

**GROWING BEDS RECYCLING
SERVICES LIMITED**

**ORGANICS & BIOMASS
RECYCLING FACILITY**

KIMBOLTON ROAD

RAVENS DEN

BEDFORD

BEDFORDSHIRE

MK44 2SJ

**DUST & EMISSION
MANAGEMENT PLAN
(DEMP)**

VERSION NUMBER: 1

DATE: 14 JUNE 2023

Issue and Revision Record

Revision	Date	Originator	Checker	Company Approver	Description of Changes
1	30/06/2022	S Clayton	M Evans	M Evans	For Issue
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1. Introduction

The site is operated by Growing Beds Recycling Services Limited (hereafter referred to as Growing Beds) at their site near Ravensden, Bedfordshire. The site's address is:

Growing Beds Recycling Services Ltd
Organics & Biomass Recycling Facility
Kimbolton Road
Ravensden
Bedford
Bedfordshire
MK44 2SJ

The site is located approximately 1.1 km North East of the village of Ravensden in rural Bedfordshire at National Grid reference TL 05952 55420. The area immediately surrounding the Installation is comprised of the following key land uses:

- North: Agricultural land.
- South: Commercial properties across the B660 road, agricultural land with Ravensden village at distance.
- East: Agricultural land with the village of Wilden beyond.
- West: Agricultural land, woods and isolated houses beyond that.

The site had operated under a waste management licence EAWML since 2005 until this was transferred to an Installation permit and subsequent Environment Agency led permit variation to include conditions from the Industrial Emissions Directive (IED) in 2015.

This permit allows the operator to compost waste under aerobic conditions in open systems such as outdoor turned windrows up to the permitted capacity of 32,000 tonnes per annum. Incoming green waste is delivered over a weighbridge prior to tipping in the reception area where it is inspected for non-conforming items. The material is then shredded before being placed in windrows for sanitation, stabilisation and maturation to produce a PAS100 certified compost. The composting takes place on an impermeable surface with a sealed drainage system. The site is surrounded by an acoustic bund to reduce noise emissions and water is used for dust suppression if necessary.

The site has operated a wood shredding activity since 2005 to provide shredded wood to a local waste wood biomass incineration plant.

The site is located in the local authority region of Bedford Borough Council. There is 1 Air Quality Management Area (AQMA) declared by the council which relates to the centre of Bedford and is in relation to NO₂. The site is not within 2km of this declared AQMA.

The site does have the potential to generate dust emissions and this management plan is to detail the mitigation measures in place which ensures that the local environment is protected.

The site practices and infrastructure has developed over the course of the life of the site and is designed

to control emissions from the wood shredding and composting activity.

The site's planning permission does not include any conditions which places special controls on the site for the control of dust emissions.

This document has been created as part of a variation application for the addition of a wood shredding activity to the site operations. The existing composting activity is excluded from this document as it is not part of this variation and is already controlled under procedures related to the PAS100 process.

This document is to be included within the site management procedures and be used by all staff on site in order to control dust emissions should they arise.

1.1 Sensitive Receptors

The site itself is not subject to any statutory or non-statutory nature conservation designations.

The only sites within 2km of the Ravensden Organics & Biomass Recycling Facility which have ecological designations are shown in Figure 1.1 below. This shows the closest ancient woodland are Little Wood and Great Wood approximately 300m and 400m west of the site respectively.

The following ecologically designated sites are located within 2km of the Ravensden Composting Facility:

- Tilwick Meadow Site of Special Scientific Interest (SSSI); and
- Mowsbury Hill Local Nature Reserve (LNR)

Both of these sites exceed the 1km range proposed by this plan guidance from the site boundary.

There are a couple of local houses within 200m of the site and the Village of Ravensden further away at approximately 1.2 km from the site boundary.

Of the receptors detailed above the most sensitive receptors are the closest houses. However, these are to the South of the site and are not considered to be especially dust sensitive as the wind direction is away from these houses for 90.7% of the year.

Tilwick Meadow, Mowsbury Hill and the village of Ravensden are too far distant to be impacted by any dust emissions. The ancient woodland are not considered to be especially sensitive to any dust emissions but are also upwind of site which would mean that for the majority of the time (83% of the year- See wind rose Figure 1.2) the wind would be blowing away from the woodland.

