



**AN APPLICATION TO VARY ENVIRONMENTAL
PERMIT NUMBER EPR/WE2918AC IN RESPECT OF
LUTON RAILHEAD, CRESCENT ROAD, LUTON,**

**DUST AND EMISSIONS MANAGEMENT PLAN
VERSION 1.1**

Report reference: GRS/LU/LRM/5733/01/DEMP
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This report has been prepared by MJCA with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between MJCA and the Client. This report is confidential to the client and MJCA accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by MJCA beforehand. Any such party relies upon the report at their own risk.

1. Introduction

1.1 MJCA is commissioned by GRS (Roadstone) Limited (GRS) to prepare a dust and particulate matter emission management plan (DEMP) for the inert and excavation waste processing and incinerator bottom ash aggregate (IBAA) blending facility operated by GRS at Luton Railhead, Crescent Road, Luton, Bedfordshire, LU1 3JG (the site). The purpose of this document 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 management techniques that are used at the site to minimise potential for particulate matter emissions, to describe the monitoring which is carried out to confirm the effectiveness of the management controls and to present an action plan which is implemented in the unlikely event that there is a significant emission of particulate matter from the site. The DEMP forms part of the environmental management system (EMS) under which the site is operated.

1.2 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” (Versions 10 and 12 dated October 2018 and August 2025 respectively).
- Environment Agency guidance ‘Non-hazardous and inert waste: appropriate measures for permitted facilities’² (the Appropriate Measures guidance).

1.3 The activities with the potential to generate and/or release dust and particulate matter are identified in Section 2 of this document. The locations of potential receptors are identified in Table DEMP 1, 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 Available at <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>. Last updated 3 December 2025. Last accessed 27 February 2026.

² Available at: <https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>. Last updated 1 August 2023. Last accessed 27 February 2026.

- 1.4** In Sections 3 and 4 of this document 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 is implemented in the unlikely event that there is the potential for 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.
- 1.5** The DEMP comprises a living document and is reviewed on an annual basis as part of the environmental performance audit or as required by the action plan. The review includes 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 is undertaken and changes made to monitoring techniques if the review identifies any improvements that can be made.

2. Operations at Luton Railhead (sources, pathways and receptors)

Sources

- 2.1** The site is centred approximately at National Grid Reference (NGR) TL 09734 21476 to the north east of Luton town centre in an urban setting. The site boundary the subject of the permit is shown outlined in green on Figure DEMP 1 and Figure DEMP 2 and covers an area of approximately 0.9 hectare (ha). The nearest residential properties are approximately 35m north east of the site. The boundary of the permit covers the south eastern half of the GRS Luton Railhead. The operations the subject of the permit are limited only to the waste related operations and not the wider railhead operations.
- 2.2** The permit currently comprises a Standard Rules Permit (SRP). The SRP was first issued in October 2023 as SR2010No12 *Treatment of waste to produce soil, soil substitute and aggregate*. Under the SRP GRS are authorised to receive up to 75,000 tonnes per annum (tpa) of a range of non-hazardous wastes and are authorised to treat the wastes by sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate. As a result of changes made by the Environment Agency to the Standard Rules Permitting regime following completion of Standard Rules consultation number 25, SR2010No12 was consolidated into SR2022No1 in December 2024 and SR2010No12 was withdrawn by the EA on 30 June 2025. GRS submitted an application in March 2024 to vary the SRP to a bespoke permit. The variation is to increase the maximum quantity of waste permitted to be received at the site from 75,000tpa to 100,000tpa and to re-align generally the waste types with those specified in SR2022No1.
- 2.3** Consistent with the currently permitted activities, treatment will include crushing and screening of waste and blending of waste including blending of Incinerator Bottom Ash Aggregate (IBAA). Wastes which are consistent with the waste types specified in the Aggregates Quality Protocol³ (the WRAP QP) are processed at the site (by crushing and screening) to produce non waste aggregates. IBAA is stored on site before being blended with primary aggregates or aggregates produced in accordance with the WRAP QP. The IBAA is blended to form an aggregate output to meet a

³ 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).

required specification which is sent off site for use. The processed IBAA is imported to the site by road and the aggregate product is predominantly exported from the site by road. It is possible that aggregate product may also be exported by rail. Primary aggregates or aggregates produced in accordance with the WRAP QP are predominantly imported to the site by rail (or produced at the site in the case of WRAP QP aggregate) although they may also be imported to the site by road. As shown on Figure DEMP 3, the access to the site by road is from Crescent Road (A6) to the north west of the permitted area.

2.4 The layout of the site the subject of the permit is shown on Figure DEMP 2. The site, including the waste storage and processing areas are located in the open air. The IBAA storage and blending operations and the storage and treatment by crushing and screening of C&D⁴ waste are carried out on an impermeable surface with a sealed drainage system. The IBAA storage and blending areas are delineated on three sides by 4m high concrete block walls topped with 1m high dust netting. A section of the 4m high wall is located at the down prevailing wind boundary of the site and is oriented perpendicular to the prevailing wind direction which is from the southwest. In summary the IBAA blending operations are carried out by loading shovels and the placement in the bays of alternate layers of IBAA and aggregate. Effective dust suppression is provided. The crushing and screening of waste for the production of WRAP QP aggregate will be undertaken in the eastern part of the site on an impermeable surface within the area of the site shown on Figure DEMP 2 that benefits from dust suppression from fixed water sprays.

2.5 The 4m high bay walls topped with 1m high dust netting provide a 5m high barrier on three sides. Consistent with the EA emissions guidance, stockpile heights will be maintained at a height at least 0.5m below the top of the dust netting, hence the stockpile heights will be limited to 4.5m. As shown on Figure DEMP 2, dust suppression from fixed water spray locations will be provided for the area of the site in which waste is treated and stored. In addition to the externally applied control measures for IBAA, IBAA naturally absorbs water and carbon dioxide from the air during storage/ageing resulting in a crusting effect on the surface of stockpiles of IBAA. This natural effect helps to reduce the potential for the release of particulate

