BGL 8
Dust Management Plan for Waste Operations

BERSHAM (GLENSIDE) LTD

Bersham Colliery
Bersham
Rhostyllen
LL14 4EG

Version 1.1 - 27.01.2026

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1.0 Introduction

1.1 Introduction Severn Compliance Limited has prepared this Dust Management Plan for Waste Operations on behalf of Bersham Glenside Limited to support an application for a bespoke Environmental Permit for the recycling (including washing) of mining spoil.

1.2 The site Dust Management Plan covers is located at land at the former Bersham Colliery, Bersham, Rhostyllen, LL14 4EG

1.3 This Dust Management Plan only considers the waste operations to be undertaken at the Site. Many of the mitigation measures listed in this Dust Management Plan for Waste Operations are in use at the Site already to mitigate the impact of dust from the existing quarry facility.

1.4 The Site is located 400m to the South of the Village of Rhostyllen and 3 kilometres to the Southwest to the town of Wrexham.

1.5 The proposed permitted boundary of the Permitted Site is shown is shown in Figure 1.5 Permitted Boundary taken from then existing environmental permit

Figure 1.5 Permitted Boundary

1.6 This Dust Management Plan provides detailed information on the sources, risks and mitigation measures related to the potential of dust from the recycling of waste operations proposed to be undertaken at the Site.

Content of the Dust Management Plan

1.7 This Dust Management Plan will form part of the Environmental Management System (EMS) for the Site. Procedures and forms referenced within this Dust Management Plan will be included within the EMS. Completed forms (records) will be kept, as required by conditions of any Environmental Permit to be obtained for the Site.

1.8 This Dust Management Plan for Waste Operations is structured as follows:

- Section 2 provides a summary of the relevant legislation and guidelines.
- Section 3 provides information relating to the Site setting, including the location of the Site and nearby sensitive receptors.
- Section 4 provides a summary of the proposed changes to operations carried out on the Site and the delivery of waste to the Site.
- Section 5 provides information on the site management and the mitigation measures employed at the Site.
- Section 6 provides information on how dust emissions are monitored at the Site.
- Section 7 provides a description of how complaints can be made and how they are addressed by the site management.

2. Relevant Legislation

2.1 The Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland fulfils the requirement under Part IV of the Environment Act 1995 for a national air quality strategy which sets out policies for improving ambient air quality and keeping these under review. The first strategy, the National Air Quality Strategy (NAQS), was published in March 1997. In January 1999, proposals to amend the strategy were put out for consultation and a consultation document was produced. Following consultation, a revised version of the strategy was published in January 2000. This was further revised in July 2007 and has not been revised since this date.

2.2 The AQS provides a framework for air quality control through air quality management and air quality standards and objectives for different pollutants (including particulate matter). These air quality standards and objectives were transposed into English Law by the Air Quality (Standards) Regulations 2010. The AQS was published on the gov.uk website in March 2011 under the 2010 to 2015 Conservative and Liberal Democrat coalition government.

Air Quality Management Area (AQMA)

2.3 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.

2.4 The Site is not located within an AQMA.

Low Emission Zone (LEZ)

2.5 A LEZ is an area that has restrictions on the type and age of vehicles permitted in it, therefore, vehicles emitting high levels of pollution can be prevented from entering and operating within the zone.

2.6 The Site is not located within a LEZ.

3. Site Location and Sensitive Receptors

Site Location

3.1 The proposed Bersham (Glenside) Limited recycling facility will be located at the former Bersham Colliery site.

3.2 The Site is located 400m to the South of the Village of Rhostyllen and 3 kilometres to the Southwest to the town of Wrexham.

3.3 The boundary of the Site is shown on Permit Boundary Plan, Drawing No. 1.5 Permitted Boundary. A fence forms the site boundaries.

3.4 The activities are restricted to the site and the site is accessed via a private road off of the Colliery Road.

3.5 Land-uses surrounding the Site include agriculture, light commercial, rail and disused colliery buildings.

3.6 The Site is not located within a Groundwater Source Protection Zone.

3.7 The Site is not located within a Flood Plain.

3.8 The site is located on the former Bersham Colliery site and next to the historical colliery spoil tip.

3.9 The proposed hours of operation for the delivery and processing of aggregate are as follows:

• 07:30 hours to 17:30 hours, Monday to Friday.

• 08:00 hours to 13:00 hours, Saturday.

• No working on Sundays and Bank Holidays

3.10 Existing site operations

Sensitive Receptors

3.10 This Dust Management Plan identifies receptors within 1,000m of the Site that may be sensitive to dust emissions.

3.11 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.

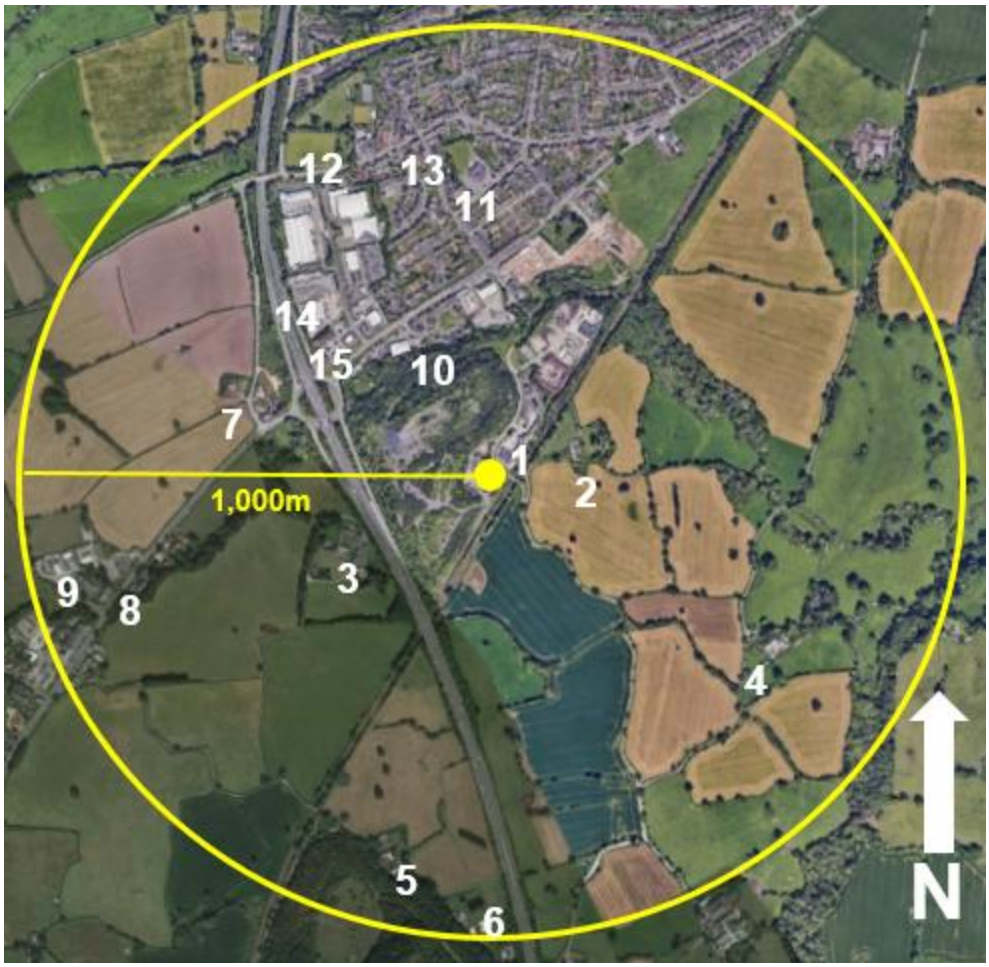
3.12 Due to the nature of the waste being handled on this Site the particle size of the dust emitted is of intermediate to large particles. Therefore, it can be concluded that these particles are highly likely to be deposited within 50m of the source.

3.13 The direction and distances from the boundary of the Site to the boundary of sensitive receptors are provided in Table 3.1 Sensitive Receptors. The references 1 - 12 are shown on the Sensitive Receptors Plan, Figure 3.1 Sensitive Receptors Plan.

