

**AGGREGATE PROCESSING PLANT,
LAND NORTH OF DON WHITE ROAD,
FINEDON INDUSTRIAL ESTATE,
WELLINGBOROUGH
NN8 4FT**

**DUST and EMISSIONS
MANAGEMENT PLAN**

For: Encyclis & Day Group

May 2023

R3023-R02-v7

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Land North of Don White Road, Finedon Road Industrial
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Dust and Emissions Management Plan

Client: Encyclis and Day Group



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LAND NORTH OF DON WHITE ROAD, FINEDON ROAD INDUSTRIAL ESTATE, WELLINGBOROUGH

DUST AND EMISSIONS MANAGEMENT PLAN

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1 Introduction

1.1 General

- 1.1.1 Planning permission has been granted by North Northamptonshire Council (NCC) for the development of an aggregate processing plant and erection of a Hydraulic Bound Mixtures (HBM) plant with parking provision, ancillary infrastructure and on-site biodiversity enhancements¹. The facility would be operated by the Day Group on behalf of Encyclis. A separate Environmental Permit application has been submitted by Land and Mineral Management (LMM), acting on behalf of the Day Group Ltd, to the Environment Agency (EA) in relation to the proposed operations. This application is presently undergoing determination.
- 1.1.2 The planning application was supported by an Environmental Statement (ES)² prepared by Heaton, on behalf of Covanta (now Encyclis). The ES incorporated an Air Quality Assessment (AQA)³ which had been prepared by Smith Grant LLP (SGP).
- 1.1.3 Under the Environmental Permit the Operator would be required to prepare, adhere to, and review a Dust and Emissions Management Plan (DEMP). Accordingly, a DEMP was prepared by SGP⁴ for provision with the planning and permit applications to supplement the AQA. The AQA and DEMP have now been updated to incorporate some proposed changes to the dust abatement proposals for the facility and are to be submitted to the EA. The revisions to the DEMP also incorporate some earlier revisions made by LMM. Details of the revisions to the DEMP are provided in Appendix E. The final agreed DEMP under the Permit will also be submitted to NCC as required under Condition 11 of the planning permission.
- 1.1.4 The application site is located on land on the Finedon Road Industrial Estate, on the northern outskirts of Wellingborough. The Site includes the area of the proposed built development (hereafter referred to as the 'Works Site') and additional land that is to be set aside for Biodiversity Net Gain (BNG) improvements (hereafter referred to as the 'BNG Site'). This DEMP deals with the proposed built development aspect of the application and the 'Works Site'.
- 1.1.5 The Day Group handles over five million tonnes of construction material each year, as well as providing services to the construction, demolition, glass recycling and water treatment industries. The company operates four other similar existing processing plants in the UK.

¹ North Northamptonshire Council, planning ref: NN/22/00017/WASFUL, dated 28th April 2022

² Heaton Planning Ltd; Environmental Statement Volume 1, March 2022

³ Smith Grant LLP, Proposed Aggregate Processing Facility, Land North of Don White Road, Wellingborough, ref: r3023-R01-v3, 9th March 2022

⁴ Smith Grant LLP, Aggregate Processing Plant, Land North of Don White Road, Finedon Industrial Estate, Wellingborough, Dust and Emissions Management Plan, ref: R3023-R02-v4, May 2022

1.2 Scope and Objectives

- 1.2.1 The following DEMP takes into account the potential for dust emissions associated with the proposed activities and the findings of the SGP AQA. It will form an integral part of the environmental management controls at the facility. The DEMP will be a 'live document' subject to on-going review, with updating as appropriate to ensure its continuing effectiveness.
- 1.2.2 The scheme is based on current guidance provided by the EA⁵ and Institute of Air Quality Management (IAQM)^{6,7}. The DEMP has also been prepared with reference to the EA Dust and Emissions Management Plan template⁸.

⁵ <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>

⁶ Institute of Air Quality Management (IAQM), Guidance on the Assessment of Mineral Dust Impacts for Planning, May 2016 (v1.1)

⁷ Institute of Air Quality Management (IAQM), Guidance on the Assessment of Dust from Demolition and Construction, June 2016 (v1.1)

⁸ Environment Agency; Example Dust Emissions Management Plan, v10, issued October 2018

2 Site Operations

2.1 General Operations

2.1.1 Full details of the proposed operations at the site are provided in the planning and permit applications and supplementary documentation. Key elements of relevance to the DEMP are detailed below.

2.1.2 Proposals are for construction and operation of an incinerator bottom ash (IBA) processing facility. It is anticipated that a total of about 200,000 tonnes of IBA per annum would be received at the facility, with an additional 200,000 tonnes of primary aggregate to be imported per annum to create the blended aggregate product.

2.1.3 The layout and processes would mirror those carried out at an existing plant at Avonmouth; the proposed site layout plan and process flow diagram are provided in Appendices A and B. The plan in Appendix A is that available at the time of preparation of this revised DEMP (plan ref: WE001-05 Rev 18).

2.1.4 The Works Site is to be fully provided with concrete surfacing. All import and export to / from the Works Site would be via road using HGV tipper lorries with access / egress provided off a single point off Don White Road.

2.1.5 Specific physical elements of the Proposed Development of relevance to this DEMP are:

- 3-sided IBA storage building; open on southern side and with a vented ridge line;
- IBA processing plant and conveyors and HBM plant;
- external aggregate, IBAA (Incinerator Bottom Ash Aggregate) and blended product storage bays; all bays to be provided with wind breaks;
- provision of sprinklers within the storage building and in external areas;
- provision of local dust extraction to the feed hopper in the storage building and at transfer points on the processing plant;
- provision of parking for 12 HGVs;
- provision of 2.4m to 3m high fences on all boundaries;
- retention of existing mature tree belt on northern boundary.

2.1.6 IBA is the residual ash generated from the incineration of waste and contains a mixture of glass, brick rubble, sand, metal, stone, concrete, ceramics and fused clinker. The permitted waste material types would be as defined in the Permit.