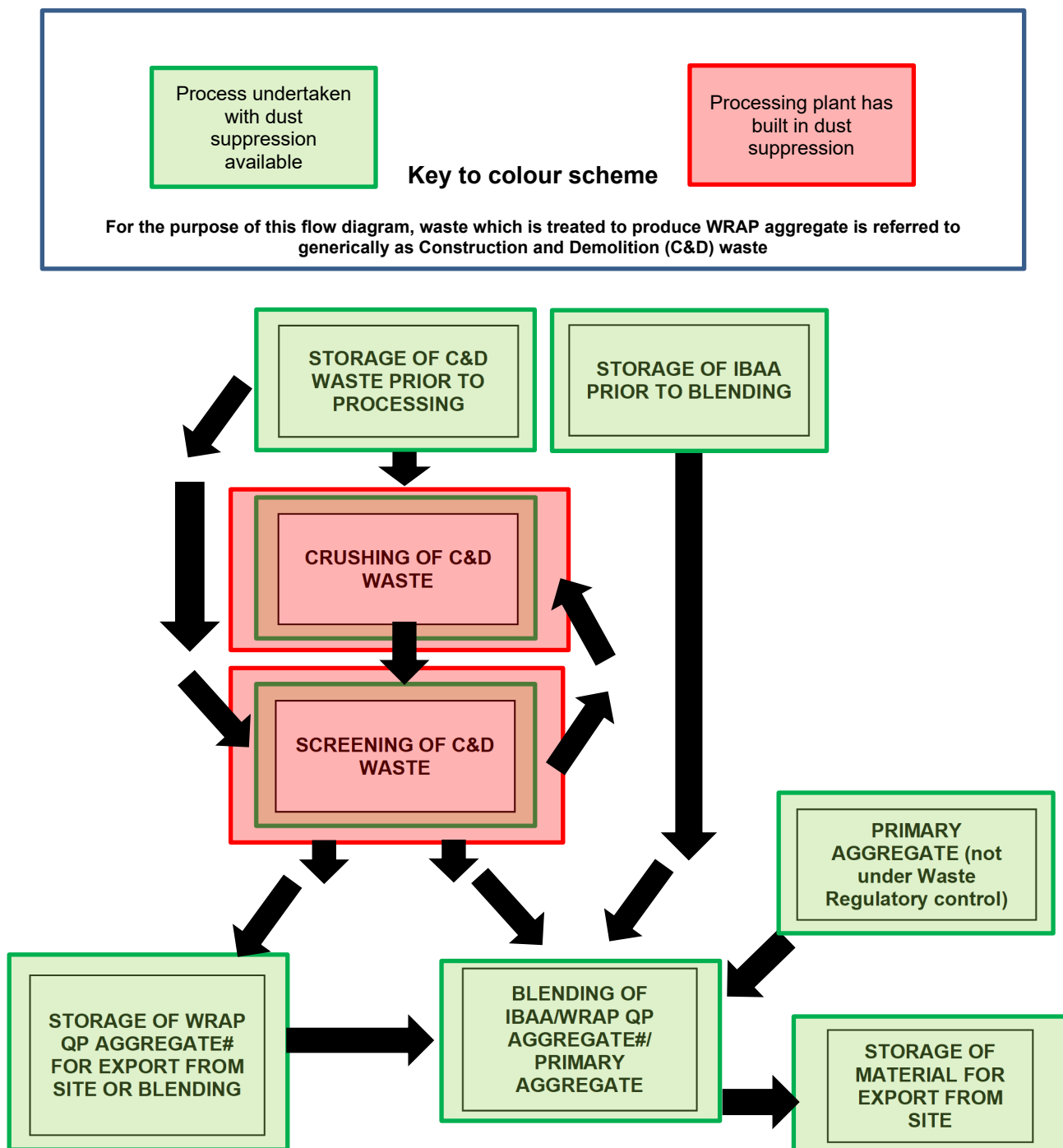
⁴ For the purpose of the DEMP, waste which is treated to produce WRAP aggregate is referred to generically as Construction and Demolition (C&D) waste although it is acknowledged that not all waste types in the Aggregate Quality Protocol comprise C&D wastes.

matter from stockpiles of IBAA and is indirectly referred to in the Waste Incineration BAT Conclusions⁵ (BAT 36e) in relation to the ageing process and prevention of dust emissions.

- 2.6** The waste types accepted at the site are specified in the permit and are reproduced in Table DEMP 2 of this DEMP. 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 are 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.
- 2.7** Waste acceptance at the site is 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 are undertaken by the technically competent manager (TCM) or a suitably trained person instructed or managed by the TCM. The pre-acceptance checks are used to identify waste that is suitable for acceptance at the facility. Waste acceptance checks are 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 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. 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 and arrangements are made to remove the load from the site. Measures are taken, for example damping down of the material, to minimise the potential for release of particulate matter from the load whilst collection is awaited. Key staff hold a relevant qualification under the approved CIWM/WAMITAB competence scheme appropriate to the waste operations conducted at the site.

⁵ COMMISSION IMPLEMENTING DECISION (EU) 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for waste incineration

2.8 A schematic diagram in which the operations at the site are summarised is presented below. The schematic diagram should be read in conjunction with the site layout plan.



Note - # QP Aggregate generated from C&D waste (Waste Regulatory Controls are not applicable to QP Aggregate)

2.9 As explained above and as shown in the schematic flow diagram, IBAA is unloaded and stored on site before being blended with primary or recycled aggregates to form an aggregate output to meet a required specification which is sent off site for use. Dust suppression is available at each stage of the process either by fixed and/or mobile dust suppression sprays supplemented as necessary by mobile suppression using a water bowser or manual spraying using hosepipes. Each of the steps in the process are described below giving consideration to the potential for the specific activity to generate or release particulate matter.

2.10 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 crushing and screening plant at the site or blending IBAA.
- The release of particulate matter when material is loaded into the bays in which IBAA is blended.
- The release of particulate matter when blending IBAA.
- 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 particulate 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.

2.11 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 document 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

2.12 Dust and particulate matter have the potential to be dispersed from the source to potential receptors by the wind. A wind rose for the Luton region is presented at Appendix A and is shown on Figure DEMP 1 and Figure DEMP 2. Based on the wind rose the prevailing wind direction is from the southwest and therefore areas to the north east of the site are generally down prevailing wind direction of the site.

Receptors

2.13 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 1.

2.14 According to the DEFRA UK Air Information Resource website⁶ the site is not located in an Air Quality Management Area (AQMA) for PM₁₀.

