DUST & EMISSION MANAGEMENT PLAN (DEMP)

Summerfield Avenue, Chelston Business Park Wellington, Somerset, TA21 9JF

Wellington Waste Management

Version:	1.0	**Date:**	27 April 2021		
Doc. Ref:	WWM-DEMP-A	**Author(s):**	GN	**Checked:**	
Client No:	WWML - 300	**Job No:**	001		

Issue and Revision Record

Revision	Date	Originator	Checker	Company Approver	Description of Changes
1.0	27/4/21	Gary Nelson Waste Consultant	Bernie Doyle Wellington Waste Manager	Antony Palfrey Wellington Waste Director	N/A, new document

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1. Introduction

Wellington Waste Management's site at Chelston is a waste transfer station, which receives waste, treats waste and stores waste pending onward processing.

The site is located on Summerfield Avenue, Chelston Business Park Wellington, Somerset, TA21 9JF. National Grid Reference ST 15452 21249.

The local authority for this facility is Somerset West & Taunton Council.

Beyond Chelston Business Park is the town of Wellington, which is approximately 1.0 km to the west of the site boundary. The closest residential properties are in the village of Chelston which lies approximately 0.2 km to the north-east of the site boundary.

The site comprises of a main building, staff parking to the front of the property, skip vehicle parking to the north of the building and a large yard near the site entrance and to the north of the site which is for waste and skip storage.

The main building provides access and egress via x4 roller shutter doors for the unloading of the skips, these doors are on the northeast elevations of the building. The processed waste will leave through the northwest elevation where there is also a loading bay.

There are also offices and a reception area on the front of the main building on the northeast elevation and a workshop to the rear. The main building measures 1,070m^2 consisting of a tipping area of 200m^2 and an adjoining upper floor of offices on the northeast elevation of 227m^2 in total.

The facility accepts source segregated materials and mixed dry recyclables (MDR) consisting of cardboard, paper, plastics and metal cans plus any small quantities of waste contamination that may be present in materials delivered.

Within the main building is a small processing line. Which elevates pre-sorted waste (which has had plasterboard, larger timber and masonry removed) into a trommel where fines are removed.

The processing line also includes manual picking to sort plastic, hard plastic, wood and cardboard. The picking station will also extract WEEE, taps, copper, aluminium, before both ferrous and non-ferrous metal is removed via an over-band magnet and an eddy current separator.

The resultant residual waste, including any fibres will be deposited in a skip adjacent to

the roller-shutter exit from the building on the northeast elevation.

The source segregated, primary sort and 'picked' materials are stored and bulked either loose or baled for onward movement and processing.

The site is located in West Somerset and Taunton Council (verified on the Defra website: http://uk-air.defra.gov.uk/aqma/). Contact with the Local Authority revealed that this is not in an Air Quality Management Area and there are no set limits for PM10 or SO2, however there are controls on NOx (as NO2) enforced by Somerset West and Taunton Council, but this is confined to two areas, East Reach and Henlade in Taunton, approximately 10 miles to the east of the site.

Section 3.1 of the current standard rules permit for the site issued by the Environment Agency stipulates the following.

> Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
>
> The operator shall:
>
> (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan:
>
> (b) implement the approved emissions management plan, from the date or approval, unless otherwise agreed in writing by the Environment Agency.

This DEMP was generated to meet the above conditions and in support of a bespoke Environmental Permit bespoke. It will be integrated into the Environmental Management System for the site. A copy of this plan will be kept on site and will be used for reference by site staff, specifically those who operate fixed plant within the building and those who control movements of mobile plant and vehicles around the site.

There are no infrastructure or special controls related to dust required within the planning permission granted by Somerset County Council.

It is highly unlikely due to the infrastructure in place, equipment installed and management techniques that there will be dust emissions beyond the permit border of the facility.

1.1 Sensitive Receptors

Table 1.1 on the following page is a summary of the sensitive receptors local to the site boundary.

Table 1.1 Representative Sensitive Locations

Boundary of transfer station	Land use	Distance / Direction
Northeastern Boundary	Summerfield Avenue	On the boundary
	VPK Packing Manufacturer	82m / NE
	Residential properties in Ham (village) (including Ham Farm, Ham House, Troods Farm)	384m / NNW
	Residential properties in and adjacent to Cob Castle	252m / N
	Industrial Units (including Milbrook Health Care, South Street Motors D & N Autogas, Autobase Southwest, ProCo-STS)	Varies (21 – 445m / E)
Southeastern Boundary	A38	257m / SE
	Industrial Units (Including Chelston Motorhomes, Wellington, Auto Fix, RH Fibreboard, Flue & Ducting, Tile & Bath, Munday Veneer, Tone Windows and Ashburton Tyres Ltd)	Varies (21 – 498m / E)
	Maidenhead Aquatics & Blackdown Garden Centre	590m / E
	Camelot House & Lodge (Care Home)	785m / E
Southwestern Boundary	Chelston Motor Homes	On the boundary
	German Service Centre	310m / S
	Wellesley Hospital	625m / SW
	Bluebird Care	515m / S W
	Residential (off Aspin Road)	700m / W
Northwestern Boundary	Open field (redundant landfill)	500m / NW
	Low Moor Car Breakers	810m / W
	Ham farm/Asham	675m / N
	Millbrook Health Care	35m / W
SSSI, RAMSAR, Special Areas of Conservation	None within 1km	-

The most immediate receptors to the site for dust would be:

- users of the A38 and B3187, 257m southeast and 166m southwest of the facility respectively,
- the neighbouring businesses surrounding the site on Chelston Business Park,
- users of Somerfield Avenue and the business along this road to the south and,
- natural habitats living within the open grass land (Closed Landfill) to the northwest.

Figure 1.2 in the following pages shows the detail for sensitive receptors within 1,000km of the site.

The type of receptor, the distance from the facility and the direction from the facility has been listed.

Travel routes to and from the site by vehicles could have a potential to be affected if excessive dust emissions from the facility did occur. There is no specific comment on the health of users of the industrial estate site nor in any residents of properties within 1,000km therefore they have all been listed as receptors.

Meteorological Conditions

The closest meteorological station to the site is Yeovilton weather station, which islocated circa 50km east from the site boundary. Due to its locality this weather station is considered the most suitable in terms of reflecting weather patterns likely to be experienced at the site.

The wind rose below shows that the prevailing wind direction is predominantly from west-south-west. This indicates that the wind will be blowing principally towards the industrial premises to the east of the site boundary.

