Dust & Emissions Management Plan

Environmental Permit Application – Tilmanstone Works

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Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked & Approved by
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Comments

Comments

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This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

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1. Introduction

1.1 The Brief

Waterman Infrastructure & Environment Limited ("Waterman") is instructed by Ovenden Tipper Services Limited (OTS) to prepare four Environmental Permit (EP) applications to the EA. The four applications relate to two existing standard rules EPs authorising waste management activities on the yard at Tilmanstone Works, Pike Road Industrial Estate, Eythorne, Dover, CT15 4ND.

The two EPs are specifically:

- a standard rules SR 2010No12 Treatment of waste to produce soil, soil substitutes and aggregate, reference EPR/DB3502CD; and
- a standard rules SR2009No6 – inert and excavation waste transfer station with treatment, reference EPR/DB3001FF.

Waterman is submitting the following EP applications:

1. a partial surrender of EPR/DB3502CD (application 1);
2. a partial surrender of EPR/DB3001FF (application 2);
3. a variation to EPR/DB3502CD, to convert it to a bespoke EP covering a wider area of land (application 3); and
4. a partial transfer of EPR/DB3502CD to EKR (application 4).

This document relates to application 3, the variation of EPR/DB3502CD. The intention of this application is to vary the EP from an SR2010No12[1] to a bespoke EP based on the best fit standard rules, and revise the EP boundary to increase the permitted area to include the land removed from EPR/DB3001FF by application 2.

The Environmental Risk Assessment (ERA) submitted in support of application 3 focussed on risks to the deciduous woodland. It concluded a Dust & Emissions Management Plan (DEMP) was required to manage the identified risks. The DEMP will also serve to protect other receptors in the vicinity of the site.

The permitted site is centred at approximate National Grid reference TR28875074.

The site address is Tilmanstone Works, Pike Road, Eythorne, Dover, Kent, CT15 4ND.

1.2 Report Context and Structure

The waste management activity has the potential to emit dust and particulate emissions which could impact offsite receptors including deciduous woodland protected habitat, as well as there being homes and a food preparation facility within 500m. Therefore, a DEMP is required to be in place as part of the operator's Environmental Management System (EMS). The EA's guidance with respect to DEMPs takes the form of a template[2] which has been used as the basis of this report.

The subject area of this DEMP will be divided between two operators (OTS and East Kent Recycling Limited) by means of partial transfer (application 4). This DEMP will incorporated into the EMSs of both operators.

This report will elaborate on the dust and particulate emission related risks highlighted in the ERA. The DEMP will establish the means and methods by which these risks will be managed for lifetime of the EP.

In line with guidance provided, the following emissions were considered:

[1] SR2010 No12 - Treatment of waste to produce soil, soil substitutes and aggregate (publishing.service.gov.uk) (accessed November 2022)
[2] Dust & Emission Management Plan (DEMP), version 10, released October 2018. Obtained directly from the EA at air.quality@environment-agency.gov.uk.

- bioaerosols;
- dust;
- particulates;
- litter; and
- mud and debris.

Sections of the template may be omitted due to not being applicable to the specific waste activity. In these cases, the omitted section and reasoning for omission will be explained.

Due to the activities present at the facility that is the subject of this DEMP, this document will mainly focus on prevention and containment of dust and airborne particulate emissions, generated by the following sources:

- direct vehicle, plant and equipment emissions;
- processing of waste by screening or crushing;
- handling of waste in the course of tipping and stockpiling; and
- emissions caused by associated site activities such as vehicular movements or degradation of site surfaces.

This document shall function as the DEMP and will be incorporated into the facility's EMS. The DEMP will be active for the life of the EP and a copy will be available at the nearby facility office at all times.

The local authority for the facility is Dover District Council.

1.3 Limitations and Constraints

This report has been prepared in accordance with the scope agreed between Waterman and OTS, as documented in Waterman's fee letter (WIE18644-100-220812-SO-Fee dated 12 August 2022) and with Waterman's standard Terms of Appointment.

The benefit of this report is made to OTS.

Waterman has endeavoured to assess all information provided to them during this investigation, but makes no guarantees or warranties as to the accuracy or completeness of this information. The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

The scope of this investigation does not include an assessment for the presence of asbestos containing materials within or below buildings or in the ground at the facility.

2. Site Setting and Sensitive Receptors

2.1 Overview of Site

The site is centred at approximate National Grid Reference TR28875074. It is located in the north-western portion of the Pike Road Industrial Estate, near Tilmanstone, Kent. The site boundary encompasses the majority of a flat level yard. The site occupies most of a yard of approximately 3 hectares (ha) in extent. The site is accessible from Pike Road via a single entrance to the south.

A plan showing the site's EP boundary can be found in Appendix A.

2.2 Surrounds and Sensitive Receptors

The surroundings of the Pike Road Industrial Estate are predominantly agricultural.

The yard is part of a larger site, flanked to the east by a building that houses a material recycling facility and a waste transfer station, as well as a former colliery spoil tip to the west. Deciduous woodland forms the northern perimeter of the site.

The nearest population centres are the villages of Elvington and Eythorne, that lie west and southwest of the facility, at distances of approximately 770m and 890m, respectively. The immediate surroundings of the facility and the local industrial area is primarily agricultural.

The table found below summarises in brief the surrounding environment and land uses found there.