2.1.7 The imported IBA is initially damp as a result of the quenching process at source with a moisture content of ~15-20%. Following weighing on the weighbridge and inspection the material would be tipped direct into the storage building on delivery. The material would be stored in windrows

for up to 3-4 weeks to achieve the appropriate pH (through 'maturation'). When required water may be added through spraying to promote the maturation process.

2.1.8 The matured IBA would then be transferred to the processing plant via a hopper and conveyor; the feed hopper and feeder discharge point would be provided with local dust / vapour extraction that would be directed to a wet scrubber filtration system. Processing would consist of separation using magnets, eddy current separators and picking areas, crushing and size separation using screens. Processing equipment would be housed within separate buildings connected via covered conveyors. Certain transfer points of the processing plant would also be subject to local extraction which would also be directed to the wet scrubber filtration. Further details on the dust suppression and extraction systems are provided in Section 5.

2.1.9 The processed material, IBAA, would be stored externally in open bays. IBAA fractions would be blended with the primary aggregate, to meet the customer specification, using a loading shovel in open mixing bays.

2.1.10 A sprinkler system would be provided both within the storage building and in external areas across the Site for dust suppression. Rainwater would be collected and re-used on site for dust suppression with water passed through a 3-stage interceptor prior to re-use. Mains' water would also be available as required.

2.2 Mobile Plant and Equipment

2.2.1 The proposed operations would utilise the following mobile plant and equipment (NRMM (Non-Road Mobile Machinery)):

- Hydraulic excavator – to create windrows of IBA within the storage building
- Loading shovel – to blend the product;
- Telehandler;
- Bobcat.

2.3 Hours of Operation

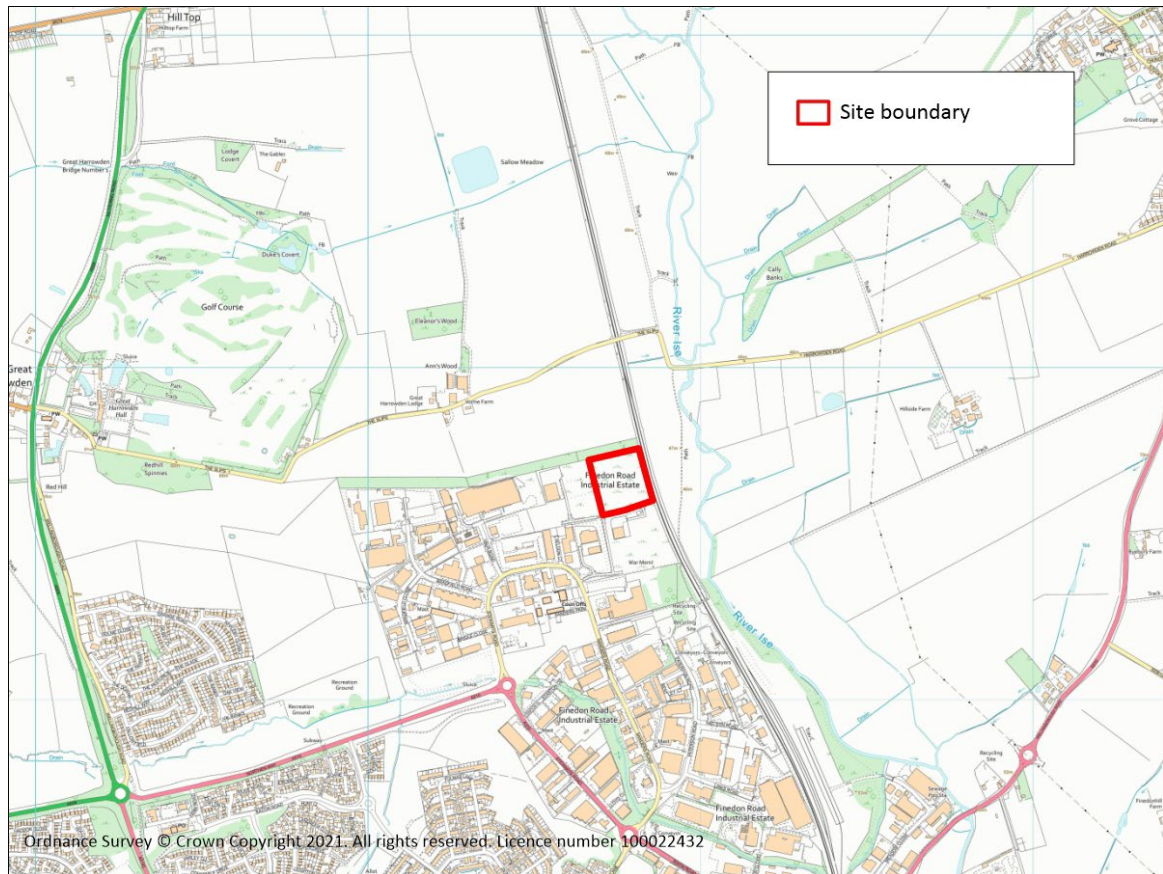
2.3.1 Proposals are for the operation of the facility 24/7.

3 Site Setting

3.1 Sensitive Receptors

3.1.1 The Works Site is located within the north-eastern corner of the Finedon Road Industrial Estate on the north-eastern outskirts of Wellingborough as shown in Figure 3.1 and 3.2 below.

Figure 3.1: Works Site Location (1:10,000 scale mapping)



3.1.2 Immediate adjoining land to the west within the business park is currently vacant, although earmarked for development. Existing light industrial / commercial units extend to within 15m of the Works Site boundary to the south across Don White Road with the wider industrial estate extending to the west, southwest and south.

3.1.3 Open agricultural fields lie to the north beyond an established 35m wide tree belt and 20m to the east beyond the East Midlands Mainline Railway.

3.1.4 The nearest residential property to the Works Site is Home Farm located 385m to the northeast. The only other residential property within 500m of the Site is Great Harrowden Lodge located close to Home Farm.

