

MEETING MINUTES

Thursday 25th July

4:30 pm to 6.00 pm Meeting

Venue: Cleanaway Landfill Office - Lot 2 Banksia Road, Dardanup

Meeting opened 4:30pm			
Time	Item	Description	Comments
4:30	1	Attendees	Cleanaway: John Mulholland (JM), Andrew Doyle (AD) Community: Noel Hayward (NH), Julie Cross (JC), Ellen Lilley (EL), Ian Trigwell (IT) Shire: Industry expert: Jon Bailes (JB) from JBS&G Independent Facilitator: Mikaela Kerwin (Wattle Consultancy)
4:30	2	Apologies	Shire: Ashwin Nair (Director of Development Services), Neil Nicholson (Environmental Health Officer), Community: James Szabadicz
4:31	3	Operational Overview	John Mulholland provided overall operational overview, outlining: <ul style="list-style-type: none"> ○ Survey from 1 July shown. Next survey of site due this week. ○ Tronox cells <ul style="list-style-type: none"> ○ Tronox cell 1 capping to begin once detailed design is complete. Estimated to take 12 months from starting. ○ Tronox 2 has 12 months to go until complete. ○ No more Tronox waste to come to site after this time. ○ Cell 12A

			<ul style="list-style-type: none"> ○ Construction is close to complete. ○ Background information on the first layers of waste provided. The cell will be initially filled with fluff layer (softer material on bottom to avoid piercing the cell seal) from Material Recycling Facility (MRF). ○ Capping <ul style="list-style-type: none"> ○ Stage 1 capping complete. ○ Hydromulching underway from 25 July 2024. Southern boundary to be grassed. Eastern face also grassed for now, will be native shrubs in the future per rehabilitation plan. ○ Phase 2 of capping to be south east of existing cell for logistics reasons. ○ JC question: erosion throughout rain? AD: erosion under control, checked today. Bunds have been designed into the capped face in order to minimize erosion. <p>Operations questions from community:</p> <ul style="list-style-type: none"> ○ Question: Licence amendment for 12A? JB: Works approval obtained, waiting for licence amendment. AD: The license amendment application submitted 24/7/24, with the outstanding detail to be submitted in next fortnight. ○ Question: when do you see extra bores to be completed? AD: Completed today. Water bore testing next in Sept. Most recent testing undertaken June 2024.
4:53	4	Strategen specialist	<p>Strategen expert, Jon Bailes, to speak about the site in the context of dust and noise.</p> <ul style="list-style-type: none"> ○ See power point slides, enclosed, for full detail of information provided by Jon Bailes. ○ Questions and comments from the community: <ul style="list-style-type: none"> ○ Question: where do the requirements for the conditions come from? JB: DWER has a 'guidance statement' on condition creation. NH: noted 'measurable' is missing as a requirement of conditions ○ Question: if Cleanaway complies with license but dust is still omitted, DWER is still ok with this? JB: Under EAct pollution should always be avoided

			<ul style="list-style-type: none"> ○ EL: outlined frustration with DWER response to potential spill from a truck rollover. ○ Question: What triggers a review of the Dust Management Plan? All solutions are preventative, but no steps for when 'dust events' occur. JB: review needs to be undertaken as a requirement of the DMP pt 11: review.
	5	Actions	<ul style="list-style-type: none"> ○ Exploring groundwater/radiation consultant to attend following meeting
5:58	6	Other business	<p>Other items outlined by the community:</p> <ul style="list-style-type: none"> ○ (EL) Litter concerns from FOGO facility ○ (EL) Odour from FOGO ○ (EL) Beepers are still audible ○ (EL) Note frustration with DWER/Shire accountability process
6:00	7	Meeting closed	Date of next meeting to be set by Cleanaway, ~3 months from this meeting.

