AC ENVIRONMENTAL CONSULTING

Dust & Emissions Management Plan

Site Clear Solutions

12-13 Conduit Road, Norton Canes, Cannock, WS11 9TJ

January 2025

Ref: SCS.PT.DEMP.2501.v6

AC Environmental Consulting Ltd

Environment House,

Werrington Road,

Stoke-on-Trent

ST2 9AF

Reference & Revision	Issue	Prepared	Checked
SCS.PT.DEMP.2008	First Issue	LS	DA
SCS.PT.DEMP.2302.v2	Second Issue	LS	DA
SCS.PT.DEMP.2304.v3	**Third Issue**	**LS**	**DA**
SCS.PT.DEMP.2409.v4	**Fourth Issue**	**LH**	**DA**
SCS.PT.DEMP.2411.v5	**Fifth Issue**	**LH**	**DA**
SCS.PT.DEMP.2501.v6	**Sixth Issue**	**LH**	**DA**

CONTENTS

1. INTRODUCTION

AC Environmental Consulting Ltd, on behalf of Site Clear Solutions, have prepared a Dust & Emissions Management Plan (DEMP) for the Site Clear Solutions site located on 12-13 Conduit Road, Norton Canes, Cannock, WS11 9TJ.

1.1 Site Location

The site is located on an industrial estate and is bordered to the north, south and west by additional industrial and commercial businesses with residential areas beyond. The east of the site is bordered by woodland and open fields with residential areas beyond. The site currently operates as a processing and storage facility for non-hazardous and hazardous waste in the Cannock area and has done so for several years. Previous uses of the site were for industrial/commercial purposes. There are no records/evidence of any pollution incidents on the site or near the site.

The Air Quality Management Area (AQMA) map from DEFRA has been checked and the site is located in a Nitrogen Dioxide (NO_2) Air Quality Management Area.

1.2 Site Operations

The site is designed to operate as a processing and storage facility for non-hazardous and hazardous waste. The site is operating under planning permission Ref: CH.19/01/778 W which was granted in March 2019. In August 2023, Site Clear Solutions Ltd obtained an Environmental Permit, reference EPR/WE4296AB/A001, and permits the site to accept up to 21,800 tonnes of waste per annum, of which no more than 3,050 tonnes per annum will be hazardous waste. The company also operates the site under the ISO9001 Quality system and the ISO14001 Environmental system. Each waste stream has its own processing/storage area within the building or external yard, with some wastes being stored in concrete bays. It is anticipated that tonnages will vary at an average of 70 tonnes per day. The site uses a variety of equipment and machinery including a baling machine (including conveyor), compacting and baling machines, cable granulation machine, polystyrene compacting machine, forklift trucks and an industrial jet washer. These items will only be used during operational hours.

Site Clear Solutions Ltd are seeking to vary the environmental permit to include the operation of 1 Nr Advetec XO22 aerobic digestion unit for the treatment of non-hazardous clinical waste. These wastes have primarily been getting sent to landfill, and occasionally for EfW incineration. However, installing an Advetec aerobic composting machine that utilises bio-stimulants, will enable rapid aerobic digestion of the organic matter found within the non-hazardous clinical waste, which will considerably reduce its volume and mass. The expected output (known as floc – a loosely clumped mass of particulate material) will be fit to use as Solid Recovered Fuel (SRF). The maximum quantity

of waste proposed for treatment by aerobic digestion is up to 8 tonnes per day, 2,440 tonnes per annum. The permit variation application seeks to allow the treatment of no more than 8 tonnes of non-hazardous waste per day, equating to 2,440 tonnes per annum.

Analysis on the feedstock has determined that there is sufficient organic matter and moisture for the aerobic biological process (composting) to work successfully. This has been further demonstrated through on-site trials with the feedstock with a site in Derby. The biological process is speeded up with the addition of bio-stimulants.

The biological process – composting – stays within expected composting parameters of temperature (no greater than 70 degrees and oxygen content of the waste). Under these conditions there is no breakdown of complex synthetic organic material, therefore posing no threat to human health or the environment. In essence is it's the same process as used in large scale aerobic composting or bio-drying Mechanical Biological Treatment Plants (MBTs), that accept this type of feedstock nappies etc. as part of the residual waste stream.

The site layout has been designed to enable efficient processing and storage of non-hazardous and hazardous waste. The central area of the site is kept free of wastes and materials. All equipment/vehicles when not in use, are stored outside of the permitted area away from stockpiles and plant. Mobile plant is stored in the mobile plant storage area in the building. The site is entirely surfaced with impermeable concrete and has a sealed drainage system draining via interceptor to a sewer. The site perimeter consists of a mixture of palisade fencing ranging between 1.8m and 2.1m in height, and concrete panel walls measuring 4m in height.

The site handles non-hazardous and hazardous waste which has been collected from various sources nationally. The waste is collected using their own transport and from outside contractors bringing the waste to the site. The waste is inspected upon arrival and if approved, it is transferred to the receiving area of the external yard. The hazardous waste includes WEEE, batteries, fluorescent tubes, paint, resin & solvents, adhesives, and aerosols & oil. The non-hazardous waste includes plasterboard, inert waste, paper, cardboard, scrap metal and plastic. Prior to unloading, the waste deliveries are inspected by site staff for non-conforming waste. If non-conforming waste is identified, it will be removed immediately from the load and transferred to the non-conforming waste bay, to the northwest of the external area, pending removal to a suitable permitted facility. If the non-conforming waste cannot be removed from the load, the entire load will be rejected and will be transferred to the non-conforming waste bay pending removal to a suitable permitted facility.

Waste is stored in stockpiles throughout the site that are allocated for waste streams including general waste, plastic, inert waste, paints and resins, plasterboard, clinical waste, copper and WEEE. Inside the building there is storage for WEEE and clinical waste. In the external yard, there are a variety of storage areas for waste in designated areas to the north, northwest, east, and central areas of the yard, where wastes will be stored in labelled containers in bays, or in 40 cyd skips, 40 cyd enclosed skip, and plasterboard waste is in a covered 8 cyd skip. The yard also has a quarantine area and a weighbridge. To the northwest of the external yard there is a chemistry laboratory. There are also two gas bottle cages, an empty bin/drum storage area, a canteen, and an overnight vehicle parking area in the external yard. The car park is situated along the western boundary.

The building comprises of several separate areas for both the processing and storage of waste. The main area of the building includes a WEEE processing area, the mobile plant storage area, balers and the office. It is crucial to note that balers are located internally, or externally under the covered bay, and they will not be used for hazardous waste. The hazardous waste is to be repackaged only. To the south of the building, there are several separate areas. The granulation and destruction areas are currently used for the granulation of copper wires. Once processed, the copper is stored in the area and the plastic is transferred to an assigned storage bay. The clinical waste transfer station is used for the sorting of clinical waste which is then stored in clinical waste wheelie bins or dedicated storage containers. The remaining areas of the building to the south consists of mezzanine storage, the traffic office, and the office and headquarters.

The range of waste accepted on site is in accordance with the Environmental Permit reference EPR/WE4296AB/A001, and planning permission Ref: CH.19/01/778W. Waste is stored in stockpiles on an impermeable surface with sealed drainage and is processed and stored for up to one month.

1.3 Potential for Emissions

Due to the types of waste accepted on site, there is the potential for dust to arise. Further information on the potential sources of dust can be found in section 3.2. All areas where vehicles and plant are operated are on a concrete surface. The current areas of hardcore surface will be converted to impermeable concrete prior to the commencement of site operations. Operating vehicles and plant on the concrete surface will prevent the potential for mud and therefore reduce the risk of material from being transferred onto the public highway by vehicles exiting the site. Any accumulation of dust on site will be removed by hand through sweeping or by using a mechanical sweeper as per the housekeeping measures within Section 5.

The permit variation application seeks to vary the environmental permit to include the operation of 1 Nr Advetec XO22 aerobic digestion unit for the treatment of non-hazardous clinical waste. The digestion unit is a full enclosed system and does not produce dust.

The waste, prior to being fed into the digestion unit, will be loaded into a hopper which connects to a shredder, both of which will be located externally, in the yard. The shredder will be located parallel to the Advetec XO22 aerobic digester. The Untha RS40-1000 shredder will shred the waste into 50mm particle size, the shredded waste is then augered into the digester. The Untha RS40-1000 shredder has been designed to produce low noise and dust pollution with its low speed cutting shafts.

The by-products of the aerobic digestion system include water vapour, carbon dioxide, condensate, which are vented to the air, and a post-process residue (floc, i.e. a loosely clumped mass of particulate material). The entire aerobic digestion process takes approximately 72 hours to complete. There are no pumps or pipework associated with this process other than the outlet vents which are stainless steel 304 attached to external plastic vent stacks. There will be two point source emissions to air from the aerobic digester, which are these vents. The process maintains a level of moisture within the system, which minimises the potential for dust.

The 2 vent stacks on the XO22 are located at the outfeed end of the process. Each vent is 150mm diameter, the top of the vent is at a height of approximately 4.4M above the adjacent ground level. Fresh air is introduced into the aerobic process by a pair of externally mounted fans on the infeed end of the XO22. These fans run in a Duty/Standy configuration where they switch over from fan to fan at a predetermined set point of typically 1-hour intervals. The operation of the fan is monitored by the system and a fan failure is sent out as an alert condition through the cloud-based monitoring system. The flow rates from each outlet vent can be seen in Appendix G. Additionally, there is an in-line gas monitoring system that continuously monitors levels of methane (CH4), carbon monoxide (CO), volatile organic compound (VOCs) and sulphur dioxide (SO2) leaving the vents. In the unlikely event of detection of any of these parameters, an alarm is raised.

Post process Floc will be collected and stored in a 40 cubic yard compactor, externally, which, when nearing capacity, arrangements will be made for the compactor to be swapped with an empty one, and the full one will be transported off site.

There are no other expected emissions to be produced on site.

1.4 Emissions Prevention

The operations will be governed by conditions attached to the Environmental Permit, reference EPR/WE4296AB/A001 and planning permission Ref: CH.19/01/778W which has been granted. Abatement measures include the use of hoses, manual and mechanical sweeping, and the covering of any exposed stockpiles with tarpaulin as per the housekeeping measures within Section 5. As part of a management procedure, daily inspections take place, and where visible accumulations of dust are present, road sweepers shall be employed to sweep the highway. Further detail on these measures is provided within Section 5.

The site's concrete surface makes it easy to clean regularly in accordance with the cleaning schedule provided in Appendix B using a manual or mechanical sweeper if any accumulation of dust becomes visible. The easily maintained concrete surface prevents the build-up of potential dust, mud, and debris, therefore reducing the risk of material being transferred to the public highway by vehicles exiting the site. The means of prevention discussed are based on existing site management procedures and the planning permission guidance. Further details on emission control and maintenance can be found in Table 3.1 and 3.2.

1.5 Purpose of DEMP

The purpose of this document is to meet the requirements of and reassure the Environment Agency that the potential for dust produced from the site's operations is mitigated and controlled in every possible way.

The DEMP has been prepared with the aim of obtaining a variation to the environmental permit to allow for a recycling and storage facility for non-hazardous and hazardous waste, including the operation of 1 Nr Advetec XO22 aerobic digestion unit for the treatment of non-hazardous clinical waste at 12-13 Conduit Road, Norton Canes, Cannock WS11 9TJ.