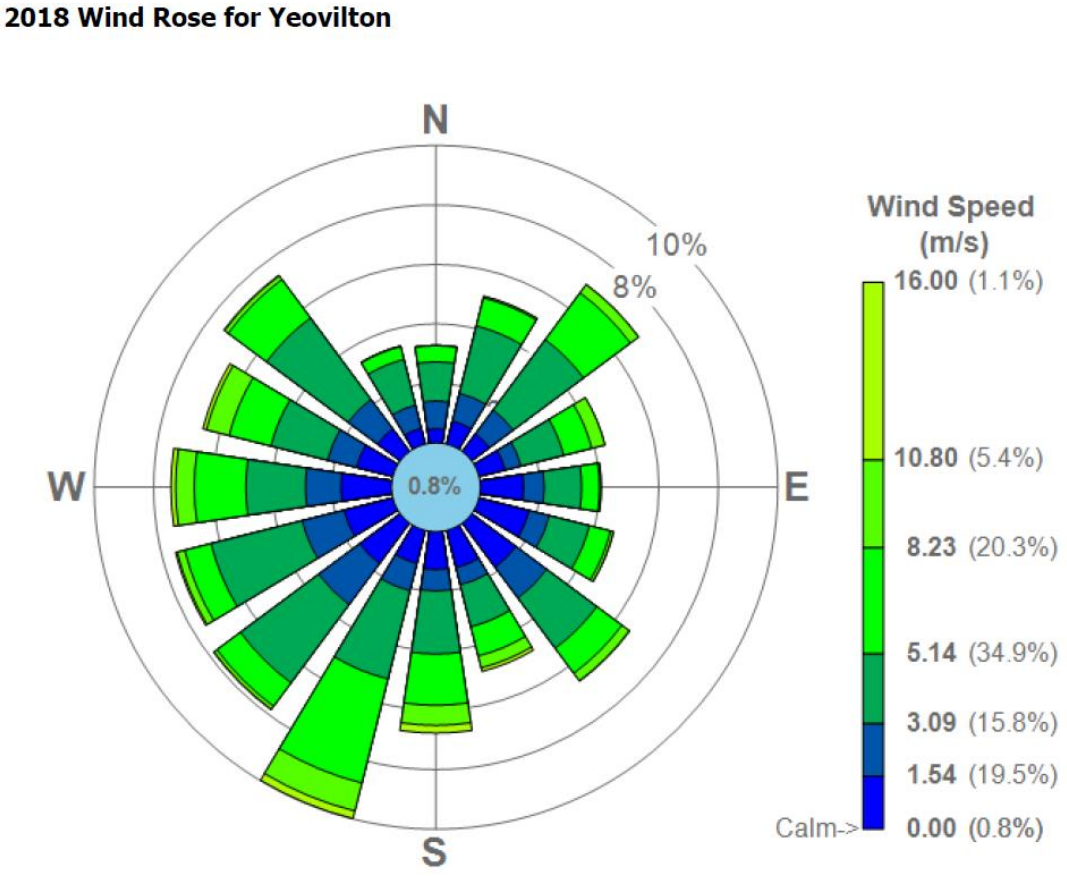
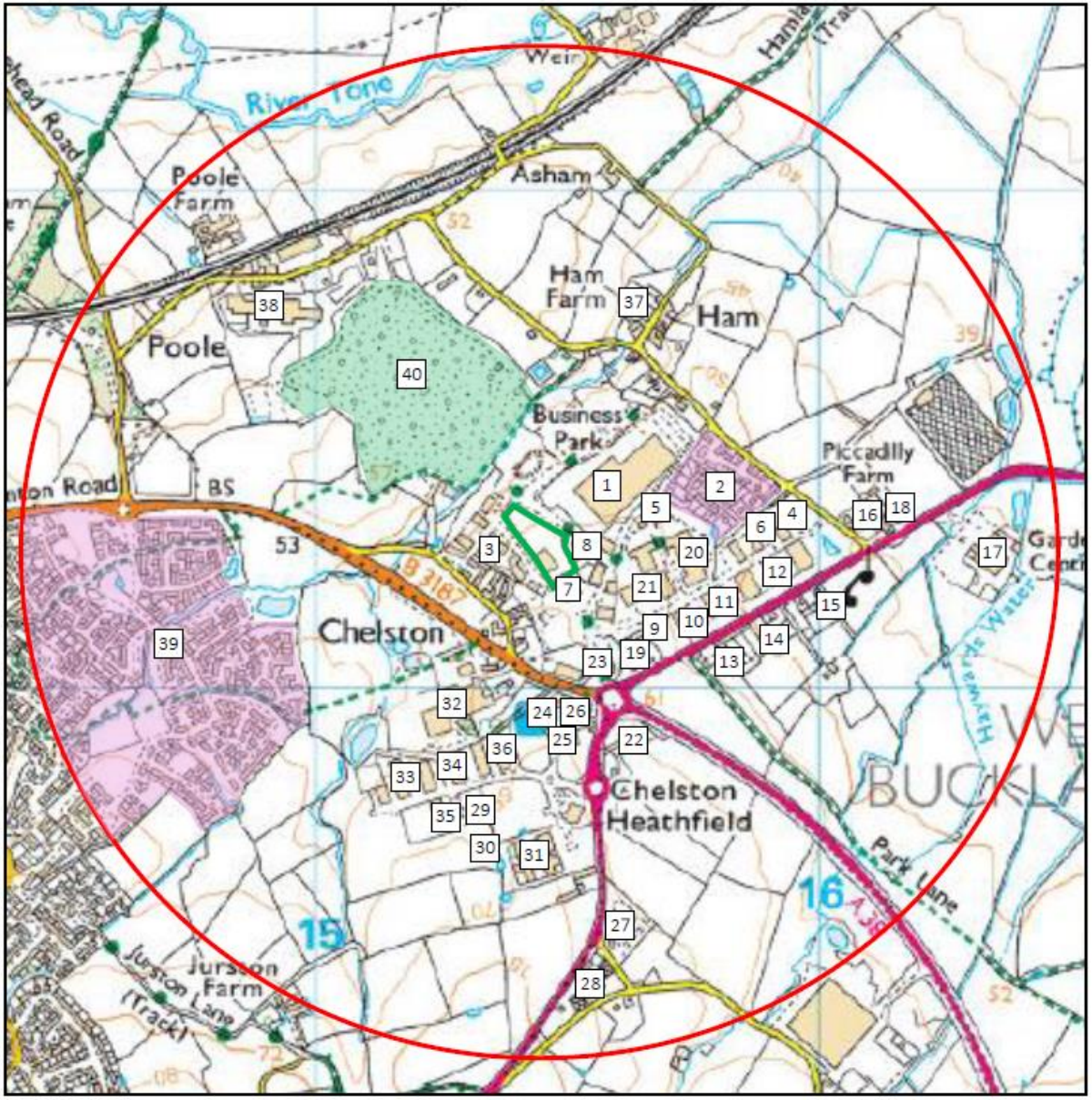


Figure 1.1: Wind rose showing the AVERAGE WIND DIRECTION AND STRENGTH



#	Receptor	Dist. (m)	Direction
1	VPK Packing	82	NE
2	Residential Properties in Ham	384	NNE
3	Milbrook Health Care	35	W
4	ProCo-STS	575	E
5	D & N Autogas	335	E
6	Autobase South West	545	E
7	Chelston Motorhomes	20	S
8	Auto Fix	20	E
9	Milverton Sawmills	315	SE
10	Flue & Ducting	480	SE
11	Tile & Bath	490	SE
12	Munday Veneer	565	ESE
13	Tone Windows	505	SE
14	Ashburton Tyres	520	SE
15	Maidenhead Aquatics	590	ESE
16	Camelot House & Lodge	785	E
17	Blackdown Garden Centre	960	ESE
18	A38 Texaco Petrol Station	805	E
19	Netherclay Home Care	310	SSE
20	RH Fibreboard Containers	350	E
21	Flip Out Somerset	160	E
22	Devon & Somerset Trading Stds.	410	S
23	German Service Cenre	310	S
24	Travelodge	325	S
25	Costa Drive Thru	335	S
26	Shell Petrol Station	330	S
27	Green Acres Touring Park	911	S
28	Chelston Nursuries	950	S
29	Bricktanks	535	SSW
30	MK Test Systems	570	SSW
31	Wellesley Hospital	625	S
32	KS Coles	405	SW
33	Bluebird Care	515	SW
34	RGB Building Supplies	505	SW
35	P & M Roofing Supplies	555	SW
36	Howdens	495	SSW
37	Ham Farm	675	NE
38	Low Moor Car Breakers	810	NW
39	Aspin Road (residential)	700	W
40	Open fields (old landfill)	500	NW

Figure 1.2: Nearby Sensitive Receptors

Table 1.2 Sources of Dust and/or other Emissions

Company	Address	Type of Business	Distance from Wellington Waste Managementsite boundary (m)
-	A38	Busy dual carriageway	300
-	B1387 (Taunton Road)	Single carriageway on industrial estate	300
VPK Packaging Somerset	Ham road, Chelston Business Park TA21 9JG	manufacture and deliver corrugated packaging	82
RH Fibreboard Containers	8 Knights Rd, Wellington TA21 9JH	manufacture and deliver corrugated packaging	350
Lowmoor Car Breakers	Garretts Yard, Poole Industrial Estate, Wellington, TA21 9HW	Approved Vehicle Dismantler	810

2. Operations at Wellington Waste Management

2.1 Waste Deliveries to and Removals to Wellington Waste Management

All incoming waste delivered to the facility and processed waste removed from the site is transported via the industrial estate road network in varying vehicles (curtain-sided trailers, Skip lift, Refuse Collection Vehicles, hard back tippers and hook-lift vehicles) All containers, trailers and vehicles are contained or have sheeting systems to contain waste and reduce the risk of emissions occurring.