Table 1: Summary of surrounding land uses

Location	Description
North	Farmland and residential properties
East	Pike Road, farm and agricultural land, Pike Road Industrial Estate
South	Pike Road Industrial Estate, Eythorne, Pike Road Industrial Estate including Bakkavor Salads.
West	Unrestored colliery spoil tip, the village of Elvington and farmland, Pike Road Industrial Estate

Receptors within 500m

The main concern of this DEMP are ecological and human receptors in close proximity to the facility, in this particular DEMP there will be a focus on the deciduous woodland that is within 50m of the EP boundary. Further detail regarding the protected habitat may be found in the section below.

A plan showing the sensitive receptors within 500m can be found in Appendix A titled WIE18644-100-GIS-WA-1B.

A table showing the sensitive receptors within 500m can be found in Appendix B.

The plan and table do not identify any dedicated healthcare sites or care homes near the site. The risks to health and amenity for nearby residents and users of the Pike Road Industrial Estate should be considered.

Deciduous Woodland within 50m

At the northeastern boundary is a Biodiversity Action Plan protected deciduous woodland, that extends further north. To the south, there is a strip of deciduous woodland that lies within 50m the EP area.

Local ambient air quality

There are no Air Quality Management Areas (AQMA) that cover the facility or the roads surrounding it[3].

[3] AQMAs Declared by Dover District Council, accessible at https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=81 (accessed November 2022).

The nearest air quality monitoring station to the site is located in Dover. The average PM_{10} concentration the recorded by the monitoring station between 3 November 2021 and 3 November 2022 was 22.35µg/m^3[4].

Prevailing wind direction

A wind rose was obtained based on data generated by a weather station at Manston Airport. This station is approximately 16.4km northeast of the facility. These data are considered representative for the purposes of determining likely wind speed and direction conditions at the facility. The wind rose shows that the prevailing wind direction for the facility is south westerly, and typically between 3.09m/s and 8.23m/s. The wind rose is included in Appendix C.

2.3 Other Emitters of Dust in Local Area

The facility is based in an Industrial Estate, as such, the presence of other dust, particulates or noise emitters is to be expected. These potential emitters include:

- Pike Road motorists;
- Pike Road Industrial Estate businesses that operate in the following sectors;
  - waste management
  - haulage
  - transport
- Pike Road Industrial Estate staff vehicles.
- Arable farmland depending on the season and activity may become a significant source of dust, examples include;
  - harvesting of cereal crops;
  - mechanized farm work in dry conditions; and
  - mud tracked by farm vehicles on to public highways drying and become resuspended as dust.

[4] Data gathered using Kent Air Data selector tool, accessible at Kent and Medway Air Quality (kentair.org.uk) (accessed November 2022).

3. Operations

3.1 Waste Deliveries

Waste is delivered by public highways typically by skip lorries, but also by flatbed trucks, tipper trucks and in vans. Suitable wastes from a materials recycling facility and waste transfer station adjacent to the permitted area may also be delivered through internal haul routes.

Some of the waste is delivered by the operators own fleet of skip lorries which are predominantly EUROVI emission standard.

All wastes delivered (and despatched) are contained by sheeting or netting (depending on the waste type). The operators own drivers and all customers are advised that loads must be covered.

All vehicles delivering or removing waste from the site have to pass over the weighbridge and complete duty of care documentation.

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

The facility has operated under a SR2010No12 EP for the treatment of waste to produce soil, soil substitutes and aggregates, to generate value as a recycled aggregate operation.

All waste activities, including processing and storage, take place in the yard, without any form of enclosure. The yard comprises an area of approximately 2.5 ha of predominately impermeable concrete. However, after application 3, the EP boundary will incorporate the area to the north of the yard that was surrendered in application 2. This additional area is surfaced in permeable hardstanding. The yard sits below the surrounding ground level, which provides some protection for stockpiles against wind exposure.

The facility conducts the following sorts of processing on site:

- storage of waste in stockpiles in preparation for treatment;
- manual sorting – separation and sorting of waste fractions into discrete waste steams by 360^{o} excavator;
- mechanical processing – a crusher and screener are used on site for processing hardcore and other construction or demolition waste, into granular material that will be separated into discrete grades.

The site operates under the following waste storage and processing limits, as defined in the SR2010No12:

- not more than 10,000 tonnes of wastes specified in table 2.4 at any given time;
- not more than 40,000 tonnes of any other wastes at any given time; and
- not more than 75,000 tonnes of waste may be processed annually.

The generation of recycled aggregate from inert waste feedstock is conducted in line with appropriate Quality Protocols[5], in order to meet the requirements of end of waste. The produced recycled aggregates, no longer being wastes become viable products that are then transported for site for sale.

Table 2.1 of the DEMP template has been omitted as the list of accepted wastes will be identical to those as accepted by the SR2010No12 EP. Table 2.3 of the SR2010No12 EP which contains the list of accepted wastes can be found in Appendix D.

3.2.1 Stockpiles

Stockpiles will be freestanding on impermeable surfacing.

[5] End of Waste Criteria for the production of aggregates from inert waste, accessible from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296499/LIT_8709_c60600.pdf (accessed 31 November 2022)

The height of all stockpiles will be maintained such that they will not exceed 6m in height. Stockpiles will be profiled by 360º excavators to minimise dust being suspended by wind whipping.

Good waste handling practices are taught and actively encouraged; these include keeping waste drop heights low as reasonably possible and avoiding double handling unless necessary.

3.3 Sources of Potential Dust and Emissions from the Site

The DEMP considers emissions of dust and particulates, including bioaerosols, mud and litter.

Emissions generated by the facility can arise from the following sources:

Use of vehicles and plant

- debris and litter – falling from waste loads or vehicle bodies;
- dust – resuspended by vehicular movements including from exhausts pointing downwards;
- particulate emissions – combustion emissions; and
- mud – tracked by vehicles entering or exiting site. Dried mud becomes another source of dust emissions.

