Final_V3

Powys County Council
North Powys Bulking Facility

Environmental Permit Application

Dust and Emissions Management Plan

Project code: 416.00798.00038
Date: January 2022

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Acknowledgements

The content of this Report has been based upon information provided by WRAP Cymru and Powys County Council.

1.0 Introduction

This Dust and Emissions Management Plan (DEMP) has been prepared to support the Environmental Permit application for the proposed North Powys Bulking Facility near Newtown, Powys, hereafter referred to as 'the Site'.

The Site will require an Environmental Permit (EP) to be issued by Natural Resources Wales (NRW) before it can operate.

The Site is located within the administrative area of Powys County Council (PCC) which has not presently declared any Air Quality Management Areas.

The Site comprises of a flat open area accessible by road (B4386).

The Activities on site include:

- Reception of materials (see Appendix AQ1);
- Storage of materials; and
- Bulk removal of materials.

It is recognised that activities on Site could lead to release of fugitive emissions of dust particles (between 2.5 and 10 micrometers) and therefore it is a requirement to control activities on Site in order to prevent or mitigate potential releases of dust.

Measures incorporated into the design of the Site to assist with dust control include:

- Tipping, stockpiling and bulk removal of mixed municipal waste, food waste and recyclables is undertaken within the Bulking Shed (enclosed and ventilated, accessed via roller shutter doors);
- Cutting, grinding or sawing equipment is not used on site in general practice;
- Site operations are managed such that any material received and stored on-site that is identified as having a high potential for the generation of dust emissions (i.e. particularly dry loads) would be diverted to another WTS (where identified prior to receipt) or transferred off-site within 24-hours (where identified following receipt);
- Material is stored in designated bunded areas which provides shelter from the wind to reduce dust emissions;
- Drop heights are minimised where possible to reduce resuspension of dust;
- Where potentially dusty materials are to be stored on site (prior to removal), the stockpiles are maintained at a height lower than the height of the retaining walls (a freeboard space of 1m is maintained at the top, sides and front of all bays on site. Lines drawn on the inside of each bay mark the maximum height and width of each stockpile ensuring the maximum volumes are adhered to);
- Stockpiling and processing is undertaken on an impermeable surface with drainage to foul sewer from all material storage areas; and
- Internal haul routes are hardstanding.

This DEMP sets out the potential sources of dust at the Site, the measures in place to control dust generation and monitor releases, and the management and monitoring actions that will be taken in response to a dust event.

The DEMP is a 'live document', in this respect the dust control measures and management procedures contained within it will be updated on a periodic basis. This DEMP will be kept in the Site office and be available to all employees.

1.1 Sensitive Receptors

1.1.1 Human Receptors

The Site is located on the A483 to the south of Abermule, Powys. The Site is situated within a predominantly agricultural rural area with fields and isolated properties in all directions with the exception of a residential area approximately 350m to the north-west (Abermule). The closest human receptors considered to be sensitive to dust and other emissions such as NO_2 from onsite mobile plant and offsite road vehicles are presented in **Table 1-1**.

The sensitivity of receptors to dust has been determined with reference to the Institute of Air Quality Management (IAQM) Mineral Guidance[1].