3.1.5 Residential receptors within 500m-1km of the Works Site comprise the residential development of Wellingborough extending to 820m to the southwest, beyond the Industrial Estate, and an isolated property, Hillside Farm, lying 940m to the east-northeast. Wellingborough Golf Club lies about 840m to the west-northwest.

3.1.6 No schools, hospitals or other such high occupancy receptors have been identified within 1km.

3.1.7 The human receptors within a 1km distance are detailed below in Table 3.1 and shown in Figure 3.2. The sensitivity of receptors to dust has been determined through reference to IAQM guidance^{4, 5}.

Table 3.1: Nearest Human Receptors

Ref	Receptor	Type	Sensitivity to Deposition Dust	Distance and Orientation ¹
D1	Home Farm	residential (isolated)	high	385m, NW
D2	Great Harrowden Lodge	residential (isolated)	high	490m, NW
D3	Wellingborough Golf Club	leisure	medium	840m, WNW
D4	Hillside Farm	residential (isolated)	high	940m, ENE
D5	development of Wellingborough	residential (community)	high	820m, SW
D6	un-named development	light industrial / commercial	medium	100m, W
D7	Tripal Group	light industrial / commercial	medium	15m, S
D8	East Midlands Mainline Railway ²	commercial	n/a	10m, E

1: distance and orientation taken from the Works Site boundary to the gardens or property boundary; distance to nearest 5m

2: search radius of 1km referred to in accordance with EA guidance; greyed out cells indicate receptors beyond distance where disamenity dust impacts may be expected in absence of mitigation

3.1.8 With reference to the IAQM guidance potential impacts with respect to fugitive dust would not be expected beyond a distance of 350m. No residential properties or other highly sensitive receptors lie within this distance, the only receptors within this distance being the light industrial / commercial development within the wider industrial estate.

3.1.9 A potential Local Wildlife Site (PLWS 978) has been identified within 20m of the site to the south across Don White Road. It is noted however that this area of land has been partially developed to a light industrial unit. Several other local nature sites have been identified within 1km of the site as detailed below in Table 3.2 and in Figure 3.2. No international or national nature conservation sites lie within 1km.

Table 3.2: Designated Nature Conservation Sites within 1km of Works Site

Ref	Receptor	Type	Sensitivity to Deposition Dust	Distance and Orientation ¹
E1	Finedon Cally Banks	LWS and Wildlife Trust Reserve	low	440m NE
E2	Finedon Quarry and Disused Railway	LWS	low	449m NE
E3	Site 978	PLWS	low	20m S
E4	Site 973	PLWS	low	285m SE
E5	Flood Storage Meadow	PLWS	low	528m SW
E6	Red Hill Bottom Field	PLWS	low	810m SW
E7	Site 977	PLWS	low	850m SW

LWS – Local Wildlife Site; PLWS – Potential Local Wildlife Site

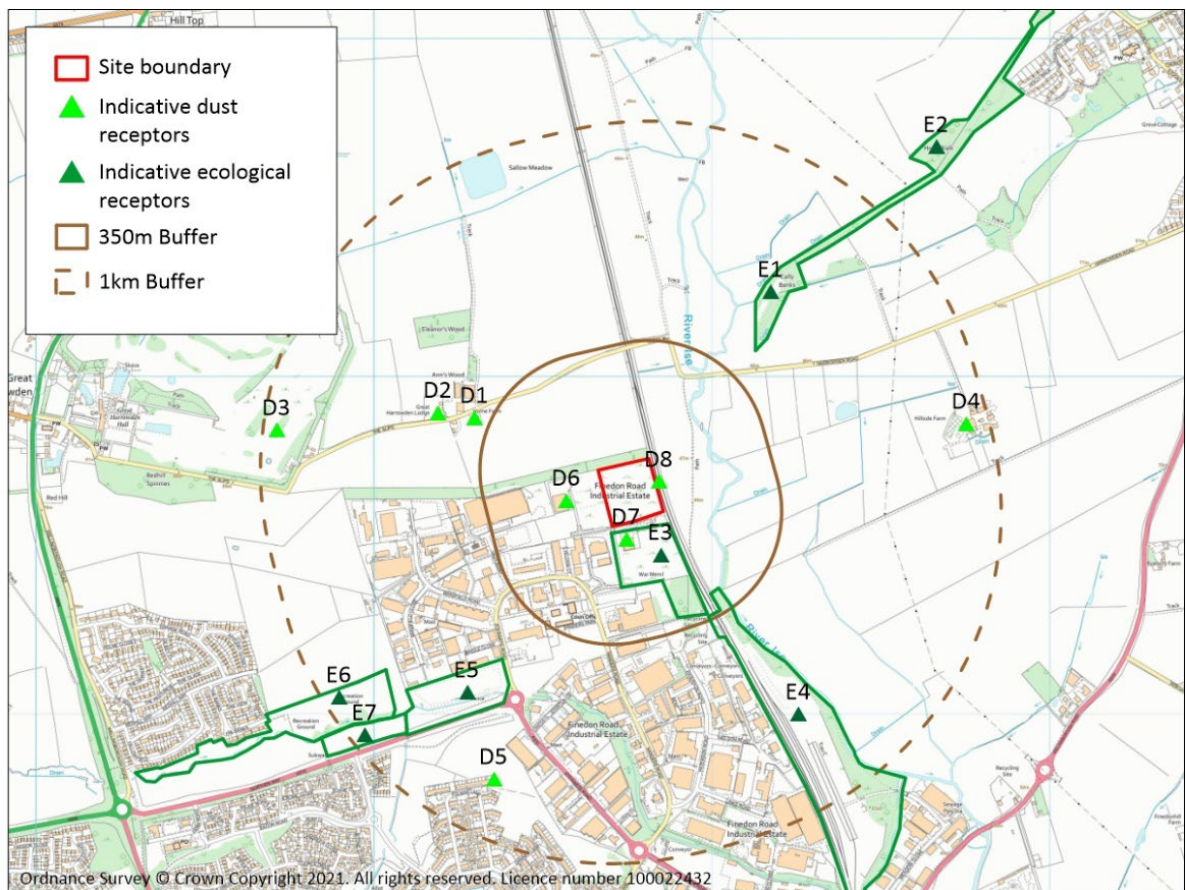
1: northern part of Site 978 has been developed and is occupied by light industrial / commercial unit