Table 3.1 Sensitive Receptors to Dunston Quarry

Ref	Receptor	Description	Direction from site boundary (m)	Approximate distance from Site Boundary (m)
1	Business Park	Mixed commercial sites	40	NE
2	Dwelling / farm	Plas Grono Farm	183	NE
3	Dwelling	Private Road	300	SW
4	Dwelling	Haford Road	645	SE
5	SSSI	Stryt Las a'r Hafod	830	SW
6	Dwelling	Corkscrew Lane	995	SW
7	Dwelling	Croesfoel Court	500	NW
8	Dwelling	Wrexham Road	665	SW
9	Dwelling	Wrexham Road	920	SW
10	Dwelling	Glan Yr Afon	320	N
11	School	Ysgol Rhostyllen	640	N
12	Sports Clubs	Football and Bowls	770	NW
13	Food and Drink	Public houses and takeaways	770	N
14	Hotel	Travelodge	755	NW
15	Food and Drink	Starbucks	440	NW

Figure 3.1 Sensitive Receptors Plan



Meteorology

3.14 Unlike many other atmospheric pollutants, the generation of dust is particularly dependent upon weather conditions.

3.15 The predominant 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. Clearly the most significant meteorological factor is the predominant wind direction and wind speeds, and consequently data has been collected regarding the predominant wind speeds and directions appropriate to the Site.

3.16 Wind speed and direction data have been obtained from the Hawarden Observation station for the period of the last five years. Hawarden observing station is located approximately 15 km to Northwest of the site. This observing station has wind speed and direction data appropriate for characterisation of the wind climate at the Site, Wind rose from Hawarden Observing Station for the last five years.

Direction	Percentage
N	1.36
NNE	2.47
NE	1.89
ENE	1.83
E	2.22
ESE	10.04
SE	18.67
SSE	13.90
S	7.09
SSW	7.80
SW	8.27
WSW	10.09
W	6.99
WNW	5.39
NW	2.52
NNW	0.00

Wind rose Hawarden Observing Station taken for the last five years

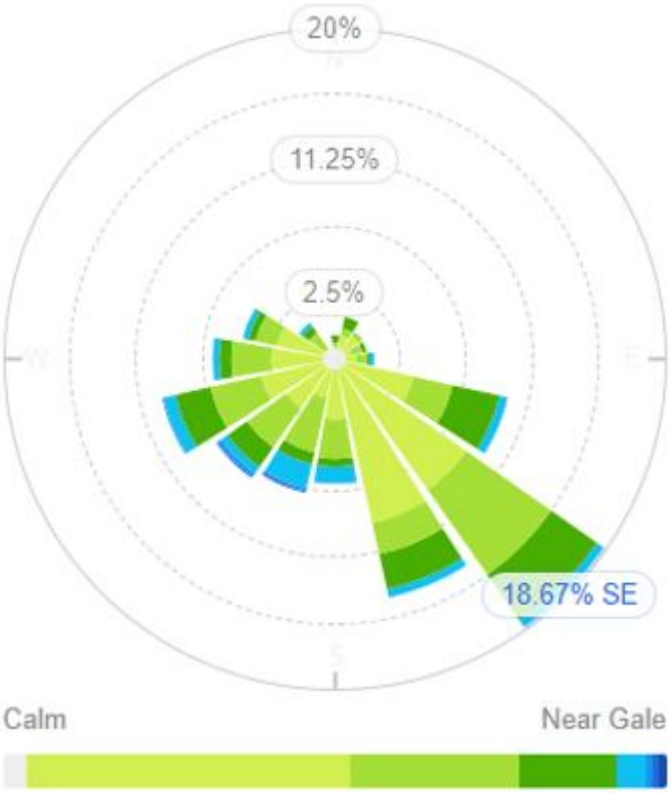
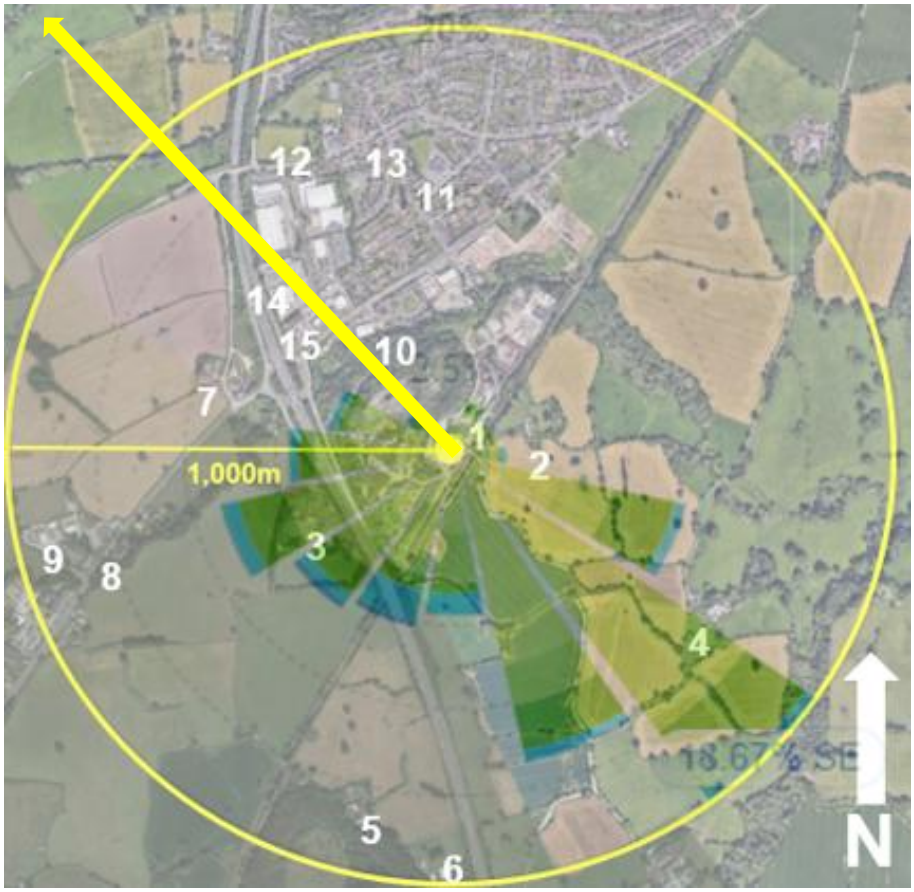


Figure 3.16 Wind rose date overlaid onto sensitive receptors plan



3.17 The predominant wind blows from the Southeast towards receptors to the Northwest of the Site. Receptors to Northwest of the Site include -

- Single Dwellings
- Sports facilities
- Light commercial and leisure

In addition there is and agricultural land.

3.18 The closest sensitive receptor in line of the prevailing wind being dwellings on Glan Yr Afon.

3.19 The closest receptor associated with human occupation inline of the prevailing wind is again dwellings on Glan Yr Afon, 320m away.

3.20 As stated in section 3.12 due to the nature of the waste being handled on this Site the particle size of the dust emitted is of intermediate to large particles. Therefore, it can be concluded that these particles are highly likely to be deposited within 50m of the source. There are no receptors within 50m of the permitted site boundary.

3.21 The receptors to the North, Northeast and Northwest of the proposed permitted area will be shielded by the colliery spoil mound.

3.22 The colliery spoil mound will gradually be removed to provide feedstock for the wash plant and until it is removed it will provide a barrier for dust to travel to sensitive receptors.

3.23 Due the methods highlighted with section 5.2 means the likelihood of dust impacting upon the SSSI is very low.

View of the colliery spoil mound from the North

3.24 A windsock and a weather station will be placed on site to enable the operator to gauge wind conditions; The weather Station details the wind speed, wind direction, rainfall, temperature, humidity, heat index, dew point, wind chill, and barometric pressure. This is a proactive measure that will allow them to accurately assess and record the conditions on site.

9.25 The weather station provides live date and a visual guide to wind strength and direction via the wind sock. This can be used by the site manager to decide if receptors are at risk of being impacted.

9.26 Only if weather conditions are so impactful that dust cannot be prevented from being generated will operations stop.

