AN APPLICATION TO VARY ENVIRONMENTAL PERMIT NUMBER EPR/JB3107HT FOR THE INERT AND EXCAVATION WASTE TRANSFER STATION OPERATED BY GRS RAIL SERVICES LIMITED AT SMALL HEATH, BIRMINGHAM

DUST AND EMISSIONS MANAGEMENT PLAN VERSION 1.0

Report reference: GRS/SMH/AW/5790/01/DEMP
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Baddesley Colliery Offices, Main Road, Baxterley, Atherstone, Warwickshire, CV9 2LE
Tel. (01827) 717891

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1. Introduction

1.1 Small Heath Rail Sidings is an operational rail sidings located in a predominately industrial area in the outskirts of Birmingham, approximately 2.5km south east of Birmingham City Centre. The Rail Sidings cover an area of approximately 3.5 hectares (ha). Standard Rules Environmental Permit SR2009No6 'inert and excavation waste transfer station with treatment' was issued to Lafarge Aggregates Limited for an area in the south east of the Rail Sidings (the site) on 23 May 2014 as Environmental Permit number EPR/JB3107HT (the permit). The permitted area, which covers an area of approximately 1.8 ha, is shown bordered in green on Figure DEMP 1. The site is centred approximately at National Grid Reference (NGR) SP 09304 85224. The permit was transferred to GRS Rail Services Limited (GRS) on 21 April 2020. The site has been operational as an inert and excavation waste transfer station with treatment since 2014.

1.2 SR2009No6 authorises the receipt, storage and processing of up to 250,000 tonnes per annum (tpa) of inert and excavation waste. The limits of the activities specified in SR2009No6 are treatment consisting only of manual sorting, separation, screening or crushing of waste into different components for disposal, (no more than 50 tonnes per day) or recovery. Following the completion of the Environment Agency (EA) Consultation Number 25 on SRPs, SR2009No6 was withdrawn by the EA on 18 December 2024 and consolidated into SRP SR2022No1 treatment of waste to produce soil, soil substitutes and aggregate. The EA provided letters to operators to explain the changes and published on 12 February 2025 a Regulatory Position Statement (RPS) 'Extension to comply with new standard rules permits: RPS 331' which states that if permit holders do not comply with the new Standard Rules, they must apply for a bespoke permit by 27 June 2025. As there is a Local Wildlife site (LWS) (Grand Union Canal) within 50m of the site, the site does not meet Standard Rules specified in SR2022No1 and it is necessary to apply for a bespoke permit. This DEMP has been prepared in support of the application for the bespoke permit. There are no proposals to vary the activities which will remain consistent with those specified in SR2009No6.

1.3 The only waste types which will be accepted at the site pursuant to the bespoke Environmental Permit will be the inert and excavation wastes listed in Table DEMP 1. Waste will continue be imported to the site by road and material (waste subject to

transfer or aggregate product generated from treatment of waste) will predominantly be exported from the site by road. It is possible that aggregate product or waste also will be exported by rail. A flow diagram in which the operations at the site are summarised is presented in Section 2.

1.4 As there are no proposals to increase the maximum annual throughput of the site or change the activities currently undertaken at the site, the administrative process of varying the permit from a SRP to a bespoke permit is undertaken on the basis that there will be no increase in the risk associated with dust emissions compared with the currently permitted activities.

1.5 Details of the layout of the site shown on Figure DEMP 2 are presented in Section 2 and Section 3 of this DEMP.

1.6 The purpose of this DEMP is to identify the operations at the site which may have the potential to have an impact on air quality as a result of emissions of particulate matter, to present the details of the operational controls which are implemented to minimise particulate emissions and to describe the monitoring which is carried out to confirm the effectiveness of the management controls.

1.7 The DEMP forms part of the Environmental Management System (EMS) under which the site is operated.

1.8 The DEMP has been prepared based on the guidance presented in the relevant sections of the following documents and guidance:

- Environment Agency – Control and monitor emissions for your environmental permit.[1] (the EA emissions guidance).
- Environment Agency internal guidance template entitled "Dust and emission management plan" (Version 10 dated October 2018).
- Environment Agency guidance 'Non-hazardous and inert waste: appropriate measures for permitted facilities[2]' (the Appropriate Measures guidance).

[1] Available at https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit. Published 1 February 2016. Last updated 24 November 2022. Last accessed 7 June 2025.

[2] Available at: https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities. Published 12 July 2021. Last updated 1 August 2023. Last accessed 7 June 2025.

1.9 The activities with the potential to generate and/or release dust and particulate matter are identified in Section 2 of this DEMP. The locations of potential receptors are identified in Table DEMP 2, are shown on Figure DEMP 1 and are discussed in Section 2 together with the potential pathways for linkage of the sources and receptors.

1.10 In Sections 3 and 4 of this DEMP the management techniques that are used at the site to minimise the potential for dust and particulate matter emissions from the site are set out and the monitoring undertaken to confirm the effectiveness of the management techniques is specified. In Section 5 details are presented of how GRS engage with the local community together with details of the procedure for reporting and responding to complaints. An action plan which will be implemented in the unlikely event that there is a significant emission of dust or particulate matter from the site or if a complaint regarding dust or particulate matter is received is presented in Section 6.

1.11 The DEMP comprises a living document and will be reviewed on an annual basis as part of the environmental performance audit or as required by the action plan. The review will include consideration of the results of dust and particulate matter monitoring and progress with any improvements that may be identified. A review of the effectiveness of dust and particulate matter monitoring techniques will be undertaken and changes made to monitoring techniques if the review identifies any improvements that can be made.

1.12 Throughout this DEMP reference is made to SR2009No6 and SR2022No1, and whilst the site will be operated under a bespoke permit (due to the presence of a LWS within 50m of the site) it is helpful to refer to the SRPs to provide context on a risk basis.

2. Operations at Small Heath Sidings (sources, pathways and receptors)

Sources

2.1 SR2009No6 provided for the transfer and treatment of up to 250,000 tonnes per annum (tpa) of waste to produce soil, soil substitutes and aggregate. SR2009No6 provided the ability to treat the waste by sorting, separation, screening and crushing for recovery. It is proposed that the permit is varied to become a bespoke Environmental Permit. The only waste types which will be accepted at the site pursuant to the bespoke Environmental Permit will be those listed in Table DEMP 1. The LoW specified in Table DEMP 1 comprise inert and excavation wastes.

Storage locations and quantities

2.2 The layout of the site including the area in which the inert and excavation waste transfer and treatment operations are already authorised to be carried out is shown on Figure DEMP 2. No more than 15,000 tonnes of waste shall be stored at any one time and no waste shall be stored for longer than 12 months.

2.3 The site is located in the open air. Consistent with SR2009No6 the inert and excavation waste transfer and treatment operations will be carried on the existing hardstanding[3] surface.

2.4 As shown on Figure DEMP 2, inert and excavation waste is stored in the area marked in pink. Neither SR2009No6 nor SR2022No1 have specified maximum stockpile heights. SR2009No6 did not specify a maximum storage quantity. SR2022No1 specifies a maximum storage quantity of 50,000 tonnes at any one time. The quantity of inert and excavation waste which will be stored at the site is significantly lower than the limit specified in SR2022No1 (see paragraph 2.2 above).

2.5 Processing of inert and excavation waste by crushing and screening will be undertaken at the site on a campaign basis. The exact location within the site of the mobile plant for crushing and screening of inert and excavation waste will vary depending on the locations of material to be processed with a focus on minimising

[3] 'hardstanding' means ground surfaced with a durable permeable material. It must be capable of remaining level and rut free and being kept clear of debris. It must be maintained so that it does not cause surface water ponding. (Defined in SR2022No1 updated 28 April 2025)

double handling of materials, however the processing will be undertaken within the area covered by the fixed dust suppression shown on Figure DEMP 2.

2.6 Non waste materials, including recovered aggregates produced in accordance with the Aggregates Quality Protocol[4], will be segregated from wastes stored at the site. Although the Aggregates Quality Protocol states that waste management controls will not apply to product material (i.e. emissions from product material will not be regulated under an Environmental Permit) good practice measures for the control of dust emissions consistent with those specified in Appendix D (Good practice for the transportation, storage and use of recycled aggregates) of the Aggregates Quality Protocol will be applied to product stockpiles at the site. These methods are consistent generally with those applied in respect of the control of particulate matter from waste stored at the site.

2.7 The EA emissions guidance includes a section entitled "Stockpiled waste and open ground" which lists a range of other appropriate measures where waste stockpiles will be located outdoors and where stockpiles will not be maintained at least 0.5m below the top of bay walls and where stockpiles will be freestanding (not within a bay). The other appropriate measures include:

"

- *controlling the moisture content of the material in the stockpile to prevent materials becoming friable*
- *using sprays ….*
- *appropriately positioning bay walls or windbreaks*
- *making sure stockpiles do not face the direction of the prevailing wind*
- *minimising waste storage heights and volumes*

"

2.8 Details of how dust emissions will be minimised from stockpiles of inert and excavation waste stored at the site with reference to each of the appropriate measures identified above are presented below:

[4] WRAP (Waste & Resources Action Programme) Quality Protocol for Aggregates from inert waste, end of waste criteria for the production of aggregates from inert waste published on 22 October 2013 (Aggregates Quality Protocol).

controlling the moisture content of the material in the stockpile to prevent materials becoming friable…

2.9 As shown on Figure DEMP 2, fixed dust suppression sprays will be located at strategic locations to ensure that the water sprays will provide full coverage of all areas of the site in which waste will be stored. The fixed sprays and a mobile water bowser will be used to provide dust suppression by controlling the moisture content of waste materials stored in the stockpiles to prevent waste becoming friable. Further information on the use of fixed and mobile water sprays is presented in Section 3. Waste stockpile heights will be limited to 4m. Water from the fixed sprays and from the mobile water bowser will be able to comfortably reach the tops of the stockpiles to provide dust suppression to maintain the waste in a non-friable condition.

using sprays…

2.10 As described above, fixed sprays and a mobile water bowser will be available to spray the stockpiled waste to control the moisture content of the waste in the stockpiles to prevent the waste becoming friable.