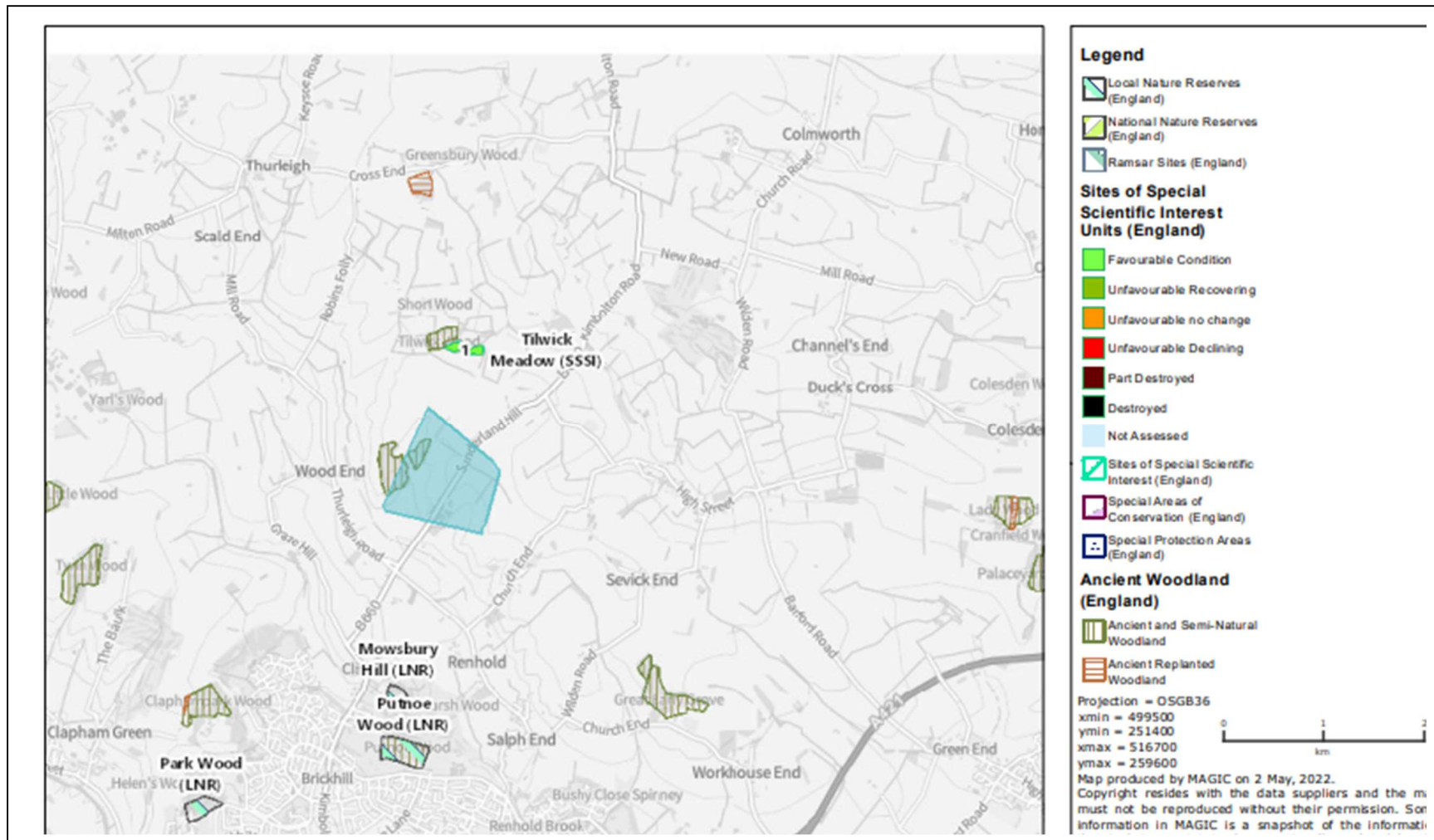
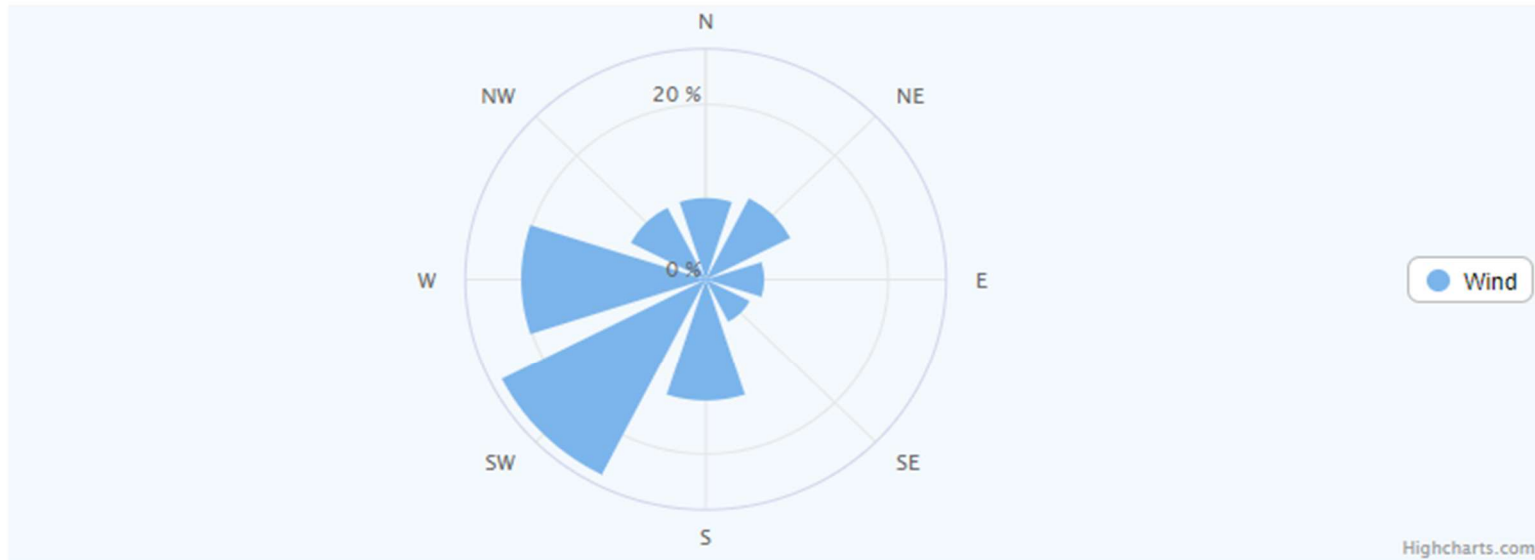


