

DUST MANAGEMENT PLAN

Moss Lane, Worsley, Manchester, M28 3LY

UBU Environmental Ltd

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1 Introduction

- 1.1.1 Oaktree Environmental Ltd have been instructed by UBU Environmental Ltd (the Operator) to prepare this Dust & Emissions Management Plan (DEMP) for the site situated at Moss Lane, Worsley, Manchester, M28 3LY. The national grid reference for the site is SD 74270 03644.
- 1.1.2 The permit boundary is illustrated on Drawing No. MOSS/3448/02 Permit Boundary Plan. All references to 'the site' in this DEMP refer to the associated operations, infrastructure, plant, and equipment within this boundary.
- 1.1.3 The site is operated in accordance with the requirements of Environmental Permit ref. RP3498CT (the Permit). This DEMP has been produced to accompany a variation application for the Permit. The site has long been established as a physical treatment of waste facility with the CDE Enviro wash plant being operated since 2017.
- 1.1.4 The site is operated as a physical treatment facility (PTF) for non-hazardous construction and demolition waste and street cleaning residues to produce soil, soil substitute and aggregates.
- 1.1.5 Treatment activities consist of the following:
- a) Screening (by using appropriate mechanical screening plant and equipment).
 - b) Crushing (by using appropriate mechanical screening plant and equipment).
 - c) Blending (to produce soil, soil substitute and aggregate product).
 - d) Washing (to remove contamination and separate materials).
 - e) Centrifuging
 - f) De-watering

1.2 Hour of Operation

- 1.2.1 The site will be open during the following hours for the delivery, receipt, and processing of waste:

Monday to Friday	07:00 – 21:00
Saturday	07:00 – 16:00
Sunday & bank holidays	Closed

- 1.2.2 The only activities on site which will be permitted outside of these hours are onsite maintenance works, emergency deliveries of waste / plant / machinery and general office use.
- 1.2.3 During times where the site is closed or not in operation, the site will be locked and secured to prevent unauthorised access.

1.3 Content of the Dust Management Plan

- 1.3.1 This DMP provides detailed information on the sources, risks and mitigation measures related to the potential dust emissions from the operations undertaken on Site. This DMP has been prepared in accordance with the Environment Agency guidance “Control and monitor emissions for your environmental permit” February 2016 (last updated 24th November 2022).
- 1.3.2 This DMP outlines the main sources of potential dust emissions at the site, the mitigation measures to be used to reduce the risk of dust and the procedure for monitoring and reporting of any dust emissions that have the potential to leave the site boundary.
- 1.3.3 This DMP will allow the Operator to implement an action plan should the site operatives detect the presence of airborne dust that has the potential of escaping beyond the site boundary, receive complaints, or should the EA suspect dust emissions from the Site during an inspection.

- 1.3.4 In addition to this DEMP the site is managed in accordance with a fully comprehensive Environmental Management System (EMS).

1.4 Relevant Legislation

Air Quality Management Area (AQMA)

- 1.4.1 The system of local air quality management (LAQM) was introduced under the Environment Act 1995. LAQM requires local authorities to periodically review and assess the current and future quality of air in their areas. Where it is determined that an air quality objective is not likely to be met within the relevant time period, the authority must designate an AQMA.

- 1.4.2 The site is not located within an AQMA.

Low Emission Zone (LEZ)

- 1.4.3 An LEZ is an area that has restrictions on the type and age of vehicles permitted in it, this prevents high levels of pollution emitting vehicles from entering and operating within the zone with the aim of improving air quality. High polluting vehicles are required to pay a charge to enter the zone.

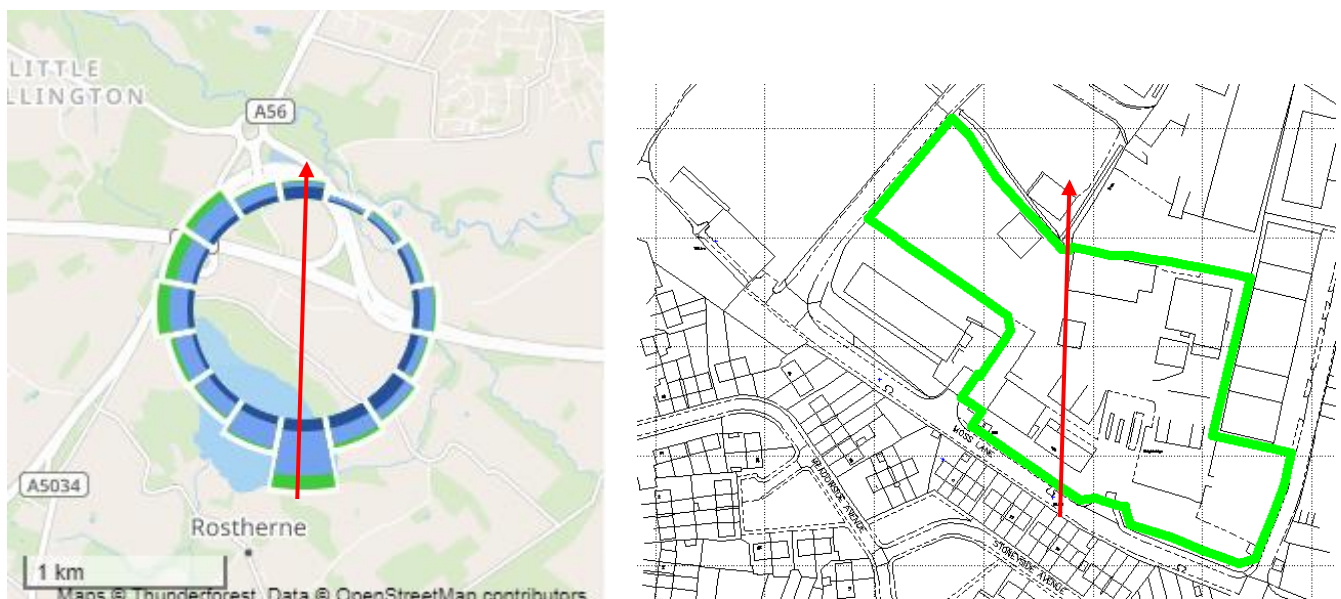
- 1.4.4 The site is not located within a low emission zone.