appropriately positioning bay walls or windbreaks…

2.11 As explained above, prior to the publication of SR2022No1 there has been no specified maximum storage capacity at the site. SR2022No1 specifies a maximum waste storage quantity of 50,000 tonnes at any one time. The maximum waste storage quantity at the site will be 15,000 tonnes of inert and excavation waste which is well within the maximum waste storage limit specified in SR2022No1. Neither SR2009No6 nor SR2022No1 specify a maximum stockpile height. Waste stockpile heights at the site will be limited to 4m to minimise the potential for wind whipping of the stockpiles. The series of fixed dust suppression points together with the use of a mobile water bowser to provide comprehensive coverage of the waste storage area will be sufficient to minimise the potential for wind whipping of the waste stockpiles without the need to install bay walls around the waste storage area.

making sure stockpiles do not face the direction of the prevailing wind…

2.12 As shown on Figure DEMP 2, based on the shape of the site, which comprises a long thin strip running from north west to south east, the site generally is perpendicular to the prevailing wind direction, which based on the Windrose for Birmingham Airport is

from the south-south west. Waste will be stockpiled in a north west to south east direction, hence perpendicular to the prevailing wind. Based on the dust control measures already implemented at the site, which have been demonstrated over a period of 10 years to be effective in controlling dust emissions, it is considered unnecessary to install bay walls in the waste storage area to protect the stockpiles from the prevailing wind direction.

minimising waste storage heights and volumes…

2.13 Waste stockpile heights at the site will be limited to 4m to minimise the potential for wind whipping of the stockpiles. The 4m height is appropriate as this will enable water sprays from fixed dust suppression locations and site mobile plant to reach the top of the stockpiles to provide dust suppression to maintain the waste in a non-friable condition hence reducing the potential for wind whipping. The maximum waste storage quantity at the site will be 15,000 tonnes which is well within the maximum waste storage limit specified in SR2022No1. Controls on waste storage heights are employed in conjunction with minimising stockpile volumes by maintaining rapid throughput of waste at the site by maintaining a regular schedule of HGV movements from the site.

2.14 Based on the site setting (a rail siding which is not located in an AQMA with no residential receptors within 150m downwind of the site), it is considered unnecessary to store material in the site in bays. The risk of emissions will be minimised by employing the additional appropriate measures specified in the EA emissions guidance including the use of sprays to control the moisture content of the waste in the stockpiles to prevent waste becoming friable. The control measures have been determined based on the worst case scenario assumption that storage areas will contain the maximum quantities of waste specified at the maximum storage height of 4m, whereas in reality, stock will be managed in such a manner to minimise the quantity of waste stored at the site and stockpiles will typically not be at the maximum height of 4m.

2.15 As shown on Figure DEMP 2, the coverage of the fixed dust suppression includes all areas of the site in which waste will be stockpiled or processed. Accordingly, it is considered unnecessary to store in bays wastes for which no changes are proposed to the currently permitted activities. As explained in Sections 3 and 4, intensive visual monitoring of the stockpiles and operations at the site including the effectiveness of

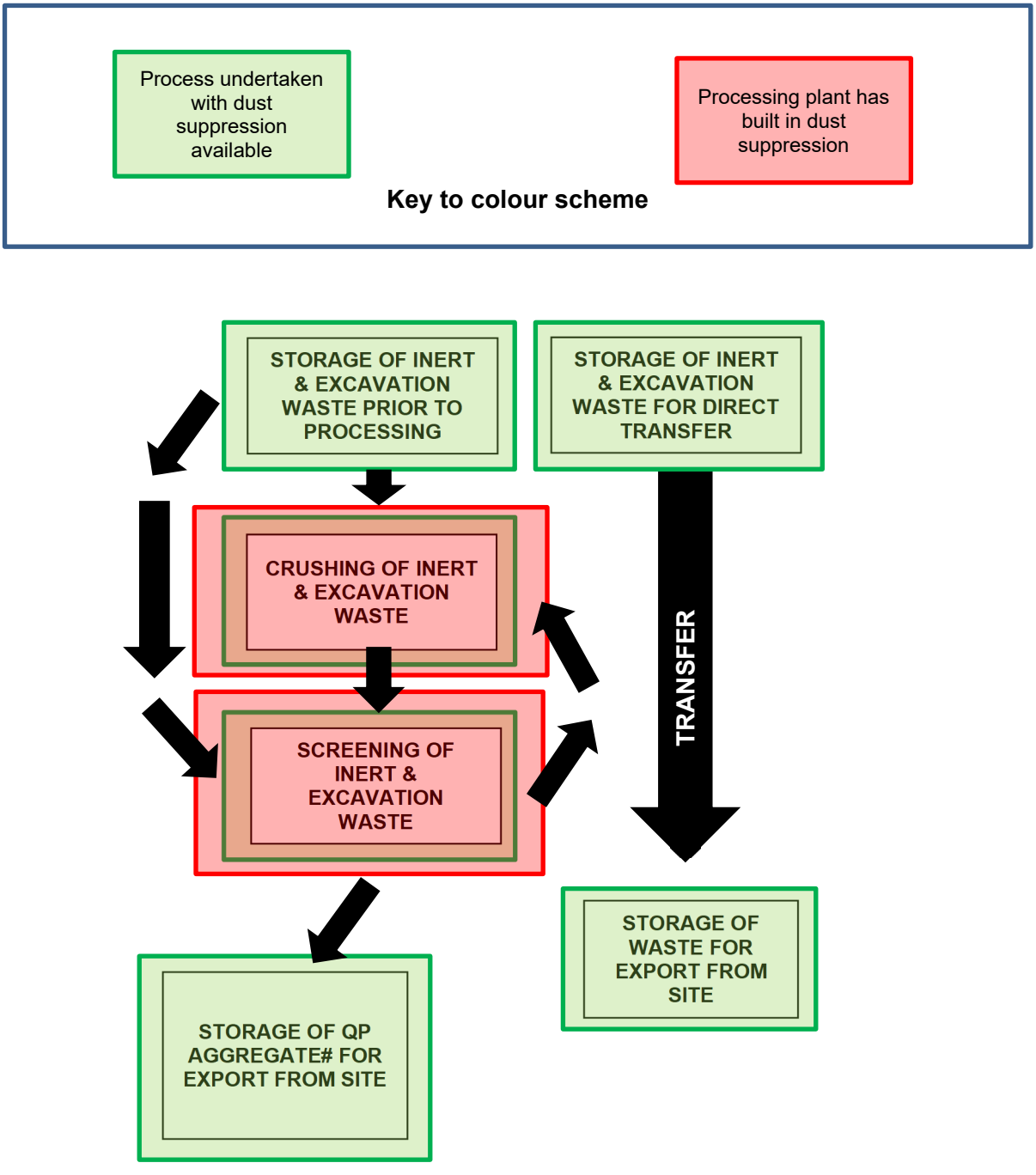
the dust control measures will be carried out to ensure that effective dust management is maintained at all times.

2.16 The waste types currently and proposed to be accepted at the site will be specified in the permit and are reproduced in Table DEMP 1. Wastes comprising solely or mainly dusts, powders or loose fibres are not accepted at the site. All heavy goods vehicles entering or exiting the site carrying waste or processed materials will be instructed to sheet or otherwise contain their loads (for example a fully enclosed container/wagon) to minimise the potential for the release of dust or particulate matter. If vehicles enter the site with their load uncovered a 3-strike policy is employed. The first strike is a verbal warning; the second a written warning explaining that any further breach will result in a ban from entering the site and the third strike is a ban.

2.17 Waste acceptance at the site is and will continue to be controlled by the waste acceptance and rejection procedures which are implemented at the site. Pre-acceptance checks of information provided by the producer or holder of the waste shall be undertaken by the technically competent manager (TCM) or a suitably trained person instructed or managed by the TCM. The pre-acceptance checks shall be used to identify waste that is suitable for acceptance at the facility. Waste acceptance checks shall be carried out for all waste loads delivered to the facility to confirm that the load is consistent with the pre-acceptance information. The acceptance checks undertaken by suitably trained site personnel shall include inspection of the Duty of Care documentation and a visual inspection of the load to confirm that the load is consistent with the Duty of Care documentation. The visual inspections will be carried out both at the weighbridge and at the point of tipping. Unsuitable materials identified at the weighbridge or at the point of tipping will immediately be rejected. If unsuitable materials are identified at the weighbridge they will not be permitted to tip at the site. If unsuitable materials are identified when the material is tipped it will be immediately reloaded onto the vehicle delivering the material and rejected. Measures will be taken, for example damping down of the material to minimise the potential for release of particulate matter from the load as it is reloaded. Key staff hold a relevant qualification under the approved CIWM/WAMITAB competence scheme appropriate to the waste operations conducted at the site including waste acceptance and handling.

Site activities

2.18 A schematic diagram identifying the key activities to be undertaken is presented below. The schematic diagram should be read in conjunction with the site layout plan shown on Figure DEMP 2.



Note - # QP Aggregate generated from inert & excavation waste

2.19 As shown in the schematic diagram, waste imported to the site will be subjected to a series of treatment activities with associated storage, all of which are undertaken with dust suppression available, either built into the treatment plant or via suppression using fixed water sprays or a mobile a water bowser. In general, the activities with the potential to generate and/or release dust and particulate matter comprise the following:

- Vehicles entering, travelling within, and/or leaving the site with mud or debris on their wheels.
- The release of dust, particulate matter and debris from material loads as they are delivered to the site.
- The resuspension of dust and particulate matter on roads and site surfacing by vehicles.
- The release of particulate matter when material loads are deposited or set down at the site.
- The release of particulate matter when an excavator and/or loading shovel dig into the materials prior to feeding materials into the treatment plant at the site.
- The release of particulate matter when material is loaded into the hopper for the crushing/screening plant at the site.
- The release of particulate matter when material is transferred from the crusher (crushed waste) into the screening plant at the site.
- The release of particulate matter when crushing or screening wastes.
- The release of particulate matter when moving product material at the site.
- The release of particular matter when material is loaded onto transport vehicles for removal from site.
- The release of particulate matter from stockpiled materials. Wind whipping of materials stockpiled at the site.
- Particulate emissions from the exhausts of vehicles and plant on site.

2.20 The management techniques employed at the site to control dust and particulate matter with reference to the specific items identified in the bulleted list above are discussed in Section 3 of this DEMP having regard to the measures presented in the Environment Agency guidance which is summarised in Table DEMP 3. Where specific activities have the potential to generate or release particulate matter, the proposed control measures are described and are summarised in Table DEMP 4 - Source - Pathway - Receptor linkages.

Pathways

2.21 Dust and particulate matter have the potential to be dispersed from the source to potential receptors by the wind. A Windrose for Birmingham Airport for the period 2020 – 2024 is presented on Figures DEMP 1, DEMP 2 and DEMP 3. Based on the Windrose the prevailing wind direction is from the south southwest and therefore areas to the north northeast of the site are generally down prevailing wind direction of the site.