Figure 1.1: Nearby Sensitive Receptors

Wind rose in Bedford



Wind direction graph in Bedford using average values according to our data.

N ▼ Northern	NE ▲ Northeastern	E ◀ Eeastern	SE ▼ Southeastern	S ▲ Southern	SW ◀ Southwestern	W ▶ Western	NW ▲ Northwestern
9.3%	10.4%	6.4%	5.4%	13.9%	25.1%	20.2%	9.2%

Figure 1.2: Wind rose showing the AVERAGE WIND DIRECTION at Organics & Biomass Recycling Facility

Table 1.1 details the nearby sensitive receptors.

Table 1.1 Distances to Selected, Representative Sensitive Locations

Boundary	Closest property	Approximate distance to Organics & Biomass Recycling Facility site boundary (m)
South East	Houses off B660	200
South East	Businesses on B660	250
South	Ravensden Village	1,200

Table 1.2 details other potential sources of dust emissions within the local area.

Table 1.2 Sources of Dust and/or other Emissions

Company	Address	Type of Business	Distance from Organics & Biomass Recycling Facility site boundary (m)
Farmland	Off B660	Farm	Immediately adjacent to site
Freds christmas tree farm	Off B660	Farm	250m
Aquasure plumbing & heating	Off B660	Plumber	300m
Freds vehicle storage	Off B660	Vehicle storage	350m
Pell G & Son	Off B660	Farm	1,000m

2. Operations at Organics & Biomass Recycling Facility

2.1 Waste Deliveries to Organics & Biomass Recycling Facility

The waste acceptance process for the site is in accordance with the below.

Covered HGVs arrive by road at GBRS Site follow the haul road signage to the waiting area.

HGVs “un-sheet” and await barrier on weighbridge to rise prior to proceeding to enter the site.

Once on the weighbridge the driver will exit the cab and proceed up to the weighbridge window. The following information will then be checked:

- Driver Induction (For new people on site).
- Waste Carriers Licence Copied for our records.
- Driver hands over Waste Transfer Note.

The Source, EWC Code and Waste Description will be checked to make sure the waste conforms to its description and is on the acceptable wastes for the facility.

- This information is entered onto the GBRS Ltd Weighbridge System.
- The downward camera view will be checked showing the waste in the HGV to identify any non-conforming items. If all is ok HGV is directed to the correct waste area to tip.
- If non-conforming items are found the HGV will be directed to a separate area of the yard and the yard staff informed to further investigate.

If the load is found to be highly contaminated it will be rejected and loaded back onto the HGV for immediate removal off site.

If the load is only partly contaminated the customer will be informed and given the option for GBRS Ltd Staff to remove the non-conforming items.

- Once the HGV is tipped it will proceed back onto the weighbridge.
- The driver will report to the weighbridge and receive his final weighbridge ticket.
- The driver and HGV exit the facility.

The HGVs used by the site and the shredder are Euro 5 rated.

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

The site accepts and shreds non-hazardous waste wood. This is supplied to a biomass incineration plant and will have approximately 4 weeks’ worth of supply for that plant on site at any given time. This will be in different amounts of non-hazardous wood which can be in shredded and unshredded piles.

As Twinwoods Heat and Power Limited can utilise approximately 4 tonnes per hour of wood this will mean that there will have to be a minimum of 2,500 tonnes of wood on site at any given time.

This helps to keep down the waste storage times between arrival, shredding and transfer off-site to ensure that the wood is utilised swiftly to prevent any issues with regards potential self-combustion.

