

Appendix I. Dust Management Plan



DUST MANAGEMENT PLAN

Waipara Solar Farm– Construction Earthworks		Rev 1, March 2024
<p>Overview: This Dust Management Plan (DMP) has been prepared to provide procedures to mitigate dust emissions during soil disturbance associated with the proposed solar farm at 380 Waipara Flat Road, Waipara. This DMP has been prepared in accordance with the requirements of Schedule 2 the Canterbury Air Regional Plan (CARP)¹.</p>		
1. Roles and responsibilities	Implementation of the DMP lies with the appointed contractor.	
2. Soil description	The land type is described as being defined by broad, very low angle coalescing outwash fans and associated low terraces of the major rivers (Waimakariri, Rakaia, Rangitata and Waitaki Rivers), comprising Pleistocene glacial outwash gravels with variable loess cover, and extensive Holocene alluvium, coastal swamp deposits and minor inland dune belts. The elevation is ranging from 0 m to 150 m, and the rainfall is being between 600–800mm.	
3. Soil disturbance works proposed (activity description)	<p>Earthworks (with potential to generate dust) associated with the site clearance and construction of the solar farm will be include the following:</p> <ol style="list-style-type: none"> 1) Approximately 44,00 m³ of earthworks will be required to enable installation of piles to support the solar panels and to form access tracks. 2) No earthworks will be undertaken within 100 m of any surface waterbody. 3) The proposed works will be undertaken in accordance with an approved Erosion and Sediment Control Plan (ESCP), which will be developed in line with best practice erosion and sediment control measures as set out in Environment Canterbury's Erosion and Sediment Control Toolbox. <p>Soil disturbance works will occur during normal working hours (0700-1800), 5-6 days a week, and is expected to occur over a 9-12 month period. Dust mitigation proposed in this plan must be in place for the full duration of the works.</p>	
4. Dust management principles	Dust control measures shall comply with the <i>Good Practice Guide for Assessing and Managing Dust, Ministry for the Environment (2016)</i> . The primary dust control measure is for wetting exposed soil surfaces to prevent dust generation.	
5. Dust management practices to be implemented by the Contractor	<p>Staging: Excavations shall be staged to minimise the area exposed ground as far as practicable.</p> <ul style="list-style-type: none"> • Piling will happen progressively across the site. • Vegetation removal will only occur as needed to develop a firm travelling surface for access tracks and to establish an appropriate grade for the solar farm's infrastructure. Vegetation will be promptly reestablished beneath the solar arrays after construction is completed, with controls remaining in place until stabilisation by vegetation is complete. <p>Dust suppression methods:</p> <ul style="list-style-type: none"> • Frequent spraying of water shall occur to ensure working surfaces remain damp in dry conditions. Dry conditions are defined as those in which any visible dust is created and are expected after two to five days without rain (depending on wind speed, high wind conditions will dry out ground faster than low wind conditions). • Water spraying can be achieved through mobile water tanker or portable water misting systems. The amount of water dispensed should not be of a magnitude that produces run off. 	

¹ Environment Canterbury, October 2017. Canterbury Air Regional Plan.

	<ul style="list-style-type: none"> • Instruct construction workers and truck drivers to monitor their own dust generation and to use lower travelling speeds on unpaved surfaces to avoid producing excessive quantities of dust. <p>Works shut down requirements:</p> <p>If there is an extended break in the works (such as for the Christmas holiday period) then exposed soil surfaces shall be left in an erosion-free state through cover with geotextile, polythene or hardfill.</p>
6. Monitoring	<p>The contractor shall undertake the following monitoring:</p> <ul style="list-style-type: none"> • At a minimum daily checks shall be made by the Contractor to ensure that dust is not being generated from exposed soil surfaces or during soil disturbance works. • Weather forecasts shall be monitored for predicted high wind events and plans for additional dust suppression activities put in place if required. • Water spraying equipment shall be inspected daily to ensure it is operating effectively.
7. Contingency measures	<p>In the event that dust continues to be generated (e.g. due to breakdown of water tanker or misting system, or extremely strong winds) or complaints from the public are received, the following additional control measures shall be considered:</p> <ul style="list-style-type: none"> • Cease dust-generating activities until effective dust controls measures can be implemented. • Audit of mitigation by the appointed contractor. • Additional measures such as the following may be required: <ul style="list-style-type: none"> - Alternative water delivery equipment and more frequent/ intense application. - Install windbreak fences. - Potential use of polymer dust suppression sprays.
8. Complaints records	<p>Records shall be kept of all complaints made by the public about dust nuisance from the site.</p> <p>Notes shall be made about the time of the complaint, weather conditions including wind direction and intensity, works being undertaken at the time, dust suppression measures that were in place, and the actions taken in response to the complaint.</p>