Mixed Dry Recyclate (MDR) predominantly gets delivered to site in the company's owned skip and leaves as either residual waste or segregated materials (Such as metal, card and plastic) in company-owned roll-on-roll-off (hook) containers or by specialist transport sub-contractors in curtain-sided trailers.

All waste is subject to being accepted (and potentially being rejected) as per the Waste Acceptance Procedure. This includes being rejected for the presence of non-acceptable or wrongly coded wastes or being liquid, odorous or dusty.

Site staff have the option to reject and reload the material in its entirety, to quarantine the material pending further investigation or onward movement or to contain the material pending onward movement.

The Waste Acceptance and Rejection procedure is shown in Appendix A.

All of the Company's vehicle fleet have an emission rating of Euro 5. Wellington Waste's main haulage contractor has confirmed that all their fleet are also Euro 6 rated.

The type of vehicle is included when generating the weighbridge tickets for waste materials brought to and being taken from the site. This is shown in Figure 1.1 below.

Wellington Waste Skips Ltd.
The Old Brickworks
Higher Poole, Wellington
Somerset. TA21 9HW
t. 01823 664628 f. 01823 660140
e. enquiries@wellingtonwaste.co.uk
www.wellingtonwaste.co.uk

wellington waste management
Taunton - Wellington - Minehead
Skips Skips Skips

Registered Waste Carrier No: CB/DU71802
Waste Management Licence No: 27038

Weighbridge Ticket and Duty of Care

Date 29/03/2021

Ticket Number: [redacted]

Extra Ref: x

Waste Producer

[redacted]

Waste Carrier

[redacted]

Registration Number

Vehicle Reg

SIC Code

Order Details

YAIN

PO

Time 1st weight 1.39.48 PM

Time 2nd 1.48.19 PM

Gross 3.160 T

Tare 2.400 T

Net 0.760 T

Producer Signature

Print Name

Carrier Signature

Grade & EWC & Weight

.Mixed 17.09.04 0.220 T

.Soil/Stone 17.05.04 0.540 T

Box Weight

Verified Gross

Container

Seal Number

Notes

Waste Receiver

WELLINGTON WASTE MANAGEMENT

The Old Brick Works, Higher Poole, TA21 9HW

Registration Number

27038

Receiver Signature

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

Figure 1.1: Screenshot of weighbridge ticket entry at Wellington Waste.

Within the site rules drivers delivering or collecting material are advised to give details about the load (this includes if it is dusty), travelling around the site as instructed, not exceeding speed limits, ensuring doors or tailgates are closed and that sheeting systems are used.

2.2 Overview of Waste Processing, Dust, and Other Emission Controls

Details of the typical waste streams delivered into the facility are shown in table 2.1 below.

The following drawings are shown below:

- Figure 2.2 - location of the facility
- Figure 2.3 - permit boundary & the impermeable surface of the site
- Figure 2.4 - MDR processing line layout
- Figure 2.5 - dust suppression system layout
- Figure 2.6 - material bay layout

Externally

All around the trafficked area of the site the surfacing is of impermeable blacktop, this will minimise any dust from vehicle movements as this surface will be swept as required.

All vehicles access the site via Summerfield Avenue and are directed to the left of the front of the building to the weighbridge. At the weighbridge office they will receive further instruction and direction whilst on site. Staff and visitors after entering the site will also turn left and park at the front of the building within designated parking bays.

Controlling vehicle speed around the site is managed by:

- speed restrictions in around the facility

Access into the main building is via the shutter doors situated on the northwest and northeast elevations of the building.

To the north of the building there is a hardstanding area which has been clearly delineated for each type of segregated waste using precast concrete blocks. Opposite this area close to the northeast boundary of the site parallel with Summerfield Avenue is the area set aside for skip collection and delivery vehicle parking along with skip and container storage.

The rear of the site (to the southeast and southwest) is fully surrounded by a raised bank and fencing which minimises the occurrence of dust and noise emissions and would also help with retaining any floating litter from the neighbouring business on these boundaries.

There is no material processed outside the main building.

Baled material is loaded onto artic vehicles or into freight containers parked outside the building.

Egress from the building for segregated waste is via the roller shutter door on the northwest elevation, this opening has a weather canopy and curtains, minimising the risk of emissions such as dust, odour and noise and potentially litter.

Road-sweeping of the site is outsourced and undertaken when appropriate. The Site Manager has the option to increase or decrease this frequency depending on arising issues or changes in weather.

Internally

All unprocessed and processed materials are stored inside the main building within bays and skips until such times as when these areas are full and then the segregated waste is transferred to the relevant bay outside made with concrete walls.

Access to these bays within the main building is via the roller shutter door in the northwest elevation only. The layout of the material bays within the facility is shown in Figure 2.6.

Down the centre of main building is the processing line, the layout of this line is shown in Figure 2.4.

MDR (Mixed Dry Recyclate) is fed into the processing line via telescopic waste handlers. The line has an oscillating / walking floor which moves the MDR via an incline conveyor to trommel screens to remove any fines from the material. The conveyor carries the MDR through a picking station where bulky materials are sorted and removed. On leaving the picking cabin the MDR passes under an over-band magnet which removes a large proportion of the ferrous metal. The remaining product then goes through an eddy current separator to remove any remaining ferrous and the non-ferrous. The bays for the segregated wastes shown in Figure 2.6.

The third-party contractor is called to site if any problems arise with the system. In addition to this Wellington Waste's engineering and maintenance staff undertake periodic checks and maintenance of the plant.

Dust Suppression

Throughout the whole of the facility Wellington Waste use a Sceenpod Mist-Air dust cannon which has the advantage of being skid mounted so it can be moved anywhere on the site where dust is proving to be a nuisance.

There is the capacity to introduce further dust cannons if required.

In addition to the Mist-Air system there are also x3 hoses which can be attached to any of six hose pipe locations on the site to dampen down the internal floors and inside and outside both shutter doors if required. These hoses are shown in Figure 2.5 as red circles.

Table 2.1 Typical weekly waste types brought to Wellington Waste Management

European Waste Code (EWC)	Product Description	Tonnes / week	Destination at the facility			Process
			Pre-sorted	Primary Sort	Picking Station	
02 01 10 15 01 04 16 01 17 17 04 05	Scrap metal	7			✓	Processed through the line into skips which are bulked up and stored externally for onward movement
16 01 18	Non-Ferrous metals	<1			✓	Processed through the line into skips which are bulked up and stored externally for onward movement
17 05 04 20 02 02 20 03 03	Naturally occurring rocks and soils	108	✓			
17 09 04	Mixed construction and demolition waste	280	✓	✓		
17 08 02	Plasterboard	8	✓			
19 12 01 20 01 01	Paper & Card	1			✓	Processed through the line into skips which are bulked up and stored externally for onward movement after baling
02 01 04 07 02 13 15 01 02 16 01 19 17 02 03 19 12 04 20 01 39	Laminates, Plastics & Polymers	<1		✓	✓	Baled / bulked for onward movement and processing
19 12 04	Rubber	<1			✓	Processed through the line into skips which are bulked up and stored externally for onward movement after baling
16 01 03	Tyres	0.1		✓		Bulked for onward movement and processing

European Waste Code (EWC)	Product Description	Tonnes / week	Destination at the facility			Process
			Pre-sorted	Primary Sort	Picking Station	
04 02 21 04 02 22 15 01 09 19 12 08 20 01 10 20 01 11	Synthetic/mixed Textiles	<1			✓	Processed through the line into skips which are bulked up and stored externally for onward movement after baling
03 01 05 17 02 01 19 12 07 20 03 07 15 01 03	Wood	34	✓	✓	✓	Bulked for onward movement and processing
17 02 01 03 01 05 20 01 38	Prepared timber	<1	✓			Bulked for onward movement and processing
02 01 03	Mixtures of vegetation	<1		✓		Bulked for onward movement and processing
20 03 01	Residual waste	<1			✓	Baled / bulked for onward movement and processing
20 03 01	MDR (Mixed Dry Recyclate)	100			✓	Processed through the line
Total		**438.1**				

