

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Whisby IBA Processing Facility

Lincwaste Limited

Environmental Permit Variation Application

Dust & Emissions Management Plan

Prepared by:

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Dust & Emissions Management Plan

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5671-CAU-XX-XX-DR-V-1800 Sensitive Receptors Plan
722A167A IBA Processing Pad – General Layout

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Appendix 3 Dust Suppression System

1.0 INTRODUCTION

1.1 Overview

- 1.1.1 Caulmert Limited have been appointed by Lincwaste Limited ('the Operator') to prepare an environmental permit variation application for Whisby Landfill Site permit ref. EPR/BW2978ID to include for the processing and landfilling of Incinerator Bottom Ash (IBA) within the boundary of the permitted installation.
- 1.1.2 It is proposed to accept up to 70,000 tonnes per annum of IBA wastes for processing at Whisby Landfill. The Operator proposes to vary their existing permit to add a 'Schedule 5.4 A(1)(b)(iii) activity for a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment of slags and ashes'.
- 1.1.3 This activity will involve processing Incinerator Bottom Ash (IBA) wastes at the site to remove ferrous and non-ferrous metals for recycling, producing an IBA Aggregate (IBAA) and disposing of the remaining IBA residues by landfilling within IBA Cells 1-4 at Whisby.

1.2 Objectives

- 1.2.1 This Dust & Emissions Management Plan (DEMP) will provide thorough detail of appropriate measures that are required for effective dust and other particulate emissions management at the site and will outline control measures for any increase in visual dust or other particulate emissions.
- 1.2.2 This DEMP has the aim of ensuring that potential dust and other particulate emission sources are identified and controlled at source where possible. The DEMP aims to minimise the risk of dust and other particulate emissions impact on receptors outside of the site boundary. As a minimum this DEMP will consider the following elements:
- An assessment of the risks of dust and other particulate emissions at the site;
 - Identify the appropriate controls to manage the identified risks;
 - Visual monitoring to confirm effectiveness of control measures;
 - Complaints handling;
 - Identify actions, contingencies, and responsibilities when dust or other particulate emissions arise; and,
 - Regular review of the effectiveness of the dust and other particulate emissions control measures.
- 1.2.3 A copy of this DEMP should be kept in the Site Office at all times and is intended for use by site operatives and managers for the control of dust and particulate emissions at the site. This is a live document and should be reviewed regularly and updated if changes are made to site activities. Electronic copies will also be held on the company's database system.

- 1.2.4 In addition to this DEMP, an 'Environmental Risk Assessment' has been produced as part of this permit application, which considers any potential risks (including dust) associated with the proposed operations, under document ref. 5671-CAU-XX-XX-RP-V-0302.

1.3 Site Location

- 1.3.1 Whisby Landfill Site is located approximately 8km to the southwest of Lincoln and 3km west of North Hykeham, off Thorpe Road, in Whisby. The area of the proposed IBA Processing Facility (hereafter referred to as 'the Site') is within the Whisby Landfill Site permitted area, centred on National Grid Reference SK 89647 66699.
- 1.3.2 The area proposed for the IBA treatment and storage is predominantly surrounded by the existing landfill infrastructure. Whisby Landfill Site is located within an agricultural setting, with fields and water bodies associated with former sand and gravel pits surrounding the landfill site to the north, east, south and west. The closest residential receptors are houses on Thorpe Road 415m to the northeast and Station Road 460m to the southeast. Crossing Gate Poultry Farm (and Sam's Auto Car Repairs Garage) is located 610m to the southwest and there is a row of houses on Eagle Lane 690m to the southeast. There are no schools or hospitals within 1km of the Site.
- 1.3.3 Tarmac Whisby Sand and Gravel Quarry is located 25m to the north of the Site and some commercial premises have been identified on Thorpe Road including The Railway Inn 480m southeast and TFM Country Store (a pet and animal feed store) 760m northeast. Lincoln Radio Sailing Club is also located 660m to the southwest.
- 1.3.4 An indicative site location plan of Whisby Landfill Site is shown below in Figure 1. The proposed IBA Cells 1-4 and IBA Processing Facility will sit within the permitted landfill site boundary in the north-western portion of the site (inside the blue line on Figure 1).



Figure 1 - Site Location (source: Google Earth, 2023)

2.0 RECEPTORS & PATHWAYS

2.1 Overview

2.1.1 A sensitive receptor search has been conducted of the surrounding area within 1km radius of the centre of the IBA Processing area using Defra's Magic Maps website¹ and other publicly available sources. The sensitive receptors identified are listed below in Table 1 and shown on the attached 'Sensitive Receptor Plan' drawing ref. 5671-CAU-XX-XX-DR-V-1800. The distance to each receptor is measured from the IBA Processing area ('the Site').

2.2 Sensitive Receptors

2.2.1 Sensitive receptors include human receptors, ecological receptors, agricultural land and surface waters, which could be affected by dust and particulate matter from the proposed activities. Human receptors can be further broken down into residential, recreational, commercial and industrial. Ecological receptors including flora and fauna can be sensitive to smothering by dust and surface waters can be sensitive to pollution by contaminated dust entering water.

2.2.2 The area proposed for the IBA treatment and storage pad is predominantly surrounded by the existing landfill infrastructure, with agricultural land and surface water bodies associated with former sand and gravel pits further afield to the northwest, south, east and west.

2.2.3 The closest human receptors are workers on Whisby Landfill Site <10m south and east, and also at the Tarmac Whisby Sand and Gravel Quarry 25m north. The closest residential receptors are houses on Thorpe Road 415m to the northeast and Station Road 460m to the southeast. Crossing Gate Poultry Farm (and Sam's Auto Car Repairs Garage) is located 610m to the southwest and there is a row of houses on Eagle Lane 690m to the southeast. There are no schools or hospitals within 1km of the Site.

2.2.4 Some commercial premises have been identified on Thorpe Road including The Railway Inn 480m southeast and TFM Country Store (a pet and animal feed store) 760m northeast. Lincoln Radio Sailing Club is also located 660m to the southwest.

2.2.5 The Environment Agency Nature and Heritage Conservation Screen provided as part of the Basic Pre-Application Advice has identified 1 Local Nature Reserve (LNR), 8 Local Wildlife Sites (LWSs) and 2 Ancient Woodlands within 2km of the site. The closest sites within 1km are Hykeham Railway Line LWS 460m to the southeast and Whisby Nature Park LNR & LWS 570m to the east-southeast.

