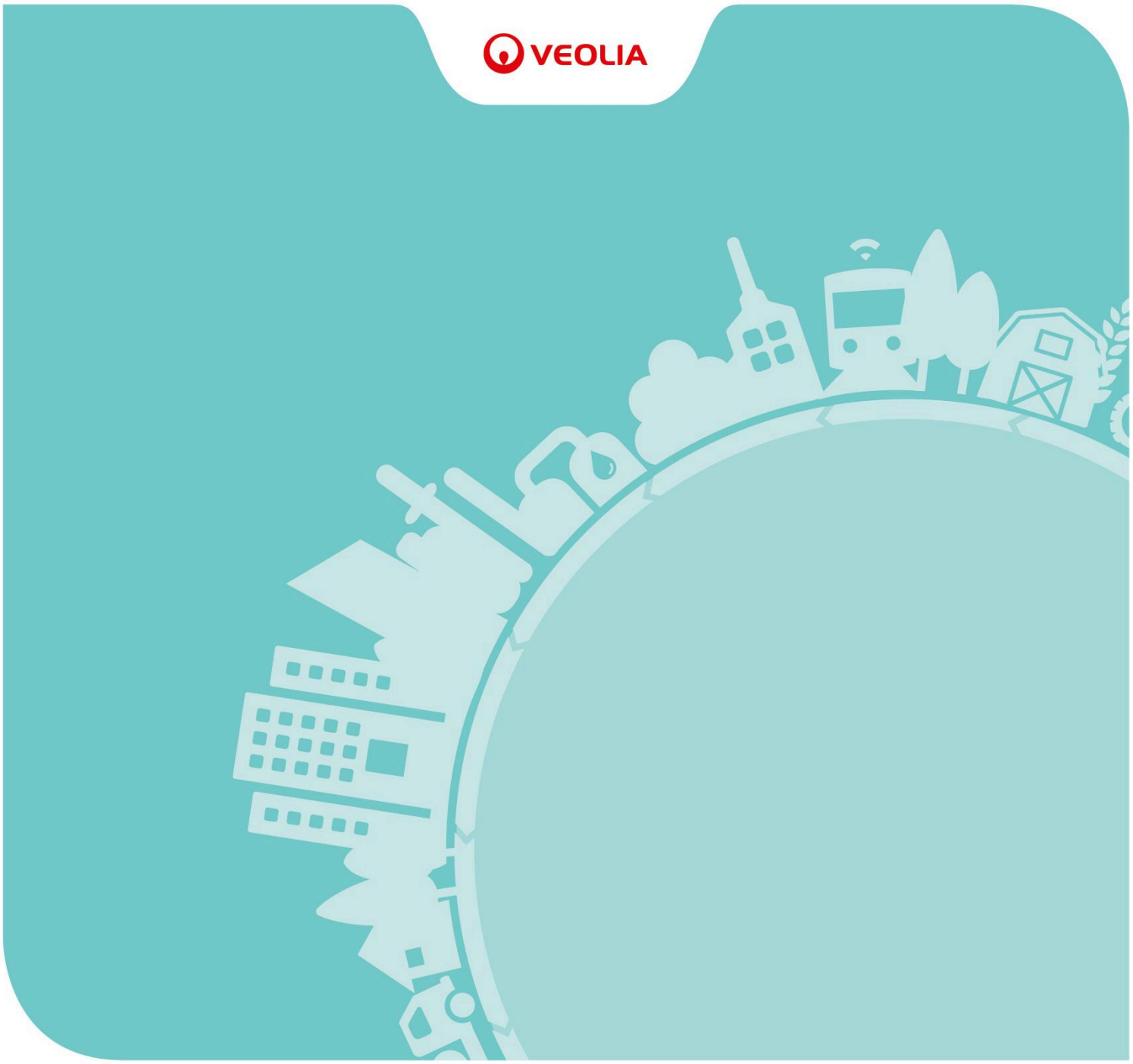


Fire Prevention Plan

Rainham Open Windrow Composting (OWC), Wood Treatment and RDF Facility

Rainham Landfill, Coldharbour Lane Rainham RM13 9BJ
Permit Reference: EPR/EP3136GK

Date: July 2025
Version: 2.0

Document Control

Revision Number	Date of Issue	Status	Reason for revision
1.0	January 2021	Final	Permit Application
1.1	June 2021	Revised	EA comments
1.2	September 2021	Revised additional flexibility for bay designations	EA comments / minor amendments
2.0	May 2025	Draft for application	Variation to add RDF

Contents

1. Process Overview

Composting, wood storage and RDF transfer / storage activities at Rainham are authorised by permit reference EPR/EP3136GK for Rainham Landfill.

The site operates with the flexibility to carry out three broad activities; open windrow composting, wood storage (and processing), and storage of refuse derived fuel 'RDF'. Composting is carried out as a listed 'Installation' activity and wood storage processing and RDF transfer / storage are carried out as waste activities.

At any one time the facility may have variable quantities of each broad waste category ranging from a mixture to operation entirely for either green waste, wood waste or RDF storage.

- The composting activity has been operating at the Rainham site for over 20 years. The site can produce high specification peat free compost to the BS PAS-100 specification which is Quality Protocol certified. Green waste can be accepted from local authorities including the East London Waste Authority, the Western Riverside Waste Authority, Bexley, Essex, Kent and Medway.
- The wood recovery process including the option for storage and processing (shredding) allows the site to take wood for storage and processing. This was included in the permit as a waste activity 2021.
- The RDF storage activity was added to the permit in 2025 allowing the site to take receive overcapacity RDF material for bulking prior to trans frontier shipment (e.g. as sea freight from the waste management terminal on the Thames to the west), or accept RDF during shutdown of Energy Recovery Facilities 'ERF's', allowing for temporary storage until the ERF resumes operation, thereby preventing the material being diverted to landfill. There is no RDF production on site.

1.1. Flexible Operations

The site is ideally suited to both wood storage / processing, composting and RDF transfer / storage activities and in order to allow VES to both innovate and supply the needs of the secondary raw material economy the Facility is permitted with the flexibility to exchange annual throughput capacity between waste types.

VES has configured the Facilities management system so as well as the polar options (wood / composting / RDF) there is limited flexibility to transition between these principal activities in a defined way based on a series of indicative operational scenarios.

The management system will allow for the following operational scenarios as outlined in the table below.

Operational scenarios governed by the Fire Prevention Plan

Activity	Description
COMPOST	Windrow composting as the principal activity
WOOD	Wood storage and treatment as the principal activity
RDF STORAGE	Storage of RDF to be used during loading of the nearby river transport network for trans frontier shipment, or, storage during ERF outages as the principal activity.
MIXED	Ability to be able to carry out a mixture of the above operations (including RDF along with wood and compost).

