

Chelmsford WTS

Regiment Business Park, Eagle Way, off Essex Regiment Way, Little Waltham, Chelmsford, CM3 3FY

Permit reference KB3036RR

EMISSIONS MANAGEMENT PLAN (EMP)

Version	Date	Change Reason	Pages	Drafted	Authorised
0.1D	19/02/ 2026	New document	All	DNW	
0.90D	25/02/2026	Drafting 90% complete	All	DNW	
0.99D	26/02/2026	Updated awaiting revised drawings from consultancy.	All	DNW	
1.0F	02/03/2026	Updated drawings inserted	All	DNW	

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Introduction

Location

This Emissions Management Plan (EMP) details the operations currently undertaken at the Chelmsford Waste Transfer and Waste Treatment site located at Regiment Business Park, Eagle Way, off Essex Regiment Way, Little Waltham, Chelmsford, CM3 3FY (Site).

The Site is not located within 500m of either a European Site, Ramsar site or a Site of Special Scientific Interest nor are operations at the Site carried on within 50m of any well, spring or borehole used for the supply of water for human consumption.

Operator

The Site is operated by Dunmow Skips Limited trading as Dunmow Group (company number: 04300744) (Operator) the Environmental Permitting (England and Wales) Regulations permit for the site is EPR/KB3036RR.

Originally the permit was made in the name of Kart-A-Way Waste Management Services Limited to Permit Reference EPR/HP3294EZ. The permit was transferred to Dunmow Skips Limited effective from the 18th of September 2012, and the permit reference was changed from EPR/HP3294EZ to EPR/KB3036RR at the time of the transfer.

Site Detail

The Site address is Dunmow Group, Chelmsford Site, Regiment Business Park, Chelmsford, Essex CM3 3FY.

The Site comprises of an impermeable concrete surface with sealed drainage and is bounded by the Operator's Metal Recycling Site to the south and west, and by Marlborough Highways Head Office to the South. To the north and east the site is bounded by Channels Park, the site is circa two to three metres below the ground level of Channels Park.

Site Layout Plan & Drainage

The site structures comprise of:

- Site weighbridge office with three adjacent weighbridges.
- Main processing building to the northeast.
- Welding workshop to the northeast.
- Plant maintenance building to the southwest.

Site access/egress is via the weighbridges for vehicles, and adjacent footpaths for pedestrians.

Plant and vehicle-wash, including a double-bunded diesel tank used for the refuelling of the Operator's mobile plant and vehicles are located in the adjacent Operators Metal Recycling Site.

Outline of Activities on the Site

The storage and processing activities carried out on at the Site include the sorting and storage of mixed wastes and some segregated-at-source wastes.

The Site has a total capacity to handle up to 150,000 tonnes of waste per annum.

Local Authority

The site is in the local authority of Chelmsford City Council, which is a district-level authority within the county council area of Essex County Council.

Air Quality Management Area

There are no air quality management areas (AQMA) within 5km of the site. Previous AQMAs in the Chelmsford area having been revoked in 2011, 2020, 2024, and 2025.

Abatement Controls

Mixed waste processing is carried out with the depot building. There are misting systems operational during times that dust may be raised by the processing, and there are wash-down hoses that can be used to suppress a dust arising from an unexpectedly dusty load.

Wood is chipped in the yard under the cover of a canopy, and the chipped wood is transferred by conveyor belt to a storage bay that is also covered by a canopy. The yard has wash-down hoses that can be used to suppress any dust that may arise.

The new plant within the depot building has been designed to ensure that incoming waste is tipped away from the entrance doors to the building, thus ensuring that if any dust is raised is it away from the entrance and so is unlikely to escape the building. By having the mixed waste processing within a depot building emissions of noise, liquids, odours and litter are contained. The site has a sealed drainage system, so any liquids released, or contaminated water is directed to an interceptor and then to a surface water lagoon.

Wood chipping is undertaken in the yard under the cover of a canopy. Being within the canopy, noise, dust and odours are contained and managed. The chipping bay is at least 14 metres from any site boundary. The yard bays with wood all have canopies and are stood-off from the site wall to allow for behind-the-bay cleaning.

Planning Restrictions

The site has planning permission with requirements, those relevant to this EMP are:

- The surfaced section of the estate between Essex Regiment Way and the depot must be kept free of mud, dust and detritus. Dunmow operates a street sweeping machine to ensure the roadway is maintained clean, this is a benefit to other estate businesses whose activities may also cause contamination of the estate road surface.
- Access and the site yard are to be sprayed with water during dry phases throughout the year. Dunmow has installed a number of wash-down hoses around the site, these are used in dry phases, and the usage is recorded in the site diary that is maintained by the technically competent manager.
- No material to be stacked over 6 metres high. Dunmow, in compliance with the Fire Prevention Plan do not stack material above 4 metres high.
- Outside stockpiles to be dampened when dust is likely to arise. Dunmow has installed a number of wash-down hoses around the site, these are used in dry phases, and the usage is recorded in the site diary that is maintained by the technically competent manager.
- No loaded vehicles to leave the site un-sheeted. Dunmow ensures that all vehicles leaving the site are checked at the "Out" weighbridge to ensure they are sheeted if loaded.
- No skips stacked to a height exceeding 3 metres from existing ground level. Dunmow's technically competent manager carries out daily site inspections, an element of which is to ensure that skips are stacked safely. Any exceedances are recorded in the site diary.
- Plant and machinery to have operational silencers. Dunmow maintains all diesel-powered equipment to the manufacturer's requirements including ensuring that silencers are fully operational.
- A lighting scheme is required and must be followed. Dunmow has installed lighting in compliance with the approved scheme and maintains the lighting in a working condition.
- Surface water drainage to follow the approved scheme. Dunmow maintains the surface water sealed drainage system, this collects all surface water, passes it through an interceptor and holds it in a surface water lagoon.
- Noisy activities occurring externally to the depot building should not occur before 7am. Dunmow ensures that no operational activities are permitted before 7am each day.
- Operational hours of the site are limited to 6am to 6pm Mondays to Fridays and 6am to 1pm on Saturdays. No operating is permitted on Sundays or bank/public holidays. Dunmow records operational hours in the site diary to ensure continued compliance.
- Heavy good vehicle movements are restricted 400 (200 in and 200 out) per working day, Monday to Friday, and 300 (150 in and 150 out) on Saturdays. Dunmow records all heavy goods vehicles both in and out via its software system "Weighsoft".

This document sets out how Dunmow will manage any and all emissions from its site and is the process document to be used by site operating staff to ensure that all emissions are fully and correctly controlled.

This EMP is for the depot operational staff and forms an annex to the depot Environmental Management System (EMS) and works alongside the depot Fire Prevention Plan (FPP) as a means of ensure the depot operates in compliance with all governing legislation and follows all relevant guidance.