2.2.6 Within 2km of the Site, there are no Sites of Scientific Interest (SSSI), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), National Nature Reserves (NNRs),

¹ DEFRA Magic Maps 2021: <https://magic.defra.gov.uk/MagicMap.aspx>

Ramsar sites or Areas of Outstanding Natural Beauty (AONBs) within 2km of the site boundary. A summary of the identified sensitive receptors is detailed in Table 1 below:

Table 1 – Summary of Sensitive Receptors within 1km of the Site Boundary

Receptor	Receptor Type	Distance/Direction
Secondary A Aquifer within Superficial Deposits (sand/gravel)	Groundwater	Below site
Secondary B Aquifer within Bedrock	Groundwater	Below site
Workers at Whisby Landfill Site	Industrial	<10m S and E
Surface Water Bodies/Flooded Sand and Gravel Workings	Surface water	25m E, 30m W, 110m SW, 160m W, 180m NW, 310m S, 610m E, 900m SW, 835m SE
Tarmac Whisby Sand and Gravel Quarry	Commercial / Industrial	25m N
Field Drain	Surface Watercourse	70m W
Pike Drain	Surface Watercourse	120m S
Agricultural Land	Agricultural	190m NE, 350m N, 440m E, 640m S, 700m SW, 730m W
Railway Line	Commercial / Industrial	260m S
House on Thorpe Road	Residential	415m NE
Users of Thorpe Rd / Station Rd	Public Road	425m E
Hykeham Railway Line LWS	Designated Habitat Site	460m SE
Houses/Businesses on Station Road	Residential/Commercial	460m SE
House on Thorpe Road	Residential	460m NE
The Railway Inn	Commercial	480m SE
Whisby Nature Park LNR & LWS	Designated Habitat Site/ Surface Water	570m ESE
Users of Eagle Lane / Thorpe Lane	Public Road	600m SW
Crossing Gate Poultry Farm	Agricultural / Residential	610m SW
Sam's Auto Car Repairs Garage	Commercial / Industrial	610m SW
Lincoln Radio Sailing Club & Lake	Recreational / Surface Water	660m SW
Row of houses on Eagle Lane	Residential	690m SE
Houses on Thorpe Road	Residential	725m NE
TFM Country Store	Commercial	760m NE
Thorpe Lane Farm	Agricultural / Residential	760m WSW
Scotland Farmhouse	Residential	1000m SW
Residence/Farm on Green Lane	Residential	1000m NW

2.3 Meteorological Setting

2.3.1 Fugitive emissions of dust, litter, odour and noise from the site are likely to be affected by local weather conditions, in particular by wind direction and strength.

2.3.2 The closest meteorological station to the site actively recording wind statistics is Swinderby RAF weather station, located over 4.5 km to the southwest of the site. Wind statistics from this weather station are considered to be representative of the typical conditions at the site (see Figure 2 below).

2.3.3 A review of the data recorded daily between December 2011 and April 2023 on the Windfinder.com website² indicates that the most dominant wind direction is from the southwest towards the northeast. The sensitive receptor plan shows that predominant wind conditions are likely to blow from the IBA Processing Facility and Cells 1-4 away from most of the nearest sensitive receptors towards the few properties and businesses over 400m to the northeast on Thorpe Road and agricultural fields beyond.

Monthly wind direction and strength distribution

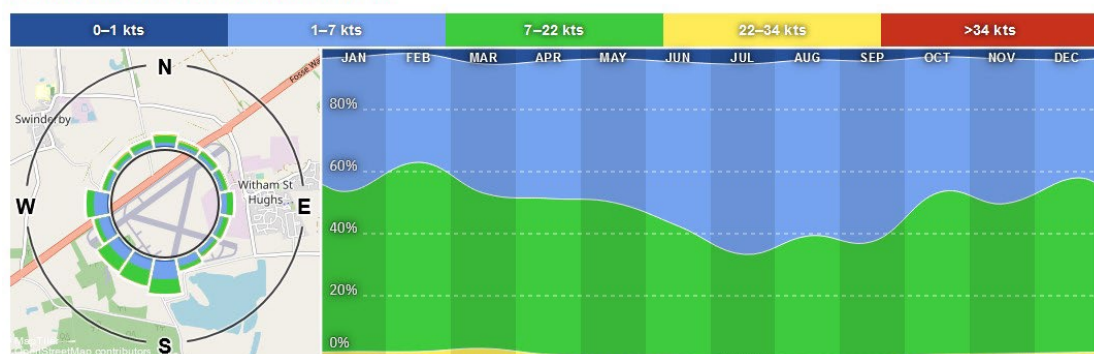


Figure 2 – Swinderby RAF wind statistics – average wind direction & strength 2011 to 2023

2.4 Airborne Pathways

2.4.1 It is considered the potential pathways for dust and particulate emissions to impact on receptors is via airborne transmission. Factors affecting dust and particulate emissions include:

- Quantity of wastes or stockpile heights;
- Types of wastes;
- Dry weather;
- Wind direction, exposure and speed; and,
- Exposure/distance of sensitive receptors to site operations/dust source.

² Windfinder website 2023, found here: https://www.windfinder.com/windstatistics/swinderby_raf