2: parts of Site 973 occupied by railhead facility

3: search radius of 1km referred to in accordance with EA guidance; greyed out cells indicate receptors beyond distance where ecological dust impacts may be expected in the absence of mitigation

3.1.10 The only nature conservation sites within a 350m radius of the site are two potential Local Wildlife Sites.

Figure 3.2: Dust Sensitive Receptors – Human Health and Ecological



3.2 Local Air Quality Status

3.2.1 The Site lies within the administration area of North Northamptonshire Council (NCC) with respect to minerals and waste planning, environmental health and local air quality matters. NCC is a new unitary authority established in April 2021 and which replaced the previous district and borough councils serving the area. This included Wellingborough Borough Council (WBC) which was historically responsible for environmental and local air quality matters for the area in which the Site is located with Northamptonshire County Council having been previously responsible for minerals and waste planning.

3.2.2 WBC did not declare any Air Quality Management Areas (AQMAs) or identify any areas of potential concern with regards to local air quality.

3.2.3 Data published by Defra indicates local background air quality to be good with predicted concentrations of PM₁₀ in the area occupied by the Site and nearest receptors being in the range 15.55 µg/m³ to 16.30 µg/m³ in 2027.

3.3 Topography

3.3.1 The Site lies at about 50m AOD within the base of a north-south trending valley associated with the River Isle which lies 155m to the east. Ground is broadly level across the Site itself presumably following creation of a level plateau for development.

3.3.2 The immediate surrounding ground rises to the northwest with the nearby industrial unit to the west on a raised level plateau.

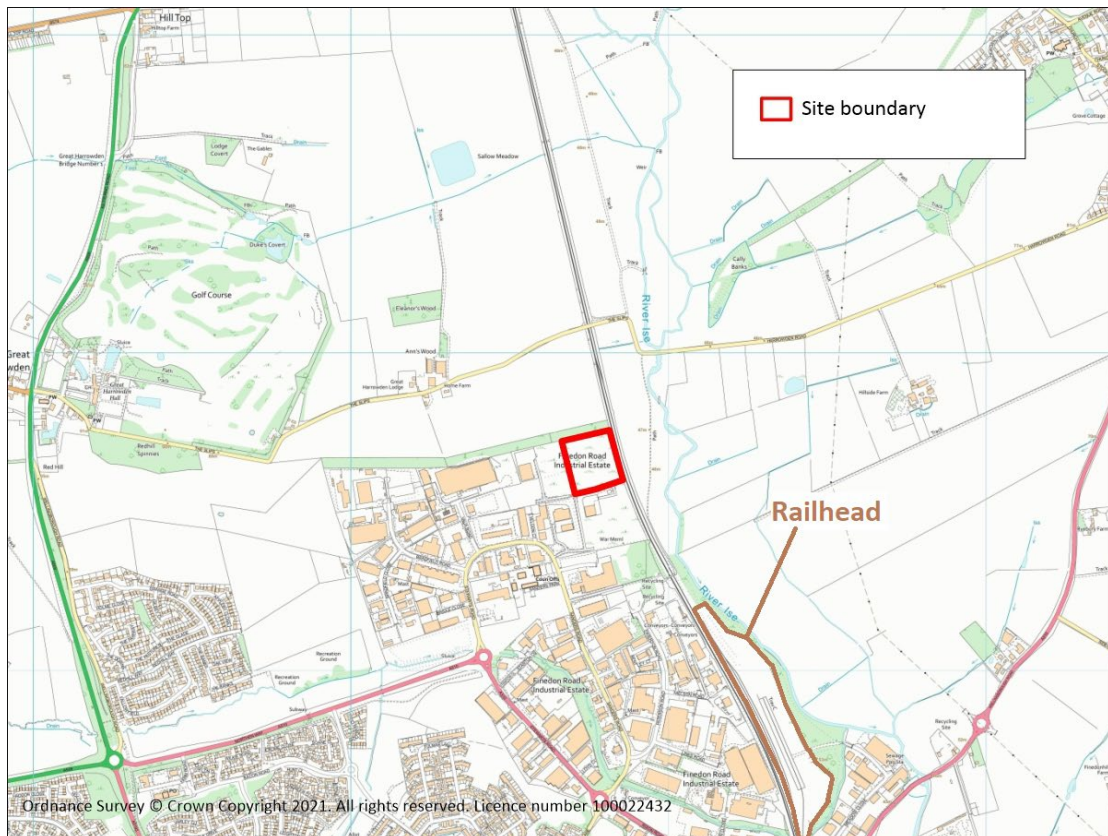
3.4 Nearby Dust Sources

3.4.1 As noted above the Site is located in the north-eastern corner of the Finedon Road Industrial Estate. The estate houses a wide range of facilities; the nearest existing activities to the Site being of light industrial / commercial in nature. The nearest identified potential significant dust generating facility is a railhead located about 475m to the southeast that is shown on aerial imagery as handling aggregate. The location of the railhead in relation to the Site is shown in Figure 3.3 below; material storage areas of the railhead appears to extend to within 310m of the Site. The railhead is shown as being well screened by trees and dust emissions are expected to be managed under conditions of the relevant planning permission. Aerial imagery suggest the operations at the railhead are likely to be limited to material handling and storage with no processing.

3.4.2 No other significant, local potential contributors of dust have been identified. The only identified human receptors that lie within 350m of both the Site and the railhead are the neighbouring light industrial / commercial facilities on the Estate. However, these all lie upwind of the prevailing wind directions across both the Site and railhead (as discussed below in Section 3.5). Similarly,

ecological receptor E3 lies upwind of the prevailing wind directions across the two sites and receptor E4 appears to encompass the railhead itself. Given the orientation of the railhead to the Site, distance and nature of the operations it is unlikely that there would be any significant interaction with dust emissions from the IBA facility and cumulative impacts at any receptors.