The composting, wood and RDF based operational scenarios and the limited, defined flexibility scenarios are assessed by this Fire Prevention Plan ‘FPP’.

2. Detailed Process Stages

2.1. Waste Inputs

Waste is delivered to site in vehicles (including rigid and articulated trucks), weighed over the weighbridge and directed to the tipping area. The description, nature and source of wastes are verified at the weighbridge. Details of the waste carrier, waste type (EWC code), client / source and quantity (tonnes) of waste are recorded on WIMS and / or on a Waste Transfer Note.

Waste will be processed in an efficient manner to ensure prompt turnaround to reduce any possible emissions to air and / or heat build-up.

Waste will be processed in the order delivered. The input bays will be managed so that waste can be treated on a first in first out basis.

Any incorrectly declared deliveries will be quarantined immediately and dealt with in line with local procedures and guidance as detailed in the permit and management system.

Pre-acceptance and waste acceptance procedures are in place for all waste accepted at the site to ensure that incompatible or reactive wastes are not accepted. In the event that a hot load is detected during acceptance, although each incident will be event specific, and the site management / fire marshal shall be responsible for managing the situation, the primary options are to direct the load to the quarantine area or if already deposited to isolate the waste from other waste if possible. In all events the emergency management plan would be enacted and the fire service would be called.

2.2. Storage & Loading

All storage bays will be constructed of 120 minute fire retardant concrete blocks with the joints sealed with intumescent mastic to prevent the spread of fire and enable any fire which does occur to be isolated quickly.

2.2.1. Scenario 1 - Compost

Scenario description: Windrow composting as the principal activity

Suitable material on arrival is shredded as soon as possible to reduce the volume and assist with accelerating the start of the composting process. The moisture content of the shredded material is assessed with additional moisture added as required with an optimum around 50-60%).

The shredded material is then formed into trapezoidal-shaped windrows in the central area of the site each row running lengthways east to west. Each windrow is approximately 40-50m in length and will hold approximately 3000 tonnes of green waste.

This ‘in process’ material then undergoes sanitisation where the material heats in the early stages of the composting process as microbial degradation accelerates which results in denaturing of weeds, seeds and pathogens. Monitoring of temperature and moisture is carried out throughout this stage on a daily basis to ensure a required range of 60 - 70 °C. This is achieved through insertion of a temperature probe into the core zone of the windrow. Moisture adjustments are made as required from harvested rainwater supplies. The windrows are turned during the sanitisation process to ensure there is uniform mixing and heat distribution and introduce oxygen ensuring decomposition remains aerobic. Sanitization is complete once the requirements of PAS 100 CQP are met.

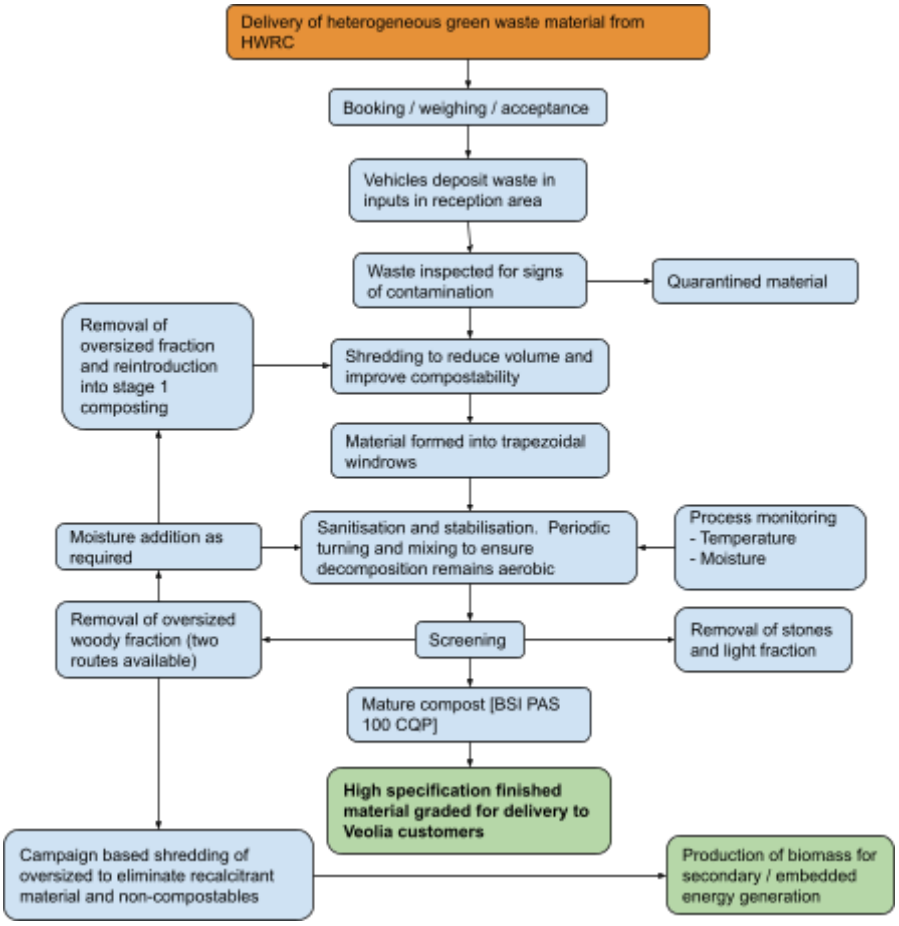
The windrows then enter a stabilisation phase where they are monitored weekly according to the PAS 100 CQP with moisture addition continuing as required. Monitoring of the temperature is carried out to ensure a required

range of 45 - 70 °C is maintained. The critical control points and critical limits of composting during the actively managed composting phase (sanitisation and stabilisation phases) are identified within the site specific PAS 100 HACCP Analysis.

Sanitised, stabilised material is screened to remove stony material unsuitable for further composting, a light fraction including plastic contamination and the generally woody / bulky 'oversized' fraction. The oversized fraction is stored in a 120 minute fire resistant bay for a maximum period of 3 months. The oversized fraction can be steadily returned into the shredding stage of the composting process. This is carried out to ensure optimum blending of carbon rich woody material and nitrogenous material e.g. grass is achieved. Alternatively, depending on demand or the amount present, oversized material can be further processed (picking and shredding) for subsequent use, off site, as a biomass fuel.

Scenario 1 also includes the option to transfer waste wood without treatment in one of 4 of 750m^3 bays to the north of the site. The bays will be used sequentially with short turnaround times as detailed in '[Preventing self combustion]'.

Composting Process Flow Diagram



2.2.2. Scenario 2 - Mixed

Ability to be able to carry out a mixture of the above operations (including RDF along with wood and compost).