3.0 DUST SOURCES

3.1 Site Operations

- 3.1.1 The operator proposes to operate an IBA Processing Facility, to receive IBA from FCC-owned Energy from Waste (EfW) sites: FCC Eastcroft EfW and FCC Lincoln EfW. The operator also proposes to develop four new landfill cells (IBA Cells 1-4) for the deposition of IBA wastes.
- 3.1.2 The proposed Facility will use the following mobile plant in one half of IBA Cell 1, which is within the footprint of the permitted boundary of Whisby Landfill Site to treat IBA waste and move material around site:
- Mobile sieve machines
 - Eddy current separators with vibrating feeders
 - Hand-sorting station with conveyors and overbelt magnets
 - Front-loading shovels
 - Dumper trucks
- 3.1.3 The purpose of the mobile plant will be to allow for the removal of ferrous and non-ferrous metals, separating out IBA Aggregate (IBAA) and disposing of the remaining IBA residues within the landfill (into IBA Cells 1-4). The activity will require the temporary storage of IBA waste pre- and post-treatment in stockpiles and also of the separated metal fractions. The IBA residues will be disposed of by mono-filling, whilst the recovered metals will be sent for recycling off-site and the IBAA will also be sent off-site for re-use.
- 3.1.4 The site will accept and treat up to 70,000 tonnes per year of non-hazardous IBA waste as a mix of recovery and disposal activity, with the temporary storage of up to 140,000 tonnes of unprocessed IBA wastes at any one time during the maturation stage on the pad. It is anticipated up to 20,000 tonnes per year of IBAA will be separated out for export off-site and up to 7-8% removed as recovered metals, to be sent for recycling.
- 3.1.5 The IBA processing and temporary storage of unprocessed and processed IBA wastes and metals will take place on the base of the newly constructed IBA Cell 1 at the site.
- 3.1.6 The IBA will be sampled at the source site for analytical testing prior to arriving at Whisby. Incoming IBA will be stored in separate stockpiles awaiting test results. Once test results confirm the IBA is non-hazardous, the IBA will undergo maturation in windrows on the pad in the open air (atmospheric carbon dioxide and rainwater being required) prior to treatment. The maturation process should result in a reduction of pH and will stabilise any heavy metal leachability of the IBA. Any IBA wastes classed as hazardous based on test results will be rejected from site and sent to a suitably permitted facility.
- 3.1.7 The IBA processing will consist of mechanical screening of the IBA to remove ferrous and non-ferrous metals and will include screens, ferrous and non-ferrous metal separators and a picking station. Separated metals and IBAA will be stored in designated stockpiles on the pad

awaiting export off site. The site will also utilise dumper trucks for IBA deliveries to the pad and a front-end loading shovel for feeding IBA wastes into the process.

- 3.1.8 The proposed IBA processing facility is to be situated on a pad within one half of the engineered IBA Cell 1. This cell will be constructed with engineered liner, drainage system and protection layer, and surface water/leachate will be managed by draining under gravity via spine drains to a sump. No discharges to surface water or sewer are proposed.
- 3.1.9 Strict waste acceptance procedures will ensure only permitted IBA wastes are accepted and processed on site.
- 3.1.10 Due to their nature, it is not anticipated that waste metals removed during processing will produce dust emissions and are considered an unlikely source of dust. The IBA wastes (which includes ash) will therefore be the primary potential source of dust and particulates on site.
- 3.1.11 Site operatives will be trained in keeping dust emissions to a minimum during handling and transit around site and between the processing area, stockpile areas and landfilling area. The handling and processing of materials on site will be well controlled to prevent excessive agitation, double handling and creating dust emissions. Drop heights of materials will be minimised. Good housekeeping of site surfaces, and processing areas will ensure the site is maintained in a clean and tidy condition.

3.2 On-Site Dust Sources

- 3.2.1 Fugitive dust could result in visible dust being observed crossing the site boundary and nuisance can be caused by dust deposition on surfaces at sensitive receptors. Processing, temporary storage and landfilling activities will be undertaken on-site. Site operations will be designed in such a way that any emissions released will have the minimum impact on the environment and local receptors.
- 3.2.2 Dust and particulates can be generated from dry materials, site surfaces, vehicles, dried mud and other dry materials. Dry wastes and other materials may give rise to dust when processed or handled (unloaded or loaded, , moved etc.), particularly in dry or windy conditions outside.
- 3.2.3 The potential dust sources as a result of site operations have been identified at the site and these are detailed below:
- Delivery of IBA wastes to site;
 - Loading and unloading of waste materials and stockpiles;
 - Vehicle movements;
 - Processing of wastes including separating, screening and hand-picking;
 - General handling of wastes;
 - Windblown action across site surfaces and stockpiles of IBA waste;
 - Landfilling and compaction of IBA wastes.

- 3.2.4 The surrounding operations in the Whisby Landfill Site i.e. vehicle movements around haul roads, could give rise to dust, however this is already controlled by existing operational procedures and the permit for the landfill.

3.3 Off-Site Dust Sources

- 3.3.1 The Tarmac Whisby Sand and Gravel Quarry 25m to the north of the proposed IBA Processing Facility is a potential source of dust from site operations and associated vehicle movements around the quarry.
- 3.3.2 The site is also predominantly surrounded by arable agricultural land, and so the associated farming activities (ploughing, harrowing, agitation of the soil by farm vehicles) could give rise to dust emissions, particularly in dry, windy conditions.

4.0 DUST CONTROL MEASURES

4.1 Overview

4.1.1 This section details the control measures that will be undertaken on site to mitigate dust and particulate emissions from site activities. The abatement of dust and particulate emissions will be based on best management practices.

4.2 Waste Acceptance

4.2.1 Waste carriers will report to the weighbridge and waste transfer notes inspected for their load, and if in order, the waste carrier will then be sent to the appropriate unloading area within the site and site operatives will visually inspect the waste load, including for dust emissions or excessive debris. Any non-conforming wastes will be rejected from site.

4.2.2 Drop heights will be minimised during the loading and unloading of materials to reduce the likelihood of dispersion of dust as a consequence of agitation. The weighbridge will conduct assessments of waste inputs and impose controls and restrictions on potentially dusty wastes. If required, the surface of the material will be dampened down prior to entering site.

4.3 Site Traffic and Movement of Vehicles

4.3.1 All site traffic will be kept to designated haul routes within the local area. The surface of internal haul routes will be inspected daily and swept at regular intervals with any defects made-good.

4.3.2 All new drivers to site, contractors and visitors will be fully inducted on traffic movements and their responsibility to minimise dust emissions from vehicle movements. In the event of materials being entrained on the underside of vehicles and site plant, wash-down and cleaning facilities are made available to reduce the build-up of materials which could be further tracked and released as airborne dust.

4.3.3 During extended dry periods of weather, the movement of any vehicle can generate a substantial amount of dust and particulates which can cause nuisance to nearby receptors. In order to minimise the generation and entrainment of dust onto public highways, it is a site requirement that all vehicles entering and carrying potentially dusty loads are covered or sheeted.

4.3.4 Further standard good practices for site traffic on site will include:

- Setting appropriate site speed limits;
- Supervised loading of vehicles to avoid waste spillages;
- Ensuring even road surfacing and potholes filled;
- Regular removal of spilled material from site haul routes; and,
- Dust suppression by regular spraying in dry conditions.