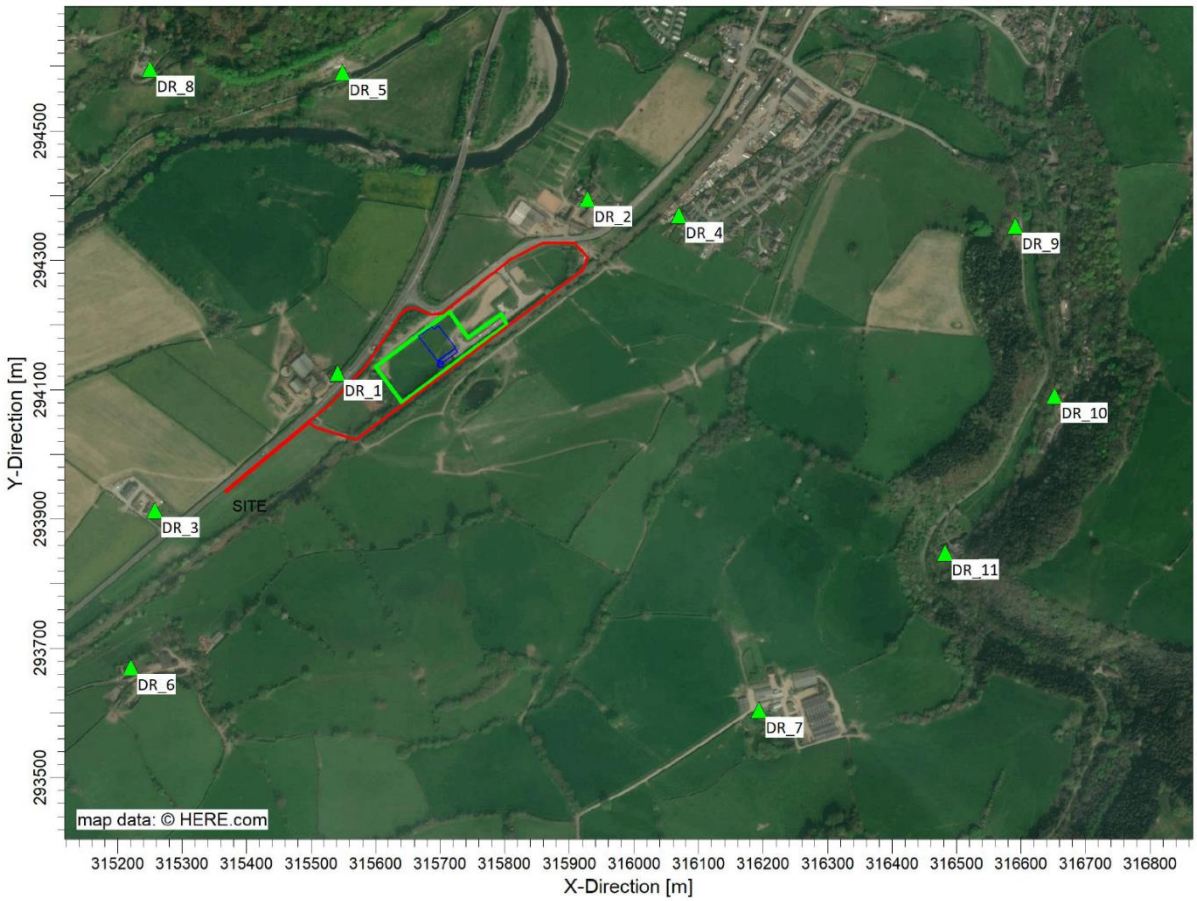
Table 1-1: Sensitive Receptors

Receptor	Direction from Permit Boundary	Receptor Type	Receptor Sensitivity to Dust	Distance from Permit Boundary(m)
R1	West	Farm (with dwelling)	High	50
R2	North-east	Farm (with dwelling)	High	110
R3	South-west	Farm (with dwelling)	High	400
R4	North-east	Residential dwellings	High	270
R5	North	Residential dwelling	High	400
R6	South-west	Farm (with dwelling)	High	590
R7	South-east	Farm (with dwelling)	High	710
R8	North-west	Residential dwelling	High	580
R9	East	Residential dwelling	High	860
R10	East	Residential dwelling	High	900
R11	South-east	Residential dwelling	High	790

Figure 1-1 illustrates the location of the identified receptors and presents the Site boundary (red) and the permitted operational area (green).

1 IAQM, Guidance on the Assessment of Mineral Dust Impacts for Planning, 2016.

Figure 1-1: Sensitive Receptors



A review of aerial imagery concluded that there are no other sources of dust in the local area to be accounted for in assessment of potential cumulative effects.

1.1.2 Ecological Receptors

The Multi-Agency Geographic Information for the Countryside (MAGIC)[2] website was utilised to identify sensitive ecological sites in proximity to the Site. The following European or International designations were considered:

- Special Scientific Interest (SSSI)
- Special Area of Conservation (SAC);
- Special Protection Areas (SPA);
- RAMSAR;
- Local Wildlife Sites;
- Local Nature Reserves; and
- Ancient Woodland.

A single European or International designated ecological site was identified within 1km of the Site; Montgomery Canal (SSSI/SAC). The Montgomery Canal passes the site to the north, running from south-west to north-east, within approximately 410m of the Site boundary at the closest point.

2 www.magic.gov.uk accessed June 2020.

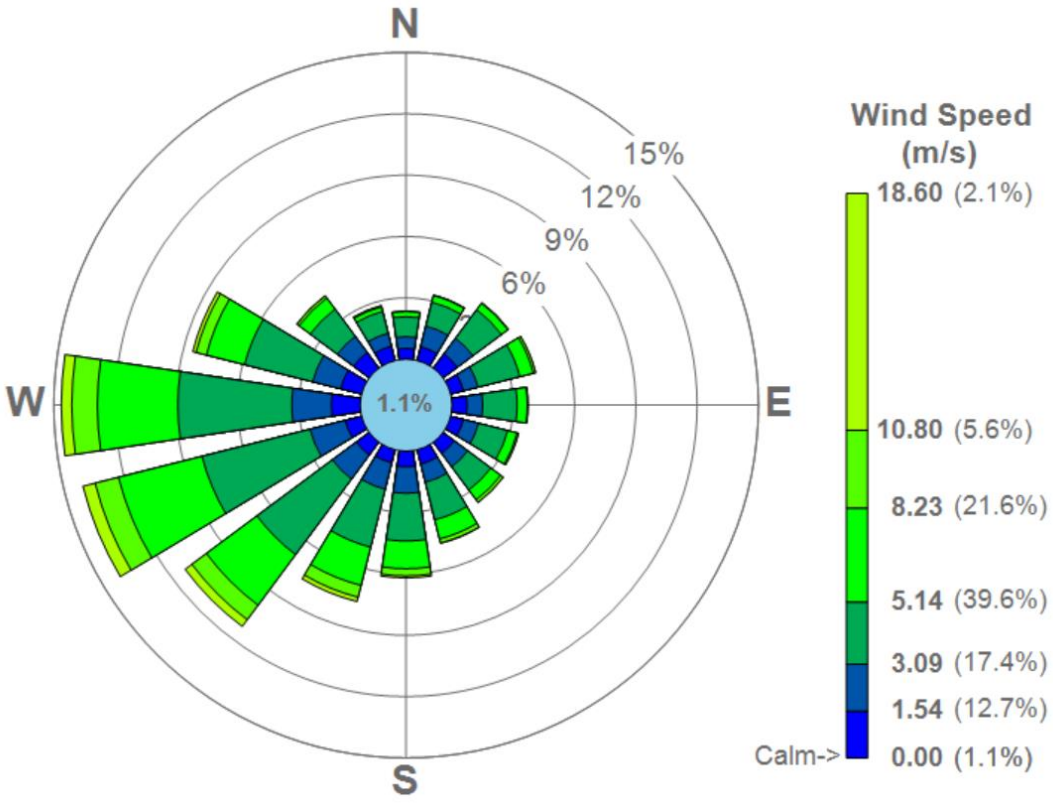
There are several areas of ancient woodland located within 1km of the site's boundary. The closest area lies approximately 550m north of the site. Additional areas are situated approximately 800m east of the site.

