Dust and Emissions Management Plan

NB Clark Ltd
Butterwell DP Recycling Centre
Longhirst
Morpeth
Northumberland
NE61 3NF

EPR/LB3004MK/A001

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Basis of Report

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Issue and Revision Record

Revision	Date	Originator	Description of Changes
V0.1 Initial draft	August 2023	K Dowling Consultant	Draft for Permit Application

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1. Basis of Report

This Dust and Emissions Management Plan (DEMP) has been prepared for NB Clark Ltd (NBC) in respect to the current permit application (2023) and will be implemented as part of the Environmental Management System (EMS) for the Bespoke Environmental Permit Application for their site located at Butterwell Disposal Point, Longhirst, Morpeth, Northumberland, NE61 3NF.

This Dust Management Plan provides detailed information on the sources, risks and mitigation measures related to the potential of dust emissions from the operations undertaken on the Site. This DEMP has been prepared in accordance with Environment Agency Guidance (control-and-monitor-emissions-for-your-environmental-permit) and using the Environment Agency Template (DEMP) V10.

Procedures and forms referenced within this Dust Management Plan will be included within the company Environmental Management System (EMS).

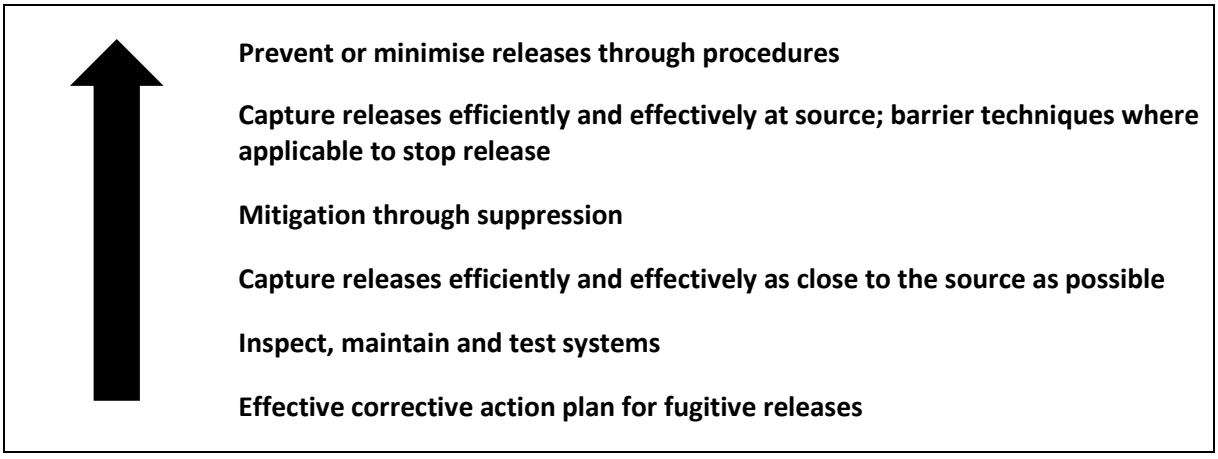
Completed forms (records) will be kept, as required by conditions included in the Environmental Permit and the company EMS.

Appendices are included for recommended formats for monitoring, recording and reporting (including for complaints).

1.1 General Principles of Emissions Management

The principles provided in the plan follow the path identified in Figure 1 below:

Figure - 1
Principles of Emissions Management



1.2 Document Management

Dust management will be reviewed yearly by the Management Team, in line with the EMS.

The document if required will be updated accordingly, unless a profile of complaints is received in which case the DEMP will be updated as appropriate to account for any such issues. Any changes in relation to site operations and abatement methods will be sent to the Environment Agency for review and comments.

1.3 Training

The site Technical Competent Manager (TCM) and other suitably qualified staff will provide the required training relating to site procedures and compliance with the DEMP. The TCM will ensure that the DEMP is enforced on site during operational hours either through on-site supervision or monitoring along with support from the site managers/supervisors.

Training will be provided to relevant personnel to give an awareness and competence in control of emissions in line with the requirements of the DEMP and a record kept of this training.

A copy of this plan, the site EMS and Permit will be available in the site office for staff and visitors to access at any time.

1.4 Air Quality Management Area

A search was made on the UK Defra Air Quality Map website (see below link);

https://uk-air.defra.gov.uk/aqma/maps/

The website and Northumberland County Council website confirms that the site does not in an AQMA area [1]

1.5 Sensitive Receptors

The site (centred at NGR 424550 591100) is located at Butterwell Disposal Point, Longhirst, Morpeth, Northumberland, NE61 3NF. The site is principally bounded as detailed in Table 1 below.

A summary of the immediate environmental site setting is provided in Table 1 below.

Table 1 – Site Setting

Boundary	Description
North	Rural/Agricultural
South	Rural/Agricultural
East	Rural/Agricultural
West	Rural/Agricultural

The below image (Image 1) shows the immediate site, surrounding and features.

[1] https://uk-air.defra.gov.uk/aqma/maps/

Image 1 – Immediate Site Surroundings



Within the immediate context of the Site, there are some residential properties. High Steads approximately 350m south of the operational area; Middlesteads Farm, approximately 450m southeast and The Sanctuary (Crowden Hill Farm), 400m west of the site.

1.6 Identified Receptors

Environment Agency Guidance provides methodologies for determining the sensitivity of:

- Types of receptor; and
- Overall sensitivity of the area.

The distance from the Site boundary to the sensitive receptor plays an important role in the potential impact experienced from airborne dust. Concentrations of airborne dust reduce significantly further away from the source.

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

The below table (Table 2) identifies sensitive receptors which could be affected by dust and other emissions within a 1km range of the site.