ATTACHMENT 1 OF 1

JBS&G

ENVIRONMENTAL REGULATION (DUST AND NOISE) PRESENTATION



Banksia Road Landfill – Environmental Regulation (Dust and Noise)

25 July 2024



Environmental Regulation

Department of Water and Environmental Regulation (DWER)

- *Environmental Protection Act 1986*
Environmental Protection Regulations 1987
Environmental Protection (Noise) Regulation 1998
- Prescribed Premises Works Approvals and Licence

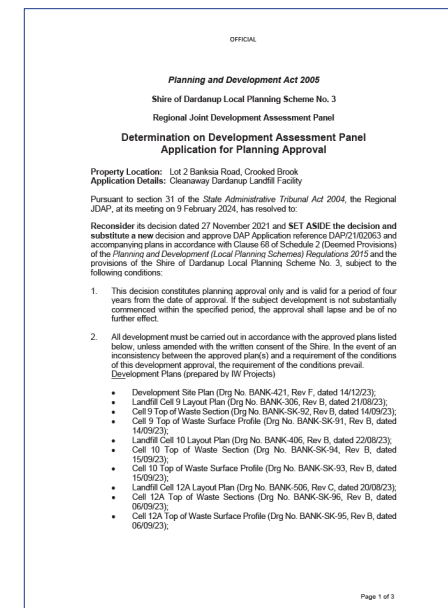
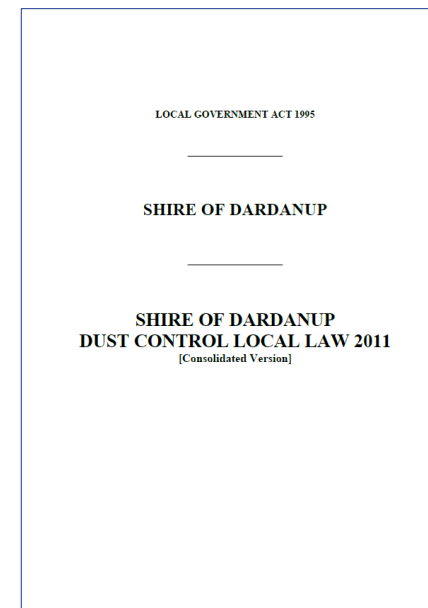
Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)		Assessed design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore: premises on which: (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.		350,000 tonnes per annual period
Category 61: Liquid waste facility - Premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.		3,000 tonnes per annual period
Category 64: Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.		350,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 22 February 2024 by:

L8904/2015/1 (Date amended 22/02/2024)
IR-T06 Licence template (v1.0) (February 2020)

Local Government – Shire of Dardanup

- Planning and Development Act 2005
- Local Government Act 1995
- Health Act 1911
- Development [Planning] Approval
- Local Laws



DWER Regulation of Prescribed Premises

Licence for Emissions and Discharges

- The occupier of any prescribed premises who causes or increases, or permits to be caused or increased, an emission, or alters or permits to be altered the nature and volume of the waste, noise, odour or electromagnetic radiation emitted, without holding a licence in respect of those premises commits an offence
- Licence contains conditions that aim to prevent, control, abate or mitigate pollution or environmental harm as a result of the operation of prescribed premises
- Conditions must be:
 - Valid
 - Enforceable
 - Risk-based
 - Outcome-based
 - Site-specific
 - Documented and justified
- DWER's risk-based assessment will only require environmental management plans in particular circumstances, as the preferred outcome-based conditions will be to limit the emissions and discharges of the activities
- Requires monitoring and reporting
- Compliance and enforcement

Dust emissions

22. The Licence Holder must, prior to using the southern haul road for access to/from Cell 8, extend the bitumised southern haul route to the eastern extent of Cell 8.
23. The Licence Holder must keep all roads used by vehicles greater than 2.5 tonnes damp at all times during operational hours by applying water via a water cart, collected from Stormwater Pond 1 and Stormwater Pond 2;
24. The Licence Holder must restrict vehicle speeds on the premises to below 20 km per hour.
25. The Licence Holder must manage fugitive dust emissions from the active tipping area during operational hours by:
 - (a) applying water collected from Stormwater Pond 1 and Stormwater Pond 2, via a water cart, to the active tipping area; or
 - (b) applying leachate via the water cart to the active tipping area in accordance with Condition 13;
 - (c) ensuring waste is levelled and compacted as soon as practicable after it is discharged and at a minimum by the end of the working day; and
 - (d) ensuring waste is placed and compacted to ensure all faces are stable and capable of retaining further waste placement or placement of cover or rehabilitation material.
26. The Licence Holder must, during operational hours, undertake targeted wetting down of Dusty Wastes during disposal and burial at the active tipping area.
27. The Licence Holder must, by 31 December 2021 apply dust suppressant material to non-vegetated landfill batters to mitigate fugitive dust emissions from these areas.
28. All operational vehicles must pass through an operational wheel wash prior to exiting the Premises.