9.27 The site will monitor the weather forecast in advance so that they can plan for potential adverse weather. In addition, the company will look for weather warning from the Met Office for weather warnings, especially those related to wind. The company will also monitor the weather forecasts for hot dry weather conditions.

9.18 A wind speed or gusts of over 20mph recorded on the sites weather station will mean that the site implements additional suppression to ensure the site is thoroughly damped down. Operations will not cease, but will be closely monitored to ensure that dust is not leaving the site.

Other Sources of Dust

3.24 There is the potential for dust to be emitted from vehicle movements along the local roads especially the A483 Dual Carriageway that runs to the West of the site.

3.25 It is considered that agricultural activities carried out at particular times of the year on the surrounding agricultural land will have the potential to cause dust emissions.

3.26 The clearance of the colliery spoil heap, which will feed the wash plant and in turn this operation has the ability to generate large amounts of dust.

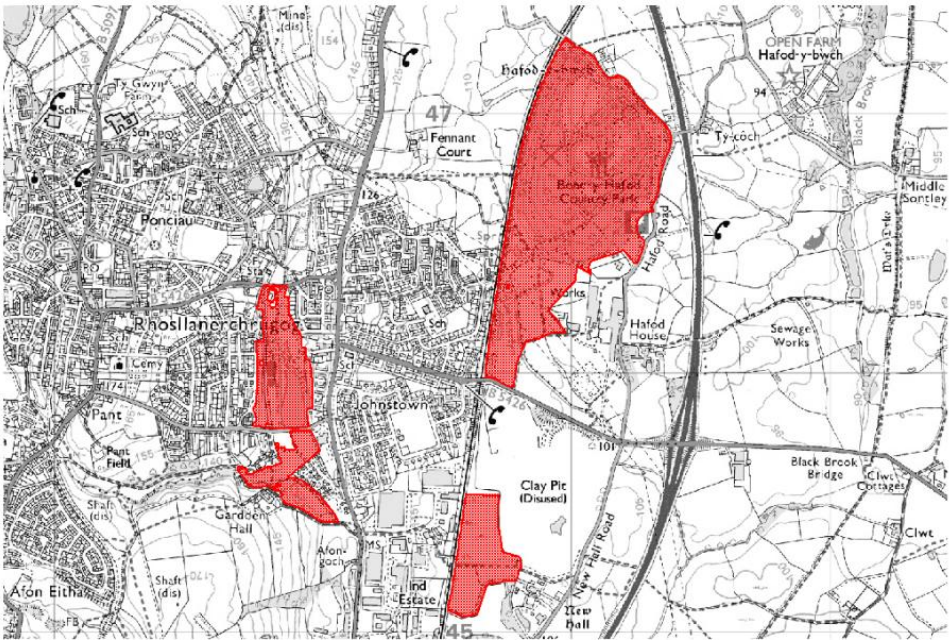
3.27 There are neighbouring business's aggregate and building supply companies and skip hire on Colliery Road.

Impact of species, habitats and designations

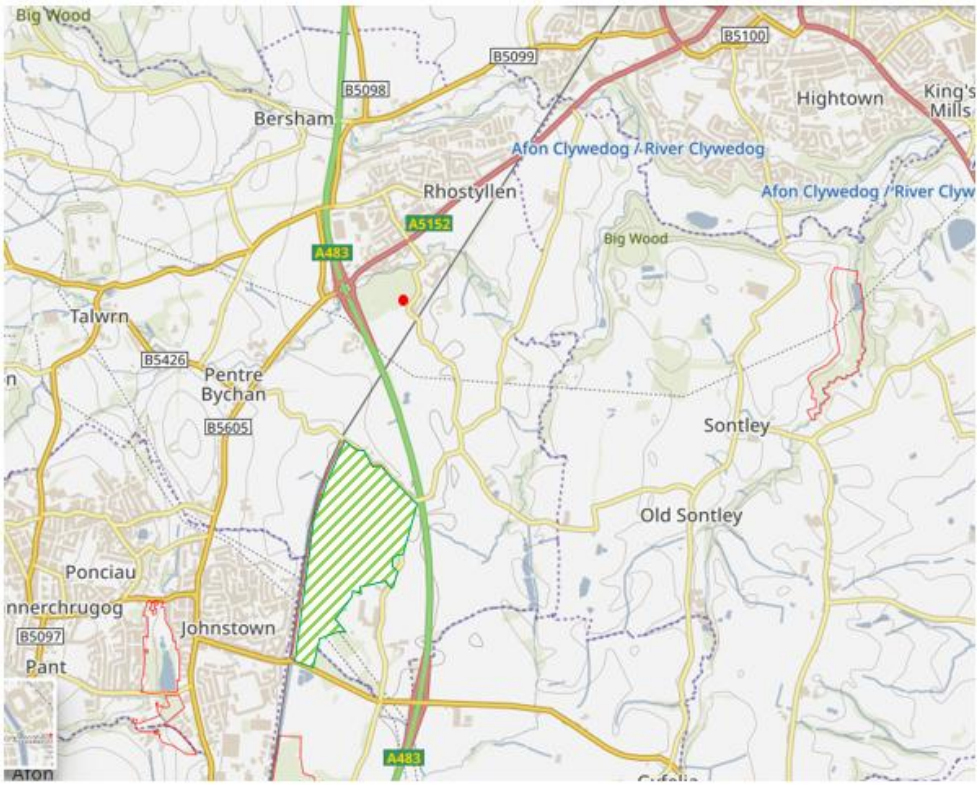
The proposed permitted area is adjacent to the historical Bersham Colliery spoil heap. The heap itself has a mixture of scrub and trees and bare earth. This heap is not protected habitat and will be gradually removed as the heap is dug out to provide feedstock for the proposed wash plant.

The site is not within 750m of Johnstown Newt Sites Special Area of Conservation (SAC) or Stryt Las a'r Hafod at Bonc yr Hafod Country Park Site of Special Scientific Interest (SSS).

Location of Johnstown Newt Sites Special Area of Conservation (SAC) EU SAC Code UK0030173



Location of Stryt Las a'r Hafod at Bonc yr Hafod Country Park Site of Special Scientific Interest (SSS).



The wind blows from the Southwest away from the Johnstown Newt Sites Special Area of Conservation (SAC) Stryt Las a'r Hafod at Bonc yr Hafod Country Park SSSI.

The SSSI holds its designation for the presence of Great Crested Newts, which will be impacted by potential dust at a distance of over 750m away from the site and not in line with the prevailing wind.

Due the methods highlighted with section 5.2 means the likelihood of dust impacting upon the SAC and SSSI is very low.

4. Operations at the Site

Waste Deliveries

4.1 All waste deliveries will be accompanied by a Waste Transfer Note (WTN) which is obtained from the load driver. The WTN will provide information on the driver, waste haulier name, permit number, description of waste etc. Loads not accompanied by a WTN or that do not match the description on the WTN will be rejected.

4.2 Waste will be brought onto the Site for the purpose of recycling. Waste acceptance procedures will be applied to ensure that only suitable waste is accepted. Wastes consisting solely or mainly of dusts, powders or loose fibres will not be accepted on Site.

4.3 Waste will be delivered onto the Site by Heavy Good Vehicles. The movement of vehicles visiting the site and moving around within the Site has the potential to cause dust emissions, particularly in dry and windy conditions.

4.4 All vehicles entering / exiting the Site will be sheeted to minimise the likelihood of dust emissions. Vehicles entering the Site will be visually inspected prior to unloading to ensure that excessively dusty loads are not accepted. The waste acceptance procedure implemented through the Site's EMS does not allow for the acceptance of dusts or powders. Therefore, overly dusty loads will be rejected from the Site in accordance with the Waste Rejection Procedure in the EMS.

4.5 All deliveries of waste to wash plant will be carried out on internal roads from the colliery spoil heap meaning movements of waste to the proposed permitted wash plant will not come via road.

4.6 Mud could be tracked out of the site by vehicles potentially causing dust emissions from the road surface. The Site has wheel washing facilities in place to help reduce the occurrence of significant dust emissions.

4.7 In addition, the use of a mechanical road sweeper will be employed when roads are visibly muddy or dusty to remove the potential nuisance on a daily basis.