In the EA screening and after a search on the MAGIC website identified areas of habitat within 2km of the site identified within the Priority Habitat Inventory as the following habitat types:

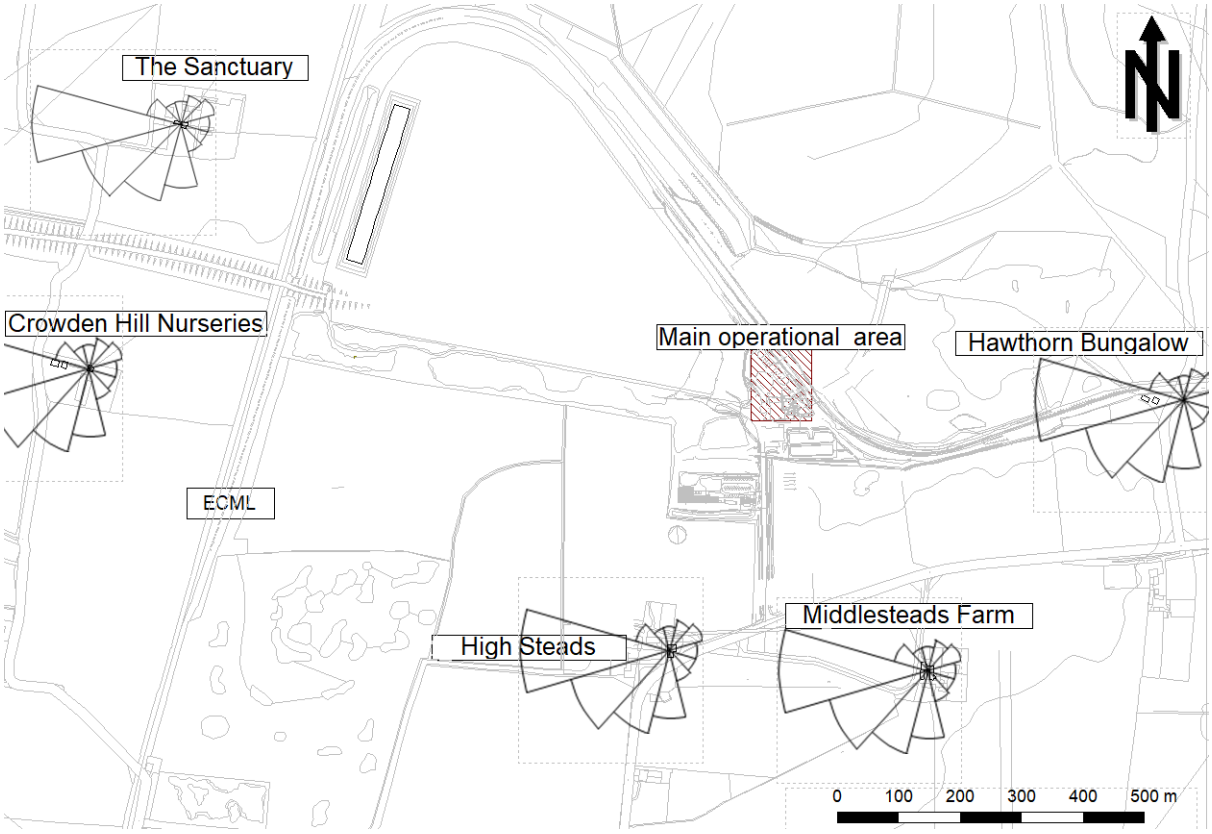
- deciduous woodland

An area identified as deciduous woodland extends into the site boundary from the north west, however from a review of aerial imagery dating back to 2002, no woodland is or has been present on site.

Table 2: Distances to Selected, Sensitive Locations and Receptors

Receptor	Distance	Receptor Assessment
Crowden Hill Nurseries – Residential	**1100m**	• **Due to the proximity of site and waste types, there is a low risk of impact from site activities.**
The Sanctuary – Residential	**1010m**	• **Due to the proximity of site, there is a low risk of impact from site activities.** • **All wastes are accepted treated, and stored in site in accordance with site management systems, regulated stockpiles with secure fencing to prevent loss of materials during handling and treatment.**
Hawthorn Bungalow – Residential	**580 m**	• **Due to the proximity of site, there is a low risk of impact from site activities.** • **Dust, Litter,Noise and Fire Controls in place to prevent impact to local residents/visitors.**
Middlesteads Farm - Residential	**450 m**	• **Due to the proximity of site, there is a risk of impact from site activities.** • **Dust, Litter,Noise and Fire Controls in place to prevent impact to the business sand public use areas**
High Steads – Residential	**350 m**	• **Due to the proximity of site, there is a risk of impact from site activities.** • **Dust, Litter,Noise and Fire Controls in place to prevent impact to these receptors and visitors.**

All residential sensitive receptors are also shown below.



1.7 Wind Direction

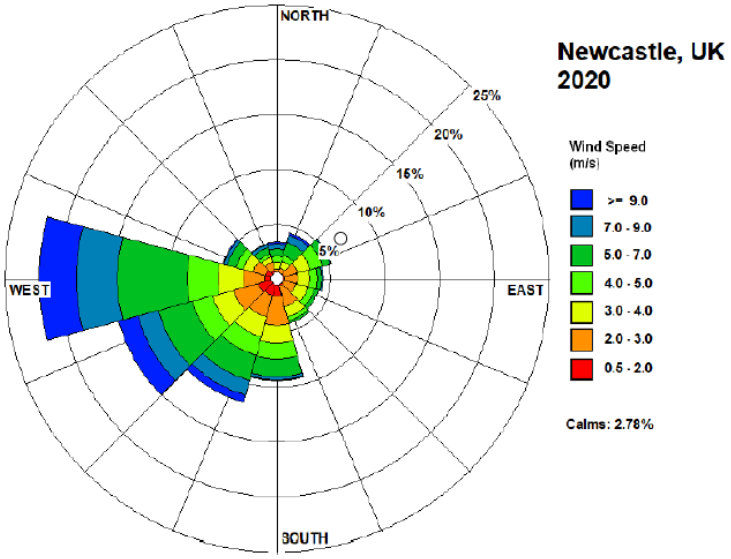
Site management and operational staff can access the MetOffice app [2] to monitor wind direction and strength immediately in the case of an incident and to assess the impact off site.

To find out the prevailing wind direction for the site, access to the Willy Weather [3]service, provides both real time and historic weather data. The free service provides weather information such as wind, weather, rainfall and tidal data around the United Kingdom.

The prevailing wind is from a south westerly and westerly direction and most sensitive receptors are not downwind of the site.