This scenario allows the site to operate as a mixture of the three broad categories of waste input; green waste / composting, wood storage and RDF storage. For example it would allow the site to accept mainly wood waste for storage but utilise a proportion of the bays to allow bulking of RDF prior to trans frontier shipment from the as sea

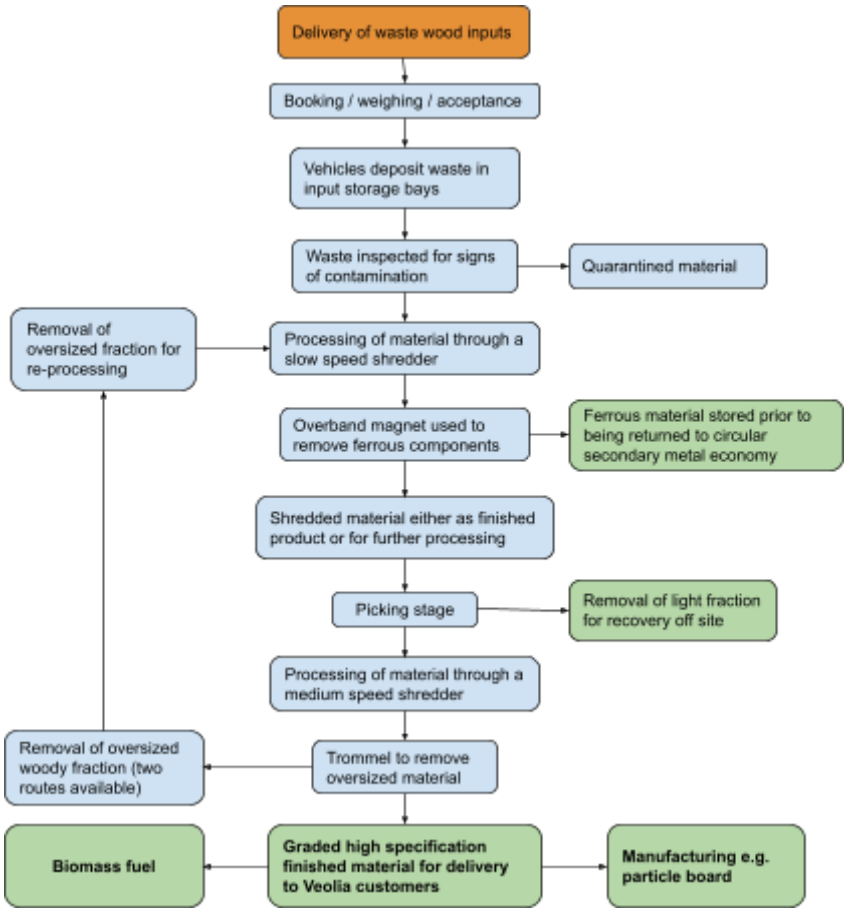
freight from the waste management terminal on the Thames to the west. Alternatively it allows the site to accept a limited amount of wood waste for bulking while carrying out composting a windrow composting activity.

2.2.3. Scenario 3 - Wood

Wood storage and treatment as the principal activity.

The wood, primarily delivered from municipal civic amenities sites, will be deposited in 120min fire resistant input storage bays with a maximum pile size of 750m^3 prior to being shredded using a slow speed shredder. The shredded wood will then be stored 120 min fire resistant shredded wood storage bays. The shredded waste will then either be exported from site for further processing elsewhere or further processed on site. The further processing consists of further shredding, use of a picking station and use of a shredder. Processed wood with a particle size between 30mm to 150mm will be stored in a 120 min fire resistant bay to a maximum pile size of 450m^3, and processed wood with a particle size less than 30mm will be stored in a 120 min fire resistant bay in a maximum pile size of 300m^3. All bays will be filled and emptied sequentially to ensure efficient stock rotation.

Wood Processing Process Flow Diagram



2.2.4. Scenario 4 - RDF storage

RDF storage and treatment as the principal activity.

Baled RDF waste will be brought to site by road transport and unloaded into Legio block storage bays. The material will arise from RDF production facilities comprising principally shredded and baled residual waste. The description, nature and source of wastes are verified at the weighbridge. Details of the waste carrier, waste type (EWC code),

client / source and quantity (tonnes) of waste are recorded on WIMS and / or on a Waste Transfer Note.

Bales will be unloaded by mobile plant and stacked in Legio block bays where they are stored pending transfer off site.

A different protocol will be in place depending on the maximum residence time of the RDF material effectively transfer only or storage and transfer.

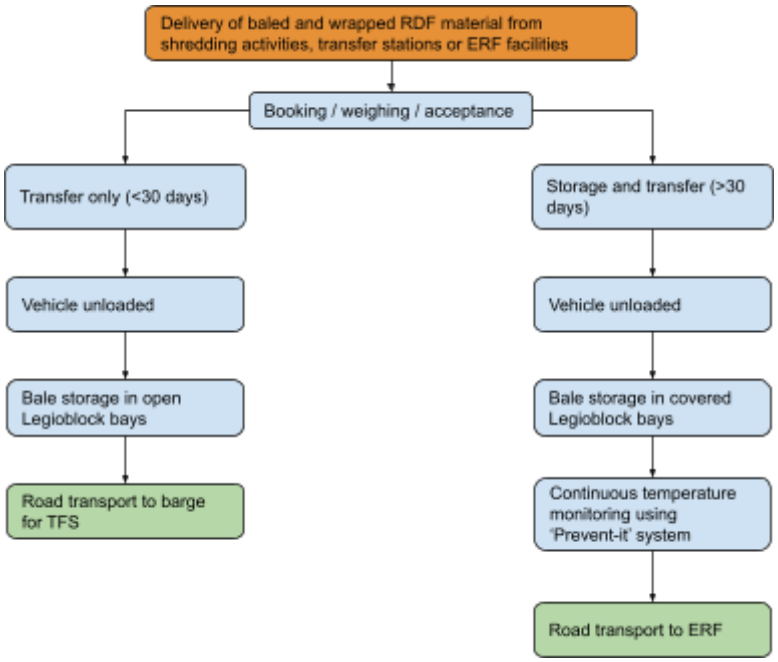
- **Transfer only**

Wrapped RDF bales will be stored in open bays constructed of concrete (Legioblocks) which are rated to fire resistance of 120 minutes. The storage time will be limited to a maximum of 30 days.

