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SCOTT BROS. LIMITED

GRANGETOWN SOIL WASHING FACILITY

DUST EMISSIONS MANAGEMENT PLAN

JUNE 2023

DATE ISSUED: JUNE 2023
JOB NUMBER: BM12258
REPORT NUMBER: 0005
VERSION: V1.0
STATUS: FINAL

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DRAWINGS

Drawing Number	Drawing Title	Scale
BM12258-001	Site Location Plan	1:20,000
BM12258-002	Site Layout Plan	approximately 1:500

1 DUST EMISSIONS MANAGEMENT PLAN

1.1 Introduction

1.1.1 Wardell Armstrong LLP have prepared this Dust Emissions Management Plan on behalf of Scott Bros. Limited as part of their application for an environmental permit to undertake waste Activities at their soil washing facility, located in the Grangetown area of Teeside, off John Boyle Road.

1.1.2 The treatment will comprise a physical sorting and washing of waste soils and sands to enable their reuse in a variety of land-based projects across the region. The facility will look to treat 700,000 tonnes of waste soils per annum through the soils washing plant. Further details on the operations are provided in the Operating Techniques, provided as part of this Application.

1.1.3 The facility is located at National Grid Reference (NGR) NZ 541198 21250, approximately 1.6km North-west of Grangetown with the postcode being TS6 6TY.

1.1.4 The site location and permitted site boundary are shown on drawings, referenced BM12258-001 and BM12258-002 respectively.

1.1.5 The wash plant will be located on a concrete apron drained to a sealed sump. There are a number of concrete pads within the site which may be used for storage. Surrounding areas are predominantly mixed density scrub and grassland with scattered trees.

1.2 Document Scope

1.2.1 The purpose of this Dust Emissions Management Plan (DEMP) is to provide details mitigation measures to ensure that the Activities will be undertaken whilst ensuring dust, mud and other particulate debris are controlled, removed and prevented where possible. The aim of this DEMP is to ensure there are no adverse releases of dust during the operation of the facility.

1.2.2 This DEMP considers the day-to-day operations and all foreseeable circumstances of the facility's undertakings (e.g. adverse meteorological conditions) which may exacerbate dusty conditions at the site. This DEMP includes:

- Consideration and identification of all activities capable of generating dust at the site;
- Identification of all sensitive receptors located nearby; and

- Site and activity specific mitigation measures.

1.2.3 Mitigation measures are identified in line with the following Guidance:

- Environment Agency – Control and Monitor Emissions for your Environmental Permit; and
- Institute of Air Quality Management, 2014. Guidance on the Assessment of Dust from Demolition and Construction.

2 SENSITIVE RECEPTORS

- 2.1.1 The site is located in a predominantly industrial setting, with a mix of commercial and light to heavy industrial use units to the South and West of site and wasteland or brownfield sites, including a landfill and steel works to the north and east. There are no residential receptors located within 0.35km of the site boundary, with the nearest located on Jones Road, approximately 370m to the South.
- 2.1.2 The site is not located within an existing Air Quality Management Area.
- 2.1.3 The River Tees SSSI and Ramsar site is located approximately 1.4km to the North-west of site and is considered to be potentially sensitive given the possible smothering risk posed by dust emissions settling on an ecologically sensitive habitat.

Table 1 Sensitive receptors located within 2km of the Site boundary			
Type of Receptor	Receptor name	Location (NGR)	Location in respect to the Site
Residential	Jones Road	NZ 53786 20852	260m S
	Properties on Elgin Avenue	NZ 54517 20554	750m SSE
	St James Court	NZ 54774 20666	780m SE
	Grangetown main residential area	NZ 54926 20691	850mSE
	Southbank main residential area	NZ 53626 20796	300m SSW
	Teesville main residential area	NZ 53833 19645	1.4km S
Commercial	Trigiene Handpiece Repair	NZ 54198 21186	54m S
	Cleveland Truck Stop Cafe	NZ 53704 21131	50m W
	Jazzyballoons (South Tees Business Centre)	NZ 53476 21019	280m W
	Mr Chips South Bank	NZ 53451 20824	375m WSW
	Cleveland Retail Park	NZ 53149 19778	1.4km SW
	Asda Supermarket	NZ 53347 21079	400m W
	Restaurant Chains	NZ 53017 20775	800m W
	Teeside Autodrome	NZ 52626 20771	1.1km W
	Retail Park (Tesco/ Aldi)	NZ 54053 20052	1.2km S
	Eston Leisure Centre	NZ 54690 20096	1.4km S

