sites.
- Loading on-site cut materials to trucks.
- Unloading of the above materials
- Stockpiling of the above materials
- Trenching and laying of underground cables between the turbine sites and the substation.
- Upgrade of Forest Road North and ~120m section of Mt Cass Road
- Wheel generated dust on unsealed roads/ surfaces across the work areas.

2.2 Hours of Construction

Construction started in January 2026 and is expected to take 2.5 years to complete, weather dependent. Works will primarily be undertaken between the standard working hours of 7am to 7pm during weekdays and Saturdays 7am – 5pm. However, there is the potential for some night works to occur, on an as needed basis.

2.3 Meteorology

Wind speed and direction was monitored at 11m above ground level at a location on the Mt Cass summit ridgeline between May 2005 and September 2006. A wind rose for the data collected during this period is presented in Figure 1. Winds are primarily from the north and north-west, with slightly less frequent north-east, south-west and southeast winds also occurring. Due to the location at the top of the ridgeline, average winds speeds are high (8.0 m/s or 29 km/hr) with winds above 9.0 m/s (32 km/hr) occurring about 37 % of the time. The highest wind speeds measured were about 30 m/s (108 km/hr). These high winds are likely to generate more dust emissions for construction works located along the ridgeline compared with activities lower down the mountain (e.g. traffic movement on the access road).

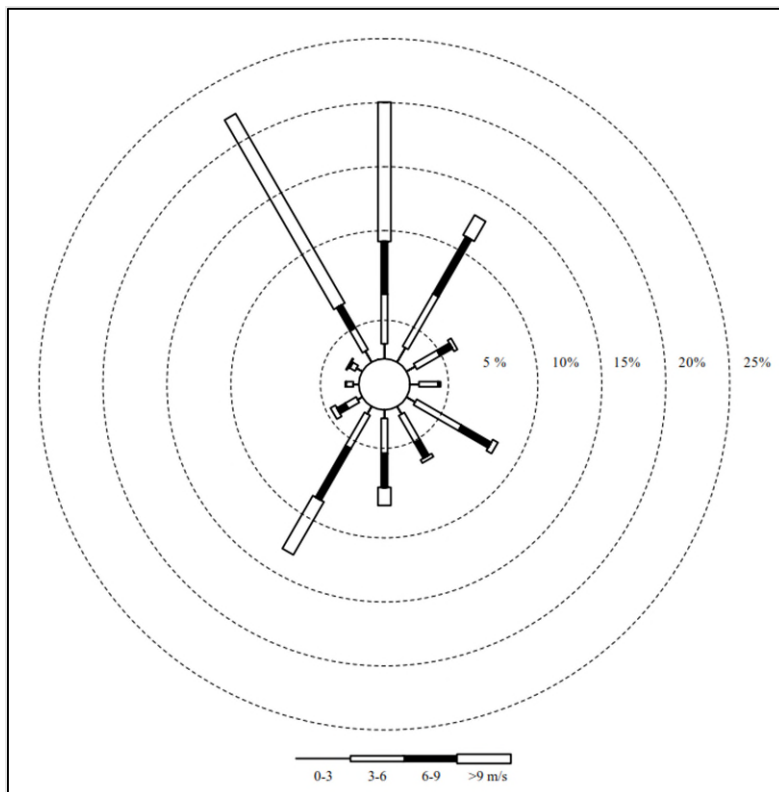


Figure 1 Wind rose for Mt Cass summit wind measurements 2005-2006 (Source: MainPower)

Harvest weather stations were installed on the airstrip near the site compound and on Mt Cass in early 2026 to provide localised weather data and will be used to monitor wind speed and direction during construction.

Wind speed and direction has historically been monitored at the nearby NIWA-operated Waipara West station, located about 13 kilometres to the west of the project. Wind speed and direction data for the period 2015 to 2019 is presented in Figure 2 (all hours) Figure 3 (by season). The wind speeds measured at Waipara West are likely to be more representative of conditions at lower elevations – i.e. where sensitive receptors are located – and are therefore included for comparison.