4.8 Waste is brought into the site through the entrance on the north-western boundary of the site from the sites main access road.

Overview of Waste Operations

4.9 The waste operations carried out at the Site will include the importation, storage deposit and treatment of colliery spoil waste to produce a washed coal and recovered aggregates and sands.

4.10 Specific waste operations to be carried out on Site are listed below with further information regarding the potential for these activities to cause dust emissions:

- **Waste Handling and Movement**

  - Wastes such as colliery spoil can be considered to be dusty if they are dry. Movement of these waste types and materials therefore has the potential to cause dust emissions.
  - Loading and off-loading of vehicles and equipment has the potential to cause dust emissions.

- **Waste treatment**

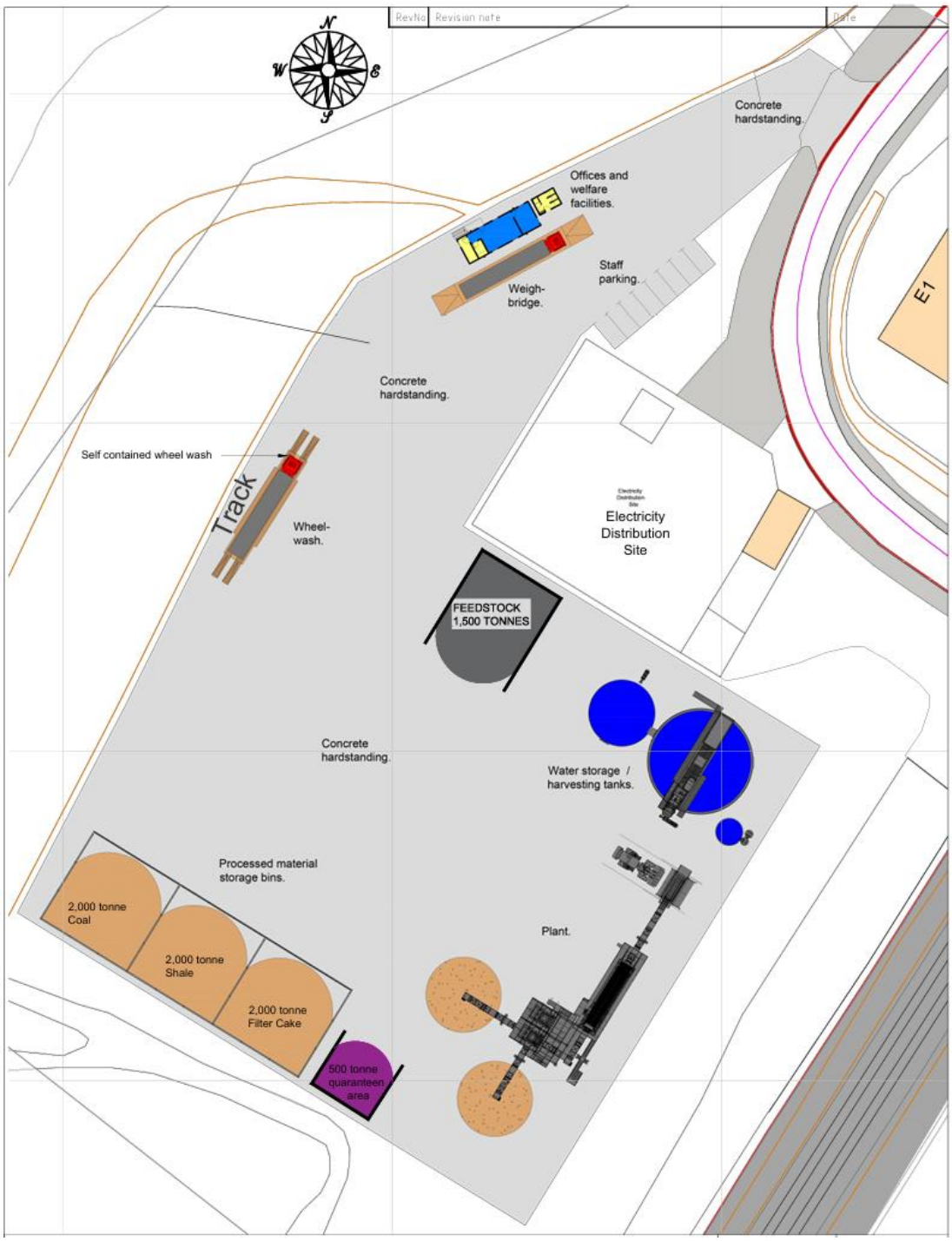
  - The loading of screeners and the wash-plant have the potential to generate dust if the waste is dry.
  - Inbuilt crusher.
  - The activities of screening waste have the potential to create dust if the waste is dry.
  - The activity of washing is wet by nature and as a result has very little potential to create dust.

- **Waste Storage**

  - Imported wastes may be temporarily stored in stockpiles before being treated. Should these stockpiles of waste become dry then they may be a potential source of dust emissions.
  - Dust emissions from stockpiles of waste may occur in the event of wind whipping.
  - Washed wastes will have had small particles removed and trapped within the filter cake output as a result the storage of washed wastes has very little potential to create dust.
  - Processed washed waste are stored in concrete block bays as per the diagram below

The maximum volume of untreated waste onsite awaiting processing will be 1,500 tonnes.

4.11 Waste Storage Plan



-**Vehicle Movements**

- The movement of vehicles around within the site has the potential to cause dust emissions, particularly in dry and windy conditions.
- Mud could be tracked out of the Site by vehicles potentially causing dust emissions from the road surface.
- Dust could be released directly from dry materials being carried by vehicles.

Potentially Dusty Wastes

4.10 The site handles waste that can be potentially dusty, no powders will be accepted on site and wastes will be accepted in line with a waste acceptance criteria outlined in the sites EMS.

Waste Types

Waste types for the bespoke permit variation are those in the table below –

01	**MINING/QUARRYING/MINERAL TREATMENT**	
01 01	**Mineral Excavation**	
01 01 02	wastes from mineral non-metalliferous excavation	Solid

Treatment Capacity

Waste codes combined	Daily Treatment Capacity Tonnes	Weekly Treatment Capacity Tonnes	Annual Treatment Capacity Tonnes
Table 1	3,000	15,000	750,000

Treatment Techniques

Treatment techniques
Separation, crushing, screening, washing, wash water treatment with floculents for the recovery of colliery spoil.

List of Potentially Dusty Wastes

- Colliery spoil

Site Layout

4.11 The proposed layout of the Site is shown on the Proposed Site Layout Plan, Drawing 4.11.

Drawing 4.11 Site Layout Drawing

4.12 Incoming loads will be directed to the Site Office and weighbridge. It is not possible to access the site without passing over the weighbridge, complete with barrier and CCTV. Vehicles cannot enter until staff have raised the barrier.

4.13 The incoming loads will then be directed to an area for temporary waste storage or will be directed to an offloading area on the Site.

4.14 Any vehicles leaving the site onto the public highway will go through the wheel wash located within the quarry before vehicles enter the tarmacked site road and weigh bridge.

5. Dust Management and Mitigation

5.1 Responsibility for Implementation of the Dust Management Plan. The Site Manager is responsible for the implementation of the Dust Management Plan for Waste Operations and for ensuring that the mitigation strategies are implemented at the Site.

5.2 Where the Site Manager is unavailable to oversee the implementation of dust suppression measures, a suitably experienced and trained Site Operative is allocated responsibility.

5.3 The Dust Management Plan for Waste Operations will be reviewed every four years or when a change in operations is deemed to have a potential effect on increasing dust emissions. The review process will amend any mitigation measures that have been identified as areas for improvement in reducing dust emissions on Site.

5.6 All staff members will have the necessary training to deliver dust suppression measures detailed within this Dust Management Plan. All staff are given training on the EMS for the Site, which includes a Dust Procedure, see Appendix 1 Dust Procedure. All staff on the Site are trained on the Dust Procedure which includes details regarding mitigation measure and monitoring/recording visual inspections. Where new dust suppression measures are to be implemented refresher training will be provided to ensure staff remain competent. This training is delivered by the Site Manager.