Table 1 Sensitive receptors located within 2km of the Site boundary			
Type of Receptor	Receptor name	Location (NGR)	Location in respect to the Site
Industrial	Freight and Haulier Yards (various businesses)	NZ 54129 21208	30m W
	Trigiene	NZ 54202 21194	30m S
	Metador	NZ 54214 21147	60m S
	Old Iron Works	NZ 54012 21517	250m N
	Titan Trailers	NZ 54536 20922	430m SE
	British Steel Lackenby	NZ 55162 21369	950m E
	Highfield Environmental Landfill	NZ 54604 21868	700m NE
	Skippers Lane Industrial Estate	NZ 53044 20260	1.2km SW
	Tilbury Road Industrial Estate / Yards (various businesses)	NZ 53346 21139	400m
	Bolkow Industrial Estate (various businesses)	NZ 54554 20700	600m SE
	Smith's Dock	NZ 53078 21646	900m NW
Infrastructure	John Boyle Road	NZ 54154 21229	Adjacent to site (W)
	Puddlers Road	NZ 53738 21080	Adjacent to site permit boundary (S)
	Electricity Substation	NZ 54101 21328	100m NW
	Middlesbrough Road East	NZ 54235 21073	160m S
	Tee Valley Line Railway	NZ 54090 21463	50m N
	AVG Biogas Plant	NZ 52908 21107	850m W
	A66 Road	NZ 53719 20921	170m S
	South Bank Train Station	NZ 53344 21265	400m W
Other Sensitive Receptors	Mannion Nature Park (Community Garden Space)	NZ 53613 20858	250m SW
	St Peter's RC Church	NZ 53208 20827	600m W
	St Peter's Catholic College	NZ 53764 20167	900m S
	Cleveland Police / Fire and Rescue	NZ 54639 20122	1.1km SSE
Rivers, Streams and Drains	River Tees (Teesmouth and Cleveland Coast SSSI)	NZ 52937 22082	1.1km NNW

Table 1 Sensitive receptors located within 2km of the Site boundary			
Type of Receptor	Receptor name	Location (NGR)	Location in respect to the Site
	Knitting Wife Beck (Land Drain at Landfill)	NZ 54960 22019	980m NE

2.1.4 The residential dwellings are included for completeness. Dust entrained in the atmosphere will often deposit within 100m of the source. The IAQM guidance document recognises dust can deposit up to 350m (specified in Construction Guidance) and 400m (specified in the Quarry Guidance). By 500m, it is expected any airborne dust will have dispersed and deposited before arriving at the sensitive receptor.

2.1.5 A full risk assessment to the habitats and residential receptors is provided in the Habitats, Amenity and Accident Risk Assessment document, which is included as part of the Application documents.

2.1.6 The smothering risk posed to the Teesmouth and Cleveland Coast SSSI / Ramsar site is considered to be negligible given the tidal nature of the habitat, which will effectively ‘flush away’ any dust deposits which transmit to the area. Given the SSSI and Ramsar site is over 1km away, it also considered highly unlikely that any dust arising at the site will travel this far.

2.2 Prevailing Conditions

2.2.1 The prevailing wind conditions at site are predominantly of a southern and westerly nature, meaning the nearest sensitive receptors to site susceptible to the effects of dust smothering or nuisance (i.e. residential properties) are not located in the direction of the prevailing winds. Whilst the Teesmouth and Cleveland Coast SSSI/Ramsar site is in the path of the prevailing wind direction, the distance is 1.4km between the facility and SSSI/Ramsar site, meaning deposition of dust is highly unlikely.

