Dust Management Plan

Plan version: **2**

Date of plan: **5th November 2020**

Site details

Site name: **Alperton Lane Waste Transfer Station**

Site address: **The Yard, Alperton Lane, Wembley, London HA0 1DX**

Operator name: **O'Donovan (Waste Disposal) Ltd**

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1.0 INTRODUCTION

This Dust Management Plan (DMP) has been prepared to support a variation application for Environmental Permit EPR/ LP3037WG held by O'Donovan Waste Disposal Ltd for the Alperton Lane site.

The location of the Site is shown on **Drawing 1** submitted with the EP Application. **Drawing 2** provides details of the Site layout.

O'Donovan has operated the Site as a transfer facility for non-hazardous waste from the construction and demolition industry since 2015. This update to the DMP is in support of an application to vary the permit to allow receipt of low volume hazardous wastes for bulking up pending onward transfer for recovery or disposal, and an increase in overall throughput at the site.

Existing waste streams will be processed using one or more of the following techniques:

- Placement and storage in a dedicated bay or container for bulking up pending transfer off-site;
- Initial manual picking to remove large recyclable items;
- Processing in a shredder to break materials down to improve segregation;
- Processing in a trommel which screens out certain items on the basis of their size;
- Manual segregation on a picking line; and
- Baling of RDF including storage of bales outside in a dedicated area.

The new waste streams proposed to be accepted will not be treated. They will be placed in storage in a dedicated storage building in sealed containers including metal 205 litre drums and other bunded containers, for bulking up pending onward transfer for recovery or disposal.

The Site lies within an Air Quality Management Area (AQMA), designated for PM_{10} and NO_x. Without the control measures identified in the Environmental Risk Assessment (ERA), which is provided in **Appendix H** of the EP Variation Application, this Site does have the potential for dust and particulate to be generated.

This DMP has therefore been developed to:

- Minimise the generation of dust/particulates produced by Site activities, as far as is practicable, through the implementation of appropriate best practice measures;
- Mitigate the potentially adverse impacts of the residual emissions of dust and particulates after all appropriate control measures have been applied, with due regard to the sensitivity of the local surroundings i.e. local businesses and residential areas located near the Site, local footpaths, the canal, local schools and recreational grounds;
- Monitor the effectiveness of the dust/particulate control measures, by means of on-site real-time continuous PM_{10} measurements (including a trigger alarm set at the level specified in the EP), and also by means of visual monitoring of dust emissions and deposition (daily Site walkover);
- Formalise the additional actions to be taken by the company when the alarm on the PM_{10} monitor is triggered;
- Investigate incidents of unusual dust/particulate releases, impacts and complaints, and implement measures to prevent further occurrences; and
- Inform continuing improvements relating to dust/particulate control to Site Management, and update the DMP to reflect such improvements.

This DMP forms part of the Environmental Management System (EMS) for the operation of the Site, and will be adhered to by all staff who will receive training in the contents of it.

This DMP was originally generated in accordance with specific guidance given to O'Donovan at the preapplication meeting with the Environment Agency, using an agreed template. The EA's guidance note M17 "Monitoring Particulate Matter in Ambient Air around Waste Facilities" Version 2 July 2013, was originally taken into consideration in the development of the plan; more recent Environment Agency Guidance 'Control and monitor emissions for your environmental permit' has also been consulted in this update.

1.1 Sensitive Receptors

M17 requires operators to identify potential receptors and their sensitivity to dust, and to identify the type of dust/particulates that will be generated by its activities.

The potential source of particulates from the Site is the movement (loading/unloading), storage, and processing or construction and demolition wastes. These tend to generate suspended particulates e.g. PM_{10} and its finer sub-set $PM_{2.5}$. M17 identifies that waste management operations that involve the mechanical generation of particulate matter (as opposed to combustion) are likely to release predominantly course particles; in its guidance for monitoring particulate matter around construction and demolition sites, the Institute of Air Quality Management (IAQM) recommends that priority is given to monitoring PM_{10}. As such O'Donovan has identified receptors based on their sensitivity to PM_{10}.