Drawing 001A illustrates all receptors within a 500m radius and a 1km radius of the site.

1.1.3 Meteorology

Wind speed and direction data for the Site is available in the format of the Numerical Weather Prediction (NWP) meteorological data based on the Site location (which was acquired for the Site for the previous odour monitoring study[3]). NWP meteorological data has been considered as there are no meteorological stations in proximity to the Site which are considered to be representative of the Site location. Wind speed and direction data for the years 2015 - 2019 (inclusive) is presented in **Figure 1-2**.

Figure 1-2: NWP Meteorological Data Wind Rose 2015 - 2019 Average



The wind rose shows that the majority of winds are from the west and to a lesser extent, the southwest. Research has indicated that rainfall greater than 0.2mm per day is sufficient to effectively suppress windblown dust emissions[4]. Relevant rainfall data applicable to the Site has been obtained from the Meteorological Office website[5].

3 SLR report reference: 416.00798.00038_North Powys Bulking Facility Odour Assessment
4 Guidance on the Assessment of Mineral Dust Impacts for Planning, Institute of Air Quality Management, v1.1, May 2016.
5 Meteorological Office, UK Climate Averages https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages Accessed June 2020.

Utilising the map of climate averages from the met office, the number of days with rainfall greater than 0.2mm is between 200 and 220 days per year (approximately 60%).

1.1.4 Other Potential Sources of Dust

A review of other potential sources of dust in the Site locale has been undertaken through use of aerial imagery.

No specific sources of dust emissions (such as industrial/commercial activities) are identified within the Site locale; however it should be noted that the land-use surrounding the Site and nearby sensitive receptors is primarily agricultural.

Considering the existing and infrequent nature of agricultural dust emissions (generated during periodic events when earth is disturbed by agricultural machinery), this source of potential dust emissions has not been considered further.

2.0 Operations at North Powys Bulking Facility

2.1 Deliveries

The North Powys Bulking Facility receives and stores a variety of material types prior to bulk removal. The material types received at the Site are primarily mixed municipal waste, food waste, dry mixed recyclables (cans, plastic, paper and cardboard), glass and green waste. Material is received at the Site via road by a fleet of 31 Recycling and Refuse Collection Vehicles (RRVs and RCVs).

2.2 Overview of Site Operations

The Site is accessed by road on the northern boundary via the B4386. The Site location is illustrated in **Figure 1-1**. The Site layout is presented in Appendix AQ5.

Food waste, mixed municipal waste, dry mixed recyclables, bulky waste and textiles is offloaded within the bulking facility in the Bulking Shed.

Green waste and glass is offloaded outdoors in designated bunded areas to the west of the Bulking Shed. All handling activities associated with these materials (tipping, stockpiling and bulk removal) take place outdoors within the designated bunded areas.

All bunded and enclosed areas in which material is handled are on an impermeable concrete surface. The detailed Site layout is presented on Drawing 002.

The Bulking Shed is accessed via 5 roller shutter doors and process air from within the building is extracted by 5 ventilation fans fitted on the north-eastern wall (2 louvres are fitted on the south-west wall to facilitate airflow into the building). These ventilation fans are designed to ensure that the Bulking shed is maintained under a state of negative pressure to minimise the potential for fugitive dust and odour emissions.

The Site also contains a number of facilities associated with supporting the fleet of RCVs such as an office, welfare facilities, a weighbridge, collection vehicle parking, a refuelling station, a vehicle wash and a staff carpark.

The bulking facility receives and processes up to 22,500 tonnes per annum (tpa). Received materials are removed from the Site in bulk via road (majority articulated lorries) for further recovery or disposal.

The Site operates between 7am and 6pm Monday to Sunday (including bank holidays).

2.3 Mobile Plant and Equipment

Particulate matter can be a by-product of internal combustion and the Site uses several items of plant with internal combustion engines. The following table lists the type, model and emission ratings for the mobile plant and equipment used on Site:

Table 2-1: Detail of the Mobile Plant and Equipment to be used at the Site

Description	Make	Model	Emission Rating
RCVs/RRVs	Dennis	Elite 6	Euro VI compliant
	DAF	LR Euro 6	Euro VI compliant
	DAF	LF45 Romaquip	Euro VI compliant
Street cleaning caged tippers	Various[A]	Various[A]	Unknown[B]
Other HGVs	Various[A]	26 tonne (various[A])	Unknown[B]
	Various[A]	15 tonne (various[A])	Unknown[B]
Mobile telehandler	Various[A]	Various[A]	Unknown[B]

Table Notes:

(A) The specific make and/or model of this type of vehicle which might be present at the site is currently unknown.

(B) As the specific make and/or model of this type of vehicle is currently unknown the emission rating cannot be determined.

All mobile plant and equipment is to be checked routinely and maintained as per manufacturer's recommendations to ensure correct and efficient operation.

3.0 Dust and Particulate (PM_{10}) Management

3.1 Responsibility for Implementation of the DEMP

A suitably trained Waste & Recycling Supervisor is on Site during operational hours who is responsible for the implementation of dust management measures where required. Responsibilities are allocated to specific personnel to ensure dust generation is effectively controlled as outlined in **Table 3-1** below.