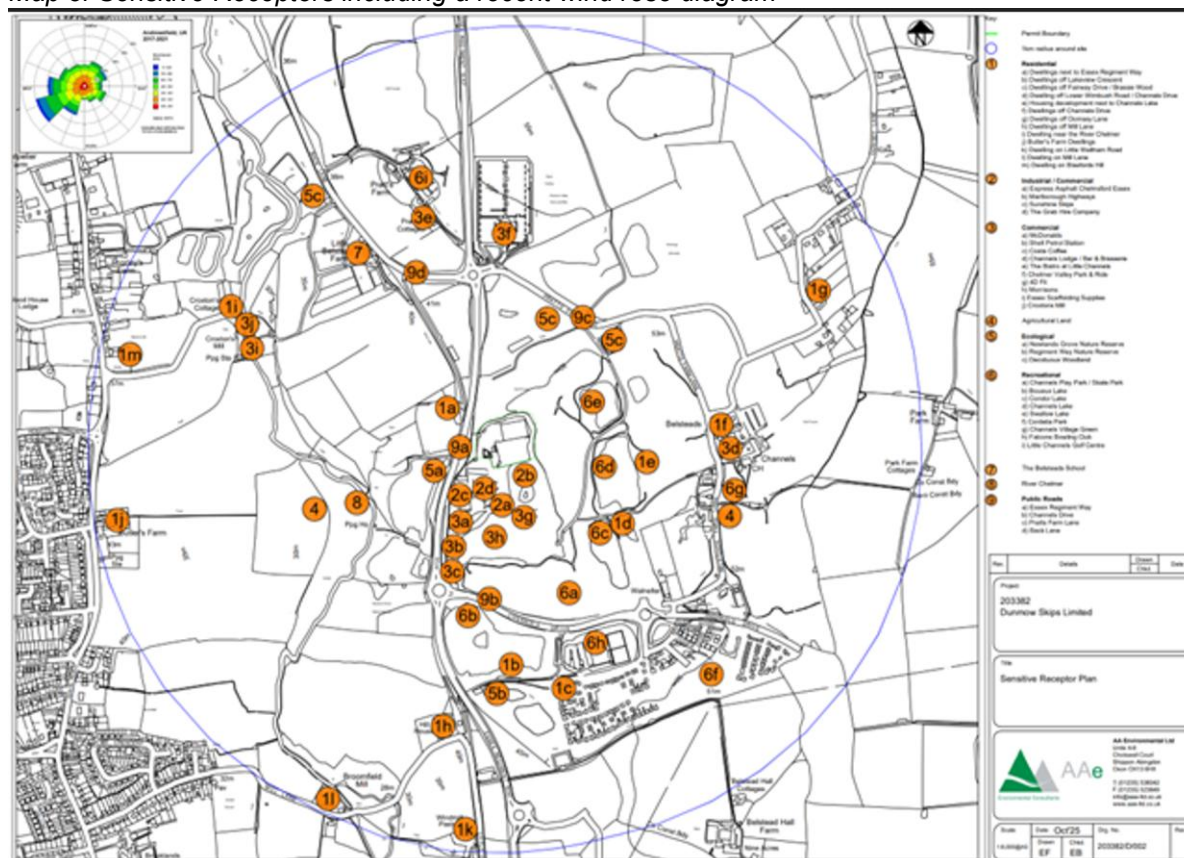
Sensitive Receptors

These sensitive receptors are within 1000 metres of the site;

Housing		
Location	Sensitivity	Distance from site boundary
Essex Regiment Way	Medium	100m to west
Lakeview Crescent	Medium	500m to south
Fairview Drive	Medium	550m to south
Channels Drive	Medium	400m to east
Channels Lakes	Medium	500m to east
Channels Drive	Medium	600m to east
Dornsea Lane	Medium	900m to northeast
Mill Lane	Medium	500m to east
River Chelmer	Medium	600m to south
Farm houses	Medium	800m to northwest
Little Waltham Road	Medium	900m to west
Mill Lane	Medium	1000m to south
Little Blasfords Hill	Medium	1000m to southwest
Commercial / Industrial		
Holcim Asphalt	Low	40m to the south
Marlborough Highways (solar panels to roof)	Medium	40m to the southeast
Dunmow Group Head Office)	Medium	100m to the south
Mid-Essex Recycling	Medium	20m to the south
McDonalds	Medium	120m to the south
Shell	Medium	150 to the south
Costa	Medium	200m to the south
Channels Lodge	Medium	600m to the east
Bistro Little Channels	Medium	500m to the northwest
Park and ride	Low	500m to the north
Gym	Low	150m to the southeast
Morrisons, Subway and Greggs	Low	120m to the south
Essex scaffolding	Low	200m to the south
Croxtons mill	Low	750m to the north west
Agricultural		
Farmland	Low	160m to the northwest 450m to the north 620m to the east
Ecology		
Newland Grove Nature Reserve	Low	300m to the southeast
Regiment Way Nature Reserve	Low	600m to the south
Deciduous woods	Low	275m to the north 300m to the northeast 750m to the northwest
River Chelmer	Medium	250m to the west
Recreational Areas		
Channels play and skate park	Medium	420m to the southeast
Beaulie park	Medium	460m to the south
Condor lake	Low	300m to the southeast
Channels lake	Low	400m to the east
Swallow lake	Low	400m to the northeast
Cordiala park	Low	600m to the southeast
Channels village green	Medium	600m to the east
Falcons bowling club	Low	800m to the southeast
Little Channels Golf Centre	Low	750m to the north
School		
Belsteads school (school for children with social, emotional and mental health difficulties)	Medium	530m to the northwest
Public Highways		
Essex Regiment Way	Medium	100m to the east
Channels Drive	Low	300m to the south

Pratts Farm Lane	Low	300m to the north
Back Lane	Low	500m to the north

Map of Sensitive Receptors including a recent wind rose diagram



Sources of Dust, Liquid, Odours, Noise and other Emissions Locally

Company	Likely Emissions	Address	Type of Business	Distance from Dunmow site boundary (m)
Marlborough Highways	Dust from lorries on unmade ground to rear of offices.	Eagle Way, Chelmsford, CM3 3FY	Highways maintenance	40
Holcim Asphalt	Odour and Noise from the production and loading of asphalt.	Eagle Way, Chelmsford, CM3 3FY	Asphalt production company	40
Mid Essex Recycling Centre	Noise from metal recycling.	Eagle Way, Chelmsford, CM3 3FY	Metal recycling	10

Site Operations

The site is operated by Dunmow Skips Ltd. trading as the Dunmow Group. Site address is Dunmow Gorup, WTS, Regiment Business Park, Eagle Way, Chelmsford, Essex, CM3 3FY.