Figure 3.3: Other Nearby Potential Dust Sources

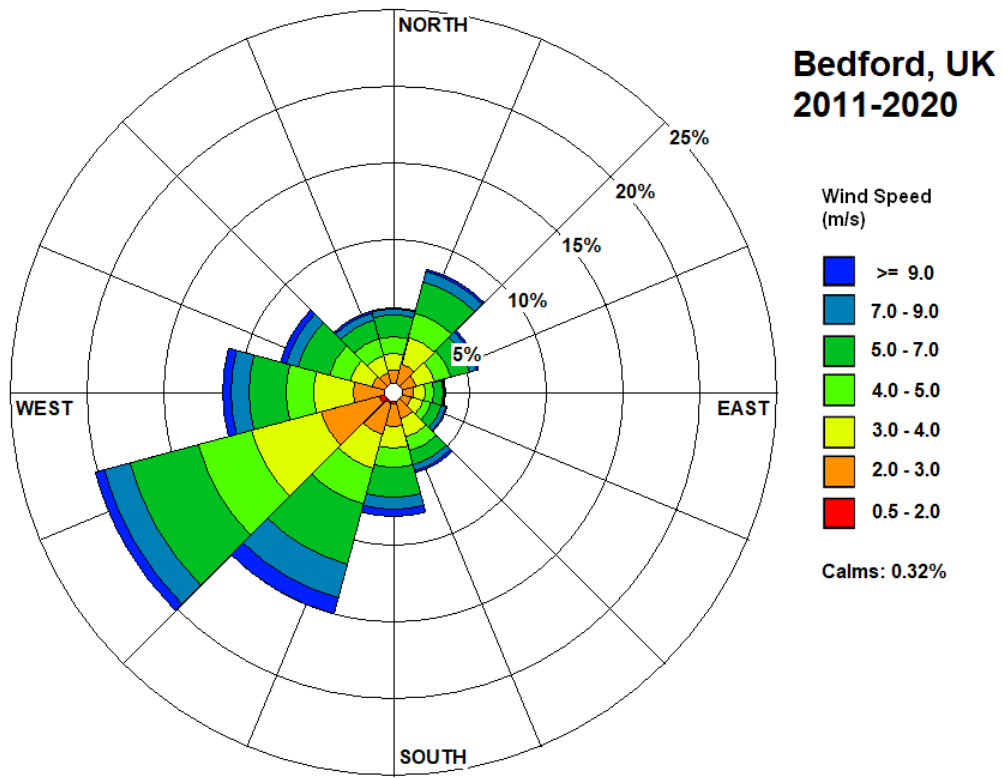


3.5 Wind Speed and Direction

3.5.1 Reference has been made to wind speed and direction data obtained from the meteorological station located at Bedford (NGR: 504912 259857, altitude 85m AOD), about 18km to the south-east. Local variations will exist in meteorological conditions, but the Bedford wind data is considered appropriate for this DEMP.

3.5.2 Annual wind roses for Bedford (for the years 2011 - 2020), as provided by ADM Ltd, a recognised meteorological data provider, are provided below in Figure 3.4. These depict average wind speeds and directions over the relevant monitoring period.

Figure 3.4: Annual Windrose for Bedford (years 2011-2020)



4 Dust Assessment Summary

4.1 Potential for Emissions

4.1.1 Aggregate processing, handling and storage operations can give rise to potential releases of dust or airborne particulate matter⁹. Airborne particulate matter is made up of condensed phase (solid or liquid) particles suspended in the atmosphere and ranges in size from a few nanometres to around 100µm. Dust can, if not controlled, give rise to the following:

- soiling effects through settling / deposition on surfaces resulting in loss of amenity (referred to as 'disamenity' dust); associated mostly with particulate matter greater than 30 µm;
- human health effects through the inhalation of suspended particle; associated with particles below 30 µm (referred to as PM₁₀);
- ecological effects through deposition and impacts on vegetation and aquatic ecosystems.

4.1.2 The principal releases of dust from the aggregate processing activities will be fugitive emissions, i.e. those not collected or released under controlled physical conditions.

4.1.3 The principal potential sources of airborne dust associated with the proposed operations at the Site were identified in the SGP AQA as:

- internal handling and storage of IBA;
- processing of IBA;
- external storage of primary aggregate;
- external blending of IBAA and primary aggregate and storage of final product;
- internal haulage,
- off-site road haulage,
- windblow across stockpiles and surfaces.

4.2 Impact Assessment

4.2.1 The AQA considered the potential impacts of dust on representative receptors up to 350m from the Works Site boundary taking into account the sources of dust on Site, distance and orientation to the receptors, sensitivity of the receptors, prevailing meteorological conditions and the in-design mitigation measures.

4.2.2 The AQA took into account the physical in-design mitigation measures. These include:

- the provision of concrete surfacing across the Site;

⁹ In this document, and with reference to IAQM guidance, the term dust refers to all particulate matter; this differs to the definition given in BS6069 where dust refers to particles up to 75 µm

- provision of 2.4-3m fencing on all Site boundaries;
- retention of the existing tree belt on the northern boundary;
- operation of IBA handling and storage within a 3-sided building;
- provision of local extraction to the feed hooper;
- operation of processing within fully contained structures;
- provision of covered conveyors;
- provision of wind breaks to external storage bays; and,
- provision of a dust suppression system across the Site.

4.2.3 The original submitted AQA has been amended to reflect the revised proposals to also provide local extraction to additional points on the processing plant.

4.2.4 Through the implementation of these physical in-design mitigation measures and with additional appropriate good practice management and monitoring mitigation measures, as would be required under the Environmental Permit, the overall source potential is considered to be *small*.