Table 3-1: Dust Management Responsibilities

Actions	**Responsibility**
Monitoring meteorological forecast	Waste & Recycling Supervisor
Routine daily visual dust monitoring	Waste & Recycling Supervisor
Routine monthly visual dust monitoring	Waste & Recycling Supervisor
Coordinating plant area cleaning	Waste & Recycling Supervisor
Application of plant dust suppression	Waste & Recycling Supervisor
Completing dust event forms	Waste & Recycling Supervisor
Liaison with public and regulator	Waste & Recycling Supervisor, Waste & Recycling Area Manager
Coordinating dust management plan updates	Waste & Recycling Supervisor, Waste & Recycling Area Manager
*The procedure for the Waste & Recycling Supervisor to review feedback from visual monitoring will be to review the visual monitoring record in the Site Logbook.	

All personnel on Site understand their responsibility to ensure the generation of dust is minimised. Each employee is made aware of the importance of dust control and the most effective measures available to minimise such emissions either as part of the induction process, or as a specific training exercise. Training incorporates the following aspects:

- Key activities with the highest potential for dust generation;
- Methodology of visual dust assessments;
- Importance of unofficial visual dust assessments during everyday work and how to report visible dust emissions;
- How to respond to a complaint from a member of the public;
- The complaints protocol and escalation method;
- What to do in the event of a dust emission incident, and who to inform;
- The importance of the DEMP, its 'active' format and its location;
- Any dust monitoring methods incorporated on Site at the time;
- Overview of the prevailing winds and how this affects daily operations;
- Key aspects to look out for during routine operations with regard to dust generating activities;
- Cleaning regime on site (routine and intermittent);

- Regime of maintenance of onsite plant;
- Routine measures that can be incorporated into daily work schedules to minimise dust and emissions (i.e. no idling, minimise drop heights, traversing across base of stockpiles, covering of loads); and
- Additional measures that can be undertaken to minimise dust and emissions (i.e. notification of relevant person visual dust plumes are identified, remedial actions).

Refresher training is provided every 2 years.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

3.2.1 Sources

Potential dust sources at the Site are:

- Road vehicles entering and leaving the site, tracking material out onto pubic highway;
- Internal vehicle / plant movements within the site on the hardstanding surface;
- Debris falling from loaded (covered) vehicles;
- Unloading and loading of materials within the Bulking Shed;
- Unloading and loading of materials outside;
- Storage of mixed municipal waste, food waste, dry mixed recyclables, glass and green waste materials; and
- Exhaust emissions from onsite vehicles / plant and from offsite HGVs.

3.2.2 Potential Dust Sources and Magnitude

Potential magnitude of dust emissions from sources at the Site, with consideration of the design and application of control measures in place, are presented in **Table 3-2**. The review of potential dust sources is used to inform the assessment of risk and the selection of appropriate controls.

Table 3-2: Dust Release Inventory

Dust Source	Potential Magnitude of Emissions	Reasons
Vehicle movements – access road	Low	■ Paved access road. ■ Minimal trackout from Site due to hardstanding haul roads. ■ Municipal waste and recyclables generally have a low dust potential, reducing the significance of dust re-suspension by vehicles. ■ Anticipated to be 62 RCV/RRV movements per day (i.e. one waste collection per vehicle) and 24 waste export movements per week (i.e. 1 load per day of refuse, food, paper/card and cans/plastics with the additional 1-2 loads per week of glass and green waste).
Vehicle movements – internal haul roads	Low	■ Hardstanding haul roads.

Dust Source	Potential Magnitude of Emissions	Reasons
		■ Municipal waste and recyclables generally have a low dust potential, reducing the significance of dust re-suspension by vehicles.
Loaded vehicles	Low	■ Municipal waste and recyclables generally have a low dust potential, reducing the significance of dust re-suspension during transit. ■ Vehicles are covered when entering or exiting the site (sheeting or enclosed vehicles).
Material within the Bulking Shed (tipping, storage, removal)	Low	■ Municipal waste and recyclables generally have a low dust potential. ■ Tipping heights are minimised where possible. ■ Fugitive dust releases are contained within the building, preventing wind whipping (through application of a physical barrier around the stockpile). Air is expelled by fans along the eastern wall. ■ Roller shutter doors help maintain containment during vehicle ingress / egress.
Tipping, storage and removal of glass recycling	Medium	■ Glass recycling generally has a medium dust potential. ■ Glass is not crushed at this Site (storage for bulk removal only). ■ Fugitive releases during periods of dry / windy weather. ■ Glass recycling is stored in an impermeable concrete area. ■ Water suppression will be used to dampen the stockpile where required to mitigate fugitive releases (i.e. during periods of dry / windy weather).
Tipping, storage and removal of green waste	Medium	■ Green waste can have a high dust potential if stored for extended periods (i.e. if allowed to dry out and decompose). ■ Green waste is removed from the Site regularly. ■ Potential for fugitive releases during periods of dry / windy weather. ■ Green waste is stored in an impermeable concrete area. ■ Water suppression will be used to dampen the stockpile as required (i.e. during periods of dry / windy weather) to mitigate fugitive releases. ■ Restriction of vehicles movements within the bunded area, clear designation of stockpile base.

Dust Source	Potential Magnitude of Emissions	Reasons
Vehicle emissions	Low	■ The RCV fleet accessing the site is Euro VI compliant. ■ Small number of vehicles in use at the Site (see **Table 2-1**).

