JOD Group

Dust and Emission Management Plan

Pegmoid Wash Plant, 31 Nobel Road, Eley Industrial Estate, Edmonton, London N18 3BH

July 2024

DUST AND EMISSION MANAGEMENT PLAN

Pegmoid Wash Plant, 31 Nobel Road, Eley Industrial Estate, Edmonton, London N18 3BH

J O'Doherty Haulage Ltd

Version:	1.0	**Date:**	09 July 2024		
Doc. Ref:	JOD – WP-DEMP-01	**Author(s):**	ML	**Checked:**	

Document History:

Version	Issue date	Author	Checked	Description
1.0		ML		Issue to client

THIS DOCUMENT WILL BE REVIEWED AS A RESULT OF ANY INCIDENTS WHICH MAY LEAD TO THE REQUIREMENT FOR IMMEDIATE REVIEW

Table of Contents

List of Appendices:

Site Information & Key Contacts List

Site Address:	Pegmoid Wash Plant, 31 Nobel Road, Eley Industrial Estate, Edmonton, London N18 3BH		
Site Operator:	J O'Doherty Haulage Ltd	**National Grid Ref:**	TQ 35569 93004

CONTACT	DESCRIPTION	OFFICE HOURS	OUT OF HOURS
Kieran O'Doherty	Director	0208 807 7722	07726 429 775
Kieran O'Doherty	Technically Competent Person		
Matthew Taylor	Technically Competent Person	07950 291 559	
Environment Agency Richard Fairclough House, Knutsford Road, Warrington WA4 1HT	Regulator		

1. Introduction

General Site Information

1.1 J O'Doherty Haualge Ltd operating as the JOD Group (JOD) operates a waste transfer station at Pegmoid Site, 29 Nobel Road, Eley Industrial Estate, Edmonton, London N18 3BH. The site is operated as a non-hazardous Household, commercial and industrial (HCI) waste transfer station with treatment. The site accepts a variety of non-hazardous and inert wastes from a number of sectors including municipal (household), commercial and industrial waste sources.

1.2 JOD has acquired land adjacent to the waste transfer station at 31 Nobel Road, Eley Industrial Estate, Edmonton, London N18 3BH. The intention is to operate a wash plant to process suitable waste material generated by the waste transfer station, to create recycled aggregate.

1.3 Wash plant operations will involve the crushing, screening and washing of suitable inert waste to produce soils, soil substitutes and recycled aggregates. The operations will be carried out using a processing plant specifically designed for this type of operation.

1.4 The site is located within the administrative area of the London Borough of Enfield and within the Air Quality Management Area (AQMA) declared by the local authority. The AQMA has been declared for Nitrogen dioxide NO_2 and Particulate Matter PM_{10}.

1.5 In general, the waste treatment processes carried out on site on the date of this plan include the following:

i. Crushing

ii. Washing (using wash plant)

iii. Screening/separation (using wash plant)

1.6 Given the nature of some of the wastes accepted on site, such as construction and demolition wastes, there is potential for dust to be generated through the site operations if there are no abatement controls in place. This is particularly true of the crushing operations. There is also potential for emissions to arise from mobile plant engines and the movement of vehicles and mobile plant within the site, which has the potential to give rise to fugitive dust if uncontrolled.

1.7 The site has been the location for scrap metal operations for several years, however, over the past 10 years the site has been entirely redeveloped to enable suitable controls to be in place to ensure all emissions can be controlled to acceptable levels.

1.8 The site has historically been used as a transport depot and storage of construction materials. In 2019 planning permission was granted for use as a scrap metal yard, which was operational on the site for approximately 3 years.

1.9 This Dust and Emissions Management Plan (DEMP) has been requested by the Environment Agency in response to an application for a new environmental permit for a recycling aggregate washing operation.

1.10 If additional processes are to be used at the site, the DEMP will be updated accordingly and sent to the EA for comment.

1.11 This DEMP identifies potential emission sources for dust and other emissions to air, the pathways by which dust and other emissions may be transmitted and how these emissions may be controlled. The DEMP should be followed by all operatives on site, but in particular the Site Manager and Compliance Manager should be familiar with this document and ensure all requirements of the Plan are followed/implemented at the site. The Site Manager and Compliance Manager should ensure that training relating to control of emissions to air is provided to or site operatives based on the DEMP.

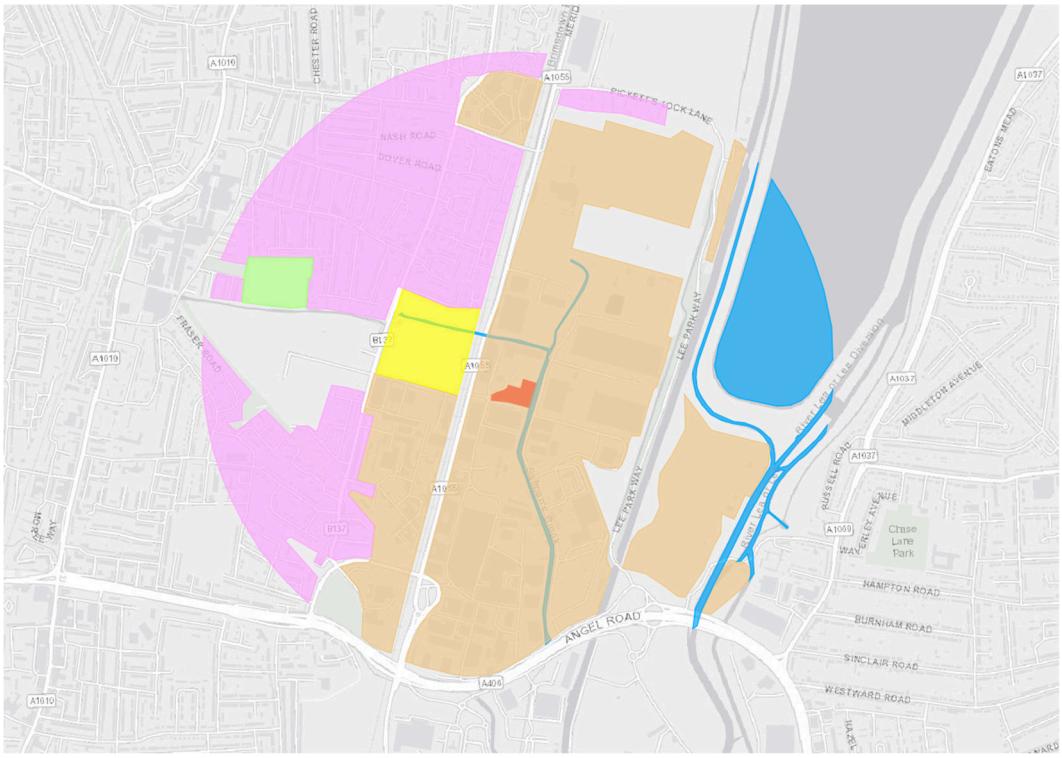
1.12 A copy of the DEMP will be kept at the site office for all site operatives to inspect or refer to.