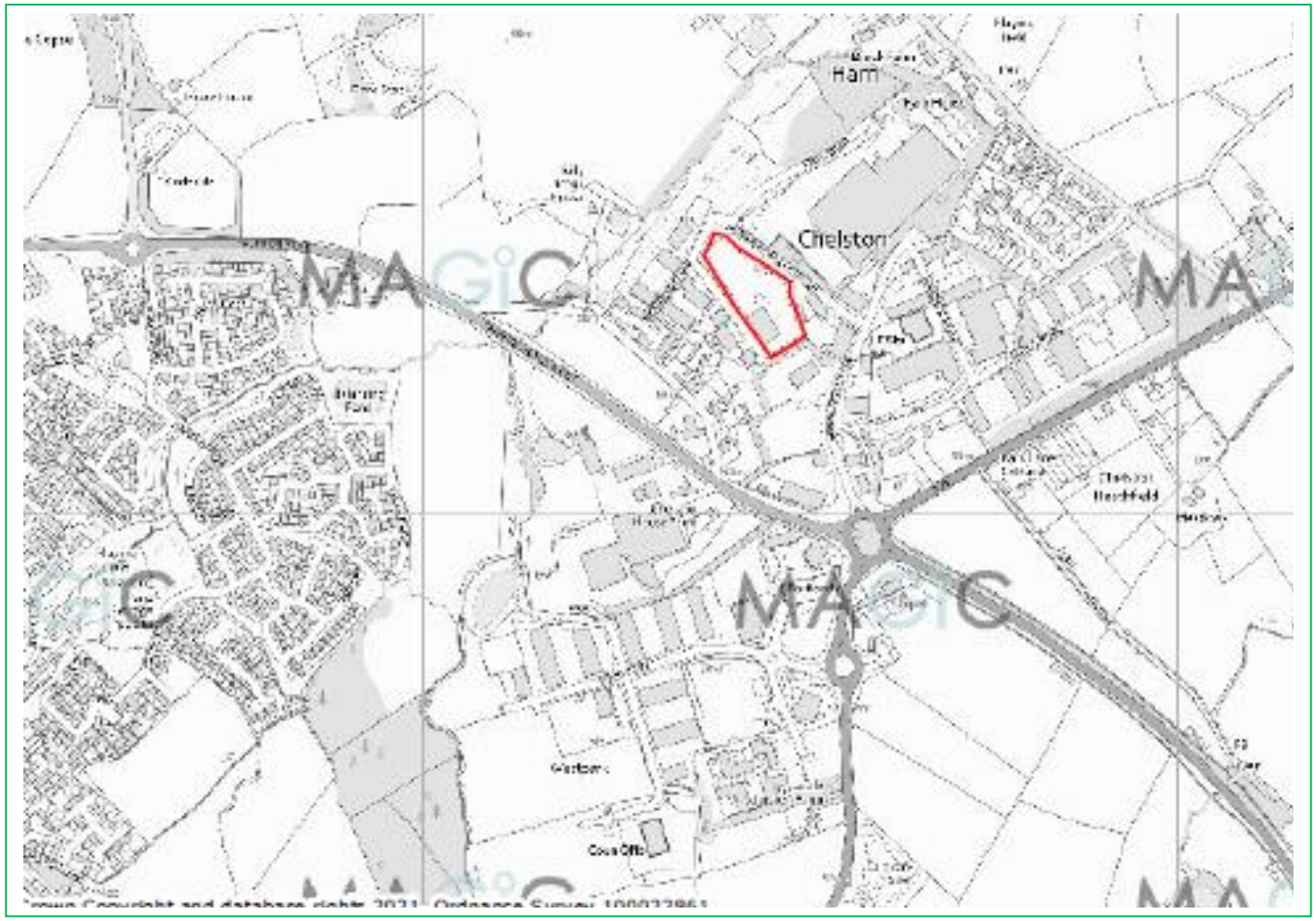


Figure 2.2: Facility Location

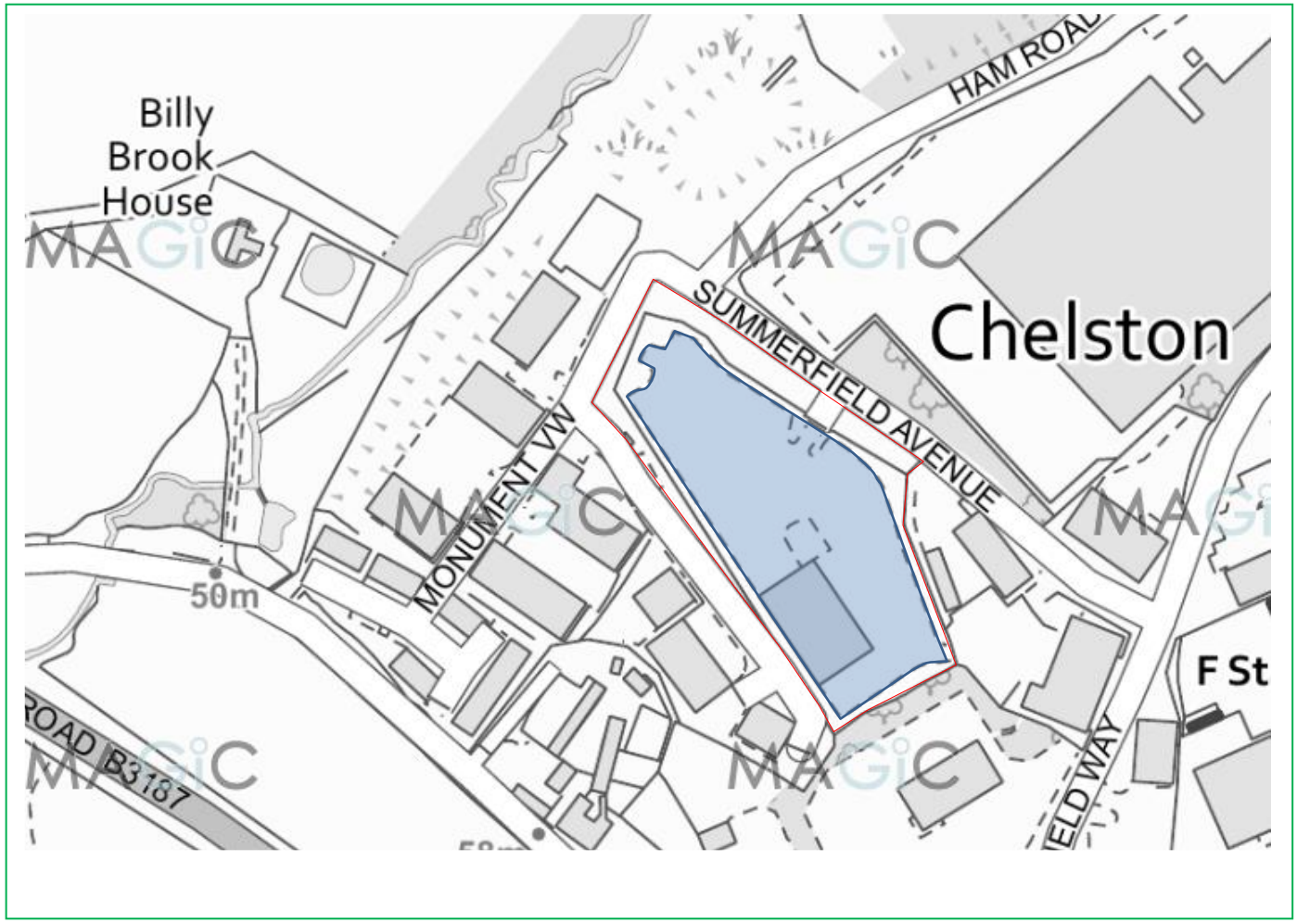


Figure 2.3: Facility permit boundary ---- and impermeable surface area

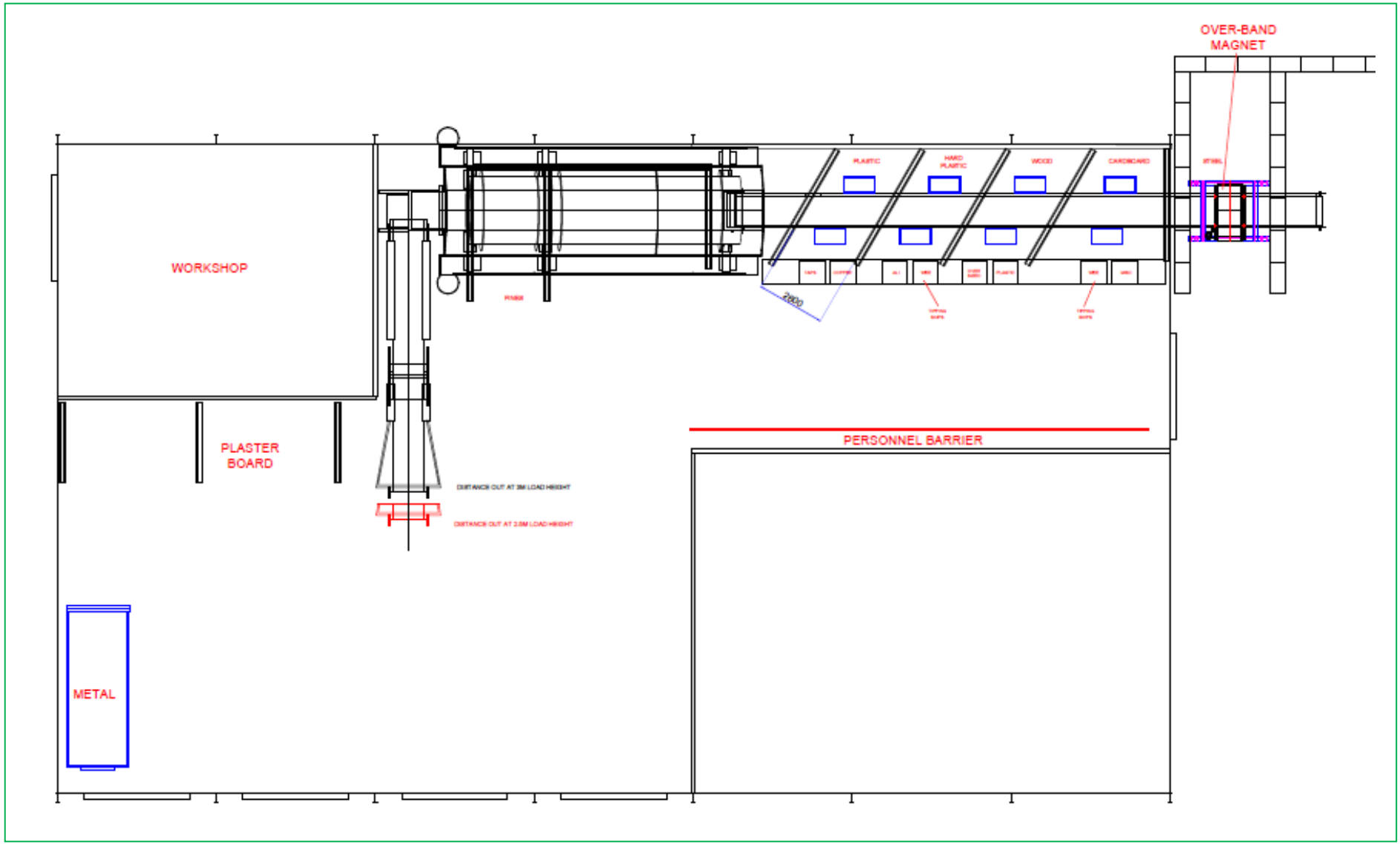


Figure 2.4: MDR processing line layout

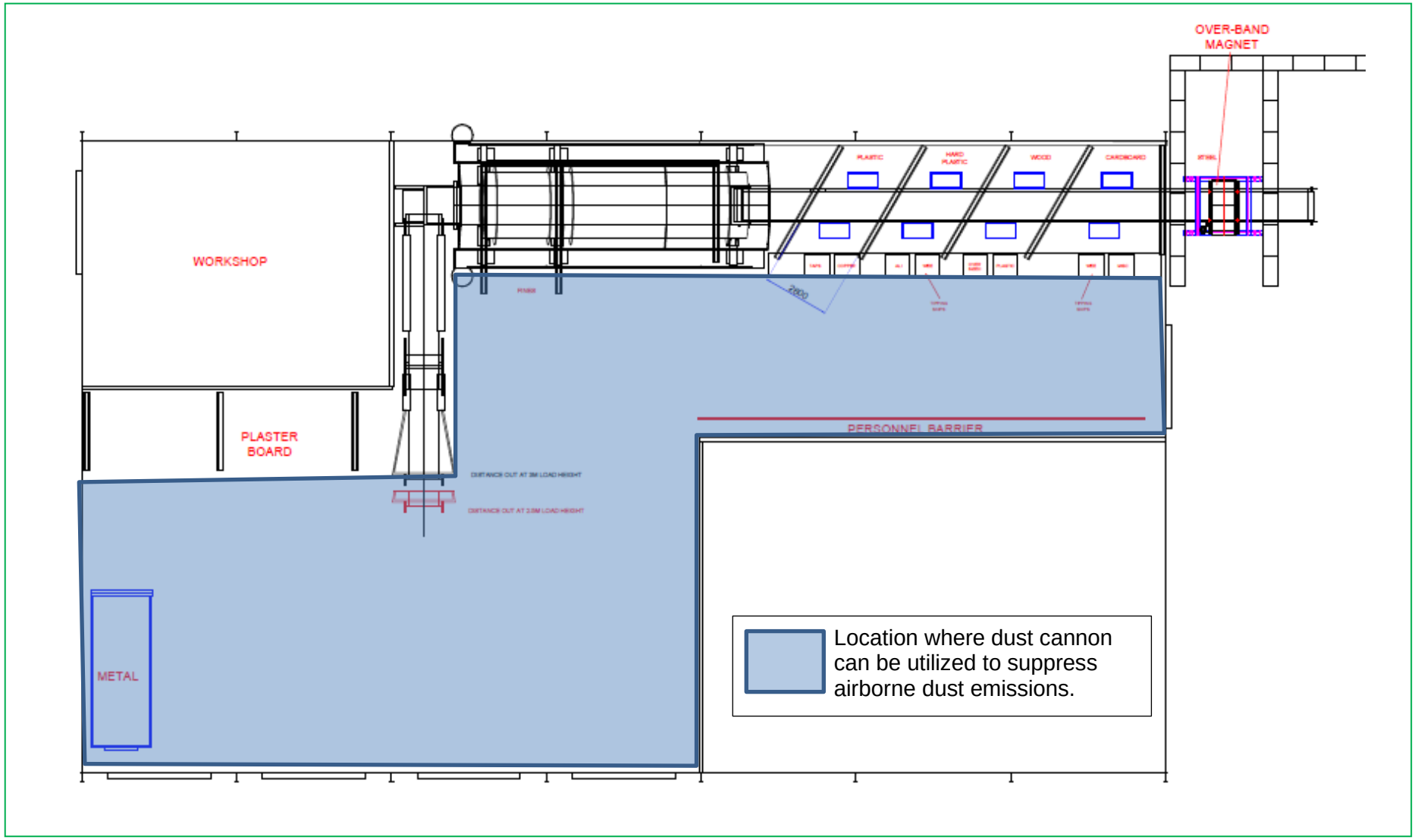


Figure 2.5: Dust Suppression System Layout

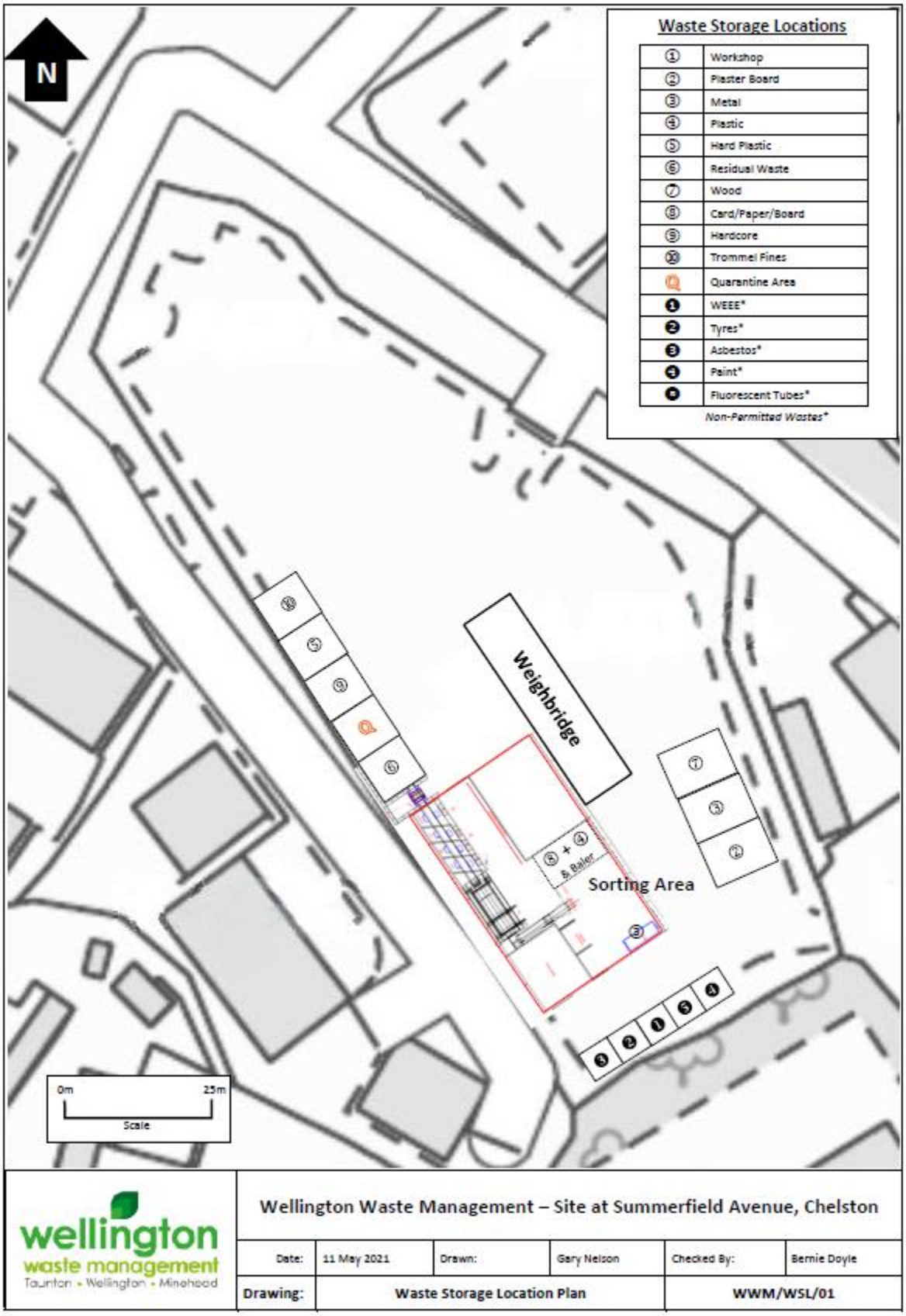


Figure 2.6: Material bay layout

2.3 Mobile Plant and Equipment.

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	Make	Model	Emission Rating
Forklift Truck	Toyota	06-8FDJ35F	Tier 4
Telescopic Waste Handler(TH42)	JCB	560-80	Tier 4
Telescopic Waste Handler(TH44)	JCB	560-80	Tier 4
Telescopic Waste Handler(TH47)	JCB	560-80	Tier 4

All plant used on site is provided with scheduled servicing and maintenance as per the manufacturer's specification using third-party specialists – Ask Plant Ltd. The workshop on site is only used for short breakdowns. The equipment used mainly for the movement of loose material but can be quickly adapted to handle pallets or bales by interchanging the appropriate attachments.

Although three telescopic waste handlers are available on site the waste processing only requires two units full-time. The availability of a spare enables cleaning and essential servicing and maintenance to take place whilst being able to continue activities on site.

Both the forklift truck and the telehandlers on site use gas oil (red diesel) as fuel. The gas oil used on site ultra-low Sulphur to reduce emissions.

The forklift truck has an anti-idling system installed which ensures it is operated only when there is an operative in the seat of the cab, it also has its speed restricted.

The telescopic waste handlers are also monitored for operational hours and idling time, any issues are addressed by the Site Manager and maintenance where required will be carried out using the in-house workshop.

