Caulmert Limited

Engineering, Environmental & Planning Consultancy Services

Knottingley Waste to Resource Facility

FCC Recycling (UK) Limited

Environmental Permit Variation Application

Dust & Emissions Management Plan

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APPROVAL RECORD

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Dust & Emissions Management Plan

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1.0 INTRODUCTION

1.1 Report Context

1.1.1 Caulmert Limited were appointed by FCC Recycling (UK) Limited ('the Operator') to prepare a bespoke environmental permit variation application to vary the existing permit ref. EPR/JP3547JL to allow a number of additional activities at the Knottingley Waste to Resource Facility on Weeland Road, Knottingley, in West Yorkshire, at postcode WF11 8DZ (hereafter referred to as 'the Site').

1.1.2 The proposed amendments to the permit (ref. EPR/JP3547JL) involves a comprehensive revaluation and optimisation of its operational activities. Primarily with the intention to refine existing processes while introducing activities to enhance waste management on site.

1.1.3 This Dust & Emissions Management Plan (DEMP) covers the proposed waste treatment activities with the potential for dust and particulate emissions, with emphasis on the operations that have the highest risk of dust emissions including Refuse Derived Fuel (RDF) processing activity from non-hazardous (household, commercial and industrial) wastes, as well as shredding activities.

1.1.4 This Dust & Emissions Management Plan (DEMP) has been prepared using the following guidance:

- Control and monitor emissions for your environmental permit (last updated 3 December 2025);
- Risk assessments for your environmental permit (last updated 1 December 2025); and
- The Environment Agency Dust and Emissions Management Plan Template vr12.

1.2 Objectives

1.2.1 This Dust & Emissions Management Plan (DEMP) provides 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. This DEMP also 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 generation and emissions at the site;
- Identify the appropriate controls to manage the identified risks;
- Visual and quantitative monitoring to confirm effectiveness of control measures;
- Identify actions, contingencies, and responsibilities when dust or other particulate emissions arise;

- Complaints handling;
- Regular review of the effectiveness of the dust and other particulate emissions control measures.

1.2.3 A copy of this DEMP will 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 will be reviewed regularly and updated if changes are made to site activities. An electronic copy will also be saved on the company's online database.

1.3 Site Location

1.3.1 The Site is located in Knottingley, West Yorkshire and centred on National Grid Reference (approximately) SE 51279 23861 and postcode WF11 8DZ. It lies within a semi-rural and residential location (primarily southwest of the Site) including Weeland Road, The Croft, Springfields Avenue, and Broomhill Avenue.

1.3.2 Fernley Green Industrial Estate encompasses the area immediately west of the site boundary and extends northwest. Willow Garth Nature Reserve extends immediately northeast. Approximately 1 km of open countryside abuts the northern and southern boundaries of the site. To the north, the site is bordered by the Bank Dole Cut and Lock, a section of the Aire and Calder Navigation canal, as well as the River Aire. To the south, it is adjacent to the A645 road. The site location is shown below in **Figure 1**:

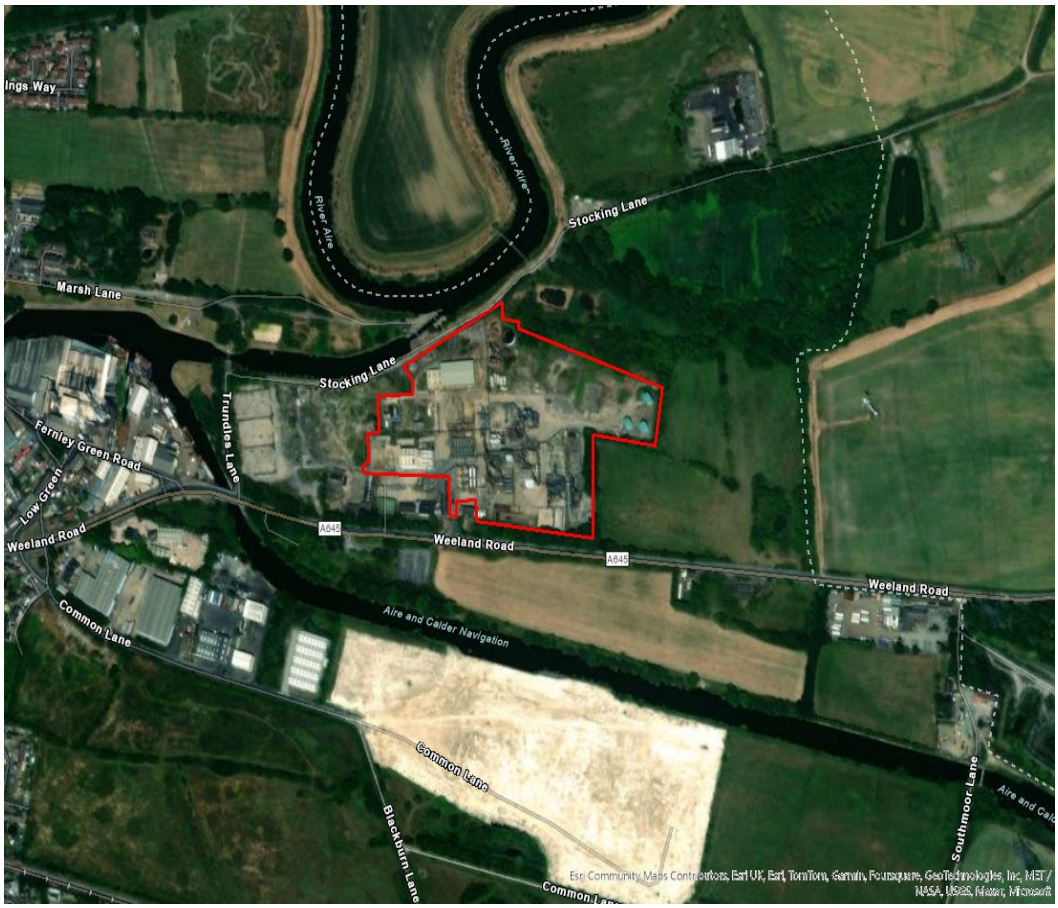


Figure 1: Site Location Plan (Permit boundary in red)

2.0 RECEPTORS & PATHWAYS

2.1 Overview

2.1.1 Sensitive receptors include human receptors, ecological receptors, environmental 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, workplaces, schools, etc., while environmental receptors may include 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 Summary of Identified Sensitive Receptors

2.2.1 This report assesses the potential risks to nearby sensitive receptors from the permit variation application proposals at Knottingley Waste to Resource Facility. A sensitive receptor search was conducted of the surrounding area within a 1km radius of the site boundary using Defra's Magic Maps website and the sensitive receptors identified are listed below in **Table 1** and also shown on the Sensitive Receptor Plan drawing ref. 5827-CAU-XX-XX-DR-V-1800 (added in the Drawing Section of this report). The distance to each receptor is measured from the site boundary.

2.2.2 The closest human receptors to the site are users of the River Aire walking trail, users of the Aire and Calder Navigation Canal and Lock, users of Weeland Road, and users of Stocking Lane. These receptors are all located less than 10m north of the site boundary, with the exception of the A645, Weeland Road, which abuts the southern boundary of the site, and provides access to the site. In addition, the Aire and Calder navigation walk commences 90m south of the site boundary. There are no hospitals located within 1km of the site, however De Lacey High School and Little Acorns Nursery are both located over 900m southwest of the site.

2.2.3 The nearest residential receptors to the site are houses in the residential area of 148 Weeland Road, located 290m SE of the site and Low Green, situated 384m west of the site. The majority of the area located west of the site within the 1km radius is residential. These areas include Fernley Green Close (481m WNW), Springfields Avenue (485m WSW), Marsh End (501m WNW), Broomhill (559m SW), Lamb Inn Road (581m W), and The Croft (873m WNW). Knottingley cemetery is located 822m southwest of the site boundary, and Knottingley RUFC is located 453m west-northwest of the site boundary.