Waste handling:

- loading and unloading waste – using 360º excavators to load waste into and out of road vehicles, and loading waste into plant for processing; and
- transporting waste – road vehicles carrying waste onto or off site.

Waste storage:

- forming stockpiles – dust may be suspended during the activity itself or by wind whipping; and
- deposition of airborne dust – suspended dust from other activities collecting on various surfaces, boundaries, and equipment.
- Bioaerosols – the site may import PAS100 compliant non-waste compost produced from green waste which may degrade to produce bioaerosols.

Waste processing:

- crushing – crushing of aggregates by mechanical means has a high propensity for dust generation; and
- screener – screening of aggregates by mechanical means can suspend large quantities of dust.

Litter may be present in waste material arriving on site or arrive from adjacent operations that do not fall within EP area.

There will be no sources of combustion other than vehicles, plant and equipment in the EP area.

Emissions sources, potential pathways to receptors and methods to sever pathways or abate the emissions are set out in the table below (Table 3).

3.3.1 Waste Processing

There are two forms of waste processing taking place in the EP area:

- crushing; and
- screening.

Screening is a method of mechanically sorting wastes typically comprising soils with hard materials in into discrete grades. This is done using mobile plant. The same plant can be used to blend materials together to create manufactured soils.

Hard materials such as concrete blocks, rubble etc. either recovered by screening or directly delivered to site, may be sized reduced by mechanical crushing using mobile plant.

3.3.2 Infrastructure and equipment summary

As stated elsewhere, there is no enclosure of any kind within the EP boundary.

Dust suppression equipment is present in the EP area, in the form of fire hoses, a road sweeper and water bowser. Further detail regarding the equipment and methods of use may be found in section 4.4.

3.4 Mobile Plant and Equipment

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Types of Non-road mobile machinery (NRMM):

- crusher (mobile waste processing plant);
- screener (mobile waste processing plant); and
- 360º excavator (waste and material handling).

All mobile plant is owned or hired by the operator. The mobile plant and equipment are subject to a maintenance strategy. A list of NRMM in use can be supplied on request – it will be subject to change.

The facility operates with no idling policy and fixed speed limit of 5 miles per hour.

Operator's Maintenance Strategy

- All equipment is maintained and serviced according to manufacturer's instructions;
- all larger plant is purchased with a three-year 5000-hour full parts and labour warranty;
- the operator employs its own workshop fitters at their maintenance workshop in a building adjacent to the EP area to maintain fleet vehicles;
- the operator has a contract with a third party to maintain mobile plant and equipment.
- the operator has Planned Preventative Maintenance procedures to ensure that vehicles are well maintained; and
- the operator has emergency breakdown contingency plans in place to expedite the repair of critical vehicles and plant.

4. Dust and Particulate Management

4.1 Responsibility for Implementation of this Plan

Responsible persons and training

The operator will implement the DEMP for as long as the permit is active. The TCM will be responsible for maintaining the DEMP, the site manager will be responsible for the day-to-day management of the site and enacting the DEMP.

All operatives must go through a formal induction process and must give their consent to acknowledge they have understood ways of working employed within the EP area.

All operational staff working on the permitted area will be made aware of the EP requirements which include this DEMP and how to comply with them.

Regular emissions related briefings, toolbox talks, and refreshers will be delivered to relevant operational staff by the site manager.

Training records are securely stored and reviewed periodically to ensure that staff competence is maintained.

Review of documents

The DEMP will be reviewed according to a formalised process by the TCM and site manager.

The DEMP will be reviewed if any of the following conditions are met:

- a year has passed since the last review;
- plant, vehicles or equipment changes; and
- a substantiated fugitive emissions related complaint is received.

Associated ways of working and procedures related to the DEMP will be altered, as necessary.

4.2 Sources and Control of Fugitive Dust & Other Emissions

Certain operations covered by the EP activity have a propensity to generate and / or suspend dust or particulates. These activities were described briefly in an earlier section but include the following:

- debris escaping from uncontained loads;
- excavators handling waste;
- loading waste material for transport;
- particulate emissions from the exhausts of vehicles, plant and equipment;
- vehicles entering or exiting site and tracking mud or dust;
- vehicle and plant movements resuspending dust;
- vehicles tipping waste material;
- waste stored in stockpiles – consider wind-whipping on the surface of the waste; and
- waste material being processed by plant – treated by crusher or machine sorted using screener.

Table 2: Dust and emissions risk assessment

Bioaerosols						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure (with risk management techniques)**	**Consequence**	**Overall risk**
Sources of bioaerosols: Green waste compost	Local residents and workers	Airborne	Green waste compost accepted will be PAS100 compliant Distance from site to human receptors The site is not enclosed so natural exposure and ventilation will prevent bioaerosols reaching dangerous concentrations.	Low	Human health impacts	Low

Dust and particulates						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure (without risk management techniques)**	**Consequence**	**Overall risk**
Sources of dust: Road vehicles and mobile plant moving around the site kicking up dust Road vehicles tipping waste Excavators (mobile plant) handling waste and recovered waste (products) including loading road vehicles Crushing and screening plant	Deciduous woodland Local residents and workers Food processing facility (Bakkavor Salads)	Airborne	Stockpiles will be maintained and profiled to prevent wind whipping Stored waste will be dampened down when necessary. Drop heights will minimised Materials with a high propensity for dust will be moved as little as possible Mitigation equipment will be deployed if visible dust may be carried beyond the site boundary Site speed limit of 5mph	High (deciduous woodland) Medium (remainder of receptors)	Smothering of trees (leaves) and ground flora leading to inhibition of biological processes, nutrient enrichment, toxic contamination Human health and nuisance impacts Contamination of food processing area	Low