2 Sensitive Receptors

2.1 Meteorology

- 2.1.1 Unlike many other atmospheric pollutants, the generation of dust is particularly dependent upon weather conditions.
- 2.1.2 The prevailing meteorological conditions at any site will be dependent upon many factors, including its location in relation to macroclimatic conditions as well as more site-specific microclimatic conditions. The most significant meteorological factor is the predominant wind direction and wind speeds.
- 2.1.3 Wind speed and direction data have been obtained from Rostherne Mere weather station for the period 07/2015 – 07/2024, see Figure 2.1 **Error! Reference source not found..** Rostherne Mere weather station is located approximately 18km south of the site.

Figure 2.1 Windrose from Rostherne Mere Weather Station



- 2.1.4 The predominant wind blows towards receptors north / northeast of the site, which includes industrial / commercial premises in the wider Linnyshaw Industrial Estate. A full list of receptors within 1km of the site is shown in Table 2.1.

2.2 Receptors

- 2.2.1 A Receptor Plan has been prepared to illustrate the location of receptors within 1km of the site, see Drawing No. MOSS/3448/04. As mentioned above the predominant wind direction is towards the north / northeast therefore, receptors within this direction of the site are most likely to be impacted.
- 2.2.2 Table 2.1 details the direction and distance from the boundary of the site to the boundary of receptors within 1km of the site.

Table 2.1 Sensitive Receptors

No.	Receptor	Receptor Type	Direction from Site	Approx distance from the site boundary to the receptor boundary (m)
1	Linnyslaw Industrial Estate	Industrial / Commercial	North / East	0
2	Residential dwellings (Moss Lane)	Residential	South	18
3	Blackleach Reservoir	Surface water feature	West	160
4	St Pauls C of E Primary School	School	Southwest	325
5	M61	Infrastructure	North	390
6	Lyon's Industrial Estate	Industrial / Commercial	North	620
7	Solar Power Farm	Utility / infrastructure	Northeast	625
8	St Paul's CE Primary School	School	Southeast	660
9	Residential Dwellings (Mossfield Road)	Residential	Northeast	670
10	Christ the King RC Primary School	School	South	680
11	St Mary's Park	Habitat	West	790

- 2.2.3 Other receptors that may not be particularly sensitive to dust but are within 1km of the site boundary and are not shown in the above table are illustrated on Drawing No. MOSS/3448/04.

2.3 Other Dust and Emission Sources

- 2.3.1 There is potential for dust to be emitted from the surrounding roads from vehicle movements and maintenance issues along the road i.e. potholes.
- 2.3.2 It is considered premises on the wider Linnyslaw Industrial Estate have the potential to produce dust emissions from activities, such as Northwest Timber Manchester who are a building materials supplier. It is considered dust could be produced from the storage and improper management of materials on their premises.

3 Site Operations

3.1 Waste Deliveries & Acceptance

- 3.1.1 Strict Waste acceptance procedures will be implemented on site to ensure that only suitable waste is accepted. Only those waste codes detailed in the Environmental Permit will be accepted onto the site. Waste acceptance procedures will ensure that waste will not comprise solely or mainly of dust, powders, or loose fibres.
- 3.1.2 Waste will be delivered to site predominantly by the Operators own vehicles. The Operator deploy road sweepers and bring the sweeping back to the site for further treatment and processing. It is predominantly this waste that will be processed on site, however, construction and demolition waste from other sources will also be processed.
- 3.1.3 All road sweepers utilised by the Operator are equipped with dust suppression systems, this will prevent dust from the movement of road sweepers on site, a 5mph speed limit and the minimisation of vehicle movements will be enforced on site to further reduce the amount of dust generated by vehicles.
- 3.1.4 All vehicles entering / exiting the site will be sheeted or enclosed to minimise the likelihood of dust emissions. Loaded delivery vehicles that are not sheeted will not be allowed to enter the site. Any third-party deliveries to the site will be advised that all loads must be suitably sheeted.
- 3.1.5 Vehicles entering the Site will be visually inspected prior to unloading to ensure that loads comprising solely dust, powders, or loose fibres are not accepted. Excessively dusty loads will be rejected from the Site in accordance with the Waste Rejection Procedure.

3.2 Site Infrastructure

- 3.2.1 The Site infrastructure is illustrated on Drawing No. MOSS/3448/03, see Appendix I. The drawing illustrates the following areas on Site:

- i) Different surfaces i.e. concrete, hardstanding etc.

- ii) Height/type of perimeter fencing.
- iii) Reception and storage areas of waste.
- iv) Location of fixed plant/equipment i.e. screener, wash plant, crusher.
- v) Existing dust mitigation techniques.
- vi) Locations of mains water points and wheel washing facility.

3.3 Wastes with Dust Potential

3.3.1 The following wastes included in Table 3.1 have the potential to produce dust emissions.

Table 3.1 – EWC Codes/descriptions with dust potential

EWC Code	Description
17 01 01	Concrete
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 09 04	Mixed construction and demolition waste arising only from 17 01 and 17 05 codes only
19 12 09	minerals (for example sand, stones)
19 12 12	Restricted to crushed bricks, tiles, concrete and ceramics only.
20 02 02	soil and stones

3.3.2 Other waste types listed in the permit may be accepted at the site but the above are considered to have the highest potential to produce dust emissions. All wastes are subject to the same management, mitigation and control measures included in this DMP.

3.4 Overview of Site Operations

3.4.1 Road sweeper waste and construction and demolition waste is accepted at the site for treatment. Once waste has been accepted at the site, it will be subject to the following depending on the nature / source of the waste type:

WASHING

- Screening of waste in the wash plant has little to no potential of producing dust emissions due to the treatment being a wet process.