3.2.3 Source-Pathway-Receptor Routes

The pathway for the majority of the releases is atmospheric dispersion; primary from the dust/particulate source (e.g. wind whipping of stockpiles and handling operations). The source-pathway-receptor routes are detailed in **Table 3-3**.

Table 3-3: Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of Impact	Where Relationship Can Be Interrupted
Import and removal activities (by road)	Falling from lorries. Trackout from the Site onto the public road network by HGVs.	High sensitivity receptors located within 50m of the permit boundary.	Visual soiling, also consequent resuspension as airborne particulates.	Internal haul routes are tarmac, therefore the accumulation of debris on vehicles whilst on Site is anticipated to be minimal. All HGVs transferring material to or from the Site shall be covered (contained vehicles or sheeted).
Material within the Bulking Shed (tipping, storage, removal)	Atmospheric dispersion of exhaust air from the ventilation fans on the eastern wall.	High sensitivity receptors located within 140m of the Bulking Shed.	Visual soiling, also consequent resuspension as airborne particulates.	The building facilitates a good level of containment of dust emissions. Roller-shutter-doors in place to minimise escape of dust during vehicle ingress / egress.

Source	Pathway	Receptor	Type of Impact	Where Relationship Can Be Interrupted
Tipping, storage and removal of glass recycling and green waste (outdoors)	Atmospheric dispersion from external tipping, storage and removal operations.	High sensitivity receptors located within 90m of the designated glass and green waste storage areas.	Visual soiling, also consequent resuspension as airborne particulates.	Monitoring of meteorological conditions to ensure activities in proximity / upwind of offsite receptors are minimised / delayed during exceptionally dry / windy conditions. Minimise source strength by means of low drop heights and shielding of active stockpiles from wind whipping (retaining walls provide shielding from winds on 3 sides).. Water suppression will be used to dampen stockpiles where required (i.e. during periods of dry / windy weather), minimising the fugitive dust source potential. Restriction of vehicles movements within the bunded area, clear designation of stockpile base to mitigate resuspension of dust by vehicles.
Vehicle emissions	Atmospheric dispersion.	High sensitivity receptors located within 50m of the permit boundary and within 10m of the A483 or B4386.	Airborne particulates.	The RCVs/RRVs accessing the site are Euro VI compliant. Small number of vehicles in use at the Site (31 RCV/RRVs and small number of support vehicles see **Table 2-1**).

Table 3-4: Control Measures for Dust/PM^{10} and Other Emissions

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
Site / process layout in relation to receptors	The Permitted Operational Area is located in the centre of the Site. Majority of operations are taking place in an enclosed building eliminating pathways to sensitive receptors.	In combination with other measures to reduce dust and particulate generation this assists to maximise the distance between the source and receptor, reducing the pathway effectiveness.	Implemented at all times that the Site is operational.
Site speed limit and minimisation of vehicle movements on site	Reducing vehicle movements reduces emissions from vehicles. A speed limit of 5mph is enforced on internal haul roads which reduces re-suspension of particulates by vehicle movements.	Implement as part of good practice and incorporated into training / induction process. Clearly presented around the Site.	Used at all times that the site is operational.
Minimising drop heights for material	Minimisation of the height at which materials are handled reduces the distance over which debris, dust and particulates could be blown and dispersed by winds.	Implement as part of good practice and incorporated into the training process.	Implemented at all times that the Site is operational. During periods of prolonged dry and windy weather conditions, consideration given to visual assessment of dust plumes being generated from existing drop heights and reduced / ceased as required.
Good housekeeping	A consistent, regular housekeeping regime is in place to ensure Site is regularly checked and issues remedied to prevent and remove dust and particulate build up:	Easy to implement and requires minimal equipment. Encourages a sense of pride and satisfaction amongst the staff which	Implemented at all times that the Site is operational.

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
	The Bulking Shed floor is swept daily after loading operations have ceased. All bays and bay walls are cleaned/swept out (as appropriate) three times per week (as when bays are completely empty). All roads and operational areas are checked on a daily basis and swept daily, as necessary, in line with daily inspections to reduce dust emissions.	promotes vigilance and a positive culture.	
Sheeting of loaded vehicles (unless enclosed)	Prevents the escape of debris, dust and particulates from vehicles as they travel.	Vehicles would be checked upon entering and prior to leaving the Site.	Implemented at all times that the site is operational.
Surfacing of vehicle routes	Site haul roads and access roads are hardstanding. The operational areas have an impermeable surface.	Hardstanding surfaces reflect industry best practice.	Surfaces are periodically inspected for signs of wear or damage. Remedial works will be commissioned as required.
Special measures for materials with a high dust potential	It is anticipated that the majority of the material to be received at the Site will have a low-to-medium potential for the generation of dust emissions. Where it is identified that materials with a high dust potential have been received (i.e. very dry green material), a number of special measures will be put in place to reduce the handling and retention time of that material.	Where materials are identified to have a high dust potential are received/stored at the Site (such as very dry green waste), dust suppression (hose pipe from adjacent jet wash) will be utilised , to keep the material damp, thus reducing the dust potential. The Site operations are managed such that materials identified to have a high	Implemented where materials are identified to have a high dust potential.