- 4.3.5 A road sweeper will be deployed promptly to remove any debris or other deposits on internal roads to prevent drag out onto the public highway.
- 4.3.6 Good general housekeeping on site will be maintained by site operatives and checked by the Site Manager daily, with any spillages of potentially dusty wastes on site roads cleared as soon as possible and vehicles leaving site checked for any tracked mud or debris that could be stuck to wheels and removed prior to exiting the site.
- 4.3.7 On-site vehicle speed limits enforced to ensure vehicle movements do not generate excessive dust. An Anti-idling policy will be in place for vehicles to reduce emissions including noxious gases, particulates and dust.
- 4.3.8 In line with manufacture's specifications, all mobile plant and machinery shall be maintained as per the minimum requirements specified by the manufacturer, to ensure they are running smoothly and cleanly.
- 4.3.9 Any malfunction or breakdown leading to abnormal emissions will be dealt with promptly and operations will be modified or suspended until normal working conditions can be restored.

4.4 Loading and Tipping Operations

- 4.4.1 All wastes handled on site shall be done so in a controlled manner, with consideration given to the potential for dust generation at all times. Loading and tipping heights will be minimised to avoid uncontrolled dust emissions.
- 4.4.2 As shown on drawing ref. 722A167A, the entire IBA storage and processing area will benefit from a mobile dust suppression system around the perimeter (brown dashed line on drawing). This will be a Pacific 250 system (see Appendix 3) or similar and will be a high-pressure system that pumps water (and additives if required) through nozzles that create a fine atomised mist.
- 4.4.3 Dust suppression equipment will be available (e.g. hoses and bowser) to dampen down dusty loads and roads. Where necessary, delivery and collection vehicles will be sheeted when entering and leaving the site.

4.5 Materials Storage and Processing

- 4.5.1 The processing of IBA waste will be undertaken by mobile sieves, eddy current separators with vibrating feeders and a hand-sorting station with conveyor belts and overbelt magnets within a container.
- 4.5.2 As shown on drawing ref. 722A167A, the entire IBA storage and processing area will benefit from a mobile dust suppression system around the perimeter (brown dashed line on drawing). This will be a Pacific 250 system (see Appendix 3) or similar and will be a high-pressure system that pumps water (and additives if required) through nozzles that create a fine atomised mist across the IBA Cell 1 area.

- 4.5.3 Good housekeeping on site will include regular checks by site staff in all processing, waste handling and storage areas for any build-up of loose debris from the processing plant on site and movement of wastes across site. Movement of wastes will be undertaken for the shortest distances possible across site to their destination to reduce potential entrainment of dusts into the air. Site management will be notified if excessive loose debris or dust is present and appropriate sweeping and collection of debris and dampening of dust will be undertaken.
- 4.5.4 The movement of waste materials across site by site vehicles and plant will be limited where possible to suitable weather conditions, avoiding excessively windy, or dry conditions that could release dust and debris.
- 4.5.5 Ferrous and non-ferrous metals will be stored externally in separate stockpiles and are unlikely to be significant source of dust emissions due to the nature of the material not being inherently dusty, unless unintentionally contaminated by dusty fractions.
- 4.5.6 Site management will monitor stockpile heights to ensure they are not exceeding capacity and to prevent potential for wind blow action across tops of piles.
- 4.5.7 Dust controls will include dampening down of the waste in stockpiles (using perimeter dust suppression system) or limiting the quantity of wastes stored on-site during dusty conditions.
- 4.5.8 All movement of materials will be conducted during the normal site operational hours.
- 4.5.9 Daily and weekly inspection of the site will be undertaken and recorded in accordance with standard operating procedures. Any issues identified during inspection shall be reported to the Site Manager and remedial actions instigated. The daily inspections will include visual inspections for dust, as well as housekeeping of site surfacing and machinery.
- 4.5.10 As an overriding requirement, if winds which carry visible dust off-site towards any sensitive site receptor are observed by site operatives, then the site operations giving rise to the dust in that part of the site will be modified, or suspended where necessary, until more suitable conditions pertain, or until effective dust control measures are implemented.

4.6 Dust Suppression and Equipment

- 4.6.1 The main dust suppression at the site will be provided by a mobile dust suppression system around the perimeter (brown dashed line on drawing ref. 722A167A). This will be a Pacific 250 system or similar and will be a high-pressure system that pumps water (and additives if required) through nozzles that create a fine atomised mist across the IBA Cell 1 area. The system operates with either mains or generator supplied power (240V/415V) and mains supplied potable water.
- 4.6.2 The equipment used for dust suppression will be inspected weekly and any maintenance requirements implemented and recorded by site operatives. Where necessary the equipment used for the processing and movement of materials around site shall be regularly inspected and cleaned to remove excess debris which could generate dust around site. Site operatives

will be adequately trained in the safe and appropriate use and maintenance of dust suppression equipment.

- 4.6.3 An adequate water supply for dust suppression will be maintained at the site using either mains water. It is anticipated only small amounts of water will be used, but higher in summer if prolonged hot dry conditions. The use of water for dust suppression will be managed to ensure excessive water is not used. Water from the site surface will be directed to the installed drainage within IBA Cell 1 and into the sump, for tankering off-site.
- 4.6.4 Suitable road cleaning equipment will be kept available to ensure that areas are kept clear and tidy and trafficked areas kept routinely dampened in dry, windy conditions to reduce the risk of airborne dust emissions.
- 4.6.5 A road sweeper will be deployed promptly to remove any debris or other deposits from adjacent highways if debris is tracked off-site by vehicles.

4.7 Site Management

- 4.7.1 Site management shall be responsible for the satisfactory working of the whole site and operations ensuring full compliance with the dust emissions management plan. Site management will be responsible for checking the meteorological conditions for that day and for ensuring the appropriate dust control measures are in place. Site management may impose restrictions, where deemed necessary, on operations that may give rise to dust to reduce the impact of dust and particulate emissions.
- 4.7.2 In line with waste acceptance procedures, wastes consisting solely or mainly of dusts will be excluded from site.
- 4.7.3 As part of the company management system, staff will receive the necessary training and instruction in their duties relating to all operations and the potential sources of dust emissions. Emphasis will be given to plant and equipment malfunctions and abnormal conditions.
- 4.7.4 Site management shall ensure that all personnel working at the site or visiting are aware of the need to comply with this Dust & Emissions Management Plan.
- 4.7.5 Any persons on site failing to comply with the requirements of the Dust and Emissions Management Plan and site procedures will be re-trained as necessary. External hauliers failing to abide by site rules in respect of vehicle operations will be reported and if required, asked to leave site.