An additional measure is to include 2 bays for the unshredded wood and 2 bays for the shredded wood. These are co-located with a fire wall of pre-fabricated concrete between the 2 bays with a 0.5m freeboard maintained. One bay of shredded wood is the active pile for transfer to the biomass incineration plant whilst the other is being filled by shredding from the main wood pile. This ensures that the shredded wood lanes are completely turned over to ensure that there is no residual wood waste being left to biodegrade.

All bays are constructed of pre-fabricated concrete blocks which are slotted into steel framework to the height of 4.5m. Furthermore, the site is surrounded by an earthen embankment 5-6m in height which is above the height of the concrete bays.

The offices and weighbridge are located to the south east of the site with the extended access road beyond that.

The mobile plant is stored on a concrete pad to the south outside of the existing waste treatment pad area.

The shredded waste bays are either side on to or have their rear wall facing the prevailing wind direction which reduces the potential for wind whip of the shredded wood. Furthermore, the shredded wood is 0-150mm so not all of the wood would have the potential to become wind entrained.

The yard area is constructed of Pav2 heavy duty concrete which is a smooth concrete finish with steel reinforcing bars which is a very durable surface for the wood processing and easy to maintain and clean.

Figure 2.1 below shows the site layout.

Table 2.1 Typical waste types brought to Organics & Biomass Recycling Facility

European Waste Code(EWC)	Product Description	Tonnes/week	Destination within facility		
			Screening	Shredding	Storage
			Area	Area	Bay 1-4
03 01 01	waste bark and cork	435 tonnes per week for all wood	N/A	435 tonnes per week for all wood	Storage capacity for up to 7,144 tonnes total
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04		N/A		
03 03 01	waste bark and cork		N/A		
15 01 03	wooden packaging		N/A		
17 02 01	wood		N/A		
19 12 07	wood other than that mentioned in 19 12 06		N/A		
20 01 38	wood other than that mentioned in 20 01 37		N/A		
Non-wood wastes					
19 02 03	premixed wastes composed only of non-hazardous wastes		N/A	N/A	
19 06 06	digestate from anaerobic treatment of animal and vegetable waste		N/A	N/A	
20 02 02	soil and stones		N/A	N/A	
19 12 09	minerals (for example sand, stones)		N/A	N/A	
Total					



Figure 2.1: Current Site Layout Plan

Figure 2.2: Proposed Installation Boundary and Layout



The main shredding activity takes place on the pad area between the compost area and the fuel bays. The wood is shredded directly into the bays ready for loading onto a walking floor HGV which then delivers the shredded wood to the biomass incineration plant. This minimises the handling of any wood. One bay is the active bay for loading onto the walking floor HGV whilst the other bay is the bay being filled and these bays are turned over to ensure they are fully empty in order to minimise fire risk.

The site has the following measures in place to prevent dust and particulate emissions:

- Wood is shredded into bays and shredded wood is not stored out of these bays. So it is only stored and shredded when needed. Therefore, if the biomass incineration plant has a maintenance shutdown or break down then these operations would be stopped to prevent potential for dusty materials being stored on site for any duration. The shredded piles are about 4,712 tonnes which is about 40 days worth of running for the biomass incineration plant.
- The wood is stored outside which ensures that it is kept naturally moist with a higher moisture content than building stored wood which would mean that it is not so mobile when shredded.
- The site uses a low speed-low dust shredder which would minimise the potential for any dust generation.
- Mains Water is added to the shredder hopper at the rate of 100 kg/hour to ensure that any dust generated is damped down to avoid causing any emissions.
- There are 2 bays for the unshredded wood and 2 bays for the shredded wood. These are co-located with a fire wall of pre-fabricated concrete between the 2 bays with a 0.5m freeboard maintained. The new land will have a further 2 wood bays as shown above.
- The shredded waste bays are either side on to or have their rear wall facing the prevailing wind direction which reduces the potential for wind whip of the shredded wood. Furthermore, the shredded wood is 0-150mm so not all of the wood would have the potential to become wind entrained.

2.3 Mobile Plant and Equipment.

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

Description	Make	Model	Emission Rating
Loading Shovel	Case	721F	Tier 3
Loading Shovel	Case	721G	Tier 3
Loading Shovel	JCB	457	Tier 3
Excavator	Case	CX210D	Tier 3
Excavator	Case	CX210B	Tier 3
Forklift	Hyster	H2	Tier 3
Shredder	Doppstadt	Inventhor 9	Tier 4
Static Trommel	Kentech	620S	Generator powered
Trommel Screen	Doppstadt	SM620	Tier 3
Generator	FG Wilson	-	Tier 3

The equipment is all owned and is maintained in accordance with the manufacturer's recommendations. For the new equipment this is done through the existing warranty whilst the

older equipment is serviced by a local engineering company every 500 hours.