Overview of Dust Control

5.7 The operation requires wastes to be delivered to the site, stored, treated, stored as an output material and loaded for transport from the site. In the absence of mitigation measures at the Site there would be the potential for short term moderate levels of dust emitted from the site.

5.8 Bersham (Glenside) Limited have dust control measures in place to help mitigate dust emissions at the Site, see Table 5.2 Mitigation Measures. These measures will be implemented when appropriate, particularly in periods of dry weather or when dust is identified to be excessive and escaping the Site boundary.

5.9 The Site boundary will be inspected regularly to identify any dust emissions leaving the Site.

5.10 Stockpile heights on Site will be minimised at all times in order to reduce the distance in which dust and particulates could be blown and dispersed by winds.

5.11 Stockpiles will be managed so that they are always a minimum of 0.5m lower than the perimeter bund to reduce wind whipping and dust leaving the site boundary.

Sources and Control of Dust Emissions

5.12 Table 5.1 details the potential sources of dust on the Site and which mitigation measures are implemented in order to break the source-pathway-receptor routes for dust emissions. 5.1 details the potential sources of dust on the Site and which mitigation measures are implemented in order to break the source-pathway-receptor routes

Table 5.1: Source-Pathway-Receptor Routes (EXAMPLE)

Source	Pathway	Receptor	Type of impact	How source and pathway can be interrupted by mitigation
Mud and debris	Transportation of dust from mud on wheels and vehicles.	Public highways.	Mud on surrounding highways. Resuspension of mud as dust.	Wheel washing facilities present on Site will remove the mud from the wheels of vehicles exiting the Site. A road sweeping vehicle will be deployed when necessary to remove mud from the local highways and the sites entrance road. The site operator states that a road sweeper will used when required as part of our housekeeping duties or as and when required due to weather and site conditions. Vehicles delivering waste will be sheeted. Where mud is identified as an ongoing issue a road sweeper will be deployed. All areas will be subject to regular housekeeping in accordance with the procedures in the EMS.
Vehicle / Plant movements	Atmospheric dispersion	Surrounding sensitive receptors	Dust emissions	A 5mph speed limit and a 'no-idling' policy will be implemented on Site. Haul roads within the Site will be dampened down during periods of dry weather or when dust is identified to be excessive. The Site will be subject to regular housekeeping in accordance with the procedures in the EMS.
Tipping, loading and storage of wastes	Atmospheric dispersion	Surrounding sensitive receptors	Dust emissions	Potential dust emissions will be reduced by minimising drop heights when moving dusty wastes. Waste may be stored stockpiles which will be dampened down in periods of dry weather or when wind whipping is identified to be excessive. Dowsing the stockpiles causes a crust to form that reduces the amount of dust emitted from the Site from wind-whipping of stockpiles. Operations will temporarily cease when winds are deemed to cause excessive movement of wastes and material. The site sits below ground level in the quarrying void. Waste stockpiles will be kept 0.5m lower than original ground height.
Treating waste via screening and washing	Atmospheric dispersion	Surrounding sensitive receptors	Dust emissions	Potential dust emissions will be reduced by the use of dust hoods on screens. Fixed spray bars on screens. Reduced drop heights The washing process is wet by nature which reduces dust levels during the operation.
Operation of plant	Atmospheric dispersion	Surrounding sensitive receptors	Visual soiling and dust emissions	Operations will be temporarily ceased in periods of very high winds

Table 5.2: Mitigation Measures

Mitigation Measure	Description Effect	Use on site	Trigger for implementation	How is it implemented?	Further mitigation if required
Preventative Measures					
Site speed limit, 'no idling' policy and minimisation of vehicle movements on Site	Reducing vehicle movements will reduce dust emissions from the Site. Enforcement of the speed limit and limiting movements will reduce the chance and amount of resuspension of dust and particulates by vehicle wheels. Reducing idling will reduce the potential for vehicle exhausts to emit dust and also blow dust from the floor.	The EMS will have procedures for a 5mph speed limit, a 'no idling' policy, and the minimisation of vehicle movements. Vehicle movements will be minimised by ensuring that the double handling of materials is avoided where possible e.g. loads entering the Site may be directed to a location in the quarry so that the load can be deposited directly into the restoration works. A load may require to be temporarily stored in a waste stockpile.	No trigger for implementation. These mitigation measures will be included in the EMS and will be carried out at all times.	Enforcement by Site Manager and observation by Site operatives	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. If required, a road sweeper will be deployed daily to clean and dampen the surface of the access road. Water sprays will also be available to dampen surfaces and stockpiles to prevent particulate matter becoming airborne. If excessive dust emissions from vehicle movements continue after these measures, then operations shall cease.
Minimising drop heights	Minimising the height from which the waste is dropped should reduce the likelihood dust could be generated and dispersed by winds.	Handling of material on Site should be minimised at all times in accordance with procedures within the EMS. Staff will be trained with regard to minimising drop heights. whenever material is being moved.	This measure will be implemented whenever the Site is operational i.e. whenever material is being moved.	By plant operators lowering the grabs, shovels, conveyors etc. on the equipment being used to move / place. potentially dusty materials prior to materials being released. Staff will be provided with training on the EMS procedures and will be trained on how to use the equipment on the site to minimise dust. The Site Manager will monitor site operations and other staff members to check that drop heights are being minimised whilst equipment is in use.	Damping down with hoses use of dust hoods and dust cannons.

Mitigation Measure	Description Effect	Use on site	Trigger for implementation	How is it implemented?	Further mitigation if required
Good housekeeping	Having a consistent, regular housekeeping regime that is supported by management, will ensure the site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	The EMS on Site has a procedure for housekeeping. Waste will be stored in designated stockpiles before placement in the restoration.	No trigger for implementation. These mitigation measures will be carried out at all times.	Enforcement by Site Manager and observation by Site operatives.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. water sprays will be used to dampen surfaces and stockpiles to prevent particulate matter becoming airborne.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles.	All vehicles entering / exiting the site must be sheeted to minimise the likelihood of dust emissions. Excessively dusty loads will not be accepted onto the Site.	Loading of potentially dusty materials on to a vehicle will be followed by closing of the sheet covers on that vehicle. Visual observation of incoming vehicles. All vehicles carrying waste to the Site will be sheeted at all times unless being loaded or unloaded. Any loads rejected from the Site will be sheeted.	The sheeting equipment will be activated and checked to ensure proper coverage of the load before the vehicle is allowed to leave the site. Incoming vehicles that are not sheeted will be rejected from the site or sheeted immediately.	If excessive dust emissions continue, then operations shall cease.
Wheel washing	Wheel Wash; The wheel wash on site is an existing drive through wheel wash, situated on a haul road between the highway and the entrance to Site All vehicles exiting the facility must use the wheel wash as stated in our site rules and explained in the site induction. Haul roads are regularly monitored and swept daily with the on-site sweeper to stop any dust/mud being taken on to the highway. We have a local company on standby should we need the highway entrance to be swept.	The wheel washing facility is used to remove mud from the wheels of vehicles and is inspected on a regular basis to ensure the facility is in working order.	Wheel washing is undertaken when a vehicle exits the Site.	Site operatives will ensure that wheels washing facilities are used as required.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. water sprays will be used to dampen surfaces and stockpiles to prevent particulate matter becoming airborne.

Mitigation Measure	Description Effect	Use on site	Trigger for implementation	How is it implemented?	Further mitigation if required
Ceasing operations during high winds and/or exceptionally dry conditions.	Mobilisation of dust is likely to be greater during periods of strong winds and exceptionally dry conditions.	The start of each working day so that the day's 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 is no specific wind speed limit and/or no specific criteria for this to occur, as dust is dependent on other conditions such as rain. The Site manager will decide whether to cease operations as a result of weather conditions. This decision is based on a combination of factors, including those mentioned above. The conditions will be recorded on the Daily Inspection Checklists. The record will include an overall description of the weather conditions including, but not limited to, wind strength (e.g. windy, not windy), wind direction (e.g. towards northern boundary) and rain.	If excessive dust is being generated by the operations and water sprays are proving not to be sufficient, then the Site Manager notifies staff and operations are temporarily ceased. Operations 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 is recorded on the Daily Inspection Checklist.	The Site Manager will make the decision to temporarily cease activities that are causing the dust emissions.	Operations will resume on the Site when the circumstances causing the excessive dust emission have been resolved. It is the Site Manager who decides when operations will temporarily cease and when they will continue.
Minimisation of stockpile heights on Site.	Minimising stockpile heights should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds and to reduce wind whipping. Stockpiles must be 0.5m lower than the sites perimeter earth bund.	The EMS will include a stockpile plan for the maximum height and volume allowed for the stockpiles on Site in order to reduce the potential for excessive dust emissions.	These measures will be implemented whenever the Site is operational.	The Site Manager will keep a record on the Daily Inspection Checklists to ensure stockpiles do not exceed the heights specified in the stockpile plan in the EMS.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. use of water sprays to dampen stockpiles / surfaces or ceasing dusty activities.