The audience of this document is the planning authority and Environment Agency for approval, and the operational staff on site. The document will be made available to the on-site operational staff by being stored in the site office and online. Also, staff will be trained in the requirements of the DEMP via toolbox talks.

1.6 Sensitive Receptors

The site has various sensitive receptors nearby that may be vulnerable to dust emissions. They are referred to as sensitive receptors due to them being in areas where the occupants are more susceptible to the adverse effects of exposure to high levels of dust and particulates. These receptors include residential, commercial, and industrial premises. However, due to the scale and activities

carried out at the site, the likelihood of dust pollution is deemed to be low. The risks are mitigated on site by having various measures in place, therefore the nearby receptors are not vulnerable to dust pollution. During any incident, receptors will be notified via phone call or by operatives knocking on doors and informing them of the incident and advising them to remain indoors. Their distances to the working area and their sensitivity to dust emissions is shown in Table 1.1.

The nearest residential housing is approximately 243m to the west on Walsall Road (B4154) and 245m to the east on Beaumont Way, which have the highest sensitivity to dust emissions due to their close proximity to the site. There are two schools and one nursery within the vicinity of the site; Jerome Primary School that is located approximately 530m to the northwest, Honeybuns Nursery situated approximately 443m to the northwest and Norton Canes Primary Academy approximately 770m to the northeast of the site. A medical centre named Norton Canes Medical Centre is situated approximately 355m to the northeast. There are also various designated sites within 1km of the site. The site is situated approximately 877m to the west of the SSSI Chasewater and the Southern Staffordshire Coalfield Heaths, 1km to the north of Cannock Extension Canal SSSI and SAC, 367m to the north of a Local Wildlife Site (LWS) and is immediately adjacent to a Protected Habitats site that is located to the east and southeast of the site.

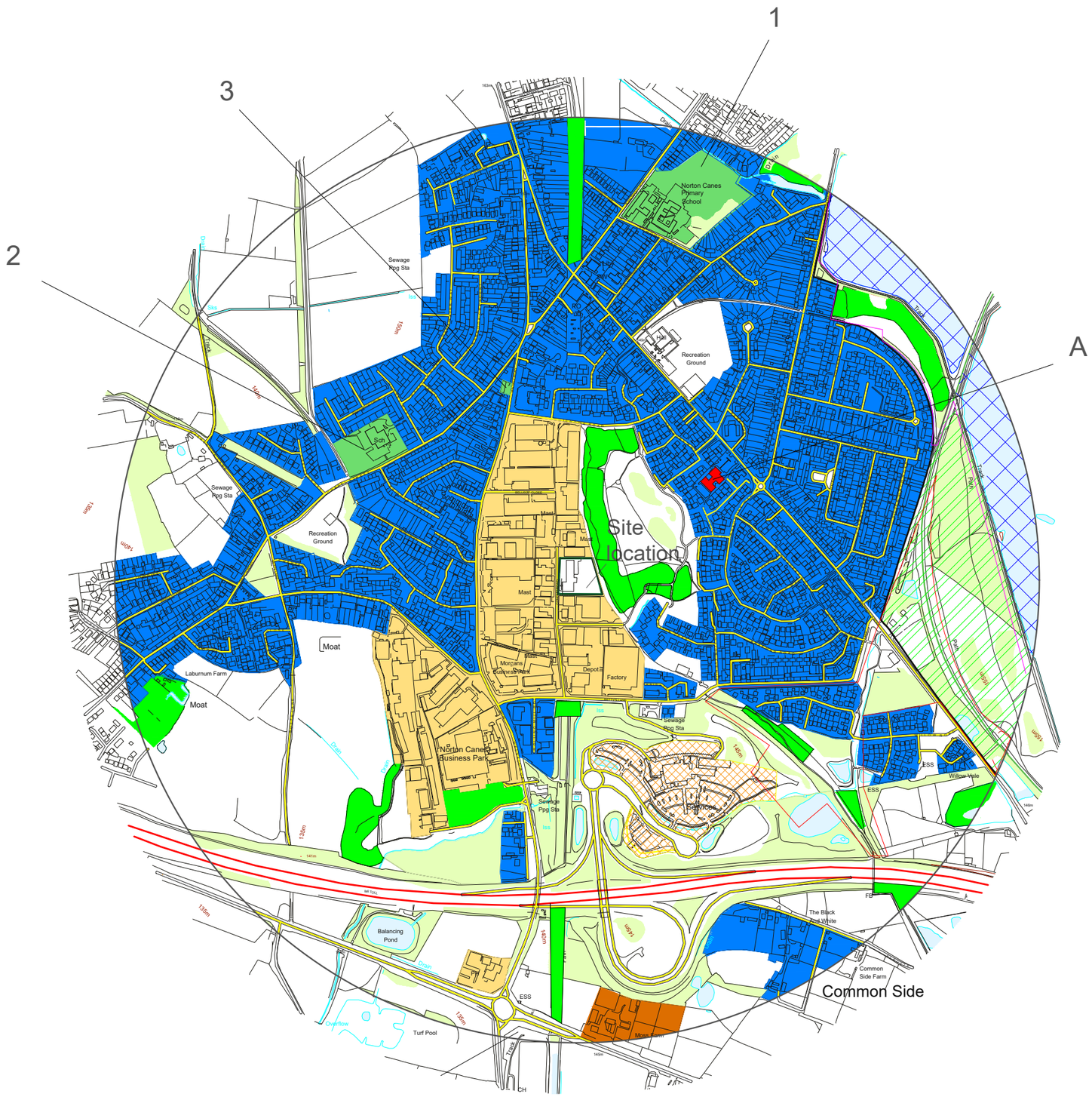
Due to the nature of the operations on site, the greatest proportion of dust emitted is largely deposited within 100m of the dust source. It is important to note that none of the receptors are within a 100m range of the site. As stated by the Guidance on the Assessment of Mineral Dust Impacts for Planning 2016, it is acknowledged that the greatest impacts from dust emissions will be within 100m of the source, referring to both small and large dust particles. This indicates that none of the receptors will be greatly impacted by any potential dust producing operation on the site. The less dense dust material only reaches a maximum of 500m, meaning the receptors beyond 500m of the site are at a very low risk of being impacted by fine dust. The map displaying the locations of the sensitive receptors is shown in Figure 1.1. There are also other dust producing operations occurring close to the residential housing, including numerous auto repair shops, a builder's merchants, a hardware shop and the M6 Toll.

Additional receptors not considered sensitive within the 1000m radius include a church located approximately 650m to the north. Also, there is a community centre situated approximately 525m to the northeast and additional recreational facilities such as bars, restaurants and pubs to the north. Chase water and fields surround the area up to the 1000m range. These receptors have not been identified as sensitive due to them being located beyond 500m of the site, therefore being at very low risk of impact from potential dust emitted from the site.

There are no other expected emissions to be produced on site besides dust. The operations on site will not cause the receptors positioned further away from the site to be given greater consideration in terms of dust impacts. There are no factors that would cause a receptor close to the site not to be considered a receptor. There are however other sources of dust close to some of the receptors, including numerous auto repair shops, a builder's merchants, a hardware shop and the M6. Detail on the other potential local sources of dust is given in Table 1.2.

A wind rose for Norton Canes, shown in Figure 1.2, indicates that the prevailing winds blow from the southeast which suggests that the receptors situated to northwest will be the most impacted by potential dust.

Figure 1.1 Nearby Sensitive Receptors



0 100 250 500

Scale (meters)

SCHOOLS

1. Norton Canes Primary school
2. Jerome Primary School
3. Honeybuns Nursery

Medical Facilities

A. Norton Canes Medical Centre

SSSI

A. Chase Water

Local Nature Reserve

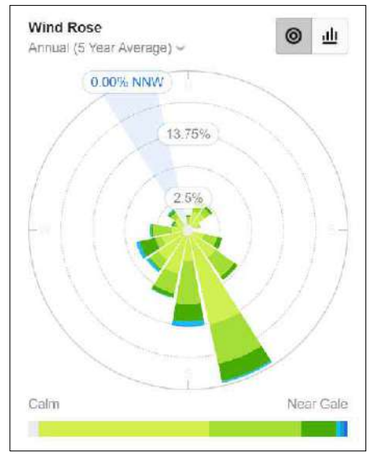
A. Chase Water

Protected Habitats

A. Chase Water

AC ENVIRONMENTAL
Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

N



- Local Nature Reserve
- SSSI
- Motorway service station
- Educational Facilities
- Industrial/ Commercial
- Residntial
- Medical Facilities
- Motorway
- Roads

CLIENT

SITE CLEAR SOLUTIONS

SITE 12-13 Conduit Road
Norton Canes
Cannock
WS11 9TJ

REV	DATE	DETAIL

PROJECT

PERMIT APPLICATION

TITLE

KEY RECEPTOR PLAN

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	Mar 2025	T Kearns	D Alcock

DRAWING NO	REVISION
230327SCS103	

Figure 1.2 Wind rose showing the average wind direction and strength at Site Clear Solutions

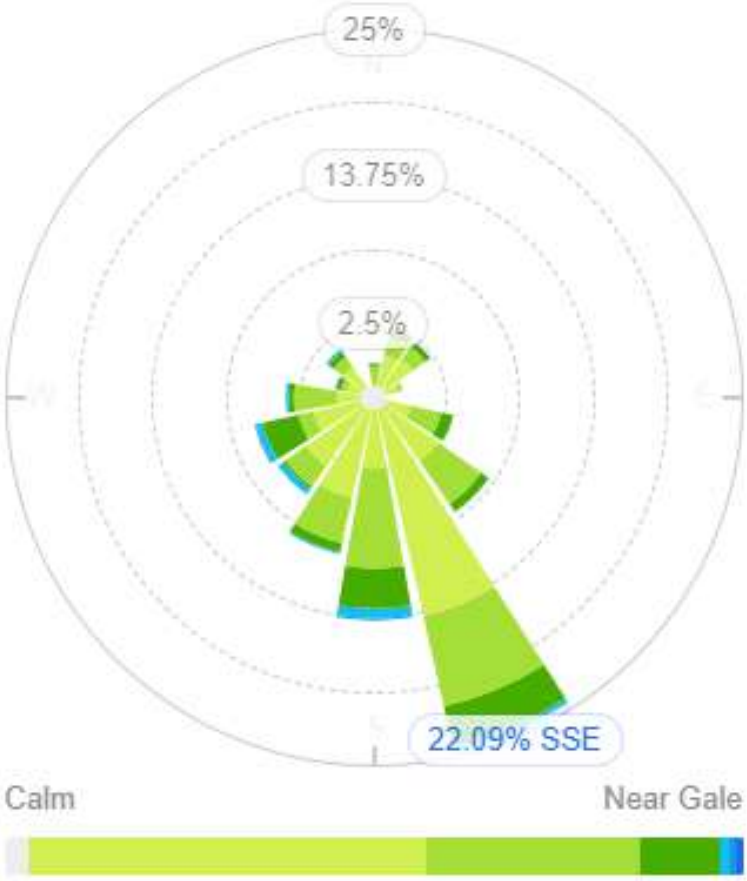


Table 1.1 Distances to selected, representative sensitive locations

Boundary	Closest property	Approximate distance to Site Clear Solutions site boundary (m)
East	Residential houses on Beaumont Way	245
West	Walsall Road	243
Northwest	Jerome Primary School	530
Northwest	Honeybuns Nursery	443
Northeast	Norton Canes Primary Academy	770
Northeast	Norton Canes Medical Centre	335
East	Chase Water SSSI	877
South	Cannock Extension Canal SSSI and SAC	1,000
South	Local Wildlife Site	367
East and Southeast	Norton Canes Protected Habitats	0

