



Dust Monitoring Campaign at Point Samson

Purpose

The purpose of this Fact Sheet is to provide information on a dust monitoring campaign to be undertaken by the Department of Environment Regulation (DER) at Point Samson.

Introduction

DER provides strategic, technical and policy advice on air quality matters.

Ongoing air quality monitoring is undertaken by DER at a number of metropolitan and regional centres within Western Australia in accordance with the National Environment Protection (Ambient Air Quality) Measure (Air NEPM).

Short-term campaigns are also undertaken in other areas to supplement existing information from that location.

A short-term campaign is planned for Point Samson, a regional town located in the Pilbara, in the north-west of Western Australia.

Point Samson receives dust from multiple sources and experiences occasional high dust levels exceeding the Air NEPM criteria. Attribution of the source of high particle levels is unclear, with nearby industry, natural events and other activities potentially contributing to dust levels experienced in the town.

Dust monitoring campaign

The dust monitoring campaign is designed to assist in determining the origin of dust impacting the town of Point Samson.

Monitoring will be undertaken for a period of two (2) months over the 2016/17 summer period.

DER will also assess the suitability of applying Light Detecting And Ranging (LiDAR) technology as a general tool in assessing dust impacts on local communities.

Equipment used

For the period of the campaign, DER will install a LiDAR unit, two Tapered Element Oscillating Microbalances (TEOMs) and a Beta Attenuation Monitor (BAM) and will also gather additional data from monitoring equipment already located within the area.

What will be monitored

The air quality pollutant to be monitored is particulate matter found in air that is less than 10 micrometres in diameter (PM₁₀). The LiDAR unit will primarily focus on determining dust lift off sources while the TEOMs and BAM results will be applied to the Air NEPM.

Air quality criteria

The Air NEPM provides criteria for particulate matter monitoring as shown in Table 1.

Table 1. Air Quality Particle Criteria

Pollutant	Averaging Period	Maximum concentration (micrograms per cubic metre)
Particulate Matter as PM ₁₀	1 day	50µg/m ³
	1 year	25µg/m ³

Results

A live feed of the data gathered as part of the dust monitoring campaign will be made publicly available through a dedicated web portal linked to DER's website www.der.wa.gov.au and a report on the findings expected to be released in mid-2017.

Limitations

A LiDAR is able to give a useful measure of the general level of particles in the air.

Although often presented as a concentration in air, the LiDAR is not an approved method for measuring dust against health criteria. Instead, LiDAR particulate data is indicative and should be considered as an approximate measure of particulates (including aerosols) in the air.

The LiDAR results from the data obtained during the campaign, together with other monitoring results will inform DER's future decision making. LiDAR results will not form the basis for any enforcement actions to be taken by DER during the trial period.

More Information

For advice on the Regulations, or related matters, please contact DER on 6467 5000.

This document is available in alternative formats and other languages on request.

Related Documents

Additional publications about air quality are available online from <https://www.der.wa.gov.au/your-environment/air>, or can be requested by phoning 6467 5000.

Legislation

This document is provided for guidance only. It should not be relied upon to address every aspect of the relevant legislation. Please refer to the State Law Publisher (SLP) for copies of the relevant legislation, available electronically from the SLP website at www.slp.wa.gov.au.

Document Versions

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Legal advice

The information provided to you by DER in relation to this matter does not constitute legal advice. Due to the range of legal issues potentially involved in this matter, DER recommends that you obtain independent legal advice.