[2] https://www.metoffice.gov.uk/public/weather/wind-map/#?tab=map&map=Wind&zoom=9&lon=-2.21&lat=55.35&fcTime=1599091200

Image 2 - Prevailing Wind Direction – Newcastle



It is considered that other activities listed below at particular times of the year could also have the potential to be a source of dust emissions.

- Major roads and public road networks located in close proximity of the site are potential sources of pollution;
- Local construction and housing development in the area;
- Greenspace Management (grass cutting/land management);
- Farming (ploughing, land management).

Table 3: Other Pollutant Sources

Company	Type of Business	Distance from site boundary (m)
Road C125	Daily heavy traffic usage to businesses surrounding site	300m
Agriculture Activities	Ploughing, Fertilising, Harvesting Crops	50m
Rail Links	Daily heavy traffic usage to businesses surrounding site	300

2. Site Operations

2.1 Site Layout and activities

The site is accessed from the C125 (a heavily used transport route by business and public between Longhirst and Linton/Ashington) by a direct access road to the site.

2.2 Pre Acceptance

The company follow the below controls in relation to pre acceptance, applying the following criteria to decide upon the acceptance or rejection of a consignment of waste.

The process of making sure the correct materials enter the site starts from the sales process. A phone call is made to the office requesting a waste service to be provided. The customer will be advised by trained as to what can be tipped at our site and our strict acceptance procedures.

NBC will then request the following information from the customer:

- company/site name and address
- Process from which the waste arises
- the source of the waste (the producer's business and the specific process that has created the waste)
- information on the nature and variability of the waste production process
- information about the history of the producer site if it may be relevant to the classification of the waste (for example soils and other construction and demolition arisings from a site contaminated by previous industrial uses)
- the waste's physical form
- the waste's composition (based on representative samples if necessary)
- a description of the waste's odour and whether it is likely to be odorous
- an estimate of the quantity you expect to receive in each load and in a year
- EWC code and description
- anticipated volume
- waste classification testing
- If available any site investigation/soil report relating to the material that they wish to bring to the site.

Bulk loads

Pre acceptance and additional waste classification of submitted testing can also be verified using WM3 and Haz Waste Online Classification.

Ad Hoc

Some facilities receive waste on an ad hoc basis. In those instances pre-acceptance checks can still be carried out before the waste is accepted. For example, through the exchange of information at the weighbridge before acceptance on site.

Sampling and assessment

Sample information if the origin of the waste is reliably understood and it clearly shows that the waste is non-hazardous. However, a visual assessment alone will not be enough to assess whether mirror entry waste is hazardous or not.

If the waste is a mirror entry and has not been properly assessed, the company assume it is the hazardous entry as a precautionary measure. The pre-acceptance information will be verified by contacting or visiting the producer. Dealing with staff directly involved in waste production can help to fully characterise a waste.

Analysis of samples must be carried out by laboratories who are UKAS or MCERTs accredited for the prescribed test.

Once the waste has been properly assessed and classified, an assessment of the waste's suitability for storage and treatment at your facility to make sure the waste is compliance with permit conditions.

The company will keep pre-acceptance records for at least 3 years, with records preferably held electronically, following receipt of the waste.

The company must reassess the information required at pre-acceptance if the:

- waste changes
- process giving rise to the waste changes
- waste received does not to conform to the pre-acceptance information
- In all cases OBM must reassess the information required at pre-acceptance on an annual basis.

2.3 Waste Acceptance

All vehicles are brought to site by the company or third parties, where the load will be visually inspected upon collection, if possible, in order to confirm its description and composition against the consignment note and other accompanying documentation.

Wastes will only be accepted at the site if the description in the accompanying documentation is in accordance with the permit and that onsite inspection confirms waste is consistent with the description provided.

All wastes will be characterised during the pre-acceptance stage of the waste acceptance process, which will include the customer providing information such as WM3 analysis, WAC Analysis and LOI data to ensure that the waste has been correctly classified and permitted for acceptance, treatment, or disposal at NBC Butterwell site.

Should the wastes be found not to conform during the initial visual inspection, then the details will be recorded and the vehicle turned away. Should wastes already be discharged within the stockpile area and deemed not to conform or otherwise not be permitted then the waste will be picked out and:

- reloaded and returned; or
- removed to a designated quarantine area as appropriate

Records of non-compliant waste received at the site will include details on:

- the quantity;
- characteristics;
- origin;
- delivery date and time; and
- the identity of the producer and carrier

Wastes will not be accepted unless the site is adequately resourced to receive the waste.
A record will be kept in the site diary of all rejected wastes. The waste producer and the Environment Agency will be notified of significant non- conformance.

Waste acceptance procedures and forms detailed within the EMS are detailed below.

- Waste Acceptance
- Waste Rejection procedure
- Waste Rejection Report

The majority of all loads are pre booked with the operations team to manage site capacity and to ensure material quality before arrival on site.

All wastes delivered to site are subject to waste acceptance checks by a member of staff using “aircraft ladders” following removal of the cover sheet/net or visual inspection using CCTV on the weighbridge.

Cameras are located on the weighbridge to allow wastes to be visually inspected remotely. Wastes are also visually inspected following tipping prior to the waste entering the treatment process. Duty of care paperwork checks are also carried out, to ensure the waste is described and is coded correctly as well and compared with pre acceptance information and sampling records.

Wastes are deposited into the appropriate bays or areas of the site yard, by in-coming vehicles and moved by mobile plant as appropriate.

Waste reception and storage areas are covered in impermeable concrete all around the one-way system.

Should any concrete repairs be needed they are scheduled in at the most appropriate time.

All movements of waste incoming and outgoing the site will be recorded, and available for inspection by the Environment Agency upon request.

2.3 Waste Rejection

In the event that a waste load is brought to the site that is not an approved waste specified within the permit, access to the facility will be refused. The carrier will be instructed to return the waste to its originator. A record will be kept of waste deliveries refused entry to the facility.

Where wastes have been deposited, inspected then verified as non-compliant this is recorded, then segregated in a quarantine skip/container and removed off site within 48 hours to a suitably permitted facility.