⁶ <https://uk-air.defra.gov.uk/aqma/> Last accessed 27 February 2026

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. 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 this site and at other GRS sites. Collectively the techniques amount to good housekeeping. Reference has been made where relevant to the Environment Agency Technical Guidance Document (Monitoring) M17⁷ entitled 'Monitoring of particulate matter in ambient air around waste facilities' (M17), Environment Agency Technical Guidance Monitoring ambient air: particulate matter⁸ 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) is responsible for the management of particulate matter and site staff are trained appropriately. The TCM appoints 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 provides the training for the deputy. The training includes 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 complements the refresher training.

Sources and control for fugitive dust and other emissions

- 3.3** For all anticipated road-based deliveries of waste to the site, transporters are instructed to cover the loads with a sheet or otherwise contain their loads during transport to the site to minimise the risk of particulate emissions. Incoming road-based loads remain sheeted or contained until such time as they are inspected and/or

⁷ <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.

⁸ <https://www.gov.uk/guidance/monitoring-ambient-air-particulate-matter>

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, hand held high pressure wheel cleaning equipment is available at the site for use before leaving the site. Vehicles are instructed to use the wheel cleaning equipment prior to returning to the local road network. 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 3) and are maintained in full working order. Vehicle drivers will be instructed to use the wheel cleaning facilities until the vehicle is in a suitable state (i.e. no visual mud or debris) to return to the public highway.
- 3.6** Areas of impermeable surfacing (concrete) and the site access road are maintained and swept with a road sweeper consistent with minimising the generation of dust and particulate matter. The mechanical road sweeper will be deployed twice a week as a minimum but will be used more frequently if there is an unacceptable build-up of surface debris⁹ (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.
- 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

⁹ '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)

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 surface.

- 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. Insofar as it is practicable all site vehicle exhausts are upward pointing to prevent the disturbance of particulate matter from the road and site surfaces. A no idling policy is implemented at the site for vehicles and plant.
- 3.10** During dry weather conditions fixed and/or mobile water sprays supplemented if necessary by mobile bowzers or manual spraying using hosepipes are used to spray water onto the site including traffic routes and the adjacent access route together with operational and stockpiles areas to minimise the potential for particulate matter to be generated and become airborne. The use of water sprays and if necessary mobile bowzers and manual spraying is a proven effective dust management technique at numerous other aggregate treatment facilities. Operations which may have the potential to generate particulate matter may cease if weather conditions and ground conditions preclude effective dust control. This decision is 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. Additional dampening of waste materials and/or stockpiles may be employed during high winds particularly when the prevailing wind direction is towards potentially sensitive receptors in the vicinity of the site.
- 3.11** 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. 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 presented below will be used to inform the use of out of operational hours control measures.

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		
		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

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>

3.12 As the weather becomes dryer and/or windier the use of control measures 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. Contact details for the site are displayed on the signage at the site entrance.

- 3.13** 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.
- 3.14** All relevant site personnel including contractors are trained in working practices and mitigation measures to minimise the generation and release of particulate matter.
- 3.15** 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.
- 3.16** Visual monitoring for emissions of particulate matter is undertaken by site personnel. Further details are provided in Section 4 of this document.

Water availability/usage

- 3.17** Mains water is used in the dust suppression equipment including the water sprays supplemented if necessary by mobile bowsers or manual spraying using hosepipes.
- 3.18** The information presented above demonstrates that the site has sufficient water supply to allow use of the dust suppression system whenever the site is operational and in a worst-case scenario. In the unlikely event that insufficient water supply is available to provide effective dust suppression, and dust suppression is required, waste processing activities comprising crushing, screening and blending will temporarily cease until such a time that adequate water supply can be restored.

Action plan

- 3.19** The operational controls which are implemented to minimise the release of particulate matter and the generation of dust at the site provide effective control of dust emissions at the site.
- 3.20** A Particulate Matter Management and Monitoring Action Plan is presented in Section 6 of this document. The Particulate Matter Management and Monitoring Action Plan is implemented in the 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 Guidance¹⁰ 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 is undertaken by suitably trained site personnel. In addition to the continuous visual monitoring a specific routine monitoring schedule is undertaken comprising visual monitoring at 4 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 are recorded on the checklist presented at Appendix B 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 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 are 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 operations outside of normal operational hours. Publicly available weather forecasts

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

are consulted by site staff to identify forecasts of extreme weather events or storms which may have the potential to increase the risk of the release of particulate matter from the site outside operational hours and additional control measures such as dampening of site surfacing and stockpiles prior to the end of the working day are implemented as necessary. The findings of the visual assessments are recorded in the Site Inspection Checklist presented at Appendix C. 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 Office¹¹ weather forecast or other forecast to predict weather conditions such as 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 as necessary and measures are taken to control aerial emissions of particulate matter within the site boundary.
- 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 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** In the 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.

¹¹ <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 has been striving to build a positive working relationship with local residents and businesses. 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) are brought to the attention of the TCM in the first instance who identifies and implements the measures needed to resolve the matter as set out in Section 6 of this DEMP. They then make a note of the complaint and the actions taken to resolve it. The nature of the complaint, the findings of the investigation and the action taken will be recorded using the form presented at Appendix DEMP D. A register of complaints is maintained onsite in the site diary. Complaints are 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 are 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 are taken in the event that conditions are identified whereby the routine measures need to be supplemented or improved.

Introduction

- 6.2** The action plan is implemented in the event that:-
- i) there is an unacceptable visual emission of dust from the site or
 - ii) a complaint is received.
- 6.3** 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 is 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 is implemented. If after following the action plan unacceptable emissions continue the site ceases operating until these emissions can be brought under control.
- 6.4** The timescale for implementation of the action plan varies depending on the circumstances under which it is implemented. If an unacceptable visual emission is observed by a site operative there is 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 investigation of the complaint is 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

6.5 In the event that an unacceptable visual emission of particulate matter from the site is observed by site personnel the event is 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 is taken to control the emissions including where relevant:

- If emissions are attributable to stockpiled material, the employing 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.
- If emissions are attributable to unloading or loading of waste, mobile dust suppression is applied to control the particulate matter emission from the activity being undertaken. The unloading and loading of waste is temporarily ceased until the dust suppression is sufficient to ensure that particulate matter emissions are effectively controlled and emissions do not cross the site boundary. The mobile dust suppression provides 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.
- Organising additional mechanical or manual road sweeping or cleaning of the concrete surface to ensure surface debris does not give rise to unacceptable emissions of dust or particulate matter.
- Checks to confirm that vehicles are adequately covering loads and obeying the site speed limits.