The site is a permitted waste treatment and waste transfer site and primarily deals with waste from the demolition and construction sector. The site also accepts waste that is from the commercial and industrial sectors including municipal sources.

The site plan is shown in appendix A.

All waste and recycling arriving at the site does so in lorry's that are either covered or sheeted. In-coming material is primarily in 4-wheel skip lorries, with other material received via 8-wheeled roll on/off and 8-wheeled grab lorries. A lesser amount is received from our other trading bases nearby (Clacton and Colchester) in articulated vehicles. All vehicles in our fleet are Euro6 complaint.

Some material is received from customers in their own vehicles, almost all being 4-wheeled vehicles. The vehicles are always sheeted/covered. The nature of the vehicles our customers use is that they are reasonably new so the majority will be Euro6 complaint.

The containers on the lorries coming to site are generally skips, a small number of these are enclosed skips, with the majority being open skips. The lorries have automatic sheeting systems to ensure all waste covered during transportation. The vehicles also carry manual tarpaulin sheets in case the automatic sheeting systems fail, so the load will always be covered.

All waste received on site is recorded in the Weighsoft 5 skip management software and this includes the details of the vehicle bringing the material to the site.

All customer vehicles arriving at the site are met at the weighbridge and are handed a copy of the Site Rules. From the weighbridge the vehicle passes to the Waste Reception holding area, where a waste receptionist discusses their material with them to ensure they are directed to the correct tipping area; at this point if a dusty load is identified it will be either allowed to tip indoors, or will be rejected from the site as the site is not permitted to accept material that is a dust.

Mixed wastes are tipped within the transfer station building as they require processing to segregate the materials that are mixed. Single fraction loads are generally tipped in the appropriate outdoor waste accumulation bay. Outdoor waste accumulation bays where dusts may be generated are covered and the site has abatement processes to manage any potential emissions.

Table of typical incoming waste types brought to site.

EWC Code	Product	Indicative tonnes per week	Destination in WTS and associated process				Emissions Risk
			Outdoor non-tipping vans bay. Added to indoor processing feedstock by Dunmow Group.	Outdoor accumulation bay for specific product	Indoor processing feedstock	Outdoor chipping feedstock	
20 01 38	Green waste	15		Added to stock in bay.			Low
17 08 02	Gypsum / plasterboard	80		Added to stock in bay.			Medium
17 01 07	Hardcore	52		Added to stock in bay.			Medium
17 09 04	Mixed construction	1502			Added to in-feed stock for processing.		Medium
17 04 07	Mixed metal	4		Added to stock in bay.			Low
17 05 04	Muck-away	4		Added to stock in bay.			Low
17 02 01	Mixed wood	150		Added to stock in bay.		Added to stock in bay.	Medium
20 03 07	POPs/WUDS	11		Added to stock in bay.			Low
17 02 03	Rigid plastics	1		Added to in-feed stock for processing.			Low
17 01 07	Soils and stones	14		Added to in-feed stock for processing.			Medium
20 03 03	Street sweepings	73		Added to in-feed stock for processing.			Low
20 03 01	Mixed municipal	348			Added to in-feed stock for processing.		Low
17 02 03	uPVC	1		Added to in-feed stock for processing.			Low
16 01 03	End of life tyres	1		Added to in-feed stock for processing.			Low
20 02 39	Rubber	2		Added to stock in bay.			Low
20 01 01	Paper and card	1	Added to stock in bay				Low
17 02 02	Glass	3		Added to stock in bay.			Low
17 06 05*	Asbestos	1		Added to stock in bay.			Medium

Overview of Processing and Emissions Management

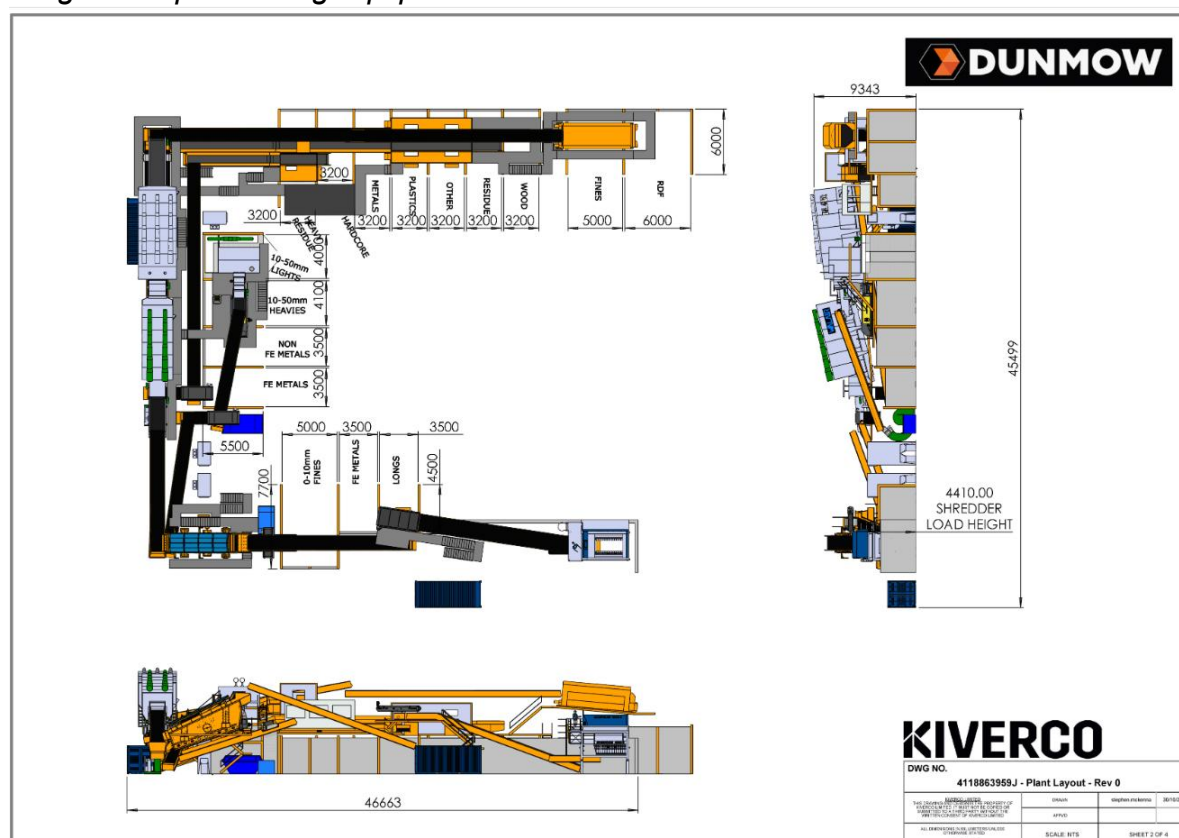
Appendix A is the site plan which indicates the layout of the site and buildings.