The Environment Agency must be notified, usually by use of a Schedule 5 notification. A telephoned report prior to submitting the Schedule 5 notification is good practice.

2.4 Waste Processing, Storage and the control of Dust, and Other Emission Controls

All operational areas of the site are comprised of impermeable concrete surfacing. Site surfacing is checked daily, and repairs made where necessary. On site silt traps are checked and maintained on a regular basis to maintain integrity.

Equipment

Only site personnel that have been trained to operate plant are authorised to process the feedstock material. Equipment should be inspected for defects prior to use.

TREATMENT - SOIL WASHING – STONES & AGGREGATES

The inert waste will be fed our wash plant where it will undergo a fully automated treatment process. The washing process will allow the separation and recovery of sand, and various grades of single size clean aggregate.

NBC will apply the WRAP Quality Protocol (Current Version June 2023) to these materials to create a non-waste. This will enable the company to recover a greater number of aggregates from the materials brought into the site for treatment.

Outputs from the wash process

- a small metal fraction.
- several grades of stones, gravel and sand (aggregates)
- A final silt-like fraction (filter-cake) will be produced. This material will have a LOI of less than 10 and will be periodically tested to ensure that the material is correctly classified under WM3.

TREATMENT – CRUSHING & SCREENING – STONES & AGGREGATES

Should any inert materials arrive at site, and not be deemed suitable or does not require to be subject to the washing process, they may be processed using the original crushing and screening methods to produce various grades of recycled aggregate.

NBC will apply the WRAP Quality Protocol (Current Version June 2023) to these materials to create a non-waste. This will enable the company to recover a greater number of aggregates from the materials brought into the site for treatment.

Soils will be screened and tested post treatment and re purposed off site in landscaping and development projects under the appropriate permissions and legislation.

The site layout is shown on Drawing 003.

3. Waste Processing Controls

The application of these control processes will be the decision and responsibility of the Site Manager/TCM giving due regard to the nature of the various materials and the prevailing meteorological conditions.

Incoming wastes are monitored through an onsite tracking system, ensuring effective waste rotation with a storage time of no more than 3 months.

Daily checks safeguard the management of these wastes and storage locations to prevent any emissions from site.

3.1 Natural controls and manmade control

Due to the location of the site, all activities are conducted in natural depression to mitigate against dust or debris leaving site. The site is bounded by a natural screen of established hedgerows and trees. The site location and large separation distances in relation to sensitive receptors and to the prevailing wind patterns, it is considered that any potential dust from the Butterwell Site has a low risk of causing adverse effects or complaint. A best-practice and site-specific mitigation strategy to limit any adverse effects on nearby sensitive receptors is outlined in this assessment.

Manmade controls have been implemented with fencing erected around all the site. Litter netting is installed around the site boundary of the site to capture any windblown litter or prevent any emissions arising from site activities.

3.2 Transport of wastes

All outgoing vehicles carrying material will be evenly loaded and covered/sheeted to minimise wind entrainment or spillage on the public highway.

The concrete surfaces shall be properly maintained and kept in good repair. Checked daily.

Dust suppression on the access road will be carried out, when required, with the use of a water bowser.

If a spillage does occur then appropriate action must be taken to remove the material as soon as possible.

The access road will also be regularly swept with onsite road sweeping attachment.

The access route shall be kept in a clean state and deposits of mud and dust shall be removed. The C126 shall also be inspected daily, and any visible deposits shall be removed as necessary. The C126 shall be inspected as necessary.

Speed restrictions are imposed on the access road and around the site of 15m.

Use of the wheel wash upon entering and leaving the site.

An external road sweeper service will contracted to provide preventative and reactive dust and emissions management should heavy deposits be identified on access and external roads arising form site activities.

3.3 Site Inspections and Monitoring

Site inspections shall include the following aspects that directly relate to dust and emissions management.

Housekeeping, daily inspections and procedures detail all daily checks on site with a summary listed below.

- Condition of waste – waste material checks ensure that wastes are in good condition and have not degraded causing dust/debris;
- Volume of waste – to ensure that bay storage limits are not exceeded;

- Condition of impermeable areas – easy to conduct visual inspections and clean;
- Condition of storage areas – to ensure they remain fit for purpose and control wastes;
- Evidence of dust/fluff build up on surfaces – to implement cleaning procedure and the potential risk of dust/debris arising from waste handling;
- Evidence of dust/fluff build up on mobile plant – to minimise potential risk of dust and debris arising during plant movement;
- Condition of perimeter fencing – to ensure fencing is fit for purpose to prevent any potential windblown litter is controlled prior to site clearance.

In addition to the above, the clearance of debris around the plant after each operational shift is carried out daily, with the cleaning of the screener, any debris in and around the area removed at the end of the day.

This is to be recorded and monitored by both the Site Manager/TCM Daily.

3.4 Dust Suppression and Housekeeping

Stockpiles shall be dampened to ensure the risk of dust generation and transportation is low.

An automatic dust suppression system will be installed on site, using the existing lagoons on site as a water supply. This comprises a series of water pipes throughout the site which lead to rain guns, located at the wash plant and stockpile areas.

A water bowser shall be maintained on-site at all times and used, as and when necessary, for example should the lagoons not be able to provide enough water for the automatic dust suppression system. The water bowser will be used to damp down stockpiles, haul routes, access route and processing areas.

Dampening activities may be required during loading and unloading of materials and movement to and from storage areas. The visual inspection shall inform when and whether these dampening activities are required. Suppression should be used daily and as and when dust is visibly apparent in the airflow.

Use of suppression and water usage is to be recorded and monitored by both the Site Manager/TCM.

3.5 Mobile Plant and Fixed Equipment

Mobile plant and equipment on site at any one time comprise of:

- Loading Shovels;
- Screener/trommel
- Road Sweeper Attachment;
- Powerwasher;
- Wheelwash;
- Washplant; and
- company and 3rd party vehicle's wagons.

NBC will consider as part of their buying policy, the emission limits of all new plant due for renewal / replacement.

Vehicle speeds will be restricted to 15mph thereby, reducing the interface of the vehicle wheel with the surface.