Sensitive Receptors

1.13 A review of potentially sensitive receptors within 1 km of the site has been undertaken. The Site lies within a predominantly industrialised area of the London Borough of Enfield. There are industrial units surrounding the site, however there are residential properties and other sensitive locations within 1 km of the site.

1.14 The general land use within 1 km of the site has been identified on the Google Earth extract below. The site is identified as edged yellow with the industrial areas shaded brown, water areas shaded blue, residential areas shaded, recreational areas shaded yellow, and allotments shaded green.

1.15 The land use classification confirms the extent of the industrialised areas, but also the proximity of the sensitive receptors to the west of the site. This information has been going on to an OS base map, to confirm the distances from the site to the various areas.



1.16 Table 1.1 below confirms distances to selected representative sensitive locations from the site.

Table 1.1 Distances to Selected, Representative Sensitive Locations

Boundary	Closest property	Approximate distance to Pegmoid Road site boundary (m)
West	Recreational Area	110
West	Residential Area (Zambezie Drive)	280
West	Princess Wedding Hall (venue)	300
West	Residential Area (Jeremy's Green)	415
West	Tottenham Park Cemetery	400
North	Residential Area (Picketts Lock)	875
North	Lee Valley Leisure Complex	1000
East	Lee Parkway Walk	435

1.17 These areas have been selected due to their perceived sensitivity to dust and other emissions. Residential areas are particularly susceptible to dust from both an amenity and health viewpoint. High levels of particulates and dust can affect the young, infirm and elderly who suffer breathing difficulties. Significant levels of dust can also impact on the amenity value of an area e.g. dust affecting cars, windows, washing, drying outside etc.

1.18 The recreational areas have been identified, given it is outside space where people exercise who may be affected by high levels of emissions.

1.19 The cemetery due west of the site may suffer amenity issues from high dust deposition and the Princess Wedding Hall venue has been selected as a place where weddings take place and thus could be affected on an amenity level by high dust levels.

1.20 In identifying sensitive receptors, other potential sources of emissions to air must also be taken into account. Within the same 1 km area a number of sites have been identified which have the potential to impact on the sensitive receptors. These additional potential sources are listed in table 1.2 below.

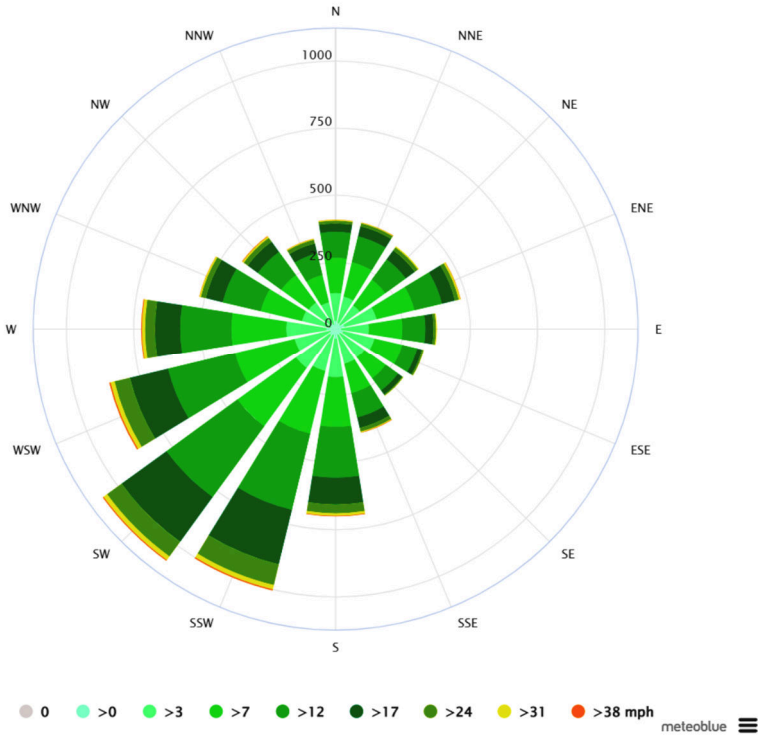
Table 1.2 Sources of Dust and/or other Emissions

Company	Address	Type of Business	Distance from Pegmoid Road site boundary (m)
Edmonton Incinerator	Private Road	Waste incineration	135
Cemex	Princes Road	Concrete production	210
AMI Waste	Stacey Avenue	Waste Transfer	375
London Concrete	First Avenue	Concrete Production	520
EMR	Derby Road	Scrap metal	700
Camden Plant	Lower Hall Lane	Aggregate Producer	560

1.21 The general location of these sites is identified on the oblique Google Earth Image below.

1.22 The sites identified are generally waste or aggregate/concrete operations which have the potential to produce fugitive dust. Diesel powered mobile plant employed at the sites would also generate some PM_{10} particulates, however, the major source of these are likely to be from the highway infrastructure in the area in particular the A406 that runs along the southern margins of the area evaluated under this Plan.

1.23 The prevailing wind directions for Edmonton are shown on the windrows below.



1.24 The wind rose has been generated by Meteoblue based on 30 years of hourly weather model data for the Edmonton area. The wind rose confirms that the prevailing direction is from the south west and west, which will generally ensure that any emissions to air are directed away from the nearby sensitive receptors identified.

2. AQMA

2.1 As indicated in Section 1 above, the site is located within an Air Quality Management Area (AQMA). Since December 1997 there is a responsibility each local authority within the UK to carry out a review and assessment of air quality in their area. The aim of the review is to make sure that national air quality objectives are achieved across the country which have been put in place in order to protect people's health and the environment.

2.2 If a local authority finds any places where objectives are not likely to be achieved, it must declare an AQMA and the authority will be required to put in place a Local Air Quality Action Plan.