- **Storage and transfer**

Wrapped RDF bales will be stored in bays constructed of concrete (Legioblocks) which are rated to fire resistance of 120 minutes. The bales will be covered to provide protection from external heating during hot weather and protection from precipitation. Temperature of the bales will be continuously monitored using the 'Prevent It' system. Monitoring tapes will be placed between the bottom / middle bales and between the middle / top bales across every row of bales. The tapes are continuously monitored for temperature fluctuations with inbuilt notifications for deviations from expected temperature ranges. An action plan is in place within the FPP incorporating notification procedures and procedures for removing and assessing bales that fall outside of the set temperature range. In the case of waste stored for ERF shutdown once the ERF outage is over, typically 2-3 weeks, baled RDF will start to be removed from the site for ERF feedstock. Also during the ERF outage baled RDF may still be exported to other ERFs.

RDF Storage Process Flow Diagram



3. Managing Common Causes of Fires

3.1. Arson

The composting / wood processing / RDF area is covered by a CCTV system and the adjacent VES recycling facility is manned 24/7. The Facility is covered by a security patrol linked to the other VES waste management activities within the wider integrated waste management facility. Gates to the compost / wood area are locked after operational hours. The security team also conducts a fire watch every 1-2 hours. The geographical location of the site within an industrial complex located distant from any nearby conurbations makes the likelihood of spontaneous arson attacks low as well as incidental fires as a result of recklessness. The adjacent VES operated PRF and MRF are 24/7 activities which means there is local presence and staff from those facilities are available to attend the composting / wood activity on short notice.

3.2. Plant & Equipment

All vehicles, plant and equipment will be maintained in accordance with manufacturer's recommendations.

The site, including all plant and equipment will be subject to a recorded daily check to confirm there is no build-up of loose combustible waste, dust and fluff. Daily checks are recorded for the site as a whole and all vehicles.

A daily check sheet is completed for all static and mobile plant. If an issue is identified then a defect sheet is completed, passed onto the maintenance team, and recorded in the electronic management system. Once appropriate repairs are completed the defect sheet is signed off and filed in the relevant plant information folder.

Examples of daily checks are contained in 'Example Check Sheets'.

Plant maintenance activities will be in excess of 6m from any stockpile of waste. Mobile plant not in use out of hours is parked off site within the Rainlam Landfill compound.

All electrical installations repairs and maintenance will be carried out by suitably qualified electricians certified to NICEIC (National Inspection Council for Electrical Installation Contracting).

Portable appliance testing is carried out annually and fixed electrical systems are checked every 3 years.

3.3. Smoking Policy & Procedures

VES operates a Smoke Free Policy and has Smoke Free Procedures in place for the Rainham Composting / Wood facility.

There is no designated smoking area within the wood recycling / compost activity boundary. The nearest VES smoking shelter for staff working at the Facility is located at the Rainham Landfill offices.

3.4. Hot Works & Ignition Sources

Hot works will be carried out when required by external contractors and will be subject to a job specific risk assessment and fire watch requirements. There will not be any gas cylinders stored on site. This work would be subject to a job specific risk assessment and may depend on a number of factors including proximity to combustible material. Post works completion as an indication the relevant area will typically be monitored after 30 - 60 mins and may not be continuous with the area being revisited 1-2 times over the specified period.

Site operatives will be on continuous fire watch throughout operational hours and will be trained to recognise and act appropriately on the signs of self-heating and fire by means of tool-box talks and other methods as appropriate.

Specific fire watch inspections will be made 3 times per day with one of the inspections included as part of the site shutdown / closure procedure at the end of each shift. All of the fire watches will include the inspection of hot exhausts and engine parts.

There will be no naked flames, space heaters, furnaces, incinerators, space-ships or other sources of ignition within 6m of any combustible waste.

There are no fuel tanks or flammable liquids stored within the composting / wood processing area or within 6m of the area.

ELV's will not be accepted at the site.

3.5. Cleaning Regime

Daily site inspections will be carried out for the build-up of loose combustible waste, dust and fluff. The inspections will be carried out by the site supervisor. Any areas identified by the inspection will be cleaned as soon as reasonably practicable. The Facility will be configured with the option to install dust suppression systems around the key operational areas to prevent the build-up of airborne dusts if operations require. Any dust suppression system will be subject to servicing and maintenance in line with the manufacturer's recommendations.

All plant will be cleaned down of dust, fluff and loose material at the end of each working day, or sooner if required, and identified by the fire watch inspections throughout the day. All plant is maintained and serviced in line with manufacturer recommendations. All plant inspected on a daily basis and checks and defect reporting will be recorded. Alternative plant will be hired at short notice should it be required.

3.6. Quarantine Area

The Facility benefits from a large fixed location quarantine area with good separation distance from other combustible material. The location of the quarantine area at the head of the site means staging and managing use of the area straightforwardly.

The 12m x 12m quarantine area is located at the north of the processing area and is easily capable of containing half of the largest stockpile of waste (375m^3 unprocessed waste) this is without considering deployment of active firefighting firebreak tactics. The quarantine area has in excess of a 6m buffer zone of permanently clear area for ease of access during use and to prevent spread of fire from burning or smoldering material. The quarantine area is located on impermeable paving and sealed drainage.

4. Preventing Self Combustion

4.1. Stock Rotation & Storage Times

4.1.1. Scenario 1 - Compost

All bays will be filled and emptied in sequential order to ensure efficient stock rotation. Drawing no. JOB3527_RAIPLA960 (Compost & Wood recycling 1st scenario) shows the layout of the site under this scenario.

Scenario 1 stock rotation and storage times

Bay	Waste Type	Typical Storage Time	Max Storage time
Wood transfer bays 1 to 4	Unprocessed wood for transfer	1 day	7 days
Oversize bays 5 to 10	Compost Oversize	1 month	3 months
Windrows 1 to 7	Actively managed composting windrows	n/a	n/a
10mm Product PAS100 product	n/a	n/a	n/a

4.1.2. Scenario 2 - Mixed

All bays will be filled and emptied in sequential order to ensure efficient stock rotation. Drawing no. JOB3527_RAIPLA960 (Compost & Wood recycling 2nd scenario) shows the layout of the site under this scenario.

Scenario 2 stock rotation and storage times

Bay	Waste Type	Typical Storage Time	Max Storage time
Wood reception bays 1 to 12	Unprocessed wood for shredding	1 day	7 days
RDF transfer bays 1 to 7	Wrapped RDF bales	1 week	1 month
Shredded bays 1 to 12	Shredded wood	2 week	1 month
Windrows 1 to 6	Actively managed composting windrows	n/a	n/a
Compost Oversize bays 1 to 12	Compost Oversize	1 month	3 months
10mm PAS100 product	n/a	n/a	n/a

4.1.3. Scenario 3 - Wood

All bays will be filled and emptied in sequential order to ensure efficient stock rotation. Drawing no. JOB3527_RAIPLA960 (Compost & Wood recycling 3rd scenario) shows the layout of the site under this scenario.