Mitigation Measure	Description Effect	Use on site	Trigger for implementation	How is it implemented?	Further mitigation if required
Colliery spoil heap	The existing colliery spoil heap to the north of the site will help protect all operations including vehicle movements, treatment. Storage and handling from the prevailing wind. Meaning that the potential for dust to be carried by the wind is reduced by wind whipping.	The colliery spoil heap are in place and a will in place until finally removed at the end of the project.	These measures are a permanent feature of the site.	These measures are a permanent feature of the site.	Non required.
Maintenance of plant and equipment	The effective maintenance of all plant and equipment as well and those involved in dust mitigation and reduction is vital to their effectiveness.	The EMS will include a site maintenance plan including all items that are within scope.	These measures are part of the sites day to day management and operations.	The Site Manager will keep a record on the Daily Inspection Checklists to ensure stockpiles do not exceed the heights specified in the stockpile plan in the EMS.	If items are identified as damaged, broken or ineffective they will be taken out of services and the issue raised with the site manager. If the item if essential to the reduction and mitigation of dust then the item will be replaced as a soon a practically possible and if required the specific operation stopped until it is replaced.
Wastes accepted	The site will not accept wastes are inherently dusty or in the form of powders namely. A list of dusty wastes is found in table 4.1	The EMS will include a section relating to the acceptance of dusty wastes.	These measures are part of the sites day to day management and operations.	These measures form part of the sites EMS and all staff will be trained in the acceptance of wastes with those on the weigh bridge having responsibility for accepting waste onto the site.	When waste is tipped it will be observed to ensure it fits the description that has been provided when the waste has arrived at the site. If waste is deemed as dusty it will be dampened down and if required reloaded with the provision of dust cannon and returned to the producer.
Staff training	All staff on site will be trained on the sites EMS and sites dust procedure. In addition staff will be trained on the correct use of site plant and dust suppression equipment.	The EMS will include a section relating to staff training.	These measures are part of the sites day to day management and operations.	These measures form part of the sites EMS and all staff will be trained in the sites dust procedure. In addition staff will be trained on the correct use of site plant and dust suppression equipment.	If staff are deemed to not be following site procedures or not operating sites equipment correctly they will be retrained by the Site Manager.
Washed coal /aggregates	The washing process removed fine particles that give rise to dust and also means that washed aggregates leaving the wash plant are inherently wet meaning they are less dusty than other wastes.	The wash plant forms an integral part of the sites process for producing a superior washed and graded recycled aggregate to an end of waste standard.	The wash plant forms an integral part of the sites process for producing a superior washed and graded recycled aggregate.	The wash plant forms an integral part of the sites process for producing a superior washed and graded recycled aggregate to an end of waste standard.	The wash plant will be maintained and operated in accordance with the manufacturers guidance.

Mitigation Measure	Description Effect	Use on site	Trigger for implementation	How is it implemented?	Further mitigation if required
Dust suppression on processing equipment	The provision of Spray bars, dust hoods and the washing will reduce the production of dust during waste treatment and processing activities.	Spray bars and dust hoods will be on the wash plant and screens.	These measures are part of the sites day to day management and operations.	These measures are part of the sites day to day management and operations. The wash plant and screens will be maintained and operated in accordance with the manufacturers guidance.	The wash plant and screen will be maintained and operated in accordance with the manufacturers guidance. If items are identified as damaged, broken or ineffective they will be taken out of services and the issue raised with the site manager. If the item if essential to the reduction and mitigation of dust, then the item will be replaced as a soon a practically possible and if required the specific operation stopped until it is replaced. Pumps to supply water suppression are kept in stock in the event of a breakdown.
Dust observations	The continued use of dust observations provided the catalyst to deploy additional dust suppression measures or cease site operations.	Conducted on site as a continuous function.	These measures are part of the sites day to day management and operations.	Carried out by the site Manager and all site staff in line with the sites Dust Procedure.	If dust issued have been identified or complaints have been received relating to dust from the site then additional perimeter dust observations will be carried out.
Treatment of surfaces on site.	Keeping surfaces either free from dust and debris by mechanical road sweeping or dampening down on hard standing.	Any surfaces such as tarmac or concrete surfaces will be cleaned by a mechanical road sweeper daily when required or and Any areas that cannot be swept such as hard standing will be dampened down by mobile water bowser.	These measures are part of the sites day to day management and operations.	The cleansing process forms part of the sites housekeeping schedule and is managed by the Site Manager.	If planned cleansing and dampening fails to keep keeps surfaces free from dust or debris then the activity of mechanical sweeping and dust dampening will be increased until the debris are removed and surfaces are sufficiently damp to prevent dust production.

Mitigation Measure	Description Effect	Use on site	Trigger for implementation	How is it implemented?	Further mitigation if required
Washing activities taking place on a sealed drainage system	Having a sealed drainage system means that water from the washing activity is contained. If this was not the case excess waters could spread potentially creating mud on site that could be spread around the site and onto external roads. Pad is kept clean by sweeping and hosing with all water being collected by 'U' drains and flowing to a sealed sump. This water is then recirculated within the wash system.	Permanent and part of the sites infrastructure.	No trigger continual use.	Permanent and part of the sites infrastructure.	Pad is kept clean by sweeping and hosing with all water being collected by 'U' drains and flowing to a sealed sump. This water is then recirculated within the wash system.
Bays walls for washed aggregate storage	Once the waste has been screened and washed the resulting recovered aggregates are stored within bays built from large blocks. This reduces the amount the aggregate is dried out via evaporation and also reduces wind whipping.	Permanent and part of the sites infrastructure.	No trigger continual use.	Permanent and part of the sites infrastructure.	In very dry weather the finer screened sand can be dampened down to prevent wind whipping, however washed damp aggregate is constantly added to the top of the piles.

Remedial Measures					
Mitigation Measure	**Description Effect**	**Use on site**	**Trigger for implementation**	**How is it implemented?**	**Further mitigation if required**
Road sweeper	Removes the mud from the site access road and the B1188 Sleaford Road.	A road sweeper will be deployed daily to control the amount of mud on local roads and minimise the generation of dust when appropriate. The cleanliness of pathways and roads in the vicinity of the Site entrance will be checked as part of the maintenance procedure and included on the Daily Inspection Checklists. If the Daily Inspection Checklist identifies a requirement for the road sweeper to be used, then a road sweeper will be hired in, deployed and used by a relevantly trained person.	Visual observation of the state of the access road and Stanfield Road - findings recorded on the Daily Inspections Checklist in the EMS. This will identify the need for the use of the road sweeper. Constant observation by all operatives on the Site.	A roads weeper will be deployed to clean up local roads and access road if there is excessive mud. Site management will hire in a roads weeper onto the Site and will instruct deployment of the roads weeper.	If mud persists even after additional sweeping. All attempts must be made to improve the internal surfaces with the addition of recycled aggregates to the site floor to remove the mud.
Water bowser	Use of a tractor and water bower on the site to wet surfaces during dry/windy weather. This measure can remove dust from the air and dampen down dry / dusty materials.	Bowser will be in use at the Site to dampen surfaces and stockpiles of material to prevent particulate matter becoming airborne. The condition and integrity of the water bowser and sprays will be checked as part of the Inspection Checklists.	When excessive dust emissions are observed to be leaving the Site boundary. Visual observation will be carried out by all employees on the Site. Findings from the visual observations will be recorded on Daily Inspection Checklists.	Use of Water bowser on the Site will be used to minimise dust emissions. Site Management will instruct the relevantly trained operative to use the tractor and bowser on the Site.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. cessation of dusty activities.
Dust cannons	The use of mobile dust cannons. This measure can be deployed around the site to prevent dust from becoming airborne and allow and area to be covered in a mist of water.	Dust cannons will be available on site and ready to use if dust is detected coming from a treatment activity or the loading / unloading of vehicles.	When excessive dust emissions are observed to be leaving the Site boundary. Visual observation will be carried out by all employees on the Site. Findings from the visual observations will be recorded on Daily Inspection Checklists.	Use of Dust cannons on the Site will be used to minimise dust emissions. Site Management will instruct the relevantly trained operative to use the tractor and bowser on the Site.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. cessation of dusty activities.