Main Building

The main building is fully covered, this is where the processing of mixed wastes takes place, the process is:

- Lorries tip mixed wastes.
- An electric 360 waste handler loads the waste into the sizer at the start of the processing line.
- As waste passes through the processing machinery various fractions are removed to dedicated storage bay (e.g. metals, fines, hardcore, and wood), the machinery consists of: sizer – conveyor - metal separator – conveyor – metals separator - three way shaker – conveyors - density separators – conveyors -metal separator – conveyor - eddy current separator – conveyor - optical sorting – conveyor – metal separator – conveyor - manual quality check – conveyor – storage bays.

Diagram of processing equipment:



Within the main building there are misting systems applied to bays that dusts may arise from such as the fines bay. The density separators, eddy current separator and lights cage have dust extraction systems built in, these apply a vacuum to extract any free dust and capture it in canisters at floor level. At the south vehicle doorway is a wash-down hose with sufficient pressure to reach the incoming material pile, so any dust seen arising can have water applied promptly. The two vehicle doorways are closed when the building is non-operational, this aids mitigating any emissions.

Shared between the main processing building and the yard are two loading shovels, these have two roles, which are:

1. To load vehicles collecting material directly from the processing building.
2. To transfer segregated materials to dedicated storage bays outdoors, some for-accumulation pending removal from site and wood for accumulation pending chipping prior to dispatch of chipped wood.

Outdoors most of the storage areas are covered and in the south yard; see appendix A for the site plan. At both ends of the south yard are wash-down hoses with sufficient pressure to reach the centre of the yard. Any dust arising is spotted by one of the four traffic controllers on site managing the flow of vehicles and mobile plant around the site, and they can quickly apply water to any dust. The site has four traffic controllers so one is always available to monitor the yard.

Wood chipping takes place under cover in the yard utilising an electric chipper. Processed wood from the building is accumulated in a bay with the chipper, and when a load is booked to leave, the chipper is used to reduce the size of the wood so that it is acceptable to the off taker. This takes place at the southeast end of the south yard with two wash-down hoses available, and the process is overseen by the machine operator responsible for the loading of the chipper and managing the process including ensuring emissions are controlled.

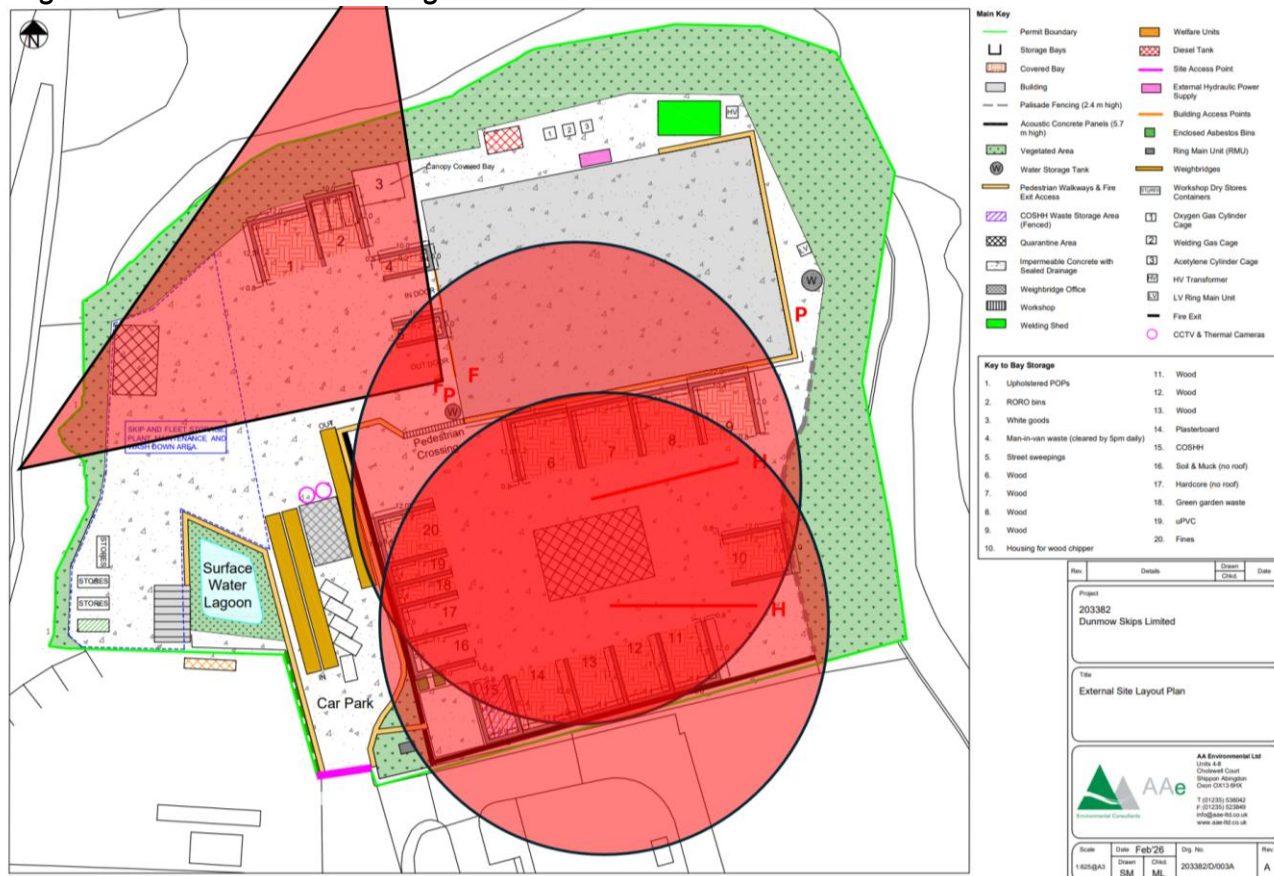
The outdoor bays are formed of Legio blocks to the back and sides the bays are topped with rounded top fabric covers that on each side are sealed to the Legio blocks and the rear is fabric covered and sealed to the rear of the Legio blocks. To keep within the requirements of the Fire Prevention Plan, a freeboard of 1,000mm is maintained between the stored material and the top of the Legio blocks.

Behind the bays along the south side of the site and the site wall there is a walking route to permit inspection of the rear of the bays and to permit cleaning of any litter. On top of the perimeter wall is litter control netting so any wind-blown litter from anywhere both on and off the site is captured.

The entire yard outdoors and indoors has an impervious concrete surface that drains to a sealed drainage system, which then passes through a petrol interceptor and into a holding lagoon pending tinkering off-site to a suitable disposal point; see appendix 2 for the drainage diagram.