Haulage across the site will be restricted to designated roads and are designed to avoid abrupt changes in horizontal or vertical alignment. Their route will also take advantage of natural protection, wherever possible.

Vehicles on site should not, wherever practical, be fitted with downward pointing exhaust systems.

The potential for dust to be raised is also greatly reduced if dust suppression methods are used on the haul roads in dry weather. Regular spraying with water will assist in the temporary entrapment of dust particles during vehicle movements.

Material that has spilled on to the haul road will be removed on a regular basis so that secondary breakage caused by the wheels of other vehicles will be prevented.

3.6 Maintenance

Planned maintenance of machinery and plant is carried out in accordance with the manufacturer's specifications and guidelines.

Plant defect books are issued once a week and a copy provided to the garage for booking in repairs. This ensures a rolling programme of maintenance and repair when needed.

Daily vehicle checks are carried out prior to use and recorded on the site plant defect form. This above procedure is detailed in the site Environmental Management System.

Breakdowns relating to plant and machinery on site will be recorded on site specific forms and arrangements made for repairs to be carried out.

A copy of this can be found within the site EMS and are referenced below. This records the nature of the breakdown, any contamination, maintenance tracking, repairs and notification to relevant bodies if necessary.

- Safe use/service and maintenance of plant
- Company Vehicles and Mobile Plant
- Plant Servicing and Maintenance Checklist

Spill kits are available on site in the event any fluids are leaked or discharges from vehicles on site. Any contaminated material will be disposed of to a suitably permitted facility.

3.*7* Waste and Material Processing

Dust suppression in the processing area will be assisted by enclosures and use of air extraction and filter equipment on fixed plant.

Drop heights at transfer points should be kept to a minimum. Staff will be trained to handle and load wastes in line with dust management principles.

Conveyors will be enclosed on fixed plant and mobile plant to continue any emissions from the treatment process.

4. Dust and Particulate (PM10) Management

4.1 Sources and Control of Fugitive Dust/Particulate Emissions

The below site operations have the potential to produce dust and particulates.

Different levels of dust emission can be anticipated during the different areas of the operation at the site.

These can include the following.

- Deposited waste,
- Loading of waste,
- Screening/crushing,
- Weather conditions,
- Insufficient attention to waste acceptance procedure,
- Over loading of waste holding bays,
- Lack of training,
- Mechanical failure,
- Customer mis-description of waste,
- Vehicles,
- Road sweeping without water suppression, and
- Loads uncovered.

4.2 Source-Pathway-Receptor Routes

Table 4 below identifies how and who may be affected by site activities, their impact on receptors off site and how they can be prevented.

4.3 On Site Control Measures

Table 5 details site infrastructure and abatement measures in place to prevent and reduce emissions from site.

Regular checks and maintenance are carried out on these systems or control measures such as bay integrity, fencing and dust management equipment. This ensures that dust suppression and abatement measures are in working order and equipment does not breakdown resulting in emissions leaving site during waste storage and processing.

Table 4 – Source/Pathway/Receptors				
Source	**Pathway**	**Receptor**	**Type of impact**	**Where relationship can be interrupted**
Mud / Dust	Tracking dust on wheels and vehicles, then mud dropping off wheels/vehicles when dry	Public Highway	Visual soiling, also consequent resuspension as airborne particulates	Remove mud/dust before vehicles if required leave site using the power washers. Vehicles delivering and collecting waste will be sheeted/covered. All operational surfaces are concrete and are subject to regular housekeeping in accordance with the procedures in the EMS. In addition, site access roads can be cleaned using the sweeping attachment on mobile plant, to prevent the suspension of any dust/debris.
Debris	Falling off lorries	Public Highway	Visual soiling, also consequent resuspension as airborne particulates	Incoming and outgoing vehicles are covered to contain and secure wastes. After loading wastes the vehicle can be swept and cleaned down using ladders to remove any protruding or loose waste. Site surfaces will be subject to regular housekeeping as per the EMS procedures. Where debris is identified as an on-going issue the road sweeper will be deployed.
Tipping, storage and treatment, sorting of wastes in the open	Atmospheric dispersion	Public Highway Receptors	Visual soiling and airborne particulates	Waste stored stockpiles can be dampened down in periods of dry weather, when wind whipping is identified to be excessive or to prevent material drying and becoming friable. Plant operators should be trained not to overload storage/stockpiles. Fixed plant will have guard and skirting to prevent litter/debris escape. Daily inspections and monitoring controls in place to identify poor waste controls and reactive action to contain wastes.
Vehicle exhaust emissions	Atmospheric dispersion	Local Receptors	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. A 15mph speed limit and a 'no-idling' policy is implemented on Site.
Non road going machinery exhaust emissions	Atmospheric dispersion	Local Receptors	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength.
Loading wastes	Atmospheric dispersion	Public Highway Receptors	Visual soiling and airborne particulates	Loading takes place with low drop hights (1.5m) reducing the risk of emission arising. Cleaning any loose waste from vehicles after covering and securing. Operations will cease when winds are deemed to cause excessive movement of wastes and materials.
Site surfaces	Atmospheric dispersion	Public Highway Receptors	Visual soiling and airborne particulates	The treatment, entrance and exit surfaces are fully concreted and therefore dust generation is likely to be minimal. A 15mph speed limit and a 'no-idling' policy is implemented on Site.

				The Site is subject to regular housekeeping in accordance with the procedures in the EMS. Site surfaces during and after operations are maintained, good housekeeping or using water suppression to clean waste storage areas.

Table 5 - Mitigation measures and controls				
Mitigation Measure	**Description / Effect**	**Use on Site**	**Trigger for Implementation and enforced/monitored by**	**Further mitigation to be implemented if not effective**
Wastes accepted, treated and stored in secure location	Creating a barrier between the source of dust and particulates and receptors from the prevailing wind. Storage bays are located under the wash plant with a bund height of approx. 8m. Very effective despite costs and the high potential for disruption to already operational sites. Ensure that procedures are in place to manage infrastructure and its integrity.	Effective to control Procedures are in place to manage infrastructure integrity and containment. Management of capacity and waste turnover required (1st in 1st out)	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives* Designated storage areas in places as specified by the DEMP with robust storage timescales.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. e.g. cessation of dusty activities.
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 from the source are not dispersed over significant distances.	Used in combination with other measures to reduce dust and particulate generation	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives* All wastes are stored and treated within secure area, with natural manmade screen and external fencing, enclosing activities from local receptors.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. e.g. cessation of dusty activities.