Dust and particulates						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure (without risk management techniques)**	**Consequence**	**Overall risk**
Wind whipping dust from the surface of stockpiles Release from site surfaces Releases from road vehicles carrying waste on public highway Mud as a source of dust: Mud can turn to dust when it dries out Mud can be tracked onto public highway during waste transport Mud is assessed below.			All waste bearing vehicles are fitted with containment appropriate to waste carried, typically in the form of sheeting In dry conditions vehicle circulation areas are dowsed. The yard surface is wet swept on a regular basis by road sweeper Vehicles must be assessed before leaving the facility for mud and cleaned by dry brushing. Jet washer used if necessary Daily and weekly site inspections to ensure that dust abatement procedures and dust suppression equipment is functioning correctly			
Sources of particulate emissions: Vehicle exhaust emissions – both road vehicles and mobile plant Generator exhaust emissions (powering waste processing plant)	Deciduous woodland Local residents and workers	Airborne	Planned preventative maintenance procedures in place to ensure plant and vehicles are functioning correctly Vehicle movements kept to a minimum, site speed limit 5mph and no idling policy to reduce vehicular exhaust emissions.	Medium	Nutrient enrichment, toxic contamination Human health impacts	Low
Litter						

Dust and particulates						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure (without risk management techniques)**	**Consequence**	**Overall risk**
Hazards	Receptor	Pathway	Risk management techniques	Probability of exposure (with risk management techniques)	Consequence	Overall risk
Sources of litter: Littering items in the incoming waste	Deciduous woodland Farmland Local residents and workers Users of bridlepaths and footpaths	Airborne	Permitted waste types have low propensity to contain littering items Waste acceptance procedures including visual inspection tipping and waste rejection procedures All waste bearing vehicles are fitted with containment appropriate to waste carried, typically in the form of sheeting Site housekeeping including daily and weekly checks of the permitted area and litter picking	Medium	Smothering of flora Ingestion by farm animals Contamination of arable crops Nuisance impacts to human receptors	Low

Mud and debris						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure (with risk management techniques)**	**Consequence**	**Overall risk**
Sources of mud and debris on the public highway: Road vehicles leaving the site with mud on wheels and chassis Loaded road vehicles travelling to or from the site	Road users	Tracked onto public highways during waste transport Debris falling from vehicles	All waste bearing vehicles are fitted with containment appropriate to waste carried, typically in the form of sheeting In dry conditions vehicle circulation areas are dowsed. The yard surface is swept on a regular basis Vehicles must be assessed	Medium	Nuisance (e.g. mud on local residents cars) Road accidents	Low

Mud and debris						
Hazards	**Receptor**	**Pathway**	**Risk management techniques**	**Probability of exposure (with risk management techniques)**	**Consequence**	**Overall risk**
Mud on the public highway or site surfaces can turn to dust on drying out			before leaving the facility for mud and cleaned by dry brushing. Jet washer used if necessary Site housekeeping including daily and weekly checks of the permitted area Regular checks of cleaning equipment and drainage system			

Table 3: Table 3.2 – abatement measures

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Enclosure within a building	N/A	The site is not in an AQMA. There are no plans to construct a building to enclose waste management activities	N/A
Negative pressure extraction	N/A	There are no buildings in the EP area.	N/A
Dust extraction system	N/A	There are no buildings in the EP area.	N/A
Site / process layout in relation to receptors	The activities are concentrated to the southwestern section of the site. This keeps dust generating activity away from the deciduous woodland and the nearest residential receptors. The elevation difference between the protected habitat also provides some benefit in fugitive emission mitigation.	To be implemented, no further comment required.	There is no trigger condition. This abatement measure will be implemented at all times, as long as the permit is active.
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	Controls over vehicular movements and idling will improve efficiency and reduce emissions. A fixed speed limit is in place at the facility to reduce likelihood of dust being re-suspended by the movement of vehicles or plant.	Vehicle operators are trained (staff induction) and refreshed on operational policies to ensure: • waste is moved as efficiently as possible • No idling as far as is practicable • 5mph speed limit in effect at the facility at all times	There is no trigger condition. This abatement measure will be implemented at all times, as long as the permit is active. The effectiveness of these measures requires vigilance from operators and maintenance through training and refreshers.
Minimising drop heights for waste / limiting exposure to wind whipping	In reducing drop heights for waste is possible to limit the amount dust or particulates	360° excavator operators are qualified and trained efficiently handle waste in a manner that reduces wind exposure and dust suspension, when loading	There is no trigger condition. This abatement measure will be

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
	being suspended during the handling process. Stockpiles are maintained and profiled to minimise wind whipping.	/ unloading vehicles or feeding waste processing plant. 360º excavator operators also trained to maintain and profile stockpile as necessary.	implemented at all times, as long as the permit is active. The effectiveness of these measures requires vigilance from operators and maintenance through training and refreshers.
Good housekeeping	To ensure that dust and particulates are not able to amass over time, it is necessary to have appropriate day-to-day cleaning and maintenance protocols that are enforced by management.	This measure can be separated into four key aspects: • Daily inspections • Maintenance of plant and equipment • Routine and proper use of dust suppression systems • Site surface integrity and management	There is no trigger condition. This abatement measure will be implemented at all times, as long as the permit is active. The effectiveness of these measures requires vigilance from operators and maintenance through training and refreshers.
Sheeting vehicles	Sheeting or alternative forms of waste containment, prevent dust, debris, litter and other emissions from escaping during transport.	This measure is incorporated into ways of working. All waste entering or leaving the permitted area must be sheeted or otherwise contained.	There is no trigger condition. This abatement measure will be implemented at all times, as long as the permit is active. The effectiveness of these measures requires vigilance from operators and maintenance through training and refreshers.
Hosing of vehicles on exit	N/A (see installed vehicle wash below)	N/A	N/A