All mobile plant operatives have had been trained externally in the safe and efficient use of all mobile plant.

3. Dust and Particulate (PM_{10}) Management

3.1 Responsibility for Implementation of the DEMP

This DEMP was established by Wellington Waste Management and implemented by the Site Manager with input from the Directors of the business.

The Site Manager is responsible for reviewing the DEMP and making sure that DEMP is followed on Site.

This DEMP will be reviewed annually and / or when:

- there are changes to the site layout or infrastructure,
- when there are any changes to the immediate surroundings areas outside the permit boundary,
- with the introduction or changes to fixed or mobile plant equipment or
- with the introduction of new grades of materials accepted on site.

The Site Foremen will follow the DEMP in the absence of the Site Manager.

The Site Manager and the Site Foremen from each shift will read through this DEMP in its entirety when it is issued and when it is amended in the future. Record of this will be retained on site and included in the Training Matrix for the facility.

No Waste Processing is undertaken outside the main building and the air extraction and filtration equipment within the main building is fully contained. Managing dust generated by site activities in this manner obviates the need to undertake any particulate matter monitoring and the associated training.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

<u>Potential Sources</u>

- Vehicles entering and / or leaving the site with mud on wheels and tracking dust on to or off the site.
- Debris falling off lorries which arrive uncovered.
- Vehicles and plant moving around the site kicking up dust.
- Road vehicles tipping waste and telescopic waste handlers moving waste.
- Plant sorting waste – feed hoppers, magnets and trommel screens.
- Waste dropping from conveyors into bays.

- Waste stored in bays.
- Surfaces around the site.