- Identify 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 1 and estimate 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 is given to further measures to minimise and control emissions including temporary reduction in stockpile heights, installation of fixed dust suppression or procurement of additional mobile dust suppression equipment.

6.6 In the event of a complaint associated with particulate matter emitted from the site an investigation is 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 1.
- 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 and third party contractors to improve the controls and minimise future emissions. Consideration is given to further measures to minimise and control emissions including temporary

reduction in stockpile heights, installation of fixed dust suppression or procurement of additional mobile dust suppression equipment.

- 6.7** Appropriate action is taken which includes the cessation of the activity if necessary. 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 is communicated to the complainant and the Environment Agency. Feedback is provided to the complainant in the form of a letter/email within 28 working days of acknowledging receipt of the complaint. As necessary the relevant operational procedures are reviewed and improvements implemented.

TABLES

Table DEMP 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	The Mall Luton	Commercial	250m-500m	SW
2	The Auction House	Commercial	<250m	E
3	Diamond Impex Ltd	Commercial	<250m	E
4	Fensomes BMW Mercedes Specialist	Commercial	<250m	N, NE
5	Windmill Trading Estate	Commercial	250m-500m	SE
6	Vauxhall Trade Club	Commercial	500m-1000m	S
7	Luton Retail Park	Commercial	500m-1000m	SSE
8	Guildford Street Commercial Area	Commercial	250m-500m	W
9	Midland Road Commercial Area	Commercial	250m-500m	NW
10	Affinity Water	Commercial	<250m	NW
11	Luton Domestic Dwellings North East	Domestic Dwellings	<250m	N, E
12	Luton Domestic Dwellings North West	Domestic Dwellings	500m-1000m	NW
13	Luton Domestic Dwellings South	Domestic Dwellings	500m-1000m	SW, S
14	BWI Group	Industrial	500m-1000m	SSE
15	Vauxhall Luton Factory	Industrial	500m-1000m	ESE
16	Network Rail	Transport	<250m	WNW
17	Luton Train Station	Transport	250m-500m	WNW
18	Construction of the new Luton Town Football Stadium	Commercial	<250m	SW
19	A6 Main Road / Crescent Road	Transport	<250m	N, NE, E
20	A505 Main Road	Transport	250m-500m	S
21	New Town Park	Recreational	500m-1000m	SSW
22	Manor Road Park	Recreational	250m-500m	S
23	St. George's Square	Recreational	500m-1000m	W
24	The Moor	Recreational	500m-1000m	WNW
25	People's Park	Recreational	500m-1000m	NNW
26	Hart Hill Community Centre	Recreational	250m-500m	NE
27	Abbotswood Park	Recreational	500m-1000m	NE
28	Gayland Avenue Recreation Ground	Recreational	500m-1000m	NE
29	St Anne's Community Garden	Recreational	500m-1000m	ENE
30	University of Bedfordshire	Educational	250m-500m	SSW
31	University of Bedfordshire Library	Educational	250m-500m	SSW
32	UK Centre for Carnival Arts	Educational	250m-500m	S
33	Wenlock V A Church of England Junior School	Educational	500m-1000m	ENE
34	Crawley Green & Wenlock Pre-School	Educational	500m-1000m	ENE
35	Chiltern Academy	Educational	500m-1000m	SSE
36	The Linden Academy Primary School	Educational	500m-1000m	SSE
37	Tennyson Road Primary North Site	Educational	500m-1000m	S
38	Hart Hill Nursery School	Educational	250m-500m	NE
39	Windmill High School	Educational	250m-500m	N
40	St Matthew's Primary School	Educational	500m-1000m	NNW
41	Hat Factory Arts Centre	Educational	250m-500m	W

Ref	Name or description	Type of receptor	Approximate distance from site (m)	Direction from site
42	Luton Central Library	Educational	500m-1000m	W
43	St Mary's Church, Luton	Religious	250m-500m	SSW
44	Central Baptist Church	Religious	500m-1000m	SSW
45	Our Lady, Help of Christians	Religious	500m-1000m	SW
46	Strathmore Avenue Methodist Church	Religious	500m-1000m	S
47	Luton Church Cemetery	Religious	250m-500m	E
48	BAPS Shri Swaminarayan Mandir, Luton	Religious	<250m	E
49	Church of St Anne	Religious	500m-1000m	NE
50	Romanian Orthodox Church	Religious	500m-1000m	NNW
51	Luton Crown Court	Government	500m-1000m	SW
52	Luton Town Hall & Council	Government	500m-1000m	W
53	Luton Magistrates' Court	Government	500m-1000m	WSW
54	Luton Police Station	Public Services	500m-1000m	WSW
55	River Lea	Waterbody	<250m	S

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 DEMP 1 above. The receptors are measured from their closest point to the site.

Table DEMP 2

Waste types authorised to be accepted at the site

Table S2.3 Permitted waste types and quantities for treatment and storage Exclusions: Wastes having any of the following characteristics shall not be accepted:		Waste Type included in the current permit (SR2010 No12 or SR2022No1)
- Consisting solely or mainly of dusts, powders or loose fibres - Hazardous wastes - Wastes in liquid form		
Maximum quantity	The total quantity of waste accepted at the site shall not exceed 100,000 tonnes per year.	
LoW Code	Waste Description	
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS	
01 04	wastes from physical and chemical processing of non-metalliferous minerals	
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07	YES (BOTH)
01 04 09	Waste sand and clays	YES (BOTH)
15	WASTE PACKAGING WASTE PACKAGING	
15 01	Packaging (including separately collected municipal packaging waste)	
15 01 07	Clean glass	YES (BOTH)
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	
17 01	concrete, bricks, tiles and ceramics	
17 01 01	Concrete	YES (BOTH)
17 01 02	bricks	YES (BOTH)
17 01 03	tiles and ceramics	YES (BOTH)
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	YES (BOTH)
17 02	wood, glass and plastic	
17 02 02	Clean glass	YES (BOTH)
17 03	bituminous mixtures, coal tar and tarred products	
17 03 02	road base and road planings (other than those containing coal tar) only	YES (BOTH)