The new low volume hazardous waste streams to be added to the permit do not present any additional risk of dust generation. These consist of oily wastes, WEEE, paints/solvents and asbestos containing materials (double-bagged).

Sensitive receptors include, but are not limited to, hospitals, schools, childcare facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to high levels of dust and particulates.

There are a number of sensitive receptors within 500-1,000 m of the Site; they are sensitive for example because they are regularly used by people and therefore there is a potential risk of dust inhalation. Table 1 identifies sensitive receptors within 500-1,000 m of the Site.

These locations can be seen on Drawing 1 – Site Location Plan and Drawing 4 – Sensitive Receptors, submitted in Appendix A of the EP Variation Application.

Table 1: Distances to Selected Representative Sensitive Locations

Boundary	Closest property / sensitive receptor	Approximate distance to Site
North-northwest	Alperton Lane/May Gardens Residential area	25
Northeast	Alperton Recreational sports ground	35
Northeast	Light commercial/business area (mixed)	275
Northwest	Vicar's Green Primary School	275
Southwest	Football ground (part of Brentham Club)	500
South	River Brent and associated footpath	112.5 at closest pc
South-southeast	Residential area (including allotments and Lynwood Rc	300
West	Perivale Village	250

O'Donovan recognises that there are other potentially dust-emitting operations in close proximity to the Site that may also contribute to the AQMA. These have been identified and are listed in Table 2.

Table 2: Other Dust/Particulate Emitting Operators

Company	Address	Type of Business	Distance from Site Bc
Veolia – 3 sites	W links and 2 sites	Household, commercial and indus	W links site adjoining; 100
Biffa Wembley Waste Transfe	Marsh Road	Waste transfer	150

2.0 OPERATIONS

M17 states that for a waste material to generate airborne particulate matter there must be a release mechanism. For the Site this includes the movement of construction and demolition waste to and from the site, storage of waste on site, and the handling and processing of waste e.g. shredding, screening etc. These are considered in the following sections.

2.1 Waste Deliveries and Collections

Waste is delivered to Site by vehicles which enter and exit through the main Site entrance, shown on Drawing 2. These vehicles will be a mix of covered lorries and skip lorries. O'Donovan will require all vehicle loads to be fully covered to minimise the release of dust during the transportation of waste. Additionally, all loads will be received and processed within the confines of the waste transfer building.

It is recognised that vehicles can re-suspend particulate matter that has been deposited on roadways and hardstanding, in addition to the more direct emission of particulates in vehicle exhaust fumes. Specific dust control measures are detailed in the ERA in **Appendix H** and include:

- Housekeeping, including regular sweeping up using road sweepers of hardstanding (to remove deposited, accumulated dusts);
- Maintenance of site surfacing of good integrity with no areas of unmade ground;
- Hosing of vehicles upon exit/at wheel wash down area if required; and
- Site speed limit, 'no idling' policy, and minimisation of vehicle movements on Site.

2.2 Waste Processing

As described in Section 1.0, the waste is processed using one or more of the following techniques:

- Placement and storage in a dedicated bay or container for bulking up pending transfer off-site;
- Initial manual picking to remove large recyclable items;
- Processing in a shredder to break materials down to improve segregation;
- Processing in a trommel which screens out certain items on the basis of their size;
- Manual segregation on a picking line; and
- Baling of RDF including storage of bales outside in a dedicated area.
- The new waste streams proposed to be accepted will not be treated. They will be placed in storage in a dedicated storage building in sealed containers including metal 205 litre drums and other bunded containers, for bulking up pending onward transfer for recovery or disposal.

The locations of these activities are shown on Drawing 2 – Site Layout Plan. Specific dust control measures are detailed in the ERA in **Appendix H** of the EP Variation Application.