4.2.5 It was concluded that there were *negligible* residual risks of adverse impacts at nearby sensitive receptors.

4.2.6 This DEMP serves to collate and detail the mitigation measures that would be employed to minimise the likelihood of emissions arising as outlined in the AQA.

5 Control of Dust Emissions

5.1 General Requirements

5.1.1 The objective of the scheme is to specify the management measures to control the likely sources of dust during normal and abnormal operations. The following measures incorporate the requirements and recommendations set out in current guidance. The essence of the guidance is that any impacts can be controlled by effective site management.

5.1.2 In addition, the Site would be operated in accordance with the Day Group Environmental Management System (EMS) which meets the requirements of ISO:2015 and is subject to independent third-party assessment and certification. Day to day operations at the facility would be managed using the Day Group EMS. The DEMP would form an integral part of the EMS.

5.2 Management Controls

5.2.1 The Site Manager will exercise, either personally or by delegation to suitably trained and responsible staff, day to day control of the site. The Site Manager will be responsible for ensuring full compliance with any planning permission and Environmental Permit which may be issued and this DEMP.

5.2.2 Organisational charts for the management of the Site and the wider Day Group are included in the EMS.

5.2.3 The Site Manager, or delegated trained personnel, will carry out daily inspections and log observations of site conditions, including any occurrences of dust or the onset of potentially dusty conditions as detailed below in Section 6.

5.2.4 Staff at all levels will receive the necessary training and instruction in their duties relating to control of all operations and the potential source of dust emissions. Particular emphasis will be given to dealing with plant malfunctions and abnormal operations.

5.2.5 Any member of staff who fails to comply with the provisions of DEMP will be liable to disciplinary action. Any external hauliers who fail to observe the requirements in respect of vehicle operations will be barred from the site.

5.2.6 The Site Manager will ensure that a high standard of housekeeping is maintained at all times.

5.3 Specific Site Activities

5.3.1 As an over-riding requirement, if any operations are identified as causing, or likely to cause, visible dust emissions across the site boundaries, then those operations will be immediately modified or suspended until either effective remedial actions can be taken or the weather conditions giving risk to the emissions have moderated.

5.3.2 The main principles for preventing dust emissions are avoidance of the generation of dust, then the containment of dust and then by suppression. General matters and the management of the site can affect the likelihood of significant dust emissions.

5.3.3 The following operational measures and techniques will be implemented at the facility to minimise airborne dust arising from site activities through these principles:

General matters

- implementation of high standards of house-keeping to minimise track-out and windblow dust;
- a preventative maintenance programme, including readily available spares, to ensure efficient operation of equipment;
- effective staff training in respect of the causes and prevention of dust;

Material Processing, Handling and Storage

- inspection of all incoming material in accordance with the procedure described in the EMS, and quarantine if necessary;
- regular testing of physical parameters of received IBA including water content in accordance with the procedure described in the EMS, and addition of additional water if required to ensure maintenance of maturation to produce material suitable for processing;
- maintenance of all processing plant in good condition in accordance with a detailed maintenance programme and operation within design capacity and manufacturer's recommendations;
- maintenance of adequate spares to enable plant repair;
- provision of shrouding at any feed hoppers, transfer points and conveyor discharges where visible dust emissions occur;
- provision of local extraction at the feed hopper loading point;
- storage of all materials in designated areas; all IBA to be stored internally within building; IBAA and primary aggregate to be stored in external bays provided with wind breaks as per layout plan;
- maintenance of stockpiles at least 0.5m lower than windbreaks and walls;
- clearance of any spilled material to avoid accumulation of loose dry material around plant and high standard of house-keeping;
- minimisation of drop heights at loading and discharge points;

- inspection of plant and external conveyors on a weekly basis;

Dust Suppression

- use of suppression and management techniques to minimise dust emissions (see paragraph 5.4 below);
- use of clean water for dust suppression, to avoid re-circulating fine material;
- use of dust suppression as required within the IBA storage building, external storage areas, internal trafficked roads and any other possible dust generating areas;
- provision of adequate year-round water supply;

Internal Vehicle and Mobile Plant Movements

- regular inspection and maintenance of the internal trafficked surfaces in good condition to provide a well-drained and smooth running surfaces;
- regular removal / sweeping of spilled material from trafficked surfaces;
- maintenance of trafficked routes in damp condition as required, and particularly during periods of prolonged dry weather, by regular spraying;
- clear demarcation of the vehicle circulation routes within the site;
- clear delineation of stockpiles to deter vehicles from running over edges;
- implementation of an internal site speed limit;
- equipping of all site vehicles and plant with upswept exhausts and radiator fan shields where practical;

Site Access and Road Transport

- inspection, and cleaning if necessary, by the driver of vehicles leaving the site before proceeding onto the public highway;
- sheeting of all outgoing loads to avoid spillage of materials onto the public highway;
- even loading of vehicles to avoid spillages on the public highway;
- in the event track-out is carried onto the public road a road sweeper will be promptly deployed to clean the road;
- ensuring all incoming loads are enclosed or sheeted.

5.3.4 The above standard practices will be supplemented by a programme of visual monitoring and inspection as detailed below.

5.4 Dust Suppression

5.4.1 As noted above a dust suppression system will be provided across the site for all potential dusty areas and materials. This will include the provision of dust suppression within the IBA storage building, at the IBA feed hopper, at the external IBAA and primary aggregate storage bays, and heavily trafficked areas.

5.4.2 The equipment will include two identical main pumps, the second being provided purely as a back-up should the primary pump fail. In addition, the system will be linked to a diesel generator which will automatically start in the event of a mains power failure.

5.4.3 The system will be used whenever there is no rain on site and / or there is a risk of dust arising.

5.4.4 In the event of failure of one part of the suppression system, activities will be limited in that area. In the unlikely event of total failure, activities will be ceased until at least one part of the suppression system is fixed.

5.4.5 Site roads will be swept as necessary. A manual jet-wash will be provided at the site exit in case of the need of any cleaning of any part of departing vehicles.