The Waipara West station is situated in a valley running east west and as such displays a high frequency of westerly winds, especially during autumn and winter. The strongest winds (up to a maximum of about 19 m/s or 68 km/hr) are from the northwest and can occur during any season.

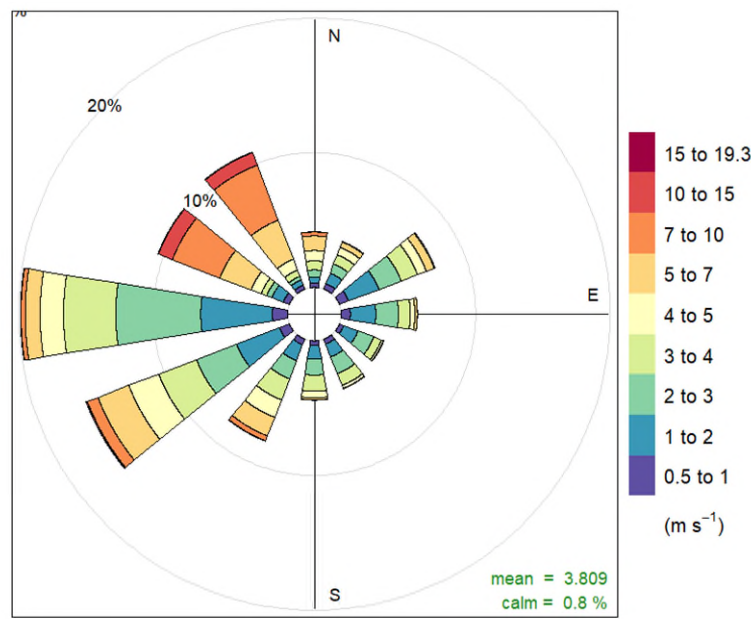


Figure 2 Annual Wind rose for Waipara West – 2015 to 2019

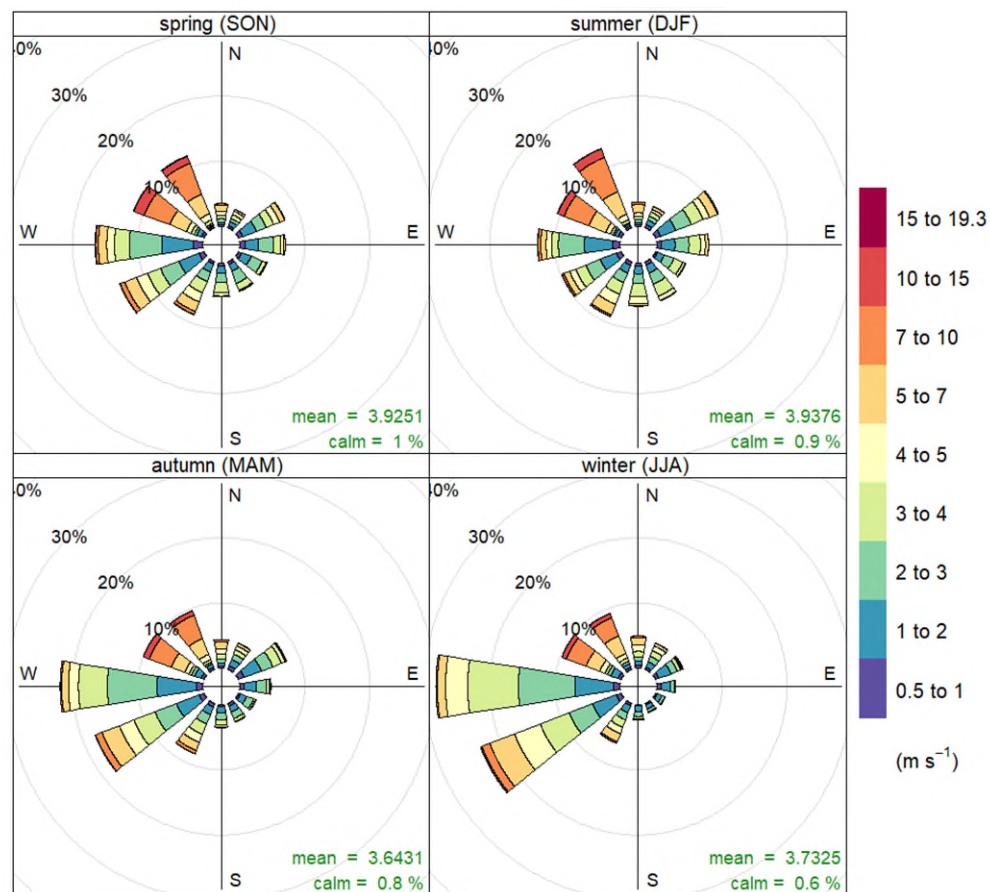


Figure 3 Seasonal Wind Roses for Waipara West – 2015 to 2019

2.4 Receiving Environment

2.4.1 Sensitive Receptors

There are no previously recorded Wāhi Taonga, Wāhi Tapu/Urupā or Ngāi Tahu Silent Files within the Project site nor is the proposal in a Statutory Acknowledgement Area.

From an amenity perspective, dust emissions from construction activities would typically impact locations within 500 m of the construction activities. This is due to the larger size fraction of particles (TSP and PM10) that result from mechanical disturbance of materials, which fall out of suspension in the air relatively quickly. Smaller particles (PM2.5) may travel considerably further, however emissions of PM2.5, which are typically formed by combustion processes or from sea salt are not expected in large quantities for the Project and would disperse to very low concentrations beyond 500m of the site.

The nearest potentially affected sensitive receptors relative to the Project construction footprint and 500 m buffer are shown in Table 1 and presented graphically in Figures 5 and 6.

A sensitive receptor was previously identified at Tiromoana; however, the building on this property has been demolished and is therefore no longer a sensitive receptor.

Receptor ID	Name	Elevation Difference from Nearest Construction Footprint (m)	Distance from Construction Footprint (m)
1	Hamilton Glens	300	1,400
2	Dovedale	370	1,800
3	The Wattles	370	2,000
4	Mt Cass Station	320	1,800
5	Glenafric	440	2,900

Table 1 Identified sensitive receptors in relation to construction footprint and 500m buffer, laydown areas and disposal sites.

Table notes:

1. Elevation difference compared with the southern end of the access road.
2. Information sourced from AQIA (pg. 9, section 5.3), which was submitted with the original resource consent application.
3. Information within table sourced from Google Earth