As well as the electric 360 waste handler in the main building and the two loading shovels working between the main building and the accumulation bays, the site benefits from having and using its own road sweeper, and a forklift truck with a sweeper attachment in case the road sweeper is unavailable due to maintenance requirements. The site also has a cherry-picker and scissor lift so it can reach items at height such as the misting systems for maintenance.

Diagram of outdoor dust management controls



Additional key:

P = pump set.

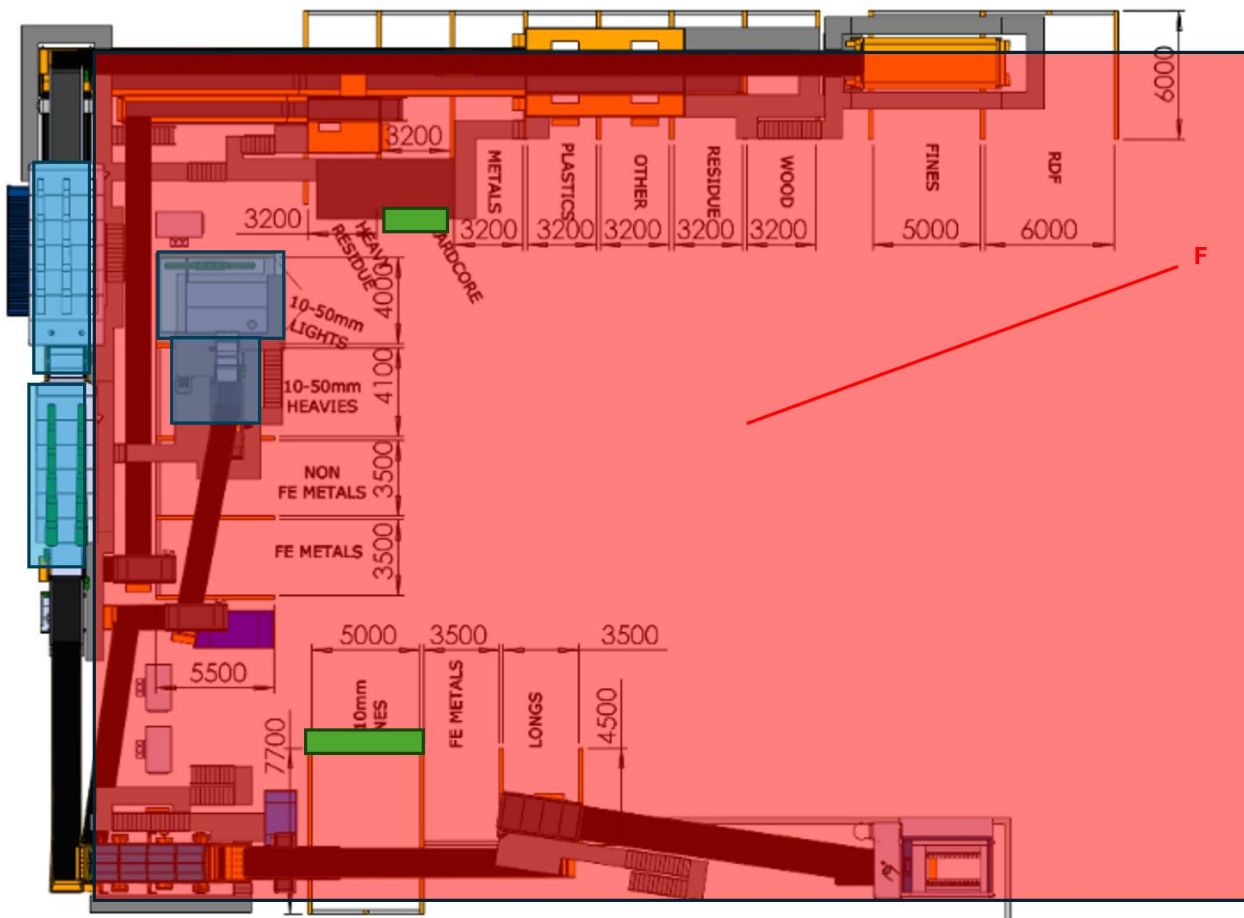
F = fire hose with 25m retractable hose and branch head

H = connection point for 50m lay-flat hose and branch head

-- = lay flat hose laid out

Shapes show area of coverage for dust suppression

Diagram of internal dust management controls



Additional key:

F = fire hose with 25m retractable hose and branch head

-- = 25m hose laid out

Shapes show area of coverage for dust suppression:

Red area is covered by the hose

Green areas are mist curtains at bays where dust is likely

Blue areas are vacuum extraction dust control systems

Site Mobile and Static Plant

Nitrogen Dioxide gas is a by-product of internal combustion engines, and the site uses several items of plant with internal combustion engines. The following table lists the type, mobile and emission ratings for the mobile plant and equipment used on site:

Description	Owned / Leased	Make	Model	Emission Rating
2 of Loading Shovels	Owned	Liebherr	L110	EU VI
Static 360 Waste Rehandler - electric	Owned	Liebherr	LH26E	Zero
2 of Wheeled Waste Rehandler	Owned	Liebherr	LH22	EU VI
Chipper - electric	Leased	Willibald Minishark	MS 3000	Zero
Road Sweeper	Owned	DAF	LF 220	EU VI
Cherry Picker – electric	Leased	JCB		Zero
Scissor lift – electric	Leased	JCB		Zero
Forklift Truck	Leased	Toyota	MY18	EU VI
Tracked shredder	Leased	Arjes	900	EU VI

All site mobile and static plant is recorded on our AssetGo software system. The system is programmed with the manufacturers required maintenance schedules; in this way the system flags up plant that is becoming due for maintenance so that maintenance kits can be ordered and supplied in time for the scheduled maintenance. We record all maintenance and all repairs on the AssetGo system so we can have a complete history on the plant to understand its efficiency and costs over time, this aids us in determining the replacement schedule for items of plant.

All non-electric plant is diesel powered and employs the AdBlue system and particulate filters to ensure the Euro VI standards are met. We use Ultra-Low Sulphur diesel in our mobile plant and road going trucks. We actively manage the “ON” time of mobile plant and require operators to turn the plant off when it is likely to be unused for more than 5-minutes; this is predicated against the risk of plant damage where frequent stopping and starting can lead to premature wear and tear.

Emissions Management

Responsibility and accountability for the management of emissions at any depot is the Director of Waste Operations. Responsibility is delegated to the Depot Manager for ensuring site compliance and maintaining the relevant controls such as physical equipment and staff training. In the event of the Depot Manager being absent, responsibility for day-to-day management control is delegated to the Operations Supervisor.

The organisation of the business and each depot is reviewed annually as part of the management review of the ISOs that the business subscribes to, namely: ISO 9001 – Quality Management; ISO 14001 – Environmental Management; and ISO 45001 – Occupational Health and Safety Management.