Table S2.3 Permitted waste types and quantities for treatment and storage Exclusions: Wastes having any of the following characteristics shall not be accepted: • Consisting solely or mainly of dusts, powders or loose fibres • Hazardous wastes • Wastes in liquid form		Waste Type included in the current permit (SR2010 No12 or SR2022No1)
Maximum quantity	The total quantity of waste accepted at the site shall not exceed 100,000 tonnes per year.	
LoW Code	Waste Description	
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 04	soil and stones other than those mentioned in 17 05 03	YES (BOTH)
17 05 06	Dredging spoil other than those mentioned in 17 05 05	YES (BOTH)
17 05 08	track ballast other than those mentioned in 17 05 07	YES (BOTH)
17 09	other construction and demolition wastes	
17 09 04	mixtures of soil, bricks, stones and concrete	YES – In SR2022No1
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE	
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified	
19 12 05	Clean glass only	YES (BOTH)
19 12 09	minerals (for example sand, stones)	YES (BOTH)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (processed incinerator bottom ash aggregate which complies with BS 13242 only)	YES (BOTH)
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	
20 01	separately collected fractions (except 15 01) separately collected fractions (except 15 01)	
20 01 02	Clean glass only	YES (BOTH)
20 02	Garden and park wastes (including cemetery wastes)	
20 02 02	Soil and stones	YES (BOTH)

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 waste types accepted at the site it is 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	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
	where controlled emissions of 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.	The IBAA blending operations are carried out on an area of impermeable surfacing in the south east of the site with each bay being surrounded on three sides by concrete block walls up to 4m high. The concrete walls act to minimise dust and particulate matter from the IBAA blending operations. The crushing and screen activities will be undertaken in the eastern part of the site in the area of the site benefiting from fixed location dust suppression. As shown on Figure DEMP 1 the site is located at a railhead in an area which has historically been used for aggregate handling operations. The mainline railway line runs in a generally north west – south east direction adjacent to the south western boundary of the site. The site is relatively narrow in a north west – south east orientation and there is limited scope to relocate the storage/processing areas. Moreover relocating the storage processing areas would make little difference in respect of the location of potential receptors.

Abatement Measure	Description / Effect	Overall consideration and implementation
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 are upward pointing to prevent the disturbance of particulate matter from the road surfaces. A no idling policy is implemented at the site.
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 are minimised and limited to a maximum of 1 metre across the entire site at all times. Site operational staff are aware of this requirement and training is provided on best practice for handling materials to minimise drop heights. Fixed and/or mobile water sprays and if necessary bowsters and manual spraying with hosepipes are employed to provide dust suppression to minimise the release of particulate matter from the unloading, storage, treatment and loading of waste at the site.
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 continuously encourages training of staff. The site surface is 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 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

Abatement Measure	Description / Effect	Overall consideration and implementation
		the wetting of site surfacing (including hardstanding and concrete surfaces) and stockpiles prior to the end of the working day will be employed as necessary. Vehicles have their wheels cleaned prior to leaving the site using the hand held wheel cleaning facilities as necessary.
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 are 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 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, handheld high pressure wheel cleaning equipment is available at the site for use as necessary before leaving the site. Vehicles are instructed to use the wheel cleaning equipment if necessary prior to returning to the local road network. The wheel cleaning equipment is maintained in full working order.
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 cease waste handling operations if weather conditions and ground conditions preclude effective dust control. This decision is 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	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, hand held high pressure wheel cleaning equipment is available at the site for use as necessary before leaving the site. Vehicles are instructed to use the wheel cleaning equipment if necessary prior to returning to the local road network. The wheel cleaning equipment is maintained in full working order.

Abatement Measure	Description / Effect	Overall consideration and implementation
	order that there is sufficient time for dirt to be removed.	
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 generated at ground level by vehicles and site activities.	Waste treatment and storage operations are carried out on an area of impermeable concrete surfacing. The concrete surface is maintained in a condition which is consistent with minimising the generation of dust and particulate matter 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 cease waste processing operations if weather conditions and ground conditions preclude effective dust control. This decision is 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	Erecting netting around equipment that could give rise to large amounts of dust and particulates may be effective within	Mitigation including the use of fixed and/or mobile water sprays supplemented if necessary by mobile bowzers and manual spraying using hosepipes are used to minimise the generation of dust and particulate matter from the crushing and screening of waste. The area of the site in which crushing and screening is undertaken will also

Abatement Measure	Description / Effect	Overall consideration and implementation
around equipment	the site boundary and prevent their dispersion off-site / their re-suspension within the site.	benefit from the protection afforded by the bay walls in the part of the site. On this basis no dust netting is required around the crusher or screen. The IBAA blending operations are carried out in bays with each bay being surrounded on three sides by concrete block walls up to 4m high topped with 1m high dust netting. The concrete walls and dust netting act to minimise dust and particulate matter from the IBAA blending operations.
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.	A road sweeper is hired and will be deployed at the site twice a week as a minimum but will be used more frequently if there is an unacceptable build-up of surface debris.
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.	The IBAA blending operations are carried out in bays with each bay being surrounded on three sides by concrete block walls up to 4m high topped with 1m high dust netting. The concrete walls and dust netting act to minimise dust and particulate matter from the IBAA blending operations and other waste operations undertaken in the eastern part of the site.
Water suppression	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the	Fixed and/or mobile water sprays supplemented if necessary by mobile bowzers and manual spraying using hosepipes are used to minimise the generation of dust and particulate matter.

Abatement Measure	Description / Effect	Overall consideration and implementation
with hoses & water jets	cleaning of the site if combined with sweeping.	
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 particulates, therefore, reducing emissions from site.	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.
Water suppression with bowser	Using bowzers 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 is provided at the site by water suppression which is employed to minimise the release of dust from site surfaces and 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 is carried out at the site. Visual dust monitoring 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.
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 there are no areas of unmade ground at the site a shaker grid is unnecessary.

Abatement Measure	Description / Effect	Overall consideration and implementation
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 operations, heavy machinery wash down, cleaning and dust and particulate abatement.	Dust suppression is provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site provides sufficient suppression capacity it is considered unnecessary to install water cannons at the site.
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 is provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site provides sufficient suppression capacity it is considered unnecessary to use CMA/chemical suppressants at the site.

Abatement Measure	Description / Effect	Overall consideration and implementation
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 allow penetration deep into the material and to 'agglomerate' the dust and particles together.	Dust suppression is provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site provides sufficient suppression capacity it is considered unnecessary to use heavy water at the site.
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 is provided at the site by water suppression equipment. As it is considered that the dust suppression system employed at the site provides 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 1, particularly those located down prevailing wind of the site. The sources in the table comprise those identified in Paragraph 2.10 of the DEMP. Further details of the techniques employed are presented in Section 3 of the DEMP and in Table DEMP 3.