- Loading waste materials back on to vehicles.
- Particulate emissions from the exhaust of vehicles, plant and machinery on site.

Further detail on how Wellington Waste intend to break the source-pathway-receptor model for each of these potential sources is shown in the below Tables 3.1 and 3.2.

Table 3.1: Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Where Source and Receptor Pathway can be broken
Mud	Tracking dust on wheels and vehicles, then mud dropping off the vehicles when dry	Highway users	Visual soiling, also consequent resuspension as airborne particulates	Remove mud before vehicles leave site. Speed humps at both shutter doors. Road sweeper completes full clean of site as required.
Debris	Falling off lorries or from containers	Chelston Business Park	Visual soiling, also consequent resuspension as airborne particulates	Cover lorries and containers before entering or leaving facility. Long haul road ensures residual mud drops off before vehicle reaches public highway. Speed humps at both shutter doors. Road sweeper completes full clean of site as and when required.
Tipping, storage, and sorting of waste inside buildings	Escape from buildings and subsequent atmospheric dispersion	Chelston Business Park	Visual soiling and airborne particulates	All loose materials inside the building facility are contained in concrete bays. Shutter doors can be closed when high winds occur. Processing line is in the centre of the tipping and processing hall, with an automatic dust suppression system in place.
Vehicle exhaust emissions	Atmospheric dispersion	Chelston Business Park	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. Daily pre-use checks. Regular servicing and maintenance.
Non road going machinery exhaust emissions	Atmospheric dispersion	Chelston Business Park	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. Shift pre-use checks on all mobile plant.Regular servicing and maintenance.