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Ceasing operation during high winds and/or prevailing wind direction	By stopping waste handling or waste processing during high winds it is possible to limit the quantity of dust dispersed.	This task would fall to trained supervisors to interpret wind direction and control the activities of waste operatives under them. Prevailing wind direction is from the south-west which facilitates the transmission of airborne dust to the nearby deciduous woodland.	Waste handling and waste processing will stop during high winds where the risk of dust being detected at the boundary is present.
Installed vehicle wash	Provides a high pressure wash of vehicle wheels and lower parts (including under body) using a series of jet sprays. .	Vehicle washing takes place, when necessary, before vehicles exit the facility	There is no trigger condition. This abatement measure will be implemented at all times, as long as the permit is active. However, determining whether a vehicle should be cleaned is carried out through visual checks by a trained operative.
Easy to clean concrete impermeable surfaces	Impermeable surfacing is easy to clean and dampen down. Dust suppression measures can be used without water soaking away, increasing water use efficiency.	The majority of the site is covered by impermeable surfacing (2.5 ha). The waste storage, handling and processing takes place on impermeable surfacing. Avoiding the permeable hardstanding surfaces. The condition and integrity of surfacing is inspected daily, maintenance is conducted accordingly.	There is no trigger for this abatement measure as it is already in place. Maintenance of this abatement measure is dependent on the site managers daily inspections.
Minimisation of waste storage heights and volumes on site	Reduced stockpile heights reduce the risk of dust being suspended by wind whipping.	Waste stockpiles are limited to 6m.	There is no trigger condition. This abatement measure will be implemented at all times, as long as the permit is active.
Reduction in operations (waste throughput, vehicle size, operational hours)	Operational hours are limited to reduce risk of nuisance or amenity issues for sensitive receptors outside of typical	Operational hours are controlled by planning condition.	There is no trigger condition. This abatement measure will be implemented at all times, as

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
	working hours.		long as the permit is active.
Remedial measures			
Netting / Micro netting around equipment	N/A	Not present at this facility.	N/A
On-site sweeping	Removes accumulated dust and particulates, spillages, and debris.	Site surfacing will be routinely swept by road sweeper using sufficient by not excessive quantities of water. Daily inspection will identify if debris and spillages require further action, or if further sweeping is necessary for site surfacing.	Routine sweeping will take place periodically. Additional sweeping will take place on an ad hoc basis, in response to the presence of debris, spillages, accumulated dust or as an action following daily inspection.
Site perimeter netting / micro netting	N/A	Not present at this facility.	N/A
Water suppression with hoses & water jets	Hoses may be used for dampening waste material prior to stockpiling, during and once stockpiled.	Hoses are in operation at the facility. They are used to dampen down stockpiles, surfaces and abate airborne dust Equipment is used manually and applied by trained operatives to minimise water usage	Implementation of this abatement measures will be under the direction of the site manager and delegated supervisors, in response to conditions on site
Water suppression with mist sprays	N/A	Not applicable, the EP boundary does not include the site egress point or any enclosure buildings	N/A
Water suppression with bowser	The bowser is used to rapidly dampen down waste material and large surfaces.	A water bowser is available for use at the facility. It will be deployed when dust abatement over a large area is required. Reserved for use on impermeable concrete surfaces. Use of this equipment is highly water intensive. As such will only be operated manually by trained operatives to minimise water usage	Implementation of this abatement measures will be under the direction of the site manager and delegated supervisors, in response to conditions on site
Dust and particulate monitor with trigger alarm	N/A	No monitors at the facility	N/A

Abatement measure	Description / effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Shaker grids	N/A	Not present at the facility	N/A
Water cannons	N/A	Not present at the facility	N/A
Screening of buildings / reducing large apertures using plastic strips	N/A	There are no buildings in the EP area.	N/A
Application of CMA / Chemical suppressant	N/A	Not present at the facility	N/A
Heavy Water	N/A	Not present at the facility	N/A
Foam Suppression	N/A	Not present at the facility	N/A

4.3 Dust Suppression Equipment

4.3.1 Fire Hoses

Water main connected hoses can used for dust suppression activities such as dampening site surfaces, stockpile surfaces and cleaning vehicles or equipment with superficial levels of dust deposition.

4.3.2 Water bowser

A water bowser (1,000) with spray bar and hose attachments is employed at the facility. This is used for dampening down surfaces.

4.3.3 Road sweeper

A mechanical road sweeper is used to clean any mud or debris deposited on impermeable surfacing.

4.4 Water Availability

A large rainwater fed tank at northern end of the facility is available for use in dust abatement operations. The tank may be seen in the site layout plan in Appendix A.

Water mains are also available for use in dust abatement operations.

4.5 Visual Dust Monitoring

Regular site inspections for dust and other emissions are conducted on a daily basis by the site manager.