Scenario 3 stock rotation and storage times

Bay	Waste Type	Typical Storage Time	Max Storage time
Wood reception bays 1 to 17	Unprocessed wood for shredding	1 day	7 days
Shredded bays 1 to 17	Shredded wood	1 week	1 month
Shredded bays 1 to 17	Shredded product 30mm to 150mm	1 week	1 month
Shredded bays 1 to 17	Shredded product < 30mm	1 week	1 month

4.1.4. Scenario 4 - RDF

All bays will be filled and emptied in sequential order to ensure efficient stock rotation. Drawing no. JOB3527_RAIPLA960 (Compost & Wood recycling 4th scenario) shows the layout of the site under this scenario.

Scenario 4 stock rotation and storage times

Bay	Waste Type	Typical Storage Time	Max Storage time
RDF transfer bays 1 - 7	Wrapped RDF bales	1 week	1 month
RDF storage bays 8 - 37	Wrapped RDF bales	> 4 weeks	12 months

4.2. Temperature Control & Monitoring

4.2.1. Temperature trigger levels (wood and compost oversized)

The following temperature action levels are in place which are applicable to woody waste inputs / outputs from the composting or wood recycling activities. These levels are based on extensive operational experience within the Veolia Group and are under constant review where incidents or near misses occur or where new external information / guidance becomes available.

- Ambient Temperatures up to 40°C – Normal operation
- Warning Temperature > 50°C – See 'Excess temperature measures (compost and wood)'
- Action temperature >75°C – See 'Excess temperature measures (compost and wood)'

4.2.2. Temperature trigger levels (RDF storage)

The following temperature action levels are in place which are applicable to the RDF storage activity. These levels are based on extensive operational experience within the Veolia Group and are under constant review where incidents or near misses occur or where new external information / guidance becomes available.

- Ambient Temperatures up to 40°C – Normal operation
- Control level > 50°C - for a period exceeding 1 hour, see 'Excess temperature measures (RDF)'

- Action Level >75℃ - See 'Excess temperature measures (RDF)'

4.2.3. Temperature trigger levels (RDF transfer)

Due to the short typical and maximum turnaround times when the RDF is stored for transfer only as described in 'Detailed Process Stages' it is not considered necessary to measure the temperature of the waste continuously as heat build-up will be highly unlikely given the short timescales. Waste piles will be visually monitored throughout the working day for signs of heat build-up and signs of combustion and thermal imaging will be used weekly.

4.2.4. Methods of temperature monitoring

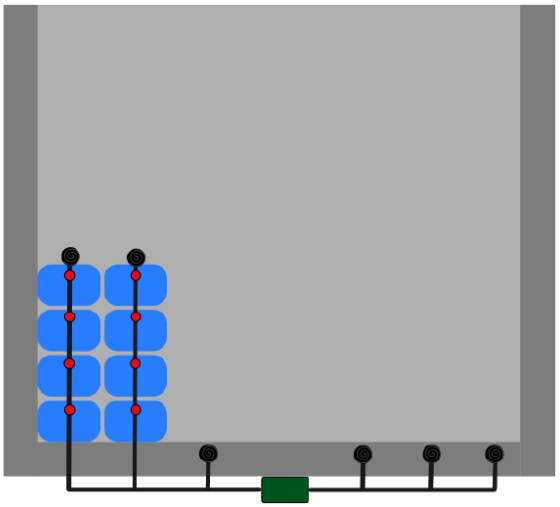
The following methods of temperature monitoring are carried out on site -

- **Temperature probe (PR)**: A 1m spike probe will be used for monitoring of active compost windrows targeting the core zone.
- **Thermal imaging (TI):** A hand held thermal imaging camera is used to monitor any piles for an increase in temperature. The camera is serviced and calibrated in line with manufacturer's recommendations. A backup or hired camera will be available either in the event of equipment failure or to cover repair calibration periods.
- **Visual signs / firewatch (VIS)**: VES employs staff who are highly experienced in composting and wood recycling activities including recognising early signs of self combustion and fire caused by external ignition sources as well as at risk situations e.g. hot weather and hot exhausts. Early signs may include excessive steam, odour, rapid temperature increase, visible flames. Refresher training is carried out periodically to ensure knowledge remains up to date and current. Previous incidents and lessons learned are shared within the group as well as locally.
- **'Prevent-it' tape continuous telemetry (PIT):** Temperature of the outside bales will be continuously monitored using the 'Prevent It' system. Monitoring tapes will be placed between the bottom/middle bales and between the middle/top bales across every row of bales. The tapes are continuously monitored for temperature fluctuations with inbuilt notifications for deviations from expected temperature ranges. Technical specification of the PreventIt system is included in 'Prevent-it system details'.

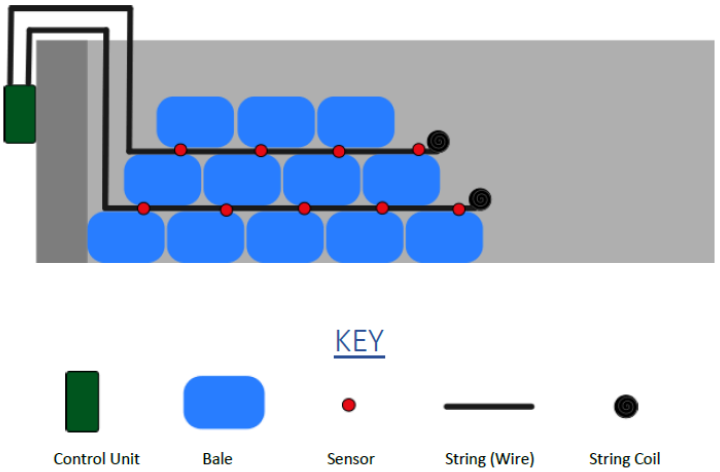
  Use of the Preventit system eliminates the need to use intrusive probes to monitor temperature and the associated handling/removal of bales from the bays to achieve this. This significantly reduces the risk of damage to the bales and holes caused by probing thus reducing the possibility of air ingress and associated potential heating.

  The schematic layout of the PreventIt system within the bays is shown below.

Plan View (not to scale)



Side View



Monitoring of the Prevent-It system is continuous 24/7 and online. Notifications of any exceedance of control and action levels will be notified to the on call site manager/supervisor by text 24/7. Notifications will be monitored by two operational staff at any time on a rota basis.