Receptors

2.22 The potential receptors in the vicinity of the site are shown on Figure DEMP 1. The receptor type, distance and direction of the receptors closest to the site are listed in Table DEMP 2.

2.23 According to the DEFRA UK Air Information Resource website[5] the site is not located in an Air Quality Management Area (AQMA) declared for PM_{10} or within 2km of an AQMA declared for PM_{10}.

[5] https://uk-air.defra.gov.uk/

3. Dust and particulate management

3.1 Particulate matter at the site is controlled by a combination of measures relating to waste delivery and receipt at the site, site infrastructure and operational techniques employed at the site as set out in detail in this DEMP. The techniques selected for use at the site are based on well-established techniques to control the emissions of particulate matter which have been demonstrated to be effective at other GRS sites. Collectively the techniques, which are explained in further detail throughout Section 3 of this DEMP, amount to good housekeeping. Reference has been made where relevant to the Environment Agency Technical Guidance Document (Monitoring) M17[6] entitled 'Monitoring of particulate matter in ambient air around waste facilities' (M17), Environment Agency Technical Guidance Monitoring ambient air: particulate matter[7] and appropriate measures for control of dust and mud presented in Environment Agency guidance "Control and monitor emissions for your environmental permit". A variety of techniques are used at the site based on site specific circumstances.

Responsibility for implementation of this plan

3.2 The Technically Competent Site Manager (TCM) shall be responsible for the management of particulate matter and site staff will be trained appropriately. The TCM will appoint a suitably trained deputy to oversee the management of particulate matter at the site during operational periods when the TCM is not present at the site. The TCM will provide the training for the deputy. The training will include refresher training where appropriate however during the course of routine operation of the site the experience of the site staff, including the deputy, will comprise on the job training which will complement the refresher training.

Operational controls

3.3 For all anticipated deliveries of waste to the site, transporters are instructed to cover the loads with a sheet or otherwise contain their loads (for example a fully enclosed container/wagon) during transport to the site to minimise the risk of particulate

6 https://www.gov.uk/government/publications/m17-monitoring-of-particulate-matter-in-ambient-air-around-waste-facilities Published 7 April 2014. This guidance was withdrawn on 28 October 2024.

7 Environment Agency Guidance: Monitoring ambient air: particulate matter. Published 10 September 2024. https://www.gov.uk/guidance/monitoring-ambient-air-particulate-matter

emissions. Incoming loads remain sheeted or contained until such time as they are inspected and/or discharged. Following completion of the visual waste acceptance checks, drivers delivering waste to the site are instructed to place waste in the appropriate area of the site.

3.4 Waste received at the site is subject to pre-acceptance checks and acceptance screening comprising, where appropriate, visual inspection to confirm that the load is consistent with the waste types permitted for acceptance at the site. In the event that unsuitable materials are delivered to the site, including wastes comprising solely or mainly dusts, powders or loose fibres, the load is rejected. Drop heights are minimised during the loading, unloading, processing and transferring of waste.

3.5 In order to minimise the deposition of mud that may subsequently dry and generate particulate matter if disturbed, such as when tracked over by vehicles, wheel cleaning facilities are available at the site. The TCM or deputy shall be responsible for checking the condition of vehicles leaving the site and determining whether further wheel cleaning should be carried out before accessing public roads. The wheel cleaning facilities are located near to the weighbridge and site offices (see Figure DEMP 2) and are maintained in full working order.

3.6 The concrete surfaced site access road between the site reception and Anderton Road is maintained and will be kept clear of dust, mud and other debris through applying good housekeeping and the daily use of a mechanical road sweeper. The mechanical road sweeper will be deployed on a daily basis as a minimum but will be used more frequently if there is an unacceptable build-up of surface debris [8] (i.e. mud; soil; dust). The road sweeper will be maintained to ensure that it remains in good working order and is available for use at the site. Any other road sweeper used on site will be a similar specification to this model.

3.7 The physical condition of internal routes used by vehicles at the site, which comprise compacted hardstanding to provide a suitable surface for vehicles to travel on around the site, will be maintained in a condition consistent with minimising the generation of dust and particulate matter, for example by the application of additional coarse aggregate to the surface to prevent the build up of muddy areas on the road surface.

[8] 'Unacceptable build-up' is defined as when surface debris reaches a level likely to give rise to dust emissions leading to an unacceptable emission from the site (unacceptable emission defined in Section 6.2)

Mud and other loose materials which may dry and generate dust will not be allowed to accumulate in significant quantities on the roadway. In the event that the surface has dried out such that it may comprise a source of particulate matter emissions, dust suppression will be applied either using the fixed dust suppression (which as shown on Figure DEMP 2 is able to reach all areas of the hardstanding adjacent to waste stockpiles) or by a mobile water bowser which is employed at the site. The mobile water bowser will be filled up using water from the either of the water tanks (5,000 litre and 20,000 litre) at the site. The locations of the water tanks are shown on Figure DEMP 2. Checking of the water level in the bowser and in the water tanks will form part of the daily checks undertaken at the site. The need to maintain the roadway or remove mud and other loose materials will be based on the results of the daily inspections together with general observations made by all site staff during the working day.

3.8 Areas of hardstanding at the site on which waste or aggregate material is not being stored will be subject to daily inspections to ensure that the hardstanding does not comprise a source of dust emissions. Mud and other loose materials which may dry and generate dust will not be allowed to accumulate in significant quantities on the hardstanding surface. The need to maintain the hardstanding at the site or remove mud and other loose materials will be based on the results of the daily inspections together with general observations made by all site staff during the working day.

3.9 The movement of site traffic is restricted to defined traffic routes which are maintained. A vehicle speed limit of 9.5mph is imposed on the site for safety reasons and to reduce the potential for significant particulate matter to be resuspended. In addition to the controls and maintenance applied to the site surfacing and the use of dust suppression sprays, which are the primary measures for minimising the potential for the emission of significant quantities of dust, as an additional control measure and insofar as it is practicable as a matter of good practice all site vehicle exhausts are upward pointing to prevent the generation of particulate matter emissions from the road and site surfaces. The crushing and screening equipment used at the site is maintained in accordance with the manufacturer's recommendations to optimise performance and minimise emissions. Dust suppression sprays are built into the crushing and screening plant. The sprays are located at the inlet and outlet conveyors and at the inlet to the crusher. A no idling policy is implemented at the site for vehicles and plant.

3.10 Weather conditions will be checked on a daily basis through the use of publicly available weather forecasts (for example Met Office, BBC Weather, etc) to pre-empt periods when dust emission risk increases and greater mitigation measures are required which is when windy conditions coincide with periods of low rainfall. Dust suppression will be employed at the discretion of the TCM to maintain the site surfacing and waste in a damp condition to minimise the potential for the generation and release of dust. The risk matrix provided below will be used by the TCM or a suitably trained person instructed or managed by the TCM to assess the potential for the release of particulate matter from the site and to inform the use of dust suppression.

Risk matrix for dust emission management used by the TCM and other site staff to inform the control measures VL = Very low L = Low M = Medium H = High VH = Very high		**WIND STRENGTH**		
		Light breeze Gentle breeze	Moderate breeze Strong breeze	Near Gale
RAINFALL	Rain forecast >50% chance	**VL**	**L**	**M**
	Rain forecast <50% chance	**L**	**M**	**H**
	No rain forecast	**M**	**H**	**VH**

Notes
Wind strength as defined by the Beaufort Wind Scale
Light breeze = 2 to 3 m/s (4 to 7 mph, 7-11km/hr)
Gentle breeze = 4 to 5 m/s (8 to 11 mph, 14-18km/hr)
Moderate breeze = 6 to 8 m/s (13 to 18 mph, 22-29km/hr)
Strong breeze = 11 to 14 m/s (24 to 31 mph, 40-50km/hr)
Near Gale = 14 to 17 m/s (31 to 37 mph, 50-61km/hr)
https://www.metoffice.gov.uk/weather/guides/coast-and-sea/beaufort-scale

3.11 While the use of control measures will be at the discretion of the TCM or a suitably trained person instructed or managed by the TCM the risk matrix will be used to inform the use of the control measures. It is likely that when the risk is very low or low, limited if any dust suppression by the use of the fixed or mobile dust suppression sprays will be needed, including during the loading and unloading and processing operations, as the site and the waste will be damp/wet in periods of no/little wind. As the weather becomes dryer and/or windier the use of control measures including the fixed or mobile dust suppression sprays will increase. At all times the objective of the control measures will be to minimise the risk of the generation of significant quantities

of dust. As a general rule dust suppression by the use of fixed or mobile dust suppression sprays will be implemented when the risk is medium or higher but even then the use of the fixed or mobile dust suppression sprays will be at the discretion of the TCM. The risk criteria presented in the matrix will be reviewed on an annual basis based on operational experience and in conjunction with the results of the visual monitoring data collected at the site.

3.12 A final site walkover will be completed at the end of each working day to check that the site is in a condition that has a low potential to release dust outside the operational hours. The publicly available weather forecasts will be consulted to identify forecasts for weather conditions which may increase the risk of release of particulate matter from the site outside the operational hours and additional control measures such as dampening or flattening of stockpiles prior to the end of the working day will be employed to minimise the risk of an unacceptable emission. While the use of control measures will be at the discretion of the TCM or suitably trained person instructed or managed by the TCM the risk matrix will be used to inform the use of out of operational hours control measures. It is likely that when the risk is very low or low, limited if any out of hours dust suppression will be needed. As the weather becomes dryer and/or windier the use of control measures including the fixed sprays will increase. At all times the objective of the control measures will be to minimise the risk of the generation of significant quantities of dust outside the operational hours. As a general rule:-

i. Where waste stockpiled at the site has the potential to become friable, where a medium risk of out of hours dust emissions is predicted, dust suppression by spraying will be applied at the end of the working day and the tops of stockpiles will be flattened.

ii. Where waste stockpiled at the site has the potential to become friable, where a high or very high risk of out of hours dust emissions is predicted, dust suppression by spraying will be applied at the end of the working day, the tops of stockpiles will be flattened and the fixed dust suppression sprays will be programmed to operate hourly during the non-operational hours.

The need for and use of control measures outside operational hours will be at the discretion of the TCM.