2.3 The Pegamoid site falls within the London Borough of Enfield, who declared an AQMA in 2001 that covers the whole of the borough. The AQMA was declared for both nitrogen dioxide and PM_{10}. Within

the Enfield AQMA there are seven Focus Areas where air quality issues are considered to be most acute. The site does not fall within any of these focus areas.

2.4 Figure 1 below identifies the focus area locations within the borough and the red dot represents the Pegamoid site location.

Figure 1 – Enfield AQMA Priority Areas

2.5 The Air Quality Action Plan dated 2022, identified that pollution within the borough comes from a variety of sources. Where a significant proportion arising from outside of the borough and even the UK. Of the pollution that originates within the borough, the main sources of nitrogen dioxide are associated with road transport, industrial processes, and the power generators.

2.6 The main sources of particulate matter are from road transport, construction and biomass with resuspension also a significant source.

2.7 Within the AQMA, priority areas have been identified namely:

1) make active travel the natural choice (e.g. walking, cycling)

2) make more school trips safe, sustainable and healthy

3) reduce the impact of private vehicles through reduction in emissions

4) make the public transport network more accessible and the natural choice for longer trips

5) reduce emissions from both existing buildings and new development.

2.8 The Plan identifies that these priorities will be supported by such measures including;

- new cycle routes
- promoting safe active and sustainable transport to and from schools
- monitoring air quality and delivering interventions that address local issues
- managing growing demand for on street parking,
- improving the local public transport network.

2.9 As is evident from the key priority areas, the majority of concerns within the AQMA are associated with public transport and where emissions are associated with built development are predominantly associated with issues from heat and power sources.

2.10 JOD Haulage has a modern fleet of vehicles that are all Euro VI compliant and therefore do not significantly contribute to nitrogen dioxide or particulate emission issues within the AQMA.

2.11 There are a number of automatic air quality monitoring locations within the Borough. These are identified on Figure 2 below.

Figure 2 - Location of Automatic Monitoring Sites

2.12 The nearest monitoring station is located at ENF4 less than 1 km to the south of the site. Air Quality statistics presented on the London Air Quality Network website report that the annual mean PM_{10}

environmental objective of 40µg/m3 specified in the UK Air Quality Strategy was not exceeded in the five year period between 2017 to 2022. The annual mean PM_{10} concentration reported for the year 2022 was 16.18µg/m3. The daily mean PM_{10} environmental objective of 50µg/m3 was not exceeded during the years 2018 t0 2022.

2.13 Defra provide background maps to facilitate the review and assessment of local air quality. Annual mean background concentrations for PM_{10} are provided for each 1km x 1km grid for each local authority area. Estimated PM_{10} background concentrations for the years 2018 to 2020 for the data point closest to the site is presented in the table below:

Particulate Matter (PM10) Annual Mean (µg/m3)		
2020	**2021**	**2023**
18.75	**18.54**	**18.34**

2.14 The data shows that estimated background PM10 concentrations in the vicinity of the site comprise less than half of the annual mean environmental objective of 40µg/m3 specified in the UK Air Quality Strategy.

3. Operations at Pegmoid Wash Plant Site

General

Plant and Equipment

3.1 The table below details the plant/equipment on site in relation to the waste operations on site on the date of this DEMP production. Only trained operators will be permitted to drive/operate the plant/equipment listed below.

Item	Number	Function
Loading shovels	2	Loading/unloading/movement/sorting
360° excavator	1	Loading/unloading/movement/sorting
Mechanical treatment plant	1	Mechanical treatment of mixed waste
Crusher	1	Size reduction of bulky inert waste

Note: The plant/equipment on site may vary and additional equipment may be hired-in to cope with busy periods, larger jobs or jobs with specific requirements.

3.2 All plant will be stored on site and will only be operated by trained personnel.

Hours of operation

3.3 The site will operate according to the hours specified below:

Monday to Friday	06:30 – 17:30
Saturday	06:30 - 13:00
Sundays, Bank/Public holidays	closed

The company reserves the right to operate at the site for the permitted hours. This will not affect the findings or action points of the DEMP.

Waste Deliveries

3.4 All waste delivered to the site is via road, using HGVs. The waste will generally be delivered directly from the adjacent Waste Transfer Station. The HGVs and skip wagons are mostly operated by the company and will meet Euro 6 emission regulations. Given the site is located just outside the Ultra Low Emission Zone (ULEZ) it is anticipated that third-party vehicles delivering to site will also be Euro 6 compliant, given the main market area lies within central London. The company does not however control third-party vehicles delivering to site and therefore cannot guarantee Euro 6 emission standards apply to all vehicles entering the site.

3.5 All HGVs operated by the company employed Easysheet vehicle covering.

3.6 All recycled aggregate and any residual waste, leaving the site will be in sheeted HGVs. Typical wastes brought to the site are set out in Table 2.1 below. The majority of waste is brought in under the Construction and Demolition waste code.

Table 2.1 Typical waste types brought to Pegmoid Site

European Waste Code(EWC)	Product Description	Tonnes/week	Screening Area	External Storage	Process
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	5,000	Yes	Yes	Sorting Shredding Washing Crushing
Total		5,000			

Dusty Loads

3.7 The majority of waste brought to site is done so using JOD Haulage own vehicles on contracts under the control of the company. The waste is derived from pre-sorted construction and demolition waste and skip waste. Due to the known nature of the waste i.e. concrete/brick/clays, it is not considered to be a difficult waste stream in respect of dust generation.