In summary, the building infrastructure is designed to prevent dust and particulate emissions. All waste is delivered, handled and processed inside the fully-enclosed (doors and bays) building. Fast-closing roller-shutter doors are in place on the building entrance. Picking line activities are further enclosed within a portacabin within the building.

Waste stored outside in bays is kept at least 0.5 metres below top of bay wall to minimise wind whipping; damping down can be employed if required.

Water-based dust suppression systems are in place and dust dampening down takes place at the dust source, not at the Site boundary. This water system uses harvested rainwater (tanks marked on Drawing 2).

3.0 DUST AND PARTICULATE (PM_{10}) MANAGEMENT

3.1 Responsibility for Implementation of the DMP

This DMP is part of O'Donovan's EMS. The implementation of the EMS is the responsibility of the management team. All staff are trained in the requirements.

The EMS is reviewed regularly and/or following any significant changes to operations. It will also be reviewed following any incidents, if required. Following review, changes are communicated to all staff.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

The operations at the Site that have the potential to produce dust and particulates are as follows:

- Vehicle entering and/or leaving the Site with mud on wheels, and tracking dust on to or off the Site;
- Debris falling off lorries which could arrive uncovered;
- Tipping of C&D wastes within the buildings, and dust/particulate clouds being generated and/or escaping from the buildings;
- Sorting of waste within the buildings and the dust/particulates which such handling can give rise to;
- Storage of segregated materials;
- Tracking dust on vehicle wheels out of the buildings;
- Particulate emissions from the exhaust of vehicles/plant/machinery on-site; and
- Generators, plant and other non-road going mobile machinery.

The ERA provided in **Appendix H** considers the source, pathway and receptor for each potential emission source.

Emission of dust can also be impacted by weather conditions. Site management will take into account the potential for weather conditions to cause increased dust emissions from the site when planning daily operations.

4.0 DUST MONITORING

4.1 Objective

M17 requires the operator to identify the purpose of the monitoring.

O'Donovan has identified that it is important to have the ability to identify if any problematic dust emissions in the area are as a result of its activities or not and therefore whether action is required to be taken in relation to the operation of the Site. This is particularly pertinent for O'Donovan as the Site is in an area where there are other potentially dust-raising activities being undertaken.

The aim of using real-time monitoring alongside visual inspection and complaints monitoring provides feedback to the operator on whether the dust control measures in place are operating effectively and enables identification of the impacts of the permitted activity.

4.2 Visual Monitoring

In accordance with M17, the first level of dust monitoring at the Site will be a simple subjective observation of visual dust emissions as part of a daily Site perimeter walkover. This daily walkover also takes into account current weather conditions.

The walkover will be carried out by competent persons in order to check that the prescribed dust management measures are being followed, that they are effective, and that dust emissions aren't affecting local receptors.

The results of this monitoring are recorded in the Site diary.

It is recognised that crushing activities are potentially particularly dusty, therefore during any such activities, competent persons shall carry out visual dust monitoring on location. If unreasonable dust levels are detected in respect of this, or another, activity, O'Donovan shall respond with dampening down at source along with additional visual dust monitoring. If the additional measures imposed fail and dust continues to escape the Site then the dust-generating activity or activities will be stopped.

4.3 PM_{10} Monitoring

PM_{10} monitoring shall be undertaken using a 24-hour dust monitor located in the northeast corner of the Site, within the permit boundary. This unit will also record wind speed and direction.

Dust monitoring data shall be subjected to a regular review and assessment against activities to identify those activities that are particularly dusty. Where possible, these activities shall be avoided on windy days.

In accordance with M17, systems shall operate to (or be certified to) a known standard to ensure they are reliable, e.g. the Environment Agency's (EA) MCERTS standard.

The system allows O'Donovan to identify opportunities to minimise its fugitive emissions but also, as the Site is within a developed, industrial area, demonstrate where it is not the sole source of emissions. The

installation of a continuous monitoring system rather than relying on contractors to take samples over a short period of time means the impact the Site may be having on local air quality can be better understood.