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
		dust potential are removed from the Site within 24-hours.	
Marking of Stockpile Base	Clear delineation of stockpile areas minimises the risk of vehicles traversing across loose particulates on the ground and causing re-suspension or re-distribution across the Site.	Easy method to implement, with clear line marking provided on the impermeable concrete at the storage areas.	Implemented at all times when the Site is operational.
Restriction of vehicles on unmade ground	Restricting the number of vehicles allowed to traverse on non-hardstanding surfaces. This significantly reduces the potential for material to be tracked across the Site and resuspended.	There are no areas of non-hardstanding on Site. HGV access is limited to the hardstanding haul routes and is clearly signposted.	Implemented at all times when the Site is operational.
Dust Suppression	Water suppression can be a highly effective way of reducing the dust potential at-source, eliminating the pathway to the receptors.	Water suppression is available (via a hose pipe from adjacent jet wash) at all material storage areas.	Implemented as required, to be determined by the Waste & Recycling Supervisors by monitoring of meteorological conditions and identification of material received with a high dust potential. In the event that the water suppression is not operational for a short period of time (i.e. malfunction or maintenance) where it is identified to be required, handling and processing operations would be temporarily suspended.
Visual Dust Monitoring	Visual dust monitoring provides a cost-effective method of monitoring that	Daily visual assessment is undertaken by site operatives for airborne or	In the event that visual dust monitoring identifies dust being transported beyond the Site boundary and

Abatement Measure	Description / Effect	Overall Consideration and Implementation	Trigger for Implementation
	allows for pro-active, immediate response to dust generating events.	deposited dust. Daily assessments include the following areas: ■ Perimeter walk around for visible dust plumes travelling offsite; ■ If required, offsite walkover surveys; ■ Storage areas; and ■ Site haul roads, access road and public highway near Site exit. Site operatives who undertake visual assessments have appropriate training. Details recorded would include (as a minimum): ■ Weather conditions (qualitative wind speed, direction, rainfall) ■ Current site operations (location of activities); ■ Identification of any significant dust on site or dispersion beyond the site boundary; and ■ Additional mitigation measures put in place, if required.	mitigation measures fail to resolve the issue, all dust generating activities will cease until the source of the dust has been identified and steps taken to prevent the off-site emissions. Additional visual monitoring will be undertaken where: ■ Particularly dusty conditions are detected on site by operational staff; ■ Dust emissions are evident near the boundary during any activity; and ■ In response to complaints being received – in this situation off-site monitoring must also be carried out at appropriate locations.

3.3 Other Considerations

3.3.1 Water Usage / Availability

Usage of water for dust suppression is sporadic and short-term as it is heavily dependent on both weather conditions and the dust potential of received material. On this basis, it can be sensibly determined that there is not a supply issue with regards to water for dust suppression.

3.3.2 Water Usage / Availability During Drought

Water for use in dust suppression is sourced from the mains. There are no alternative sources of water at the Site. In the event of a drought it is anticipated that there will be no barrier to continue to draw mains water for use in dust suppression as per normal operations.

3.4 Visual Dust Monitoring

Visual dust monitoring provides a cost-effective method of monitoring that allows for pro-active, immediate response to dust generating events.

Visual assessment is undertaken on a daily basis by Site operatives for airborne or deposited dust. Daily assessments include, as a minimum, a visual assessment of the following areas (identified as areas / activities with the highest potential for dust generation):

- Perimeter walk around;
- If required, offsite walkover surveys;
- Material storage areas;
- Internal haul routes; and
- Access road and public highway near Site exit.

Based upon the size of the Site, it is considered viable for daily monitoring to include a walkover of the entire perimeter (permit boundary) as the routine. If this is not possible, a minimum of 8 perimeter locations shall be assessed, including a minimum of one per boundary (i.e. northern / western / southern / eastern). The location of the monitoring points will be determined based upon the wind direction and the location of dust generating activities being undertaken on Site / off Site at the time. The visual dust monitoring points are illustrated on Drawing DEMP 1.

All visual monitoring is recorded in the daily logbook and made available to NRW as required. Details recorded include (as a minimum):

- Weather conditions (qualitative wind speed, direction, rainfall);
- Current site operations (location of activities);
- Identification of any significant dust on site or dispersion beyond the site boundary; and
- Additional mitigation measures put in place, if required.

A visual dust monitoring checksheet is provided in appendix AQ4 as an example, although use of this sheet is not mandatory,

Site operatives who undertake visual dust assessments have appropriate training.
An increase in the frequency and scale of visual monitoring will be undertaken where:

- Particularly dusty conditions are detected on site by operational staff;
- Dust emissions are evident near the boundary during any activity; and/or
- In response to complaints being received – in this situation off site monitoring will also be carried out at appropriate locations.

The results of the visual dust monitoring will be monitored by the Site management. Where it is identified that significant dust levels are present on-site, or dust is visible beyond the Site boundary, Site management will ensure that the appropriate mitigation measures are adopted in response. In the event that visual dust monitoring identifies dust being transported beyond the Site boundary and mitigation measures fail to resolve the issue, all dust generating activities will cease until the source of the dust has been identified and steps taken to prevent the off-site emissions.

In the event that continuous offsite dust emissions are detected (i.e. more than 2 days in a row) alongside complaints being received by members of the public, correspondence with NRW will be undertaken to discuss subsequent steps.

It is not proposed to undertake any visual dust monitoring outside of the operational hours of the Site. However if monitoring was specifically required outside of the operational hours, a third-party monitoring company could be commissioned to undertake monitoring.

4.0 Complaints Procedure

Complaints may be notified to the Waste & Recycling Supervisor either during or after an event, by the complainant or indirectly through a regulator who was notified. Complaints will be reported to the relevant authorities by the operator and will include the following (recorded in the Site Logbook):

- Date, time, and name of complainant (if given);
- Nature of complaint;
- Locality of complaint; and
- A summary of investigation and actions taken and outcome.