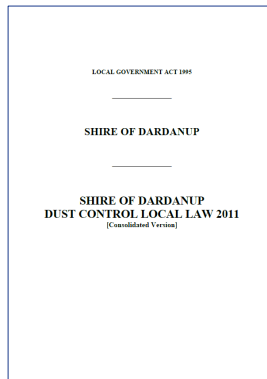
Noise emissions

31. All vehicles entering the premises and within the Licence Holders control must be fitted with broadband reversing alarms.

Shire of Dardanup

Local Laws

- Dust Control Local Law 2011 and Dust Control Amendment Local Law 2021:
 - General Control Measures
 - Dust Management Plans
 - Notices (to comply, cease activity, prevent possible breach)
 - Offences and penalties
- The site deemed to be a 'dust generating development' by the local government:
 - Requirement for a Dust Management Plan
 - Content of a Dust Management Plan
 - Local government assessment of a Dust Management Plan



Development Approval

- Development applications determined by the Shire or Regional Joint Development Assessment Panel (JDAP)
- Development approvals include conditions for approval
- The purpose of conditions on a development approval is to ensure that the development permitted has the minimal possible adverse impact on the community, including amenity, traffic and the environment
- Conditions typically require the development must be carried out in accordance with the approved plans (drawings and written plans):
 - All development must be carried out in accordance with the approved plans listed below, unless amended with the written consent of the Shire. In the event of an inconsistency between the approved plan(s) and a requirement of the conditions of this development approval, the requirement of the conditions prevail.

Development Plans (prepared by IW Projects)

 - Development Site Plan (Drg No. BANK-421, Rev F, dated 14/12/23);
 - Landfill Cell 9 Layout Plan (Drg No. BANK-306, Rev B, dated 21/08/23);
 - Cell 9 Top of Waste Section (Drg No. BANK-SK-92, Rev B, dated 14/09/23);
 - Cell 9 Top of Waste Surface Profile (Drg No. BANK-SK-91, Rev B, dated 14/09/23);
 - Landfill Cell 10 Layout Plan (Drg No. BANK-406, Rev B, dated 22/08/23);
 - Cell 10 Top of Waste Section (Drg No. BANK-SK-94, Rev B, dated 15/09/23);
 - Cell 10 Top of Waste Surface Profile (Drg No. BANK-SK-93, Rev B, dated 15/09/23);
 - Landfill Cell 12A Layout Plan (Drg No. BANK-506, Rev C, dated 20/08/23);
 - Cell 12A Top of Waste Sections (Drg No. BANK-SK-96, Rev B, dated 06/09/23);
 - Cell 12A Top of Waste Surface Profile (Drg No. BANK-SK-95, Rev B, dated 06/09/23);

Management & Other Relevant Plans

 - Dust Management Plan dated 12/03/21 (Rev 4) prepared by Strateg- JBS&G;
 - Environmental Management Plan dated 18/03/21 (Ver 004) prepared by Cleanaway;
 - Stormwater Management Plan dated 15/01/21 (Ver C2) prepared by Cleanaway;
 - Rehabilitation and Closure Plan dated 12/09/23 (Ver V9) prepared by Cleanaway;
 - Landfill Gas Management Plan dated September 2023 (Ver 004) prepared by Cleanaway;
 - Bushfire Management Plan dated 12/07/2021 (Ver 1.0) prepared by Bushfire Prone Planning; and
 - Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin.
- Conditions can require management plans to be developed and provide 'limits' such as operating hours
- Prior to the commencement of use, a 'Noise Management Plan' that has been prepared by a suitably qualified acoustic consultant must be submitted to and approved by the Shire of Dardanup that includes the following:
 - demonstrates that noise from the approved use will comply with the *Environmental Protection (Noise) Regulations 1997*; and
 - details the noise mitigation measures that will be implemented to make the noise comply with the *Environmental Protection (Noise) Regulations 1997*.
 - Once approved the plan will form part of this approval and must be complied with at all times for the life of this approval.