4.2.5. Scenario 1 - Compost

Scenario 1 temperature control and monitoring frequency

Bay	Waste Type	Temperature monitoring method	Monitoring Frequency
Wood transfer bays	Unprocessed wood for transfer	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly
Oversize bays	Compost Oversize	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly

Windrows 1 to 6	Actively managed composting windrows	*VIS, PR*	*VIS* - Continuous, shift completion *PR* - Process monitoring
10mm Product PAS100 product	n/a	n/a	n/a

4.2.6. Scenario 2 - Mixed

Scenario 2 temperature control and monitoring frequency

Bay	Waste Type	Temperature monitoring method	Monitoring frequency
Wood reception bays	Unprocessed wood for shredding	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly
RDF transfer bays	Wrapped RDF bales	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly
Shredded bays	Shredded wood	*VIS, TI, PR*	*VIS* - Continuous, shift completion *TI* - Weekly (staggered with PR) *PR* - Weekly (staggered with TI)
Windrows 1 to 5	Actively managed composting windrows	*VIS, PR*	*VIS* - Continuous, shift completion *PR* - Process monitoring
Compost oversize bays	Compost Oversize	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly
10mm PAS100 product	n/a	n/a	n/a

4.2.7. Scenario 3 - Wood

Scenario 3 temperature control and monitoring frequency

Bay	Waste Type	Temperature Monitoring method	Monitoring frequency
Wood reception bays	Unprocessed wood for shredding	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly
Shredded bays	Shredded wood	*VIS, TI, PR*	*VIS* - Continuous, shift completion *TI* - Weekly (staggered with PR) *PR* - Weekly (staggered with TI)
Shredded bays	Shredded product 30mm to 150mm	*VIS, TI, PR*	*VIS* - Continuous, shift completion *TI* - Weekly (staggered with PR) *PR* - Weekly (staggered with TI)

Shredded bays	Shredded product < 30mm	*VIS, TI, PR*	*VIS* - Continuous, shift completion *TI* - Weekly (staggered with PR) *PR* - Weekly (staggered with TI)

4.2.8. Scenario 4 - RDF

Scenario 4 temperature control and monitoring frequency

Bay	Waste Type	Temperature Monitoring method	Monitoring frequency
RDF transfer bays 1 - 7	Wrapped RDF bales	*VIS, TI*	*VIS* - Continuous, shift completion *TI* - Weekly
RDF storage bays 8 - 37	Wrapped RDF bales	*VIS, TI, PR*	*VIS* - Continuous, shift completion *PIT* - Continuous monitoring

During periods of ERF outages the outside covered bays will be utilised with storage times of up to 3 months. As some of the bales will be stored up to a maximum of 3 months and the use of the Preventit system eliminates the need for intrusive temperature monitoring it is proposed that no routine turning of the bales will take place. As no routing turning will take place all of the outside bays will benefit from a fire retardant cover to provide shading during hot weather.

4.3. Excess temperature measures (compost and wood)

Where excess temperature occurs and site attendance is indicated or required there are several possible courses of action available. These are likely to be a combination of:

- Installation of pre-emptive fire breaks to control the scale and duration of an emerging incident.
- Dismantling of waste piles to the quarantine area to allow for dragging out and cooling.
- Removal of nearby combustible waste even if the separation distance is greater than 6m to further minimise the risk of spread.
- Use of on site water supplies to treat smoldering waste and as a cooling agent.
- Use of site water supplies to damp down nearby waste piles to minimise the potential for spread in the event a fire begins to propagate.
- Where an incident appears to be escalating, certain pre-emptive actions can be undertaken including filling of the two available bowsers and calling for resources from the adjacent VES sites including drivers for heavy equipment.
- Within the wider VES operation at Rainham there are multiple sources of low combustible inert materials e.g. soils, sand and solid material from the adjacent roadsweeping recycling facility. These can be transported by dumper truck and used to smother burning waste.

4.4. Excess temperature measures (RDF)

In the event that the control level is breached for any bales the following actions will be undertaken, in the event that a control level notification is received outside of working hours the actions will be undertaken the following day.

- Visual and olfactometric inspection of the bay for any signs of heating or smoke 3 times per day
- If the temperature of the bales reduces below 50°C within 14 days no further action is required.
- If the temperature of the bales exceeds 50°C for a period of 14 days the bales will be removed from the bay.
- In the event that the action level of 75°C is exceeded the bales will be removed from the bay within a maximum of 24 hours.

In the event that a bale has to be removed from the bay by virtue of the above breaches of the control parameters or action level it will be taken to one of the two quarantine areas for further inspection and monitoring. The bale will be deconstructed within the quarantine area so that a detailed inspection can be carried out. If no evidence of heating or elevated temperature is found the waste will be returned to an input bay for reprocessing. The second quarantine area will be used for temporary storage of any bales that do not exhibit elevated temperature but need to be removed from the bay to access the bales with elevated temperature, they will be returned to the bay once the site manager/supervisor is satisfied that all bales with elevated temperature have been removed.

In the event that there is any evidence of self heating or combustion the deconstructed bale will be dowsed using fire extinguishers, fire hose or the fire service called based on the judgement of the duty manager and the fire marshal. Once the duty manager/fire marshal is satisfied that there is no longer a risk of further self heating/combustion the waste will be returned to an input bay for reprocessing.

5. Managing Waste Volumes

5.1. Waste Piles

With the exception of the actively managed compost windrows, all waste will be stored in concrete bays of interlocking concrete blocks having a fire rating of greater than 120 minutes. Storage heights will be limited to a maximum of 4m high for loose waste and for bales waste either 4m or three bales whichever is the lower. All bays will have a 1m freeboard both vertically and laterally. The whole composting / wood processing / RDF storage and transfer area is on an impermeable concrete base with sealed drainage.

Bays may be constructed to reduced dimensions to suit operational constraints, any reduced size bays will maintain a 1m freeboard both laterally and vertically.

Bay designations described below are expected operational formats based on proposed site configuration and design however this plan should be read that bay designations could change provided FPP pile size vs size fraction are maintained below guidance volumes as described below. This is to allow for the required flexibility in operations. Where large bays are used for smaller maximum pile sizes there will be height / width markings as a guide to show when capacity is reached.

5.1.1. Maximum pile sizes (absolute)

Absolute pile size limitations

Waste Type	Maximum pile size
Unprocessed wood for transfer	750m^3
Unprocessed wood for shredding	750m^3
Compost Oversize	750m^3
Shredded product 30 to 150mm	450m^3
Shredded product < 30mm	300m^3
Baled RDF	450m^3

5.1.2. Scenario 1 - Compost

Scenario 1 waste bay sizes

Bay*	Waste Type*	Max. waste Depth	Max. waste Width	Max. waste Height	Maximum Stored	Bay size including freeboard (DxWxH) meters
Bays 1 to 4	Unprocessed wood for transfer	12.5m	15m	4m	750m^3	13.5 x 16 x 5
Bays 5 to 10	Compost Oversize	7.5	10	4m	300m^3	8.5 x 11 x 5
Windrows 1 to 7	Actively managed composting windrows	40-50m	10m	6m	3000m^3	n/a

There will be a minimum of 1 m freeboard both vertically and laterally on all bays.