3.13 The use of water sprays backed up with mobile bowsers and manual spraying is a proven effective dust management technique at numerous other aggregate treatment facilities. At all times during the operation of the fixed or mobile dust suppression sprays the use of the sprays will be monitored to confirm that they remain effective and their use will be adjusted as necessary, for instance by repositioning. Operations which may have the potential to generate particulate matter will cease if weather conditions and ground conditions preclude effective dust control, even with the use of fixed or mobile dust suppression sprays. Effective dust control means compliance with the Environmental Permit which is that emissions from the activities shall be free from dust at levels likely to cause pollution outside the site. If effective dust control cannot be achieved then the operations or some of the operations at the site would cease and would not recommence unless or until effective dust control could be achieved. This decision will be made at the discretion of the TCM and / or site manager based on the site conditions (dry, damp, wet) giving consideration to the weather conditions (windy, calm, etc) and the type, quantity and particle size of the waste on site.

3.14 In the event that particulate matter control measures fail to the extent that effective dust management cannot be provided then waste related operations at the site are suspended until such time as the control measures can be reinstated.

3.15 All relevant site personnel including contractors are trained in working practices and mitigation measures to minimise the generation and release of particulate matter.

3.16 The management techniques employed at the site to control dust and particulate matter having regard to the measures presented in the Environment Agency guidance are summarised in Table DEMP 3. Where specific activities have the potential to generate or release particulate matter, the proposed control measures are described and are summarised in Table DEMP 4 - Source - Pathway - Receptor linkages.

3.17 Visual monitoring for emissions of particulate matter is undertaken by site personnel. Further details are provided in Section 4 of this DEMP.

Water availability/usage

3.18 Water used in the dust suppression equipment including the fixed water sprays and mobile bowsers is obtained from the water tanks (5,000 litre and 20,000 litre) at the site. The locations of the water tanks are shown on Figure DEMP 2. Checking of the water level in the water tanks will form part of the daily checks undertaken at the site and the tanks will be topped up by mains water when necessary. At all times during the operation of the site consideration will be given to minimising water consumption in accordance with Environment Agency guidance.

3.19 The use of water from water storage tanks protects the site from any issues relating to disruptions in the mains water supplyIn the unlikely event that water is not available, and dust suppression is required, waste handling activities will temporarily cease until such a time that an adequate water supply can be restored.

Action plan

3.20 Consistent with the current observations at the site, it is considered that operational controls which are implemented to minimise the release of particulate matter and the generation of dust at the site will provide effective control of dust emissions at the site.

3.21 A Particulate Matter Management and Monitoring Action Plan is presented in Section 6 of this DEMP. It is a fundamental principle of the DEMP that effective dust control is provided at the site and that monitoring is carried out to confirm the effectiveness of the dust control measures. Measures for effective dust control are provided in Sections 2 and 3 of this DEMP and dust monitoring is provided in Section 4 of this DEMP. The Particulate Matter Management and Monitoring Action Plan has been included in the DEMP, not because it is reactionary rather than preventative, but to the contrary, in addition to the preventative measures. The inclusion of a Particulate Matter Management and Monitoring Action Plan is entirely consistent with Environment Agency guidance. The Particulate Matter Management and Monitoring Action Plan will be implemented in the unlikely event that:

i. there is an unacceptable visual emission of particulate matter from the site, or

ii. a complaint is received.

4. Particulate matter monitoring

4.1 In Environment Agency Technical Guidance[9] it is stated that despite the subjective nature of the visual assessment of dust emissions:

> *'this simple, cheap and easy to implement assessment approach has the significant advantage of providing instantaneous information on problems. For example it may be possible to directly observe the source of the dust emission, such as a particular stockpile of material. This allows the taking of rapid actions to deal with the problem.'*

4.2 During all site operations continuous visual monitoring for emissions of particulate matter shall be undertaken by suitably trained site personnel. In addition to the continuous visual monitoring a specific routine monitoring schedule will be undertaken comprising visual monitoring at four specific on-site locations at least once per day while the site is active. The on-site monitoring locations are shown on Figure DEMP 3. The results of the on-site monitoring of visible dust will be recorded on the visual monitoring checklist presented at Appendix A of this DEMP.

4.3 Visual monitoring by suitably trained site personnel is the most effective method of detecting as quickly as possible emissions of particulate matter throughout the working day thereby facilitating promptly the assessment of such emissions allowing the selection and implementation as quickly as practicable of control measures as necessary. The effectiveness of the measures taken in controlling emissions are assessed during inspections undertaken at the site following implementation of the control measures. Any problem that is observed is reported to the site manager who is responsible for investigating the cause and implementing any necessary remedial action. The investigation and remedial action plan that is implemented as a result of visual monitoring identifying the emission of dust is set out in Section 6 of this DEMP. The results of inspections and remedial measures taken are recorded in the site diary.

4.4 As part of the daily housekeeping practices, an initial and final site inspection is completed at the start and end of each working day to check that the site is in a condition that has a low potential to release dust including dust as a result of

[9] Environment Agency Guidance: Monitoring ambient air: particulate matter. Published 10 September 2024. https://www.gov.uk/guidance/monitoring-ambient-air-particulate-matter

operations outside of normal operational hours. Information in respect of controls outside operational hours is presented in Section 3. The visual monitoring checklist is provided at Appendix A and the findings of the visual assessments are recorded in the Site Inspection Housekeeping Checklist presented at Appendix B. Any problem that is observed is reported to the site manager who is responsible for investigating the cause and implementing any remedial action as necessary. Incidents and remedial measures taken are recorded in the site diary.

4.5 The site manager uses the Meteorological Office[10] weather forecast or other forecast to predict weather conditions such as strong winds and/or prolonged dry spells which may give rise to particulate matter emissions and implements the appropriate precautionary and or management measures. Qualitative assessments of the on-site conditions are undertaken and measures are taken to control aerial emissions of particulate matter within the site boundary. Additional control measures such as extended dampening or flattening of stockpiles prior to the end of the working day will be employed where prudent to minimise the risk of an unacceptable emission.

4.6 The records of the visual particulate matter monitoring are reviewed periodically to facilitate the review and assessment of operational activities as necessary. The review is carried out in conjunction with a review of the meteorological data that are available and the site operations that took place during the monitoring period together with any complaints regarding particulate matter emissions that have been received.

4.7 As explained in Section 3 it is a fundamental principle of the DEMP that effective dust control is provided at the site and that monitoring is carried out to confirm the effectiveness of the dust control measures. In the unlikely event that based on the visual site observations there is an unacceptable particulate matter emission from the site the Particulate Matter Management and Monitoring Action Plan is implemented. The Particulate Matter Management and Monitoring Action Plan is presented in Section 6. The inclusion of a Particulate Matter Management and Monitoring Action Plan is entirely consistent with Environment Agency guidance and is not a concession that it is considered that the measures included in the DEMP will not provide for effective dust and emissions management.

10 https://www.metoffice.gov.uk/

5. Engagement with the Community

5.1 GRS is conscious of the potential impact on the environment of its activities and strives to manage and minimise those impacts. GRS recognises the importance of community engagement and strives to build a positive working relationship with local residents and businesses across all of its sites. Contact details for the site are displayed on the signage at the site entrance.

Reporting of complaints and management responsibilities

5.2 Any complaints about the site operations and/or their impact on the environment made by third parties (including any complaints identified by the Environment Agency, Health and Safety Executive or Local Authority) should be brought to the attention of the TCM in the first instance who will identify and implement the measures needed to resolve the matter as set out in Section 6 of this DEMP. They shall then make a note of the complaint and the actions taken to resolve it. A register of complaints will be maintained onsite in the site diary. Complaints will be escalated to senior management at the discretion of the TCM, based on the number and nature of the complaints. Should complaints be escalated the details will be recorded in the site diary.

5.3 The particulate matter management and monitoring action plan which is implemented in the event that a complaint is received is presented in Section 6 of this DEMP.

6. Particulate matter and dust management and monitoring action plan

Context

6.1 The overriding management principle of the site with respect to dust control is to operate the site in a manner which prevents or minimises the release of dust as set out in the DEMP. If it is considered that the waste stored on the site, the waste being loaded or unloaded at the site or the site surfacing itself is in a condition that has the potential to release a significant quantity of dust such that there is a potential for off site dust emissions, additional dust suppression measures will be employed in a manner proportionate to the risk. These actions will be undertaken as part of the routine operation of the site. The action plan in this section of the report sets out the additional actions that will be taken in the event that conditions are identified whereby the routine measures need to be supplemented or improved.

Introduction

6.2 The action plan will be implemented in the event that:-

i) there is an unacceptable visual emission of dust from the site, or
ii) a complaint is received.

An unacceptable visual emission of dust from the site comprises a visual observation of dust or particulate matter crossing the site boundary from GRS's operations. The initial visual observation will be made by the site operative who has identified the emission and will be verified by the TCM. At the first instance of an unacceptable emission of dust or particulate matter from the site, verified by the TCM, the site should cease dust generating activities immediately and the action plan provided below will be implemented. If after following the action plan unacceptable emissions continue the site will cease operating until these emissions can be brought under control.

6.3 The timescale for implementation of the action plan will vary depending on the circumstances under which it is implemented. If an unacceptable visual emission is observed by site operative there will be no delay in implementing the action plan, whereas a complaint may be received by the operator a number of hours or even days after the activity that may have contributed to the complaint has ceased. In the

latter case an investigation of the complaint will be based on a review of the data and observations recorded at the site corresponding to the time at which the complainant observed the event.

Action plan

6.4 Measures for the routine management of dust are presented in Section 3, including information of the conditions when fixed and mobile dust suppression will be used. In the event that an unacceptable visual emission of particulate matter from the site is observed by site personnel the event will be investigated immediately by the TCM to determine the source as follows:

If it is established that the emissions are attributable to activities being undertaken at the GRS site action will be taken to control the emissions including where relevant:

- If emissions are attributable to stockpiled material, the employment of further dust suppression immediately by either repositioning a water spray or if necessary, using a water bowser or manual spraying using a hosepipe to dampen the stockpiles. Dust suppression will provide full coverage of the stockpiles.

- If emissions are attributable to unloading or loading of waste the application of additional dust suppression to control the particulate matter emission from the activity being undertaken. The temporary cessation of unloading and loading of waste until the dust suppression is sufficient to ensure that particulate matter emissions are effectively controlled and emissions do not cross the site boundary. Dust suppression will provide full coverage of loading and unloading areas on site.