Replacements are purchased to be more efficient. With the withdrawal of red diesel the site has invested in hybrid trollers and generator in order to reduce fuel consumption and consequently emissions of NOx and dust.

Low sulphur diesel is used by the site bought from Barton petroleum.

All plant when not in use is turned off and idling is discouraged through training practices.

3. Dust and Particulate (PM₁₀) Management

3.1 Responsibility for Implementation of the DEMP

The responsible person for implementation of the dust management plan is Mark Evans (Director) who is WAMITAB trained.

The deputy would be Tom Bedford, also WAMITAB trained, in the absence of Mark Evans.

The dust management plan is reviewed annually to reflect any changes to site, management practices or in the event of any complaints.

All staff upon induction will be provided with a copy of the dust management plan to review and assert that they have understood it.

All existing staff will be given a copy to review and sign that they have read and understood the requirements. This will be undertaken again on a four-year basis or when the dust management plan changes.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

The following operations and sources have the potential to generate dust and particulates.

- Vehicles entering and/or leaving the site with mud on wheels and tracking dust on to or off the site.
- Vehicles and plant moving around the site kicking up dust
- Road vehicles tipping waste wood
- Excavators/360s moving waste wood around site
- Plant treating waste – shredders
- Waste wood dropping from conveyors into bays
- Waste wood stored in bays
- Site surfaces and cleaning operations
- Loading waste materials back on to vehicles for removal to the biomass incineration plant
- Particulate emissions from the exhaust of vehicles/plant/machinery on site.
- Generators, plant and other non-road going mobile machinery.

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	Houses off B660	Soiling of yard area Resuspension as airborne particulates	The site and access road are gravel and hardstanding areas which would not cover the HGV in mud. The HGVs arrive from public roads which would not be covered in mud. Yards areas are kept clean and can be washed with the lagoon stored surface water to ensure clean. Any lorries on site that are heavily soiled can be washed using a hose with surface water from the lagoon.
Debris	falling off HGVs	Houses off B660	Wood on access road	All HGVs delivering to site are covered and only unsheeted just prior to entrance to the site. All walking floor HGVs delivering to the biomass incineration plant are fully enclosed. Any debris falling off of HGVs delivering to site would be large pieces and unshredded and would therefore not generate dust. Any debris can easily be swept up and included in the wood pile for shredding.
Tipping, storage, shredding and sorting of waste wood in the open	Atmospheric dispersion	Houses off B660	Airborne particulates	The following measures are adopted to manage any dust generation: <ul style="list-style-type: none"> • Drop height from conveyors will be no higher than 3.5m; • The machine is fitted with a dust suppression system which sprays water into the hopper and also onto the conveyor as the shredded wood goes to be stored in the bay; • Shredding operations ceased on high wind days; • Wood kept naturally moist and water added to shredding hopper to damp down wood and dust;

				<ul style="list-style-type: none"> • Wood bays are protected against prevailing wind directions; • Wood bays have walls 4.5m in height with a 0.5m freeboard; • Receptors are upwind of site for over (0% of the year; and • Site where wood is stored is surrounded by a 5-6m earthen embankment.
Vehicle exhaust emissions	Atmospheric dispersion	Houses off B660	Airborne particulates	Regulatory controls (e.g. servicing and MOT) and best-practice measures to minimise potential emissions
Non road going machinery exhaust emissions	Atmospheric dispersion	Houses off B660	Airborne particulates	Equipment maintained in accordance with manufacturer recommendations including servicing periods.
Generator emissions	Atmospheric dispersion	Houses off B660	Airborne particulates	Hybrid generator recently purchased which would reduce fuel consumption and subsequent dust emissions. Equipment maintained in accordance with manufacturer recommendations including servicing periods.

Table 3.2: Measures that will be used on site to control dust/particulates (PM₁₀) and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Enclosure within a building	Creates a solid barrier between the source of dust and particulates and receptors.	<p>If the site is in a sensitive location then it is considered that this would be an effective measure.</p> <p>The site is not considered to be in a sensitive location as the area is very rural with the nearest potential receptor, 2 houses, being upwind of site for over 90% of the year. Furthermore, other receptors are at a distance in excess of 1.2km from site in an upwind direction also.</p> <p>Wood particles generated would be larger in size and greater than 10 µm. TGN M17¹ states that particles greater than 10 µm deposit within 200 metres to up to 1km.</p>	Not considered to be necessary unless receptors are built closer to the site in a downwind direction then the overall risk would have to be reconsidered.
Site / process layout in relation to receptors	Locating particulate emitting activities at a greater distance and downwind from receptors may reduce receptor exposure.	<p>There are 2 bays for the unshredded wood and 2 bays for the shredded wood. These are co-located with a fire wall of pre-fabricated concrete between the 2 bays with a 0.5m freeboard maintained.</p> <p>The shredded waste bays are either side on to or have their rear wall facing the prevailing wind direction which reduces the potential for wind whip of the shredded wood.</p>	These measures are currently adopted and will be in place with the proposed variation.