5.0 EMISSIONS ACTION PLAN

5.1 Overview

5.1.1 In the event that site monitoring identifies that there are visible airborne dust and/or particulate emissions that have, or are likely to be, transported beyond the site boundary and cause an unacceptable dust impact at a nearby sensitive receptor, immediate action shall be taken to stop the material handling/treatment/landfilling operations giving rise to the emissions.

5.2 Dust Emissions Event Procedures

5.2.1 The following actions will be undertaken as part of the Action Plan should dust and/or particulate emissions be detected:

- Additional visual monitoring to identify the extent of the impact and potential cause and source;
- Examination of the operational activities at site at the time of the complaint or identification of an impact;
- Examination of the meteorological conditions at the time of the complaint or identification of an impact;
- Carry out a review of the operational procedure and controls and instigate any control measures immediately following identification of the problem;
- Further monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

5.2.2 In the event that dust emissions are observed to be crossing the site boundary or surfaces (such as trees/vegetation and cars) are becoming soiled, the site management will be informed immediately and the approximate location and extent of the dust, or deposition, assessed and site operations reviewed and remediated.

5.2.3 The rate of dust suppression will be adjusted to suit the conditions observed, ensuring water coverage is sufficient to prevent fugitive emissions to air. In extreme circumstances, if there is evidence of significant amounts of dust, all site activities will be suspended until the affected area has been dampened with sufficient water preventing emissions to air.

5.2.4 If airborne emissions are the result of equipment failure, faulty items of plant will be repaired/replaced as required. As part of plant maintenance, records will be made of repairs or replacement parts.

5.2.5 Operations that were halted due to adverse wind conditions will only resume when the wind conditions are deemed suitable. Suitable conditions will be determined by the Site Management and will comprise conditions where dust emissions and particulates are not

carried by the wind from the source to cause significant visible dust emissions that have the potential to leave the site boundary into the surrounding area.

- 5.2.6 If unacceptable airborne emissions have been observed, appropriate remediation measures will be put in place with immediate effect. The frequency of inspections will only be reduced once the issue has been fully resolved.
- 5.2.7 A record must be made of any dust emission incidents and actions taken. A review of the operational procedure and process controls will be initiated.
- 5.2.8 Waste storage and processing procedures should be reviewed, and additional controls imposed as deemed necessary by the Site Manager.

5.3 Responsibilities

- 5.3.1 It is the responsibility of all site personnel to maintain a visual awareness of dust emissions during the working day as part of continual proactive environmental monitoring. Any significant dust emissions occurring with the potential to travel beyond the site boundary will be reported to the Site Manager/designated person who will be responsible for investigating the cause and taking immediate action to minimise further emissions.
- 5.3.2 Site management (or designated persons) will also be responsible for daily visual checks which will be carried out as part of their normal operational procedures monitoring of dust levels and conditions associated with the potential for fugitive emissions of dust. In particular, this is in relation to:
- Dry surfaces where dust or debris is present;
 - Any part of the site where movement of vehicles may generate dust;
 - Any part of the site where dust may be generated by wind;
 - Storage areas of material; and,
 - Transport and handling of material on-site.
- 5.3.3 The site boundary will be checked weekly to ensure that there are no waste materials or debris being blown off site which has the potential to cause nuisance. If a complaint regarding such an emission is received, the company Complaints Record Form will be completed. Any corrective and preventative actions will be recorded.

6.0 MONITORING

6.1 Overview

6.1.1 Dust monitoring will be undertaken in order to assess operational management and mitigating control measures at site and to identify if necessary, whether dust is causing a potential nuisance. Monitoring will also ensure that appropriate remediation measures are adopted early. In addition, a visual awareness of dust is made and recorded daily logged in the 'Daily Installation Checks Form' (Appendix 1).

6.1.2 Monitoring will be undertaken by designated staff who will be fully trained by site management. All site personnel will be responsible for reporting any problem dust emissions identified during their day to day operations. Monitoring at the site will consist of the following as shown in Table 2 below:

Table 2 – Monitoring Overview

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring	Using weather station app or website.	Manually checked at start of each working day.
Dust Monitoring	Dust monitoring as part of daily site inspections. On-site checks and off-site checks in response to an issue being identified.	Daily on site checks (or more frequently following dust complaints, or during prolonged dry or windy conditions).
Complaints Monitoring	Logged in site diary in accordance with complaint procedure.	Ad-Hoc.

6.2 Meteorological Monitoring

6.2.1 In the event of dust complaints, the weather data enables complaints to be assessed against the meteorological conditions for the relevant period. Meteorological information will also be recorded in the 'Complaints Record Form' (Appendix 2).

6.3 Dust and Particulate Emissions Monitoring

6.3.1 Site staff will visually monitor the operations likely to cause airborne emissions. The frequency of these inspections will be risk-based but will occur daily as a minimum. Inspections will be increased in response to adverse weather conditions, and the activities undertaken on site. Inspections will be increased when the following situations are encountered (this list is for guidance only and is not exhaustive):

- Increases in wind speed;

- Intensity of wind;
- Changes in wind direction towards sensitive receptors;
- Periods of hot, dry weather; and,
- Any unscheduled activity (e.g. dealing with an emergency).

6.3.2 As part of the daily inspections, appropriately trained and experienced site personnel will carry out an on-site inspection to monitor dust and particulate emissions, which will be recorded on the 'Daily Installation Checks Form' (Appendix 1). The records of the site daily inspections will be made available to the Environment Agency on request.

6.3.3 In the case of an emission, the below information will be recorded in the Site Diary:

- Date and time of dust/particulate emission;
- Meteorological conditions;
- Potential source of dust emissions/operations during the observation;
- Any complaints received and remedial actions to be taken to minimise or eliminate dust emissions.

6.3.4 It is the responsibility of all site personnel to maintain a visual awareness of dust emissions during the working day. Any significant dust emission occurring during the working day with the potential to travel beyond the site boundary will be reported to site management and a record made in the Site Diary. Site Management will be responsible for investigating the cause and taking immediate action to minimise further emissions. If necessary, site operations will be halted until appropriate remedial action(s) is completed.