- If the emissions are attributable to crushing or screening operations, the employment of additional suppression immediately such as by repositioning a water spray or if necessary or using a water bowser. Temporary cessation of the processing operations until the dust suppression is sufficient to ensure that particulate matter emissions are effectively controlled and emissions do not cross the site boundary. Dust suppression will provide full coverage of processing areas on site.

- Organisation of additional mechanical or manual cleaning of the site surfaces to ensure surface debris does not give rise to unacceptable emissions of dust or particulate matter.

- Carrying out checks to confirm that vehicles are adequately covering loads and obeying the site speed limits.

- Identifying whether there are any other activities being undertaken at locations other than the GRS site including the locations with the potential to release particulate matter identified in Table DEMP 2 and estimating the extent to which other activities may contribute to the visual emissions observed on the site including circumstances where windblown dust may be transported across and/or over the site from the external sources.

- In the unlikely event that the routine control measures employed at the site are not sufficient to control particulate matter emissions then consideration will be given to further measures to minimise and control emissions such as relocation of storage areas, temporary reduction in stockpile heights, installation of storage bays, implementation of additional dust suppression and/or procurement of additional dust suppression equipment.

6.5 In the event of a complaint associated with particulate matter emitted from the site an investigation will be undertaken immediately to determine the source as follows:

- Identify from the site diary what activities were being undertaken at the time at which the complaint event occurred and in which location at the site and review the waste types that were accepted and handled at the site on that day.

- Identify from meteorological data available whether the emissions are potentially a result of the operations at the site.

- Identify from the site diary whether there were any unusual regional weather events occurring during the day on which the complaint was made such as Saharan dust storms.

- Giving consideration to the wind direction on the day of the complaint, identify from the site diary whether there were any other activities being undertaken at locations other than the GRS site for example the neighbouring sites with the potential to release particulate matter identified in Table DEMP 2.

- If it is established that the emissions were attributable to activities being undertaken at the site, review the relevant operational procedures and implement

improvements and provide additional training to site personnel to improve the controls and minimise future emissions. Consideration will be given to further measures to minimise and control emissions such as relocation of storage areas, temporary reduction in stockpile heights, installation of storage bays, implementation of additional dust suppression and/or procurement of additional dust suppression equipment.

6.6 Appropriate action will be taken which may include the cessation of the activity. The decision to cease activity is made at the discretion of the TCM and/or site manager based on the circumstances leading to the complaint. In the case of a complaint, the action taken will be communicated to the complainant and the Environment Agency promptly following the receipt of the complaint with follow up feedback after the initial response if appropriate. The relevant operational procedures will be reviewed and improvements that are needed will be implemented. The decision to make improvements to operational procedures will be made at the discretion of the TCM and/or site manager based on the circumstances leading to the complaint.

TABLES

Table DEMP 1

Waste types authorised to be accepted at the site

LoW Code	Description	Nature	Potential for dust generation from handling, storage and treatment of wastes without mitigation[A]	Reason
01 04 08	Gravel and crushed rocks other than those mentioned in 01 04 07	Solid	Low	Comprises generally larger items with greater mass and lower dust emission potential as a result. Mitigation measures will be applied in accordance with this plan.
01 04 09	Sand and clays	Solid	Low-medium	Minerals such as sands are typically finer grained than aggregate/stones and can release dust during loading/unloading and screening. Mitigation measures will be applied in accordance with this plan.
15 01 07	Clean glass	Solid	Low	Comprises generally larger items with greater mass and lower dust emission potential as a result. Mitigation measures will be applied in accordance with this plan.
17 01 01	Concrete	Solid	Medium	Typically comprises of larger, heavier items. Dust emission risk deemed low to medium when crushing and screening wastes without mitigation. Built in dust suppression on crushing and screening plant and fixed dust suppression on site covering the treatment areas will be applied in accordance with this plan. All other mitigation measures will be applied in accordance with this plan.
17 01 02	Bricks	Solid	Low-medium	
17 01 03	Tiles and ceramics	Solid	Low	
17 01 07	Mixtures of concrete, bricks, tiles and ceramics	Solid	Low-Medium	
17 02 02	Glass	Solid	Low	Comprises generally larger items with greater mass and

				lower dust emission potential as a result. Mitigation measures will be applied in accordance with this plan.
17 03 02	Bituminous mixtures	Solid	Low	Road planings typically comprise large, high density pieces of pavement. Dust emission risk deemed low when crushing and screening wastes without mitigation. Built in dust suppression on crushing and screening plant and fixed dust suppression on site covering the treatment areas will be applied in accordance with this plan. All other mitigation measures will be applied in accordance with this plan.
17 05 04	Soil and stones	Solid	Low-Medium	Soils are typically finer grained than aggregate/ stones and can release dust during loading and unloading. Fixed dust suppression to be applied during loading, unloading and screening where a risk of an unacceptable emission is possible. Mitigation measures will be applied in accordance with this plan.
17 05 06	Dredging spoil other than those mentioned in 17 05 05 (sand and aggregate only)	Solid	Low	Dredging spoil typically is damp hence lower dust emission potential as a result. Mitigation measures will be applied in accordance with this plan.
17 05 08	Track ballast	Solid	Low	Track ballast typically is coarser than soil. This waste type will rarely be received at the site. Mitigation measures will be applied in accordance with this plan.
17 09 04	Mixtures of soil, bricks, stones and concrete	Solid	Low-Medium	Typically comprises a mix of the wastes which are all included individually in this list of wastes table.

				Mitigation measures will be applied in accordance with this plan.
19 12 05	Glass	Solid	Low	Comprises generally larger items with greater mass and lower dust emission potential as a result. Mitigation measures will be applied in accordance with this plan.
19 12 09	Minerals (for example sand, stones)	Solid	Low-Medium	Minerals such as sands are typically finer grained than aggregate/stones and can release dust during loading and unloading. Mitigation measures will be applied in accordance with this plan.
20 01 02	Glass	Solid	Low	Comprises generally larger items with greater mass and lower dust emission potential as a result. Mitigation measures will be applied in accordance with this plan.
20 02 02	Soil and stones (garden and park wastes)	Solid	Low-Medium	Soils are typically finer grained than aggregate/ stones and can release dust during loading and unloading. Fixed dust suppression to be applied during loading, unloading and screening where a risk of an unacceptable emission is possible. Mitigation measures will be applied in accordance with this plan.

Notes
A - The control measures applied at the site to minimise the potential for generation of dust from the storage of the waste types specified in Table DEMP 2 are set out in Section 3 and in Tables DEMP3 and DEMP4.

Table DEMP 2 (Part 1)

Summary of the receptors in the vicinity of the site (including other sources of dust emissions)

Ref	Name or description	Type of receptor	Approximate distance from site (m)	Direction from site
1	Grand Union Canal	LWS	Adjacent	S
2	Deciduous Woodland #	Protected Woodland	<250	NW
3	Sparkbrook Residential Area	Residential	<250	S
4	A45	Road	<250	NE
5	Small Heath Residential Area	Residential	200 - 500	W
6	Holy Trinity Catholic School	Education	250 - 500	N
7	Spring Vale Residential Area	Residential	250 - 500	N
8	Small Heath Park	Amenity	250-500	NE
9	Sports Facility	Commercial/Leisure	250 - 500	SE
10	Farm Park	Amenity	<250	W
11	Regents Park	Amenity	500 - 1000	NW
12	Regents Park Community Primary School	Education	500 - 1000	NW
13	Central Jamia Mosque	Religious Building	<250	NE
14	Ramgarhia Sikh Temple	Religious Building	250 - 500	NE
15	Christ Church of England Primary School and Nursery	Education	500 - 1000	WSW
16	Conway Primary School	Education	500 - 1000	SW
17	Ski Centre	Commercial/Leisure	500 - 1000	ESE
18	Ark Boulton Academy	Education	500 - 1000	SSE
19	Midlands Refrigeration & Catering Equipment	Industrial	500 - 1000	WNW
20	Small Heath Station	Commercial	<250	ENE
21	Khattak Memorial Surgery	Commercial	<250	N
22	Applegreen Petrol Station	Commercial	<250	NE
23	Cemex Rail Depot	Industrial	<250	W
24	Vicks Motors Limited	Industrial	<250	W
25	Vincent Timber	Industrial	250 - 500	W

Table DEMP 2 (Part 2)

Summary of the receptors in the vicinity of the site (including other sources of dust emissions)

Ref	Name or description	Type of receptor	Approximate distance from site (m)	Direction from site
26	Yara Cash and Carry	Commercial	<250	SW
27	Profile Handling Limited	Industrial	<250	W
28	HI Q Windows	Industrial	<250	W
29	South & City College Birmingham - Golden Hillock Women's Centre	Education	250 - 500	NE
30	I.T. Auto Centre	Industrial	250 - 500	N
31	Stellantis & You Peugeot Birmingham Central	Industrial	500 - 1000	NW
32	Jumbo Midlands Ltd	Industrial	250 - 500	WNW
33	Sparkbrook Community Centre	Commercial	250 - 500	SW
34	Paradise Banqueting Hall	Commercial	<250	S
35	IMO Car Wash	Commercial	<250	ESE
36	Humanitarian Academy for Development	Education	500 - 1000	WNW
37	Bordesley Train Station	Commercial	500 - 1000	WNW
38	GMC Motors Bham ltd	Industrial	500 - 1000	WNW
39	Euro Claddings Sparkbrook	Industrial	250 - 500	WNW
40	Wallwork Heat Treatment Ltd	Industrial	<250	SE
41	Christ Church Sparkbrook	Religious Building	250 - 500	WSW
42	Olive School	Education	<250	NE
43	Ladypool Primary School	Education	500 - 1000	SW
44	Arden Primary School	Education	500 - 1000	S
45	Ark Victoria Academy	Education	500 - 1000	E
46	Small Heah School	Education	500 - 1000	N
47	Salafi Independent School	Education	500 - 1000	N
48	Hi-Ton	Industrial	<250	S
49	Amanah Day Nursery	Education	500 - 1000	WNW
50	Montgomery Primary School	Education	<250m	S
51	Housing Estate to the North of the Site	Residential	<250m	N

Note: The shaded boxes comprise activities such as roads and commercial operations in the vicinity of the site which have the potential to contribute particulate matter emissions to local air quality. Receptors within 1km of the site are displayed in Table 2 above. The receptors are measured from their closest point to the site and their locations are shown on Figure DEMP 1.

The location of the deciduous woodland is also shown on the EA Nature and Heritage Conservation Screening report presented at Appendix A of the Environmental Risk Assessment for the site.