- Oversize aggregate (>80mm) is stored in a bay adjacent to the trommel.
- The aggregate is loaded into a trommel prior to entering the wash plant using a loading shovel/excavator.
- Material will pass through the trommel and over a conveyor to the wash plant.
- Recovered metals will drop from the conveyor before entering the log wash.
- The remaining material is fed into the hull of the log wash where it is spread into the base of the log and impacted with significant water flow. The paddle design of the log wash manoeuvres material down the log wash agitating the material and cleaning it as it progresses.
- Aggregate is separated by fractions into bays beneath the wash plant.
- Water is reused in the wash plant system in a closed loop cycle, flocculant is added to separate suspended solids which are dropped into a bay forming a filter cake.
- The clean water is then stored in an effluent tank to be reused in the system.
- All output materials will be tested in accordance with the WRAP Factory Control Procedure.

3.4.2 Reference should be made to the wash plant layout drawing included in Appendix I of this DMP for a visual representation of the wash plant layout and process.

SCREENER

- a) Dry screening of waste will be undertaken on Site, this has the potential to produce dust emissions.
- b) Waste will be loaded into the feed hopper of the screening plant using a 360° excavator or a loading shovel. This process will then separate the soil from the stone/hardcore.
- c) The screening plant utilises a vibrating grid with evenly spaced vertical bars to separate out the different fractions of material. Such plant has interchangeable mesh screens to permit the production of a wide range of product sizes (<3 mm to 20 mm).
- d) Soil will be deposited into varying stockpiles depending on its size via conveyors.
- e) The stone/hardcore material off the front conveyor of the screener should consist of stone/hardcore which will consist of a saleable aggregate.

CRUSHER

- a) The crushing plant has a high potential for dust generation and will not be operated within an inbuilt dust suppression system.
- b) Waste will be loaded into the crusher using a 360° excavator or a loading shovel. Material will then be crushed to a range of product sizes.
- c) Following treatment via crushing, the material will be deposited in a stockpile to be transferred to the product storage area or further treatment.

3.5 Processed Waste Types/Product

- 3.5.1 Once waste has been subject to mechanical treatment, the finer material will be stored in secure bays for aggregate product or dedicated non-waste storage areas prior to removal off site.

3.6 Mobile Plant and Equipment

- 3.6.1 The following plant and equipment are utilised on site:
 - Crusher
 - Screener
 - Wash Plant
 - Loading Shovel / Grab
 - Excavator
- 3.6.2 A no idling policy is in place which ensures that engines are switched off when vehicles or plant are not in use. This policy will ensure that tail pipe emissions are significantly reduced.
- 3.6.3 All plant and equipment will be maintained with manufacturers recommendation to ensure good working condition and reduce the potential of dust / fumes from poorly performing plant and equipment.

4 Dust Management & Mitigation

4.1 Responsibility for Implementation of the DMP

- 4.1.1 The DMP is intended to be a live document which serves as a reference during daily operations. The site manager will be responsible for the implementation of the DMP and for ensuring that the mitigation strategies are adhered to. Where the site manager is unavailable to oversee the implementation of dust suppression measures, a suitably experienced site operative or TCM is allocated responsible.
- 4.1.2 The DMP will be reviewed on a biannual basis (once every two years), when there is a change in operation that is considered to have a potential impact on dust emissions or in the event of a complaint relating to dust, whichever is sooner. However, the DMP is intended to be a live document which serves as a reference during daily operations.

4.2 Sources of Fugitive Dust/ Emissions

- 4.2.1 The main dust/emission sources which arise from site, particularly in hot and or dry conditions are detailed in the following table below:

Table 4.1 – Dust Emission Source

Source	Description
Material handling and movement	Loading, unloading of vehicles and treatment equipment. Movement of materials on conveyors.
Material Storage	Wind-whipping of stockpiles / material stored in bays.
Material Treatment	Dry treatment methods such as crushing and screening.
Vehicle Movement	Movement of vehicles. Resuspension of dried mud on surrounding roads.

4.3 Dust Control Measures

- 4.3.1 Dust control measures are implemented to help mitigate dust emissions at the Site. These measures are implemented when appropriate, particularly in periods of hot and dry weather.

- 4.3.2 The site boundary is inspected regularly to identify any dust emissions / dust leaving the site boundary. If excessive dust emissions are observed appropriate corrective action will be instigated.
- 4.3.3 Dust inspections will be undertaken of a minimum once a day and more frequent during dry/windy weather conditions. Inspection points may vary depending on the prevailing wind conditions but will always be from somewhere along the permit boundary.
- 4.3.4 The areas listed in table 4.1 above i.e. where dusts arise or build up will be continuously monitored throughout the working day and cleaned on a daily basis; paying special attention to the machines where dust is most likely to build up.
- 4.3.5 Water bowzers and water sprays will be available at the Site to dampen surfaces and stockpiles of material to prevent particulate matter becoming airborne. The condition and integrity of the bowzers and water sprays will be checked as part of the Inspection Checklist included in the EMS.
- 4.3.6 The handling height of material will be minimised, at all times, by all mobile plant in order to reduce the opportunity for dust to be dispersed by winds.
- 4.3.7 Weather conditions at the site will be considered at the start of each working day so that the days work may be planned to take in regard any potential dust emissions. If the wind speed and direction are likely to increase the risk of nuisance to neighbouring receptors, then operations may be temporarily stopped. There will be no specific wind speed limit or criteria for this to occur, as dust is dependent on other conditions such as rain.
- 4.3.8 The Site manager may choose to cease operations should there be excessive / abnormal dust emissions from the Site. Operations will resume when the circumstances causing the excessive dust have been resolved. It is the Site manager who decides when operations will continue.

4.4 Control Measures (Containment)

- 4.4.1 **Waste reception and storage areas** – The waste reception/tipping area and storage locations are all externally situated. Waste is stored within bays with a minimum 1m freeboard or in a free-standing stockpiles.
- 4.4.2 Waste is stored in free standing stockpiles within the western area of the site, boundary fencing / containment within this area consists of a 5m high concrete panel wall along the southwestern boundary and a 2m high concrete panel fencing along the remainder of the western area. Free standing stockpiles will not be stored higher than the perimeter fencing, and stockpiles will retain a 1m free board from the fencing.