2.2.4 Environmental receptors cover business operators (commercial and industrial) within Fernley Green Industrial Estate, located 187m west of the site, including Delta MOT and Service Centre Ltd, Beepers Ltd, Allied Glass Group Ltd, Hirst Boatbuilders Ltd, A1 Building Supplies Ltd, and Gillian and Baines Ltd. Brick Box Ltd also operates from Fernley Green Industrial Estate and provides children's party services (located 364m NW from site boundary). See **Table 2** for more details.

2.2.5 The site is not located within a Source Protection Zone (SPZ), the closest of which is 1.6km northwest of the site, designated as a Zone 1. The site is located on a secondary B aquifer within the bedrock below the site (Roxby Formation - mudstone and siltstone). The superficial geology of the site consists of a combination of Alluvium (clay, silt, sand, and gravel) and Breighton Sand Formation - sand.

2.2.6 While some areas of the Knottingley Waste to Resource Site fall within high-flood risk zones according to the GOV.UK Flood Risk Maps website[1], the site layout has been designed to avoid these areas, including, where necessary, relocating some of the project elements of the proposed waste activities from flood-risk zones to areas identified as low risk.

2.2.7 The sensitive receptors identified within 1km of the Site boundary are presented in **Table 1** below:

Table 1: Distances to Selected, Representative Sensitive Locations within 1km of the Site Boundary.

Receptors	Direction from boundary	Description of closest sensitive receptor types	Approximate distance to site boundary (m)
Secondary B Aquifer	–	Groundwater	–
Willow Garth Nature Reserve	NE	Habitat	<10
Priority Habitat – Deciduous Woodland	NE	Habitat	<10
Users of River Aire Walking Trail	North	Recreational	<10
The River Aire	North	Surface Water / Habitat	<10
Aire and Calder Navigation Canal	North	Surface Water / Recreational	<10
Bank Dole Lock	North	Recreational / Commercial	<10
Users of A645 Weeland Road	South	Recreational	<10
Users of Stocking Lane	North	Recreational	<10
Agricultural Fields	South and North	Commercial	20 and 100
Users of Aire and Calder Navigation Walk	South	Recreational	90
Priority Habitat - Reedbeds	NE	Habitat	96
Ponds	NNE and NE	Habitat / Surface Water	130, 161, 328
Fernley Green Industrial Estate	West	Commercial / Industrial	187
Priority Habitat – Lowland Fens	NE	Habitat	193
Blackburn and Common Lane	South	Commercial / Industrial	219
Industrial Units	SW	Commercial / Industrial	231
148 Weeland Road	SW	Residential	290
Caddick Construction Ltd	ESE	Commercial / Industrial	320
Low Green	West	Residential	384
Knottingley RUFC	WNW	Commercial / Recreational	453
Fernley Green Close	WNW	Residential	481
Springfields Avenue	WSW	Residential	485
Marsh End	WNW	Residential	501
Broomhill	SW	Residential	559

[1] Map – Flood map for planning – GOV.UK

Lamb Inn Road	West	Residential	581
OneCT Manufacturing Park	ESE	Commercial / Industrial	634
Knottingley St Botolph's C of E Academy	West	School	812
Knottingley Cemetery	SW	Cemetery	822
The Croft	WNW	Residential	873
Little Acorns Nursery	SW	School	900
De Lacey High School	SW	School	1000

Table 2: Other sources of dust or other emissions

Company Name	Address	Type of business	Distance from site boundary
Delta MOT & Service Centre	Unit 3 Fernley Green Rd, Knottingley WF11 8DH	Commercial	159m West
Fleetclean	Common Lane, Knottingley WF11 8BN	Commercial	191m SW
John Harkers Shipyard Ltd	Fernley Green Rd, Knottingley WF11 8DH	Commercial	192m West
A1 Equestrian, Pets & DIY	126A Weeland Road, Knottingley WF11 8DB	Commercial	223m SW
Pollard Optical	Delta House, Delta Business Park, Fernley Green Rd, Knottingley WF11 8DH	Optician	224m West
Beepers Garage Services	10 Fernley Green Close, Knottingley WF11 8DY	Commercial	240m West
Alex Pol Trans Ltd	Stocking Lane, Knottingley WF11 8TH	Commercial/Industrial	264m NE
Yorkshire Blasting & Spraying ltd	The Old Maggot Farm, Stocking Lane, Knottingley WF11 8TH	Industrial	367m NE
Verallia UK	7 Fernley Green Road, Knottingley WF11 8DH	Commercial/Industrial	367m West

2.3 Designated Sites of Ecological Importance & Other Habitats

2.3.1 The Environment Agency (EA) Pre-Application Conservation Screen Report (see **Appendix 1**) identified two Local Wildlife Sites (LWS), up to two protected species and two protected habitats within 2km of the site.

2.3.2 There are no Ancient or Semi-Natural Woodlands within 2km of the Site, however, less than 10m northeast of the site is Willow Garth Nature Reserve, comprising of a deciduous woodland (<10m from site boundary), Reedbeds (96m), and lowland fens (193m), all designated as a priority habitat, meaning they have been deemed to be of principal importance for the purpose of conserving biodiversity. In addition, there are three ponds located within the nature reserve, closest of which is 130m north-northeast, the second and third are 161m and 328m northeast, respectively.

2.3.3 There are no Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Local Nature Reserves (LNR), National Nature Reserves

(NNRs), Ramsar sites or Areas of Outstanding Natural Beauty (AONBs) within 2km of the site. The closest SSSI is located over 7km to the northwest of the site. The closest AONB is The Nidderdale AONB located over 50km to north-northwest of the site.

2.4 Meteorological Setting

2.4.1 Fugitive emissions of dust from the site are likely to be affected by local weather conditions, in particular by wind direction.

2.4.2 Wind statistics observed from Normanton weather station, the closest weather station actively recording wind statistics, are considered to be representative of the typical conditions at the site (**Figure 2** below).

2.4.3 A review of the data recorded daily between April 2013 and March 2026 on the Windfinder.com[2] website indicates that the most dominant wind direction is from the west-southwest towards the east-northeast. With reference to **Table 1** above, predominant annual wind conditions are likely to blow towards the Willow Garth Nature Reserve and the River Aire.

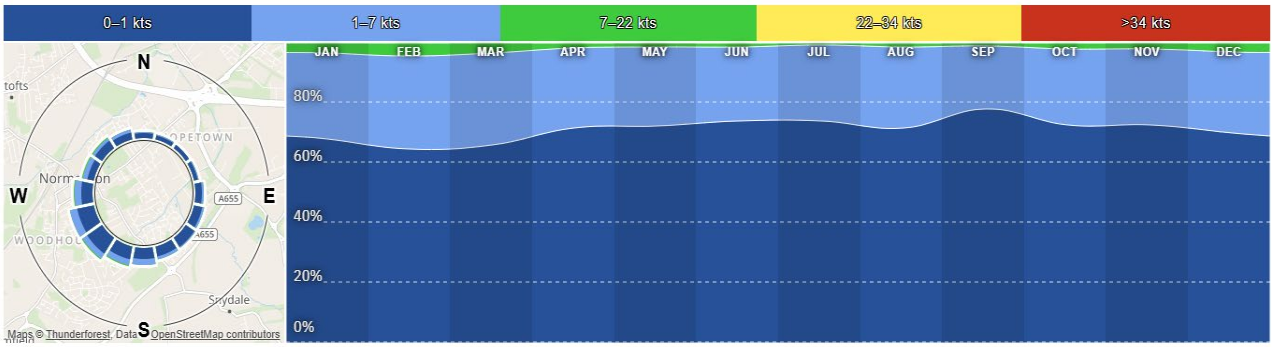


Figure 2: Normanton weather station and statistics - average wind direction & strength 2013-2026.

2.5 Airborne Pathways

2.5.1 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] https://www.windfinder.com/windstatistics/normanton

3.0 DUST SOURCES

3.1 Site Operations

3.1.1 The current permitted activities at the site include the bulk handling and transfer of both hazardous and non-hazardous waste, distillation-based solvent recovery, biological treatment of associated aqueous effluents, the creation of Secondary Liquid Fuel (involving the utilisation of heat and steam from boilers), as well as the storage and management of waste materials and raw substances. Furthermore, the site conducts surface water and process water treatment through a biological treatment plant.