			Designated storage areas in places as specified by the EMS/DEMP. Post the treatment of waste, storage of waste is in secure bays, to provide containment for waste, segregated materials and fines residues from processed waste.	
Fencing screen/panels	Creating a barrier between the source of dust and particulates and receptors from the prevailing wind	Effective to control Procedures are in place to manage integrity and containment. 3 monthly maintenance plan in place to maintain operational use.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives* Panels reduce the risk of any loose material being wind whipped from within secure bays causing waste to escape.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. e.g. cessation of dusty activities.
Litter netting	Erecting netting around the site external perimeter to capture released debris and dust and particulates prior to it being dispersed off-site.	Can reduce wind speed across the site which indirectly controls the potential for dust and particulate emissions Acts as a control to prevent litter/debris leaving site Daily inspections of the netting will be made, and maintenance programmed into the management system.	**Operational requirement** *Monitored by TCM/Site Managers* Daily inspections of the netting will be made, any trapped material cleared. Checks on the integrity of netting made daily, and repairs/defects/maintenance programmed into the management system.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. cessation of dusty activities.
Site speed limit, 'no idling' policy and minimisation of	By reducing vehicle movements and idling will	Easy to implement and control as part of good practice	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives/drivers*	If excessive dust emissions are observed to be leaving the Site boundary, then the further mitigation

vehicle movements on site	reduce emissions from vehicles Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels	Is identified clearly in the site management system, site rules and implemented as appropriate measures	Supported by the site rules and driver inductions. There will be a 15mph speed limit, a 'no-idling' policy, and the minimisation of vehicle movements on the Site.	measure(s) will be triggered. If there is mud on the access road, then a mobile bowser will be deployed to clean and dampen the surface. If excessive dust emissions from vehicle movements continue after these measures, then operations shall cease.
Traffic Management System	By reducing and controlling vehicle movements on site	Easy to implement and control as part of good practice Is identified clearly in the site management system, implemented as an appropriate measure Procedure Traffic management of the EMS support this measure	**Operational requirement** *Monitored by TCM/Site Managers/Weighbridge* *Observed by site operatives/drivers* Vehicle movements will be minimised by ensuring that the double handling of materials is avoided where possible e.g. loads entering the Site that can be clearly identified as one waste type will be immediately sent to the correct waste stockpile area.	If excessive dust emissions are observed to be leaving the Site boundary, then the further mitigation measure(s) will be triggered. If there is mud on the access road, then a mobile bowser will be deployed to clean and dampen the surface. If excessive dust emissions from vehicle movements continue after these measures, then operations shall cease.
Minimising drop heights for waste.	Minimising the height at which waste is handled will reduce the distance over which debris, dust and particulates could be blown and dispersed by winds	Relatively easy to implement. Staff are trained to use equipment such as the grab to place waste into hoppers/onto conveyers and vehicles, not to drop from height. Procedures are identified clearly in the site management system and implemented as an appropriate measure.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives*	Water will also be available to dampen surfaces and stockpiles to reduce dust generation. If excessive dust emissions continue after these measures, then operations shall cease.
Site surfacing	Creating an easy to clean impermeable surface, using materials such as concrete as	Easy to implement and requires minimal equipment.	**Operational requirement** *Monitored by TCM/Site Managers*	Water will also be available to dampen surfaces and stockpiles to reduce dust generation. If excessive

	opposed to unmade (rocky or muddy) ground	The site is fully concreted with a sealed drainage system.	Good housekeeping will be implemented by following the housekeeping procedure within the EMS and by carrying out site inspections	dust emissions continue after these measures, then operations shall cease.
Good house-keeping	Consistent, regular housekeeping regime that is supported by management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up Plant and machinery will also be cleaned and maintained at regular intervals to prevent the build up of dust and debris	Easy to implement and requires minimal equipment Encourages good practice on site Staff will target the areas not caught by the road sweeper and other cleaning apparatus. Procedure supported within the site Management System along with daily checks. Daily cleaning regime in place driven by the site DEMP/EMS. Once bays and storage locations are cleared inline with storage times, they are cleaned, and photographic evidence taken to demonstrate compliance.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives*	Water will also be available to dampen surfaces and stockpiles to reduce dust generation. If excessive dust emissions continue after these measures, then operations shall cease.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	Easy to implement at many sites Is identified clearly in the site management system and implemented as appropriate measures	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives/drivers* Limitations: The exception of Grab Vehicles Loading/ unloading of materials to/from a vehicle will be followed by closing of the sheet covers on that vehicle. Visual observation of incoming vehicles will take place to ensure vehicles arriving are sheeted.	If excessive dust emissions are observed to be leaving the Site boundary, then the further mitigation measure(s) will be triggered. Materials may be dampened.

			All vehicles carrying waste to the Site will be sheeted at all times unless being loaded or unloaded. The sheeting equipment will be activated and checked to ensure proper coverage before the vehicle can leave the site. Incoming vehicles that are not sheeted will be rejected from the site or sheeted immediately.	
Hosing or cleaning of vehicles pre exit from site	Will remove some dirt, dust and particulates from the lower parts of vehicles using the steam cleaner or hoses Wheelwash also located on site for vehicles entering and exiting site.	Supported by site procedures and training and site rules.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives /drivers* The washing facilities are available for use by vehicles observed as having accumulated a significant amount of mud prior to entry to site.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. eg. water sprays will be used to dampen surfaces to prevent dust becoming airborne.
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 will reduce peak pollution events	Will reduce dust and particulate emissions. Procedures are in place to identify when operations will cease.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives.* If excessive dust is being generated by the operations and water sprays are proving not to be sufficient, then the Site Management will notify staff and operations will temporarily cease. Operations will commence once the wind has subsided and/or the area is dampened down. Weather condition monitoring (Visual observation) including wind strength, wind direction and rainfall. This monitoring will be recorded on the Daily Diary.	N/A

Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site, including no tipping, shredding, chipping or screening of high risk loads during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site	Effective in terms of dust and particulate reduction and is easily implemented due to low volumes of waste being received on site	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives.* Management conducts recorded daily checks and visual monitoring during the day of waste volumes on site. Incoming wastes are controlled by site management/supervisors where wastes inputs can be ceased or controlled if required.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. eg. cessation of dusty activities.
On-site sweeping & Off-site	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles Road sweeping attachment can damp down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside	Easy to organise but less effective than other measures due to heavy traffic off site	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives.* Utilised when required on site monitored by management and Operations Manager. Can be increased when necessary or if identified during busy periods and after visual daily monitoring.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. e.g. cessation of dusty activities.
Water suppression with hoses	Use of hoses on external surfaces, predominately near entrances and exits.	Detailed in the management system and procedures.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives.* Water supply from onsite main source.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered use of the bowser or atomisers. If excessive dust emissions still continue, further mitigation measures will be triggered cessation of dusty activities.

Water suppression using bowser and rain guns	It can also assist in the damping down of materials during receipt and pretreatment or site surfaces to reduce dust suspension from traffic movements	Will reduce dust and particulate emissions.	**Operational requirement** *Monitored by TCM/Site Managers* *Observed by site operatives.* Limitations: This abatement measure will not be used all the time on wastes due the fact that the integrity of the waste material is affected is too wet.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. eg. cessation of dusty activities.

4.4 In the event of a drought

The main water supply to the site is provided by the local water authority.

Reserve water is stored on site in a bowser during the summer period and used for dust suppression or surface dampening.

Rainwater harvesting is also collected and recycled into on site lagoons for reuse on site.

In the event of a drought, further guidance and clarification from the Local Water Authority regarding water usage.

In the event that onsite measures and other abatement options are not available due to high water usage, site operations will be ceased until operations can be carried out in accordance with this document.

4.5 Enclosure of Waste Processing & Storage Areas

The company are demonstrating that mitigation measures are in place to prevent fugitive emissions, without full enclosure.

Enclosure of waste activities is not practical due to the type of waste handled and equipment required.

This is a standard feature of all non-hazardous recovery sites handling soils and C&D derived waste.

4.6 Visual Dust Monitoring

Operations at the Site will be monitored daily for compliance with the provisions of this DEMP by the TCM and site manager (or delegated person with appropriate training/competency). Records of these routine inspections will be made on the daily checklist.

In addition, all staff will be responsible for immediately reporting specific incidents that could result in significant dust emissions from the site to the site managers/yard supervisor.

A log of specific/exceptional incidents and the actions taken to remedy them (including measures implements to prevent their reoccurrence) will be maintained.

The emission of dust will be monitored at the site boundary routinely once per day.

The inspection will be carried out as part of the site daily checks and recorded on the inspection sheet and Site Diary.

Should any complaints or visual inspections indicate emissions leaving site further monitoring will be carried out. A map of the Site and its surroundings (Appendix C) identifies the off-site locations that shall be monitored, based on the nearest receptor areas outlined in Table 2.

The dust impacts (i.e. deposition, airborne particulate matter) will be monitored at the locations identified in the afternoon. These are recorded on Appendix B.

The dust impacts will be assessed in accordance with the following scoring scheme:

- 0 - No dust detected
- 1 - Very faint, unlikely to cause annoyance
- 2 - Faint dust, unlikely to cause annoyance
- 3 - Distinct dust, likely to cause annoyance
- 4 - Visible dust in continuous plumes, likely to cause annoyance
- 5 - Large amounts of visible dust, likely to cause annoyance
- 6 - Excessive amounts of dust and particles, highly likely to cause annoyance

The frequency of on-site and off-site inspections may be increased:

Upon receipt of material will be potential to generate significant amounts of dust is received at the Site; and/or

- During periods of prolonged windy and/or dry conditions.
- Only employees with suitable training/competency will undertake the dust monitoring.

Quantitative monitoring is not proposed during routine inspections.

In the event of a dust impact scoring 3 or greater, the full extent of the impact will be determined and notified immediately to the TCM/Facility Supervisor.

5. Particulate Matter Monitoring

Quarterly particulate monitoring is not required under the Permit.

6. Actions when fugitive dust emissions are observed leaving site

In the event fugitive dust emissions are observed leaving site, the following actions are taken:

1. The TCM/ Facility Supervisor assesses off site influences and yard activities/operations, and the nature of the waste handling and deliveries immediately prior the incident.
2. If the source cannot be ascertained with 100% confidence, the site managers/yard supervisor on duty suspends the likely dust/particulate generating activities be it waste loading, unloading or waste processing.
3. If the source is within the site's control, the site managers/yard supervisor will take appropriate action in terms of dust/particulate abatement, to ensure that the alarm is not re-activated. This may take the form of the following;

    (a) Investigating the source of the dust/particulates to prevent a re-occurrence;
    (b) Suspending operations which are not being conducted using best-practice controls as set out in Table 7;
    (c) Additional use of the dust abatement measures;
    (d) Logging findings of a – c in the site diary.

In all cases, findings from the site managers/yard supervisor investigations are to be reviewed by the company directors. Any changes to site operating techniques will be implemented into the dust & particulate emission management plan, to prevent a re-occurrence of any further emissions from site.

Alongside the implementation of this monitoring system, the daily continuous visual monitoring of potential dust sources and activities safeguard will also be a vital part in managing dust and particulates.

7. Reporting and Complaints Response

Members of the public are able to contact the company with any odour complaints about the facility by the following means:

- By telephone the contact number 01670 512468 is manned from Monday to Sunday 24hrs with a voicemail facility; or
- By email to info@nbclark.co.uk.

Senior management/TCM can attend the Site or instruct a relevantly trained Site Operative to attend the Site in their absence.

These methods of contacting the site are displayed at the site entrance and on the company's website.

On arrival at the Site, the cause of the dust emission will be identified, and the most suitable corrective measure will be instigated.