6.3.5 Dust and particulate matter monitoring will include observing the movement of vehicles, stockpiling and movement of materials, to establish if such operations are giving rise to dust emissions and the size and frequency of these releases. Daily monitoring will also check for evidence of dust escaping beyond the site boundary or surfaces are becoming soiled (e.g. trees/vegetation and cars).

6.3.6 In the event that dust emissions are observed to be crossing the site boundary or surfaces are becoming soiled, the site management will be informed immediately and the approximate location and extent of the dust, or deposition, assessed and site operations reviewed and remediated.

7.0 ENGAGEMENT WITH NEIGHBOURS

7.1 Complaints Procedure

7.1.1 As part of this Dust & Emissions Management Plan, engagement with the neighbours will be undertaken.

7.1.2 Typically, any complaints received at the site are likely to be through the Environment Agency or Local Authority although the operator is willing to deal directly with the complainants and where necessary the following can be implemented:

- Information can be provided to the local neighbours (via the Local Authority) regarding the point and method of contact for the site in the event that fugitive dust has been detected or they want to discuss any activities at the site;
- Complainants can be advised that any complaints/concerns will be addressed immediately following identification/notification and contingency action measures implemented;
- Complainants can be advised of any corrective action and a follow up call carried out by the Site Manager if required.

7.1.3 The primary point of contact at the site for complaints and liaison with the neighbours is the Site Manager, who will ensure that the recording, investigation and close-out of any complaints is undertaken as described as below and in accordance with company management procedures.

7.1.4 In the event of a dust complaint being received by the Local Authority the complaint is passed to the Operator for investigation. Every complaint will be recorded as per the company's Complaint Reporting Procedure, a Complaints Record Form (Appendix 2) will be completed and an entry made in the Site Diary to include the following information:

- Date and time of complaint;
- Extent of complaint;
- Meteorological conditions at time of complaint;
- The complainant's contact details including name and contact telephone;
- Name of person filling out Complaint Record Form/Site Diary;
- Action taken to resolve complaint or investigate complaint further;
- Depending on the severity, the complaint can be escalated to senior management for even further investigation if necessary.

7.2 Complaints Monitoring

- 7.2.1 Any complaints received directly by the site or via the regulatory bodies, will be recorded on the Complaints Record Form (Appendix 2) and will instigate dust monitoring at the location of the complaint and on site to determine the extent and location of the plume and the source of the dust will be identified. If necessary, monitoring will also be carried out at the nearest sensitive receptors to the site and the monitoring results recorded.

8.0 GENERAL SITE PROCEDURES

8.1 Record Keeping

8.1.1 The Complaints Record Form (Appendix 2) will be completed, and notes made in the Site Diary of records made. Daily site inspections will be recorded on the 'Daily Installation Checks Form' (Appendix 1). The forms will be maintained free from damage and kept within the Site office and will be made available to the regulating authorities on request. The record keeping will form part of the site's Management System.

8.2 Staff Training

8.2.1 The designated person or Site Manager will be responsible for ensuring staff receive proper and adequate training in respect of dust and emissions management.

8.2.2 Site staff will undergo training to ensure that they understand how their actions and the site operations can affect airborne emissions. Staff will be instructed to not operate unless the site controls are operational and to alert site management at times when the site could potentially cause a dust/emissions nuisance. Staff will be trained to apply dust suppression on operations when conditions require and trained to visually inspect for airborne dust emissions. Staff will be instructed to report fugitive dust emissions to the designated person or the Site Manager with immediate effect.

8.2.3 Staff training records will also be updated and stored within the Site Office.

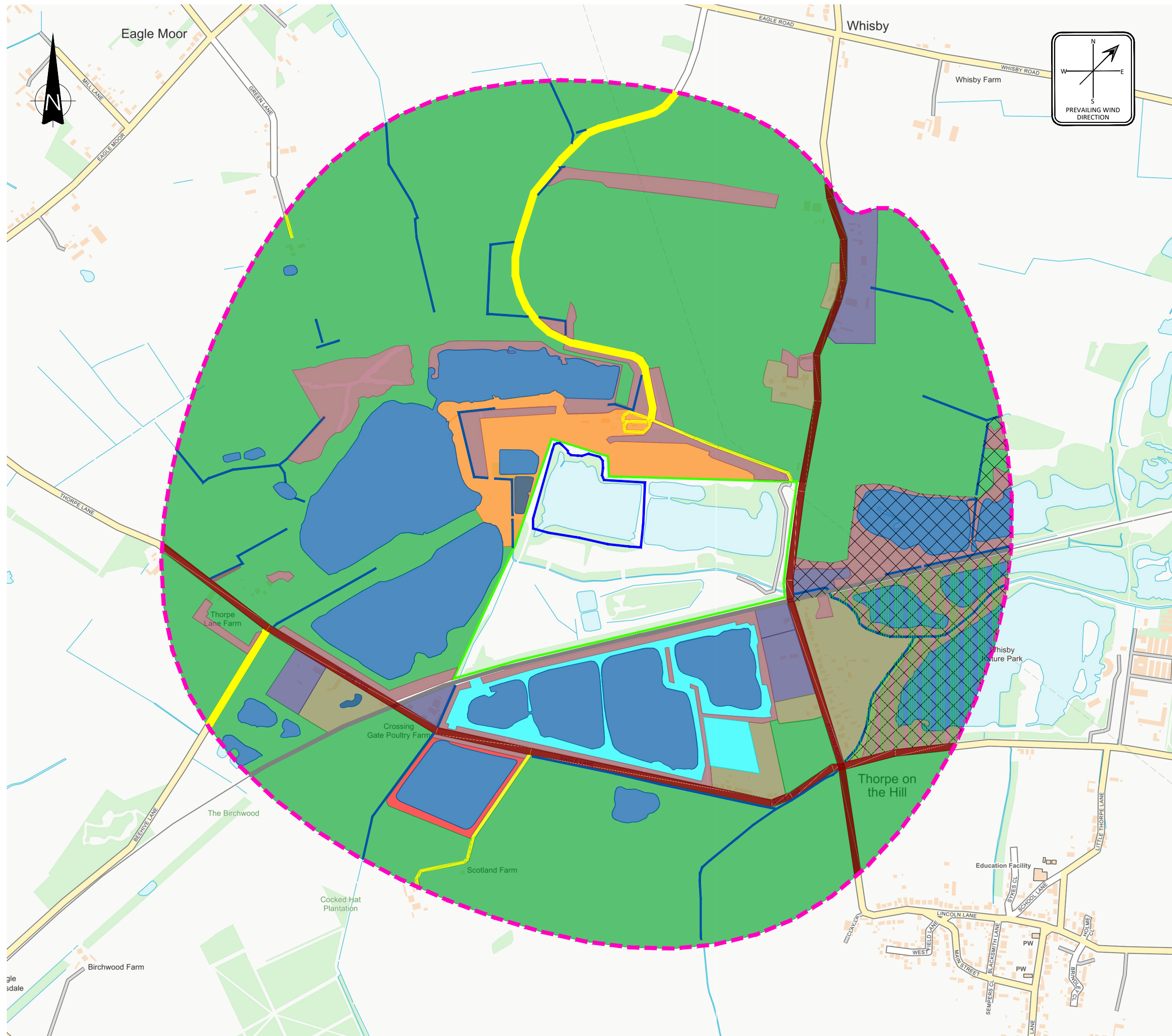
8.3 Dust & Emissions Management Plan Review