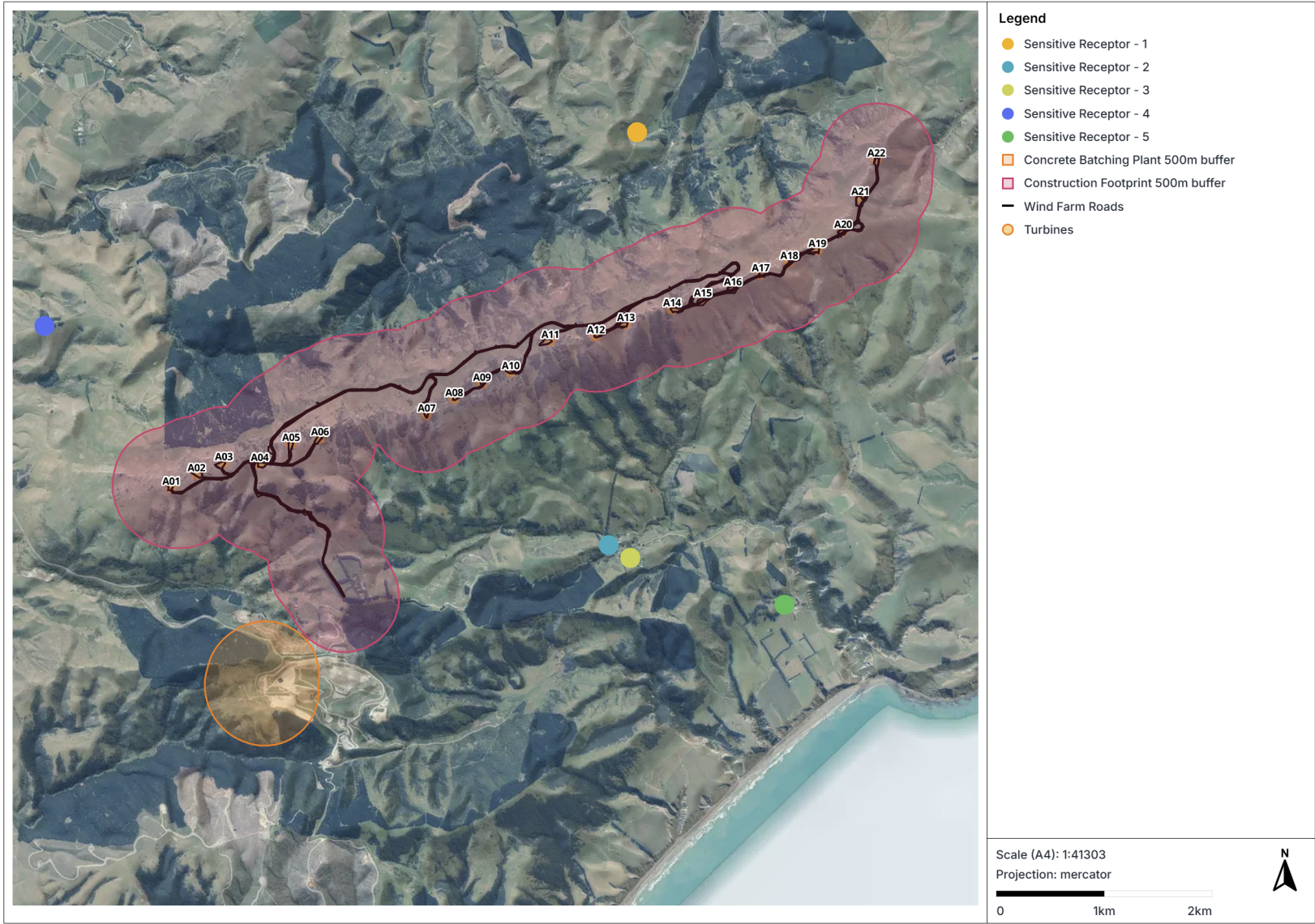


Figure 4 Sensitive receptor locations in relation to construction footprint and 500m buffer

3. Implementation and Operation

3.1 Training

It is the responsibility of the Individual Contractors to implement an on-going training and induction programme for all contractors and staff. The purpose of this programme is to make all personnel working on site aware of and understand the purpose and requirements of the DMP and the resource consent conditions and the ramifications of a failure to comply with these requirements. With respect to dust management, the training programme for all personnel on site will include at least the following aspects:

- The responsibilities of all personnel for carrying out the work on site in a manner which does not result in adverse effects on the environment, local residents and in accordance with DMP;
- The potential legal ramifications of adverse environmental effects occurring as a result of the project and non-compliance with resource consent conditions;
- The minimum requirements for dust control for all activities on site;
- The requirements for staff to monitor weather and visually inspect the site for dust discharges, assess the adequacy of dust control methods and implement additional dust control methods when required;
- The actions to be taken in an extreme dust and weather event; and
- The actions to be taken if a complaint is received from the public or consent authority.

3.2 Dust Controls and Sources

The dust prevention controls summarised below shall be employed for the Project during construction.

Source of Dust	Controls
Access road (construction and vehicle use)	• Compact all unconsolidated surfaces where practicable. • Limit exposed surfaces as much as possible. • Keep exposed surfaces damp in dry, windy weather conditions. • Stabilise cleared areas not required for construction, access or for parking if liable to cause excessive dust during windy conditions. Methods may include grassing or the establishment of vegetative cover. • Water Cart will be used to mitigate dust caused by construction and vehicle movements.
Forest North Road/ Mt Cass Rd Upgrade	• Dust will be controlled initially via implementing a TSL of 30 kph. • A water cart will be used if dust becomes a visibility issue for road users. • The road involves the widening and upgrade of Mt Cass Road sections of the road will be chip sealed as soon as practical.
Temporary Stockpiles	• All material deposited in temporary stockpiles will be in areas specified by the contractor. • Limit the height of uncovered stockpiles to reduce wind entrainment. Stockpiles exceeding 3 m in height have a higher risk of discharging dust. • Align stockpiles to maximise wind sheltering as much as possible. • Maximise shelter from winds as far as practicable. • Water Cart will be used on an as required basis
Cut to waste Stockpiles (located in disposal sites)	• Cut to waste/spoil permanent stockpiles will be limited to 3m in height and stabilised by grassing or the establishment of vegetative cover as soon as practicable. • Before grass seeding stockpiles will be capped by track rolling.