4.5 Control Measures - Site Surfacing /Drainage

- 4.5.1 The western area of the site where crushing and screening is proposed to take place consists of hardstanding surface and surface water is free draining in this area.
- 4.5.2 The remainder of the site is all an impermeable concrete surface. Surface water for the area of site with impermeable concrete is connected to foul sewer passing through multiple silt traps and interceptor tanks. The drainage system is illustrated on Drawing No. MOSS/3448/03.
- 4.5.3 The concrete area of the site is relatively flat and any defects such as cracks, rivets will be repaired as soon as practically possible to ensure the site can be swept using a road-sweeper or similar.

4.6 Control Measures – Site Surfaces and Vehicle Movements

- 4.6.1 Control measures implemented to minimise the risk of dust and debris from site surfaces and vehicle movements include:
- A permanent water supply (mains water) is available on site during dry weather conditions to ensure that the dust suppression systems can function effectively.

- In dry and windy weather conditions site surfaces are dampened down to minimise the potential for dust emissions.
- All vehicles on site will be restricted to a 5mph speed limit to reduce the dispersion of dust and particle matter by vehicle movements.
- Vehicle movement will be minimised by ensuring that the double handling of material is avoided where possible.
- A no idling policy is implemented on site for all plant and vehicles.
- All vehicles entering / exiting the Site will be sheeted to minimise the likelihood of dust emissions.
- Road sweeping vehicles on site are all fitted with a permanent water suppression system to prevent the vehicles tracking mud.

4.7 Control Measures – Site Suppression

- 4.7.1 There are a number of hose pipes situated around the site which can be utilised to spray on bays and stockpiles which do not benefit from suppression systems; and for further dampening of the main 'dusty' stockpiles and the site surface.
- 4.7.2 Mobile dust suppression systems are utilised to cover all areas of the site.

4.8 Control Measures - Water Supply

- 4.8.1 A permanent mains water supply is available on site to ensure that dust suppression can function effectively. Any external water pipes will be lagged to prevent frost damage during winter months and the operator will set up a notification alert system with the Met Office in the event of a drought or hot weather being imminent. This will enable the operator to source water in the short and long term and store in tanks prior to a potential water ban.

4.9 Control Measures – Storage of Waste

- 4.9.1 The control measures implemented to minimise the risk of dust and debris emissions from the continuing storage of wastes and the loading/unloading of these include:

- a) Stockpiles will be sprayed with water during periods of dry/windy weather to prevent excessive drying and dust formation.
- b) In the event of dust plumes on site, dust emanating off site, dry weather conditions or when winds reach 4 on the Beaufort Wind Scale, dust suppression will be deployed to waste stockpiles.
- c) Drop heights will be kept to a minimum to prevent dust emissions where adjustment permits.
- d) All waste which has undergone waste sorting/separation and are stored in dedicated bays with a 1m freeboard to prevent the waste exceeding the height of the bay and causing dust plumes.
- e) In the event of high winds outside of operational hours (the likelihood of which will be checked daily via Met Office notifications) stockpile heights of potentially dusty wastes e.g., soils, stones and aggregate will be further reduced in height and covered with tarpaulin to prevent wind whipping of material.

4.10 Control Measures - Loading and Unloading of Waste into Vehicles & Plant

- 4.10.1 The operator of the loading plant will direct vehicles to a position and location which reduces wind whipping of loaded material i.e. the lee side of the loading plant or against the side of a bay wall. Should the loading and unloading be carried out during periods of dry or windy weather or if the material is considered finer/dusty material, stockpiles will be dampened prior to and during loading operations.
- 4.10.2 Using a 360° excavator grab to load waste into vehicles and the mechanical treatment hoppers on site rather than a loading shovel will be prioritised to ensure the drop height can be minimal to prevent fugitive dust emissions.

4.11 Control Measures for Mechanical Treatment Plant

- 4.11.1 The crusher will be fitted with a spray bar to dampen waste during treatment and prevent any potential dust emissions.

- 4.11.2 The nature of the washing process is not considered to produce excessive amounts of dust and is sufficient in preventing dust emissions when waste is undergoing treatment.
- 4.11.3 During exceptionally dry and or windy conditions if any operation / site movements cause or are likely to cause excessive dust emissions beyond the site boundary, or if abnormal dust emissions are observed within the site, site operations may temporarily be suspended to avoid further dust emissions.

5 DUST MANAGEMENT RISK ASSESSMENT MODEL

5.1 Fundamental Considerations

- 5.1.1 **Source/Hazard:** A property or situation that in particular circumstances could lead to harm.
- 5.1.2 **Consequences:** The adverse effects or harm as the result of realising a hazard which causes the quality of human health or the environment to be impaired in the short or long term.
- 5.1.3 **Risk:** A combination of the probability of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.

5.2 Pathway

- 5.2.1 Important in the assessment of a particular risk(s) and to inform the subsequent management of the risk(s) is the identification of the pathway(s) through which the risk may affect the identified receptor(s). The following are examples of pathways:

- Air
- Ground
- Water
- Direct contact / exposure

5.3 Consequences

- 5.3.1 The following table highlights the consequences of the hazard(s) identified and the abbreviations for each as used in the Risk Assessment Table 5.5 in Section 5.7.

Table 5.1 – Consequences

Abbreviation	Consequences
A	MINOR INJURY
B	MAJOR INJURY
C	DEATH

D	AIR POLLUTION
E	WATER POLLUTION
F	POLLUTION OF LAND

5.4 **Effects of Consequences**

- 5.4.1 In order to quantify the level of risk and identify the appropriate management procedures, the potential effects must be considered, as outlined in the table below:

Table 5.2 – Potential effects

Abbreviation	Effect of Consequences	Management Required?
S	SEVERE	In all cases
Mo	MODERATE	In most cases
Mi	MILD	Occasionally
N	NEGLIGIBLE	No

- 5.4.2 Note: “Management” is the action required to reduce the risk of a hazard causing a problem on site. Contingency measures are procedures which are in place to reduce the consequences of a hazard.