Table 1.2 Sources of Dust and/or other Emissions

Company	Address	Type of Business	Distance from Site Clear Solutions site boundary (m)
M6 Toll Motorway	South of the site	Motorway	670
AER Stafford	Bellsize Close, Norton Canes	Plastic products supplier	260
Norbert Dentressangle	Bellsize Close, Norton Canes	Transport Company	240

XPO Logistics	Bellsize Close, Norton Canes	Storage facility	220
Jointing Technologies Ltd	Bellsize Close, Norton Canes	Utilities Contractor	195
Synatel Instrumentation	Walsall Road, Norton Canes	Electronics Manufacturer	210
Brownhills Asphalt Tarmac Limited	Walsall Road, Norton Canes	Groundwork, property maintenance and surfacing	175
VMTP Midlands Ltd	Conduit Road, Norton Canes	Car repairer	115
Joyce & Reddington	Conduit Road, Norton Canes	Builder	105
Midland Air Tools	Walsall Road, Norton Canes	Pneumatic tools supplier	220
Fluid Technologies	Walsall Road, Norton Canes	Industrial equipment supplier	175
Trust Automotive	Walsall Road, Norton Canes	Vehicle Repair Shop	175
RLS Tooling Ltd	Walsall Road, Norton Canes	Tool manufacturer	135
TGI Corporation	Conduit Road, Norton Canes	Clothes and Fabric wholesaler	0
Lindale Building Services Ltd	St James House, Conduit Road	Electrician	0
Autosmart International Ltd	Walsall Road, Norton Canes	Cleaning products supplier	210

R A Auto Repairs	Conduit Road, Norton Canes	Vehicle repair shop	60
Rimac Fabrications Ltd	Conduit Road, Norton Canes	Flooring contractor	70
Norton Gates & Fencing Fabrication	Conduit Road, Norton Canes	Manufacturer	70
Halco Products	Walsall Road, Norton Canes	Hardware shop	190
West Midland Transmission	Conduit Road, Norton Canes	Vehicle inspection	90
J P Autobodies	Conduit Road, Norton Canes	Vehicle repair shop	75
Chase Tyres Specialists Ltd & MOT Centre	Conduit Road, Norton Canes	Tyre shop	95
Wilkes Distribution Services	Conduit Road, Norton Canes	Transportation service	100
DG Automotive	Conduit Road, Norton Canes	Vehicle repair shop	110
HBL Plastics	Conduit Road, Norton Canes	Plastic injection moulding service	140
Tube Polishing & Engineering	Conduit Road, Norton Canes	Metal finisher	130
Midlands Nautique	Walsall Road, Norton Canes	Marine Broker	175
SK Direct	Bettys Lane, Norton Canes	Manufacturer	235
Redmore (UK) Ltd	Bettys Lane, Cannock	Machine shop	215

Reliance Manufacturing Ltd	Conduit Road, Norton Canes	Manufacturer	210
Ranton Building Supplies Ltd	Conduit Road, Norton Canes	Building materials supplier	220
Redirack	Bettys Lane, Norton Canes	Manufacturer	240
Stakapal Limited	Bettys Lane, Norton Canes	Manufacturer	245
Sunstore Ltd	Bettys Lane, Norton Canes	Medical supply store	260
John Horton Plant Hire Ltd	Rolling Mill Road, Norton Canes	Industrial equipment supplier	285
Affordable Fencing	Walsall Road, Norton Canes	Fence contractor	320
The Brock Metal Co Ltd	Walsall Road, Norton Canes	Metal supplier	350
Industrial Coating Services	Rolling Mill Road, Norton Canes	Painting	330
Central Milled Lead	Rolling Mill Road, Norton Canes	Manufacturer	380
Edmondson Racing	Rolling Mill Road, Norton Canes	Mechanical engineering	345
Premier Platforms	Rolling Mill Road, Norton Canes	Industrial equipment supplier	380
Norton Aluminium Ltd	Norton Green Lane, Norton Canes	Aluminium supplier	390
Stainless Metal Solutions	Norton Green Lane, Norton Canes	Steel stockholder and supplier	330

G Mech Fabrications Ltd	Norton Green Lane, Norton Canes	Steel fabricator	400
Owen Autobodies Ltd	Norton Green Lane, Norton Canes	Car body shop	575

2. OPERATIONS AT SITE CLEAR SOLUTIONS

2.1 Waste Deliveries to Site Clear Solutions

Waste is collected from customer's premises in the site's own vehicles and delivered to the site using their own vehicles. Third party contractors' vehicles are also used for waste deliveries. These particular vehicles and their emissions ratings are provided in table 2.1 below, although the list is subject to change over time. Further detail on the waste accepted on site, the onsite processes and their destinations within the facility are shown in Table 2.2 and Figure 2.1.

Table 2.1 Waste delivery vehicles and emissions ratings

Group	Make	Model	Emissions
HGV	MAN	TGL 12.220	Euro 6
HGV	MAN	TGM 18.250	Euro 6
HGV	DAF	CF	Euro 6
Vans	MERCEDES	SPRINTER	221
Vans	RENAULT	MASTER	323
Vans	RENAULT	MASTER	323
Vans	RENAULT	MASTER	236
Vans	RENAULT	MASTER	236
Vans	RENAULT	MASTER	236
Vans	RENAULT	MASTER	236
Vans	MERCEDES	SPRINTER	244
Vans	MERCEDES	SPRINTER	244
Yard/Office	JCB	Forklift	n/a
Yard/Office	Toyota	Forklift	n/a
Yard/Office	Yale	Forklift	n/a
Welfare Van	MERCEDES	SPRINTER	210
Directors	Volvo	XC90 hybrid	63
Directors	Lotus	Eletre	0

Waste consists of a variety of non-hazardous waste, including plastic, inert waste, plasterboard, bagged 'offensive' clinical waste, scrap metal, cardboard and paper, and a range of hazardous waste including WEEE and clinical waste. Further detail on the waste accepted on site, the onsite processes and their destinations within the facility are shown in Table 2.2 and Figure 2.1. All waste is delivered to site in vehicles that are sealed or sheeted. In the absence of a wheel wash, if required, vehicles will be dampened down using the onsite hoses upon arrival and before exiting the site. The main source of water is mains water, however there are also two IBC containers filled with water present on site which can be used in the event of a drought or a hose ban.

Drivers are required to inspect loads prior to uplift and the checks include load security, potentially dangerous wastes, and hot loads. If a load is deemed to present a risk, then the driver reports this to site management who will advise the customer that the load cannot be collected and the reasons for that.

Loads are also inspected at the site by site staff prior to tipping. Loads being tipped are also supervised so that any issues which were hidden and not identified prior to tipping can be seen. The aim of this is to ensure that a problematic load is not tipped and allowed to stand for a period of time, potentially allowing dust and emissions to accumulate. Prior to tipping an accepted load, the load can be dampened down with a hose to reduce the risk of dust becoming airborne and exceeding the height of the boundary walls and being carried on the breeze. Loads are checked to ensure the following criteria is met:

i) EWC Code on the waste transfer note conforms to the waste inside the container.
ii) Permit waste acceptance criteria – waste meets with the criteria of the environmental permit and the planning permission for example, waste accepted would be within the permissible tonnage and waste type acceptance criteria.
iii) The waste is not odorous – waste is likely to be odorous if it has elements of putrescible waste and food residue.

If an issue is identified with non-conforming waste, the load shall be transferred to the quarantine area and site management alerted. Action taken may be to segregate and remove the problematic waste to a secure area or to sort the load, removing acceptable waste to recycling and to invite suitable qualified contractors to collect the problematic waste.

A driver induction will be conducted, and this briefing includes information on dust mitigation. Where possible incoming wastes should be pre-booked. However, in cases where waste is not pre-booked, a driver induction and waste acceptance procedure will be carried out. Waste accepted onto the site, whether pre-booked or not, will be visually inspected upon reception to the site in order to ensure that the waste is compliant with the site's permitted waste types and EWC Code description given by the produce/holder as listed on the waste transfer description.

Any wastes that do not comply with the site's permitted waste types shall be reloaded, rejected, and recorded in the rejection log.

There is one weighbridge on site where all vehicles will be weighed on arrival prior to tipping and on exit. All weights will be recorded and kept within the container office that is in the centre of both weighbridges. Further detail on this procedure can be found in the Site Management Plan.

In terms of records, Duty of Care notes, Waste Transfer notes are all kept. Additionally, input records consisting of EWC Codes as well as the source and quantity of the waste received will also be kept.

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

Processing operations within the building includes granulation, stripping and dismantling of WEEE, and baling. In the external yard, the hazardous processing area is located to the north-west of the yard, where hazardous wastes and laboratory smalls are repackaged. Once waste is accepted into the receiving area in the external yard, it is immediately transferred to the assigned processing areas, depending on waste stream. Once processed, the waste is moved to the assigned storage area according to waste stream. Storage areas include areas within the building, and several storage areas in the external yard consisting of 40cyd skips and concrete walled bays. Paper, cardboard and plastics are baled for efficient storage. It is crucial to note that the receiving area is the only temporary stockpile on site. The receiving area is emptied daily and the stockpile in this area will strictly remain 0.5m below the perimeter wall. Waste will be removed from this area within 24 hours. As shown on Drawing Ref: 230327SCS107, the receiving area has a visual dust monitoring position which will be inspected at the start and end of each working day during the site management inspections as per the housekeeping measures in Section 5.

The permit variation seeks to incorporate the operation of 1 Nr Advetec XO22 aerobic digestion unit for the treatment of no more than 8 tonnes of non-hazardous clinical waste per day, equating to 2,440 tonnes per annum. The XO22 digester will be located on the yard. Waste awaiting processing will be stored within the clinical waste transfer station which is bagged clinical waste in yellow bins. The volume of waste stored in this area is 73.2m3.

All waste processing areas and stockpile storage are situated on an impermeable concrete surface which is easy to clean with a sealed drainage system. The site surface will be cleaned using either manual or mechanical sweepers when there is the visible accumulation of dust or immediately following an incident as per the housekeeping measures in Section 5. The site access roads are constructed of tarmac which allows the easy and efficient removal of dust accumulations. There are concrete panel walls measuring 4m in height along the eastern and eastern corners of the perimeter which shield the stockpiles from the wind. The concrete perimeter walls, where there are designated areas used for the storage of hazardous and flammable waste, will also reduce the risk of the spread of dust through wind-whipping. It is ensured that all wastes are kept below 0.5m of the top of the concrete panel wall and the top of the bays at all times. All wastes stored in the concrete walled bays are stored on pallets or IBCs, which are covered using plastic, so this reduces the impact of the wind on the stockpiles. Plasterboard will be stored in a covered skip which will also reduce the risk of dust.

There is a receiving area within which waste is temporarily deposited before being transferred to designated processing areas. Further information on this operation can be found below. It is crucial to note that the position of the reception bay is protected from the prevailing wind directions so that it reduces wind-whipping of stockpile materials. The potentially dusty wastes brought to site are given in Table 2.2 below and their locations are shown on Drawing Ref: 230327SCS107.