3.8 There may be occasions where individual loads contain high proportions of dusty waste. Where individual dusty loads are identified at the point of supply/collection, the following procedures to protect against fugitive dust are implemented:

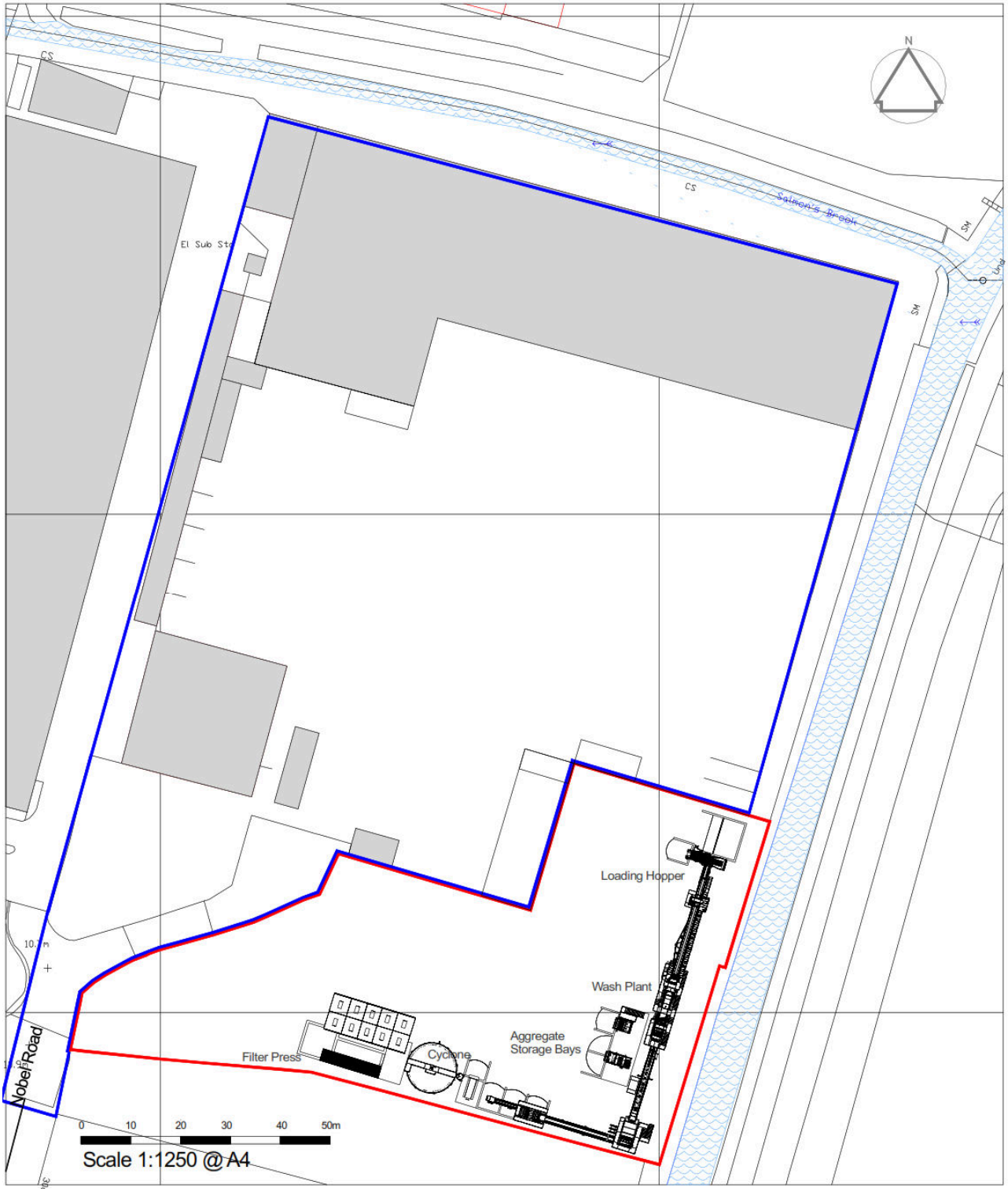
1) The load will be thoroughly dampened prior to moving to a suitable external stockpile bay.

2) Tipping heights will be reduced for dusty loads,

3) these loads will be processed at the earliest opportunity

4) the bay containing the dusty load will continue to be dampened prior to processing.

3.9 The general site layout is shown below.



3.10 The proposals are to operate a wash plant capable of treating up to 100tph of suitable inert, construction an demolition waste. This equates to a maximum throughput of 260,000 tonnes per annum.

3.11 A maximum of 50,000 tonnes of waste feedstock and product will be stored at the site at any one time.

3.12 The processing operations comprise the following. Suitable inert construction and demolition waste will be brought into the site either from the adjacent Waste Transfer Station or where the waste has been checked as being suitable for processing imported directly.

3.13 A 3D model of the proposals is shown below:

3.14 The waste will be stockpiled and loaded via a loading shovel into a receiving hopper of the processing plant. This includes a scalping screen to remove waste greater than 70mm. This >70mm material is then sent to the crusher for re-sizing. The <70mm travels along the elevating conveyor into the log wash. Above the conveyor is located an overband magnet which removes any ferrous metal from the waste for recycling.

3.15 The log washer provides high attrition scrubbing and cleaning to remove potential contaminants from the waste stream. The cleaned waste is transported via a conveyor to a grading screen. At the end of the conveyor is an Eddy Current Separator (EDS) which removes non-ferrous metals from the waste stream for recycling.

3.16 The grading screen permits three grades of washed stone to be produced.

3.17 Fines are directed to the cyclone that enables the recovery of the sand fraction (below 5mm) to produce 2 grades of sand.

3.18 The washed stone and sand fractions are stored in separate bunkers.

3.19 There are two additional bunkers for soil and contaminants such as wood and plastic, which is recovered as RDF at the adjacent Waste Transfer Station.

3.20 Water from the log washer is recovered within the plant. Water from the cyclone, which contains silt and clay washed from the waste is directed to the filter press. This mechanically removes the water

from the silt/water mixture to produce a clay which is stored below the filter press. The water is recirculated back to the cyclone.

3.21 The clay from the filter press can be used in non-hazardous or inert restoration works, dependent on the waste characterisation of the clay.

3.22 All stockpiles are to be contained within "Lego" block side push walls that are 5 m high (the maximum storage height of any stockpile on site). The sidewalls and 5 m high push walls provide containment to any of the stockpiles on site that will assist in the control of the production of fugitive dust. The containment will be supplemented by the use of water sprays when necessary, i.e. during dry and/or windy conditions to prohibit the production of dust.

3.23 The prevailing wind direction is from the south-west (as shown on the wind rose diagram above). Whilst the stockpile bays are angled against the prevailing wind, there is still potential for wind blow on the open face of each stockpile bay.

3.24 To reduce the risk of wind whipping each stockpile in generating fugitive dust, the side containment walks of each bay extends beyond the limit of each stockpile to provide protection from the action of the wind directly on each exposed stockpile face.

3.25 All plant involved in crushing of the waste is connected to a mains water supply and spray bars are fitted (as part of the manufacturer's specification) to dampen the material being processed. The spray bars are installed at strategic positions to ensure the material being processed is sufficiently damp prior to crushing and post-crushing during the segregation/sizing operations.