4.4 Monitoring Location

The location is shown in **Drawing 2** – Site Layout Plan and has been chosen based on the objectives of the monitoring exercise, in Section 4.1.

The guidelines set out in Box 4.1 of the M17 guidance have also been considered in setting the location, as shown in Table 3.

Table 3: Assessment of Monitoring Location

M17 Guideline	Proposed Location
The sampler should be in an open setting, away from large stru should be equivalent to at least 5 x building height (but no less	The sampler is 15 m away from the process building.
The sampling height should be no more than 10 m and ideally	The inlet of the instrument will be at a height of 4 m above grou wind direction instruments will be located so they are not shie obstructions.
The sampler should be open to the sky with no overhanging tr	Any overhanging or nearby trees/branches will be cleared to e not obscured.
Vehicles should not be left running within 5 m, no major sourc and no intermediate sources within 20 m.	The sampler is in the corner of the visitor and staff car park are movements in the immediate area; however the Site employs staff and visitors will be made aware of.
The surrounding area should not be undergoing major redevel	There is no major redevelopment underway in the immediate
The sampler should not be within 30 m of a very busy road (>3 per day), 20 m of a busy road (10,000 – 30,000 vehicle movem any other road (<10,000 vehicle movements per day).	The sampler is approximately 15 m from Alperton Lane. This is to place the sample down-gradient of the waste activity, in the direction.
The sampler must be accessible for servicing and calibration bu etc.	It is readily accessible/not obstructed but is within the permit b fenced and secure.

The monitor is located in the north-eastern part of the Site, within the proposed permit boundary, downgradient of the waste activity, in the predominant wind direction.

4.5 Operation of the PM_{10} Monitoring Equipment

The Site Manager is responsible for ensuring that all equipment is serviced and calibrated in accordance with the manufacturer's guidelines. This is carried out by a third-party contractor who is competent to do so. Between servicing and calibration, the equipment can be left to monitor continuously and does not need to be accessed by the operator.

The proposed action level, at which the alarm will be activated, is 100 µg/m^3. This was agreed upon with the EA at the pre-application meeting.

Site supervisors will be made aware of high levels of particulates via a flashing light on the wall of the site office and in the main building area.

O'Donovan shall review and improve dust management measures using the results of the monitoring, as follows:

- Identify Site activities at time of the alarm, to identify the likely source;
- Consider what steps can be taken to prevent this happening again;
- Record in the Site diary; and
- Update the management plan to reflect the preventative steps identified.

4.6 Quality Assurance/Quality Control and Record Keeping

The dust monitor will be subject to regular inspection, service and calibration. Records of calibration will be kept including qualifications of calibration house, methods and dates.

Routine inspection/servicing will be recorded in the Site diary. If this identifies that the equipment is damaged or not functioning as it should be, this will also be noted in the Site diary and arrangements made for its repair as soon as is practicable.

4.7 Reporting of Data

Data is retained at the Site, for review by the EA if required e.g. at Site inspection. More detailed analysis of the data will be provided to the EA following a complaint as part of the Schedule 1 Notification process required by the permit.

Where monitoring reports are required, these will include the following, as set out in M17:

- Site details – address, name of operator, type of process, planning consent reference;
- Report details – date of report, monitoring period to which it relates, author(s), name of organisation submitting it, evidence of QA/sign off;
- Monitoring details – scope and terms of reference, methodology, details of MCERTs/UKAS, QA system, records of servicing/calibration of monitor; and
- Results – a print out or tabulated results of data and time-series plots. Print outs will clearly show the instrument identity and site location.

4.8 Additional Detailed Monthly Reporting

If the 100 µg/m^3 (as a 5-minute average) is exceeded repeatedly, O'Donovan will carry out a more detailed investigation in order to work out the source of the emission, whether it be from dust/particulate sources on Site, sources of dust/particulates beyond the site boundary, background sources affecting the whole region, or more local sources.