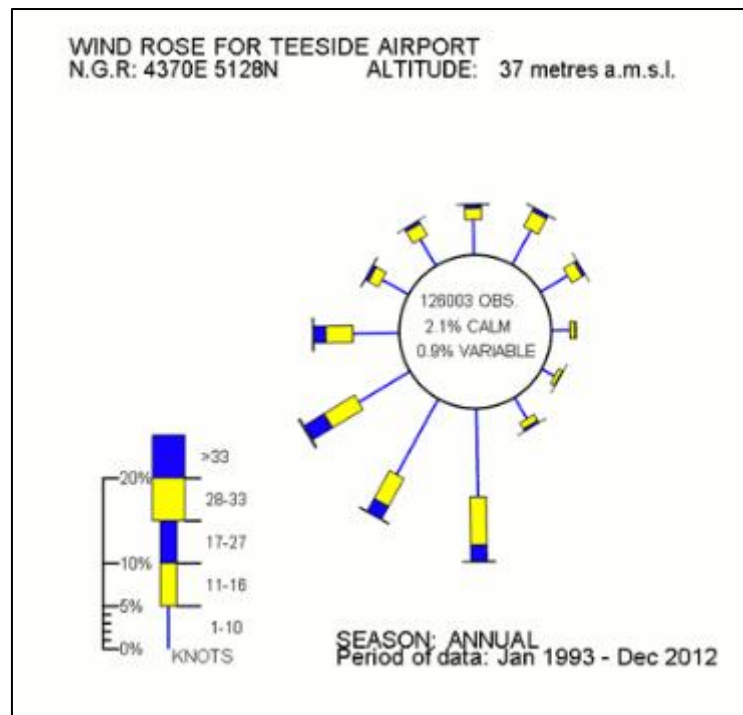


Figure 1. Wind Rose Data from Met Office Website¹

2.2.2 Figure 1 above, show the prevailing wind conditions for the Tees-Durham region of the UK between 1993 and 2012. It is not considered that the average conditions from 2012 to current day are much changed in terms of wind direction.

¹ <https://www.metoffice.gov.uk/services/transport/aviation/regulated/airfield-climate-stats#Durham>

3 POTENTIAL DUST SOURCES

3.1.1 The site will handle and treat a variety of waste soils and aggregates to enable segregation of particle sizes and material types, enabling reuse off site in a variety of construction and ground improvement projects. The Activities will be covered by the environmental permit.

3.1.2 There are no point source emissions from any of the processes undertaken on site; all water is recycled within the treatment process and the treatment process is enclosed. Dust emissions generated by the activities on site are all of a fugitive nature.

3.1.3 Emissions to air may arise from the following activities on site:

- Vehicle movements, both in and outbound from trucks and movement from mobile plant;
- Loading and unloading of materials from trucks and mobile plant;
- Storage and stockpiles of waste, soils and aggregates;
- Processing and treatment of waste soils in the soil washing facility in dry phase.

4 MITIGATION MEASURES

4.1 Introduction

4.1.1 Due to the site location in relation to sensitive receptors and the prevailing wind conditions, it is considered that dust generated on site has a low risk of causing adverse effects or complaint.

4.1.2 The site will employ a number of measures detailed throughout this section of the DEMP, outlining how they will contribute to prevention or suppression of dust emission arising from the activities undertaken at site.

4.2 Site Management

4.2.1 The facility manager (or another appointed member of personnel) shall carry out as minimum one daily visual inspection of the working areas of the site and outside the entrance. The visual inspection shall consider, as a minimum, the following:

- Current dust generating activities (Upon identifying dust generation, additional mitigation will be employed as necessary);
- Access route to ensure mud and debris is not being tracked out of the site onto the John Boyle Road and across the site itself;
- Ensuring employees are carrying out the actions outlined in this DEMP; and
- Details of daily activities.

4.2.2 The results of the visual inspection shall be recorded in an Environmental Logbook which will be kept on site at all times. The logbook will be made available to the Environment Agency (or other regulatory body) upon request. The Logbook can be adapted for all visual inspections required and a specific 'dust inspection sheet' will be completed and included.

4.2.3 Information which should be recorded In the Logbook includes quality assurance details (date, time, signature of completion and inspector), meteorological conditions and the results of the visual check & actions taken if necessary, and any information relating to dust management implemented that differs from day-to-day operation.

4.2.4 During operational hours, an awareness of meteorological conditions will be maintained. Prolonged dry periods and moderate to high winds can increase dust generation which may then become airborne and be carried on the prevailing winds. Dust management will be adjusted to suit the prevailing conditions.

- 4.2.5 Contact details for emergency third party contractors (e.g. road sweepers, water bowzers) will be set out in the Logbook, ensuring additional measures can be put in place quickly where required.
- 4.2.6 In the event of equipment failure that is vital to the dust suppression, replacement equipment will be sourced promptly, and maintained on site until such time that the equipment is repaired or replaced.
- 4.2.7 There will be a site wide speed limit set at 5 mph for all waste delivery and aggregate collection vehicles.

4.3 Waste Storage

- 4.3.1 Where practical waste and products will be stored in bays with the height of the stockpile maintained below the height of the bay wall to provide shelter from wind whipping of dust.
- 4.3.2 Stockpiles shall be compacted, shaped where possible and dampened periodically to ensure the risk of dust generation and transportation from the materials bays is low.
- 4.3.3 Stockpiles will also be orientated to be sympathetic to prevailing wind conditions, again minimising surface exposure to strong gusts and wind whipping.