Table 2.2 Potentially dusty wastes brought to Site Clear Solutions

EWC code	Description	Process	Destination within the facility
03 01 04*	Sawdust, shavings, cuttings, wood, particle board and veneer containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
03 01 05	Sawdust, shavings, cuttings, wood, particle board other than those mentioned in 03 01 04	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
06 13 02*	Spent activated carbon (except 06 07 02)	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
06 13 03	Carbon Black	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
06 13 05*	Soot	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
08 02 01	Waste coating powders	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Building
10 01 01	Bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 02	Coal fly ash	Hand picking and sorting of recyclables from input waste with	Covered bay (in lidded containers)

		the assistance of mobile plant.	
10 01 03	Fly ash from peat and untreated wood	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 04*	Oil fly ash and boiler dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 05	Calcium-based reaction wastes from flue-gas desulphurisation in solid form	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 13*	Fly ash from emulsified hydrocarbons used as fuel	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 14*	Bottom ash, slag and boiler dust from co-incineration containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 15	Bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 16*	Fly ash from co-incineration containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 01 17	Fly ash from co-incineration other than those mentioned in 10 01 16	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 02 10	Mill Scales	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 03 19*	Flue-gas dust containing hazardous substances	Hand picking and sorting of recyclables from input waste with	Covered bay (in lidded containers)

		the assistance of mobile plant.	
10 03 20	Flue-gas dust other than those mentioned in 10 03 19	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 03 21*	Other particulates and dust (including ball-mill dust) containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 03 22	Other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 04 04*	Flue-gas dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 04 05*	Other particulates and dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 05 03*	Flue-gas dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 05 04	Other particulates and dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 06 03*	Flue-gas dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 06 04	Other particulates and dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 07 04	Other particulates and dust	Hand picking and sorting of recyclables from input waste with	Covered bay (in lidded containers)

		the assistance of mobile plant.	
10 08 04	Particulates and dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 08 15*	Flue-gas dust containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 08 16	Flue-gas dust other than those mentioned in 10 08 15	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 09 09*	Flue-gas dust containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 09 10	Flue-gas dust other than those mentioned	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 09 11*	Other particulates containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 10 12	Other particulates other than those mentioned in 1 010 11	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 11 05	Particulates and dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 12 03	Particulates and dust	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
10 13 06	Particulates and dust (except 10 13 12 and 10 13 13)	Hand picking and sorting of recyclables from input waste with	Covered bay (in lidded containers)

		the assistance of mobile plant.	
12 01 01	Ferrous metal filings and turnings	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Granulation area
12 01 02	Ferrous metal dust and particles	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Granulation area
12 01 03	Non-ferrous metal filings and turnings	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Granulation area
12 01 04	Non-ferrous metal dust and particles	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Granulation area
12 01 05	Plastics shavings and turnings	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Building
15 01 01	Paper and cardboard packaging	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant, then baled.	Building
15 01 06	Mixed packaging	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant, then baled.	Building and 40cyd skip in external yard
15 01 10	Packaging containing residues of or contaminated by hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant, then baled.	Enclosed 40 cyd skip
15 01 11	Metallic packaging containing a hazardous solid porous matrix (for example asbestos),	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant, then baled.	Enclosed 40 cyd skip

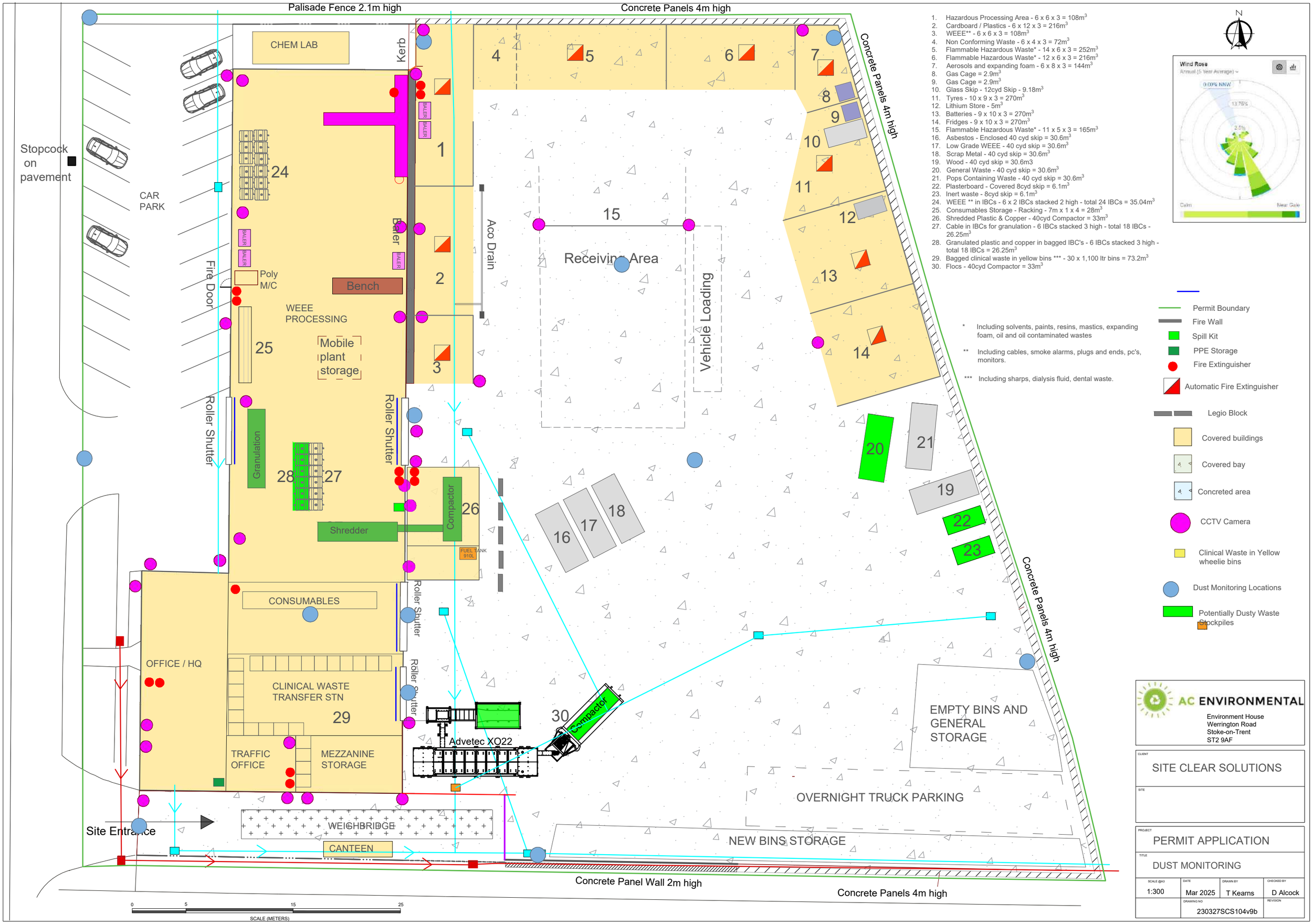
	including empty pressure containers		
16 02 12	Discarded equipment containing free asbestos	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Enclosed 40 cyd skip
17 01 01	Concrete	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 01 02	Bricks	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 01 03	Tiles and ceramics	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 01 07	Mixtures of concrete, bricks, tiles, and ceramics other than those mentioned in 17 01 06	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 05 03	Soil and stones containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 05 04	Soil and stones other than those mentioned in 17 05 03	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 05 05	Dredging spoil containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 05 06	Dredging spoil other than those mentioned in 17 05 05	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 05 07	Track ballast containing hazardous substances	Hand picking and sorting of recyclables from input waste with	8 cyd skip

		the assistance of mobile plant.	
17 05 08	Track ballast other than those mentioned in 17 05 07	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 06 01	Insulation materials containing asbestos	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Enclosed 40 cyd skip
17 06 03	Other insulation materials consisting of or containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
17 06 04	Insulation materials other than those mentioned in 17 06 01 and 17 06 03	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered 8 cyd skip
17 06 05	Construction materials containing asbestos	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Enclosed 40 cyd skip
17 08 01	Gypsum-based construction materials contaminated with hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered 8 cyd skip
17 08 02	Gypsum-based construction materials other than those mentioned in 17 08 01	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered 8 cyd skip
17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
19 01 10*	Spent activated carbon from flue-gas treatment	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 01 11*	Bottom ash and slag containing hazardous substances	Hand picking and sorting of recyclables from input waste with	Covered bay (in lidded containers)

		the assistance of mobile plant.	
19 01 12	Bottom ash and slag other than those mentioned in 19 01 11	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 01 13*	Fly ash containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 01 14	Fly ash other than those mentioned in 19 01 13	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 01 15*	Boiler dust containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 01 16	Boiler dust other than those mentioned in 19 01 15	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 09 04	Spent activated carbon	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Covered bay (in lidded containers)
19 10 03	Fluff-light fraction and dust containing hazardous substances	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Building
19 10 04	Fluff-light fraction and dust other than those mentioned in 19 10 03	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	Building
19 12 09	Minerals (for example sand, stones)	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	8 cyd skip
20 01 41	Wastes from chimney sweeping	Hand picking and sorting of recyclables from input waste with	Covered bay (in lidded containers)

		the assistance of mobile plant.	
20 03 03	Street-cleaning residues	Hand picking and sorting of recyclables from input waste with the assistance of mobile plant.	40cyd skip in external yard

Figure 2.1 Site Layout Plan showing the destinations of the onsite processes Ref: 230327SCS107



1. Hazardous Processing Area - 6 x 6 x 3 = 108m³
2. Cardboard / Plastics - 6 x 12 x 3 = 216m³
3. WEEE** - 6 x 6 x 3 = 108m³
4. Non Conforming Waste - 6 x 4 x 3 = 72m³
5. Flammable Hazardous Waste* - 14 x 6 x 3 = 252m³
6. Flammable Hazardous Waste* - 12 x 6 x 3 = 216m³
7. Aerosols and expanding foam - 6 x 8 x 3 = 144m³
8. Gas Cage = 2.9m³
9. Gas Cage = 2.9m³
10. Glass Skip - 12cyd Skip - 9.18m³
11. Tyres - 10 x 9 x 3 = 270m³
12. Lithium Store - 5m³
13. Batteries - 9 x 10 x 3 = 270m³
14. Fridges - 9 x 10 x 3 = 270m³
15. Flammable Hazardous Waste* - 11 x 5 x 3 = 165m³
16. Asbestos - Enclosed 40 cyd skip = 30.6m³
17. Low Grade WEEE - 40 cyd skip = 30.6m³
18. Scrap Metal - 40 cyd skip = 30.6m³
19. Wood - 40 cyd skip = 30.6m3
20. General Waste - 40 cyd skip = 30.6m³
21. Pops Containing Waste - 40 cyd skip = 30.6m³
22. Plasterboard - Covered 8cyd skip = 6.1m³
23. Inert waste - 8cyd skip = 6.1m³
24. WEEE ** in IBCs - 6 x 2 IBCs stacked 2 high - total 24 IBCs = 35.04m³
25. Consumables Storage - Racking - 7m x 1 x 4 = 28m³
26. Shredded Plastic & Copper - 40cyd Compactor = 33m³
27. Cable in IBCs for granulation - 6 IBCs stacked 3 high - total 18 IBCs - 26.25m³
28. Granulated plastic and copper in bagged IBC's - 6 IBCs stacked 3 high - total 18 IBCs = 26.25m³
29. Bagged clinical waste in yellow bins *** - 30 x 1,100 ltr bins = 73.2m³
30. Flocs - 40cyd Compactor = 33m³

* Including solvents, paints, resins, mastics, expanding foam, oil and oil contaminated wastes

** Including cables, smoke alarms, plugs and ends, pc's, monitors.

*** Including sharps, dialysis fluid, dental waste.

- Permit Boundary
- Fire Wall
- Spill Kit
- PPE Storage
- Fire Extinguisher
- Automatic Fire Extinguisher
- Legio Block
- Covered buildings
- Covered bay
- Concreted area
- CCTV Camera
- Clinical Waste in Yellow wheelie bins
- Dust Monitoring Locations
- Potentially Dusty Waste Stockpiles

AC ENVIRONMENTAL
Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

CLIENT: SITE CLEAR SOLUTIONS

SITE:

PROJECT: PERMIT APPLICATION

TITLE: DUST MONITORING

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:300	Mar 2025	T Kearns	D Alcock

DRAWING NO: 230327SCS104v9b

REVISION:

The site has planning permission to handle up to 21,800 per annum, of which no more than 3,050 tonnes per annum will be hazardous waste. The site layout has been designed to enable efficient recycling of the permitted non-hazardous and hazardous waste and incorporates various processing and storage areas.