Dust Management Plan

Preparation, Review and Approval

- Prepared by JBS&G in January 2020 in accordance with relevant guidance, including *DWER guideline for managing the impacts of dust and associated contaminants from land, development sites, contaminated sites remediation and other related activities*
- Consistent with and reference to conditions of EP Act Licence
- Extensive review process:
 - Internal review by Cleanaway
 - Reviewed by the Shire (planning and environmental health)
 - Advertised for public comment
 - Third-party peer review (ASK Consultants)
 - Reviewed by DWER (Air Quality Services Branch and Industry Regulation Division)
 - Review by CEO of Shire
 - Endorsed by Shire Council

Content of Dust Management Plan

- Introduction
- Environmental setting
- Regulatory framework
- Site activities
 - Construction activities
 - Operational activities
- Potential impacts
- Emissions sources
- Relevant air quality criteria
- Dust risk assessment (as per DWER guideline)
- Dust control measures:
 - Dust Risk Areas
 - General management
 - Management of trafficable areas
 - Operation of vehicles
 - Landfill areas
 - Construction activities
 - Administrative controls
 - Incident and complaints management
- Dust monitoring
- Roles and responsibilities
- Document review

Dust Monitoring – Dust Management Plan

Monitoring Program

- Six-month dust monitoring program completed to further understand the effectiveness of the control of dust emissions from the site operations
- November 2020 to April 2021 (i.e., drier, hotter months)
- Three real-time nephelometer dust monitoring instruments
- Commenced with PM₁₀ monitoring; later changed to TSP
- Monitoring locations selected based on analysis of the prevailing winds expected for the time of year (using on-site station and BoM station)
- Monitors located on boundary locations most likely to be impacted by dust informed by site inspection and requirements of AS/NZS3580.1.1:2007 *Methods for sampling and analysis of ambient air, Part 1.1: Guide to siting air monitoring equipment*





Legend:

- Premises boundary
- Cadastral boundary
- Sand extraction area (excluded from DMP)
- Dust monitoring location



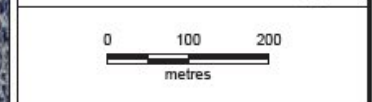
Job No: 58071

Client: Cleanaway

Version: A	Date 10/12/2020
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Drawn By: cthatcher	Checked By: JB
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Scale 1:8,750



Banksia Road Landfill
Crooked Brook, WA 6236

DUST MONITORING LOCATIONS

FIGURE 5

File Name: W:\Projects\1\Open\Cleanaway\58071 Banksia Road DMP\GIS\Maps\R01_Rev_A\58071_06_DustMon.mxd
Image Reference: www.hearmap.com© - Imagery Date: 10 July 2020

Dust Monitoring – Dust Management Plan

Performance Criteria (Trigger Levels)

- Trigger levels set to drive response actions
- Alerts received by SMS to weighbridge
- Corrective action trigger:
 - Review the working methodology of any dust-generating activities and ensure that the appropriate measures have been implemented
 - If the dust event continues following implementation of the above measures, activity controlled, and water applied at the source of the dust generation to damp down soils
 - Work not recommenced until the dust event is under control and dust levels have reduced below the corrective action trigger level
 - Spraying of water carried out at a frequency sufficient to keep surface soils damp throughout the dust-generating activity without resulting in run-off
- Stop work trigger level:
 - All site activities generating visible dust cease
 - Review the working methodology of any dust-generating activities and ensure that the appropriate measures can be implemented
 - Water applied at the source of the dust generation to damp down soils; work not recommenced until the dust event is under control and dust levels have reduced below the corrective action trigger level
 - Spraying of water carried out at a frequency sufficient to keep surface soils damp throughout the dust-generating activity without resulting in run-off
- Trigger levels reviewed throughout monitoring program

Appendix D Trigger levels

The current trigger levels described in Section 8.2.3 are shown in Table D.1 and Table D.2.