Table 3.2: Measures that will be used on site to control dust/particulates (PM_{10}) and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Enclosure within a building	Creating a solid barrier between the source of dust and particulates and receptors is likely to be the most effective method of control, provided that the building entrances and exits are well managed.	As site is not in a hugely sensitive location and the business park has an industrial nature, to ensure that dust nuisance will be kept to a minimum the sorting activities are enclosed in a building. Ensure that procedures are in place to manage the building and its integrity.	This will be used all the time, there will be no processing of waste outside the building.
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure, if emissions from the source are not dispersed oversignificant distances.	The activities given rise to most dust will be carried out inside of the building. The risks caused by storage are less significant.	This will be used all the time, there will be no processing of waste outside the building. If the facility develops in anyway then this will be taken into consideration in the design phase.
Site speed limit, 'no idling' policy and minimisation of vehicle movementson site	Reducing vehicle movements and idling should reduce emissions fromvehicles.	Easy to implement as part of good practice. Should be identified clearly in the site management system and implemented asappropriate measures.	These speed controlling measures and reducing plant idling time will be used all the time.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Minimising drop heights for waste. Covered skips / storage vessels.	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds. Enclosing processes will further reduce dispersion.	Relatively easy to implement at many sites. These steps should be identified clearly inthe site management system and implemented as appropriate measures.	This will be used all the time.
Good house-keeping	Having a consistent, regular housekeeping regime that is supportedby management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	Easy to implement and requires minimalequipment. Encourages a sense of pride and satisfactionamongst the staff which promotes vigilance and a positive culture. Staff should target the areas not caught bythe road sweeper and other cleaning apparatus. Details on the frequency, job roles and areascovered should be documented here.	This will be used all the time. Site Manager will decide when not to do this outside the facility – for example if it is not safeto do so due to icy conditions.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as theytravel.	Relatively easy to implement at many sites.Should be identified clearly in the site management system and implemented as appropriate measures.	This will be used all the time.
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface, using materialssuch as concrete as opposed to unmade (rocky or muddy) ground within the site and on-site haul roads. This should reduce the amount of dustand particulate generated at ground level by vehicles and site activities.	Considered good overall based on dust andparticulate reduction but potentially costly and disruptive to retrofit. For sites that haveconcrete surfaces ensure there are maintenance and cleaning procedures in the management system, and they are implemented.	This will be used all the time.
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.	Likely minimal return on potentially costly layout changes. The amount of waste that can be managed on site without causing dust and particulate pollution should be identified in the management system and may have to be reduced if it is considered an appropriate measure.	This approach will be used all the time.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Remedial Measures			
On-site sweeping	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles. Road sweeping vehicles damp downdust and particulates whilst brushingand collecting dust and particulates from the road surface, particularly at the kerbside. This may generate dust and particulatemovement that may become a Health and Safety issue if the filters and spray bars on the sweepers are not maintained.	Easy to apply but less effective than other measures.	This will be done on as required by a third-party contractor.
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	Quite water intensive. Maintenance should be covered in the management system and procedures.	This will be undertaken as and when required.
Water suppression with mist sprays	Installation of mist sprays around sites, at building entrances/exits and within buildings at point source emissions like conveyors, trommels etc. It can also assist in the damping down of dust and particulates, therefore, reducing emissions from site.	Very effective at controlling point source emissions of dust and particulates. Can be installed to conveyors and areas where waste is dropped. 'Halo' rings can be fitted to conveyor drops on concrete crushers and screeners to minimise dispersion. Not effective for use at site boundaries. Uses less water than water bowser. Maintenance should be covered in the management system and procedures.	This will be used all the time inside the building.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
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3.3 Other considerations

Water usage/ availability:

This site is located on a large industrial estate and water to the site is primarily used for the hygiene facilities on site, the Screenpod Mist-Air system (which is low volume usage) and a small vehicle jet wash.

As there is no readily available information in terms of the water supply levels, however, guidance on water supplies for industrial estates has been referenced to determine an average flow:

a) Up to one hectare minimum of 20 l/sec (1200 l/min)

b) One to two hectares minimum of 35 l/sec (2100 l/min)

c) Two to three hectares minimum of 50 l/sec (3000 l/min)

d) Over three hectares minimum of 75 l/sec (4500 l/min)

As the Industrial Estate is over 10 hectares it is likely that a supply of 4,500 litres per minute of water supply (or 270 m^3 per hour or in excess of 6,000 m^3 per day) available.

It is appreciated that this available capacity of water will fluctuate and would dissipate depending on demand on the industrial estate.

The average daily usage for the site 5.89 m^3. Hence, there are no issues with water supply to the site.

Looking at a worst-case scenario that the Mist-Air system ran continuous, it would use 11.16 litres per minute, 669.6 litres per hour or 16.1 m^3 over a 24-hour period. It should be noted though the Screenpod dust cannon system is programmed to work intermittently and does not run continuously.

Drainage for the site is both foul water which comes from inside the building and surface water from the surface water drainage of the hardstanding and the roof of the building.

In the event of a drought:

Guidance / clarification will be sought from the Local Water Authority regarding water usage.

3.4 Enclosure of Waste Processing Areas

All wastes delivered to site that are either bulked for onward movement are sorted inside the building where the risk of dust dispersal is managed and only then stored within the permitted area at the facility.

3.5 Visual Dust Monitoring

All processing of waste is within the building, and with dust suppression systems in place the emission of dust leaving the building is highly unlikely. To manage this visual dust monitoring will be undertaken on the daily walk around of the site by the Site Manager or the shift Site Foremen.

As the southeast boundary of the site is the only part of the site with direct neighbouring businesses (Wellington Auto Fix and Chelston Motorhomes), the person undertaking the daily walk around will look for dust plumes going towards any of the site boundaries.

Any reports of dust around the site (that have the potential to leave the site) will be recorded in the Environmental Log, the Site Manager will be informed and any additional measures (such as dampening down or additional third-party contractor road sweeping) agreed and implemented.

4. Particulate Matter Monitoring

No Waste Processing is undertaken outside the main building and the air extraction and filtration equipment within the main building is fully contained. Managing dust generated by site activities in this manner obviates the need to undertake any particulate matter monitoring and the associated training.

If a complaint does occur, an investigation of the complaint will be undertaken in accordance with the instructions in Appendix C and a decision made on the any remedial actions or additional measures thereafter and seek guidance from the Environment Agency if it is required.

4.1 Analysers

N/A.

4.2 Monitoring Location

N/A.

4.3 Operation of the PM Monitoring Equipment

N/A.

4.4 Quality Assurance/Quality Control and Record Keeping

N/A.

4.5 Equipment and Data Management

N/A.

4.6 Reporting of Data

Reporting will be undertaken as specified within the Environmental Permit.

Wellington Waste will take appropriate measures to reduce the amount of dust generated by the waste sorting activities and will not create any emissions beyond the site boundaries.

Wellington Waste, however, will report data to the Environment Agency as and when it is requested and / or agreed.

4.7 Additional Detailed Monthly Reporting

N/A.

5. Actions when alarm is triggered.

N/A.

6. Reporting and Complaints Response

The Site Manager will deal with all complaints and will formally respond to the complainant within 2 working days of the complaint being reported to site.

6.1 Engagement with the Community

The immediate neighbours to the site (Wellington Auto Fix, John Packer (musical instrument shop) and Chelston Motorhomes) have been contacted by the Site Manager who has passed on his details and who is the primary contact Wellington Waste's facility.

6.2 Reporting of Complaints

All complaints from interested parties will be recorded on the Dust and Odour Complaint Form by the Site Manager. This form is shown in Appendix B.

If the decision has been made to review findings or improvement measures later, the Site Manager will record this on the form.

Findings from the investigations and any remedial actions will be recorded on the form and details will be fed back to the complainant.

Records of any complaints made about the facility will be kept for at least 3 years.

6.3 Management Responsibilities

All complaints from interested parties regarding the possible emission of dust from the site will be investigated primarily by the Site Manager who will inform the Company Director of the complaint.

Findings from the investigation and any remedial actions will be agreed by the Company Director.

All complaints together with the results of the investigations and any remedial actions will be included within the Wellington Waste's monthly Management Review Meetings.

6.4 Summary

The aims of this DEMP are:

- to identify if any site-generated dust is leaving the boundary of the site,
- to identify if on-site dust management methods are effective or whether they need to be reviewed and / or improved.

This DEMP will form part of the Environmental Management System for the site, and it will be integrated into the EMS as a formal document. A copy of this DEMP will be kept on site, enabling ease of reference by site staff.