Other Considerations:

Water availability

5.13 Water for dust suppression is from a mains supply.

5.14 To prevent dust generation, site surfacing and stockpiles may be dampened down using water from a mobile water bowser and spray attachment.

5.15 The company's own mechanical road sweepers use water to both cleanse and dampen surfaces to prevent dust.

5.16 All suppression with the exemption of the mobile water bowser is carried out by the use of pumps and as a result there is no impact on a loss of water pressure to the site.

1 x Wash plant storage tanks are fed off water mains in case of dry weather.

1 x Water tanks hold clarified water from the water treatment plant.

In the event of a drought

5.17 During exceptionally dry and/or windy conditions, if any operations / site movements cause or are likely to cause visible dust emissions beyond the site boundary, or if excessive dust emissions are observed within the site, some site operations may be temporarily suspended to avoid further dust emissions. This will be decided by the Site Manager.

5.18 Depending on the severity of the drought conditions, restrictions may be in place on the amount of water available for use on Site. In this case, operations may be reduced or suspended in order to comply with any water usage restrictions.

6. Monitoring

Visual Dust Monitoring

6.1 Dust emissions for the Site will be assessed by visual observation. Assessments will be recorded daily on the Daily Inspection Checklists in the EMS, see Appendix 3 Inspection Checklists. It is the responsibility of every member of staff to continually visually monitor the emission of dust from the Site. Monitoring of dust will be carried out by visual assessment. Visual dust monitoring will take place anywhere within the proposed permit boundary and in the immediate vicinity of the Site.

6.2 It is the responsibility of all staff members to visually check for dust emissions leaving the site during the working day. Emergency contact numbers are available to local businesses/ residences on the Site Notice Board, should dust be causing a nuisance. It is not considered that there would be significant emissions of dust outside of operational hours.

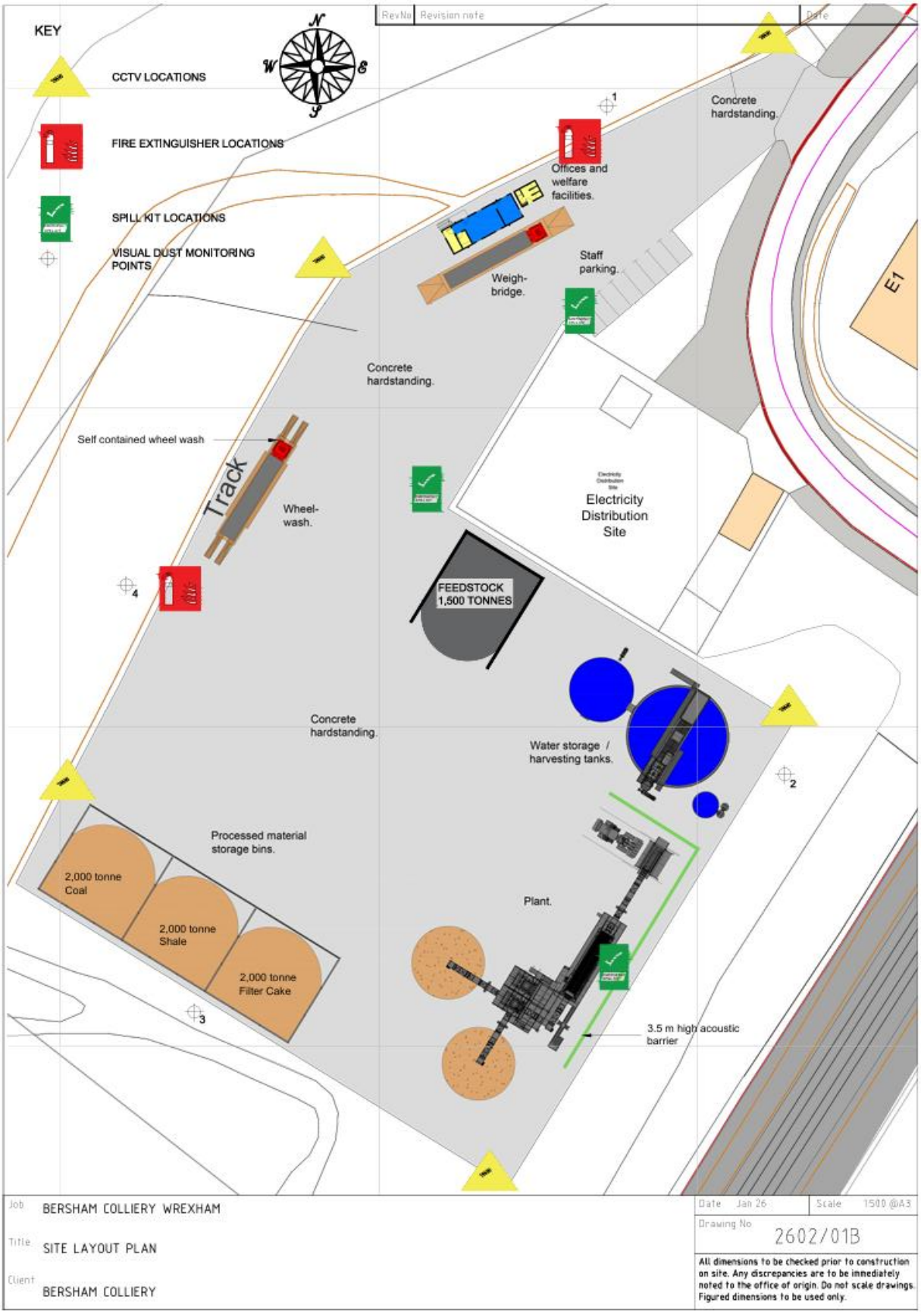
6.3 If excessive dust emissions are leaving the Site boundary, then the Site Manager will establish what is causing the excessive dust emission to be generated and take remedial action. The results of the investigation and what action was taken will be recorded and retained.

6.4 The prevailing weather conditions at the Site will be considered and recorded at the start of each working day so that the day's work may be planned as appropriate regarding potential dust emissions. Wind direction and weather will be determined by visual observation of the conditions. The conditions will be recorded on the Daily Inspection Checklists. Information on the Daily Inspection Checklists will contain an overall description of the weather conditions including, but not limited to, wind strength (e.g. windy, not windy), wind directions (e.g. towards northern boundary) and rain.

6.5 Table 5.2 states the mitigation measures in place in case of excessive dust emissions on Site.

6.6 There will be no dust monitoring equipment located on the Site. Only visual monitoring of dust emissions will take place. Visual monitoring will take place whenever the Site is operational and from anywhere within the Site boundary, shown below.

6.7 No quantitative dust monitoring is undertaken on the Site.


KEY
CCTV LOCATIONS
FIRE EXTINGUISHER LOCATIONS
SPILL KIT LOCATIONS
VISUAL DUST MONITORING POINTS
N
W
E
S
Rev No
Revision note
Date
Concrete hardstanding.
Offices and welfare facilities.
Staff parking.
Weigh-bridge.
E1
Concrete hardstanding.
Self contained wheel wash
Track
Wheel-wash.
Electricity Distribution Site
FEEDSTOCK 1,500 TONNES
Concrete hardstanding.
Water storage / harvesting tanks.
Processed material storage bins.
2,000 tonne Coal
2,000 tonne Shale
2,000 tonne Filter Cake
Plant.
3.5 m high acoustic barrier
1
2
3
4
Job
BERSHAM COLLIERY WREXHAM
Title
SITE LAYOUT PLAN
Client
BERSHAM COLLIERY
Date
Jan 26
Scale
1500 @A3
Drawing No
2602/01B
All dimensions to be checked prior to construction on site. Any discrepancies are to be immediately noted to the office of origin. Do not scale drawings. Figured dimensions to be used only.