3.26 The processing, screening and grading of the crushed waste to produce recycled aggregate is achieved via a wet process, which prohibits the production of dust during processing.

3.27 As the majority of the waste for processing is delivered from the adjacent Waste Transfer Station, there is little scope for mud to be brought from the public highway.

3.28 There is a potential for mud to be generated through the processing of the construction and demolition waste. Although this is generally dry, when the stockpiles have been dampened to prevent the generation of fugitive dust, this can lead to the production of mud, which can be trafficked across the operational areas of the site.

3.29 The operational areas of the site consist of impervious and sealed concrete. The surfaced area trafficked by HGVs is kept mud free by the use of a road sweeper and tractor and browser, both of which are kept permanently on site. Accordingly, there is no necessity for a wheel wash. Given the site does not lead to mud being trafficked out onto the public highway.

3.30 The road sweeper is used daily at a frequency determined by the yard foreman. When appropriate, the road sweeper will be used beyond the site boundary to maintain the public highway. This does not happen on any frequent/regular basis due to the standard of cleaning within the site.

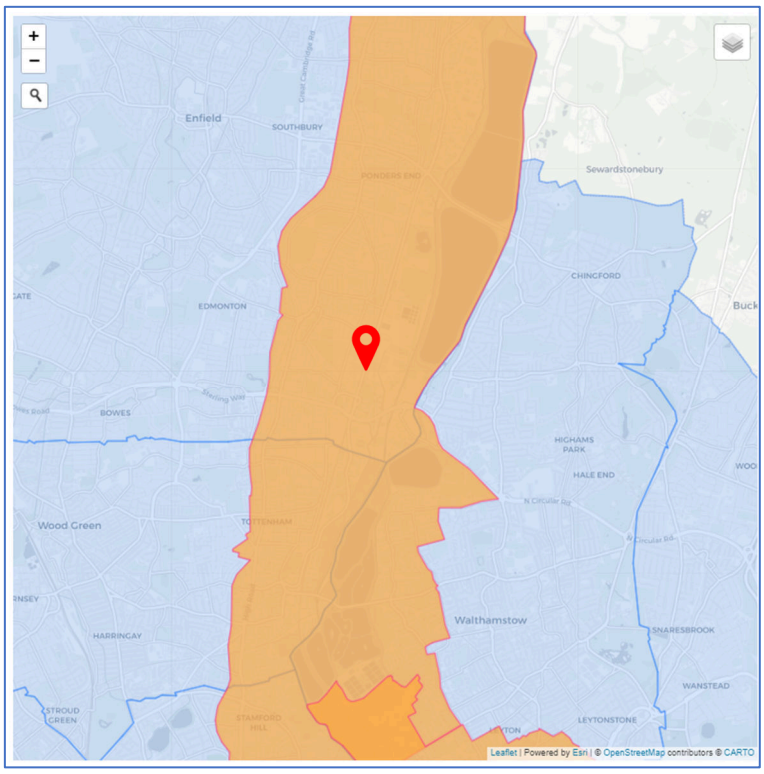
Mobile Plant and Equipment

3.31 Processing and movement of materials around the site is undertaken by mobile plant and equipment, which is generally diesel powered. Diesel engines produce Nitrogen dioxide gas, which is harmful to health and the environment therefore there is a drive to ensure that where possible, these engines are the most efficient to ensure levels of nitrogen dioxide are kept to a minimum.

3.32 These types of machinery are categorised as Non--Road Mobile Machinery (NRMM). The Greater London Authority (GLA) has adopted the London NRMM Low Emission Zone. From September 2020, all sites within Greater London operating NRMM are required to meet emission Stage IIIB as a minimum, and sites within the Central Activities Zone (CAZ) or Opportunity Areas (OAs) are required to meet emission Stage IV as a minimum.

3.33 The Stages referred to relate to EU emission stages based on power outputs of engine and how efficient the engine is.

3.34 The Pegmoid Wash Plant Site is located within the area covered by the London NRMM Low Emission Zone and specifically is also located within an Opportunity Area.



3.35 The drawing above is an extract of the London NRMM Low Emission Zone area. The light blue, confirmed the extent of coverage of the zone, whilst the Orange area is the extent of the Opportunity Area. The Pegmoid Site is identified by the red location marker and confirms it is sited within an Opportunity Area. Consequently, all NRMM must meet Emission Stage IV as a minimum

3.36 All the machinery operating at the site will be owned and operated by JOD Group. The group has various repair and maintenance contracts in place with the appropriate manufacturers/plant suppliers. In addition, the company also employs in-house engineers and technicians who are responsible for repairing and maintenance on all equipment including those that do not fall under manufacture contracted works scope.

3.37 All repairs and maintenance are carried out in accordance with the manufacturer's specifications and timings. Records of each plant item are maintained confirming the maintenance schedule, hours of operation, and what scheduled and non-scheduled work/repairs has been carried out.

3.38 The company's replacement strategy for all plant, machinery, and vehicles, is to replace them on a three- and five-year cycle or depending on new regulations, rules or legislation introduced (the NRMM Low Emission Zone being an example).

3.39 All diesel used to refuel the mobile plant and equipment is low sulphur diesel, which assists in the production of harmful particulates.

3.40 To reduce emissions, the company operates anti-idling campaigns, all drivers and visitors to site are informed of this. As a FORS GOLD & CLOCS Champion in relation to the HGVs the company operates, they are bound by rules and regulations to ensure the best emission standards are met at all times, this includes using only partners who adhere to the same standards.

4. Dust and Particulate Management

4.1 The Managing Director and Compliance Manager are responsible for the DEMP, its implementation, and its review.

4.2 The DEMP will be reviewed on a biannual basis or if there are verified issues with emissions to air affecting third-party individuals or sites/operations.

4.3 The Compliance Manager is the company's Health & Safety Manager and is registered with the IOSH Institution of Occupation Health & Safety as well as the CQI Chartered Quality Institute of Auditors and is an IRCA International Register of Certificated Auditor. The manager has the experience and knowledge to ensure the DEMP is properly managed, across the site and to undertake reviews of the DEMP when necessary.

4.4 The Company will employ air quality consultants specialists to provide training and review the DEMP in the event of repeated failings at the site. Repeated failings is considered to be two or more air quality control issues arising from operations at the site within any three-month period.