Table DEMP 3

Measures that will be used on site to control emissions of particulate matter

This table considers in turn each of the measures considered in Table 3.2 of Environment Agency internal guidance template entitled "Dust and emission management plan" (Version 10 dated October 2018). Text from the EA guidance document is shown in red.

Abatement Measure	Description / Effect	Overall consideration and implementation
Preventative Measures		
Enclosure within a building	Creating a solid barrier between the source of dust and particulates and receptors is likely to be the most effective method of control, provided that the building entrances and exits are well managed.	Taking into consideration the current and proposed waste types accepted at the site it is considered unnecessary to carry out operations inside a building.
Negative pressure extraction	Within enclosed buildings, controlled extraction can be undertaken to ensure a constant negative pressure relative to the outside air. This system should prevent the emission of particulates from any openings in the building. Extracted air should be treated through a suitable filtration system prior to discharge to atmosphere. This method is more frequently applied for odour control.	As this technique is relevant only to operations undertaken within a building it is not relevant to the operations at the site.
Dust Extraction Systems	A large variety of abatement technologies exist for the removal of dust and particulates from a flowing gas and have typically been applied to combustion plants and other sites where controlled emissions of	As this technique is relevant only to operations undertaken within a building it is not relevant to the operations at the site.

Abatement Measure	Description / Effect	Overall consideration and implementation
	particulates occur. These include Electrostatic Precipitators (ESPs), wet scrubbers, baghouses (bag filters), viscous media (e.g. oil) filters and gravitational settling. Although not all of these may be appropriate for dust and particulate suppression at waste management sites, and they cannot be applied to controlling external fugitive emissions, they may be effective when coupled with local exhaust extraction, ventilation or negative pressure extraction systems from enclosed buildings to remove dust and particulates from the airstream.	
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.	As shown on Figure DEMP 1, the downwind boundary of the site is bordered by the main line railway line and the A45 dual carriageway. There are no residential receptors directly adjacent to the downwind boundary.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Reducing vehicle movements and idling should reduce emissions from vehicles. Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery. Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.	A 9.5mph speed limit is imposed at the site. Insofar as it is practicable all site vehicle exhausts will be upward pointing to prevent the disturbance of particulate matter from the road surfaces. A no idling policy is implemented at the site.

Abatement Measure	Description / Effect	Overall consideration and implementation
Minimising drop heights for waste. Use of enclosed chutes for waste drops/end of conveyor transfers and covered skips / storage vessels.	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Enclosing processes will further reduce dispersion.	Drop heights when loading, unloading and transferring materials will be minimised. Site operational staff will be made aware of this requirement and training will be provided on best practice for handling materials to minimise drop heights. Water sprays and bowsers will be employed to provide dust suppression to minimise the release of particulate matter from the unloading, storage, treatment and loading of waste at the site. Waste will be at its highest point when being fed into the crushers and moving through the screener. Crushing and the screening plant have in built dust suppression technology.
Good house-keeping	Having a 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.	Good housekeeping is mandatory at the site and the TCM will continuously encourage training of staff. The site surface will be assessed daily to ensure there isn't an unacceptable build up of debris on site that is likely to give rise to an unacceptable emission of dust or particulate matter. An initial and final site inspection will be completed at the start and end of each working day to check that the site is in a condition that has a low potential to release dust as a result of operations or outside of normal operational hours. Publicly available meteorological information will be used by site staff to identify forecasts of extreme weather events which may have the potential to increase the risk of the release of dust from the site outside operational hours and additional control measures such as the wetting of site surfacing (including unmade ground/hardstanding and concrete surfaces) and stockpiles prior to the end of the working day will be employed as necessary. Vehicles will have their wheels cleaned as necessary prior to leaving the site using the wheel cleaning facilities.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	All heavy goods vehicles entering or exiting the site carrying waste or processed materials will be instructed to sheet or otherwise contain their loads (for example a fully enclosed container/wagon) to minimise the potential for the release of dust or particulate matter. If vehicles enter the site with their load uncovered a 3-strike policy is employed.

Abatement Measure	Description / Effect	Overall consideration and implementation
		The first strike is a verbal warning; the second a written warning explaining any further breach will result in a ban from entering the site and the third strike is a permanent ban.
Hosing of vehicles on exit	May remove some dirt, dust and particulates from the lower parts of vehicles although likely to be less effective than a more powerful wheel wash.	In order to minimise the deposition of mud that may subsequently dry and generate particulate matter if disturbed, such as when tracked over by vehicles, wheel cleaning facilities which includes the hosing of vehicles on exit using a high powered jet wash, will be used at the site. All vehicles delivering waste to the site will use the wheel cleaning facilities as necessary before leaving the site. The wheel cleaning facilities will be maintained in full working order throughout the life of the site.
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.	GRS will cease waste handling operations if weather conditions and ground conditions preclude effective dust control. This decision will be made at the discretion of the TCM based on the site conditions (dry, damp, wet) giving consideration to the weather conditions (windy, calm, etc) and the type, quantity and particle size of the waste on site.
Installed wheel wash	Provides a high pressure wash of vehicle wheels and lower parts (including under body) using a series of jet sprays. More effective if vehicles drive through the wheel wash slowly in order that there is sufficient time for dirt to be removed.	In order to minimise the deposition of mud that may subsequently dry and generate particulate matter if disturbed, such as when tracked over by vehicles, wheel cleaning facilities will be used at the site. It is considered that the wheel cleaning facilities currently in place at the site, which includes a high powered jet wash are suitable to minimise the potential for mud and debris to be tracked out onto the public highway without the requirement for a fully automated wheel wash to be installed.
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface, using materials such as concrete as opposed to unmade (rocky or muddy) ground within the site and on site haul roads. This should reduce the amount of dust and particulate	By the grant of the permit in 2014, the inert and excavation waste transfer and treatment operations the subject of the permit have been accepted at this location with a hardstanding surfacing.

Abatement Measure	Description / Effect	Overall consideration and implementation
	generated at ground level by vehicles and site activities.	
Minimisation of waste storage heights and volumes on site	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	The principle of the operation of the site is to minimise the timescale during which waste is stored at the site, hence the quantity of waste stored, by maintaining a regular schedule of HGV deliveries from the site.
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.	GRS will cease waste handling operations if weather conditions and ground conditions preclude effective dust control. This decision will be made at the discretion of the TCM based on the site conditions (dry, damp, wet) giving consideration to the weather conditions (windy, calm, etc) and the type, quantity and particle size of the waste on site.
Remedial Measures		
Netting / micro netting around equipment	Erecting netting around equipment that could give rise to large amounts of dust and particulates may be effective within the site boundary and prevent their dispersion off-site / their re-suspension within the site.	The equipment employed at the site for treatment of waste comprises mobile crushers and mobile screening plant. This plant has built in dust suppression and additional dust suppression is available from the fixed dust suppression points and mobile water bowser. Given the controls in place described above, it is considered unnecessary to erect additional netting around treatment equipment. The crushing and screening activities already were authorised under SR2009No6 and no changes to this activity are proposed as part of the variation application other than to restrict the quantity of waste treated and to add a series of waste types that are consistent with the waste types specified in the WRAP Aggregates Quality Protocol (01 04 08, 01 04 09, 15 01 07, 17 05 06, 17 09 04 19 12 05, 19 12 09 and 20 01 02) and in SR2022No1.

Abatement Measure	Description / Effect	Overall consideration and implementation
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles. Road sweeping vehicles damp down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside. This may generate dust and particulate movement that may become a Health and Safety issue if the filters and spray bars on the sweepers are not maintained.	The site access road is maintained and swept with a road sweeper and the area of hardstanding at the site will be maintained in a condition consistent with minimising the generation of dust and particulate matter. A copy of the visual monitoring checklist and the site inspection check sheet, which form part of the housekeeping schedule, are provided at Appendices A and B respectively.
Site perimeter netting / micro netting	Erecting netting around the site perimeter may capture released debris and dust and particulates prior to it being dispersed off-site.	Please see comments above in relation to erecting netting around equipment. The same principles apply that based on the dust controls in place described above, it is considered unnecessary to erect netting at the site perimeter.
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	As explained in Section 3 of this DEMP fixed and mobile water suppression will be used at the site.
Water suppression with mist sprays	Installation of mist sprays around sites, at building entrances/exits and within buildings at point source emissions like conveyors, trommels etc. It can also assist in the damping down of dust and	There are no waste storage buildings at the site. It is unnecessary to install any mist suppression in addition to the water suppression described above.

Abatement Measure	Description / Effect	Overall consideration and implementation
	particulates, therefore, reducing emissions from site.	
Water suppression with bowser	Using bowsers is a quick method of damping down large areas of the site with large water jets. This method could also be used on easy-to-clean, impermeable concrete surfaces.	Dust suppression will be provided at the site by water suppression which will be employed to minimise the release of dust from site surfaces, stockpiled materials and operational areas.
Dust and particulate monitor with trigger alarm	Installation of a dust and particulate monitor with specified alarm trigger level can alert site staff when short-term particulate concentrations are elevated in order that site practices can be reviewed or application of mitigation measures increased.	Visual dust monitoring will be carried out at the site. Visual dust monitoring, which is to be undertaken by suitably trained staff, is an effective method of rapidly detecting emissions and facilitates the selection rapidly of an appropriate method of particulate matter control based on observations at the time of the emission. Given the controls in place described above, it is considered unnecessary to install a dust and particulate monitor with a specified alarm trigger.
Shaker grids	Similar to cattle grids, these are installed at a site entrance and exit. The movement of vehicles over the grids shakes dust and particulates from the wheels, thus removing them before vehicles enter the site.	As the site surface will comprise a well maintained hardstanding surface and as wheel cleaning facilities are installed at the site a shaker grid is unnecessary.
Water Cannons	Water cannons provide a means for delivery of powerful water streams from a water truck. With variable nozzles, the spray pattern can be controlled and varied between jet and fog. Typical water flows are up to 5000 litres per minute. Water cannons are most often used for fire protection, mining	Dust suppression will be provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site will provide sufficient suppression capacity it is considered unnecessary to install water cannons at the site.