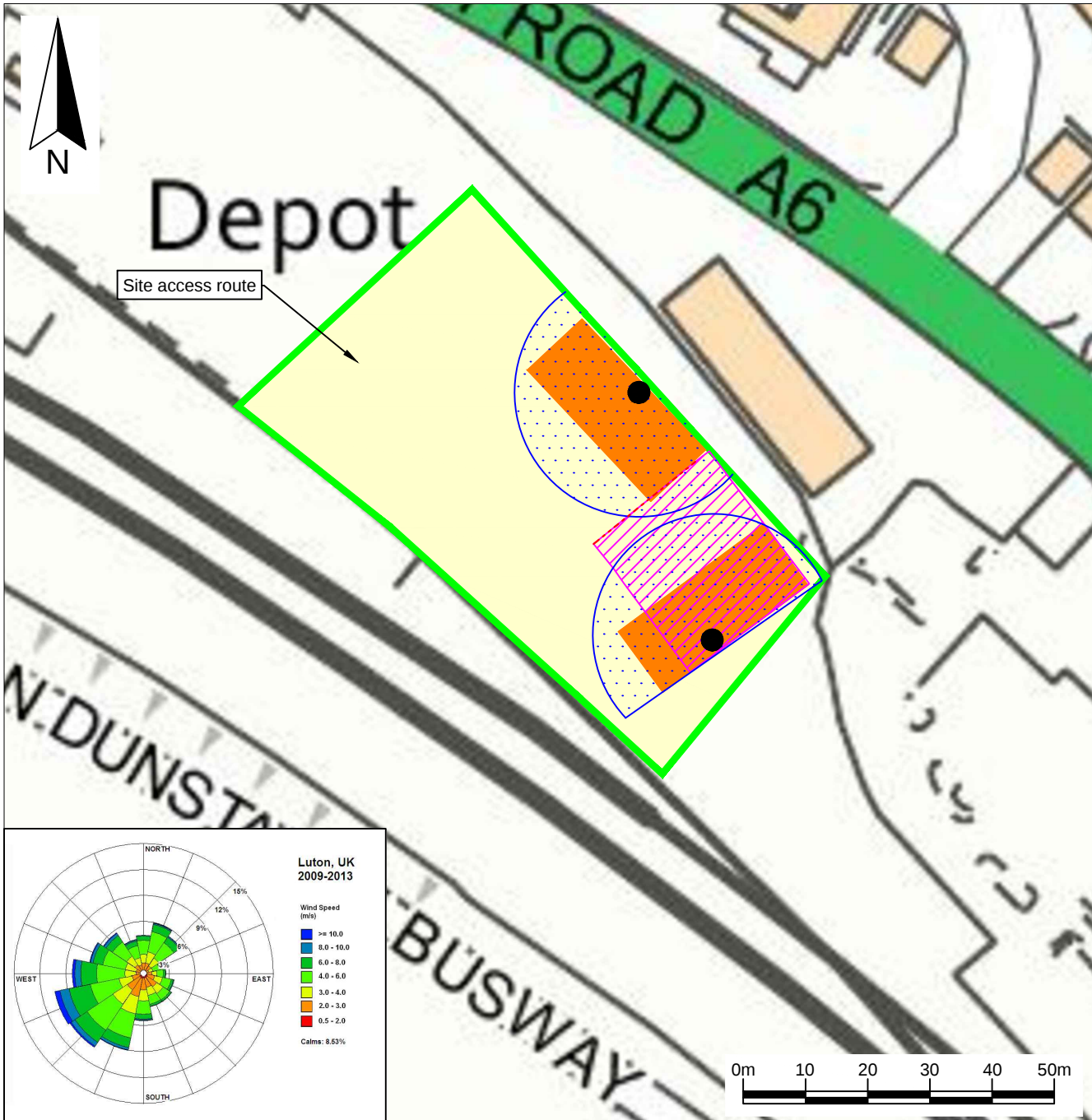
Source	Pathway	Techniques employed to minimise the emissions of dust
Vehicles entering, travelling within, and/or leaving the site with mud or debris on their wheels	Tracking out of the site of particulate matter and mud on vehicle wheels which may drop off and deposit on the public highway which may 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, hand held high pressure wheel cleaning equipment is available at the site for use as necessary before leaving the site. Vehicles are instructed to use the wheel cleaning equipment if necessary prior to returning to the local road network. The wheel cleaning equipment is maintained in full working order. The site surface is 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 surface is maintained in a condition consistent with minimising the generation of dust and particulate matter. Dust suppression sprays together if necessary with bowsters and manual spraying with hosepipes are 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 dust, particulate matter and debris from material loads as they are delivered to the site.	Falling off delivery or collection vehicles.	All road going vehicles using the site are instructed to sheet or otherwise contain their loads prior to arrival at the site to minimise the risk of particulate emissions. Loads are sheeted or contained until such time as they are inspected and/or deposited. Outgoing loads are sheeted.

Source	Pathway	Techniques employed to minimise the emissions of dust
The release of particulate matter when material loads are deposited or set down at 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/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are employed to minimise the release of dust when waste is 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 crushing and screening plant at the site or blending IBAA	Atmospheric dispersion	Plant operators are trained in handling materials in a dust conscious manner. Dust suppression is provided at the site by fixed and/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are employed to minimise the release of dust from waste handling operations at the site.
The release of particulate matter when material is loaded into the bays in which IBAA is blended.	Atmospheric dispersion	Drop heights are kept to a minimum. Plant operators are trained in handling materials in a dust conscious manner. Dust suppression is provided at the site by fixed and/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are employed to minimise the release of dust from waste handling operations at the site.
The release of particulate matter when blending IBAA.	Atmospheric dispersion	The blending process is undertaken with dust suppression available and taking into consideration the prevailing weather conditions. The IBAA blending operations are carried out in bays with each bay being surrounded on three sides by concrete block walls up to 4m high topped with 1m high dust netting. The concrete walls and dust netting act to minimise dust and particulate matter from the IBAA blending operations. The dust suppression is provided by water suppression which is employed to minimise the release of dust during blending. Drop heights are minimised during the material handling operations.
The release of particulate matter when material is loaded into the hopper for the crushing/screening plant at the site	Atmospheric dispersion	Drop heights are kept to a minimum. Plant operators are trained in handling materials in a dust conscious manner. Dust suppression is provided at the site by fixed and/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are