5.5 Extraction System

5.5.1 Local extraction will be provided for vapour and dust to the feed hopper within the storage building and at certain transfer points of the processing plant. Expected extraction points include primary feed hopper, the screenhouse / trommel building where the material is screened into separate fraction sizes and the crushing house.

5.5.2 The extracted air will be directed to a wet scrubber system. The wet scrubber system has been chosen by the operator based on their operational experience at other IBA treatment sites. It has been found to be more effective than a bag filter due to the damp nature of the IBA and vapour present in the extracted air arising from the dust suppression measures.

5.5.3 At this stage design is on-going but plans are being devised by Exeon, specialists in Design, Supply & Installation of Dust & Odour Control Systems. The proposed scrubber would be a 'self-induced' venturi scrubber that would use water as the solvent. It is expected the scrubber would achieve 96-98% efficiency of particulate matter removal (in the size range 10-1,000 µm). The treated air would be directed to a stack for discharge to ambient air. Further information of the proposed system can be provided during the determination process as it becomes available and 'as built' plans provided on completion of construction. The DEMP would be reviewed and updated as appropriate prior to the commencement of operations.

5.6 Maintenance

5.6.1 Effective control of airborne dust emissions requires the maintenance and proper use of all plant and equipment. A programme of planned maintenance will be carried out on all plant in accordance with the manufacturer's recommendations to ensure that it operates at optimum efficiency. Stocks of essential spares and consumable items will be kept on site and readily available for use at short notice.

5.6.2 Any malfunction or breakdown leading to abnormal dust emissions will be dealt with promptly and operations will be modified or suspended until normal working can be restored. All such malfunctions will be recorded in the site logbook.

5.7 Weather Conditions

5.7.1 The prevailing weather conditions, particularly wind and rainfall, significantly affect the risk of dust generation and dispersion from an aggregate processing site. Trigger conditions likely to give rise to an increased risk of wind-blown dust are during periods of little or no rainfall (typically taken as <0.2 mm rainfall per day) which coincide with winds of sufficient strength to raise dust (typically taken as about 5.5 m/s, moderate breeze where dust and loose paper may be raised).

5.7.2 The expected weather conditions would be reviewed on a daily basis to determine the likelihood of those conditions that may give rise to a greater risk of dust generation and the requirement for additional mitigation measures such as enhanced dust suppression. The reviewed data would be retained to provide information in the event of any complaints.

5.8 Out of Normal Operational Hours Arrangements

5.8.1 The yard will be swept at the end of each working shift if necessary and the site securely locked when applicable. There would be a very low risk of any emissions from non-operational plant and in the absence of any vehicle movements during periods of non or low activity.

5.9 Community / Engagement with Local Community / Businesses

5.9.1 The nearest residential property to the Site is 385m to the north-west and the risk of dust emissions impacting the property is negligible. Light industrial / commercial premises are however in the immediate vicinity of the Site. Contact details for the facility in the event of any issues relating to dust will be provided to neighbouring facilities and on the notice board at the Site entrance.

5.10 Abnormal Conditions

5.10.1 The above controls include for reasonably foreseeable events and conditions that may result in dust generation and off-site migration. This includes for:

- abnormal weather conditions including prolonged dry periods and / or windy periods;
- accidental spillages or releases;
- malfunction of plant and machinery;
- failure of water recirculation and dust suppression system.

5.10.2 Where key plant cannot be repaired / replaced within 24 hours; other failure of dust suppression equipment occurs, e.g. freezing of water; or significantly abnormal weather conditions, then additional contingency provisions will be considered involving cessation of relevant processing operations and diverting scheduled deliveries away from site, as appropriate.

6 Dust Emissions Monitoring

6.1 Visual Monitoring

6.1.1 The Site Manager, or delegated member of staff, will carry out inspections at least once a day during operations. Additional inspections will be undertaken during the day as necessary and particularly during:

- any occurrences of dust emissions potentially migrating towards the Site boundaries;
- during dry or windy conditions.

6.1.2 The inspections will include visual assessment of:

- prevailing weather conditions and likelihood for increased risk of dust generation;
- potential dust generating activities;
- sensitive site boundaries;
- road surfaces and dirt accumulation outside the Site entrance.

6.1.3 All observations and findings will be recorded daily in the site diary. Information recorded will include the weather conditions, current site activities, any off-site activities with a potential for dust generation and observation of any dust travelling beyond the site boundary.

6.1.4 In addition, site staff will be instructed to inform the Site Manager whenever visible dust emissions are observed crossing, or extending towards, the site boundaries as a result of any operation or process.

6.1.5 The following graded scale of dust occurrences, and responses, will be referred to:

Table 6.1: Visual Grading of Dust Occurrences

score	condition	action required
0	no visible dust	none
1	visible dust in immediate area of activity	damp surfaces down, review operations and weather conditions, and take further preventative actions as appropriate
2	visible dust crossing the site boundary (<i>unacceptable emissions</i>)	immediately modification, reduction or cessation of operations; carry out emergency damping down and treatment of source areas; carry out inspection at site boundary to ascertain extent and amount of dust migration; review processes and provide plan for any modification to operations to prevent recurrence

6.1.6 In the event an occurrence of unacceptable emissions occurs (score 2) the action plan (see below) will be implemented immediately.

6.2 Quantitative Monitoring

Ambient Air Monitoring

6.2.1 It is considered the above measures are sufficient to ensure the appropriate management and mitigation of dust emissions. Quantitative monitoring of ambient air dust and / or PM₁₀ is not considered necessary or appropriate. In the event quantitative monitoring is required by the EA (where acting reasonably), for example in response to the receipt of complaints due to potential alleged dust arising from the site, then a programme of monitoring may be implemented to a methodology agreed with the EA. This may include monitoring of deposited dust and / or total suspended particulate (TSP) in accordance with guidance provided for minerals, waste management and construction dust and demolition activities^{10,11}.