The inspection includes the following checks:

- the appearance of the facility i.e. no visible dust raising is present;
  - an inspection of the facility perimeter and EP boundary. The presence of dust should be recorded, and appropriate remedial action should be taken.
  - stockpiles are checked to ensure compliance i.e. correct height, placement and profile; and
  - the EP area is checked for debris, dust, litter and mud – clean up and wash or dampen down (of surfaces where appropriate) will be actioned if necessary.

If visible dust is detected at any time, work will be paused. Mitigation measures (e.g. dampening, covering) will be implemented.

The site manager completes a check sheet post-inspection to confirm:

- dust levels are compliant with the DEMP at the time of inspection;
- dust and emission controls are being utilised and / or maintained;
- only suitable equipment is observed on site; and actions required are entered on the form.

4.6 Operating Hours

Under the site's planning permission decision notice (DO/17/1244) the site may operate between 7am to 6pm on weekdays and 7am to 1pm on Saturdays.

There is no handling of waste outside of these times.

4.6.1 Out of hours

The site is secured by perimeter fencing and CCTV to prevent unauthorised access. The operator will consider the likely weather overnight and over weekends and if it is likely to be particularly dry and / or windy will ensure stockpiles are dampened at the end of the day as are the site surfaces.

5. Reporting and Complaints Response

5.1 Engagement with the Community

Due to the period that the facility had previously been operating under an SR2010No12 EP, the facility already has established lines of communication and a rapport with neighbouring businesses and residents.

In the event that fugitive emissions are being emitted as a result of an incident, neighbours will be alerted.

5.2 Reporting of Complaints

The facility has signage at the site access gate, featuring the phone numbers for both, the facility's site office and the EA's Incident Hotline.

The facilities EMS contains a work instruction document that governs the procedure for receiving and processing of complaints, as well as how to effectively respond to complaints.

Complainants will be answered by site office staff and have their complaints recorded.

The EA should be notified if events transpire that may cause significant fugitive emissions, these events include:

- breakdown or failure dust suppression equipment;
- breach of an emissions limit;
- malfunction; and
- accident.

5.3 Management Responsibilities

The site managers or supervisors will investigate each complaint. Should the complaint be substantiated, the site manager will arrange appropriate remedial abatement actions.

The site manager should also respond to complainants and inform them of actions taken. The TCM and site managers will collate and review complaints on a periodic basis.

6. Summary

The objective of this dust management plan is to:

- identify dust and emission risks to surrounding receptors that can arise from waste management activities taking place on site;
- provide abatement controls to manage dust and emission related risk; and
- be incorporated into the currently established EMS.

The control measures for preventing and managing dust from each source on site are set out in Tables 2 and 3.

Management responsibilities are outlined in sections 4.1 and 5.3.

Details of when the DEMP should be reviewed are in section 4.1.2.