Table D.1: Trigger level

Date	Parameter	Corrective action trigger level	Units	Averaging period	Comment
11/09/2020	PM ₁₀	600	µg/m ³	10-minute	Initial trigger level set prior to completion and review of one month of monitoring data
08/02/2021	PM ₁₀	150	µg/m ³	10-minute	Revised trigger level established after first month of monitoring
17/02/2021	TSP	150	µg/m ³	10-minute	All monitor sampling heads changed to TSP

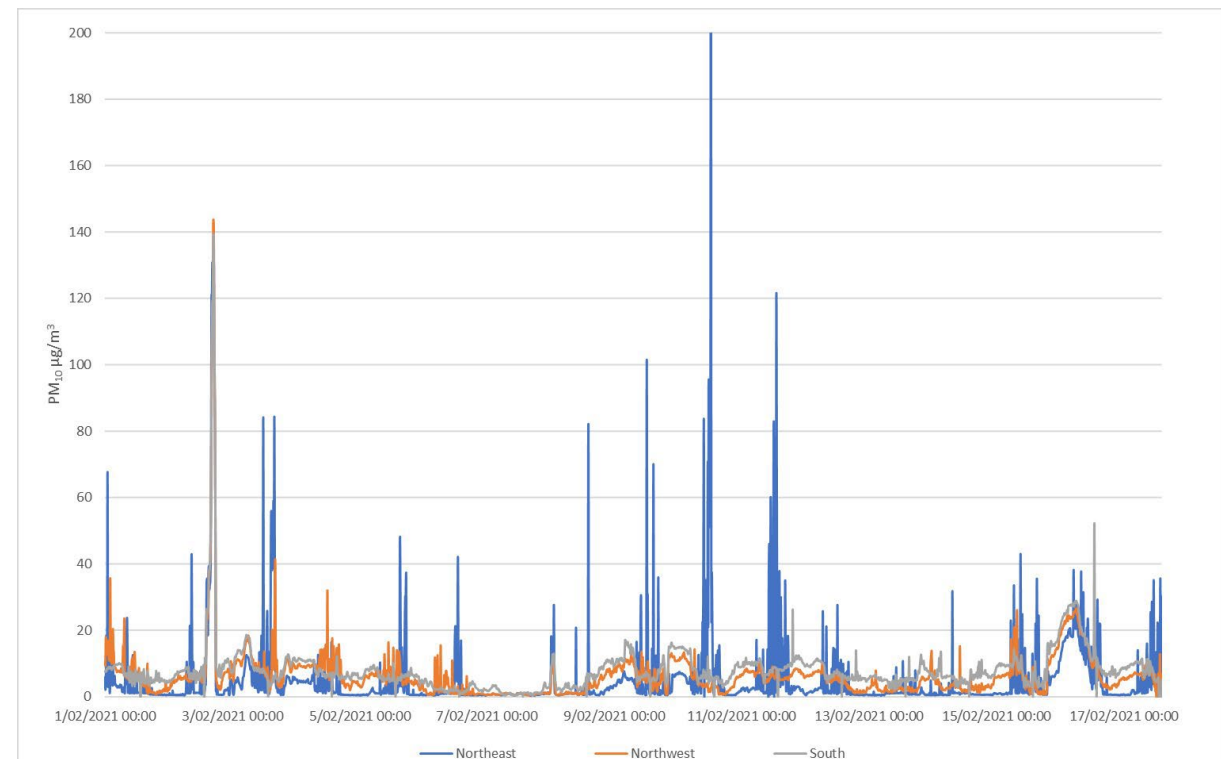
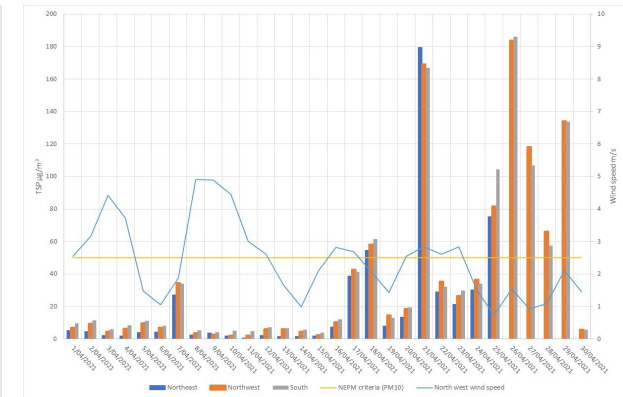
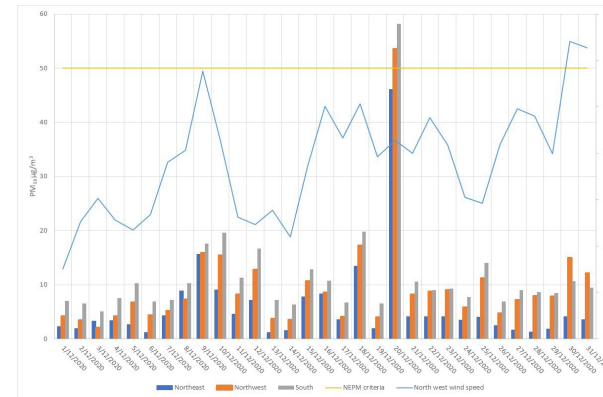
Table D.2: Stop work trigger level