Abatement Measure	Description / Effect	Overall consideration and implementation
	operations, heavy machinery wash down, cleaning and dust and particulate abatement.	
Screening of buildings / reducing large apertures using plastic strips	Installing plastic strips to cover entrances/exits to buildings may reduce emissions of dust and particulates dispersing through doorways.	As this technique is relevant only to operations undertaken within a building it is not relevant to the operations undertaken at the site.
Application of CMA / chemical suppressant	Diluted Calcium Magnesium Acetate (CMA) or other chemical based dust suppressant is regularly applied by spraying using a back-pack applicator for small areas or by road sweeper to cover larger areas. CMA acts as a suppressant with the aim of reducing dust and particulate re-suspension and hence ambient concentrations.	Dust suppression will be provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site will provide sufficient suppression capacity it is considered unnecessary to use CMA/chemical suppressants at the site.
Heavy Water	Heavy water is used to improve the compaction and stability and reduce dust and particulates on unsealed roads or areas of land. Ideally it is blended into the road construction material as the road is constructed, but where this is not possible it can be sprayed onto the top of the road. Heavy water combines fast acting wetting agents with polymer binders, to	Dust suppression will be provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site will provide sufficient suppression capacity it is considered unnecessary to use heavy water at the site.

Abatement Measure	Description / Effect	Overall consideration and implementation
	allow penetration deep into the material and to 'agglomerate' the dust and particles together.	
Foam Suppression	The aggregate and mining industries frequently use foam suppression for the control of dust and particulate emissions, mixing the foam with broken material to increase efficiency. Foaming agents can be added to increase the efficiency of dust and particulate reduction. Foam suppression has seen increased attention in recent years and has previously been applied to waste transfer facilities where crushing of waste occurs.	Dust suppression will be provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site will provide sufficient suppression capacity it is considered unnecessary to use foam suppression at the site.

Table DEMP 4

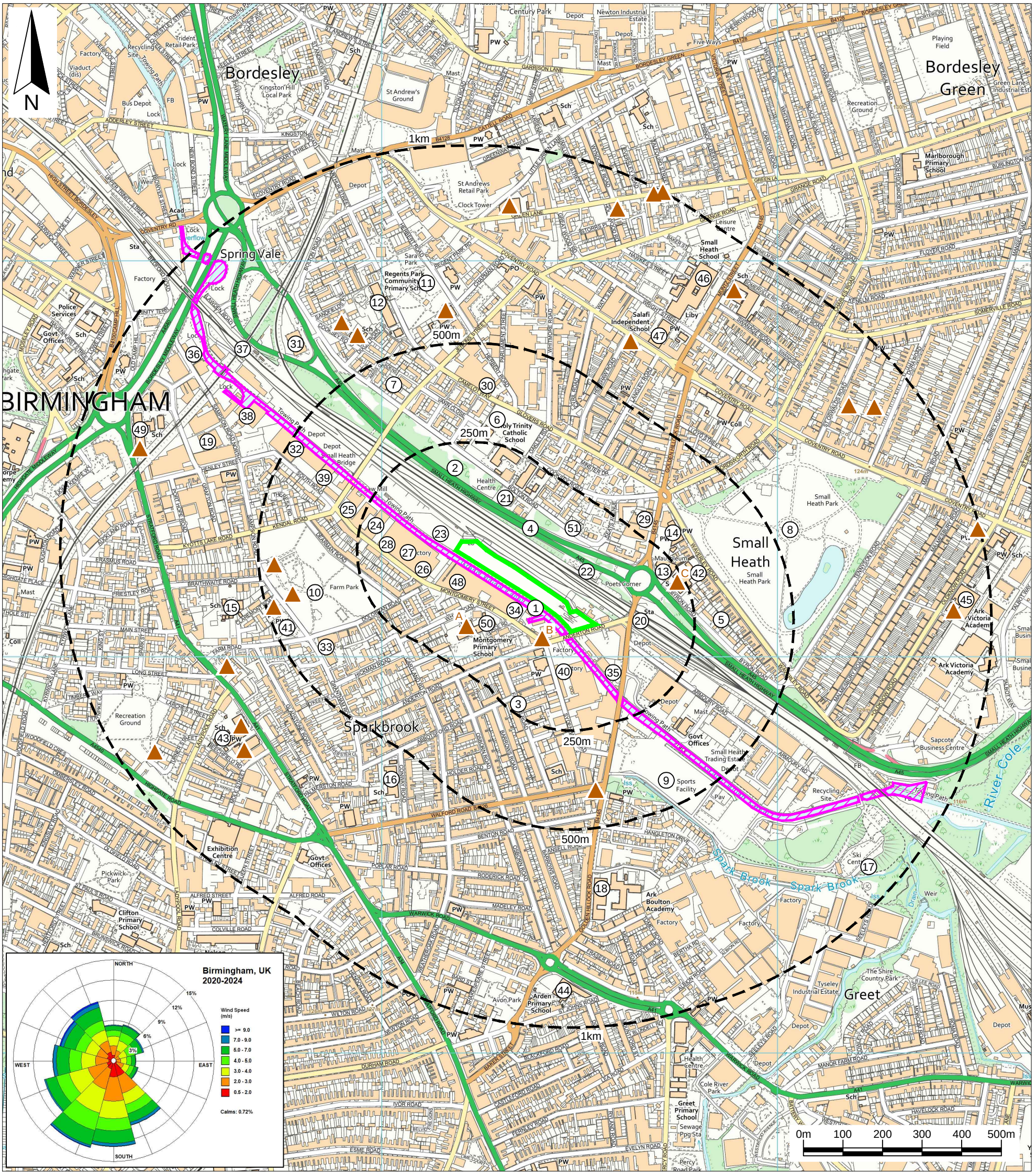
Source - pathway - receptor linkages

For each of the sources and pathways included in the table the receptor is considered to be the receptors identified in Table DEMP 2, particularly those located down prevailing wind of the site. The sources in the table comprise those identified in Section 2 of the DEMP. Further details of the techniques employed are presented in Section 3 of the DEMP and in Table DEMP 3.

Source	Pathway	Techniques employed to minimise the emissions of dust
Vehicles entering and/or leaving the site with mud on their wheels	Tracking out of the site of particulate matter and mud on vehicle wheels which may drop off and deposit on the public highway which may subsequently dry and generate particulate matter if disturbed such as when tracked over by vehicles.	In order to minimise the deposition of mud that may subsequently dry and generate particulate matter if disturbed, such as when tracked over by vehicles, wheel cleaning facilities are installed at the site. All vehicles delivering waste to the site will use the wheel cleaning facilities as necessary before leaving the site. The wheel cleaning facilities will be maintained in full working order throughout the life of the site. The site access road is maintained and swept with a road sweeper and the area of hardstanding at the site will be maintained in a condition consistent with minimising the generation of dust and particulate matter.
The resuspension of particulate matter on roads and site surfacing by vehicles	Atmospheric dispersion	The site access road is maintained and swept with a road sweeper and the area of hardstanding at the site will be maintained in a condition consistent with minimising the generation of dust and particulate matter. Dust suppression sprays together if necessary with the water bowser will be used to dampen down as necessary the site surface to reduce the potential for particulate matter to be resuspended by vehicles travelling round the site.
The release of particulate matter and debris from waste loads as they are delivered to the site	Falling off delivery or collection vehicles.	All vehicles using the site will be instructed to sheet or otherwise contain their loads prior to arrival at the site to minimise the risk of particulate emissions. Loads will be sheeted or contained until such

Source	Pathway	Techniques employed to minimise the emissions of dust
		time as they are inspected and/or deposited. Outgoing loads will be sheeted.
The release of particulate matter when waste loads are deposited or set down in stockpiles on the site.	Atmospheric dispersion	Drop heights are kept to a minimum and loads that arrive sheeted are kept sheeted immediately prior tipping to minimise the potential for release of dust. Dust suppression is provided at the site by fixed and mobile water sprays which are employed to minimise the release of dust from stockpiled waste at the site.
The release of particulate matter when treating waste through crushing and screening.	Atmospheric dispersion	Crushing and screening is carried out on a campaign basis (i.e., not on a routine daily basis) and taking into consideration the prevailing weather conditions in order to reduce the risk of generating and releasing particulate matter. Crushing and screening will be avoided during weather conditions that preclude effective particulate matter management. Drop heights will be minimised during the unloading of waste into the crusher/screener. The crushing and screening plant is equipped with enclosed conveyors and built in dust suppression spray bars to minimise the release of particulate matter during the treatment of waste at the site. Fixed and mobile water suppression is employed to provide additional dust suppression.
The release of particulate matter from stockpiled materials. Wind scouring / wind whipping of material stockpiles.	Atmospheric dispersion	Stockpiles have the potential to dry out and release particulate matter by wind scouring. Stockpile heights will be limited to a maximum of 4m. Waste stockpiles will be dampened using the water suppression.
Particulate emissions from the exhaust of vehicles and plant on site.	Atmospheric dispersion	Vehicles and plant on site will be maintained to optimise performance and minimise vehicle emissions. A no idling policy will be implemented at the site for vehicles and plant.

FIGURES



Key / Notes

- Environmental Permit Boundary
- Offset from permit boundary
- (1) Potential receptor of dust generally within 1km radius of the site
- Grand Union Canal Local Wildlife Site (LWS)
- ▲ Approximate location of a listed building
- A Grade II Listed Building — Montgomery Primary School
- B Grade II Listed Building — Marlborough Public House
- C Grade II* Listed Building — Small Heath Lower School

Rev	Status	Drn	App	Chk	Date
A	Addition of receptor 51	KR	LRM	AW	24/06/25
	Draft	KR	AW	GT	13/06/25