Emission Points

6.2.2 Any specific emission points, such as may be associated with the local exhaust extraction to be provided to the feed hopper loading point and processing transfer points, may be subject to quantitative monitoring in accordance with requirements of the EA. Such requirements would be determined through the Environmental Permit application and determination process and this DEMP would be updated accordingly as required.

6.3 Complaints

6.3.1 Any complaints received at the Site will be recorded and reported to the Site Manager, who will investigate the circumstances and ensure that any necessary corrective measures are taken. The complaint procedure is detailed in the EMS and includes a standard proforma for completion.

6.3.2 Information to be recorded includes date and time of the complaint, location and nature of complaint, name of person handling the complaint, details of the investigation into the complaint and corrective and preventative actions to be undertaken where necessary.

6.3.3 Complaints will be investigated and recorded within 4 hours of receipt during normal hours of operation and within 36 hours outside normal hours. Where possible, the investigation will include a visit to location of the complaint to ascertain the extent of any dust present, investigation of potential sources of dust and resolution of any issues.

6.3.4 On completion of the investigation a prompt response (within 5 working days of receipt) will be made to the complainant detailing feedback and nature of any proposed corrective action.

6.3.5 Complaint records will be retained for a period of time as detailed in the EMS.

¹⁰ Environment Agency, Technical Guidance Note (Monitoring) M17, Monitoring particulate Matter in Ambient Air around Waste Facilities, version 2, July 2013

¹¹ Institute of Air Quality Management, Guidance on Monitoring in the Vicinity of Demolition and Construction Sites, October 2018, version 1.1

6.3.6 Complaints should be directed to the EA, as the regulator, via the 24 hr Incident Hotline. In addition, site information and contact details will be provided to neighbouring facilities and on the notice board at the site entrance. Any substantiated complaints received by the Site directly will be notified to the EA using the hotline telephone number or national email address in accordance with the procedure required by the EA.

6.3.7 In the event of any substantiated complaint, the DEMP will be reviewed and amended as necessary, in agreement with the EA.

6.4 Action Plan

6.4.1 An Action Plan will be implemented in the event of an incident occurring. This will be on the basis of i) there is an unacceptable visual emission of particulate matter from the site (i.e. observed crossing the boundary by Site Manager or on-site personnel) or ii) a substantiated complaint is received in relation to emissions to air.

6.4.2 If it is established that the emissions are attributable to the site, then action will be undertaken to control the emissions. If necessary, the Site Manager will instruct the modification, reduction or suspension of any operation or process causing visible dust emissions crossing the site boundary until such time as the situation has been resolved. In the unlikely event routine control measures are not sufficient to control dust emissions then consideration will be given to further measures to minimise and control emissions.

6.5 Record Keeping

6.5.1 The site operator will keep records of all observations, investigations and complaints for a minimum period of 3 years. All records will be made available within a reasonable time to the EA on request.

7 Implementation, Review and Update

- 7.1 The DEMP will be updated as required on finalisation of the determination of the Environmental Permit through consultations with the EA and implemented as approved. The effectiveness of the DEMP will initially be reviewed after 6 months of the on-set of operations at the Site. Therefore, the continued effectiveness of the DEMP will be subject to periodic review, and at least every 2 years.
- 7.2 The review process will take into account aspects such as the complaints history of the site, observations of dust, changes in site operations and processes and any potentially sensitive developments on neighbouring land. The DEMP will be updated and revised as appropriate.

APPENDIX A

Proposed Layout Plan

APPENDIX B

Process Flow Diagram

APPENDIX C
Record of Amendments to DEMP

Record of Amendments to the DEMP

1. Addendum on receipt of EA comment 13-03-2023 (amendments made by LMM and revised DEMP issued in March 2023)

The EA noted :

The dust management plan is missing some of the significant aspects outlined in our guidance on controlling emissions (see link below for further guidance)

[Control and monitor emissions for your environmental permit - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

They additionally included:

The DEMP does not provide a comprehensive demonstration of control measures in relations to the dust control methods. Our guidance needs to be reviewed and all relevant control measures need to be referenced

The guidance on what to include in a DEMP at the link provided is set out in the table below with a cross reference to the content of the DEMP:

the plan version number and date	On front page
an introduction to the site and description of site operations – including site plan(s) to support the description	Section 2, site plans are over arching in the EMS and not repeated in the DEMP and NMP appendices
local sensitive receptors	Section 3
emissions sources on site	Section 4.1.3
site abatement systems, including the nomination of responsibility	Section 5 and specifically 5.2.1 nominates the site manager
other local contributors of dust and emissions	Section 3.4.1
how you contact the local community and respond to complaints	Section 6.3
You must also provide details of the location and specifications of site PM10 monitoring	Not applicable
show how you have taken into account the principle of the source, pathway, receptor model in planning your: Site, operations, use of abatement to minimise emissions	Section 4.2 and a full AQRA that can be provided if necessary.
describe how you will take account of and deal with different weather conditions when planning for and carrying out site activities	Section 4.2

2. Record of Subsequent Amendments to the DEMP

Location	Comments
R02, v7, May 2023	
Cover page and page 1	Change of client names
Section 1: General	Update of planning permission and Environmental Permit application status. Changes to client names. Overarching commentary on revision to Air Quality Assessment report to incorporate changes to the dust abatement proposals
Para. 2.1.5	Edits to include local dust extraction at certain points of the processing plant
Para 2.1.8	Edits to include local dust extraction at certain points of the processing plant
Paras 3.4.1 and 3.4.2	Provision of additional information on nearby dust sources; provision of Figure 3.3
Para 4.2.2	Edits to include local dust extraction at certain points of the processing plant
Section 5.5	Provision of additional information on proposed dust abatement Updated to reflect DEMP would be reviewed and updated as appropriate prior to the commencement of operations.
Para 6.2.2	Revision of text relating potential monitoring of any emission points
Appendix A: Proposed Site Layout	Proposed layout plan as available at the time of preparation of the revised DEMP included; plan ref: WE001-05 Rev 18: Plan of proposed plant and buildings