8.3.1 This Dust & Emissions Management Plan (DEMP) will be reviewed by Site Management on a regular basis to ensure that the controls described are effective and reflect best available techniques. The management plan will also be reviewed following a number of complaints at the site or if there are relevant changes in the site operations or procedures.

DRAWINGS

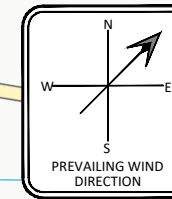
5671-CAU-XX-XX-DR-V-1800 Sensitive Receptor Plan

722A167A IBA Processing Pad – General Layout



LEGEND

- LANDFILL BOUNDARY
- IBA PROCESSING FACILITY
- 1000m OFFSET
- SURFACE WATER
- WOODLAND
- COMMERCIAL
- INDUSTRIAL
- RESIDENTIAL
- MAJOR ROAD
- MINOR ROAD
- RAIL
- AGRICULTURAL
- PUBLIC AREAS
- RECREATIONAL
- LOCAL WILDLIFE SITES
- LOCAL NATURE RESERVES



P02	BOUNDARY UPDATED	EJD	SH	SH	04.07.23
P01	ISSUED FOR INFORMATION	EJD	SH	SH	17.05.23
REV	MODIFICATIONS	BY	RE	AP	DATE
PURPOSE OF ISSUE					STATUS
FOR INFORMATION					S2

CLIENT:
LINCWASTE LIMITED

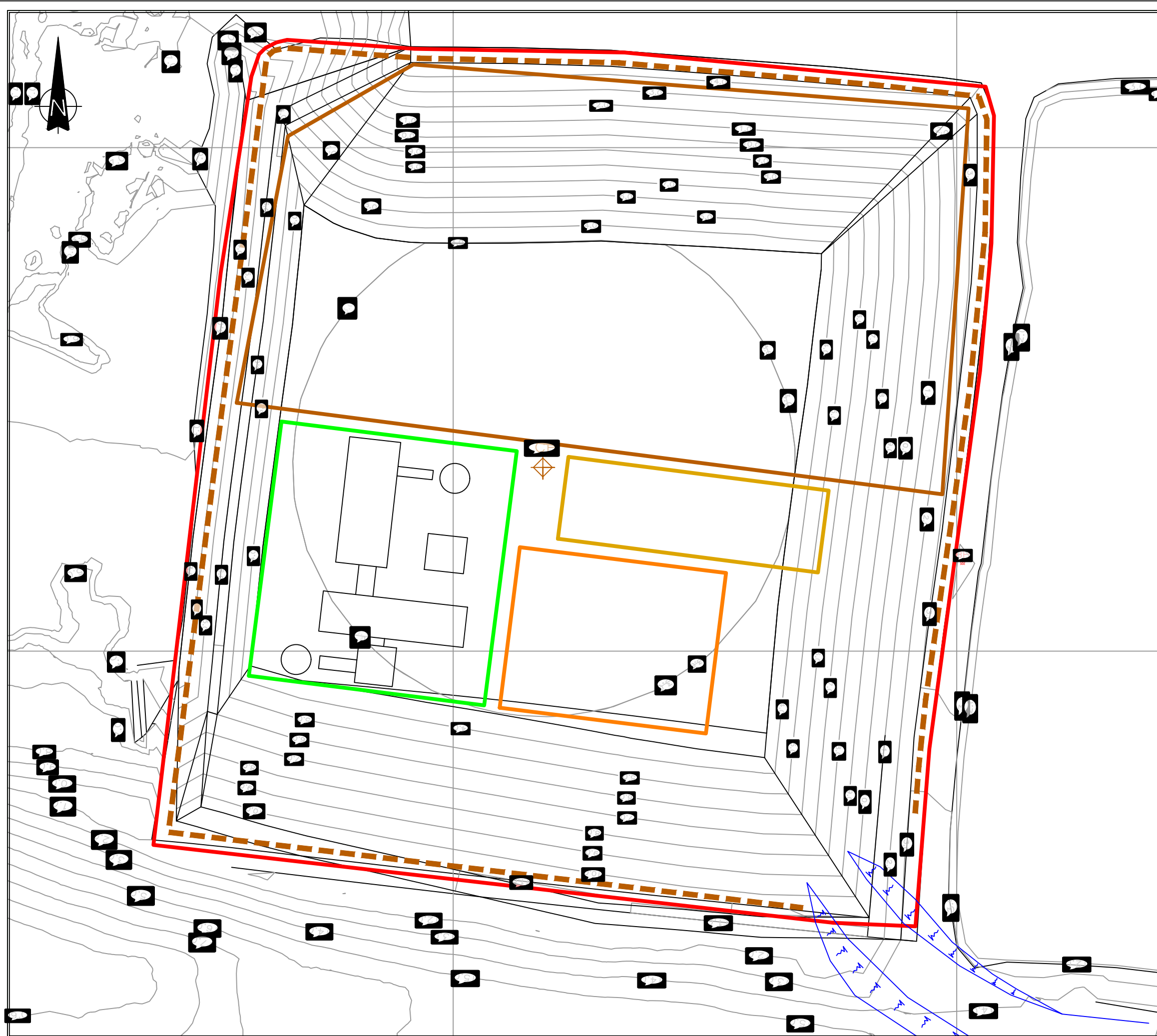
PROJECT:
**IBA PROCESSING FACILITY
WHISBY LANDFILL SITE**

TITLE:
SENSITIVE RECEPTORS PLAN

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	SH	SH
DATE	SCALE @ A3	JOB REF:	REVISION
16.02.2023	1:10,000	5671	P02

DRAWING NUMBER
5671-CAU-XX-XX-DR-V-1800














NOTES:

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.
2. DO NOT SCALE FROM THIS DRAWING.
3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF FCC ENVIRONMENT (UK) LIMITED PRIOR TO CONSTRUCTION WORKS COMMENCING.