3.1.2 It is proposed to remove the distillation of solvents activities and the activity/waste list for Tank S13 from the permit, but to retain two of the previously three permitted boilers using gas and Secondary Liquid Fuels (SLF) as fuel. Currently, the two remaining boilers (boilers numbered 4 and 5) and associated storage tanks are mothballed, however the Operator would be using the boiler installation to provide steam to the proposed dryer, the ammonia recovery unit and the metals recovery facility as directly associated activities (DAA).

3.1.3 The following activities are also being proposed to be retained in the existing permit but requires amending as follows:

- **Waste Transfer Station -** the storage and transfer of hazardous and non-hazardous wastes, including where appropriate repackaging, size reduction and decanting. To amend the waste list in the permit to add additional waste codes for storage and transfer and to allow these activities to take place on the site as a whole.

- **Associated raw materials/reagents will be stored** and used on site.

- **Discharge of treated effluents** (i.e., site surface water and process water in the aerobic treatment plant) **to sewer** is already permitted but needs updating to reflect the changes that pertains the existing biological treatment activity which is mothballed and will not recommence. However, the Operator has repurposed the infrastructure as a **surface water collection tank,** and no waste treatment activities takes place.

- **The use of existing gas or liquid-fuelled boilers** which is to be reduced to two (i.e., Boiler 4 with rated thermal input of 6.6MWth and Boiler 5 with rated thermal input of 9.0MWth) with tag numbers B01-ZP-01 and B01-ZP-02 and their corresponding boiler stack emission points - EP08 and EP12 (currently A12 and A13 on the existing permit ref. EPR/JP3547JL) within the Boiler Complex, indicated on the Sampling and Emissions Point Plan (ref. 5827-CAU-XX-XX-DR-V-1805) will be retained to provide steam to the proposed dryer, the ammonia recovery unit and the metals recovery facility as directly associated activities (DAA).

3.1.4 The Site has multiple operations, some of which operate 24/7, however the main reception times for waste receipt are:

- From **6.00am** to **10:00 pm,** Monday to Saturday;
- **CLOSED** on Sundays, with limited operations during Bank Holidays.

3.1.5 The Knottingley Waste to Resource Facility is located under the jurisdiction of Wakefield Metropolitan District Council, in West Yorkshire.

3.1.6 The Site is not located within an Air Quality Management Area (AQMA) boundary.

3.1.7 As per **Section 1.1.3** above, the proposed waste treatment activities, including RDF processing and shredding activities will take place within buildings/covered structures and any potential dusty or powdery waste will be delivered to site in covered containers, drums or tanks and stored within sealed tanks where applicable. Therefore, dust and other particulate emissions to air will be controlled with appropriate housekeeping (e.g., closing doors, windows, buildings maintaining negative pressure, etc.) and the provision of emission control equipment (e.g., air extraction systems, dust filtration, etc.), including scheduled cleaning of these whichever is deemed appropriate from point and area (fugitive) sources. See **Section 4** of this report for more details.

3.2 Waste Processing and Storage Areas

3.2.1 The proposed waste treatment activities are summarised below:

Waste Processing 01 and 02

3.2.2 The shredding of hazardous and non-hazardous materials for recovery or offsite disposal will occur within Waste Processing 01 and 02 buildings respectively. These buildings are fully enclosed and bunded, and will house a shredder which is intended to be used for reducing bulk materials or segregate packaging from contents, prior to further processing. The shredder will be loaded using a forklift truck and shredded materials will be collected in suitable containers, sealed and transferred or repackaged for further recovery or disposal.

3.2.3 These buildings will be maintained under negative pressure and be equipped with air extraction equipment (e.g., extraction hoods and/or activated carbon filtration system) in order to minimise dust and other particulate emissions.

Waste Processing 03

3.2.4 The processing of non-hazardous (household, commercial and industrial) wastes to produce Refuse Derived Fuel (RDF) will take place within the enclosed Waste Processing 03 building. Preparation will include receipt of pre-selected waste materials prior to sorting and shredding for recovery or reuse, with temporary storage. There will be up to two shredders for RDF processing in this building.

3.2.5 A dust filtration and recirculating system will be used to remove dust and other particulate emissions from this building, which will be complemented by an air extraction system that will pass through a carbon filter (with a particulate pre-filter component in it) for emissions

control. During processing, the roller shutter doors will be kept closed where possible to minimise dust pollution.

3.2.6 These buildings (i.e., Waste Processing 01, 02 and 03, and Waste Storage 02) are identified as a potential source of dust and particulate emissions, particularly during waste handling, shredding and RDF processing, therefore appropriate controls measures will be implemented to minimises emissions. See **Section 4** for more details.

Waste Processing 04

3.2.7 Metal recovery activities from waste materials containing heavy metals, including 'critical metals' will be undertaken in this building. The treatment processes involved will look to concentrate the target metal(s) in the waste being processed so as to produce a material suitable for final recovery and reuse (by others). To achieve this, multiple stages of aqueous chemistry (pH control, targeted precipitation and redox reactions, temperature control) with settlement, extraction and/or filtration at appropriate stages will be utilised.

3.2.8 The processing vessels for metal recovery operations will be in a bunded building, which will include a combination of reactors and storage tanks, with filter presses.

3.2.9 For this building, a stack emission point is proposed which will be equipped with activated carbon filter in the process building, including air extraction systems via wet scrubbers to abate air exiting the building and minimise emissions into the atmosphere.

3.2.10 Emissions from this activity is considered negligible and any control measures to be implemented would be to manage the potential of acid or alkaline inorganic gases due to the nature of activities to be undertaken. Therefore, control measures are not considered further in Section 4.2 of this document.

Waste Processing 05

3.2.11 This building will house a GPD 14W 190 Single Condenser paddle dryer or similar which will be used to further treat inorganic wastes having gone through the physico-chemical treatment before final recovery or disposal where applicable. It will also be used to store feedstocks such as filter cakes, etc. for drying and dusty residues.

3.2.12 This activity will be conducted within an enclosed building which will have a stack emission point that will be equipped with a dust/carbon filtration system responsible for removing fugitive dust or VOCs prior to release into the atmosphere.

3.2.13 The emission of dust and particulate is not expected from this building because the drying unit will be enclosed, however there is the likelihood of the warming of wastes which may result in the release of some gases giving rise to the building being maintained under negative pressure, with activated carbon being used to clean the air removed as a precautionary measure. Therefore, control measures are not considered further in Section 4.2 of this document.

Waste Processing 06

3.2.14 The treatment of aqueous wastes (either liquid or solid form), including the preparation and conditioning of air pollution control residues (APCr), etc. will be carried out within this area, which will consist of a group of enclosed self-bunded buildings. The wastes brought to the site for the purpose of this treatment may include packaging materials, bulk liquids, or powdered solids. Each type of waste may undergo an individual treatment stage or a combination of multiple stages, depending on the specific waste, to maximise recovery and disposal where applicable.

3.2.15 The potential for dust and particulate emissions from the processing of Air Pollution Control (APCr) derived wastes from Energy from Waste facilities, cement kilns and similar, is considered negligible since the mixing of APCrs with reagents will be in enclosed equipment within buildings. These buildings will have two stack emission points which will be equipped with activated carbon filters, and a scrubber, responsible for discharging abated air into the atmosphere.

3.2.16 Tank storage for dusty/powdery powders will be equipped with self-cleaning fabric filters where captured dusts will be returned to the storage tank or removed. Therefore, control measures are not considered further in Section 4.2 of this document.

Waste Processing 07

3.2.17 The leachate and aqueous waste treatment activities will be a self-contained treatment operation carried out within fully bunded areas. There are three distinct processing activities:

- Membrane filtration, reverse osmosis and ultrafiltration with the potential for nanofiltration, all of which are undertaken in a building, the equipment is sealed with no open vessels;
- Ammonia stripping and scrubbing, and associated storage of the recovered aqueous ammonia solution; and
- Biological treatment of landfill leachate and similar biodegradable wastes, where 5 and 6 practical, waste substituting for reagents.