As part of permit compliance Dunmow annually refreshes depot managers and supervisors on the requirements of the site permit, this includes the requirements needed to comply with the permit as detailed in the Written Management System, Fire Prevention Plan, and this Emissions Management Plan for the site. The refresher includes a knowledge test at the end to ensure that the staff are aware of the requirements. To aid staff a copy of the Written Management System, Fire Prevention Plan, and this Emissions Management Plan for the site are retained in the site weighbridge office. The refresher training is generally conducted by either the Regulatory and Compliance Director, or the Safety, Health, Environment, and Quality (SHEQ) Manager.

Sources and Control of Emissions

Table of Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Mud	Tracking mud on wheels and vehicles, then mud dropping off wheels/vehicles when dry becomes dust from other vehicles disturbing the dried mud.	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Visual soiling, also consequent resuspension as airborne particulates.	Driver checks vehicle and removes any mud before vehicles leave site via the dedicated wash-down area. Road sweeper utilised every operating day, road sweeper also cleanses estate as both Marlborough Highway and Holcim Asphalt vehicles and customers contribute to mud on the highway. Site speed limit is 5MPH. Forklift with bush attachment assists with site cleaning. Lorries bringing loads to the site are sheeted/covered and do not uncover/remove sheets until within the site. Lorries taking material out of the site are sheeted before leaving the site.
Debris	Items falling off lorries as they enter / leave the site.	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Visual soiling, also consequent suspension as airborne particulates. Litter.	Lorries bringing loads to the site are sheeted/covered and do not uncover/remove sheets until within the site. Lorries taking material out of the site are sheeted before leaving the site. Outdoor bays are constructed of Legio concrete blocks, and the majority are covered with a structure to prevent the release of litter. The site boundary fence is topped with a 2-metre litter control fencing system.
Tipping, storage and loading of wastes in the open	Atmospheric dispersion	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Airborne particulates	Minimised source strength due to low drop heights during tipping and loading. Maintaining bay contents below maximum volume. Wetting of certain materials during tipping/loading if a dust issue is suspected.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Tipping, storage and sorting of waste inside buildings	Escape from buildings and subsequent atmospheric dispersion	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Airborne particulates	Maximised containment, with minimum width doors for vehicle access and egress. Tipping area is within the building, not directly at the door. Wash-down hoses available and used if a dusty load is suspected. Water misting of relevant accumulation bays.
Chipping of wood in the south yard.	Wood dusts escaping from bay canopy and subsequent atmospheric dispersion.	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Airborne particulates	Chipping operation is contained in a covered bay. Minimised source strength due to low drop heights during tipping and loading. Maintaining bay contents below maximum volume. Operation is supervised by operator of waste rehandler used to load the chipper, and the use of wetting is the responsibility of the supervisor to ensure dust release is minimised. Wetting of materials during tipping/processing/loading if a dust issue is suspected.
Vehicle exhaust emissions	Atmospheric dispersion	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. Vehicles are subject to drivers' daily checks, 6-weekly inspections, and annual MoTs. Vehicle compliance is externally audited by FORS.
Non road going machinery exhaust emissions	Atmospheric dispersion	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. All machinery is on the AssetGo software system to ensure that manufactures requirements are followed and recorded. All machinery is subject to daily pre-use checks, and routine maintenance following manufacturers requirements.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Water run-off from inclement weather and from use of wash-down hoses to clean the yard and dampen any items that result in dust (except gypsum/plasterboard).	Over ground tracking leading to escape of liquid from site.	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Liquid soiling of surrounding roads.	Yard has a sealed drainage system. Drainage system leads to a lagoon via a petrol interceptor. Site manager monitors yard conditions and requests the lagoon be (partially) emptied as necessary.
Noise from external operations of mobile plant, vehicles and electric chipper.	Atmospheric conduction.	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Increase of background noise levels in local vicinity.	Vehicles are subject to drivers' daily checks, 6-weekly inspections, and annual MoTs. Vehicle compliance is externally audited by FORS. All machinery is on the AssetGo software system to ensure that manufacturers requirements are followed and recorded. All machinery is subject to daily pre-use checks, and routine maintenance following manufacturers requirements. Chipping operation is contained in a covered bay that dampens any noise, the chipper is electric which is significantly quieter than a diesel-powered equivalent.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Odours from waste received at the site.	Atmospheric conduction.	Surrounding receptors as detailed in Sensitive Receptors in above table and map.	Offensive odours reaching neighbouring receptors.	The waste streams received, Construct and Demolition and Commercial and Industrial are generally odour free. Daily monitoring of site conditions by the depot manager, depot supervisor and the waste reception staff, leads to any odorous materials being quickly identified. The identification of odorous materials will be by a “sniff test” and if two or more people agree that the material is odorous then the load will be declared as odorous and be recorded in the site diary. If odorous material has not been tipped at the site, then the load may be rejected and either returned to the waste producer or redirected to a suitable disposal site in liaison with the waste producer to ensure the duty of care requirements for waste movements are complied with. If the odorous material has been tipped, it will be collected and either placed in an enclosed container or sheeted/covered to prevent odours being emitted. Disposal of odorous material will be a priority.