Source	Pathway	Techniques employed to minimise the emissions of dust
		employed to minimise the release of dust from waste handling operations at the site.
The release of particulate matter when material is transferred from the crusher (crushed waste) into the screening plant at the site.	Atmospheric dispersion	Drop heights are kept to a minimum. Plant operators are trained in handling materials in a dust conscious manner. Dust suppression is provided at the site by fixed and/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are employed to minimise the release of dust from waste handling operations at the site.
The release of particulate matter when crushing or screening wastes	Atmospheric dispersion	Dust suppression water sprays are built into the crushing and screening plant. Drop heights are kept to a minimum. Plant operators are trained in handling materials in a dust conscious manner. Dust suppression is provided at the site by fixed and/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are employed to minimise the release of dust from waste processing operations at the site.
The release of particulate matter when moving product material at the site	Atmospheric dispersion	As described earlier in this DEMP C&D wastes are treated at the site to produce non-waste recycled aggregate products that are in accordance with the WRAP QP for aggregates. Section 4.2.1 of the WRAP QP states the following in respect of storage of recycled aggregate: <i>“Aggregate produced in compliance with the requirements of this Quality Protocol, which is therefore regarded as having ceased to be waste, may need to be stored temporarily either before delivery to the customer or at the customer’s premises. The materials will not be waste at that point, <u>so waste management controls will not apply.</u>”</i> Non-waste recycled aggregate products will be stored at the Luton Railhead site. Although the WRAP QP states that waste management controls will not apply to the product material (i.e.

Source	Pathway	Techniques employed to minimise the emissions of dust
		emissions from the product material will not be regulated under the Environmental Permit) good practice measures for control of dust emissions consistent with those specified in Appendix D (Good practice for the transportation, storage and use of recycled aggregates) of the WRAP QP will be applied to product stockpiles at the site.
The release of particular matter when material is loaded onto transport vehicles for removal from site		Drop heights are kept to a minimum. Plant operators are trained in handling materials in a dust conscious manner. Dust suppression is provided at the site by fixed and/or mobile water sprays supplemented as necessary by water bowser or hosepipes which are employed to minimise the release of dust from waste handling operations at the site.
The release of particulate matter from stockpiled materials. Wind whipping of materials stockpiled at the site.	Atmospheric dispersion	Stockpiles have the potential to dry out and release particulate matter by wind scouring. Waste stockpiles are dampened using the water suppression. Waste is stored in bays with each bay being surrounded on three sides by concrete block walls up to 4m high topped by 1m high dust netting. The concrete walls and dust netting act to minimise dust and particulate matter from stockpiled waste.
Particulate emissions from the exhaust of vehicles and plant on site.	Atmospheric dispersion	Vehicles and plant on site are maintained to optimise performance and minimise vehicle emissions. A no idling policy is implemented at the site for vehicles and plant.