LEGEND:

-  Contours
-  Proposed Leachate Collection Point
-  Site Access Road
-  IBA Storage & Processing Area
-  Plant Site Area
-  Pre-Processing Stockpiles
-  Post-Processing Metals Stocks
-  Post-Processing IBA Storage
-  Mobile Dust Suppression System

Revision	Date	Description	By	Chk
-	-	-	-	-
-	-	-	-	-
A	15.06.23	Area's revised	BS	MP

Reference files:
Information taken from plans:
Plan: WR7855 01 02

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Site: **WHISBY LANDFILL SITE**

Drawing Title: **IBA Processing Pad - General Layout**

Drawn By: BS	Checked By: MP	Date: 15.06.23	Scale: 1:750	Paper Size: A3
Status: FINAL	Revision: A	Drawing No: 722A167	Plan Number: -	

APPENDIX 1

Daily Installation Checks Form

DAILY INSTALLATION CHECKS FORM

WEEK
STARTING:

DAILY SITE INSPECTION		DAY						NOTES / REFERENCE
		M	Tu	W	Th	F	Sa	
SITE ENTRANCE / NOTICE BOARD								
SECURITY - PERIMETER FENCING & GATES								
SECURITY - PORTACABINS & STORES								
WEIGHBRIDGE								
OFFICE								
WELFARE FACILITIES								
PROCESSING PLANT								
MOBILE PLANT (DUMPERS, LOADING SHOVELS)								
GENERAL HOUSEKEEPING								
FUEL TANK / BUND (if present)								
SITE ROADS / SURFACES								
DRAINAGE & SUMP								
WASTE STORAGE AREAS								
WASTE TYPES: - QUANTITY - QUALITY	Unprocessed IBA							
	Processed IBA							
	IBA Aggregate							
	Ferrous Metals							
	Non-Ferrous Metals							
	General Waste							
	Quarantine Area							
AMENITY CHECKS:	Debris / Litter							
	Dust							
	Noise / Vibration							
	Odour							
	Pests / Vermin							
SPILL KITS								
FIRE EXTINGUISHERS								
FIRST AID KITS								(All radios working)
DUST SUPPRESSION SYSTEM								
OTHER								
INSPECTION CARRIED OUT BY:								
FIREWATCH (if required) COMPLETED BY:								
NOTES / ACTIONS (CONTINUE ON A SEPARATE SHEET IF NECESSARY):								
CHECKED BY:					SIGNATURE:			
POSITION:					DATE:			
Sheet					of			

**DAILY INSTALLATION CHECKS
FORM**

WEEK
STARTING:

Lincwaste Limited

NOTES/ACTIONS (CONTINUATION SHEET):

CHECKED BY:		SIGNATURE:	
POSITION:		DATE:	
Sheet		of	

APPENDIX 2

Complaints Record Form

**COMPLAINTS RECORDING
FORM**

REFERENCE NUMBER:

Lincwaste Ltd.

DATE & TIME REPORTED TO SITE:		
PERSON REPORTING	NAME	
	ADDRESS	
	TELEPHONE	
	EMAIL	
DATE & TIME COMPLAINT RECEIVED:		(If different to above)
PERSON MAKING COMPLAINT	NAME	(If different to above)
	ADDRESS	(If different to above)
	TELEPHONE	(If different to above)
	EMAIL	(If different to above)
NATURE OF COMPLAINT:		(eg. debris, dust, litter, noise, odour, pests, vibration)
DATE & TIME OF INCIDENT:		
WEATHER DURING INCIDENT	GENERAL CONDITIONS	
	WIND SPEED & DIRECTION	
ROOT CAUSE IDENTIFIED?	Y / N	Reference (if applicable)
REMEDIAL ACTIONS / CHANGES TO SITE PROCEDURES:		

NOTES / CONTINUATION:

COMPLAINT RECEIVED BY:	
COMPLAINT ACTIONED BY:	
COMPLAINT ESCALATED TO:	(If applicable)

APPENDIX 3

Dust Suppression System

Dispersal equipment

Misting systems



Pacific 75/125/250

Dust suppression and odour control misting systems

The Pacific is a high-pressure system that pumps water or water and *Odr* additive, through nozzles to create a fine atomised mist. The system operates with either mains or generator supplied power (240V/415V) and mains supplied potable water.

The cabinet is available in either GRP or stainless steel, with all key components in an IP65 rated enclosure. The 7-day timer control, remote facility and pulse mode allow the system to function without frequent operator attention and ensures reduced running costs and maintenance.

The Pacific system is available in three standard static forms, the Pacific 75, Pacific 125 or Pacific 250, with 75, 125 or 250 nozzles respectively, and in bespoke form, designed to meet your specific requirements. It is also available in a mobile, trailer mounted form as the Pacific Mobile for use where extra flexibility is required.

Typical Applications:

- Waste transfer stations
- Landfill sites
- Composting sites
- Remediation sites



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Air Spectrum Environmental Limited continually strives to improve its products and therefore reserves the right to introduce modifications to their product range without notice.

www.AirSpectrum.com



Pacific model			Features
75	125	250	
•	•	•	Nozzle available as 1m or 2m spacing option
•	•	•	70 Bar, 1000 Psi delivery system
75	125	250	Maximum number of nozzles possible (upgradeability)
•	•	•	7 day timer control with remote relay and optional weather station controller
•	•	•	Low level water and product indicators
•	•	•	User adjustable doing levels
•	•	•	Heated cabinet
•	•	•	240V or 415V supply
•	•	•	Stainless steel or GRP cabinet
•	•	•	CE marked
•	•	•	Pulse control
•	•	•	Dimensions 1080mm (h) x 800mm (w) x 300mm (d)
		•	Dimensions 1135mm (h) x 850mm (w) x 350mm (d)

The design and specification may alter dependent on the individual needs of the project and the unit may subsequently differ in appearance to the one shown.

WWW.CAULMERT.COM



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