4.4 Waste and materials loading and unloading

- 4.4.1 Wherever possible, loading and unloading of wastes and processed materials will take place in sheltered areas of the site and around stockpiles to prevent the entrainment of dust in the wind.
- 4.4.2 Drop heights from treatment plant will be minimised where possible and consideration given to postponing material loading and unloading under excessively windy conditions to minimise generation of dust emissions.
- 4.4.3 Material will be treated as soon as possible under any conditions to ensure minimal dust mobilisation from waste stockpiles, with double handling of materials minimised where possible and avoiding any temporary storage as much as is possible.
- 4.4.4 Where temporary stockpiles are required for on-site activities, materials will be shaped to be stable and no more than 3m in height to avoid undue generation of dusty emissions.

4.4.5 In the event that any stockpiles are identified as generating dust sources, alternative measures will be reviewed to find a solution to reduce or suppress generation of dust material arising.

4.5 Waste Soils Treatment

4.5.1 All elements of the transfers between soil washing treatment stages will be enclosed and will require the addition of water to the process, resulting in minimal generation of dusty material to be emitted from the process.

4.5.2 The process will also be conducted with wet soils throughout the washing process, meaning there is a very low to no risk of any dust emissions being generated during the treatment process.

4.6 Water Suppression

4.6.1 A continuous water supply will be maintained for dust suppression.

4.6.2 A water bowser or other means of damping down shall be maintained on-site at all times and used, as and when necessary, to damp down stockpiles, haul routes, access routes and processing areas.

4.6.3 Dampening activities may be required during unloading and movement to storage activities. The visual inspection shall inform when and whether these dampening activities are required.

4.6.4 Stockpiles will be dampened as and when necessary to reduce dust generation and may include dampening the stockpile itself. Due to the low risk identified, a hose fitted on the bowser is considered to be sufficient.

4.6.5 Continuous water suppression across the site is not deemed to be necessary due to the low risk identified. Suppression should be used as and when dust is visually seen in the airflow.

4.7 Road Surfaces and Cleanliness

4.7.1 The concrete surfaces present on site shall be maintained and kept in good repair. The access route shall be monitored daily by site personnel and be kept in a clean state and deposits of mud and dust shall be removed.

4.8 General Mitigation and Maintenance

4.8.1 The following general measures shall be implemented at the site:

- Laden vehicles will be sheeted prior to entering and leaving the site;
- Drop heights from loading/unloading activities will be minimised. This applies to inbound/outbound vehicles and mobile plant;
- Plant, equipment and seals will be checked regularly to ensure they are in full working order, defective equipment which may give rise to fugitive emissions will be repaired or replaced as soon as possible;
- Plant and machinery shall not be left running unnecessarily;
- Dry sweeping of large areas will be avoided.

4.9 Complaints

4.9.1 In the event that any complaints are received, details of the complaint will be recorded in the Environmental Logbook and potential sources or occurrences on site will be investigated. Records of all complaints and remedial action taken shall be recorded in the Logbook.

4.9.2 The results of the complaint investigation and the measures taken to resolve the complaint will be made available to the Regulator upon request.

4.9.3 Additional mitigation will be employed as and when necessary to resolve the complaint(s).

4.9.4 Any complaints received will be recorded and investigated in accordance with the Scott Bros. Limited Environmental Management System protocols. Outcomes will be fed into site management plans such as this DEMP, as appropriate to ensure ongoing improvement to minimising risks from the Activities on site.

4.10 Distribution & Training

4.10.1 A physical copy of the DEMP will be kept on site at all times and made available to employees. A digital copy will also be held at the head office. The DEMP shall be made available to the Regulator on request.

4.10.2 The site manager will ensure each employee and subcontractor at and/or arriving to the site are familiar with the control measures and procedures outlined in this plan and are aware of their individual role in reducing dust emissions.

4.10.3 Personal protective equipment shall be provided as necessary for employees and visitors.

4.10.4 Upon arrival at the site and/or beginning of employment the employee will be trained to carry out the mitigation actions required of their role. The training will make the employee aware of the wider dust management controls active at the site. Suitable training may include a site-specific toolbox talk and annual refresher sessions.

4.11 Review and Responsibility

4.11.1 The DEMP will be reviewed by the site manager annually. New versions of the DEMP will be issued as and when necessary, with mitigation and/or operational changes outlined. The version history shall be updated each time.

4.11.2 It is the responsibility of operator and the site manager to ensure the DEMP is enforced and that all employees are suitably trained. Failure to do so could result in adverse environmental conditions and enforcement by the Environment Agency.

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