The site aims to accept a variety of waste in line with the permit including hazardous and non-hazardous waste. The hazardous waste includes WEEE, batteries, fluorescent tubes, paint, resin & solvents, adhesives, aerosols & oil, clinical waste, asbestos and gas bottles. The non-hazardous waste includes plasterboard, inert waste, bagged 'offensive' clinical waste, scrap metal, paper, and cardboard. The waste is brought onto site using the site's own vehicles and third party contractors. Prior to unloading, the waste deliveries are inspected by site staff for non-conforming waste. If non-conforming waste is identified, it will be removed immediately from the load and transferred to the non-conforming waste bay to the northwest of the external area pending removal to a suitable permitted facility. If the non-conforming waste cannot be removed from the load, the entire load will be rejected, and will be transferred to the non-conforming waste bay pending removal to a suitable permitted facility.

The various waste types stated in the previous section will be accepted from different sources and stored in designated areas, concrete walled bays and 40cyd skips in the external yard. Material will be weighed at the weighbridge located near the site entrance along the southern side of the unit building. Upon arrival, waste will be transferred to the receiving area which is located to the north of the external yard to be sorted by hand and with the assistance of mobile plant. Once sorted, the waste is transferred to the building for processing according to waste stream. Processing on site includes granulation, stripping and dismantling of WEEE, and baling. It is crucial to note that the granulation process will be enclosed within the granulation area of the building. Once processed within the building, the majority of waste is then stored in one of the assigned storage areas in the external yard which include the 40cyd skips. Copper from the granulation processing is stored within the building and clinical waste is stored within the clinical waste transfer station in yellow clinical waste wheelie bins.

The perimeter walls of the site and the concrete bays act as a dust shield. The accepted wastes are not dusty in nature, except general waste which can be dusty. The processing of the cable on site, including granulation and stripping, can produce dust, though cable processing occurs only inside the building.

The shredding of the bagged offensive non-hazardous waste, prior to it being fed into the digester can also produce dust, however, the shredders low speed cutting shafts minimise dust and noise from this

operation.

When accumulations of dust become visible, or immediately following an incident, the manual use of onsite hoses to dampen stockpiles and surfaces further prevents the spread of dust across the site and to neighbouring properties. On arrival and prior to tipping in the reception bay, the onsite hoses are used to spray loads with visible accumulations of dust to minimise the risk of a spread of dust and particulates when tipping. There is also an industrial jet wash on site that will be used on vehicles with visible accumulations of dust, debris, and mud as per the housekeeping measures in Section 5.

2.3 Mobile Plant and Equipment

The Air Quality Management Area (AQMA) map from DEFRA has been checked and the site is located in a Nitrogen Dioxide (NO_2) Air Quality Management Area. 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, model and emissions rating for the mobile plant and equipment used on site:

Description	Make	Model	Emission Rating
Forklift Trucks	Toyota	Telescopic Lift Truck	Tier 4
Handler	JCB	JCB Wastemaster	Tier 4
Forklift Trucks	Yale	Forklift Truck	Tier 4

The Cannock Chase Council Air Quality Action Plan was produced in November 2013 and sets out targets on how to monitor and reduce emissions to improve air quality in the area. The site's location is beneficial as it provides a valued processing and storage facility for non-hazardous and hazardous waste in the local area and is situated within a purpose built industrial estate surrounded by similar operations. The site is also within 700m of the M6 toll road and the A5 which provides major transport links, reducing the need for site vehicles to take alternative longer routes, therefore reducing emissions produced.

A speed limit of 5mph will be strictly adhered to on site at all times and there will be no idling of plant or vehicles when not in use. It is crucial to note that the site is located on a purpose built industrial estate and is surrounded by additional industrial and commercial properties with the M6 toll motorway running approximately 670m to the south. Surrounding receptors also contributing to the release of NO_2 include the M6 toll motorway, Ranton Building Supplies, Marcote UK Ltd Industrial Coatings, and DG Automotive.

Plant machinery will be maintained by the supplier and will be serviced in accordance with the manufacturer's specifications and recommendations with a LOLER being performed annually. Plant will be cleaned down at the end of the working week. Defect checks will be performed daily by the user of the plant machinery and any defects noted will be recorded on the defect form and the repair will be arranged with the supplier.

In the event of a breakdown, either of vehicles, plant or machinery, a contingency process is followed which involves options such as fixing the item internally, covering the broken down item with a replacement, hiring a supplier to fix the item and renting additional equipment. If none of these options are suitable, operations may have to cease on site and the relevant affected parties will be contracted immediately with a date of when operations can continue. If replaced, the item will be replaced with the lowest emission standard possible at the time of purchase. Both ultra-low and low sulphur fuels are used. Breakdowns will be recorded, and the Environment Agency will be contacted with the nature of the problem and when it is expected for the site to return to normal operations.

Staff are trained on induction and are given refresher training at least annually via toolbox talks. Visitor driver inductions are given to inform them of all dust mitigation measures they can undertake. Control measures are in place to reduce emissions include the strong enforcement of a ban on idling site vehicles and plant.

3. DUST AND PARTICULATE (PM_{10}) MANAGEMENT

3.1 Responsibility for Implementation of the DEMP

The site manager will exercise day-to-day control of the site, either personally or by delegation to suitably trained and responsible staff. The site manager will be responsible to the satisfactory working of the site and for ensuring compliance with the DEMP.

Daily records will be kept at the start of operations and again in the middle of the working day. The records will be kept on site for a minimum of two years and will be made available on request for inspection by the relevant authorities.

Staff at all levels will receive the necessary training and instruction in their duties relating to all operations and the potential sources of dust emissions. Particular emphasis will be given to plant and equipment malfunctions and abnormal conditions.

Staff are trained on induction and given refresher training at least annually via toolbox talks.

Site Management will ensure that external hauliers and other visitors are aware of the need to comply with the provisions of this site plan so far as they are relevant to their activities on site.

Any member of staff who fails to comply with the provisions of the DEMP will be retrained as necessary. External hauliers and other visitors failing to observe the requirements of the plan will be asked to leave the site.

The DEMP will be reviewed annually or in response to an incident.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

3.2.1 Sources of Potential Emissions

The principal dust sources anticipated would be from waste sorting, processing, loading and tipping operations and site transport, which may also raise visible dust. Processing operations including cable granulation, cable stripping, dismantling off WEEE, and baling occurs within the enclosed building. The risk of the spread of dust from these activities is therefore highly unlikely. The repackaging of hazardous wastes occurs in a covered bay, and the nature of the materials means that the spread of dust from this is unlikely.

The permit variation application seeks to vary the environmental permit to include the operation of 1 Nr Advetec XO22 aerobic digestion unit for the treatment of non-hazardous clinical waste. As identified in Section 1.3, the digestion unit is a full enclosed system and does not produce dust,

The waste, prior to being fed into the digestion unit, will be loaded into a hopper which connects to a shredder, both of which will be located externally, in the yard. The Untha RS40-1000 shredder will shred the waste into 50mm particle size, the shredded waste is then augered into the digester. The Untha RS40-1000 shredder has been designed to produce low noise and dust pollution with its low speed cutting shafts.

The by-products of the aerobic digestion system include water vapour, carbon dioxide, condensate, which are vented to the air, and a post-process residue (floc, i.e. a loosely clumped mass of particulate material). The entire aerobic digestion process takes approximately 72 hours to complete.
Post process Floc will be collected and stored in a 40 cubic yard compactor, externally, which, when nearing capacity, arrangements will be made for the compactor to be swapped with an empty one, and the full one will be transported off site.

Windblown dust emissions may also occur when moderate to high winds blow across materials in stockpiles. The concrete panel wall along the eastern boundary and sections of the northern and

southern boundary reaches a height of 4m. This wall will also protect against prevailing winds reaching the external stockpiles and therefore reduce the risk of wind-whipping of dust from outdoor stockpiles and vehicle movements and the spread of dust to nearby sensitive receptors including the Norton Canes protected habitat and residential properties. Loose materials are kept to an absolute minimum and all wastes are stored in labelled containers in concrete walled bays, or in skips.

The external stockpiles will not increase the risk of emissions as they are appropriately positioned within bay walls and the stockpile height will strictly remain 0.5m below the height of the bay walls. Site management will undertake inspections at the start and end of each day to ensure there is no accumulation of dust. As stated within Section 3.6, any exposed external stockpiles will be covered with tarpaulin at the end of each day to ensure out of hours emission prevention. During windy and dry weather, following a weather forecast check, any dusty and exposed external stockpiles will be dampened and covered with tarpaulin.

The moisture content of stockpiles of potentially dusty and dusty wastes will be controlled to prevent the material becoming friable through dampening down the stockpiles on a weekly basis, immediately in response to an incident or during windy/dry weather as per the housekeeping measures in Section 5.

Typically, the greatest proportion of dust emitted from any site operations is largely deposited within 100m of the source as stated in The Guidance on the Assessment of Mineral Dust Impacts for Planning 2016. It is beneficial to note that the main sensitive receptors, detailed in Section 1.7, are in excess of 100m away from the site. However, paper and plastics are much less dense that mineral dusts and consequently may be carried for a much greater distance before settling. Adverse impacts due to dust emissions from the site may therefore be experienced up to 500m or more form the source.

As shown in Figure 1.2, the prevailing winds blow towards the southeast and south for a combined total of approximately 44.3% of the time. This shows that the wind blows towards the receptors in the northeast, consisting of mostly residential housing.

Table 3.1 details the potential sources of dust from operations being undertaken on site and their pathways, receptors, and suitable mitigation measures.

Table 3.1 Source-Pathway-Receptor routes for dust producing operations on site.