Date	Parameter	Stop work trigger level	Units	Averaging period	Comment
11/09/2020	PM ₁₀	1,200	µg/m ³	10-minute	Initial trigger level set prior to completion and review of one month of monitoring data
08/02/2021	PM ₁₀	300	µg/m ³	10-minute	Revised trigger level established after first month of monitoring
17/02/2021	TSP	300	µg/m ³	10-minute	All monitor sampling heads changed to TSP

Dust Monitoring – Dust Management Plan

Monitoring Results

- Concentrations at all three monitoring locations typically tracked together, representing the trend of particulates in the greater airshed
- The standards in the ambient air quality NEPM were adopted as a basis against which to compare the monitoring results for particulates. The air quality standards are applicable to urban airsheds:
 - PM₁₀ at 50 µg/m³ on a 24-hr averaging period
 - Annual limit of 25 µg/m³ derived from 24-hr measurements across a year
- Particulate concentrations typically remained below the 24-hour NEPM PM₁₀ criteria of 50 µg/m³ at the site boundary
 - Exceedance in December 2020 attributed to a large fire in the region
- The highest concentrations, detected during late April 2021 at all three monitoring locations simultaneously, were attributable to fires across the Perth Metro and South West regions
- Exceedances of the corrective action trigger level were largely due to off-site influences, evidenced by elevated concentration detected at all monitoring locations coinciding with known events (e.g., prescribed burns and bushfires)
- The NE monitor experienced peaks in particulate concentrations during daytime hours under variable wind conditions that were not evident at the other monitoring locations and attributed to on-site activity
 - Peak concentrations at the NE monitor attributed to on-site activities exceeded the corrective action trigger level on one occasion (10 February 2021). Implementation of controls to mitigate fugitive dust resulted in a rapid decay in measured dust concentrations to below the trigger level. Dust event caused by non-routine operations (i.e., traffic diversion during road maintenance)
- Overall, the results from the six-month monitoring program indicated fugitive dust was being adequately managed at the site



Dust Monitoring – DWER Licence (Composition)

Monitoring Program

- Requirement of revised version of EP Act Licence post DWER review(2021)
- The purpose of the dust monitoring program was to characterise the composition of dust generated from the existing site operations
- Two sampling locations were selected in consultation with DWER – one on the sites' northwest (NW) boundary and one on the west (W) boundary of operations
- Sampling conducted using low-volume gravimetric air samplers calibrated and operated in accordance with Australian Standard 3580.9.9.2017:
 - Ambient air was sampled by drawing it through a PM₁₀ selective inlet (required by DWER) at a flow rate of 16.7 litres per minute
 - Particles entrained in the sample flow were collected on a pre-weighed 47 mm diameter filter
 - The mass of particulates collected on the filter was used to determine the ambient PM₁₀ concentration across the 24-hour monitoring period
- Fifteen samples were collected at each site between March and June 2022
- Filters analysed for PM₁₀, asbestos and heavy metals/metals
- Analysis results compared to ambient air quality guideline values (AGVs) published by DWER, peak-to-mean conversion applied to convert 24-hour concentration to 1-hour where applicable



55. The Licence Holder must

- Develop and submit to the CEO a Sampling and Analysis Plan by 31 January 2022, prepared by an Air Quality Professional for dust composition sampling that includes:
 - Sampling regime;
 - Averaging period that must not be less than one 24-hour sample collected every 6 days for a period of at least three months;
 - Sampling methodology
 - Sampling locations
 - Analytes which must include asbestos fibres, heavy metals, and PM₁₀;
 - Appropriate assessment levels; and
 - Quality assurance / quality control (QA/QC) program.
- (b) Install monitors that are capable of collecting bulk dust for quantitative analysis as specified in the Plan required by Condition 55(a) by 28 February 2022, placed in locations that will collect any dust that is emitted from the Premises and allow an interpretation of impacts on receptors.
- (c) Undertake monitoring as specified in the sampling and analysis plan specified by Condition 55(a), commencing within 14 days of installation of the monitoring equipment specified in Condition 55(b).