Source of Dust	Controls
	- Any stockpile to remain in place for more than 4 consecutive weeks shall be seeded if intended to remain for more than 4 months. - Water Cart will be used on an as required basis.
Vehicles	- Limit vehicle speeds to 50 km/hr through the works areas and along the southern access road. If dust is an issue, then this can be revised. - Cover loads of fine materials; 2.5 micrometres in diameter (PM2.5 known as 'fine particles') or any materials where concern of dust is noted as a mitigation when required. - Minimise mud and dust tracked-out onto the surrounding road network by having a sweeper tractor with water discharge capacities on site at all times. - Switch engines off when not in use.
Earthworks	- Complete earthworks as per guidelines laid out in the Erosion and Sediment Control plan and any other relevant documentation. - Stabilise exposed areas not required for construction, access or parking, along with completed fill and spoil areas as soon as practicable. - Minimise the extent of surface disturbance. - Limit drop heights.
Miscellaneous	Take account of daily forecast wind speed, wind direction and soil conditions before commencing an operation that has a high dust potential. If dust cannot be controlled, works must stop until it is controlled.

Table 2 Project specific dust mitigation controls

3.3 Monitoring and Review

Due to the distance between dust sources and nearby sensitive receptors, dust impacts are unlikely.

Visual dust monitoring shall be conducted across the site daily throughout the entirety of the project. Visual monitoring activities will primarily be the responsibility of the Site Manager and are presented below. These will be recorded and available to the Canterbury Regional Council on request.

Activity	Frequency
Check weather forecast for high winds that may blow dust towards the nearest receptors. Plan and implement appropriate dust management responses.	Daily
Inspect land adjacent to the site for signs of dust deposition.	Weekly
Inspect stockpiles daily to check temporary bunds, height and alignment.	Daily
Inspect site entrance to ensure minimal dust track out onto public roads	Daily
Maintain a visual monitoring log in the site environmental diary.	Daily
Weekly environmental site check of controls for dust, sediment and erosion noise and any other relevant environmental controls used on site.	Weekly

Table 3 Project Specific Visual Dust Monitoring Activities

4. Reporting

4.1 MCWF to Relevant Contractors Project Manager:

MCWFL shall report the following to personnel involved in site operations:

- Advice of any complaints regarding dust and/or odour received during the works if directed to MCWF.

4.2 Contractor to MCWF

- Report any complaints and corrective actions to MCFW Environmental Compliance Manager.

4.3 MCWF to ECan & HDC Compliance Officers

MCWF shall report the following to ECan:

- Complaint records if requested by ECan.

MCWF shall report the following to HDC:

Within 5 days of receiving a complaint, the details of the complaint and, where appropriate, of any remedial or corrective action taken, including the response provided to the complainant.

4.4 ECan & HDC Compliance Officers to MCWF

ECan & HDC are to advise MCWF of any complaints they receive regarding dust and/or odour from the site as soon as practicable after a complaint has been lodged.

4.5 Amendments

The DMP will be reviewed and updated, with the necessary approval, throughout the course of the Project to reflect changes in construction techniques, staging or the natural environment. The review will take into consideration:

- Any significant changes to construction activities or methods;
- Key changes to roles and responsibilities within the Project;
- Changes in industry best practice standards or recommended dust controls;
- Changes in legal or other requirements (social and environmental legal requirements, consent conditions, Transport Agency objectives and relevant policies, plans, standards, specifications and guidelines);
- Results of inspection and maintenance programmes, logs of incidents, corrective actions, internal or external assessments; and
- The outcome of investigations into discharges of dust and/or odour.