Source	Pathway	Receptor	Mitigation

Vehicles entering and/or leaving the site with mud on wheels and tracking dust on to or off the site.	Tracking of mud and dust onto public highway and subsequent atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Vehicles are enclosed or will be sheeted. Hosing down of vehicles with site hoses or jet wash if accumulation of debris is visible. 3rd party sweepers used to clean the highway when accumulation of mud and dust is visible. All as per the housekeeping measures in Section 5.
Debris falling off vehicles that arrive uncovered.	Tracking of debris on to the site from external vehicles and subsequent atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Routine check of vehicles as they enter the site and use an onsite hose/jet wash to clean the vehicles. Sweeping of site surface when accumulation of debris is visible. All as per the housekeeping measures in Section 5.
Vehicles and plant moving around the site kicking up dust.	Atmospheric dispersion from the movement of vehicles around the site	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Site speed limit is strictly set to 5mph and vehicle idling is prohibited. On site hoses will be used to dampen the concrete surfaces. Routine sweeping of the site. All as per the housekeeping measures in Section 5. Operations will cease in windy weather where airborne dust is visible.
Road vehicles tipping waste	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock	Onsite hoses used to spray the loads prior to tipping and to dampen concrete surfaces. Routine sweeping as part of a cleaning regime and when accumulation of dust is visible.

		Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	All as per the housekeeping measures in Section 5. Operations will cease in windy weather where airborne dust is visible.
Windblown dust from temporarily exposed stockpiles	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Dusty stockpiles will be dampened with onsite hoses. In particularly windy weather dusty stockpiles will be hosed prior to loading into the receiving area. All as per the housekeeping measures in Section 5. Non-hazardous waste stockpiles may be baled. The concrete panel wall along the eastern boundary will also shield outdoor stockpiles from wind.
Forklift Trucks	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Onsite hoses used to dampen concrete surfaces. Operations will cease in windy weather where airborne dust is visible. All as per the housekeeping measures in Section 5.
Baler machines	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI	Onsite hoses used to dampen concrete surfaces. All baling operations are enclosed within the unit building. Operations will cease in windy weather where airborne dust is visible. All as per the housekeeping measures in Section 5.

		and SAC, Local Wildlife Site (LWS)	
Shredding of clinical waste	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Shredding speed and particle size should be adjusted to be optimal to minimise the release of dust. Operations will cease in windy weather where airborne dust is visible.
Site surfaces	Wind-whipping of surface dust subsequent atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Site speed limit is strictly set to 5mph limiting wind-whipping from vehicles. Onsite hoses used to dampen concrete surfaces. Concrete surfaces make them easy to sweep during cleaning regime of when accumulation of dust is visible. All as per the housekeeping measures in Section 5.
Loading waste back on to vehicles	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Hosing down of vehicles before they exit the site if there is visible accumulation of debris. Operations will cease in windy weather where airborne dust is visible. All as per the housekeeping measures in Section 5.
Particulate emissions from the exhaust of	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern	Site speed limit is strictly set to 5mph and vehicle idling is prohibited. The use of low

vehicles/ plant / machinery on site		Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	sulphur fuels and downward facing exhausts/blow off valves.
Generators, plant and other non-road going mobile machinery	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Site speed limit is strictly set to 5mph and vehicle idling is prohibited. Routine sweeping as part of a cleaning regime when accumulation of dust is visible. All as per the housekeeping measures in Section 5.

3.2.2 Controls

The operations will be governed by conditions attached to the planning permission which has been granted. Operations will also be governed by the environmental permit which may be granted in due course. The following means of prevention are based on existing site management procedures and the planning permission guidance.

Relevant parts of current best practice for minerals can also be taken to apply to waste management and processing operations and will be referred to as appropriate. The essence of guidance for the minerals industry is that dust impacts can be controlled by effective site management.

Weather Conditions

As an over-riding requirement, if during windy conditions any operations are identified as causing or likely to cause visible emissions across the site boundaries, or if abnormal emissions are observed within the site, the site manager will immediately modify, reduce, or suspend those operations until either effective remedial actions can be taken or the weather conditions giving rise to the emissions have moderated. No major incidences have been reported in previous years.

Loading and Tipping

Drop heights will be controlled during all loading and tipping operations to reduce the entrainment of dust into the atmosphere. Routine hosing of the stockpiles in accordance with the housekeeping measures in Section 5 will take place to dampen the material and reduce dust emissions when the material slumps.

On arrival and prior to tipping, the onsite hoses will be used to spray the loads in order to reduce the risk of the spread of dust and particulates when tipping.

Site Traffic

All site traffic will keep to designated routes. The designated routes will be dampened using the onsite hoses and will be swept where accumulations of dust are visible to dampen and remove any loose materials in accordance with the cleaning schedule in Appendix B.

Standard good practice will be adopted for site traffic, including:

- Avoiding abrupt changes in alignment;
- Weekly clearing, wetting and maintenance of yard surfaces;
- Setting site speed limit strictly to 5mph;
- Evenly loading vehicles to avoid spillages; and
- Regular application of water in dry conditions

Road Transport

All vehicles carrying material into or out of the site will be enclosed or securely sheeted. The wheels, chassis, and under-bodies of departing vehicles will be inspected for cleanliness by the driver. If a substantial amount of dust, debris and mud is visible, the vehicle will be cleaned and further inspected by the driver before proceeding towards the site entrance. A drained hard-standing equipped with a hose and brush will be provided for this purpose. In the absence of a wheel wash, vehicles will be dampened down using the onsite hoses. The main source of water is mains water, however there are also two IBC containers filled with water present on site which can be used in the event of a drought or a hose ban.

All site surfaces will be dampened in particular conditions such as dry, hot, or windy weather or when accumulations of dust are visible through the use of an onsite hose in accordance with the cleaning schedule provided in Appendix B. Yard surfaces will be cleaned using manual sweepers as required and will be swept to remove loose materials. A speed limit of 5mph is set on site.

The site entrance will be inspected daily to ensure that track-out is not carried out onto the public highway. A road sweeper will be deployed when accumulations of dust are visible to remove any muddy or loose deposits.

Wind-blown across stockpiles and loose materials

Material stockpile areas will be clearly designated, and loose materials will be kept to an absolute minimum. Hazardous and flammable wastes are stored in labelled containers in the concrete walled bays in the external yard and within 40cyd skips which shield the stockpiles from the wind. Plasterboard is stored within a covered 8 cyd skip in the external yard. The remaining stockpiles, which consist of clinical waste, granulated copper and WEEE, are stored in the building. Any loose materials both inside and outside these designated areas will be swept to minimise the generation of wind-blown dust.

Other Matters

General matters and the management of the site can affect the likelihood of significant dust emissions. These include:

- High standards of housekeeping to minimise track-out and wind-blown dust;
- The use of clean water for dust suppression that has coverage over all parts of all stockpiles, to avoid re-circulating fine material; and
- Effective staff training in respect of the causes and prevention of unacceptable emissions of dust.

The water supply to the dust suppression installations will be protected against frost to ensure availability at all times.

3.2.3 Maintenance

Effective control of dust emissions requires the maintenance and proper operation or all plan and equipment, including fixed and mobile dust suppression equipment. Dust suppression equipment such as on site hoses and an industrial jet washer will be used to deal with dusty loads to ensure that the risk of dust leaving the site is minimised. A programme of planned maintenance will be carried out on all plant and equipment in accordance with the manufacturer's recommendations to ensure that it operates at optimum efficiency.

Stocks of essential spares and consumable items will be held at the site or kept readily available for use at short notice.

Any malfunction of breakdown leading to abnormal emissions will be dealt with within 24 hours and operations will be modified or suspended until normal working can be restored. All such malfunctions, and the actions taken, will be recorded in the site logbook. If control measures fail will cease and the regulator will be informed.

Table 3.1 Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Mud	Tracking dust on wheels and vehicles, then mud dropping off wheels/vehicles when dry	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Visual soiling, also consequent resuspension as airborne particulates	Remove mud before vehicles leave site using the onsite hoses and industrial jet wash.

Debris	Falling off waste vehicles	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Visual soiling, also consequent resuspension as airborne particulates	All waste vehicles are solid and waste remains within the enclosed vehicles at all time prior to unloading. A mechanical road sweeper will be hired weekly to clean and sweep the public highway.
Tipping, storage and sorting of wastes in the open	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock	Visual soiling and airborne particulates	Minimise source strength by means of low drop heights and shielding the stockpiles in bays and behind the concrete panel wall from wind whipping, positioning sources away from receptors. Also spraying of loads on arrival prior to tipping with the onsite hoses.

		Extension Canal SSSI and SAC, Local Wildlife Site (LWS)		
Vehicle exhaust emissions	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength through downward facing exhausts etc.
Non road going machinery exhaust emissions	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength including low sulphur fuels and anti-idling measures.

		Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)		
Shredding of non-hazardous clinical waste externally	Atmospheric dispersion	Norton Canes protected habitats, residential properties, SSSI Chase Water and the Southern Staffordshire Coalfield Heaths, Cannock Extension Canal SSSI and SAC, Local Wildlife Site (LWS)	Airborne particulates	Low speed cutting shafts on the shredder means less dust. The Untha RS40-1000 shredder is designed for low speed shredding to produce less dust.

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			
Site / process layout in relation to receptors	The location chosen for the development of the operation is as far as is reasonably practical from local sensitive receptors as can be designed.	Easy to implement as part of good practice. Site activities are strategically positioned to lower the risk of adverse impact on surrounding receptors.	This measure will be used the entire time that the site is operational.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	The speed limit on site is 5 mph. Reducing vehicle movements and idling should reduce emissions from vehicles. Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery. Enforcement of a speed limit reduces re-suspension of particulates by vehicle wheels.	Easy to implement as part of good practice. Drivers are inducted onto site and speed limits are strictly enforced by site management.	Speed limits are in place at all times. Failure to comply with speed limits shall be a disciplinary matter for Staff and cause other drivers to be banned from site.
Minimising drop heights for waste.	Minimising the height at which waste is handled should reduce the distance over which debris, dust and particulates	Easy to implement as part of good practice.	Site staff are trained in the various dust mitigation measures required on site. This is done at induction and reinforced through annual toolbox talks. Any

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	could be blown and dispersed by winds.		changes to the DEMP are also introduced to staff via toolbox talks.
Good house-keeping	Having a consistent, regular housekeeping regime that is supported by management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up. A cleaning schedule is in place to ensure that any accumulations of dust that do occur are removed. A copy of the cleaning schedule can be found in Appendix B.	Easy to implement and requires minimal equipment. Encourages a sense of pride and satisfaction amongst the staff which promotes vigilance and a positive culture. Staff should target the areas not caught by the road sweeper and other cleaning apparatus. Site management are responsible for ensuring that inspection stake place and cleaning is undertaken in compliance with the schedule.	This measure will be used the entire time that the site is operational.
Sheeting of vehicles	Prevents the escape of debris, dust, and particulates from vehicles as they travel. All vehicles are already enclosed.	Clearly in the site management system, driver induction and implemented as appropriate measures.	This requirement will be enforced all the time that the site is operational.
Hosing of vehicles on exit	May remove some dirt, dust, and particulates from the lower parts of vehicles	This is included in the emissions prevention measures and will be undertaken when visible	This will be undertaken when visible staining of site roads occurs to prevent mud being taken out on