These methods of contacting the site will be displayed at the site and communicated through meetings, newsletters and other forms of advertisement.

Suitable complaint forms (based on the example provided in Appendix A) will be made available at the site office to anyone wishing to report any incident relating to dust emissions from the Site.

7.1 Engagement with the Community

NBC recognise the importance of engaging with the people who may be affected by site activities. If an issue occurred where neighbours were affected by the activities, then we would like to propose to use the following community outreach activities to engage with local community in order to understand the issues and provide detailed information about our actions to mitigate any problems.

Newsletter / leaflet

Leaflet explaining about site activities, remedial actions and information about complaining procedures. We propose to communicate with residents regarding any incidents or issues via this media.

Website Information

Leaflet explaining about site activities, remedial actions and information about complaining procedures. The company may choose to communicate with residents regarding any incidents or issues via this media.

Meeting with residents

In the event of an incident or an issue which may lead to complaints regarding dust and emissions we will carry out a formal letter drop to inform local residents about the DEMP and future improvements to the site and invite residents to contact us through the appropriate methods and/or to attend a public meeting regarding the issues on site.

This DEMP will be updated to include actions and outcomes from any community engagement meetings.

7.2 Investigating Complaints

On receipt of any complaint, the Site Manager/TCM or nominated person in their absence will investigate the details of the complaint in order to determine if the reported impact is as a result of operations within the Site.

Similarly, upon identification of a dust impact scoring 3 during the routine monitoring, immediate action by (or under the responsibility of) the Site Manager will be taken to determine if the dust impact is likely to have been caused by operations at the Site.

If an incident is notified either via direct complaint or through the routine inspections, the site managers/yard supervisor or TCM will review the operations at the Site for:

- Notifications of specific/exceptional incidents (relating to dust emission generations) occurring since the last inspection;
- The nature of the wastes received since the last inspection;
- The storage arrangements for these wastes (including the use or otherwise of dust suppression equipment); and
- Meteorological conditions since the last inspection that could have the potential to generate significant dust emissions from the Site.
- External influences of note that have impacted site conditions

Where the above review reveals that the Site may have been the source of the recorded dust impact, the Site Manager/TCM or nominated persons will notify the EA as soon as is reasonably practicable.

7.3 Escalation Procedure

In the event more than 3 complaints over period of 24hrs, are received, site operations will be ceased immediately with the complaint investigation and monitoring process instigated. As detailed in Tables 6 and 7 the site will investigate and propose additional measures to enable the site to continue site operations.

No further operations will take place until full investigation and resolution with complainants have taken place.

7.4 Remedial Actions

If plant/equipment failings are identified as the cause of the incident (including those relating to the suppression/mitigation measures), all relevant items will be submitted to a full inspection and testing procedure (in accordance with manufacturer/supplier guidelines) and relevant repair work undertaken as soon as is reasonably practicable.

If operational/procedural failings are identified, all relevant procedures and policies (including the Integrated Management System, this DEMP and other associated documents) will be reviewed and updated as necessary.

If an update to any document is required, this will be made and recorded within the document revision timeline. If appropriate, the new versions provided to the Local Planning Authority and/or the EA.

Additional training will be provided to operations staff either on the implications of the updated policies and systems to their specific roles or to reiterate the importance of performing their duties in full accordance with the environmental policies and procedures, and the Site Environmental Permit.

8. Recording

A log will be kept of all:

- Inspections;
- Complaints received;
- Investigations;
- Corrective actions;
- Further Monitoring; and
- Policy reviews/updates.

All such information will be made available to the Local Planning Authority and the EA, on request.

Records will be held for a period of no less than 6 years.

9. Closure

This report has been prepared by Olive Compliance Ltd (OCL) with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of NB Clark Ltd, no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from OCL.

OCL disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

APPENDICES

Appendix A – Complaint Recording Form
Appendix B – Monitoring Record Form
Appendix C – Monitoring Location Plan
Appendix D – Housekeeping Plan

REFERNCED DRAWINGS

Drawing 003 Site Layout Plan
Drawing 004 Sensitive Receptor Plan

APPENDIX A – Complaint Recording Form

Compliant 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	
Review date	

Site Manager signature to confirm no further action required	

APPENDIX B - Dust Monitoring – Receptors and Investigation

Date:	Responsible Person:

	MP 1	MP 2	MP3	MP 4		
Time of test						
Location of test e.g. street name etc						
Weather conditions (dry, rain, fog, snow etc):						
Temperature (very warm, warm, mild, cold, or degrees if known)						
Wind strength (none, light, steady, strong, gusting)						
Wind direction (e.g. from NE)						
Intensity (see below)						
Duration (of test)						
Constant or intermittent in this period						
Location sensitivity (see below)						
Is the source evident?						
Any other comments or observations						

In the event a complaint or trigger alert the below monitoring at the below sensitive receptor monitoring points (APPENDIX C) will be carried out as part of the investigation.

Intensity (Detectability)	**Location sensitivity where Dust detected**
0 - No Dust detected 1 - Very faint, Dust unlikely to cause annoyance (Dust barely detectable inhaling face to the wind) 2 - Faint Dust, unlikely to cause annoyance 3 – Distinct Dust, likely to cause annoyance (Dust easily detected while walking and breathing normally) 4 - Visible Dust in continuous plumes, likely to cause annoyance 5 - Large amounts of visible Dust, likely to cause annoyance 6 – Extremely excessive amounts of Dust and particles, highly likely to cause annoyance	0 not detectable 1 Remote (no housing, commercial/industrial premises or public area within 500m) 2 Low sensitivity (no housing, etc. within 100m of area affected by Dust) 3 Moderate sensitivity (housing, etc. within 100m of area affected by Dust) 4 High sensitivity (housing, etc. within area affected by Dust) 5 Extra sensitive (complaints arising from residents within area affected by Dust)

APPENDIX C – SENSITIVE RECEPTOR / MONITORING LOCATION PLAN

(West) Sensitive receptor monitoring point

(North) Sensitive receptor monitoring point (Boundary)

(South) Sensitive receptor monitoring point

(East) Sensitive Receptor monioring point