3.2.18 The proposed leachate and aqueous waste treatment area will have a stack emission point and an air handling unit which will be equipped with carbon filter, responsible for regulating and distributing air throughout the building.

3.2.19 Due to the nature of materials that would be treated in this area, control measures are not considered further in Section 4.2 of this document.

Waste Storage 02

3.2.20 This is an open sided building, that is fully bunded and intended to serve as the packaged waste recovery (potentially dusty) storage building. Here waste will be stored containerised to prevent dust from escaping. The capacity of this building is roughly 500 PEq. and waste will be stored to a maximum height of 3m to minimise drop height.

3.2.21 **Section 4** of this report provides the proposed control measures for the activities that have been identified in this section having the highest potential to generate dust and particulate emissions, with particular attention to RDF processing and shredding operations.

3.3 On-Site Dust Sources

3.3.1 Fugitive dust could give rise to visible dust being observed crossing the site boundary which can pose a human health risk and nuisance to workers and human receptors beyond the site boundary, including nuisance caused by dust deposition on surfaces at sensitive receptors.

3.3.2 Dust and particulates can be generated from dry loose waste 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.

3.3.3 Potential dust sources due to the proposed waste activities have been identified and listed below (see **Table 3** for details):

- Delivery of wastes to site;
- Loading and unloading of waste materials and stockpiles;
- Vehicle movements;
- Processing of waste including shredding;
- General handling of waste;
- Particulate emissions from the exhausts of mobile plant;
- Windblown action across site surfaces and stockpiles.

3.3.4 Further details of the control measures proposed are provided in **Section 4**.

3.3.5 The stages of the operations considered to have the highest risk of dust and their proposed control measures are as detailed in Table 3 below:

Table 3: Potential Dust Emissions and Mitigation

Potential Dust Source	Receptor	Pathway	Control Measures
HGVs travelling on A645 Weeland Road and site roads.	Human population in nearby residential properties located west / southwest of site. Workers and patrons of nearby commercial/industrial premises inc. at: Fernley Green Industrial Estate. Users of public and domestic roads and footpaths nearby. Wildlife in nearby woodlands and habitats, including flora and fauna.	Tracking dust on wheels and vehicles, then mud dropping off wheels /vehicles when dry	Remove any visible waste debris or mud from vehicles where required before vehicles leave the site. Not overloading vehicles with waste to avoid spillages and ensuring delivery and collection vehicles are covered. Good housekeeping of concrete site pavement/surface, including regular cleaning of any mud or debris accumulation to prevent tracking out onto public highway.
Shredding	As above	Airborne particulates	Shredding activity will be carried out within the relevant enclosed building, keeping roller shutter doors closed except during active use for entry/exit of vehicles. Minimise drop heights and limit them to a maximum of 3m.
Unloading dusty/powdery wastes	As above	Airborne particulates	Offloading and unloading of wastes will be carried out within the reception area of the relevant enclosed buildings, or in the case of tankers, by direct discharge into the receiving silo fitted with appropriate filtration equipment for the displaced air. Most potentially dusty wastes will be packaged/arrive at site in sealed containers. Where buildings are in use roller shutter doors will be closed except during active use for entry/exit of vehicles. Minimise drop heights and limit them to a maximum of 3m.

			Use of air extraction system and filters within the buildings.
Vehicle movements on site (including empty and loaded vehicles)	As above	Airborne particulates.	Selection of low-emission mobile plant where possible and an anti-idling policy to be enforced on site to reduce emissions. Site surfaces will be subject to good housekeeping practices and regular inspections.
Exhaust emissions from delivery vehicles/mobile plant operation	As above	Airborne particulates.	Anti-idling policy in place to minimise emissions of airborne particulate from diesel/petrol fuelled vehicles. Selection of low-emission mobile plant where possible.

3.4 Off-Site Dust Sources

3.4.1 The surrounding operations in the Knottingley Waste to Resource Facility 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 Site.

3.4.2 The closest potential off-site dust sources are the adjacent commercial/industrial sites nearby, the majority of which are located to the west of the Knottingley Waste to Resource Facility e.g., Verallia UK - a glass packaging company, Fluid Pumps - a pump supplier, and Beepers – a vehicle repair shop, followed by A1 Equestrian, Pets & DIY (just on the southwestern edge) and those on the far north (NNE) i.e., Alex Pol Trans Ltd/SEB's Garage and Yorkshire Blasting & Spraying Ltd.

3.4.3 The A645/Weeland Road runs South of the site, of which users of this road could be a potential off-site dust source..

3.4.4 See Table 2 in **Section 2** above for more details of off-site dust sources.

3.5 Site Activities and Layout

3.5.1 The Permit Layout Plan ref. 5827-CAU-XX-XX-DR-V-1804 indicates the layout of the proposed areas that would be used for RDF preparation and shredding activities within the relevant Waste Processing areas (i.e., Waste Processing 01, 02 and 03) at any given time.

Reagent Deliveries

3.5.2 Some reagents used at the site may be received as powders in packages or tankers, these materials will be stored appropriately to protect the integrity of packaging or in the case of bulk in silos fitted with appropriate dust control filters. During handling and use the same dust control procedures as applied to waste shall be applied.

Waste Deliveries

3.5.3 All waste deliveries to site will be through the public highway network only, using road-going vehicles. HGVs will be utilised for waste deliveries, including articulated vehicles (walking floor trailers, tautliners, flatbed vehicles, tankers), tippers, RoRo container vehicles, skip lorries, non- HGV flatbed, enclosed or curtain-sided vehicles.

3.5.4 Potentially dusty or powdery wastes, will be brought onto site as packaged items (retail package, drums, FIBC bulk bags) or tankers, all of which will be enclosed or sealed.

3.5.5 Vehicle drivers will report to the weighbridge and undergo strict waste acceptance checks, which include a visual inspection of the waste load by trained site personnel to verify that the delivered waste matches the information provided during pre-acceptance and the waste transfer note is in order. Where a risk of dust escape is identified, e.g., from poor packaging, then the waste will be rejected from site.

3.5.6 Following visual inspection of the waste, information such as weight, etc. of the load will be recorded using the Operator's computer record system. Below is a list of the information recorded:

i. Date and time of delivery.
ii. Name and address of the waste producer.
iii. Description of waste types, including quantity.
iv. How the waste is contained.
v. Carriers name and address.
vi. Driver's name, signature, and vehicle registration number.
vii. Signature or initial of person(s) accepting/inspecting the waste.
viii. Additional handling details (e.g. notes made by the driver after inspecting the load).
ix. SIC code of the premises which produced the wastes (if relevant).
x. Waste hierarchy declaration.
xi. Information on previous treatment of the waste (if applicable).

3.5.7 The weighbridge personnel will also check that all vehicles are a registered waste carrier, any expired certificates will be advised to contact the Environment Agency.

3.5.8 If on the weighbridge, waste cannot be accurately categorised or is described incorrectly on the waste transfer note, the delivery driver will be directed to a Quarantine Area where the Site Manager or nominated deputy will inspect the waste and decide whether it will be accepted onto site or not.

3.5.9 If accepted, the waste transfer note will be updated and the delivery driver directed to the tipping area. Further visual inspections are undertaken by site operatives in the tipping area to confirm the waste load conforms to the permitted waste list.

3.5.10 Designated unloading areas are located within the relevant buildings to prevent dust and other particulate emissions leaving the site during waste delivery. In addition, the relevant waste processing buildings are equipped with air extraction and/or dust filtration for controlling airborne dust and other particulate emissions.

3.5.11 Waste delivery vehicles will be instructed to minimise dust generation during unloading or loading by employing controlled discharge methods (e.g., ensuring low drop heights).

3.5.12 All vehicles leaving site will be subject to inspection and where necessary, mud and debris stuck to the vehicle will be removed manually on site prior to leaving site to prevent drag out onto the public highway. In the event that drag-out is observed, then a road sweeper will be deployed promptly to remove any debris or other deposits on internal site surfacing to prevent drag out onto the public highway, and external roads if required.