5.5 **Risk Estimation and Evaluation (Probability/Frequency of Occurrence of Hazard)**

- 5.5.1 The following table allows the likelihood of an occurrence of an identified risk to be assessed:

Table 5.3 – Likelihood

	Probability	Evaluation
1	Very likely	Could occur during any working day
2	Likely	Could occur regularly
3	Possible	Event possible

4	Unlikely	Event very unlikely
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5.6 **Risk Assessment Outcome (Combination of Probability & Consequence)**

- 5.6.1 The following table shows the resultant risk of an identified hazard or potential situation. This uses the hierarchy of both probability and consequence to assess the level of risk. The level of risk determines what level of management would be required in order to reduce the risk of occurrence and/or scale.

Table 5.4 – Risk assessment outcome

		Consequence			
		S	Mo	Mi	N
Probability	1	High	High	Medium	Low
	2	High	Medium	Low	Negligible
	3	Medium	Low	Negligible	N/A
	4	Low	Negligible	N/A	N/A

- 5.6.2 Where the risk assessment outcome is high, first-level management of the risk is essential, i.e. removal of hazard, implementation of major infrastructure/structural design measures to contain the risk/hazard and company policy changes to incorporate the management of the risk. All risk management measures must be supplemented with detailed induction training, spot training and tool-box talks to ensure all site staff and users are made fully aware of the risk/hazard, all potential consequences and necessary management and contingency procedures.
- 5.6.3 Where the risk assessment outcome is medium, the management of the risk should be tackled by management or delegates. If removal of the hazard is not possible, management will normally be met through implementing minor structural design measures or by imposing procedures for the prevention of occurrences which will be conveyed to all site staff through the appropriate training, including any contingency measures/procedures.
- 5.6.4 Where the risk assessment outcome is low, the management of the risk can be done wholly through appropriate training to site staff including any contingency measures/procedures.
- 5.6.5 Where the risk assessment outcome is near-zero, site staff should be made aware of the possibility of an occurrence and contingency measures should be readily available to all staff should they be required.

5.7 Risk Assessment Table

- 5.7.1 The following pages contain the site-specific risk assessment for the site with appropriate remedial actions, recommendations and comments included for each identified hazard, potential contaminant, or situation.
- 5.7.2 The table also contains references to the appropriate section(s) of the site's EMS for additional management procedures.
- 5.7.3 As discussed in the section above, all situations which identify a risk from Low –High should be incorporated into the staff/visitor training schedule, where appropriate and acted on as required.
- 5.7.4 Table 5.5, overleaf details the relevant pathways and receptors for each individual dust/emission source and relevant measures required to break these linkages. The control measures outlined in Section 4 will be included within these tables as well as additional specific measures.

SEE TABLES OVERLEAF

Table 5.5 – Source, pathway, receptor, abatement tables

Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
Dust / debris on site surfaces	Air	See Table 2.1	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	3	Med	Site surfaces will be dampened using a mixture of bowser and hose pipes. The Operator will pay special attention to the areas where dust/debris is likely to build-up i.e. near to treatment plant and stockpiles. All site operatives will be trained in these procedures, and it will be the responsibility of site management to ensure the measures have been carried out. Daily housekeeping inspections are undertaken on site to clear debris and litter and prevent it from leaving the permit boundary. Vehicle speed on site is restricted to 5mph. Signs are erected at the relevant areas of the site, including the main access gates, to advise drivers of the speed limit. This will reduce the re-suspension of dust and particulate matter. Exiting vehicles leaving the site will avoid all areas where wastes are stored or stockpiled. All vehicles will be checked before they leave the site to ensure no mud/dust can stretch beyond the site access. All incoming/outgoing vehicle loads will be sheeted. Any mud/dust deposited onto the public highway will be treated as an emergency and cleaned by site operatives or a road sweeper. Continuous monitoring regime in place to identify any potential for dust leaving site boundary.	Negligible

Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
Vehicles tipping into waste reception/storage areas	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	2	High	Drop heights will be kept to a minimum to prevent dust emissions which will be no more than 1m – 2m above the plant. The loading of waste into the plant is undertaken by a 360° excavator which can deposit directly into the hoppers, this is considered better method than a loading shovel. The operator will avoid double handling of waste. Staff continue to monitor the waste to ensure it does not escape the confines of storage bays and skips. The site also has the use of a mobile water bowser and hosepipes.	Low
Loading of waste into treatment plants (screener, crusher)	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	2	High	Drop heights will be kept to a minimum to prevent dust emissions. The on-site hosepipes and mobile water bowzers will offer additional suppression. The operator will avoid double handling of waste and may directly load from vehicle directly into the treatment plant if feasible. If operations permit, site operatives may be able to directly tip into the treatment plant. Suspension of operations during conditions where winds reach 7+ on the Beaufort Wind Scale, if dust plumes occur on site or if dust is emanating off site following on/off site inspections.	Low

Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
Processing of waste as part of mechanical recycling facility comprising screeners, crusher etc..	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	2	High	The site will not carry out any crushing or screening during wind speeds reaching 7 or above on the Beaufort Wind Scale. Treatment operations will reduce or suspend if the site management detect dust plumes on site or dust emanating off site arising from dry/hot weather conditions. The presence of the 5m high concrete wall adjacent to the crushing and screening operations will provide a screen for potential dust emissions. The crusher will be fitted with fixed dust suppression in the form of spray bars.	Low
Waste storage bays and external stockpiles	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	3	Mild	Drop heights will be kept to a minimum to prevent dust emissions. Stockpiles will be sprayed with water to prevent excessive drying and dust formation. Materials which are stored in bays will maintain a minimum 1m freeboard which will help reduce wind whipping and dust generation. The process is ongoing and therefore waste is unlikely to remain at the site for any significant length of time prior to the loading, processing, and removal from site. Staff will ensure there is suitable space in the bay to ensure the waste can be deposited and safely contained. External storage areas benefit from the concrete wall to the west of the site to prevent wind whipping.	Low
Prolonged periods of dry/warm or windy weather conditions	Air	As above	Harm to human health – respiratory irritation and illness.	Mo	2	High	Additional (increased from one to three times) daily visual assessment / monitoring will be on and off site around the site perimeter in order to ensure dust is not escaping beyond the site.	Low

Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments	Assessment Outcome following action /recommendation
			Air Pollution Water Pollution				Continual use of mobile dust suppression methods until weather conditions change/improve or inspections detail dust emanating on/off site is not occurring.	
Particulate emissions from the exhaust of vehicles / plant /generators and other non-road going machinery on site.	Air	As above	Harm to human health – respiratory irritation and illness. Air Pollution Water Pollution	Moderate	3	Low	All vehicles, plant and equipment are serviced in line with manufacturer recommendations to ensure they are fit for purpose and ensure emissions are below the acceptable level. All vehicles, plant and equipment undergo daily inspections under the site's preventative maintenance schedule to ensure no visible faults are detected. Ongoing inspections will note any faults with machinery and if a fault detected, the site/compliance manager or TCM will decommission the plant/vehicle until it is fit for purpose.	Very Low - Negligible

6 Monitoring and Contingency Measures

6.1 Visual Monitoring

- 6.1.1 Dust emissions at the site will be monitored by visual observation and recorded on the Dust Monitoring Form. There are no fixed locations for dust monitoring as this will change dependent on weather conditions and the direction of wind. Monitoring will take place anywhere within and around the site boundary. Monitoring results will be recorded on the Dust Monitoring Form, see Appendix IV.
- 6.1.2 Dust monitoring will be carried out during operational hours. Recorded visual monitoring will be undertaken at least twice a day, for a minimum of five minutes each time by appropriately trained site operatives. Visual monitoring will take place at the beginning of the working day and when operations with the highest potential to produce dust are taking place. This is considered to be the most beneficial method to ensure that mitigation measures being implemented on site are effective. It is expected that staff members will also check for dust emissions as they approach or leave the site boundary.
- 6.1.3 If excessive dust emissions (dust clouds) are observed, the site manager will establish what is causing the excessive dust emission to be generated and take remedial action. The results of the investigation and what action was taken will be recorded.
- 6.1.4 If the operator increases suppression methods and the suppression methods are still not considered suitable, operations will reduce or cease until the problem has been fully rectified. Site management will be responsible for investigating dust issues and provide additional training to staff to prevent any re-occurrences.
- 6.1.5 Extra and unplanned monitoring will be carried out on site when conditions are particularly windy (4 or above on the Beaufort scale) or dry, new activities are being undertaken, new machinery is being used or following the receipt of a complaint or incident related to dust emissions.

- 6.1.6 Site operatives will continuously visually monitor dust emissions whilst plant is in operation and will control dust emissions using the procedures outlined in sections 4.2 – 4.11 and asking the site manager, compliance manager, TCM or third party for advice as required. Work procedures will be stopped/adjusted should it be evident significant dust is being emitted which has the potential to migrate offsite.

6.2 Staff Shortages / Human Error

- 6.2.1 In the event of unforeseen staff shortages arising from illness, suspension or no shows, the Operator will make a judgement whether to reduce the number of incoming loads, thus reducing processing frequency and divert material to an alternative site. The operator will then seek further employment within a timely manner to ensure the site can continue to operate at its required capacity.
- 6.2.2 All staff are trained and undergo toolbox talks every 12 months (or sooner if operations change) to reduce the impact of human error. In instances where a human error has caused to an on-site dust issue, the site may suspend operations until the issue has been rectified and the member of staff will be warned and re-trained accordingly.

6.3 Weather Conditions

- 6.3.1 The site will receive Met Office weather alerts for conditions which could cause a potential on or off-site dust complaint:
- a) Dust plumes occurring on site, potentially if winds reach 4 on the Beaufort Wind Scale
 - b) Winds exceeding 7 on the Beaufort Wind Scale
 - c) Dust escaping beyond the site boundary.
 - d) Droughts or periods of hot weather exceeding 3 major dry days which could lead to water shortages, hosepipe bans and excessive dust.

6.3.2 The site will install the following preventative measures to avoid serious dust pollution:

WINDS EXCEEDING 7 ON THE BEAUFORT WIND SCALE

- No sorting, processing or treatment of any wastes which are likely to be blown around during these wind conditions; operations would also be suspended where it is evident where dust is escaping beyond the site. Operations would only continue once the problem has been rectified i.e. by carrying out suppression or reducing stockpile heights or if weather conditions improve.
- Stockpiles will be reduced to further such as a 2m freeboard to prevent the material escaping beyond the site boundary.
- Stockpiles may be covered with tarpaulin in the event the above procedures are not considered effective.
- If higher winds i.e. amber/red alert on Met Office are present, the site will deploy the above measures and may be forced to close operations until conditions have improved.

DROUGHTS/WARM, DRY WEATHER

- In cases such as a hosepipe ban or water shortage, the site will ensure there is additional water available i.e. tanks which can be used for filling the dust cannons to ensure suppression techniques can still function. Tanks will include IBCs filled with water and a mobile water bowser to be utilised.
- The site will contact the water company daily to see when water supply is available, operations would reduce in these instances.
- Where dust is becoming a major concern then the operator will stop processing the material and cover the piles using tarpaulin until conditions or dust suppression techniques are considered effective.

6.4 Operational Failure

6.4.1 The site manager will be contacted by staff in the event of any operational failure such as the breakdown of plant, systems or equipment and will decide whether operations are to

continue or be suspended prior to corrective action being taken. Serious operational failures will be recorded in the site diary and operations suspended if dust is apparent.

- 6.4.2 All details of defects, problems and repairs carried out will be recorded on a daily inspection form. Detailed comments may also be recorded in the site diary. All repairs will be carried out as soon as practicable.
- 6.4.3 All repairs to site security will be made on the discovery of the damage and the site will be made secure until the repair has been carried out.
- 6.4.4 Any major defects found during site inspections which are likely to lead to a breach of permit conditions will be repaired by the end of the working day in which they are found, where possible. If a repair is not possible by the end of the working day and a potential breach of permit conditions may occur, the EA will be contacted to agree a suitable timescale for repair.
- 6.4.5 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint. If there are significant dust releases outside normal operations, the operator will cease operation, investigate, and resolve the issue before continuing.