Measures that will be used on site to control emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Enclosure within a building for the processing of mixed wastes.	Fugitive emissions minimised by processing within a building. Processing activities are placed away from vehicle entrance/exit. No mixed waste feedstock in stored outside of the building.	Containment of mixed waste feedstock and processing within a building with water-based emissions control systems. External storage is only for processed materials. Outdoor chipping of segregated wood is within a covered and enclosed bay.	Permanent requirement.
Building vehicle entrance doors to be closed when access is not required.	Prevents fugitive emissions as there is no escape route available for emissions.	Out of operational hours the vehicle doors will be closed.	Permanent requirement.
Negative pressure dust extraction at selected points of processing system.	To prevent emission of particulates from processes that are expected to be emission sources. Extracted air is treated through a filtration system and dust is collected for safe disposal.	Highly effective at managing emission sources. Reduces H+S risks for staff working on site who may be exposed to nuisance dusts.	Permanent requirement at the selected points within the processing system.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Speed limit reduces the possibility of vehicle movements raising dusts. Idling limits aid in minimising exhaust emissions (particulate and Nox). Site redesign leading to less vehicle movements to achieve the same goal and reducing vehicles crossing with each other which reduces stop/start vehicle emission.	5mph speed limit applied several years ago and maintained. Idling limitations to be balanced against stop/start wear and tear, so no idling applies to any idling likely to last 5 minutes or more. Site redesign is going ahead despite the cost of the reorganisation.	5mph limit is permanent. Idling limitation to be introduced promptly. Site redesign and modification to go ahead.
Minimising drop heights for waste being tipped and material being loaded outwards.	Skips already tip at the lowest available point. Mixed waste skip tipping is indoors which minimises the potential for emissions generation. Loading shovel and 360 waste rehandler operators are required to minimise drop heights.	Layout of bays for accumulating and loading out has been redesigned to aid loading shovel and 360 waste rehandler operators to have a good view of the vehicle being loaded and so are able to minimise drop heights. Operators to be briefed by supervisory staff on minimising drop heights and monitored by supervisory staff to ensure drop heights are minimised.	Bay layout is a permanent feature. Training and briefing of staff are an ongoing process that is routinely refreshed.
Awareness of emissions management by staff.	The site manager, site supervisor and waste reception staff play a key role in ensuring that emissions are identified and managed, and that management systems are operating effectively. Other staff such as mobile plant operators, Maintenance Manager and SHEQ Manager have a part to play by monitoring both staff and the depot to ensure processes and procedures are followed and that mitigation measures are effective.	All site staff to be briefed by supervisory staff on preventing / managing emissions and the actions expected of them.	Training and briefing of staff are an ongoing process that is routinely refreshed.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Good housekeeping regime.	Housekeeping and depot tidiness and cleanliness are daily requirements. Depot manager and supervisors monitor depot throughout the working day, and any accumulation of debris is scheduled for prompt clearance. Daily housekeeping tasks are scheduled and implemented. It is required that any unexpected detritus accumulation is encountered it is reported to the depot manager for adding to the housekeeping schedule. Housekeeping is recorded in the site diary. Housekeeping includes, but is not limited to: litter picking, general sweeping including sweeping from behind barriers to allow road sweeper access to detritus, using wash-down hoses to clean vehicles, plant and the depot in general, daily equipment checks to ensure all equipment is functional including misting systems, dust extraction systems and wash-down hoses.	Every day the road sweeper cleans the depot floor both indoors and outdoors. The forklift truck with a sweeping attachment is used to cover for the road sweeper when required. The forklift truck with a sweeping attachment is also used to reach areas that the road sweeper is unable to access. Staff have housekeeping duties at the start of the day, prior to every break and at the end of the day. Depot manager and supervisor checks to be increased in response to changing weather conditions.	Housekeeping is a permanent requirement of all staff assigned to the depot.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel. Vehicles are not permitted to un-sheet until they are ready to tip. Loaded vehicles leaving the site are required to be sheeted before arriving at the weighbridge to be weighed out.	Site rules are issued to all drivers (Dunmow's and customers).	Permanent requirement notified by Site Rules and managed by depot management/supervision/waste receptionists.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Cleaning of vehicles tyres and underfloor prior to exit.	Removes any dirt, dust and particulates from the lower parts of vehicles.	The site has concrete impervious surface that is cleaned daily and is not known to accumulate dirt and dust that can become attached to vehicles. Waste reception staff monitor vehicles all the time and are aware that vehicles must not leave the site if holding mud or other unwanted matter.	This is a permanent role for the waste reception staff.
Ceasing or minimising outdoor operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds. Ceasing or minimising outdoor operations at these times will reduce pollution events.	Most depot activities are carried on indoors within a building, so short-term cessation of outdoor activities is possible with major disruption to depot activities. Use of an on-line local weather forecasting website to help determine if activities outdoors should be ceased or curtailed by the depot manager.	A wind speed more than 15mph is the point at which additional emission control measure to be implemented, such as the use of wash-down hoses to limit any potential emissions. A wind speed more than 30mph is the point at which outdoor waste movements should cease except for wood that is 300mm or larger.
Easy to clean concrete impermeable surfaces throughout the depot.	This enables the road sweeper assisted by the forklift truck with a broom attachment and staff using brooms and washdown hoses to maintain a clean yard surface,	The site manager, site supervisor and waste reception staff monitor the yard surface throughout the day as a necessary element of their roles, so any build-up of detritus is quickly spotted, and the road sweeper can be directed to clean the specific site.	This is a permanent element of the roles of the depot manager, depot supervisor, and the waste reception staff.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Minimisation of waste storage heights and volumes on site	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	By minimising waste storage on site, this leaves room to adapt to contingencies by having spare available storage capacity. If storage capacity becomes tight, additional emissions monitoring to be instigated and any necessary additional controls started.	All waste to be within the dedicated bays and with a free board of 1,000mm, there should also be a front slope (repose angle) of circa 35°. If waste stored begins to exceed the front of the bay, or the front slope (repose angle) exceeds 35°, then additional disposal services will be ordered to remove the waste, and site staff will monitor the bay(s) on an hourly basis, the material in the bay will be tamped down by a loading shovel or 360 material rehandler, additional depot cleaning to remove spillages around the bay(s) will be started and the wash-down hose will be made available to dampen the waste if any is seen to become wind borne.
Netting / micro netting around the site.	Netting is fixed around the site perimeter to catch any emissions litter, dust and particulates that may become wind borne by vehicles and mobile plant movements around the site.	Netting helps reduce the wind speed across the site as it effectively raises the height of the perimeter. External bays are mostly covered so waste is well contained. It is the movement of waste to and from bays in mobile plant that poses the largest risk of emissions being generated. Maintenance of the perimeter netting is recorded on the AssetGo system and is managed by the Maintenance Manager. Netting condition is one of the items recorded in the daily site diary, to ensure it is inspected at least once per day.	Litter control netting is a permanent feature.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Water Cannons	Water cannons provide a means for delivery of powerful water streams from a ground mounted cannon that is near a water and power supply. Water cannons are best suited to localised emission sources and can both dampen stock to minimise emissions occurring and can take collect emissions once they have become airborne.	Highly water intensive and requiring a good electrical supply. Can minimise dust and particulates on the ground that are at risk of becoming airborne, and can capture already airborne litter, dust and particulates. Covers a large area in a short amount of time. Will reduce the calorific value of the material to be sent for energy recovery/biomass type operations. Produces large amounts of run-off that need to be managed to prevent pollution.	If routine monitoring of emissions determines that emissions are being managed well, and that litter, debris, dust and particulates are not a nuisance then a water cannon will not be required. If routine monitoring of emissions determines that emissions are not being managed well, and that litter, debris, dust and particulates are potentially becoming a nuisance then the purchase / short-term lease of a water cannon to be considered along side other options for gaining more control.
Boundary heights	To the north and east boundaries, the site is below the height of the surrounding landscape, this provides a bund of between ten and fifteen meters in height, this minimises wind lifting of litter, detritus, debris, dust and particulates by directing wind over the site. To the south and west are concrete panel walls of between two and three metres, these walls prevent direct wind access to the site and provide shelter for the material stored in bays outdoors, additionally most outdoor bays are also covered. At the top of the bunding and the top of the concrete panel walls is litter control fencing.	The bunding and concrete walls are permanent. The litter control fencing is checked daily, and the check is recorded in the site diary, with any repairs being notified to the Maintenance Manager for action and recording on the AssetGo system.	These are permanent features.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Actions if a dusty load is suspected.	Having been weighed in at the weighbridge the incoming vehicle pulls forward to the waste reception staff. The nature of the load is discussed, and the waste reception staff direct the vehicle to the correct tipping location and also arrange for any necessary assistance which may include the use of wash-down hoses to dampen any waste being off-loaded. Weighbridge and Waste reception staff may reject a load that is too dusty as the site is not permitted to accept dust, and the load will be returned to the waste producer.	Drivers of vehicles are unlikely to know the full contents of material being received, as they rely on the waste producer to tell the truth when completing a waste transfer note. If a very dusty load is received the material will be dampened to prevent any emissions. The CCTV of the event will be saved and an entry in the site diary will be made. The customer will be advised of the issue and advised who and where to dispose of dusty material in the future.	Some dust is inevitable due to the nature of the received waste, and this has a seasonal element. The trigger for informing customers or rejecting loads is that the load is “very” dusty, and that abnormal amounts of dust control measures are required. This is subjective so guidance is supplied in staff briefings as to what is normal and what is abnormal.
Actions if a malodorous load is discovered.	Having been weighed in at the weighbridge the incoming vehicle pulls forward to the waste reception staff. The nature of the load is discussed and the waste reception staff. If the waste reception staff notice an unpleasant odour from the waste being delivered, they will have the vehicle go and wait in a quarantine area, and call-out the depot manager/supervisor for their advice. Weighbridge and Waste reception staff may reject a load that is malodorous, and the load will be returned to the waste producer.	If a driver discovers a load that is malodorous, they must stop and call the office for advice. Drivers of vehicles are unlikely to know the full contents of material being received, as they rely on the waste producer to tell the truth when completing a waste transfer note. It is possible that during transport a load may move and this may cause containers to open that contain substances that are malodorous. The CCTV of the event will be saved and an entry in the site diary will be made. The customer will be advised of the issue and advised who and where to dispose of malodorous material in the future. Any malodorous material received is to be quarantined in a sealed container and disposed of promptly.	Malodorous material should not be accepted at the site, as avoiding the risk of causing a nuisance to neighbours needs to be a high priority. Malodorous material found on site is to be removed promptly to minimis any odour emission.