3.5.13 See **Table 4** below for details:

Table 4: Potentially Dusty Waste Types[3]

EWC	Product description	Tonnes/week	Destination within Facility	Process
03 01 01	Waste bark and cork	<100	Waste Processing 03	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving pre-treatment of waste for incineration or co-incineration (AR14)
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04			
03 03 01	Waste bark and wood			
03 03 07	Mechanically separated rejects from pulping of waste paper and cardboard			
04 02 21	Wastes from unprocessed textile fibres			
04 02 22	Wastes from processed textile fibres			
17 06 04	Insulation materials other than those mentioned in 17 06 01 and 17 06 03			
07 01 09*	Halogenated filter cakes and spent absorbents	500	Waste Storage 02, Waste Processing 05 and 06	Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment (AR11).
07 01 10*	Other filter cakes and spent absorbents			
08 01 11*	Waste paint and varnish containing organic solvents or other hazardous substances	<20	Waste Storage 02, Waste Processing 02 and 06	Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment (AR11).
08 01 12	Waste paint and varnish other than those mentioned in 08 01 11			
19 01 07*	Solid waste from gas treatment Fly ash containing hazardous substances	500	Waste Storage 02, Waste Processing 02 and 06	Temporary Storage of hazardous waste with a total capacity >50 tonnes per day (AR1 and AR2); Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment (AR11).
19 01 13*	Fly ash containing hazardous substances			
08 01 11*	Waste paint and varnish containing organic solvents or other hazardous substances	<20	Waste Storage 02, Waste	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day

[3] All of the materials listed in this table will be delivered to site on a flatbed vehicle in palletised containers (enclosed or sheeted) or tankers and subsequently stored in containers or silos prior to treatment or transfer off site. In the case of RDF production and shredding, wastes will be stored in the designated bays within enclosed buildings prior to processing.

08 01 12	Waste paint and varnish other than those mentioned in 08 01 11		Processing 02 and 06	involving pre-treatment of waste for incineration or co-incineration (AR11)

3.6 Mobile Plant and Equipment

3.6.1 The following equipment will be used on site:

- CAT 950M loader or similar;
- Fork lift trucks;
- Loading shovel (See **Table 5** below for more details).

3.6.2 All plant and mobile equipment will undergo regular inspection and maintenance as per manufacturer's instructions, and serviced at least annually, to minimise faults or defects that may increase exhaust emissions. Staff will be trained to identify and report any faults or damage to site management immediately so remedial actions can be scheduled.

3.6.3 At the beginning of every plant operator's shift, the plant or vehicle and mobile equipment will be inspected prior to workers starting their shift in order to carry out checks and to report any defects to site management.

3.6.4 Site operations, including handling and movement of waste, will only be within site operational hours, as stipulated in the planning permission for the site.

3.6.5 All plant and equipment that is purchased/hired for the site is selected to meet all relevant legislation and statutory guidance to achieve the lowest emission standard possible, whilst still being operationally effective and finically viable.

3.6.6 An anti-idling policy is enforced on-site to ensure no mobile plant, equipment or site/visitor/delivery vehicles that have internal combustion engines are left running when stationary and/or not in active use.

Table 5: Mobile Plant and Equipment

Description	Make	TAN (Type Approval Number)	Emission Rating	Hired/owned	Is ultra-low sulphur fuel used (Yes/No)
CAT 950M Wheel loader	Caterpillar (CAT) Inc.	See comment[4]	Compliant with EU Stage IV or Stage V NRMM emissions standards.[5]	Hired	Yes.
Fork lift trucks (Diesel or LPG-fuelled)	JCB	Certified under NRMM (EU) Regulation (EU) 2016/1628	Stage V (or Stage IIIA-IV for older units)[6]	Owned	Yes
Loading shovel	Mixed fleet (e.g., Caterpillar, Volvo, JCB)	As above	Stage IV or Stage V compliant.	Owned	Yes

3.6.7 All Non-Road Mobile Machinery (NRMM) proposed to be used on site, including wheel loaders, forklifts and loading shovels, will meet the minimum of EU Stage IV emissions ratings/standards, with preference for Stage V complaint plant, in accordance with the retained UK version of the Non-Road Mobile Machinery Regulation (EU) 2016/1628.

3.6.8 All diesel-powered plant will operate on ultra—low sulphur diesel (ULSD ≤ 10 ppm sulphur) or suitable emission alternatives such as HVO where available.

3.6.9 Documented evidence of engine emissions compliance and manufacturer certification will be maintained on site and made available to the Environment Agency upon request.

[4] No single TAN applicable at machine level. Compliance is demonstrated via: engine type (i.e., CAT C7.1) approval certification under NRMM regulations and manufacturer documentation.
[5] Meets requirements of Non-Road Mobile Machinery Regulations (EU) 2016/1628).
[6] LPG units: Lower particulate emissions, compliant with relevant NRMM requirements.

4.0 DUST CONTROL MEASURES

4.1 Overview

4.1.1 As per **Section 3.2** above, this section details the control measures for the activities that have been identified as having the highest risk of dust and particulate emissions. These control measures will be implemented on site to mitigate dust and particulate emissions from site activities.

4.1.2 The abatement of dust and particulate emissions is based on the BAT Reference Document for Waste Treatment (2018) which highlights the best available techniques for such control, based upon the activities undertaken. This information, together with equipment selection and performance information from suppliers, knowledge of the waste treatment processes to be employed at the site, and of existing experience, has informed the selection of appropriate emissions control techniques to be employed at the facility.

4.1.3 The relevant buildings (i.e., Waste Processing 01, 02 and 03, and Waste Storage 02) where waste processing and storage will take place are designed to operate as far as reasonably practicable as enclosed, with air being extracted through an appropriate or precautionary emission control systems. The operation of the building, extraction and emission control system will be such as to maximise their ability to control emissions and complement waste pre-acceptance, acceptance and operational measures to minimise emissions to air.

4.1.4 Where wastes are stored in buildings in an unpackaged form, emission control equipment will be operated continuously. During times of maintenance or equipment failure, the stocks of waste will be minimised.

4.1.5 Where emission control is required for process tanks or vessels or waste treatment activities being undertaken within a building, the emission control system will be in operation. During times of maintenance or equipment failure, waste processing operations will cease.

4.1.6 Equipment will be maintained and operated in line with good practice, with appropriate monitoring and routine maintenance undertaken as applicable.

4.1.7 Compliance with the BAT Reference Document and the Appropriate Measures document has been highlighted in the appropriate documents of this permit variation application.

4.2 Control Measures for Processing Areas

Waste Processing 01 and 02

4.2.1 The activities here will be carried out within hooded areas where air is extracted to minimise the occupational health risk to employees and visitors. The extracted air will be cleaned within an activated carbon filter, which is highlighted within the BAT reference document and known in practice to be the most suitable technique for such emission control with an efficiency of removal exceeds 90%.

4.2.2 The buildings are fitted with doors, and the extraction of air maintains the buildings under negative pressure when in use.

Waste Processing 03

4.2.3 Two complementary emission control systems will be used. A recirculation system employing fabric dust filtration and carbon filtration, which acts to clean air and return it to the building and an air extraction system to remove potential nuisance odours or organic substances prior to emission to air via the emission point. The latter provides negative pressure within the building as a whole, the former allows extraction of air from specific process areas and allows air to be recirculated, and therefore minimising the need for space heating.

4.2.4 Fabric filtration for dusts is identified as a best practicable technique within the BAT reference document and is expected to achieve >95% removal of particulates. The use of activated carbon to control the emission of organic substances at low levels is highlighted in the BAT reference document as the best practicable technique. Efficiency of removal exceeds 90%. Both fabric filtration and activated carbon adsorption are the most efficient techniques available for this application.

4.2.5 The building will be fitted with doors, and the extraction of air maintains the building under negative pressure, this is maintained 24hours, 7 days each week (24/7) due to the presence of unpackaged wastes.

4.3 Control Measures for other Site Activities

Waste Acceptance

4.3.1 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 designated unloading area within the site as shown on the Permit Layout Plan ref. 5827-CAU-XX-XX-DR-V-1804. Site operatives will then visually inspect the waste load, including for dust emissions or excessive debris. Any non-conforming wastes will be assessed and, if required, rejected from site.