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	although likely to be less effective than a more powerful wheel wash.	staining of the internal road occurs.	onto the public highway and in accordance with the housekeeping measures.
Ceasing operation during high winds and/or prevailing wind direction	Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.	Likely to reduce dust and particulate emissions, no previous record of dust pollution in previous years.	When identified, the cessation measure will be taken out across the entire site.
Mechanical sweeper hired weekly or within 24 hours of an incident to remove any material spread by vehicle wheels.	A mechanical sweeper will be used to clear any visible deposits made by vehicle wheels from the concrete surface of the site roads.	Easy to implement as part of good practice.	This measure will be implemented in response to observations of accumulations of dust or mud on site roads. In the event that a sweeper cannot be deployed, site management shall consider the potential for dusts to be raised from vehicles travelling on site rods, the potential for dusts/mud to be taken off-site onto the public highway or for dusts to be created by vehicles operating on site roads and in the event that any of these situations occur, shall

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
			suspend inputs to the site until mitigation measures and normal conditions can be restored.
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface, using materials such as concrete as opposed to unmade (rocky or muddy) ground within the site and on site haul roads. This should reduce the amount of dust and particulate generated at ground level by vehicles and site activities.	Considered good overall based on dust and particulate reduction but potentially costly and disruptive to retrofit. There are maintenance and cleaning procedures in place for the concrete surface.	This measure will be implemented across all concrete surfaces for the entire time that the site is operational. Cleaning will be undertaken in accordance with the cleaning regime and the housekeeping measures.
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	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.	This measure will be used the entire time that the site is operational.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	particulates can be mobilised.		
Do not overload the shredder hopper	With less material in the hopper, there's less movement and agitation during loading and shredding. This can minimize the release of fine particles into the air.	Easy to implement as part of good practice. Bags on clinical waste should be fed into the hopper at a steady flow, rather than many bags being dumped in all at once.	This measure will be used the entire time that the site is operational.
Remedial Measures			
On-site sweeping	Road sweeping vehicles damp down dust and particulates whilst brushing and collecting dust and particulates form the road surface, particularly at the kerbside. Mechanical sweeper shall be hired in weekly or within 24 hours of an incident.	A mechanical sweeper will be used to clear visible accumulations of dust and mud. Manual sweeping and cleaning within the building is a daily activity carried out in accordance with a schedule.	This measure will be used when there is the visual build-up of dust during inspection and in compliance with the cleaning regime and housekeeping measures.
Storage of external stockpiles in concrete storage bays and 40cyd skips.	Stockpiles within concrete storage bays are stored on pallets or IBCs which are covered with plastic and 40cyd skips contains the material	Easy to implement as part of good practice. Reduces wind speed across the site which indirectly controls the potential for dust and particulate emissions.	This measure will be used the entire time that the site is operational.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	which shields the stockpiles from wind and therefore reduces dust spread risk.	Maintenance is covered in the site management system and procedures.	
Concrete panel wall measuring 4m high	The concrete panel wall is located on the eastern boundary and stretching around the northeastern and southeastern corners of the site. The wall will prevent the spread of dust and debris to neighbouring properties. The height reduces wind-blow.	This is a well-established approach and works well in association with other measures e.g. hosing of surfaces and routine sweeping as per the housekeeping measures.	This measure will be used the entire time that the site is operational.
Water suppression with hoses & water jets	Dampening down of site areas and spraying all areas of all stockpiles 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. Routine spraying of stockpiles covered in the site management system and maintenance plans as per the housekeeping measures.	This measure will be used when observations by staff indicate that stockpiles are dry and weather conditions could give rise to windborne dusts, to ensure stockpiles and the concrete surface are dampened down. All in accordance with the housekeeping measures.

3.3 Other Considerations

Water usage / availability:

There may be the occasional use of a mains water hose that will only produce a maximum volume possible of a single tap. If this is insufficient in mitigating onsite dust, then the site will cease operations until the dust is removed.

In the event of a drought:

As mentioned above, in the event of dry weather, a mains water hose will be used to dampen stockpiles and site surfaces in order to reduce the spread of dust. In the event the mains water hose is not working or there is a hose ban, the two IBC containers full of water will be used to dampen the stockpiles and site surfaces.

Abnormal conditions and ceasing operations:

If the use of mains water from the hose or the use of water from the IBC storage containers is insufficient in mitigating onsite dust, then the site will cease operations until the dust is removed. Extreme winds have the potential to result in an issue with accumulations of dust and airbourne dust. Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.

3.4 Enclosure of Waste Processing & Storage Areas

Wastes are enclosed appropriately when considering the nature and scale of the site. The majority of the processing operations occurs in the enclosed space of the building. The enclosure of waste processing within the building will significantly reduce the risk of dust spreading outside of the site as the structure of the warehouse will act as a dust barrier. The surfaces, plant and storage areas within the warehouse will be cleaned in strict accordance with the cleaning schedule provided within Appendix B to ensure the accumulation of dust is prevented. The building is equipped with roller shutter doors which can be shut to significantly reduce the risk of any potential dust from waste processing activities spreading across the external yard and to neighbouring properties.

Once processed, the majority of waste is relocated, in labelled containers, to the storage areas and bays, and 40cyd skips in the external yard. WEEE, clinical waste and granulated copper are stored within the building. There are several designated storage areas and concrete storage bays located on the external yard, and the 40cyd skips are distributed throughout the external yard, leaving the central area of the yard clear for the quarantine area.

Loose external stockpiles will be kept to an absolute minimum and will not increase the risk of emissions as they are appropriately positioned within bay walls and the stockpile height will strictly remain 0.5m below the height of the bay walls. Site management will undertake inspections at the start and end of each day to ensure there is no accumulation of dust. Loose stockpiles will be dampened whenever necessary, and in the event that site management identify the accumulation of dust upon inspection, the loose stockpiles will be dampened immediately, and the vicinity swept. As stated within Section 3.6 below, any exposed external stockpiles will be covered with tarpaulin at the end of each day to ensure out of hours emission prevention. During windy and dry weather, following a weather forecast check, the loose external stockpiles, where necessary, will be dampened and covered with tarpaulin.

The moisture content of any stockpiles of potentially dusty and dusty wastes will be controlled to prevent the material becoming friable through dampening down the stockpiles on a weekly basis, immediately in response to an incident or during windy/dry weather.

WEEE waste is treated within the designated area of the building only, along with the granulation and shredding of cable. The treatment will be fully enclosed by the building's structure which is equipped with roller shutter doors. Site management will undertake an inspection at the start and end of each working day for accumulations of dust. In the event that accumulations of dust are identified in the hazardous waste treatment area during the inspection, the area will be swept immediately. This will significantly reduce the risk of further accumulations, and the resultant spread of dust to the external yard.

There is a small amount of dust produced during the granulation process which remains within an enclosed area of the building. As detailed within Appendix B, a daily cleaning schedule is strictly adhered to in line with the insurance recommendations which includes sweeping and vacuuming of the area on a daily basis. The vacuuming procedure will ensure that the dust is captured and stored securely.

The hazardous waste processing area is located externally in an enclosed bay. The nature of the wastes being processed there will not give rise to dust, however, as detailed within Appendix B, the cleaning schedule will be adhered to on a daily basis.

The permit variation application seeks to vary the environmental permit to include the operation of 1 Nr Advetec XO22 aerobic digestion unit for the treatment of non-hazardous clinical waste. The digestion unit is a full enclosed system and does not produce dust.
The bagged clinical waste is stored in the building until processing commences.

The waste, prior to being fed into the digestion unit, will be loaded into a hopper which connects to a shredder, both of which will be located externally, in the yard. The Untha RS40-1000 shredder will shred the waste into 50mm particle size, the shredded waste is then augered into the digester. The Untha RS40-1000 shredder has been designed to produce low noise and dust pollution with its low speed cutting shafts.

3.5 Visual Dust Monitoring

Activities that have the potential to cause dust emissions, as detailed in Section 3.2, will be monitored at the start-up of operations and again during the working day, therefore twice a day. This will include a visual assessment of any impacts beyond the downwind site boundary. Weekly site inspections will also be undertaken by a COTC holder.

The site will be visually monitored at the site entrance and at every stockpile twice a day during the site inspections undertaken by site management. Further detail on the locations of visual dust monitoring are displayed in the drawing provided in Figure 2.1.

All observations and findings, including wind and other weather conditions, will be noted in the daily records. In the event that dust is observed during visual monitoring during working hours, the identified area will be swept immediately. If the dust has been observed during windy or dry weather conditions, any dusty stockpiles will be dampened down using the site hose.

Should visible dust be generated, the Site Manager will act immediately to identify the sources of dust and take the necessary corrective action. Each event, its cause and the action taken will be noted in the daily records. Formal reporting of dust incidents will be recorded in the site incident log, and any offsite notifications of dust shall be considered as complaints.

If necessary, to avoid potential nuisance, Site Management will instruct the reduction or suspension of any operation or process causing visible dust emissions across the site boundary towards any sensitive receptor until the emissions can be controlled.

All site personnel will be instructed to inform Site Management whenever visible dust emissions are observed, or appear likely to occur, as a result of any operation or process. There will be a procedure in place for senior management to review the feedback from the visual monitoring.

3.6 Out of Hours Prevention and Monitoring

Arrangements for the out of hours prevention of emissions include:

- In the event the accumulation of dust has been identified by site management during their end of day inspection, exposed external stockpiles will be dampened down before closure.

- Covering any exposed external stockpiles with tarpaulin before closure each day.
- Ensuring all roller shutter doors of the warehouse are sealed and locked at the end of each working day.

The site does not have 24/7 security staff and therefore Arrangement for the out of hours monitoring of emissions include:

- The building will be locked and sealed at the end of each working day ensuring all internal stockpiles are fully enclosed.
- Site management will undertake perimeter inspections and the start and end of each day. In the event accumulations of dust are observed, they will be swept immediately.
- All exposed external stockpiles with the potential to be dusty will be covered with tarpaulin at the end of each working day.

3.7 Dust Suppression

Site management will undertake a site inspection, including the site perimeter, dusty stockpiles, and vehicle movement areas, at the start and end of each day in order to identify any accumulations of dust. In the event that an accumulation of dust is identified during these inspections, they will be swept immediately. The key forms of dust suppression on site are sweeping, the use of the mains water hose, rags for the wiping down of machinery, vacuuming of the granulation area, and a hose to dampen any stockpiles and site surfaces. In the event the hose is not in use, water from the IBC containers on site can be used for the dampening process.

There are several aspects of the site infrastructure that also contribute to dust suppression. All waste processing occurs undercover, in a controlled area, or indoors within the building. The site has various concrete bays in the external yard. The structure of the bay walls will act as a barrier reducing the risk of the spread of dust, and additionally protecting them from potential wind-whipping. There is a 4m high concrete panel wall which runs along the eastern boundary, and northeastern and southeastern corners of the site. The concrete panel wall will also act as a barrier to potential wind-blown dust, significantly reducing the risk of the spread of dust to nearby receptors. At the end of each working day, any potentially dusty stockpiles will be covered with tarpaulin to reduce the risk of the spread of dust via wind-whipping out of hours.

One activity likely to produce dust is the granulation operations which occur strictly indoors within the building. Granulation takes place in an enclosed area within the building and the small amount of dust produced remains within this enclosed area where it is vacuumed.

Another activity likely to produce dust is the clinical waste shredding operations which occur

externally and is required for the clinical waste to be fed into the digester unit. The low speed cutting shafts will minimise the dust quantities produced.
As detailed within Appendix B, a daily cleaning schedule is strictly adhered to in line with the insurance recommendations which includes sweeping and vacuuming of the areas on a daily basis. The vacuuming procedure will ensure that the dust is captured and stored securely.