- Legend**
- Site boundary
 - Sand extraction area (excluded from DMP)
 - Cadastral boundary
 - Dust monitoring location
 - Dust composition sampling location
 - Minor road



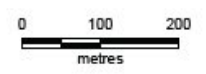
Job No: 62153

Client: Cleanaway Solid Waste Pty Ltd

Version: A	Date 27/09/2022
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Drawn By: jcrute	Checked By: CT
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Scale 1:9,000



Coord. Sys. GDA 1994 MGA Zone 50

**Banksia Road Landfill
Darnadup, WA 6236**

DUST MONITORING LOCATIONS

FIGURE 2.1



File Name: W:\Projects\1\Open\Cleanaway\62153 Banksia Road dust monitoring\GIS\Maps\M02_Rev_A\62153_01_DustMonitoring.mxd
 Image Reference: www.nearmap.com© - Imagery Date: 06 April 2022.

Dust Monitoring – DWER Licence (Composition)

Monitoring Results

- Dust levels above the Ambient Air Quality NEPM criteria ($50 \mu\text{g}/\text{m}^3$) were determined for three samples collected on-site within the first month of sampling

It is not possible to discern the nature or duration of the elevated dust levels from the 24-hour average data collected

Elevated levels at a single site suggest a more localised source in these instances

Prevailing winds during the sampling at the NW site were from the southeast across the landfill site and dust from site operations could have contributed to the elevated dust levels

- Analysis of metals in the sampled particulate determined mainly non-detect results or concentrations below AGV.

Concentrations at the AGV were determined for beryllium (one sample at DL) and above the AGV for beryllium (one sample) and nickel (one sample at DL).

Measurement uncertainty at DL high

1-hour concentrations of Be determined by conservative peak-to-mean conversion (known to over-estimate peak concentrations for ambient conditions)

- Analysis determined asbestos was not present in any of the samples
- The results of the sampling and analysis indicate that the composition of dust generated at the site, with the potential to leave the site and reach nearby sensitive receptors, does not pose a high risk