4.3.2 Drop heights will be minimised and not exceed 3m during the loading and unloading of materials to reduce the likelihood of dispersion of dust as a consequence of agitation. Site operatives at the point of waste receipt will conduct assessments of waste inputs and impose controls and restrictions on any wastes which are unusually dusty.

4.3.3 Delivery vehicles of potentially dusty wastes to remain sheeted until arrival at the weighbridge. They are then de-sheeted for visual checks on the weighbridge in line with EA Waste Acceptance requirements.

4.3.4 The unloading of vehicles will be supervised at all times by suitably trained site staff.

Site Traffic and Movement of Vehicles

4.3.5 All site traffic will use designated haul roads on-site. The surface of internal haul routes will be inspected daily and swept at regular intervals with any defects made-good.

4.3.6 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, they will be cleaned to reduce the build-up of materials which could be further tracked around site and released as airborne dust.

4.3.7 During extended dry periods of weather, the movements of vehicles can generate airborne dust and particulates if present on site roads, which can cause nuisance to nearby receptors. In order to minimise the generation of airborne dust on- and off-site, it is a site requirement that all vehicles entering and leaving site that are carrying potentially dusty loads are covered or sheeted.

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

- Setting a site speed limit of 10mph on site haul roads;
- Supervised loading/unloading of vehicles to avoid waste spillages;
- Ensuring even road surfacing and potholes filled;
- Regular removal of any spilled material/debris from site haul routes;
- Dust suppression equipment will be available (e.g., tractor and bowser or similar) to dampen down dusty loads and roads; and,
- Dust suppression by regular dampening down in dry conditions.

4.3.9 Good general housekeeping on site will be maintained by site operatives and checked by the technically competent Site Manager daily, with any spillages of potentially dusty wastes on site roads to be cleared as soon as practicable and vehicles leaving site checked for any tracked mud or debris that could be stuck to wheels and removed prior to exiting the site. As all potentially dusty waste will be stored and/or processed within a building or covered structure the potential for dust from site roads is low.

4.3.10 On-site vehicle speed limits of 10 mph will be imposed on the haul roads. This will be enforced to minimise the potential for vehicle movements to generate dust. An Anti-idling policy will be in place for vehicles and mobile plant to reduce emissions including noxious gases, particulates and dust.

4.3.11 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.

4.3.12 Any malfunction or breakdowns of plant will be dealt with in accordance with the relevant Plant Breakdown Procedure and operations will be modified or suspended until normal working conditions can be restored.

4.3.13 The Site will maintain a store of spares for commonly required items to minimise downtime.

Loading and Tipping Operations

4.3.14 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 but limited to a maximum of 3m to minimise uncontrolled dust emissions and supervised by trained site staff. Vehicles will be loaded evenly and not be overfilled to prevent spillages.

4.3.15 As mentioned in **Section 3.1.7** above, the proposed waste treatment activities, including waste reception for RDF processing and shredding activities will be undertaken within enclosed buildings/covered structures (i.e., Waste Processing 01, 02 and 03) which will be maintained under negative pressure and equipped with air extraction systems and filters, including the implementation of good housekeeping (such as shutting doors, windows, etc.) where applicable.

Materials Storage and Processing

4.3.16 The Waste Processing 01 and 02 buildings will both have two separate areas, one will be used for storing the waste materials prior to processing (i.e., shredding), and the other is where processing will be carried out, all will take place within the enclosed building. Storage areas (i.e., bays) will have a capacity of 400 PEq.

4.3.17 The enclosed Waste Processing 03 building will have two separate areas, one processing area housing the shredders and, a second receipt and storage area. The receipt and storage area will have three waste storage bays (designed as 3-sided concrete bays with 4.8m high walls) each with effective capacity of approx. 300 m^3.

4.3.18 The open-sided Waste Storage 02 building will have a capacity of up to 500 PEq which will be used to store packaged waste recovery materials in containers.

4.3.19 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.

4.3.20 As mentioned above, RDF processing and shredding activities will be undertaken within enclosed buildings (i.e., Waste Processing 01, 02 and 03), including additional storage which will be maintained under negative pressure and equipped with air extraction systems and filters, including the implementation of good housekeeping (such as shutting doors, windows, etc.).

4.3.21 All movement of materials will be conducted during the normal site operational hours.

4.3.22 Daily site checks will be undertaken and recorded in accordance with standard operating procedures. Any issues identified during checks shall be reported to the Site Manager and remedial actions instigated. The daily site checks will include visual inspections for dust, as well as good housekeeping of site surfaces and all plant and equipment identified in **Table 5** below.

4.3.23 Any malfunction or breakdowns of plant will be dealt with in accordance with the relevant plant breakdown procedures in place at the site and operations will be modified or suspended until normal working conditions can be restored.

4.3.24 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 in discussion with the technically competent Site Manager, until more suitable conditions pertain, or until effective dust control measures are implemented.

4.4 Other Considerations

Water Usage/Availability

4.4.1 Whilst it is not envisaged that there will be the requirement for dust suppression due to the nature of the wastes accepted and the enclosure of the proposed waste treatment activities on site, an adequate water supply for dust suppression will be maintained via the repurposed surface water collection tank which has a capacity of 1000 T, providing adequate water supply for dust suppression at the site whenever this is required. It is anticipated that only small amounts of water will be used, which could be higher in the summer months due to prolonged hot dry conditions. The use of additives in the water used for dust suppression is not proposed.

4.4.2 Excessive water usage in dust suppression will be avoided by continuous monitoring of the site conditions by site operatives during active dust suppression using stored water from the surface water collection tank, and checking the site is not becoming flooded or excessive standing water is present. All water will pass through existing drainage into the site's surface water collection system.

4.4.3 The use of water for dust suppression will be managed by Site Management and trained site operatives to ensure excessive water is not used and is proportionate to the dusty conditions at the time.

4.4.4 The site operatives can access all parts of the site with the hose extension attached to the pipework of the repurposed surface water collection tank to allow dust suppression to be undertaken if required. In rare circumstances where there is a water shortage or drought that could affect water supply, and dust emissions are considered to be an issue at the site, the operator will source mobile bowsers of clean water for use in dust suppression at the site. No potentially dusty activities will be undertaken at the site if no dust suppression water is available and the potential for dust emissions will be monitored closely by the Site Manager and trained site operatives.

4.4.5 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 or hot conditions to reduce the risk of airborne dust emissions.

4.4.6 A road sweeper may be hired if required to remove any debris or other deposits from adjacent highways if debris is tracked off-site by vehicles.

5.0 MONITORING PLAN

5.1 Overview

5.1.1 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 undertaken.

5.2 Dust and Particulate Emissions Monitoring

Visual Monitoring of Dust Emissions and Deposition

5.2.1 Four dust and particulate monitoring points are proposed, as shown on drawing ref. 'Noise and Dust Monitoring Plan' 5827-CAU-XX-XX-DR-V-1810.

5.2.2 Site staff will visually monitor general operations on site likely to cause airborne dust and particulate emissions as part of site walkover. 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).

5.2.3 As part of the daily site checks, appropriately trained and experienced site personnel will carry out an on-site inspection to monitor dust and particulate emissions, which shall be recorded on the 'Visual Dust Monitoring Check Sheet' (**Appendix 1**). The records of the site daily checks will be made available to the Environment Agency on request.

5.2.4 In the case of a dust emission being reported, the below information will be recorded in FCC online database:

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

5.2.5 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 smothered with dust (e.g., trees/vegetation and cars).

5.2.6 In the event that dust emissions are observed to be crossing the site boundary or surfaces are becoming smothered, Site Management will be informed immediately and the approximate location and extent of the dust, or deposition, assessed and site operations reviewed and remediated. See **Section 6** for further details.

Quantitative Monitoring

5.2.7 PM_{10} monitoring is not proposed due to the location of the site (not within an AQMA) and the distance from sensitive receptors.