Site: SMALL HEATH RAIL SIDINGS

Client: GRS Rail Services

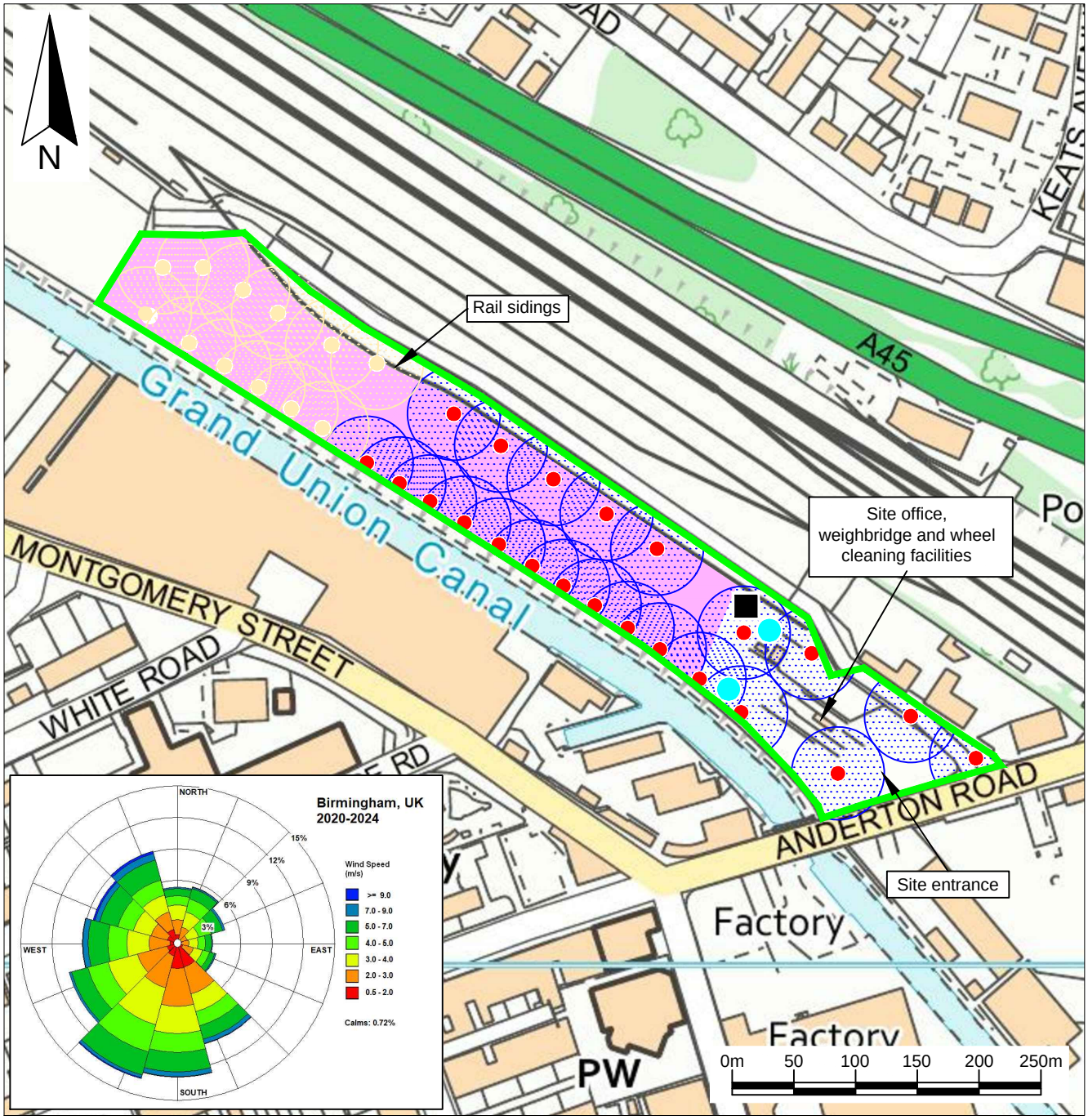
Title: Site plan showing the receptors relevant to the DEMP

Figure DEMP 1

Scale: 1:10,000@A3

Drawing Ref: GRS/SMH/05-25/24963revA

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices,
Main Road, Baxterley, Atherstone,
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507



Key / Notes

- Environmental Permit Boundary
- Waste storage area
- Approximate location of water sprinkler dust suppression point
- Proposed location of water sprinkler dust suppression point
- 20,000 litre diesel storage tank
- Water tanks (5,000l and 20,000l)
- Approximate coverage of dust suppression

Rev	Status	Drn	App	Chk	Date
A	Addition of proposed sprinklers	KR	LRM	AW	24/06/25
	Draft	KR	AW	GT	13/06/25

Site: SMALL HEATH RAIL SIDINGS

Client: GRS Rail Services

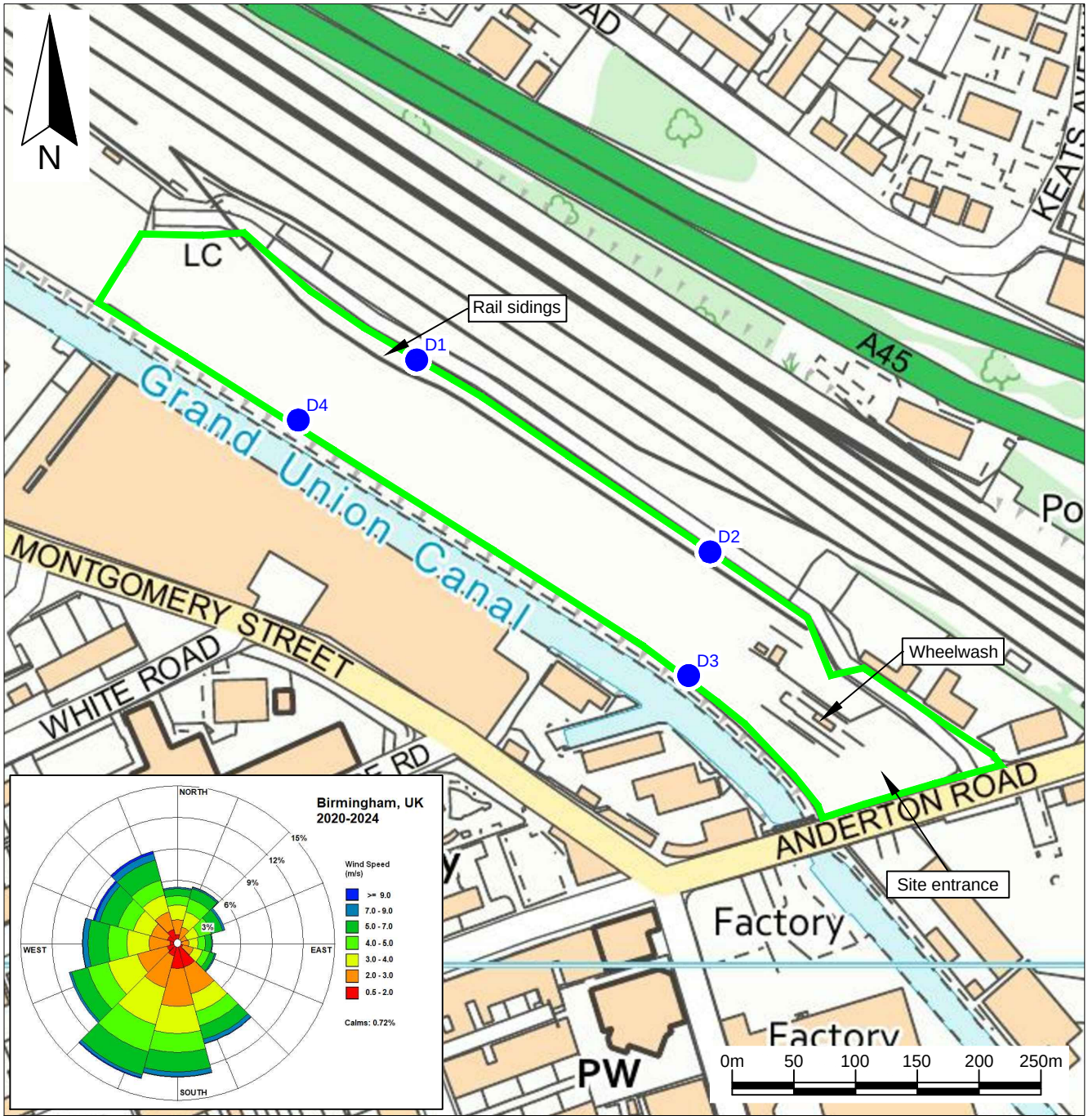
Title: Site layout

Figure DEMP 2

Scale: 1:2,500@A4

Drawing Ref: GRS/SMH/05-25/24969revA

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices,
Main Road, Baxterley, Atherstone,
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507



Key / Notes

Environmental Permit Boundary

D1 Visual dust monitoring location

Rev	Status	Drn	App	Chk	Date
	Final	KR	AW	GT	24/06/25

Site: SMALL HEATH RAIL SIDINGS

Client: GRS Rail Services

Title: Visual dust monitoring locations

Figure DEMP 3

Scale: 1:2,500@A4

Drawing Ref: GRS/SMH/06-25/24994

MJCA
Technical advisers on environmental issues
Baddesley Colliery Offices,
Main Road, Baxterley, Atherstone,
Warwickshire, CV9 2LE.
Telephone : 01827 717891
Fax : 01827 718507

APPENDICES

APPENDIX A

VISUAL MONITORING CHECKLIST

Dust Monitoring Form

Week commencing: ……

Day	Name of assessor	Time	Location	Wind direction	Visual observations / Comments	Action taken
Monday			D1			
			D2			
			D3			
			D4			
Tuesday			D1			
			D2			
			D3			
			D4			
Wednesday			D1			
			D2			
			D3			
			D4			
Thursday			D1			
			D2			
			D3			
			D4			
Friday			D1			
			D2			
			D3			
			D4			
Additional comments						

Signed off by
Management: ……

This form should be read and used in conjunction with Figure DEMP 3 which shows the visual monitoring locations D1, D2, D3 and D4

Use as many of these forms as necessary

APPENDIX B

SITE INSPECTION AND HOUSEKEEPING CHECK SHEET

Site Inspection Check Sheet

Week Commencing: _____

Daily Check	Mon	Tue	Wed	Thu	Fri	Sat	Sun
TCM signed in?							
Waste/materials stored in correct area?							
Outputs – stored in separate marked areas							
Condition of yard – surface integrity (concrete and hardstanding), spillages, debris							
Water storage tank – visual check of integrity							
Dust – visual assessment							
Dust – bowser operational and sufficient water level							
Dust – fixed dust suppression functional							
Noise – assess operations							
Wheel cleaning equipment - functional							
Mud on road – site entrance checked							
Odour – check for complaints, assess odour							
Litter – check complaints, litter around site							
Security – boundary condition							
Condition of road/site surfaces (concrete and hardstanding)– cleanliness, surface condition							
☑ if OK or nothing to report ☒ if not – see facility diary for details							

Weekly Inspections	Comments
Permit & EMS – available & up to date	
Duty of Care documents – checks current & recorded?	
Mobile & static plant maintenance – checks completed	
Accommodation/welfare facilities – toilets, mess	

Monthly Inspections	Comments
Warning/information signs – suitability, condition	
Site ID board – condition, still current	
Fire extinguishers / safety equipment	
First Aid boxes – contents & position	
Plant maintenance schedules	

Site Inspection Check Sheet

Comments:

Checks carried out by: Print Name _____ Signed _____ Date _____

Reviewed by Manager/Director: Print Name _____ Signed _____ Date _____