6.5 Reporting of Complaints

- 6.5.1 Should a complaint regarding dust be received by the site, the complaint will be recorded on the complaints form and investigated in accordance with the complaint's procedure. Details of information to be recorded as a minimum are:
- a) Who made the complaint.
 - b) Date & time of the complaint.
 - c) The nature of the complaint.

- d) Action taken.
- e) Signature.

6.5.2 The person completing the form will then, if possible, make a note of:

- a) the weather conditions at the time of the problem (rain snow fog etc.)
- b) strength and direction of the wind; and,
- c) the activities being undertaken at the time of the complaint, particularly anything unusual.

6.5.3 The site manager will identify what caused the excessive dust emissions to be generated. If the excessive dust emissions have been caused by a procedure not being carried out properly, then staff will receive further training on the dust procedures and this DEMP. If the excessive dust emission has been caused by plant failure, then the plant will be repaired as soon as possible.

6.5.4 All complaints will be acknowledged and investigated, with resultant actions reported to the complainant. Any complaints received by the Environment Agency relating to dust emissions from the site are dealt with on the same day.

6.5.5 If three or more complaints are received on the same working day, the TCM will escalate the complaint, review site operations taking place and commit to stop operations until the cause has been identified. The known cause will not commence until the issue has resolved i.e. targeted suppression or plant malfunction and repair.

6.5.6 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint.

- 6.5.7 If the source cannot be ascertained with 100% confidence, the site manager, compliance manager or TCM will either suspend or reduce the likely dust/particulate generating activities.
- 6.5.8 The EA will be notified by email of any third-party dust complaints received by the end of the working day including the complainant and the outcome of the investigation. Where complaints are substantiated as causing or likely to cause significant pollution, then the EA will be notified without delay, as required by conditions in the EP.

6.6 Liaison with Neighbours

- 6.6.1 In the extreme event of significant but temporary dust releases outside normal operations, neighbours will be contacted to advise them of the situation and the action being taken. The EA will also be notified.
- 6.6.2 An open-door policy will be encouraged by the operator to enable any complaints from neighbouring premises (if received) to be dealt with immediately. The complainant will then be supplied with remedial actions taken and any procedures or measures put in place by the operator to reduce or ideally eradicate the likelihood of a subsequent complaint.
- 6.6.3 If any dust complaints are received, the complaint will be assigned to an operative familiar with the sites operation who will complete the form in Appendix III which will be kept for inspection on request by the LA and/or EA. Details of information to be completed are dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum). Dust complaints will be investigated and responded to within 24 hours and suitably reviewed by the site manager who is ultimately responsible.

Appendix I

Drawings



NOTES

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REVISION HISTORY

Rev:	Date:	Int:	Description:
-	05.09.24	JH/CP	Initial drawing

KEY:

Permit boundary

Impermeable concrete surfaces

Freely draining hardstanding surfaces

Waste storage area

Non-waste storage area

Gully

Manhole

Inspection cover

Drainage flow direction

Silt trap

Pit

Interceptor

Surface water fall direction

Surface drainage

Foul drainage

ACO drain

Storage bays (height/size vary)

Buildings

Washplant	
Number	Description
①	Oversize Aggregate
②	Trommel
③	Conveyor
④	Recovered metals
⑤	Logwash
⑥	Aggregates
⑦	Pipe bedding
⑧	Sand
⑨	Sand
⑩	Flocculant added
⑪	Centrifuge
⑫	Filter cake
⑬	Effluent tank

TITLE:

SITE LAYOUT PLAN

CLIENT:

UBU Environmental Ltd

PROJECT/SITE:

Moss Lane, Worsley, Manchester M28 3LY

SCALE @ A0:

1:250

CLIENT NO:

3448

JOB NO:

001

DRAWING NO:

MOSS-3448-03

REV:

-

STATUS:

Issued

DATE:

05.09.24

DRAWN:

JH/CP

CHECKED:

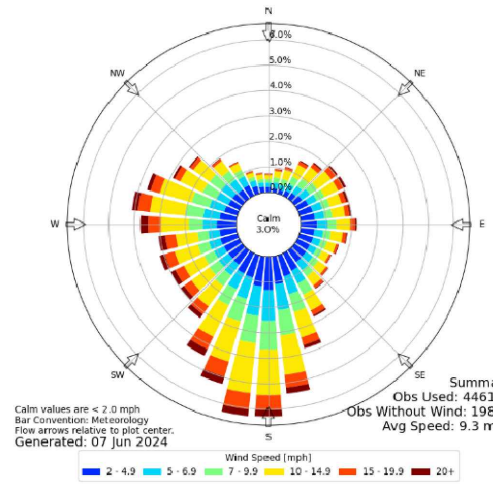
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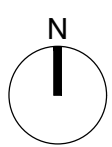
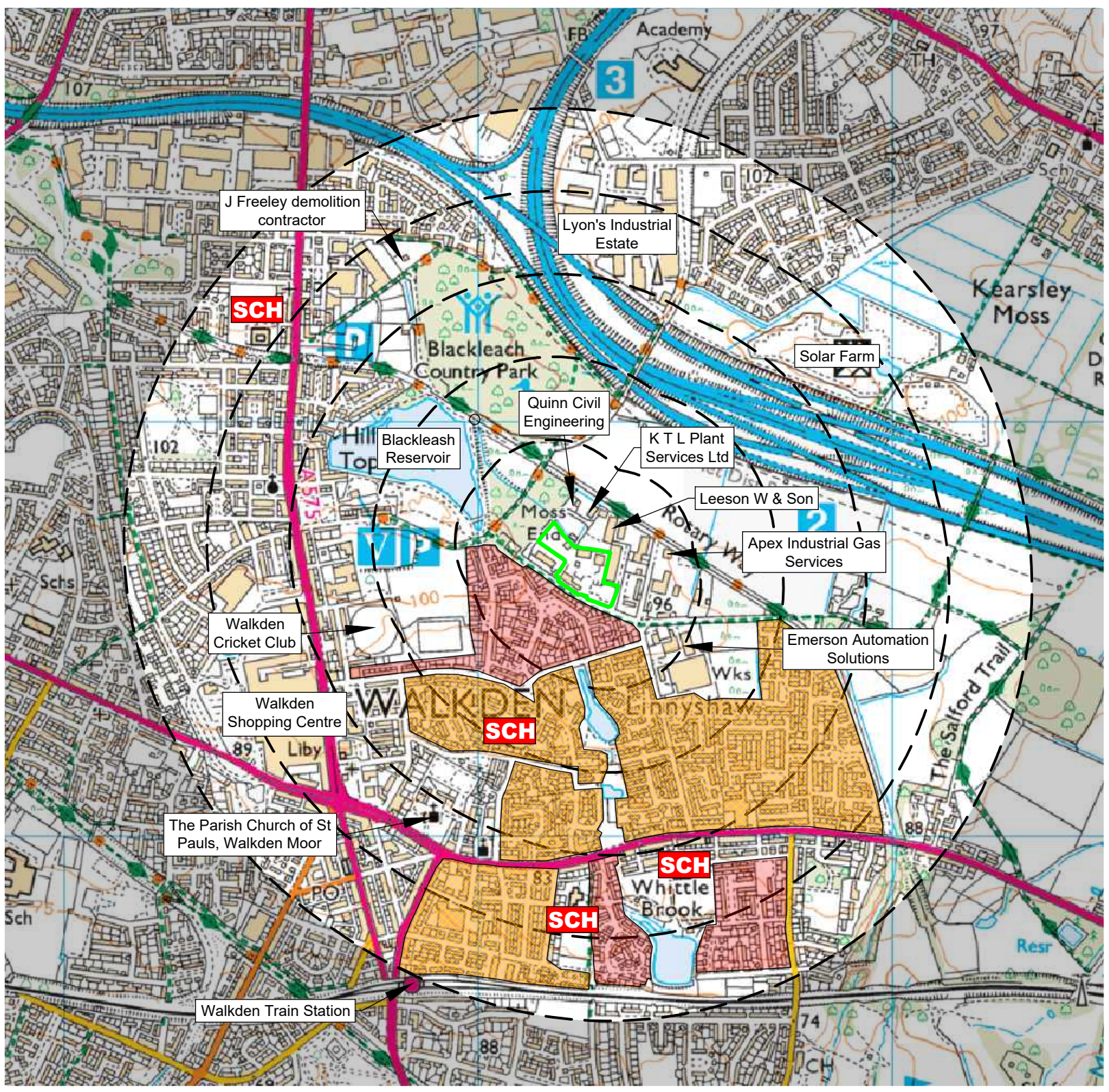
KEY:

- Permit boundary
- Main River
- Surface water body (river / stream / pond / pool / lake)
- Workplaces (includes agriculture industry, commerce and retail)
- Areas with mix of residential, retail and commercial properties
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- Nearest fire hydrant
- Railway line
- SCH School
- Woodland areas
- Protected sites (Ramsar, SSSI, SPA, SAC)
- Nature reserves

Windrose Plot for [EGCC] Manchester
Obs Between: 01 Jan 1973 12:00 AM - 07 Jun 2024 08:50 AM Europe/London



Compass Wind Rose for Manchester
International Airport (EGCC) Period 1972-2018
- source: Iowa State University



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REVISION HISTORY			
Rev:	Date:	Init:	Description:
-	05.09.24	EG	Initial drawing

TITLE: RECEPTOR PLAN		
CLIENT: UBU Environmental Ltd		
PROJECT/SITE: Moss Lane, Worsley, Manchester, M28 3LY		
SCALE @ A4: 1:12,500	CLIENT NO: 3448	JOB NO: 001
DRAWING NO: MOSS-3448-04	REV: -	STATUS: Issued
DATE: 05.09.24	DRAWN: EG	CHECKED: CP



Appendix II

Complaints Recording Form

Complaints Report Form	
Date Recorded	Reference Number
Name and address of caller	
Telephone number of caller	
Time and Date of call	
Nature of complaint (noise, odour, dust, other) (date, time, duration)	
Weather at the time of complaint (rain, snow, fog, etc.)	
Wind (strength, direction)	
Any other complaints relating to this report	
Any other relevant information	
Potential reasons for complaint	
The operations being carried out on site at the time of the complaint	
Follow Up	
Actions taken	
Date of call back to complainant	
Summary of call back conversation	
Recommendations	
Change in procedures	
Changes to Written Management System	
Date changes implemented	
Form completed by	
Signed	
Date completed	

Appendix III

Dust Monitoring Form

UBU ENVIRONMENTAL LTD DUST MONITORING FORM				
WEEK BEGINNING				
DAY/DATE/TIME OF INSPECTION				
SHEET 1 OF	COMMENTS BELOW (AS MUCH DETAIL AS POSSIBLE); IF COMMENT IS NO – ADD FURTHER COMMENTS			
DAILY RECORDING INFORMATION	DUST MONITORING POINT 1	DUST MONITORING POINT 2	DUST MONITORING POINT 3	OTHER AREA OF SITE - SPECIFY
WEATHER CONDITIONS				
WEATHER TEMPERATURE				
WIND SPEED				
WIND DIRECTION				
PERIMETER INFRASTRUCTURE SUITABLE				
WATER JET SYSTEM FUNCTIONING				
ARE WASTE STORAGE STOCKPILES BELOW 5m				
DUSTY MATERIAL STORAGE VISIBLE FROM LOCATION				
ANY NOTICEABLE DUST / PARTICULATES ON THE GROUND NEAR THE LOCATION				
ANY DUST APPARENT OFF SITE				
EMISSIONS FROM PLANT/EQUIPMENT VISIBLE				
SMOKE FROM PLANT APPEAR TO BE SUITABLE				
HAS SITE MANAGEMENT BEEN INFORMED OF THE INSPECTION				
DOES ACTION NEED TO BE TAKEN				
INSPECTION CARRIED OUT BY				
OTHER				
NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):				
CHECKED BY		SIGNATURE		
POSITION		DATE		