¹ Technical Guidance Note (Monitoring) M17 Monitoring Particulate Matter in Ambient Air around Waste Facilities

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		Furthermore, the shredded wood is 0-150mm so not all of the wood would have the potential to become wind entrained.	
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	<p>Reducing vehicle movements and idling reduces emissions from vehicles.</p> <p>Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery.</p> <p>Enforcement of a speed limit reduces re-suspension of particulates by vehicle wheels.</p>	<p>Vehicle movements are minimised through minimising the handling of waste and carrying out shredding activities in close proximity to the storage areas.</p> <p>Trommel and generator purchased recently are hybrid versions which will reduce fuel consumption and emissions generated.</p> <p>Site has a 5 mph speed limit.</p>	These measures are currently adopted and will be in place with the proposed variation.
Minimising drop heights for waste	Minimising the height at which waste is handled reduces the distance over which debris, dust and particulates could be blown and dispersed by winds.	<p>The drop height from the end of the conveyor to the storage pile in the shredded bay is no more than 1m.</p> <p>The storage bay is 4.5m in height with side walls with a 0.5m freeboard.</p>	These measures are currently adopted and will be in place with the proposed variation.
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.	<p>The site is subject to a daily site inspection. Any identified areas of wood dust build up will be swept up and added to the shredded wood bay for delivery to the biomass incineration plant.</p> <p>This would cover the whole site but mainly the active yard area and be undertaken by the operators and yard manager.</p>	These measures are currently adopted and will be in place with the proposed variation.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		Details on the frequency, job roles and areas covered should be documented here.	
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	All HGVs delivering to site are sheeted on the roof. This sheeting is removed just before entry to the weighbridge to allow the load to be inspected by camera. All HGVs delivering shredded to the biomass waste incineration plant are fully enclosed.	These measures are currently adopted and will be in place with the proposed variation.
Hosing of vehicles on exit	May remove some dirt, dust and particulates from the lower parts of vehicles.	All mobile plant moving around site and HGVs owned by Growing Beds are washed weekly with on site power washer with water from the town mains to ensure their cleanliness.	These measures are currently adopted and will be in place with the proposed variation.
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.	The site has an earthen embankment surrounding the height at 5-6m which should provide some shielding from wind. All storage bays are either side on or have their rear wall facing the prevailing wind direction which would prevent wind whip. The site has a weather station and if the wind gets up to speeds of 25 mph, dependent on direction, all shredding operations will be ceased.	These measures are currently adopted and will be in place with the proposed variation.
Easy to clean concrete impermeable surfaces	Creating an easy to clean impermeable surface such as concrete within the site and on-site haul roads. This reduces the	The main yard area where all treatment activities, waste storage and movement takes place is covered in Pav2 heavy duty concrete.	These measures are currently adopted and will be in place with the proposed variation.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	amount of dust and particulate generated at ground level by vehicles and site activities.	The site access road about 200m from the public road to the weighbridge is a rock covered construction. This can be damped down in dry periods.	
Minimisation of waste storage heights and volumes on site	Minimising the height at which waste is handled reduces the distance over which debris, dust and particulates could be blown and dispersed by winds. Reducing storage volumes should reduce the surface area over which particulates can be mobilised.	The site has a number of bays for shredded and unshredded wood which should prevent wind access to the wood. The wood pile stored in the main yard area is the active pile for shredding to the bay for storage. These bays are surrounded by pre-fabricated concrete walls up to a height of 4.5m with a 0.5m freeboard. All storage volumes are in accordance with the approved fire prevention plan.	These measures are currently adopted and will be in place with the proposed variation.
Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site, including no tipping, shredding, chipping or screening of high risk loads during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site.	Shredding operations are ceased during high winds as described above. The delivery and loading of wood for off-site transfer to the biomass incineration plant will continue.	These measures are currently adopted and will be in place with the proposed variation.
Remedial Measures			
Netting / micro netting around site	Erecting netting around equipment that could give rise to large amounts of dust and particulates may be effective within the site boundary and prevent their	Micro netting is not used on site. However, the shredder is placed in close proximity to the bays to be filled which have 4.5m high walls and an earthen embankment around site 5-6m to prevent dust dispersion off-site.	Alternative measures are currently adopted and will be in place with the proposed variation.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	dispersion off-site / their re-suspension within the site.		
On-site sweeping	<p>Sweeping can be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles.</p> <p>Road sweeping vehicles damp down dust and particulates whilst brushing and collecting dust and particulates from the road surface, particularly at the kerbside.</p> <p>This may generate dust and particulate movement that may become a Health and Safety issue if the filters and spray bars on the sweepers are not maintained.</p>	The site is subject to a daily inspection. If any dust build-up is identified around site kerbing then this will be cleaned up and added to the shredded wood bay for delivery to the biomass incineration plant.	These measures are currently adopted and will be in place with the proposed variation.
Water suppression with hoses & water jets	Damping down of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.	The yard area can be damped down by hose from the surface water contained in the lagoon in dry period.	These measures are currently adopted and will be in place with the proposed variation.
Water suppression with mist sprays	Installation of mist sprays at point source emissions like conveyors, trommels etc. It can also assist in the damping down of dust and particulates, therefore, reducing emissions from site.	Water is added to the shredder hopper at 100kg/hr to provide damping down of any dust generated during shredding operations. This wood would then be able to be moved by trommels whilst still damp to the fuel bays.	These measures are currently adopted and will be in place with the proposed variation.