Sources and Control of Fugitive Dust/Particle Emissions

4.5 The operations at the site that have the potential to give rise to dust are considered to be:

1) Vehicles and plant moving around the site kicking up dust
2) Road vehicles tipping waste
3) Excavators/360s handling waste
4) Waste stored in bays - exposed to wind
5) Site surfaces (not just the ground include around plant and equipment)
6) Loading of recycled aggregate onto vehicles.
7) Particulate emissions from the exhaust of vehicles/plant/machinery on site.
8) Generators, plant and other non-road going mobile machinery.

4.6 In order for an emission to give rise to an impact, besides a source it must also have a pathway, i.e. how it is transmitted and a sensitive receptor. Table 3.1 below identifies all potential source pathway receptor routes relating to the operations at the Pegmoid Site.

Table 3.1

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Debris	falling off lorries	The public highway within 5km vicinity of the site.	Visual soiling, also consequent resuspension as airborne particulates	Enforce the covering of all lorries before leaving site.
Tipping, storage and sorting of wastes in the open	Atmospheric dispersion	Recreational Area Residential Area (Zambezie Drive) Princess Wedding Hall (venue) Residential Area (Jeremy's Green) Tottenham Park Cemetery	Visual soiling and airborne particulates	Minimise source strength by means of low drop heights, profiling and shielding of piles from wind whipping, positioning sources away from receptors. Also dampening of waste/materials stockpiles which are likely to generate fugitive dust.
Vehicle exhaust emissions	Atmospheric dispersion	Recreational Area Residential Area (Zambezie Drive) Princess Wedding Hall (venue) Residential Area (Jeremy's Green) Tottenham Park Cemetery Residential Area (Picketts Lock)	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength

		Lee Valley Leisure Complex Lee Parkway Walk		
Non road going machinery exhaust emissions	Atmospheric dispersion	Recreational Area Residential Area (Zambezie Drive) Princess Wedding Hall (venue) Residential Area (Jeremy's Green) Tottenham Park Cemetery Residential Area (Picketts Lock) Lee Valley Leisure Complex Lee Parkway Walk	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength

Table 3.2 measures that will be used on site to control dust/particulates (PM_{10}) and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure, provided that emissions	The presence of a high containment wall around the site together with large industrial buildings to the west, south and east,	A review of the site operations and location of these operations, specifically locations within the site will be undertaken if it is evident from visual inspection that dust and particulates are

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	from the source are not dispersed over significant distances.	significantly reduces the effects of wind blow on the site. The operations at the site will still lead to potential exposure of dusty materials to prevailing winds and the generation of PM10 particulates from mobile plant and equipment. In the event of dry and windy conditions. Additional abatement control measures are implemented. The site also prohibits the acceptance of particularly dusty loads, where the waste type cannot be properly controlled, or processed within the WTS. In the event that additional abatement control measures are still unable to adequately control emissions to air then the site will review operations and will either relocate or cease the activities until measures or conditions are in place that enable emissions to be properly contained or controlled.	leaving the site boundary or where the company has received complaints from third parties which have been verified.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Due to the tight configuration of the site, there is no requirement to impose a site speed limit. The company does employ a no idling policy and seeks to minimise vehicle movements wherever possible. The double handling of material is also avoided where possible and transfer	The company as a responsible operator only uses mobile plant, which is capable of meeting Stage IV emission standards and where possible higher. Plant is replaced on a regular basis and where possible replacement plant will be chosen that offers higher emission standards.	Vehicle movements and idling will be reduced as far as possible, this is written in the Management System.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	point of process to stockpile is kept as short as possible. To minimise the production of harmful particulates, low sulphur diesel is employed in all plant at the site. The site is located within an Opportunity Area of the London NRMM Low Emission Zone. This requires that all diesel powered plant is capable of meeting the minimum EU Stage IV emission standard. It is confirmed that all plant employed by the company does meet this standard. Traffic movements within the site are unlikely to be responsible for the generation of fugitive dust, due to the space constraints meaning that vehicle speeds will not be sufficient to generate fugitive dust (MPG guidance on dust considers 10mph to be the minimum speed).	The operation of mobile plant, its maintenance and management and replacement is part of the companies in general management system. Notwithstanding the physical contraints of the site, a maximum 10mph speed limit is in place which will prevent the production of fugitive dust. In addition, the frequent cleaning of the operational/trafficked areas of the site by road sweeper will minimise the risk of deleterious material accumulating leading to a risk of dust generation.	
Minimising drop heights for waste. Use of	Drop heights are minimised within the site operations to reduce the potential for generation of fugitive dust and particulates.	The location of potentially dusty loadout areas i.e. chutes from the crusher and screening operations will be within contained	These measures will be implemented at all times during operational periods of the site.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
enclosed chutes for waste drops/end of conveyor transfers and covered skips / storage vessels.	In addition, the crushing, and screening operations take place within enclosed bays, which further minimise the potential for fugitive dust generation. Loading shovel drivers are instructed to ensure potentially dusty loads are suitably dampened prior to loading out. Drop heights from buckets into HGV wagon bodies are also minimised for dusty loads to prevent dust generation.	areas. The site manager will be responsible for ensuring the effectiveness of containment. The reduction of drop heights is a standard employed by the company and integrated into the site management system.	Additional abatement measures will be employed as and when required, as detailed elsewhere in this assessment.
Good house-keeping	The site is relatively constrained in terms of operational areas and therefore good housekeeping is vital to enable the site to process waste received and ensure there is safe vehicle management. The housekeeping regime is enforced by the site management and regularly checked to prevent deleterious material building up within the site.	The planning and efficient operation of the site is enforced by site management and incorporated into the site's management system. All of the operational floor space of the site is to concrete hardstanding, which enables good housekeeping practice to be easily implemented. The site management regularly review operations to ensure high standards of housekeeping are maintained. The Site Manager will regularly inspect the site at least twice a day for housekeeping standards and report any issues to the relevant shift operatives responsible for their areas of the site as and when necessary.	Good standards of housekeeping are expected by the company at all times. Where there is a failure to maintain high standards, then either additional training or resources will be provided to ensure the required standards can be met.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		All operatives working within the site are reminded of their obligations to achieve high standards of housekeeping.	
Sheeting of vehicles	This prevents the escape of debris, dust and particulates from vehicles as they travel.	All HGVs transporting waste operated by the company will have an integrated sheeting system and its use is rigorously enforced within the company's management system. All skip waste brought to site will only be accepted if it has been suitably secured and sheeted. In the event that any loads are not properly secured or sheeted, then they will be refused entry to the site. If the driver is employed by the company then training will be given. For repeat offenders, disciplinary action will be taken.	The safe securing of all loads into the site and sheeting of all loaded vehicles leaving the site is mandatory and rigorously enforced.
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events. Certain operations within the site, such as, crushing may need to be temporarily suspended if even with the benefit of abatement measures dust emissions cannot be adequately controlled.	In the event that cessation of operations is required on a regular basis i.e more than twice within any four-week period, then a review of the site operations will be undertaken to establish whether longer term control measures can be implemented or whether an alternative location within the site may be required.	The review of operations following is cessation due to high winds will be detailed within the DEMP. Any action taken as a consequence of the review will also be noted within the DEMP.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Easy to clean concrete impermeable surfaces	The whole of the operational area of the site is concreted, providing a level impermeable surface which is easy to maintain/keep clear of any deposition of dust/mud.	Maintenance of the concrete surface is essential in order to prevent the breakup of the surface leading to poorer control of deleterious waste/mud across the site. As part of the daily site inspection, the operational areas of the concrete hardstanding will be inspected. Any defects will be reported in the site's daily log and reported to the site manager and repairs undertaken within 10 working days.	The site surface is made entirely of impermeable concrete which is maintained and cleaned on a regular daily basis.
Minimisation of waste storage heights and volumes on site	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised. The maximum height of waste stockpiles at the site is limited to 4 m. This is also conditioned via the site's planning permission.	Likely minimal return on potentially costly layout changes. The amount of waste that can be managed on site without causing dust and particulate pollution should be identified in the management system and may have to be reduced if it is considered an appropriate measure	The stockpile bays have a maximum height of 4 m to each sidewall which enables the easy determination as to whether piles are too high. The site manager will ensure that stockpile heights are maintained below 4 m and checks are carried out daily. Where stockpiles are above 4 m, then steps will be taken immediately to reduce the height of the stockpiles.
Remedial Measures			
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles. Road sweeping vehicles damp down dust and particulates whilst brushing	Easy to apply but less effective than other measures. Should be covered in the management system and procedures and implemented thoroughly.	a. A road sweeper is used daily around the yard to clear the site surface of mud, dust and litter and manual sweeping is carried out within the building as part of general housekeeping. This is carried out all the time the site is