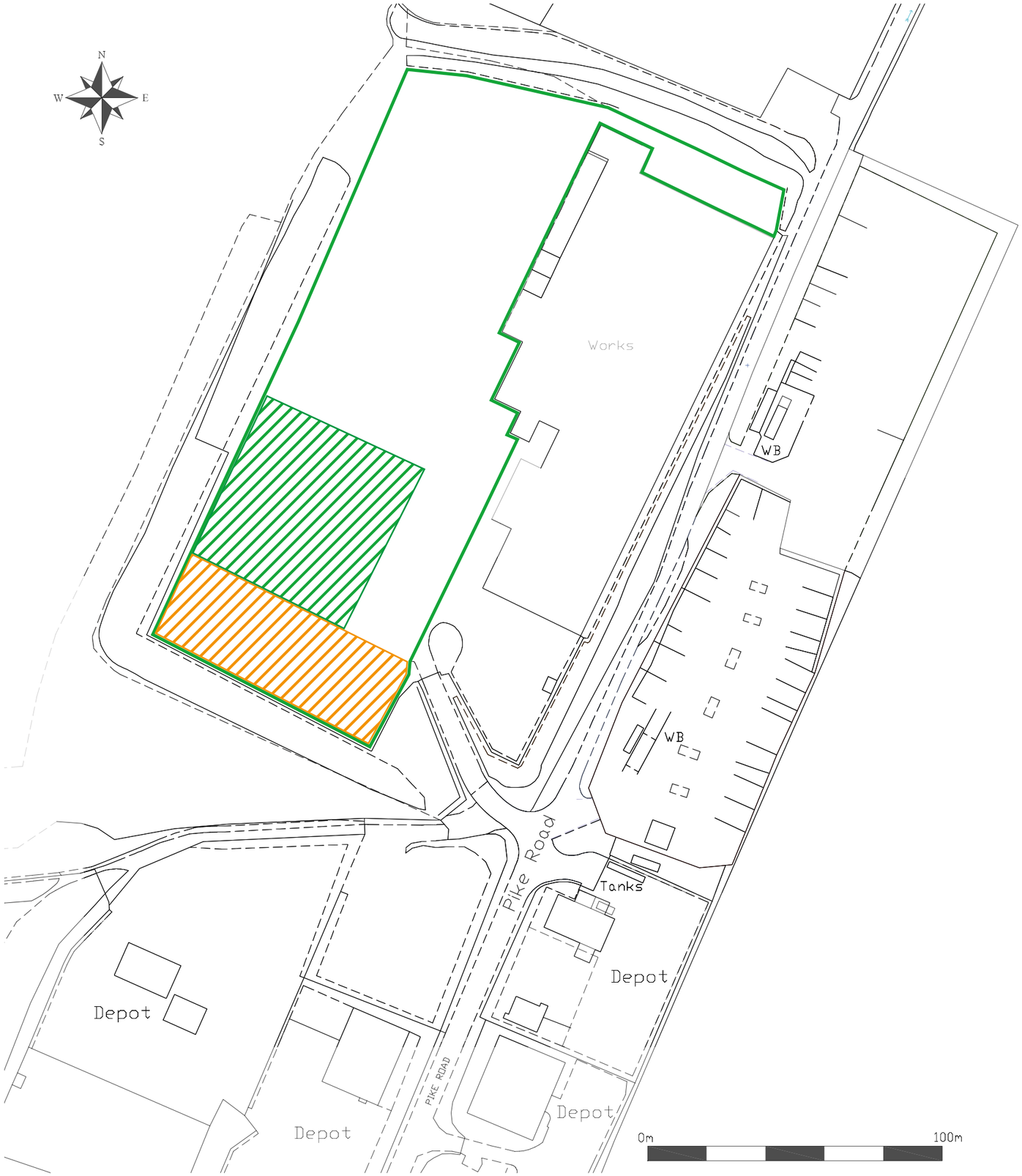
6.1 Omitted sections

The section of the EA template for a DEMP – “enclosure of waste processing and storage areas”, has not been included. As it relates to waste management activities enclosed within buildings. The waste recovery permitted areas will not be within building structures.

APPENDICES

A. Plans and Drawings

- Site Layout Plan (18644-100_GR_EP_13A)
- 500m Sensitive Receptors Plan (WIE18644-100_GIS_WA_1B)



Permit Boundary - EPR/DB3502CD

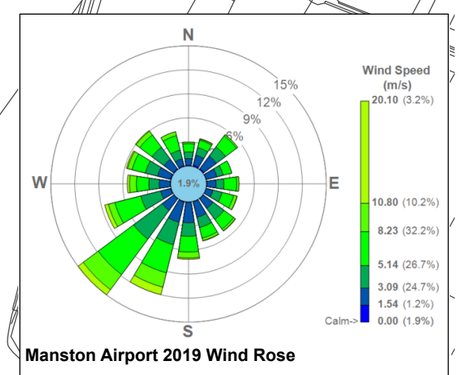
East Kent Recycling Waste Processing and Storage Area (After Partial Transfer)

Ovenden Tipper Services Waste Processing and Storage Area (After Partial Transfer)

Source: Ovenden

Project Details	WIE18644-100 Tilmanstone Works - Environmental Permits
Figure Title	Site Layout Plan – EPR/DB3502CD
Figure Ref	WIE18644-100_GR_EP_13A
Date	January 2023
File Location	\\s-lncs\wiel\projects\wie18644\100\graphics\ep\issued figures

Permit Boundary
500m Study Area
Agricultural
Commercial / Industrial
Deciduous Woodland (EA Screened)
Public Spaces
Residential
Woodland
Public Highways
Public Rights of Way
Surface Water



Manston Airport 2019 Wind Rose

N

0 25 50 100 150 200 250 m

Project Details	WIE18644-100: Tilmanstone Works, Dover
Figure Title	Figure 1: Identified Human and Environmental Receptors within 500m of the Site
Figure Ref	WIE18644-100_GIS_WA_1B
Date	January 2023
File Location	N:\Projects\WIE18644\100\9_GIS\WIE18644-100_GIS_WA\

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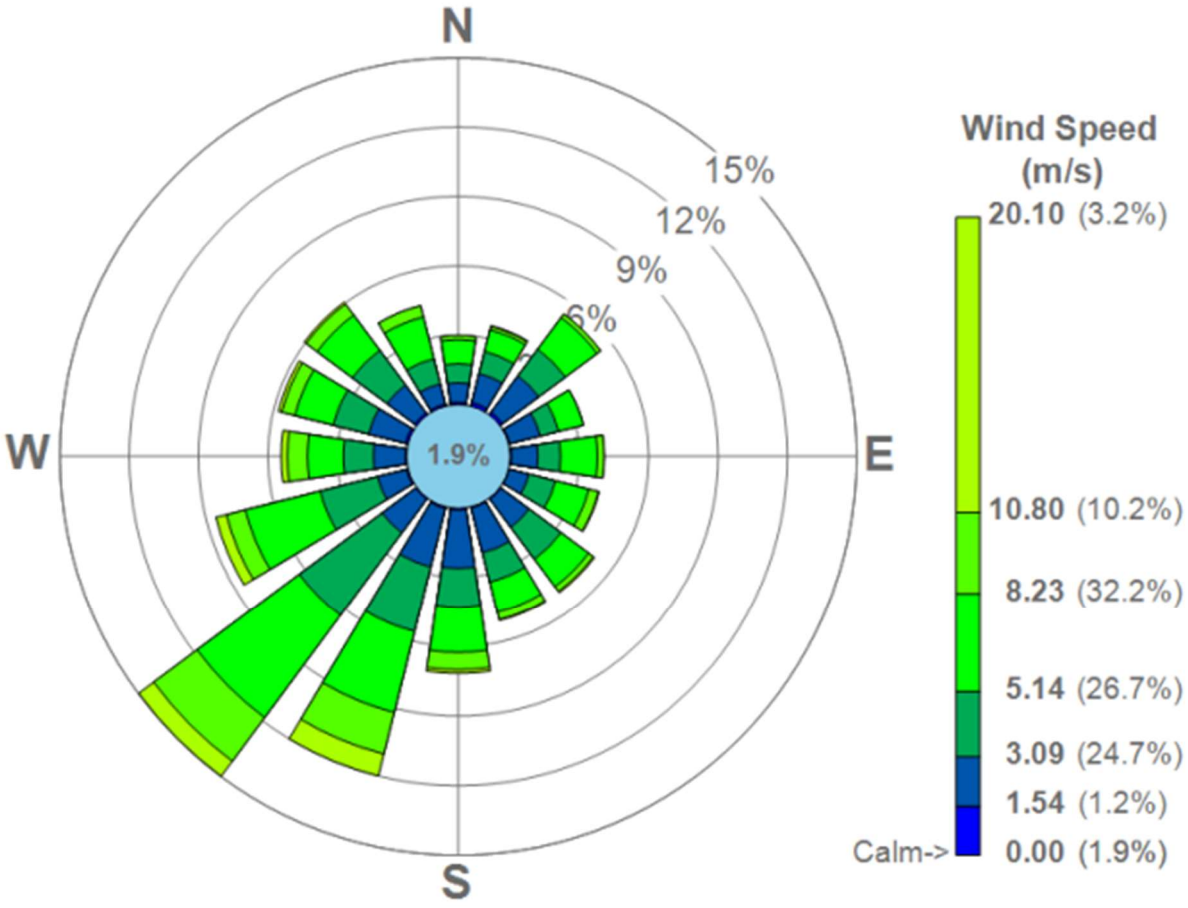
B. Table of Sensitive Receptors Within 500m