3.3 Other considerations

Water usage/ availability:

The site has an onsite lagoon 75 metres by 15 metres with a depth of 3.5 metres. This has a capacity of 3,937.5 m³ which would be sufficient to provide water for the site. In addition, there is the old lagoon which has a capacity of 25m by 25 metres with a depth of 5m for a capacity of 3,125m³. This is currently filled with rainwater which could be used via hose. Water can also be pumped between the two lagoons.

The new area included within the installation boundary also contains a lagoon which is 75m by 15m by 3.5m for a total of 3,937.5 m³.

There is also a 20,000 litre freshwater tank with pump which can provide water for spot usage at site.

The hoses and pumps on site are sufficient to cover the whole of the site. There are 6 Fire Hoses each of which are 25m in length. There is a hose splitter so that 2 separate hose lines can be run from the pump.

Fire Hydrant 1 is located just at the bottom of the newly permitted area for the storage of mobile plant and is approximately 200m from the weighbridge and is maintained by Growing Beds Limited. This is tested monthly by opening the hydrant to allow it to flow freely to ensure that there is a sufficient head of water within the hydrant.

The Fire Hydrant 2 is at Junction of B660 & Thurleigh Road and is maintained by Anglian Water. There is good pressure in all areas due to the location of water tower on B660.

Lagoons are continually 50-70% full throughout the year. Lagoons can be topped up easily by tanker.

The water contained in the lagoons is more than sufficient for the daily usage at site.

In the event of a drought:

The lagoons and water tank can be topped up if required by potable water in the event of a drought but in the first instance the collected rainwater would be always used first.

The climate change risk assessment for the Anglian region states that summers could be 39% drier whilst winters 35% wetter. Therefore, effective water collection during winter should provide enough rainfall to cover extended drier periods.

3.4 Enclosure of Waste Processing & Storage Areas

[Non-hazardous and inert waste: appropriate measures for permitted facilities - 6. Emissions control - Guidance - GOV.UK \(www.gov.uk\)](#) 6.1 Enclosure within Buildings condition 2 states:

“If your waste treatment activities are likely to cause (or are) causing significant pollution at sensitive receptors which cannot be addressed by alternative measures, then you must carry out that waste treatment activity in an enclosed building”.

It is considered that the site is not causing significant pollution or is likely to cause pollution after the variation for the following reasons:

- 1) The site has been operating with shredding non-hazardous wood since 2005 and has been visited on multiple occasions by the local EA site officer who has not raised any issue with regards to pollution in the subsequent CAR reports.
- 2) The closest local site receptors are two houses 200m to the South of the site. These are upwind of the site for 90% of the time and given the site only operates 8am to 7pm this limits further the risk of any pollution occurring.
- 3) The other receptor downwind from site are over 1km away and is a local farm which would generate dust emissions of its own with its farming activities so would not be considered particularly sensitive.
- 4) TGN M17 states that dust over 10 μm falls out between a couple of hundred metres and 1km. Therefore, any dust would not reach any of the nearby receptors to cause nuisance.
- 5) A low speed-low dust generating shredder is used which would prevent significant emissions of dust occurring.
- 6) Water is added to the shredder hopper at the rate of 100kg/h which would damp down any dust making it less mobile and would stay within the confines of the site boundary.
- 7) The wood is predominantly sourced from household waste recycling centres and is stored in the open on site. This means it would be naturally wet and would not generate as much dust as drier wood stored indoors.
- 8) The wood is shredded near to the fuel bays which are constructed of prefabricated to a height of 4.5m with a 0.5m freeboard. Wood would be discharged to the bays below the height level of the bays which would thus contain it.
- 9) Fuel bays have sides of the same height and are located either side on or with their rear to the prevailing wind direction which would ensure any shredded wood is not wind entrained.
- 10) The fuel specification for the biomass incineration plant is 0-150mm with most of the shredded material much too large to become windborne.
- 11) The site has a weather station and will not undertake shredding when windspeed gusts to over 20 mph reducing the chances of any dust becoming airborne.
- 12) The site boundary where shredding takes place has a 5-6m earthen bund which would further prevent any dust egress as this is significantly higher than the height of the shredder, trommels and any other activity likely to generate dust.
- 13) The site has 2 lagoons filled with collected rainwater which can be used to dampen yard areas or wood piles to ensure there is minimal dust generation in dry periods.
- 14) Since 2005 the site has had 18 complaints and none of these were for dust despite the shredding activity being undertaken. The only complaints in the last 6 years (2 complaints) were with regards to the compost fire in 2019.