5.2.8 In the event of receipt of substantiated complaints of dust or particulate pollution from the site, the operator will carry a detailed investigation to ascertain the source of the pollution (whether it is from dust/particulate sources on site), sources of dust/particulates beyond the site boundary, background sources affecting the whole region, or more local sources), followed by collecting representative, real time optical particulate monitoring using indicative MCERT standard equipment or similar. Data will then be compared against the Environment's Agency recommended 75ug/m^3 over a 6 consecutive 5-minute average readings. Depending on the outcome of the investigation, a report will be sent to the Environment Agency for further action.

5.2.9 Monitoring at the site will therefore consist of the following as shown in Table 6 below:

Table 6: Monitoring Overview

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring • windspeed and direction • temperature • relative humidity • precipitation • atmospheric pressure	Online meteorological reporting service.	Checked at start of each working day.
Visual Dust Monitoring	Visual monitoring for dust as part of daily site inspections at the site locations shown in the Noise and Dust Monitoring Plan ref. 5827-CAU-XX-XX-DR-V-1810.	Daily on-site checks, or additional checks following dust complaints, or during prolonged dry or windy conditions.
Complaints Monitoring	Logged in FCC online database in accordance with complaints procedure.	Ad-Hoc.

5.3 Meteorological Monitoring

5.3.1 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 be recorded as part of daily site checks.

5.4 Reporting

5.4.1 The results of any dust monitoring will be reviewed regularly, and the findings of each review will be recorded. If airborne dust or particulates are reported as being a nuisance or complaints are received, an investigation will be carried out into the potential causes and appropriate actions will be taken to improve dust management measures where the waste processing activities (i.e., RDF production and shredding) are identified as the cause of the exceedance. This Dust and Emissions Management Plan will be reviewed regularly and updated accordingly following the outcome of any investigations. The results of the monitoring and the associated reviews will be available on request to the Environment Agency or reported in accordance with permit requirements.

6.0 EMISSIONS ACTION PLAN

6.1 Overview

6.1.1 In the event that site monitoring detailed in **Section 5** 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 operations giving rise to the emissions.

6.2 Dust Emissions Event Procedures

6.2.1 The following actions will be undertaken as part of the Action Plan, should unacceptable dust and/or particulate emissions be identified or 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;
- Review of the results of the quantitative dust monitoring;
- Carry out a review of the operational procedures and controls and instigate any control measures immediately following identification of the problem;
- Further visual and quantitative monitoring will be carried out as determined by the technically competent Site Manager to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

6.2.2 In the event that dust emissions are observed to be crossing the site boundary or surfaces (such as trees/vegetation and cars) external to the site are becoming smothered, 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.

6.2.3 Where the dust is identified as due to road movements, 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, site activities in the area of concern will be suspended until the affected area has been dampened with sufficient water preventing emissions to air.

6.2.4 If airborne dust emissions are the result of waste processing operations, these will cease to allow remedial action to be taken. If the release is due to equipment failure or faulty items of plant, then the associated operations will cease to allow repair or replacement such that dust

control is maintained. As part of plant maintenance, records will be made of repairs or replacement parts. Rolling “key” spares on site will be readily available for replacement or repairs.

6.2.5 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 technically competent Site Manager 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.

6.2.6 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.

6.2.7 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.

6.2.8 Waste storage and processing procedures will be reviewed, and additional controls imposed, as deemed necessary by the technically competent Site Manager.

6.3 Responsibilities

6.3.1 Site Management shall be responsible for the satisfactory working of the whole site and operations, ensuring full compliance with this DEMP. 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.

6.3.2 It is the responsibility of the Site Manager and/or nominated deputy for ensuring the DEMP is distributed to site staff/contractual staff. This is achieved through Site Inductions, refresher (annual) Site Inductions and Toolbox Talks (or equivalent) which will be delivered by the Site Manager/nominated deputy.

6.3.3 It is the responsibility of the Site Manager to implement this DEMP and ensure that dust control measures are being implemented across the site. It is also 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 and to ensure dust control measures are implemented and any dust emissions identified are reported immediately to site management.

6.3.4 Site Management/Nominated Deputy will be responsible for daily visual checks which will be carried out as part of their normal operational procedures for 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.

6.3.5 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.

7.0 ENGAGEMENT WITH NEIGHBOURS

7.1 Complaints Procedure

7.1.1 As part of this Dust & Emissions Management Plan (DEMP), engagement with the neighbours will be undertaken. Prevention of dust and particulate emissions is viewed as the most effective means of controlling dust before an impact or complaint occurs.

7.1.2 Any complaints received at the site are likely to be directed to the Operator, who is willing to deal directly with the complainants, however complaints could also be received through the Environment Agency or Local Authority. Where necessary the following can be implemented:

- Information can be provided to the local neighbours (via the Environment Agency) regarding the point and method of contact for the Facility in the event that fugitive dust or particulates have 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 implemented;
- Complainants can be advised of any corrective action and a follow up call carried out 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 below and in accordance with company management procedures.

7.1.4 In the event of a dust complaint being received by the Local Authority or the Environment Agency (EA), the complaint is passed to the Operator for investigation, and a response to the complaint is provided, typically within 48 hours, but could vary depending on the complaint.

7.1.5 The FCC EcoOnline database is already in place as part of the company's accredited environmental management system and includes reporting to the EA of the findings of any investigations into emissions complaints. The following details will be recorded for a complaint received at the site:

- 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 form;
- Actions taken to resolve complaint or investigate complaint further;

- Depending on the severity, the complaint can be escalated to Senior Management for further investigation if necessary.

7.2 Staff Training

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

7.2.2 Under 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 and particulate emissions and management procedures. Emphasis will also be given to plant and equipment malfunctions and abnormal conditions that could give rise to dust or particulate emissions.

7.2.3 The staff will be trained to visually inspect for airborne dust emissions on-site and to check if emissions are leaving the site boundary. Staff will be instructed to report fugitive emissions to the Site Manager with immediate effect.

7.2.4 Staff training records will be updated with training in dust control measures and stored to allow for central electronic storage and will be accessible from the Site Office.