Water usage/ availability

The site benefits from two water storage tanks, one to the front (west) at 20,000 litres and one to the rear (east) at 50,000 litres, of the main processing building, giving a combined capacity of 70,000 litres. These are rain harvesting tanks that are also topped up with mains water to ensure they remain as full as possible throughout the working day. These tanks supply the wash-down hoses situated around the yard.

The site also benefits from a surface water lagoon with a capacity of 1,220,000 litres; this was to feed emission suppression systems around the yard and can be drawn off into the road sweeper for use as a wetting agent.

The site therefore has access to 1,292,000 litres of water that may be used for emissions management purposes.

The site is also connected to the local mains water supply which has a delivery rate of 3,700 litres per minute / 222,000 litres per hour.

The site receives on average circa 450 tonnes of waste per day, over an operating period of 06:30 am to 19:00 pm daily. Recent estimates from published authors shows that waste sites use 35 litres of water per tonne of waste received (Chafer et al. (2019). Iriarte et al. (2009). Uson et al (2013)). As Dunmow do not use water in any part of the processing then our use will be below this worst-case figure, however, using the worst-case figure Dunmow can expect to use circa 15,800 litres of water per day for emissions management. Compared to the available water on site, plus the available mains water Dunmow has sufficient water supplies to meet its emissions management requirements.

Should there be a drought with the stored water on site and available mains water, it is not envisaged that drought will impact emissions management.

Odour and Noise Control

The received waste most likely to have an odour is mixed wastes (17 09 04) and (20 03 01), both are tipped and processed indoors within the processing building. Of the wastes received on site the majority, circa 82% consists of mixed wastes that are tipped and processed indoors.

The remainder of waste (circa 18%) that is tipped outdoors is not inclined to be odorous, and most of the waste tipped outside is done so into covered bays that help contain both odours and any associated noise. The covered bays also prevent rainwater from acting on the stored material to produce odours, especially the Gypsum/Plasterboard, and Green Waste.

Bays that are not covered are Hardcore, End-of-Life Tyres, and Soils and Stones. These are not known to produce odours and the tipping and reloading of these items is generally quieter than for other materials.

As part of the waste acceptance, the Waste Reception staff check loads and are empowered to quarantine loads that emit odours and escalate the matter to the Site Manager or Site Supervisor. The Site Manager / Site Supervisor use their knowledge and experience to “sniff test” the load and in their opinion if the load is malodorous, it is rejected and returned to the waste producer and a record is made in the site diary.

Dust Monitoring

Throughout the day all yard staff have a responsibility to alert the Site Manager / Site Supervisor should they believe that dust may be becoming an issue. The Waste Reception staff have it as part of their job descriptions to monitor incoming loads for dusts, and to deal with these before any dust is released.

Within the waste processing building there are mist curtains on certain bays known to produce dusts such as the fines and hardcore bays. The site staff have wash-down hoses that they use to maintain the concrete surface as clean as is reasonable.

The processing line has vacuum dust extraction at specific points to capture any potential dust and collect it in containers ready for safe disposal, in this way any potential dust is captured and effectively managed before it can become airborne.

Out of hours there is no processing of wastes, and no movement of waste so dust from waste activities is not possible.

Reporting and Complaints Response

The site-specific Environmental Management System for Chelmsford WTS at appendix C has the Environmental Complaints Procedure Form, this is used to record any environmental complaint and directs the investigation that must happen including any resolutions. These forms are maintained by the depot manager and are reviewed at least annually through the ISO 9001 (and ISO 14001) management review process.

Upon receipt of an environmental complaint the Depot Manager / Depot Supervisor will alert the Director of Waste Operations and the Safety, Health, Environment and Quality (SHEQ) Manager. The nature of the complaint will be discussed and one of these will be appointed to carryout an investigation and to record this on the Environmental Complaints Procedure Form that is contained in the Environmental Management System for Chelmsford WTS.

The person nominated to investigate the complaint will be empowered to take statements from staff, review CCTV footage and interrogate the Weighsoft 5 database if necessary.

The intension is that a thorough investigation will be completed within one working week and that the output will be remedial actions that will be aimed at preventing a recurrence.

Community Engagement

We liaise with our immediate neighbours regularly to ensure we are not a nuisance to them, and to receive any feedback they may have. We also liaise regularly with the estate landlord for whom we utilise our road sweeper to main the estate roads in a clean condition.