Complaint response will have the objective of investigating the incident and preventing any continuing issue by putting in place additional control or management measures to prevent re-occurrence of incident and updating the DEMP. Complainants will be informed of findings of investigation and actions taken.

Investigations will include but not be limited to:

- Visit by Site management (i.e. Waste & Recycling Area Manager) to the location of the complainant to verify issue (if the complaint is made 'after' rather than 'during' a dust event this may not be possible);
- Review of Site activities at the time of the incident to investigate potential sources;
- If a dust event is occurring, or a recurring event, undertake more frequent on-site monitoring and instigate off-site visual monitoring and record findings;
- Review of control measures and management actions at time of incident;
- Review of meteorological conditions at time of incident; and
- Reporting of findings (either in pro-forma or Site Logbook).

All complaints will be acknowledged within 2 working days and a response provided in line with the Councils Complaints Procedure. An example Dust Event Form is included in Appendix AQ2. Where a number of complaints are received (or recurring complaints are received), the complaints investigation would be escalated to the Waste & Recycling Area Manager, who will lead an investigation seeking to rectify the issue at the earliest opportunity. The Waste & Recycling Area Manager may engage the services of a specialist contractor to investigate where appropriate.

4.1 Engagement with the Community

The Waste & Recycling Area Manager (or nominated representative) will act as liaison with the regulator and local community for issues relating to dust nuisance.

The nominated representative will respond promptly to all complaints by undertaking an investigation into the dust event, including weather conditions, operations on Site and mitigation measures in place at the time of the complaint.

Complainants will be informed of the investigation.

Following the receipt of a complaint, the details of the complaint will be recorded (an example of a compliant record form is presented in Appendix AQ3), a Dust Event Form

will be completed, and the results of the subsequent investigation kept in the Site Logbook.
Liaison with local residents and business can be undertaken through posts on the council's website / community council / PCC's social media channels as appropriate. PCC will also liaise with local residents and businesses via the County Councillors.

4.2 Management Responsibilities

There will be a trained Waste & Recycling Supervisor on site during operational hours, responsible for dealing with complaints (i.e. receipt, recording and investigation).

Contact details will be available at all times at the site entrance, with details (including a phone number / email address) provided for both operational hours and out-of-hour periods.

4.3 DEMP Update and Review

This DEMP is a controlled document, and forms part of the Environmental Management System (EMS). The DEMP will be reviewed on an annual basis. However, the DEMP is intended to be a 'live' document which serves as a reference during daily operations, and as such will be updated on a more frequent basis should the following occur:

- Significant changes are made to the plant or operational practices;
- The regulator requests that the DEMP is updated; or
- Complaints are received, which on subsequent investigation result in the identification of further control measures or remedial action, in addition to those set out within this DEMP.

Appendix AQ1: Accepted Waste Types

Table AQ1: Accepted Waste Types - Further Details

Waste Code	Description of Waste	Approximate Total Storage Bund Area (m^2)	Storage Location	Associated Dust Potential
200301	Residual waste	100	Bunded area located within Bulking Shed	Low
200303	Street cleaning litter			Low
200307	Bulky waste			Low
200111	Textiles			
200108	Food waste	40		Low
15 01 02, 15 01 04, 20 01 39 and 20 01 40	Co-mingled cans and plastic	167		Moderate
15 01 01 and 200101	Mixed paper and cardboard	100		Moderate
15 01 07and 200102	Mixed glass recycling	115	Bunded area located Outdoors	Moderate
200201	Green (garden) waste	115		High to low

The dust potential of the different types of material have been determined in reference to SLR's experience at similar sites across the UK. The dust potential of material is often linked to the moisture content of material; the higher the moisture content the lower the dust potential. Recyclables (specifically glass) tend to have a lower moisture content than mixed municipal wastes (which generally have a higher organic content).

It is noted that there can be a great deal of variation in the dust potential between loads of received green material. Green waste loads can be composed entirely of either new growth (low dust potential) or brittle and aged material (moderate dust potential).

Appendix AQ2: Dust Event Form

Staff Details	
Name of author:	
Event notified by:	
Description of event:	
Date:	
Time:	
Investigation Details	
Activities taking place during time of event:	
Dust mitigation techniques employed at time of event:	
Summary of weather conditions leading up to and during the event:	
Details of corrective actions:	
Notes:	

Closure	
Site supervisor review date:	
Site supervisor signature (to confirm no further action required):	

Appendix AQ3: Dust Complaint Form

Complainant Details	
Complainant Name:	
Address and postcode:	
Complainant contact details (telephone/ email):	
Date & time of complaint:	
Complaint reference number:	
Complaint details:	
Investigation Details	
Investigation carried out by:	
Investigator position/role:	
Date & time of investigation:	
Weather conditions at time of complaint and investigation:	
Wind speed and direction at time of complaint and investigation:	
Investigation findings:	
Feedback given to NRW and/or local authority?	
Date feedback given:	
Feedback given to complainant and/or public?	