7.3 Record Keeping and Reporting

7.3.1 The Dust Management Plan will be stored as hardcopy within the Site Office and on the company computer system.

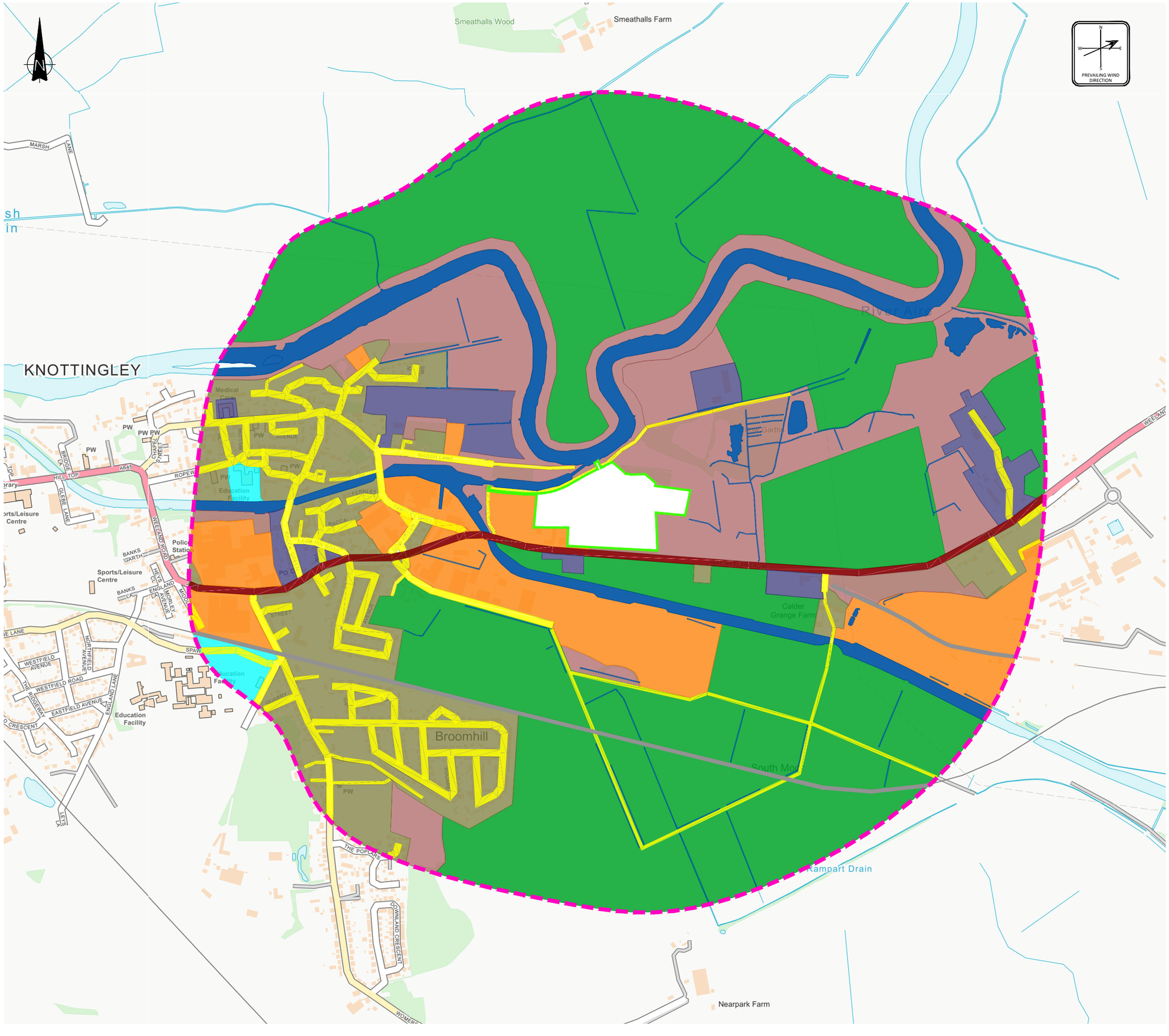
7.3.2 The procedure for recording via the FCC EcoOnline database will be undertaken as detailed above. All information is recorded digitally and maintained within a digital database. All information can be accessed via computer within the Site Office and will be made available to the Environment Agency on request. This record keeping already forms part of the Site's Management System.

7.4 Dust & Emissions Management Plan Review

7.4.1 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 the outcome of any investigations into validated complaints at the site, or if there are relevant changes in the site operations or procedures.

DRAWINGS

5827-CAU-XX-XX-DR-V-1800 Sensitive Receptor Plan
5827-CAU-XX-XX-DR-V-1804 Permit Layout Plan
5827-CAU-XX-XX-DR-V-1810 Noise and Dust Monitoring Plan



LEGEND

- PERMIT BOUNDARY
- 1000m OFFSET
- SURFACE WATER
- WOODLAND / SCRUBLAND
- COMMERCIAL / LEISURE
- EDUCATIONAL FACILITY
- INDUSTRIAL
- RESIDENTIAL
- MAJOR ROAD
- MINOR ROAD
- RAIL

REV					
P03	LEGEND UPDATED	EJD	JC	JC	06.08.25
P02	PERMIT BOUNDARY UPDATED	EJD	JC	JC	09.07.25
P01	ISSUED FOR INFORMATION	EJD	ER	ER	16.04.24
REV	MODIFICATIONS	BY	RE	AP	DATE

PURPOSE OF ISSUE: FOR INFORMATION

STATUS: S2

CLIENT: FCC Environment

PROJECT:

KNOTTINGLEY WASTE TO RESOURCE FACILITY

TITLE:

SENSITIVE RECEPTOR PLAN

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	ER	ER

DATE	SCALE @ A3	JOB REF:	REVISION
16.04.2024	1:10000	5827	P03

DRAWING NUMBER: 5827-CAU-XX-XX-DR-V-1800

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RIVER AIRE

DISCHARGE

STOCKING LANE

TRUNDLES LANE

Surface Water Storage

Waste Processing 07

EP07

P07-ZP-01

INT 01

Sewer Connection

Effluent

Waste Processing 02

EP02

P02-ZP-01

Waste Storage 02
(packaged only)

S02-ZS-01

General Storage 01

GS1-OS-01

General Storage 02

GS1-ZS-02

Packaged
Waste
Offloading
Area

Tanker
Holding
Area

Waste Processing 06

INT 02

EP26

EP06

EP16

P06-ZP-11

P06-ZP-21

P06-ZP-31

Surface Water Storage

INT 03

Waste Processing 03

EP03

P03-ZP-01

Waste Storage 01

S01-OS-01

Reception
Area

EP05

Diesel

EP11 EP01

Waste Processing 01

P01-ZP-01

Weighbridge

Waste Processing 05

P05-ZP-01

EP08

B01-ZP-01

EP18

B01-ZP-02

Boiler Complex

MANOEUVRING

FIRE TANK

SUB

SUB

PUMP HOUSE

YE Equipment
Transformer

Switchroom

Weighbridge

Switchroom
Transformer
YE Equipment

Offices and Labs

EP14

EP24

EP04

P04-ZP-01

INT 04

WEELAND ROAD

Gas Main

Water Main

Waste Processing 04

Water Main

NOTES

1. DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN METRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND

- OWNERSHIP BOUNDARY
- PERMIT BOUNDARY
- H — HYDRANT

REV	MODIFICATIONS	BY	RE	AP	DATE
P03	LEGEND AMENDED	EJD	JC	AS	06.08.25
P02	HYDRANTS ADDED TO DRAWING	EJD	JC	AS	28.07.25
P01	ISSUED FOR INFORMATION	EJD	JC	AS	10.07.25

CLIENT: FCC Environment

PROJECT: KNOTTINGLEY WASTE TO RESOURCE FACILITY

TITLE: PERMIT BOUNDARY PLAN

PURPOSE OF ISSUE	STATUS
FOR INFORMATION	S2

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	JC	AS

DATE	SCALE @ A1	JOB REF:	REVISION
10.07.2025	1:750	5827	P03

DRAWING NUMBER: 5827-CAU-XX-XX-DR-V-1804

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2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND

- OWNERSHIP BOUNDARY
- PERMIT BOUNDARY
- BUILDINGS
- ND — NOISE AND DUST MONITORING LOCATION

REV	MODIFICATIONS	BY	RE	AP	DATE
P01	ISSUED FOR INFORMATION	EJD	JC	AS	21.04.26

CLIENT: FCC Environment

PROJECT: KNOTTINGLEY WASTE TO RESOURCE FACILITY

TITLE: NOISE AND DUST MONITORING PLAN

PURPOSE OF ISSUE	STATUS
FOR INFORMATION	S2

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	JC	AS

DATE	SCALE @ A1	JOB REF:	REVISION
21.04.2026	1:750	5827	P01

DRAWING NUMBER: 5827-CAU-XX-XX-DR-V-1810

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APPENDIX 1

Visual Dust Monitoring Check Sheet

Caulmert
engineering environmental planning

Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG
Tel: 01248 672666
Email: contact@caulmert.com
Web: www.caulmert.com

Site Name: _____

Permit Number: _____

Date: _____

Weather Conditions: _____

Wind Direction: _____

Monitoring Staff Member : _____

Inspection Record

Time	Area / Activity Observed	Dust Observed? (Y/N)	Description of Dust	Action Taken	Further Action Required (Y/N)
	Waste Reception / Deliveries				
	Processing Area				
	Storage Areas / Stockpiles				
	Loading / Dispatch				
	Site Roads / Traffic Routes				
	Site Boundary				

Boundary Monitoring

Location Checked	Dust Crossing Boundary? (Y/N)	'Any other Emissions Noted'	Action Taken

Trigger Levels and Actions

Observation	Required Action
No visible dust	Continue operations and routine monitoring
Minor dust within site	Increase housekeeping / damping down
Visible dust leaving activity area	Apply suppression immediately and review activity

Dust crossing site boundary	Stop activity if necessary and inform manager
Persistent or significant dust	Suspend operations and investigate

Comments / Additional Observations:

_____

_____

Monitoring Staff Member Signature: _____

Supervisor Review: _____

Date: _____

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