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	and collecting dust and particulates from the road surface, particularly at the kerbside. This may generate dust and particulate movement that may become a Health and Safety issue if the filters and spray bars on the sweepers are not maintained.		operational. The road sweeper is owned by JOD.
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	Quite water intensive. Can reduce the calorific value of the material which should be considered if sent for energy recovery/biomass type operations. Maintenance should be covered in the management system and procedures.	Water suppression with hoses is used when necessary, i.e. in particularly dry or windy weather on those stockpiles that may generate fugitive dust. The Site Manager will be responsible for ensuring appropriate implementation.
Water suppression with mist sprays	Installation of mist sprays around sites, at building entrances/exits and within buildings at point source emissions like conveyors, trommels etc. It can also assist in the damping down of dust and particulates, therefore, reducing emissions from site.	Very effective at controlling point source emissions of dust and particulates. Can be installed to conveyors and areas where waste is dropped. 'Halo' rings can be fitted to conveyor drops on concrete crushers and screeners to minimise dispersion. Not effective for use at site boundaries. Uses less water than water bowser Maintenance should be covered in the management system and procedures.	Mist sprays are employed along the southern open front of the WTS to ensure any particulates generated are not permitted to become fugitive. The spray curtain is used when appropriate i.e. when there is potential to generate particulates (i.e. very dry or dusty loads) when the weather conditions are dry or windy.
Water suppression with bowser	Using bowsers is a quick method of damping down large areas of the site with large water jets. This method could also be used on easy-to-clean, impermeable concrete surfaces.	Highly water intensive and more likely to minimise dust and particulates on the ground that is at risk of being re-suspended rather than already airborne dust and particulates. Very effective at dampening down haul roads and large surface areas. Can also come with	A mobile bowser will be available on site and will be used when appropriate i.e.. during particularly dry spells as an additional aid to damp down waste and site surface.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		hose attachments and other attachments to increase its versatility. Can reduce the calorific value of the material which should be considered if sent for energy recovery/biomass type operations. Maintenance should be covered in the management system and procedures.	

Visual Dust Monitoring

4.7 Routine dust monitoring will be carried out twice a day or more if necessary. This will be dictated by the prevailing weather conditions and or whether there have been complaints regarding the site and dust emissions.

4.8 There are no set locations for dust monitoring, and the inspections are visual only. The nature of the operations i.e. predominantly a wet-process operation with limited potential for fugitive dust generation, visual inspection is considered sufficient. In the event, however, that this changes and there are complaints regarding dust and particulates from the site affecting sensitive local receptors, then the company will review this DEMP part of which may be to install dust monitoring equipment at appropriate locations around the site.

4.9 The use of monitoring equipment will be decided through consultation with the company's environmental consultants and the EHO.

4.10 If visual inspection indicates that dust is being generated by any specific activity within the site then action will be taken to resolve the problem. Generally, this will be to dampen down the material/waste or cease the activity until it can be carried out without generating fugitive dust that escapes the site. Additional actions may include prohibiting the acceptance of certain wastes from suppliers which are known to be particularly dusty.

4.11 Visual monitoring will be undertaken by the Site Manager or trained staff. The inspections will be taken at various locations around the site. This will be dictated by the location and nature of potentially dust generating operations at the time.

4.12 Visual monitoring is considered to be the most effective method of detecting as quickly as possible emissions of particulate matter throughout the working day and thus facilitating the prompt assessment of such omissions and implementing additional/alternative control measures as considered necessary. The effectiveness of the additional measures for controlling the particulate emissions identified shall be assessed during subsequent inspections, which will be undertaken immediately following the implementation of these additional control measures.

4.13 Any issues that are observed will be reported to the Site Manager who will be responsible for investigating the cause and implementing any remedial action as necessary. The results of these inspections and the remedial measures taken will be recorded in the site's daily log.

4.14 Operational staff will be trained to be aware of and to identify visual release of particulate matter so that based on the activity producing the fugitive emissions, its location within the site and the prevailing weather conditions at the time the appropriate control measures can be selected. Training will be provided by a suitably trained person experienced in the visual assessment of particulate matter emissions from waste facilities. All staff will be subject to continue performance reviews, which will include an assessment of their general environmental awareness.