Therefore, it is considered that it is not required to enclose the shredding activity within a building as the risk is not significant given the factors above and that this is proportionate to the level of risk.

3.5 Visual Dust Monitoring

The site has a daily site inspection which is undertaken by the yard manager or nominated representative and this would check the boundary on each of the sides to assess whether any dust is likely to exceed the boundary during shredding activities.

If this is the case then the shredding activity can be adjusted by moving further from the boundary or by temporarily increasing water addition to reduce any dust carry.

This would be recorded in the daily site log.

4. Particulate Matter Monitoring

Particulate matter monitoring will be undertaken once per year by an accredited third party to demonstrate that this is not an issue. This will be undertaken in the first 3 months of receiving the varied permit.

It is considered that this would be sufficient given that:

- The site is in a rural location with no downwind receptors;
- The 5-6m earthen bund would prevent off-site migration of dust;
- Dust suppression measures by spraying into the hopper whilst shredding and as the wood leaves the conveyors would prevent dust being airborne;
- The site is not within an air quality management area;
- Shredded wood is stored in bays sheltered from the prevailing wind direction; and
- Most wood would be above 10 µm and would fall out very quickly especially when sprayed with water.

5. Actions when alarm is triggered.

In general, it is only the wind speed which dictates when shredding operations cease as the higher the wind speed, 25 mph or over, means that the shredding operation is less controlled and has to cease.

At other times the dust suppression system ensures this does not become a problem. The operators have been trained in the operation of the equipment and understand what normal operation would be or otherwise and would adjust the operation of the equipment accordingly.

However, should a complaint be raised with regards to dust (none have been so far in 17 years) then the Yard Manager will investigate, stop operations where a problem is found and rectify the problem dependent on the findings of the investigation.

6. Reporting and Complaints Response

Growing Beds Recycling Services Limited has a complaints procedure in place. This specifies that the complainant should be notified that their complaint has been logged within 5 working days and that a formal response has been sent within a month to the complainant.

6.1 Engagement with the Community

Growing Beds Recycling Services Limited is in a very rural location with very few neighbouring residents or businesses. These local residents and businesses In Tables 1.1 and 1.2 would be notified in the event of a change in the activities taking place at site.

6.2 Reporting of Complaints

The person who receives a phone or in person complaint should:

- Write down the facts of the complaint
- Take the complainant's name, address and telephone number
- Note down the relationship of the complainant to GBRS Ltd, e.g. client, supplier, member of the public
- Tell the complainant that we have a complaints procedure
- Tell the complainant what will happen next and how long it will take
- Where appropriate, ask the complainant to send a written account by post or by email so that the complaint is recorded in the complainant's own words

Complaints are logged upon receipt in the complaints logbook. These will be reported to site management.

The dust complaint form in Appendix B will be used to investigate the complaint.

Complaints should be acknowledged by the person handling the complaint within five working days to the complainant. The acknowledgement should say who is dealing with the complaint and when the person complaining can expect a reply. A copy of this complaints procedure should be attached. Ideally complainants should receive a definitive reply within a month. If this is not possible because for example, an investigation has not been fully completed, a progress report should be sent with an indication of when a full reply will be given. A formal written response will be provided to the complainant.

6.3 Management Responsibilities

The site has publicised Contact Details for Complaints which are:
Written complaints may be sent to GBRS Ltd, Sunderland Hill, Kimbolton Road, Ravensden, Bedford. MK44 2SJ or by e-mail to admin@growing-beds.co.uk. Verbal complaints may be made by phone to +44 (0) 1234 772226 (Option 1) or in person to any of GBRS Ltd staff or Directors at the same address as above.

Complaints are reviewed annually to identify any trends which may indicate a need to take further action.

All complaint resolutions are overseen by a Director or member of site management as detailed in the organogram.

6.4 Summary

The aim of the dust management plan is to manage any dust arisings at site so as to not cause any pollution to occur which could cause nuisance to any of the receptors detailed in Tables 1.1 and 1.2 above.

To this end all of the measures detailed above will be adopted at site.

The dust management plan will be reviewed annually, upon the resolution of a dust complaint or when any site activities change.

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	