Date feedback given:	
Review and Improve	
Improvements needed to prevent a reoccurrence:	
Proposed date for completion of required improvements:	
Actual date of completion (to be filled in once completed):	
If proposed date for completion of improvements was missed, state why:	
Does the dust management plan need updating?	
Date that the dust management plan was updated (if applicable):	
Closure	
Site supervisor review date:	
Site supervisor signature (to confirm no further action required):	

Appendix AQ4: Visual Dust Monitoring Checksheet

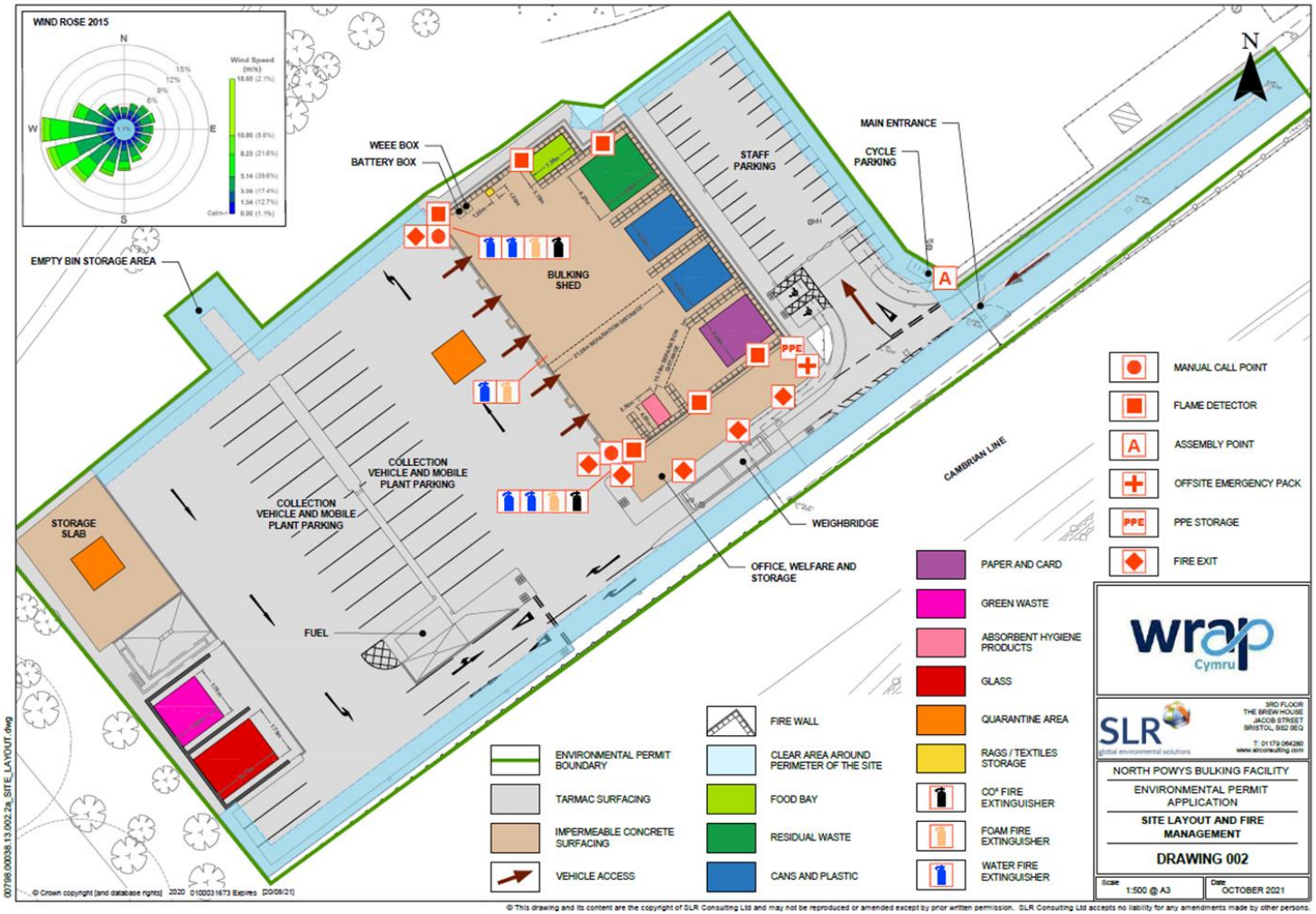
Background Information			
Person Undertaking Survey (& Position)			
Date:		Time:	
Description of Wind Strength (i.e. strong, gusty)			
Wind Direction			
Weather observations (i.e. sunny/overcast)			
Ambient temperature (degree Celsius)			

Survey Results			
Monitoring location (to be defined based upon wind direction)		Observations	
ID	Description (i.e. boundary)	Airborne dust visible on Site?	Airborne dust visible beyond Site boundary?
1		Y/N	Y/N
2		Y/N	Y/N
3		Y/N	Y/N
4		Y/N	Y/N
5		Y/N	Y/N
6		Y/N	Y/N
7		Y/N	Y/N
8		Y/N	Y/N
Dust visible on-site or beyond boundary?			
If dust visible, identify potential source(s):			

If dust is visible beyond the site boundary, or significant levels of dust are observed at the Site, the following remedial measures should be considered:	
Dust Suppression	Suppression measures should be adopted to wet down stockpiles or surfaces to reduce dust emissions.
Good housekeeping	Reduce dust emissions resulting from events such as overspill of stockpiles onto access roads through cleaning/sweeping.
Minimising of drop heights	Reduce the drop height of material to reduce resuspension of dust.
Enforcement of Site speed limit	Ensure vehicles adhere to the 5mph site speed limit to reduce resuspension of dust.
Vehicle sheeting	Ensure vehicles have sheeting in place over loads upon arrival (and continued movements) at the site.
Temporary cease of operations	If adopted mitigation measures are not effective, a temporary cease to those operations may be required
This is not an exhaustive list of measures.	

Summary of mitigation measures adopted (also fill in a Dusty event form)

Appendix AQ5: Detailed Site Layout Plan



www.wrapcymru.org.uk/CCP

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