4.15 Site staff will report any visible dust emissions that are observed to the Site Manager who will be responsible for investigating the cause and implementing any remedial action as necessary. Incidents and remedial measures taken will be recorded in the site's daily log. The senior management team will review the visual monitoring results on a weekly basis.

Unfavourable Weather Conditions

4.16 In the event that fugitive dust is identified leaving the site despite the mitigation measures outlined in this plan being implemented as a consequence of unfavourable weather conditions, i.e. dry and windy then those operations which are responsible for the fugitive dust generation will cease until additional measures can be put in place to adequately control the dust or there is a change to the weather conditions.

5. Particulate Matter Monitoring

5.1 The management and monitoring of particulate matter will be undertaken by visual assessment. An action plan will be implemented on the basis of either an unacceptable visual emission of particulate matter has been identified or if a complaint has been received in relation to emissions to air from the site. An unacceptable visual emission of particulate matter from the site comprises observation of dust or particulate matter leaving the site boundary. The initial observation made by the site personnel will be verified by the Site Manager (or any authorised deputy).

5.2 If an unacceptable visual emission is observed then the action plan set out below will be implemented. If a complaint has been received after the activity that may have contributed to the complaint has ceased, an investigation into the complaint will be based on a review of the information and observations recorded at the site at the time in which the complainant observed the event in question. The timescale for implementation of the action plan will therefore vary dependent upon the circumstances upon which it is triggered.

Action Plan

5.3 the Action Plan will be reviewed every six months or in the event of an incident occurring. In the event of an unacceptable visual emission of particulate matter generated by site operations is observed by site personnel leaving the site boundary, the event will be investigated immediately by the Site Manager.

5.4 If the review establishes that the emissions are attributable to activities being undertaken at the site, action will be taken to control the emissions, including, where relevant:

- the activities leading to the emissions ceasing until the matter is rectified and or prevailing weather conditions permit,
- identify whether there are other activities being undertaken at locations other than at the site and estimate the extent to which these other activities may contribute to the visual emissions observed on the site,
- in the unlikely event that routine control measures employed at the site are not sufficient to control particulate matter emissions consideration will be given to further measures to minimise and control them.

5.5 In the event of a complaint relating to dust and particulate matter being emitted from the site, an investigation will be undertaken immediately to determine the source. The investigations will include:

- confirmation of the meteorological data available which will assist in establishing whether the emissions are potentially as a result of the operations at the site and or whether they are a contributory factor,

- identified from the site log when activities were undertaken at the time at which the complaint event occurred and in which location at the site and review the waste operations and type of waste accepted and handled at the site on the day,

- if it is established that emissions were attributable to activities undertaken at the site then the operational procedures will be reviewed and improvements implemented where possible. Additional training to site personnel and third-party contractors to improve the level of control and minimise future emissions will take place. One of the control measures will be to cease acceptance of the waste type or the processing operations until appropriate controls can be implemented,

- the senior management team will provide a review of all complaints. If a number of complaints are received over a prolonged period (i.e. more than two complaints over a two-week period, which then takes into account different waste streams/prevailing weather conditions) the operations will cease until satisfactory remedial action has been undertaken.

- The actions taken as a consequence of any complaints received will be communicated to the Environment Agency. The nature of the complaint, the findings of any investigation and the actions arising from the investigation will be recorded.

Engagement with the community

5.6 if the site is confirmed to be causing an impact on local businesses and/or any sensitive receptors, steps will be taken to reassure them that the issue is being dealt with, and they will be informed of the progress and outcome of any investigations and actions taken.

Reporting of Complaints

5.7 A complaint form will be used to log complaints, feedback will be given either in person to the complainant or over the phone or via email. Complaints will be reviewed to ensure that the cause of the problem does not re-occur.

5.8 A complaints received in relation to dust or particulate emissions will be recorded on the complaint form shown in Appendix II.

5.9 The following details as a minimum will be completed on the form:

- the name and contact details of the complainant will be requested

- each complaint will be given a reference number.

- The complainant will be asked to give details of

    - the nature of the complaint,

    - the time the incident was first noted

- the duration of the incident
- the frequency of the incident
- whether it is the first time the problem has been identified
- confirmation of what prompted them to complain

5.10 The member of staff completing the form will then if possible, make a note of the following:

- the prevailing weather conditions at the time the problem was identified
- the strength and direction of the wind
- the activity on the site at the time the complaint was detected

5.11 Following any investigation, the complainant will be contacted with the next relation of the source of the complaint. If identified and any action taken to prevent re-occurrence of the problem in the future. If the complainant is unhappy about the outcome, or unwilling, to identify themselves then they will be referred to the appropriate department of the Environment Agency or Local Council EHO.

5.12 Following any complaint, the complaint procedure will be reviewed to establish if changes are required, or if new procedures need to be put in place.

Appendix I – Dust Complaint Form

Dust Complaint Form

Customer Details	
Customer Name -	
Address – **Postcode -**	
Customer Contact Details -	
Tel -	
Email -	
Date -	
Complaint Ref Number -	
Complaint Details -	

Investigation Details	
Investigation carried out by -	
Position -	
Date & time investigation carried out -	
Weather conditions -	
Wind direction and speed -	
Investigation findings -	
Feedback given to Environment Agency and/or local authority -	
Date feedback given -	
Feedback given to public -	
Date feedback given -	

Review and Improve	
Improvements needed to prevent a reoccurrence -	
Proposed date for completion of the improvements -	
Actual date for completion -	
If different insert reason for delay -	
Does the dust management plan need to be updated -	
Date that the dust management plan was updated -	

Closure	
Site manager review date	
Site manager signature to confirm no further action required	

Appendix II - Daily Dust Check Sheet

Dust Check Sheet

Daily Dust Monitoring Check Sheet		
Date		
Monitoring		
Carried out by -		
Position -		
Weather conditions -		
Wind direction and speed -		
Location	**Dust Visible (y/n)?**	**Activities Causing Dust**
Monitoring Location 1		
Monitoring Location 2		
Monitoring Location 3		
Monitoring Location 4		
	Alarm triggered?	**Activities Causing Dust**
PM10 Monitor		
Actions Taken		
Closure		
Site manager review date		
Site manager signature to confirm no further action required		

Page left deliberately blank