7. Reporting and Complaints Response

Engagement with the Community

7.1 A Site Notice Board will be located at the Site entrance and will include the following information:

- The Environmental Permit holder's name.
- The operator's name.
- An emergency contact name and telephone number for the operator.
- A statement that the Site is permitted by the Natural Resources Wales.
- The Environmental Permit reference.
- The Natural Resources Wales national numbers, 0300 065 3000.

7.2 The provision of the above information ensures that members of the community can contact the site should they be concerned by dust emissions or wish to make a complaint. This also applies to any events that may happen when the Site is unmanned / not operational.

7.3 Contact numbers on the Site Notice Board will allow any out-of-hours complaints regarding dust emissions to be made to the operator. The operator will respond accordingly during out-of-hours to complaints.

Reporting of Complaints

7.4 Should a complaint regarding dust be received by the Site, the complaint will be recorded on the Complaints Form in the EMS and investigated in accordance with the Complaints Procedure within the EMS implemented on the Site. The Complaints

Form records who made the complaint, what the complaint was about and what has been done to resolve the issue and make sure this does not happen again.

7.5 The Site Manager must identify what caused the excessive dust emission to be generated. This generation may have been caused by failure of site machinery or dust procedures. If the excessive dust emission has been caused by a procedure not being carried out properly, then staff will receive repeat EMS training on the dust procedures and site management.

7.6 In all cases, and where information is available, all complaints will be acknowledged and investigated. Any complaints received by the Natural Resources Wales relating to dust emissions from the site are dealt with as soon as is reasonably possible upon notification.

Management Responsibilities

7.8 Site staff are responsible for dust management issues and detecting/reporting dust emissions. All members of staff are given training on the EMS for the Site, which includes a Dust Procedure. All staff on the Site are trained on the Dust Procedure which includes details regarding mitigation measures and monitoring/recording visual inspections.

7.9 On receipt of a complaint the Site Manager investigates and establishes the cause. The most effective corrective or preventative action must then be determined to prevent future emissions occurring. Where additional time is required in order to implement the appropriate corrective or preventative action the complainant will be contacted with details on the actions to be implemented and the estimated timescales for completion.

7.10 Should numerous complaints be received at the Site regarding the same issue, the cause of the complaint(s) will be investigated in accordance with the Accidents, Incidents & Complaints Procedure within the EMS. Operations on the Site will temporarily cease should dust emissions be seen leaving the boundary following the implementation of other mitigation measures or when instruction from the Natural Resources Wales to cease operations has been received.

7.11 In the event of a major dust release that is deemed to have caused local pollution to sensitive receptors the local Natural Resources Wales Officer would be notified by the Site Manager.

Appendix 1

Dust Procedure V.1 June 2021

Purpose: To control emissions of dust from the Site.

		RESPONSIBLE PERSON	RECORD
1	The most common cause of dust on Site is from the following: • Materials Handling and Movement. • Material Storage. • Material Treatment. • Vehicle Movements		
2	Mitigation measures have been devised to help alleviate the potential impacts of increased dust emissions within the Site and its surroundings.		
	Dust Monitoring	All	Inspection Checklists
3	It is every member of staff's responsibility to continually monitor the emission of dust from the Site. Monitoring of dust will be carried out by visual assessment.		
4	If dust emissions are perceived to be excessive then the Site Manager must 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 should be reported in accordance with the Complaints Procedure.	Site Manager	Complaints Procedure
5	Information regarding these remedial actions are included within the 'Mitigating the Impacts of Dust' section of this Procedure. Should the remedial action not be sufficient then the Site Manager will be informed, who will advise on the necessity to cease operations.	Site Manager	
6	In the event of a complaint being received the Complaints Procedure should be followed.		Complaints Procedure
7	The weather conditions at the Site will be considered and recorded at the start of each working day so that the day's work may be planned as appropriate regarding potential dust emissions.	Site Manager	Inspection Checklists
8	During exceptionally dry and/or windy conditions, if any operations / Site movements cause or are likely to cause visible dust emissions beyond the Site boundary, or if abnormal dust emissions are observed within the Site, Site operations may be suspended to avoid further dust emissions.	Site Manager	
	Mitigating the Impacts of Dust	Site Manager	

9	A 10mph Site speed limit and the reduction of vehicle movements is enforced on the Site to help minimise the amount of dust generated by vehicle wheels		
10	All vehicles entering / exiting the Site will be sheeted to minimise the likelihood of dust emissions. Vehicles entering the Site are visually inspected prior to unloading to ensure that excessively dusty loads are not accepted	Site Manager	
11	A mobile water bowser will be employed at the Site to dampen surfaces and stockpiles of material to prevent particulate matter becoming airborne. The condition and integrity of the bowser is checked as part of the Inspection Checklists.	Site Operative	Inspection Checklists
12	The Site boundary is inspected regularly to identify any dust emissions / dust leaving the Site. If dust emissions are observed, then the use of water sprays is instigated.	Site Operative	Site Operative
13	All equipment on site will be maintained in accordance with the manufacturer's specifications.	Site Operative	Maintenance Procedure
14	The handling height of material should be minimised at all times for all mobile plant in order to reduce the distance in which dust and particulates could be blown and dispersed by winds.	Site Operative	
15	The consequences of not following this procedure are that dust emissions may occur that lead to a nuisance being caused to neighbours of the Site.		
16	All staff to be trained in the site processes and maintenance requirements.	Site Operative	Training Records
17	When dust or mud are causing problems reactive measures should be taken including mechanical road sweeping, water bowser and dust cannon deployments.	Site Manager	Inspection Checklists

Dust Complaint Report Form

Time and date of complaint:	Name and address of complainant:
Telephone number of complainant:	
Date and time of dust:	
Location of dust, if not at above address:	
Weather conditions (i.e., dry, rain, fog, snow):	
Temperature (very warm, warm, mild, cold or degrees if known):	
Wind strength (none, light, steady, strong, gusting):	
Wind direction (e.g. from NE):	
Complainant's description of dust: o What does it look like?	
o Duration (time):	
o Constant or intermittent in this period:	
o Does the complainant have any other comments about the dust?	
Are there any other complaints relating to the site, or to that location? (either previously or relating to the same exposure):	
Any other relevant information:	
Do you accept that dust likely to be from your activities?	
What was happening on site at the time the dust occurred?	

Actions taken:		
Form completed by:	Date Sign	Signed

Dust assessment form		**Date completed :**		**Conducted by:**
Time of observation				
Location of observation on site				
Weather conditions (dry, rain, fog, snow etc.)				
Temperature (very warm, warm, mild, cold or degrees if known)				
Wind strength (none, light, steady, strong; use Beaufort scale if known)				
Wind direction				
Duration of exposure (i.e. length of test)				
Amount of dust (none, thick. Light?)				
Leaving site boundary?				
What does it look like?				
Is the source evident?				
Actions taken?				

House Keeping Schedule

Mitigation	Frequency
Checking speed limit adhered to	Every Day
Minimising drop heights of aggregates	Every day
General housekeeping	Site checked daily – employees monitor hourly
Sheeted Vehicles	Every load must be sheeted – each load checked by weighbridge operator
Wheel Wash	Filled as and when required – checked daily
Managing stock pile heights	Every day
Checking bund integrity	Every day
Plant maintenance	Every day
Bund integrity	Every day
Fence / security	Every day
Dust observations	Every day and as and when required depending on work activity
Damping down	As and when required depending on weather conditions and work activity
Road cleaning	As and when required
Wheel wash functionality	Every day
Water bowser functionality	Contracted in as and when mud on road is identified.
Dust cannon functionality	When required and inspected daily when in use
Mechanical road sweeper	When required
Plant dust suppression functionality	Every day