This investigation may include the consideration of the data from other local air quality monitoring systems that will enable O'Donovan to identify whether if at times of high readings on the Site there are also high readings at other nearby sites. In this case, this would demonstrate that it was unlikely that the Site was the sole source of the dust emission.

If a monitoring report is required, the approach detailed in Section 4.7 will be followed.

5.0 ACTIONS WHEN ALARM IS TRIGGERED

When the "action level" alarm sounds the following actions will be taken:

- Site personnel assesses the Site activities and the nature of the waste handling and deliveries immediately prior to the alarm being activated, to work out what might have caused the alarm to be activated;
- If the source can be identified, the Site personnel will cease the dust-generating activity. If the source cannot be ascertained, the likely dust/particulate generating activity, e.g. waste shredding, will be suspended; and
- If the source is within the Site's control, Site personnel will take appropriate action in terms of dust/particulate abatement, to ensure that the alarm is not re-activated e.g.:
    - Investigate the source of the dust/particulates to prevent a re-occurrence;
    - Suspend operations which are not being carried out using best-practice controls as set out in the ERA;
    - Consider the use of hoses/bowsers to dampen down the dust; and/or
    - Log findings in the Site diary and submit a Schedule 1 Notification to the EA in accordance with the Environmental Permit.

If an effective abatement technique cannot be identified and implemented, and observed PM_{10} levels remain above the action level for six consecutive 5-minute mean readings (i.e. 25 minutes) concurrent with recorded wind directions suggesting that the source of emission could be from the Site activities, then operations will be suspended until measured PM_{10} concentrations drop below the action level of 100 $\mu g/m^3$ for six consecutive, 5-minute mean readings.

In all cases, any suggested amendments to the procedure from the investigation will be considered by the company directors and incorporated into a revised dust management plan (if not already included), to prevent a re-occurrence of the emission.

It is recognised that the alarm is not the sole indicator of a dust event at the Site; the continuous visual monitoring of potential dust sources and activities safeguard all play a very important part in managing dust and particulates.

6.0 REPORTING AND COMPLAINTS RESPONSE

Following receipt of a complaint the Site will analyse the dust monitoring data (including wind data) to identify if they are the source. If this is confirmed, the steps set out in Section 5.0 above will be followed.

A Schedule 1 Notification will be completed and submitted to the EA with details of the complaint and the initial steps taken. This will be followed up by submission of investigation details along with any actions required.

Complaints shall be responded to within two working days.

6.1 Engagement with the Community

The community was engaged with at the planning application stage for the Site, by the previous owners. This engagement will continue into the development and operational phases of the permitted waste installation. O'Donovan recognises the benefit of communicating regularly with residents and will engage with residents and businesses as required. No concerns have been raised by local residents.

6.2 Summary

This DMP has been generated for the purpose of:

- Minimising the generation of dust/particulates produced by Site activities, as far as is practicable for a waste recycling facility, using appropriate best-practice measures;
- Mitigating the potentially adverse impacts of the residual emissions of dust and particulates after all appropriate control measures have been applied, with due regard to the sensitivity of the local surroundings i.e. local businesses and residential areas located near the Site, local footpaths, the canal, local schools and recreational grounds;
- Monitoring the effectiveness of the dust/particulate control measures, by means of on-site real-time continuous PM_{10} measurements (a trigger alarm set at the level specified in the permit), and also by means of visual monitoring of dust emissions and deposition (daily Site walkover);
- Formalising additional actions to be taken by the company when the alarm on the PM_{10} monitor is triggered;
- Investigating incidents of unusual dust/particulate releases, impacts and complaints, and implement measures to prevent further occurrences; and
- Informing continuing improvements required in relation to dust/particulate control to Site Management at the Site, and updating the DMP if required, to reflect these improvements.

This DMP forms part of the EMS for the operation of the Site, and will be adhered to by all staff. It shall be reviewed regularly and/or following any significant changes to operations. It will also be reviewed following any incidents, and updated if required.

Following changes to the DMP, these will be communicated to all staff.