The location, type of dust suppression, and frequency of dust suppression is detailed within the cleaning schedule provided in Appendix B.

4. PARTICULATE MATTER MONITORING

As shown on the DEFRA AQMA map, the site is not within a Particulate Matter (PM_{10}) Air Quality Management Area and the distance of the site from the sensitive receptors means that the use of permanent particulate matter monitoring is not justified.

5. PREVENTATIVE HOUSEKEEPING MEASURES

There are various housekeeping measures in place on site which significantly reduce the risk of the accumulation and spread of dust across and off site including:

- Enclosing the majority of the waste processing indoors within the warehouse.
- Enclosing all external waste with the potential to produce dust within a concrete wall bay and the wastes stored within the bays are contained within labelled containers on pallets, or IBCs which are covered with plastic.
- Ensuring any external stockpiles remain 0.5m below the height of the retaining wall.
- Enclosing all plasterboard / gypsum waste within a covered 8 cyd skip.
- Washing and dampening down any dusty / dirty vehicles upon arrival and exit with the site hoses in accordance with the cleaning schedule in Appendix B.
- Yard surfaces will be swept manually once a week or whenever necessary.
- Hiring a mechanical sweeper weekly or within 24 hours after an incident to clean and remove dust, mud, litter and other debris on the nearby haul roads and Highway.
- Site management to undertake site inspections at the start and end of each working day, and before and after deliveries, including perimeter inspections, to ensure no accumulation of dust, debris, or litter. Any accumulations will be immediately swept.
- Undertaking a weather forecast check once every 24 hours in anticipation of potential windy weather.

- All site surfaces to be dampened in particular conditions such as dry, hot, or windy weather or when accumulations of dust are visible through the use of an onsite hose.
- Avoiding activities that could spread dust and particulates, mud or litter during high winds e.g. loading and unloading waste from vehicles.
- Operations will cease in windy weather where airborne dust is visible.

A detailed cleaning schedule is provided within Appendix B.

6. ACTIONS WHEN AN INCIDENT OF DUST IS REPORTED

The following actions are taken:

1. Site management assesses yard activities and the nature of the waste handling and deliveries immediately prior to the incident being reported, to work out the cause.
2. If the source cannot be ascertained with 100% confidence, the site supervisor suspends the likely dust/particulate generating activities.
3. If the source is within the site's control the site supervisor takes appropriate action in terms of dust/particulate abatement, to ensure that the alarm is not re-activated. This may take the form of the following:
    a. Investigating the source of the dust/particulates to prevent a reoccurrence.
    b. Suspending operations which are not being conducted using best practice controls as set out in Table 3.1.
    c. Additional use of the dust abatement measures.
    d. Logging findings of a -c in the site diary, and also in the reporting template within the relevant appendix of the Environmental Permit.

If an effective abatement technique cannot be identified and implemented, and dust levels remain visible at the site boundary, then operations should be suspended.

In all cases, any new "lessons learned" from the site management's investigations are considered by the company directors and implemented into a dust & particulate emission management (if not already included), to prevent a reoccurrence of the incident.

7. REPORTING AND COMPLAINTS RESPONSE

In line with the Site Management Plan and the ISO9001 quality system, a complaints form will be completed for every complaint received about Site Clear Solutions. All complaints will be recorded in a complaint register, a copy of which is attached in Appendix A. These records will be stored on file

for a period of 6 years. In the event of a dust complaint, the complaint will be investigated with immediate effect and the Environment Agency will be informed to assist within the investigation.

A record of all copies of correspondence and telephone file notes will be made in the complaints register.

7.1 Engaging with the Community

Site Clear Solutions Ltd understand the importance of open communication with their neighbours. If an issue arises that may impact the surrounding community, a committed, proactive approach is taken, through the following outreach activities:

Website:

There is a dedicated website section that provides detailed information about the site, including ongoing activities, remedial actions, and a clear complaints channel.

Meetings:

In the event of a significant incident or issue that might cause odour concerns, additional steps will be taken to keep the community informed. This will include:

- A formal letter drop informing local residents about the issue, any actions being taken to address it, and planned improvements for the site.
- An invitation to residents and neighbours to contact Site Clear Solutions directly or attend a public meeting to discuss the issue in more detail.

7.2 Reporting of Complaints

The site operates a complaints procedure as part of its ISO9001 quality system.

All complaints will be recorded in a complaint form (see Appendix A), and reported to the Site Manager, who will investigate the circumstances and ensure that the necessary corrective measures are taken. A prompt response will be made to the complainant and a record, including copies of all correspondence and telephone file notes, will be made in the complaints register. Relevant authorities, e.g. Cannock Chase District Council, will be advised in writing within one week of any dust complaint received, together with details of the findings of the investigation and any corrective measures which have been taken.

In the event of any substantiated complaint, the effectiveness of the DEMP will be reviewed. All complaints will be engaged with and responded to directly. Neighbouring businesses will be reassured that any complaints will be dealt with immediately through direct engagement with site management

and a follow up phone call once the nature of the complaint has been resolved. If numerous complaints are received, operations will cease.

If numerous complaints are received, particularly in regard to fugitive emissions, operations will cease until onsite conditions have been improved.

7.3 Management Responsibilities

Site management will alert Company Directors of any complaints in accordance with the quality system. Complaints registered will be discussed at monthly management meetings and any trends will be analysed. The monthly management meetings will instigate further remedial measures including reviews of the DEMP in response to any issues arising. Summary

This DEMP has been produced on behalf of Site Clear Solutions in order for the site to meet the requirements of an reassure the Environment Agency that the potential for dust produced operations is mitigated and controlled in every possible way. The aim is to be granted an environmental permit to allow the discussed operations to commence on site.

The DEMP aims to control any potential sources of dust to prevent dust emission impacts on the surrounding receptors, including several that are sensitive. All possible source-pathway-receptor routes have been identified and suitable abatement measures have been assigned to each one to minimise the potential dust caused from onsite operations.

The DEMP will be reviewed annually to ensure it is up to date or following a dust incident by the ineffectiveness of the plan.

7.4 Summary

This DEMP has been produced on behalf Site Clear Solutions Ltd in order for the site to meet the requirements of and reassure the Environment Agency that the potential for dust produced from the site's operations is mitigated and controlled in every possible way. The aim is to be granted an environmental permit to allow for the proposed operations to continue on site.

The DEMP aims to control any potential sources of dust to prevent dust emission impacts, and sources of NO_2, to prevent NO_2 emission impacts, on the surrounding receptors, including several that are sensitive. All possible source-pathway-receptor routes have been identified, and suitable abatement measures have been assigned to each one to minimise the potential dust and emissions caused from onsite operations.

The DEMP will be reviewed annually to ensure it is up to date or following a dust and / or emissions incident by the ineffectiveness of the plan.

APPENDICES

Appendix A – Dust Complaint Form

Customer Details	
Customer Name -	
Address – **Postcode -**	
Customer Contact Details -	
Tel -	
Email -	
Date -	
Complaint Ref Number -	
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 B – Cleaning Schedule

Location	How it is cleaned	Frequency
Floors under the plant	Hose	Weekly / immediately following an incident
	Manual Sweep	Weekly / immediately following an incident
Racking	Hose	Weekly / immediately following an incident
	Manual Sweep	
Behind bays	Hose	Weekly / immediately following an incident
	Manual Sweep	Weekly / immediately following an incident
External bays	Hose	Weekly / upon emptying / immediately following an incident.
	Manual Sweep	
Walkways	Hose	Weekly / immediately following an incident
	Manual Sweep	
WEEE processing area	Hose	Weekly / immediately following an incident
	Manual Sweep	
Granulation area	Vacuum	Daily / immediately following an incident
	Manual Sweep	
Receiving area	Hose	Immediately upon accumulation of dust, debris or litter identified from daily inspections / weekly / immediately following an incident.
	Manual Sweep	
Hazardous waste repackaging area	Manual Sweep	Weekly / immediately following an incident
Yard surface	Hose	Immediately upon accumulation of dust, debris or litter identified from daily inspections / weekly /
	Manual Sweep	

		immediately following an incident.
Warehouse surface	Hose Manual Sweep	Immediately upon accumulation of dust, debris or litter identified from daily inspections / weekly / immediately following an incident.
Base of perimeter	Manual Sweep	Immediately upon accumulation of dust, debris or litter identified from daily inspections / weekly / immediately following an incident.
Filter units	Wipe with rags	Weekly / immediately following an incident
Motors	Wipe with rags	Weekly / immediately following an incident
Framework	Wipe with rags	Weekly / immediately following an incident
Haul Roads	Mechanical Sweeper	Weekly / within 24 hours of an incident
Highway	Mechanical Sweeper	Weekly / within 24 hours of an incident
By signing this document I confirm that the screen cleaning has been done and all materials removed.		

Appendix C – Visual Monitoring Check Sheet

Name:	**Date:**	**Time:**
Weather	Wind strength / direction	
	Conditions e.g. dry, showers	

Location of visible accumulation of dust	**Time**	**Visible Dust**	**Dust Mitigation Action**
Access road surface			
Yard surface			
Internal surface of building			
Airborne			
Stockpiles			

Appendix D – Record of Actions

Name:	**Date:**	**Time:**
Location of visible accumulation of dust	**Dust control measure used**	**✓ or ×**
Access Road Surface	Mechanical sweepers	
	Hosing down of vehicles and surface to dampen	
Yard Surface	Mechanical sweeper	
	Manual sweeper	
	Hosing down of vehicles and surface to dampen	
Internal surface of building	Manual sweeper	
	Hosing down of surface to dampen	
	Extreme circumstances: cease operations immediately	
Stockpiles	Wrapped baling of plastic waste	
	Hosing down of stockpiles to dampen	

Appendix E – Other Sources of Emissions Drawing Ref: 230327SCS105

AC ENVIRONMENTAL
Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

N

Industrial/ Commercial

M6 Motorway
Roads

Public Highway

CLIENT
SITE CLEAR SOLUTIONS

SITE

REV	DATE	DETAIL

PROJECT
PERMIT APPLICATION

TITLE
POTENTIAL CONTRIBUTORS OF DUST AND EMISSIONS

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	Mar 2025	T Kearns	D Alcock

DRAWING NO
230327SCS105

REVISION

Appendix F - Protected Habitats Drawing Ref: 230327SCS106

1

3

SSSI

Local Nature Reserve

Protected Habitats

Local Wildlife Sites

0 100 250 500

Scale (meters)

AC ENVIRONMENTAL
Environment House
Werrington Road
Stoke-on-Trent
ST2 9AF

N

CLIENT

SITE CLEAR SOLUTIONS

SITE

REV	DATE	DETAIL

PROJECT

PERMIT APPLICATION

TITLE

PROTECTED HABITATS

SCALE @A3	DATE	DRAWN BY	CHECKED BY
1:10000	Mar 2025	T Kearns	D Alcock

DRAWING NO

230327SCS106

REVISION

Appendix G – Advetec XO22 Outlet Vents – Flow Range

The flow rates from each outlet vent operate in the following ranges.

XO22 Air Flow Range at Inlet & Exit			
Fan Speed	Deadhead restriction	Outlet 1	Outlet 2
%	%	CMH	CMH
100	0	360	360
60	0	145	145
45	0	98	98
100	50	150	150
60	50	96	96
45	50	72	72
Worst Case			
Unlikely			
Likely operating range			