APPENDICES

Appendix A: Waste Acceptance and Rejection

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Waste Acceptance Procedure

Check all waste deliveries for Delivered waste will be inspected for acceptance under three criteria, waste type, environmental nuisance and operating constraints.

Check the waste for:	YES	NO
Waste Type Is the waste listed in the Waste Acceptance table?	Accept the waste, subject to environmental and operational considerations	Reject the waste, see reject table
Waste Description Does the waste match the waste description on the weighbridge ticket?	Accept the waste	Change the description of the waste on weighbridge ticket, and inform the weighbridge AND reject waste, if non-acceptable waste type, see waste rejection table.
Environmental: **Odour** Does the waste smell strongly enough to cause immediate nuisance off site?	Reject waste, see rejection table.	Accept waste.
Environmental: **Dust** Is the waste dusty with the potential for airborne emissions off site?	Damp the waste down and consider minimising the storage time. OR Damp down the waste and reject it, see rejection table.	Accept waste.
Environmental: **Flies** - are there flies coming from and attracted to the waste?	Reject waste, see rejection table.	Accept waste
Operational: **Size Acceptability** Is the waste of an acceptable size for the MRF operation OR for storage areas provided for other waste?	Accept waste	Reject waste, see reject table.

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Waste Rejection Procedure

Waste that is not compliant with any of the acceptance categories detailed in the waste acceptance section will be rejected in accordance with the waste rejection table.

All reject waste and all reject waste containers will be stored on the impermeable pavement area of the site.

Reason for rejection	Small Fraction of Load	Whole of Load
Waste Type	Remove non-acceptable waste and store in a suitable bay or container If hazardous, label, isolate and arrange correct disposal/recycling and removal from site as soon as possible	Place back on vehicle for immediate rejection to a suitably licensed site for its acceptance
Waste Description	Correct waste description AND follow rejection procedure if non-compliant with other categories in this table.	Change waste description AND follow rejection procedure if non-compliant with other categories in this table.
Environmental: Odour	Contain section of waste AND arrange disposal of waste by end of working day	Place back on vehicle for immediate rejection to site for disposal.
Environmental: Dust	Damp dusty waste down OR place in container and store in reject bay	Damp dusty waste down OR place back on vehicle for immediate rejection to site for disposal.
Environmental: Flies	Contain section of waste in container AND treat waste with insecticide	Place back on vehicle for immediate rejection to site for disposal.
Operational: Waste Size	Store rejects in a bay or place back on vehicle and reject	Place back on vehicle and reject.

In every instance that a rejection is made a WASTE REJECTION FORM must be filled in. Photographs should be taken of the rejected load to accompany the form if proof may be required and if the rejected material is a Health and Safety issue.

Waste Rejection Form

Summerfield Avenue,
Chelston Business Park
Wellington

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Date _____

Customer _____

Hauler _____

Vehicle Registration _____

Time of Delivery _____

WE ARE UNABLE TO ACCEPT DELIVERY OF THIS LOAD FOR THE FOLLOWING REASON(S) :

TICK THE APPROPRIATE BOX(ES)

* Legal: Waste type: presence of non-acceptable wastes	☐
* Legal: Waste description: wrongly coded waste and non-acceptable	☐
* Environmental: presence of odorous waste	☐
* Environmental: presence of dusty waste	☐
* Environmental: presence of flies	☐
* Operational: presence of oversized waste	☐
* Other	☐

Signed _____

Name _____

Date _____

Appendix B: Screenpod dust and particulate suppression system.

Screenpod™
Design & Manufacturing

Both the S35 & S45 can be supplied as a road legal mobile unit which includes:
- Road legal trailer-mounted Dust Cannon
- 2500 litre water tank with easy fill bowser lid and ballvalve drainage point
- On-board genset - 12 kVA for S35 & 20kVA for S45
- Chequer plate and step up to the control area on the genset
- On-board control panel for dust cannon functions, remote control can be added as an option
Rough terrain (site trailer) for a range of Dust Cannons:
- 5000L water tank mounted on a single braked axle with rough terrain tyres
- On-board genset available with all units
- Both low & high level towing hitch to suit various site vehicles
- Jacking legs on four corners to stabilize the tank while stationary
- On-board control panel & optional remote control
Skid frame for S35 & S45:
- 1200L water tank
- On-board genset
- Fork pockets on both Z & X axis along with 4 lifting eyes
- Easy access doors at the rear to drain water pump
- Can be mounted on plant trailers from 1900mm wide
- On-board control panel for dust cannon functions, remote control can be added as an option
Tracked dust cannon:
- Range of cannons available on track frame
- On-board genset
- Electric tracks for easy movement around site
- On-board electrical control panel complete with remote control to operate both the dust cannon & tracks
- Fold down dust cannon for easy shipment to fit inside containers
Wheeled dust cannon:
- Wheeled frame for ease of movement around site
- Heavy-duty frame & rough terrain tyres
- Jockey wheel & jacking legs for stablisation
- Both towing eye & ball hitch option. Can be towed by car, jeep, or site vehicle (e.g. loading shovel)
- Range of cannons available to be mounted on this wheeled frame.
Telescopic dust cannon:
- Available for every dust cannon in our range
- Cover a larger surface area by rising the dust cannon head an extra 1500mm (4'11")
- Uses the same footprint as our standard dust cannons
- Available on all trailer, tracked, wheeled & skid option.
03
04

WHAT ARE YOU DOING ABOUT DUST?
Designed for effective dust control - The Screenpod Dust Cannon helps minimise dust, reduce health risks & improve air quality.
How it works: -
Water is pressurised through jet nozzles, transforming it into a fine mist. A fan within the cowling then generates an airflow to disperse the mist. The mist latches to the dust particles, thus supressing the dust.
Features & Benefits: -
- Robust Chassis - all components hot dip galvanised; perfect for the Demolition, Steel and Rental industry
- Electric tilt and automatic main valve
- Automatic swing operation to disperse mist over a large area
- Low power consumption
- Adjustable water flow to suit application requirements
- Droplet size between 10-150 microns
- Ideal for outdoor use - all round dust suppression for steel plants, crushing & recycling, mining, bulk handling and demolition
10-150 micron droplet size creating fine mist for optimal dust supression
Easy to use control panel and an optional wireless remote control
Up to 350° automatic rotation for full coverage (adjustable)
-10° to +50° of head tilt, controlled from both panel and remote control
3kW, 7.5kW, 18.5kW & 30kW options using a 16, 32 or 63amp 5 pin plug
70 bar water pump with adjustable pressure
S35 Max 45m: 70% of water volume at 7-35m
S45 Max 55m: 70% of water volume at 7-45m
S55 Max 65m: 70% of water volume at 10-55m
S65 Max 65m: 70% of water volume at 15-65m
01
02

Appendix C: Dust and Odour Complaint Form

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

Appendix D: Dust Control and Monitoring

Work Instruction – Wellington Waste Skips Ltd

Site	Summerfield Avenue, Chelston Business Park Wellington, Somerset, TA21 9JF	**Creation Date** **Author**	May 2021 BD	Issue No 2

DECRIPTION	
PURPOSE	
To reduce the risk of dust clouds arising in the site and leaving the boundary and meeting planning conditions, reducing health risks as well as reducing the risk of complaints.	
EQUIPMENT REQUIRED	**HEALTH & SAFETY**
Internet/ BBC or XC weather site/ sprinkler system/ site diary	Risk Assessment
Action	**Responsible**
Check forecast for wind speed and wind direction, visually inspect the site and windsock when entering the site. Use sprinkler system for damping down waste piles and monitor emissions of dust from the site.	Site Manager/ Weighbridge office staff
Install Dustscan monitoring pads quarterly and review the results	Bernie Doyle
Record the weather conditions in the site diary daily, record any complaints from the public.	Weighbridge office staff
If there is a risk of significant dust clouds leaving the site which might impact Chelston Business Park machinery and processes causing the issue will be immediately stopped. This can include: • Not clearing the piles of waste • Stopping the trammel and sorting plant • Wet waste piles • When new waste covers the pile the risk of dust can be reduced, and operations may recommence	Site Manager/ Weighbridge office staff
ll staff need to be aware of dust leaving the site and should inform the weighbridge office if they have any concerns	All staff