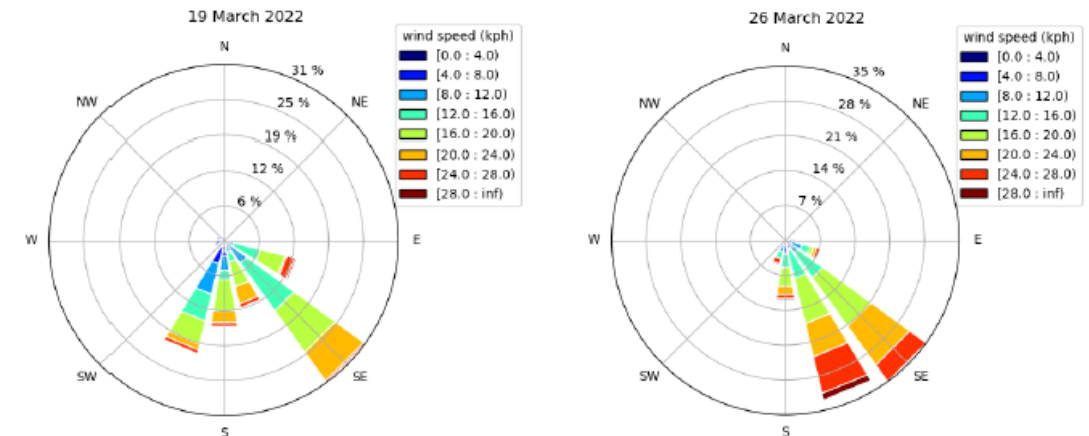
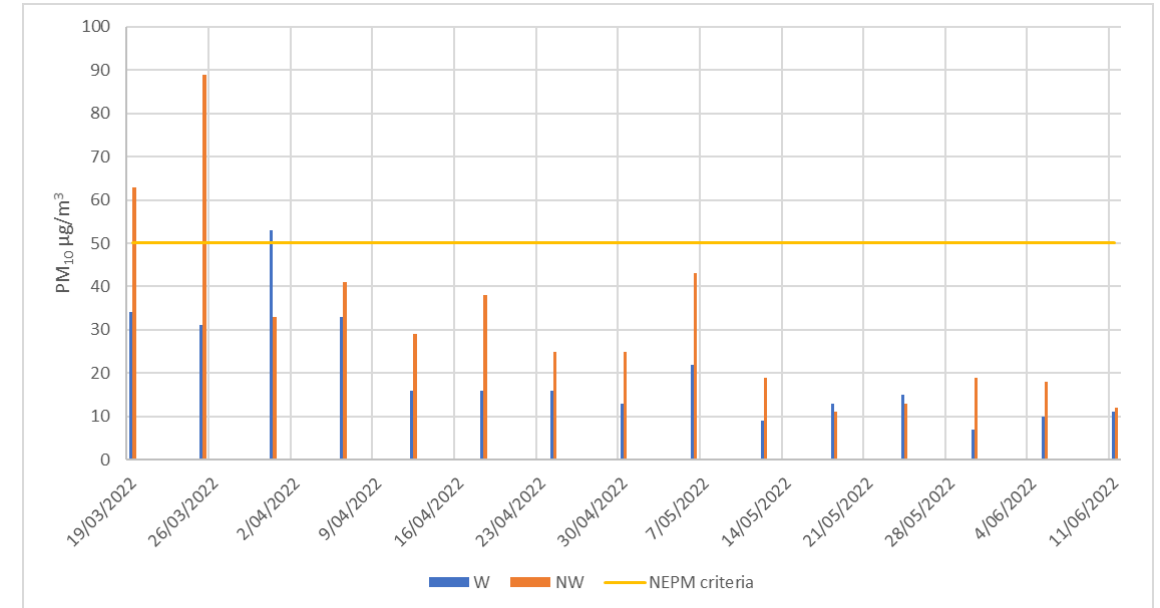


Figure 3.2: Wind roses 19 March and 26 March 2022

Noise

Noise Management Plan

- Noise Management Plan recently developed and submitted to Shire for approval as required by condition of development approval
- Format and structure of Noise Management Plan similar to the Dust Management Plan and is consistent with the EP Act Licence.
- Environmental Protection (Noise) Regulations 1997 provide a regulatory framework that complements the EP Act Licence and planning conditions
- The Noise Regulations contain assigned levels and monitoring requirements against which noise from the site can be assessed
- Noise Regulations enforced by DWER and local government.

Noise Monitoring

- Baseline noise monitoring conducted in February/March 2020 at two locations on-site, the neighboring waste facility and one residential receptor (268 Banksia Rd)
 - Noise levels from the site were reported as difficult to distinguish over background noise
- DWER conducted noise monitoring in October/November 2020 at residential receptors
 - Noise associated with the operation of the site was confirmed to be audible at two residences, most noticeably on calm days
 - The noise results indicated that noise emissions from the site complied with the Noise Regulations during the monitoring period
 - DWER determined that additional controls for reversing tonal beepers should be implemented
 - Condition 32 of EP Act Licence requires broadband reversing alarms to be fitted to vehicles within Cleanaway's control entering the site



Legend Site boundary Cadastral boundary Noise monitoring location Sensitive receptor location Main road Minor road Track	Scale 1:30,000 at A4 	Banksia Road Landfill Dardanup, WA 6236
	Coord. Sys. GDA 1994 MGA Zone 50 	NOISE MONITORING LOCATIONS
	Job No: 61736	FIGURE 6.4
	Client: Cleanaway Solid Waste Pty Ltd	Version: A Date: 12-Aug-2022
	Drawn By: Ianandagoda Checked By: CT	

File Name: W:\Projects\1\Open\Cleanaway\61736 Banksia Rd Call @ 10.12A ERO\GIS\Map\RD1_Rev_061736_06_4_NoiseMonLoc.mxd
 Image Reference: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community