FIGURES



Key / Notes



Approximate boundary of the
Environmental Permit number
EPR/WE2918AC



Approximate coverage of dust
suppression



Hardstanding



Waste storage area including
imported and blended IBAA

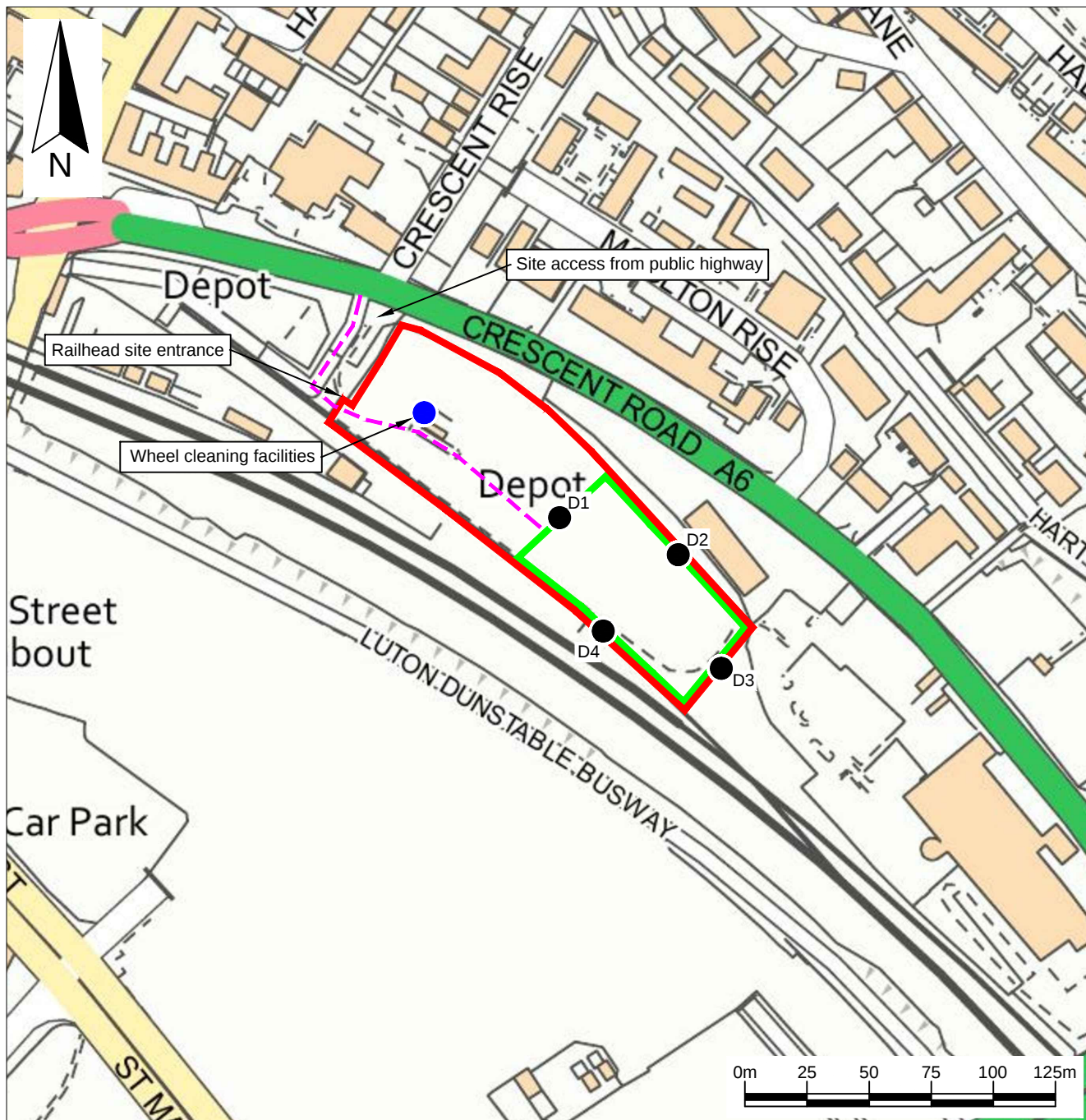


Existing concrete surface



Location of a sprinkler dust
suppression point

	Final	TL	LRM	AW	05/03/26
Rev	Status	Drn	App	Chk	Date
Site LUTON RAILHEAD					
Client GRS (Roadstone) Limited					
Title Site layout					
Figure DEMP 2		Scale 1:1,000@A4			
Drawing Ref GRS/LU/03-26/25451					
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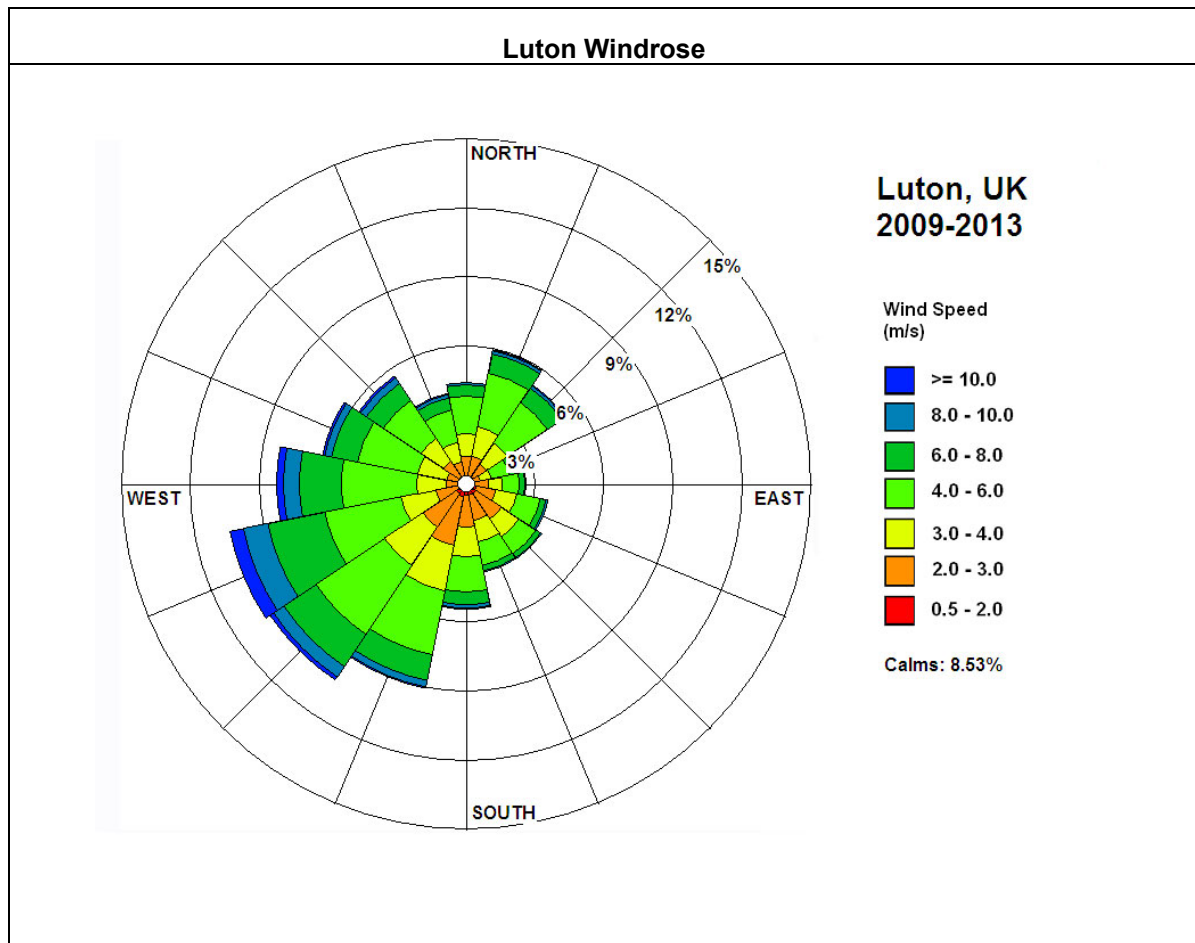
Key / Notes

- Approximate boundary of the GRS Luton Facility
- Approximate boundary of the Environmental Permit number EPR/WE2918AC
- Visual dust monitoring location
- - - Vehicle access route to the permitted area

	Final	KR	LRM	AW	03/03/26
Rev	Status	Drn	App	Chk	Date
Site LUTON RAILHEAD					
Client GRS (Roadstone) Limited					
Title Locations for the monitoring of visible dust					
Figure DEMP 3		Scale 1:2,500@A4			
Drawing Ref GRS/LU/01-26/25390					
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APPENDICES

APPENDIX A
WIND ROSE FOR LUTON (2009 – 2013)



APPENDIX B
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 C
SITE INSPECTION 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, spillages, debris							
Water storage tank – visual check of integrity							
Dust – visual assessment							
Dust – bowser operational							
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 – 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 Print Name Signed Date

Manager/Director:

APPENDIX D
DUST COMPLAINT FORM

Complainant Details	
Name	
Address	
Postcode	
Contact Details	
Tel	
Email	
Date	
Complaint Ref Number	
Complaint Details	
Investigation Details	
Investigation carried out by	
Position	
Date & time investigation carried out	
Weather conditions	
Wind direction and speed	
Investigation findings	
Feedback given to Environment Agency and/or local authority	
Date feedback given	
Feedback given to public	
Date feedback given	
Review and Improve	
Improvements needed to prevent a reoccurrence	
Proposed date for completion of the improvements	
Actual date for completion	
If different insert reason for delay	
Does the dust management plan need to be updated	
Date that the dust management plan was updated	
Closure	
Site manager review date	
Site manager signature to confirm no further action required	