Receptor name	Receptor type	Direction from site	Approximate distance from site boundary (m)
Deciduous woodland	Priority habitat	North, north west, west	8
Arable land	Farmland	North	22
Bridleway EE335B	Transient users of bridleway	North, north east,	130
Pilgrims Cottage, The Old Farmhouse, New Purchase Farm Cottages	Residential	North	145
Footpath EE406	Transient users of footpath	North	170
Beeches Farm	Farm buildings	North	205
Footpath EE394A	Transient users of footpaths	North east	455
Pike Road	Public highway	East	1
Arable land	Farmland	East	25
Pike Road Industrial Estate	Various industrial and commercial premises	East, south east, south	17
Footpath EE337A	Transient users of footpath	South east	65
Arable land	Farmland	South east	285
Footpath EE337	Transient users of footpath	South	25
Deciduous woodland	Priority habitat	South	27
Bakkavor Salads	Food processing plant	South	90
Barville Road	Public highway	South, south east	285
Arable land	Farmland	West – north west	250

C. Manston Airport 2019 Wind Rose



D. SR2010No12 Table of Accepted Wastes

- Table 2.3 waste types.

(c) its chemical, physical and biological characteristics make it suitable for its intended treatment;

(d) any excavated soil from potentially contaminated sites has been shown by prior chemical analysis and assessment to be suitable for the intended use without significant risk of pollution; and

(e) it is visually inspected on arrival and before it enters the treatment process to ensure that it complies with these standard rules.

2.3.2. Any waste that does not comply with 2.3.1 shall be rejected and shall be;

(a) removed from the site; or

(b) moved to a designated quarantine area pending removal.

2.3.3 Records demonstrating compliance with rule 2.3 (including analysis and assessment of any excavated soil from potentially contaminated sites) shall be maintained.

Table 2.3 Waste types

Exclusions

Wastes having any of the following characteristics shall not be accepted:

- **Consisting solely or mainly of dusts, powders or loose fibres**
- **Hazardous wastes**
- **Wastes in liquid form**

Waste Code	Description
01	**WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS**
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**
02 02	**waste from preparation and processing of meat, fish and other foods of animal origin**
02 02 02	shellfish shells from which the soft tissue or flesh has been removed only
03	**WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**
03 01	**wastes from wood processing and the production of panels and furniture**
03 01 01	waste bark and cork
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 01	waste bark and wood
10	**WASTES FROM THERMAL PROCESSES**
10 01	**waste from power stations and other combustion plants**
10 01 01	bottom ash and slag only
10 01 02	pulverised fuel ash only
10 01 05	gypsum (solid) only
10 01 07	gypsum (sludge) only
10 01 15	bottom ash and slag only from co-incineration other than those mentioned in 10 01 14
10 11	**wastes from manufacture of glass and glass products**
10 11 12	clean glass other than those mentioned in 10 11 11
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**
10 12 08	waste ceramics, bricks, tiles and construction products(after thermal processing)
10 13	**wastes from manufacture of cement, lime and plaster products and articles and products made from them**

10 13 14	waste concrete only
15	**WASTE PACKAGING**
15 01	**packaging**
15 01 07	clean glass only
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	**wood, glass and plastic**
17 02 02	clean glass only
17 03	**bituminous mixtures, coal tar and tarred products**
17 03 02	road base and road planings (other than those containing coal tar) only
17 05	**soil (including excavated soil from contaminated sites) stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 08	**gypsum based construction material**
17 08 02	gypsum only other than that mentioned in 17 08 01
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION / INDUSTRIAL WASTE**
19 05	**wastes from aerobic treatment of solid waste**
19 05 03	compost from source segregated biodegradable waste only
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 02	washed sewage grit (waste from desanding) free from sewage contamination only
19 08 99	stone filter media if free from sewage contamination only
19 09	**wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 02	sludges from water clarification
19 12	**wastes from the mechanical treatment of wastes**
19 12 05	clean glass only
19 12 09	minerals (for example sand, stones)
19 12 12	treated bottom ash including IBA and slag other than that containing dangerous substances only
19 13	**wastes from soil and groundwater remediation**
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**
20 01	**separately collected fractions**
20 01 02	clean glass only
20 02	**garden and park wastes**
20 02 02	soil and stones

2.4 Operating techniques

2.4.1 The activities shall be operated using the techniques and in the manner described in Table 2.4 below.