5.1.3. Scenario 2 - Mixed

Scenario 2 waste bay sizes

Bay*	Waste Type*	Max. waste Depth	Max. waste Width	Max. waste Height	Maximum pile size stored	Bay size including freeboard (DxWxH) meters
Bays 1 to 4	Unprocessed wood for shredding	12.5m	15m	4m	750m^3	13.5 x 16 x 5
Bays 1 to 7 (scenario 4)	Wrapped RDF bales	10m	12m	4m	450m^3	11 x 12 x 5
Bays 11 & 12	Shredded product 30 to 150mm	12m	12m	4m	450m^3	13 x 13 x 5
	Shredded product < 30mm				300m^3	13 x 13 x 5
Bays 5 to 10	Compost Oversize	11m	10m	4m	300m^3	12 x 11 x 5
Windrows 1 to 6	Actively managed composting windrows	40-50m	10m	6m	3000m^3	n/a

5.1.4. Scenario 3 - Wood

Scenario 3 waste bay sizes

Bay*	Waste Type*	Max. waste Depth	Max. waste Width	Max. waste Height	Maximum pile size stored	Bay size including freeboard (DxWxH) meters
Bays 1 to 9	Unprocessed wood for transfer	12.5m	15m	4m	750m^3	13.5 x 16 x 5
Bays 10 to 13	Shredded wood	12m	12m	4m	450m^3	13 x 13 x 5
Bays 14 & 15	Shredded product 30mm to 150mm	12m	12m	4m	450m^3	13 x 13 x 5
Bays 16 & 17	Shredded product < 30mm	11	10	4m	300m^3	12 x 11 x 5

* Waste types described are expected operational formats based on site configuration and design however this plan should be read that bay designations could change provided FPP pile size vs size fraction are maintained below guidance volumes. This is to allow for the required flexibility in operations.

5.1.5. Scenario 4 - RDF

Scenario 4 waste bay sizes

Bay*	Waste Type*	Max. waste Depth	Max. waste Width	Max. waste Height*	Maximum pile size stored	Bay size including freeboard (DxWxH) meters
Bays 1 to 7	Wrapped RDF bales	10m	12m	4m	450m^3	11 x 12 x 5
Bays 8 to 37	Wrapped RDF bales	11.5m	16m	4m	450m^3	12.5 x 16 x 5

* Maximum waste height for bales is 4m or three bales high whichever is the lower.

6. Preventing Fire Spreading

6.1. Separation Distances

All waste piles are 6m from any other waste pile, the site perimeter, other buildings and other combustible or flammable materials as shown on drawings:

- JOB3527_RAIPLA960 (Compost & Wood recycling 1st scenario)
- JOB3527_RAIPLA960 (Compost & Wood recycling 2nd scenario)
- JOB3527_RAIPLA960 (Compost & Wood recycling 3rd scenario)
- JOB3527_RAIPLA960 (Compost & Wood recycling 4th scenario)

Unless separated by 120 minute retardant fire walls.

7. Quarantine Area

A 12m x 12m quarantine area is located at the North of the processing area and is capable of containing half the largest stockpile of waste (375m^3 unprocessed waste). The quarantine area has in excess of a 6m buffer zone of permanently clear area for ease of access during use and to prevent spread of fire from burning or smoldering material. The quarantine area is located on impermeable paving and sealed drainage.

The quarantine area is located on impermeable paving and would be isolated from the site drainage system using a penstock valve which would be closed in the event that the quarantine area is used.

8. Fire Detection

Regular visual inspections of waste streams for signs of smoke and / or temperature checks will be carried out as follows.

Stockpiles of waste and compost windrows are monitored for temperature using the method and at the frequencies described in ‘Temperature Control & Monitoring’.

In the event of a fire being detected, site management would be contacted and would attend the site. A rota system is in place ensuring that the out of hours monitoring service will always have a minimum of two contacts available on a 24/7 basis 365 days a year. Operatives would also be available out of hours in the event of the need for plant and machinery to be used to assist the Fire Service.

Emergency contact procedures and contact details are contained within ‘Emergency Management Plan’.

The composting / wood processing area is covered by a CCTV system and the adjacent VES recycling facility is manned 24/7. The Facility is covered by a security patrol linked to the other VES waste management activities within the wider integrated waste management facility. The security team also conducts a fire watch every 1-2 hours.

9. Fire Suppression

As no part of the activity is within a building no fire suppression system is fitted.

10. Fire Fighting

In the event of a fire taking place within the permitted area, the most effective fire strategy would be to extinguish any fire as soon as possible and therefore a 'Controlled burn' would not be a favourable option.

There are a number of options available for fire fighting both as suppression in advance of the arrival of the fire service and to assist the fire service on arrival, these include:

- **Tractor and vacuum bowser -** Two tractors and bowsers are available on site that can be filled from a number of sources including the on-site fire hydrant and fire tank. These can be used immediately on detection of a fire to direct a deluge of water to a specific location at a rate of 0.45m^3 / minute.

- **Active firefighting fire break procedure -** A significant element of the fire fighting strategy is the fire break procedure, utilising the staff and available plant on site this procedure contributes to fire fighting but also results in a significant reduction in the volume of water needed.

- **Other heavy equipment / yellow plant availability** - There are 2 loading shovels and a 360 excavator stationed on site as part of current operations. The facility benefits from access to heavy plant based on the adjacent roadsweeping recycling facility, landfill PRF and MRF. In an emergency there would be short turnaround access to at least an additional 3 loading shovels, 2 dumper trucks and an additional 360 excavator. This equipment could be deployed with the associated operators.

- **Smothering agent -** Within the wider VES operation at Rainham there are multiple sources of low combustible inert materials e.g. soils, sand and solid material from the adjacent roadsweeping recycling facility. These can be transported by dumper truck and used to smother burning waste.

  The fire break procedure will operate as outlined below and on their arrival as directed by the Fire Rescue Service:

  1. Assess the location of the hot spot and surrounding material.
  2. Report to Site Manager the details being carried out
  3. Site Manager or deputy will report the fire to the emergency service in the first instance and then follow the VES emergency plan. The Environment Agency Emergency Line will also be notified.
  4. One loading shovel is to start moving a bucket width of material from the windrow to the right of the windrow containing the hot spot.
  5. The second loading shovel is to start moving a bucket width of material from the windrow to the left of the windrow containing the hot spot.
  6. Both of these loading shovels will start from the trommel (Eastern) side of the windrow.
  7. The third loading shovel will start moving material from the windrow at the MRF side of the process pad. Access can be gained from the reception area.
  8. All material will be formed into a pile as shown in the diagram.

9. This process has been accessed and allocated a period of 10 minutes. All loading shovel drivers are experienced drivers who can drive at a swift safe speed.

10. Care must be taken when approaching the hot spot. The Operator should not approach the hot spot if the flames are assessed as being too dangerous to work in close proximity.

11. This procedure will be reviewed annually or as required following any incident.

In addition to on-site resources, VES as a large waste management company has the resources, including financial, to deal with a fire related incident and the subsequent aftermath such as contingency arrangements and fire water management.

All VES controlled vehicles using the site will be fitted with appropriate fire extinguishers.

The Facility is located within range of several London Fire Brigade (LFB) Fire stations within the Borough of Havering and also the adjacent Barking and Dagenham. The nearest Fire Station is based in Wennington which is north east of the Facility (Wennington Fire Station). This station is 6 miles by road and less than 15 minutes normal (non emergency) driving time.

Other stations within range are as follows along with distance and normal (non emergency) drivetime:

Borough of Havering:

- **Wennington**, Wennington Road RM13 9EE, 6 miles, 15mins drivetime.
- **Romford**, 198 Pettits Boulevard , RM1 4PL, 10.4 miles, 30 mins drivetime.
- **Hornchurch**, 42 North Street, RM11 1SH, 7.9 miles, 22 mins drivetime.
- **Harold Hill**, Units 7 - 9 Falcon Business Centre Ashton Road Romford, RM3 8UN, 17.7 miles, 28 mins drivetime.

Borough of Barking and Dagenham:

- **Barking**, Alfred's Way, IG11 0BB, 7.6 miles, 15 drivetime.
- **Dagenham**, 70 Rainham Road North, Dagenham, RM10 7ES, 7.9 miles, 22 drivetime.

11. Water Supplies

Environment Agency Fire Prevention Plan guidance bases fire fighting water volume estimates on a nominal pile size of 300m^3 and an application rate of 2000 litres a minute over a period of three hours active fire fighting. Based on prorated guidance amounts, a water volume of 900m^3 is indicated for the subject site. Actual volumes required are a site specific consideration based on a number of risk based factors and operational constraints, however the Environment Agency approach ensures that the risk is framed with a nominal guidance quantity to inform the decision making process.

Water supplies available at the site consist of:

- **Storage tank:** A 500m^3 water tank situated directly adjacent to the activity as shown on drawing JOB3527_RAIPLA960 (Fire Prevention Plan).

- **Hydrant:** A fire hydrant is located adjacent to the activity (within 100m) as shown on drawing JOB3527_RAIPLA960 (Fire Prevention Plan), the hydrant has been tested to produce a flow rate of approximately 0.45m^3 / minute.

- **Main river source (secondary supply):** Complementary to the on-site water availability the LFB have a locally based fire boat and access to the Thames immediately adjacent to the operation. The Thames is subject to seasonal and tidal variations however the stretch running alongside the Facility is approaching 1km wide and therefore sufficiency of water volume or abstraction length is not a constraint. The LFB fireboat has previously been successfully deployed at the site in response to an incident and therefore efficacy of this measure in the field has been established. Access can be gained for fire fighting from to the south of the site from the river across Coldharbour Lane.

- **Recirculation of fire water:** Due to local topography, retainment features and drainage isolation system, the facility has a fire water hold up capacity of up to 1138m^3 which will accumulate principally in the south western quadrant of the site. The depth of accumulated water in this area will allow for recirculation of fire water using on site use of yellow plant / bowser. The area could also be used as a quench.

  Recirculation of fire water by the LFB may also be possible but this will be a site specific assessment at the time of any incident and may depend on the amount of fines present within the water so cannot be guaranteed.

In combination with the measures described in this document, the proposed physical separation between stockpiles, use of fire resistant storage bays, the fire prevention controls in place and receptor locations / sensitivity the water availability is deemed to be adequate for the scenarios considered.

12. Fire Water Management

In the event of a fire the penstock valve in the southwest corner of the concrete pad will be closed and fire water will be allowed to accumulate in the southwest corner of the area which is retained by raised kerbing along its southern and western edges as shown on drawing JOB3527_RAIPLA960 (Fire Prevention Plan). The volume of water that can be stored in this area is calculated as 1,138m^3 which will provide excess hold up capacity even based on the largest stockpile of waste assuming no post-incident pile size reduction / fire break procedure.

13. Amenity Issues

The facility is located in an area predominantly surrounded by other waste management activities, primarily the operational Rainham Landfill Site. There are no residential receptors or major transport networks (except the River Thames) within 1km of the site. Should any fire create large amounts of smoke to be blown off site, the Manager / Supervisor will contact the closest downwind receptors as a courtesy and to provide updates on the ongoing management of the incident.

Key receptors within 1km of the site have been identified and are shown on the 1km receptor drawing no. JOB3527_RAIPLA960 (Fire Prevention Plan) which can be seen in 'Emergency Management Plan'.

Key offsite receptor type and locations

Receptor (non VES)	Type	Distance to site boundary (m)	Direction from site	Grid reference	
				x	y
River Thames	Controlled water	50	South	552727	178928
River Thames	Ecological (LWS)	50	South	552727	178928
EDL gas utilisation plant (part of landfill operations plant run by third party)	Commercial	66	West	552495	179181
Freightmaster estate	Commercial / industrial	140	West	552444	179067
Inner Thames Marshes	Ecological (SSSI)	633	North east	552933	179765
Wennington, Aveley and Rainham Marshes	Ecological (LWS)	633	North east	552933	179765
Mudflats	Ecological	35	South	552635	178896

There are no schools, care homes or hospitals within 1km of the site. There are no bedrock aquifers within 1km beneath the site. There are four protected habitats within statutory screening distance of the site, the Inner Thames marshes SSSI, the River Thames Local Wildlife Site 'LWS', the Wennington, Aveley and Rainham Marshes LWS and protected mudflats along the banks of the Thames. Receptors are shown on drawing 202106_1km Receptors - Rainham.

14. Contingency Measures

In the event of a fire to ensure effective waste removal and protection of the environment, and in the event of a closure of the intended outlet for the material treated on the site, the following contingency delivery points will be utilised according to tonnage requirements and availability;

Other Veolia Group Treatment and Disposal Facilities:

- Veolia Rainham Non-Hazardous Landfill (Compost / oversize material)

- Veolia Pitsea Compost (Compost / oversize material)
- Hadfields / Enva Wood Recycling Facilities (wood material)

To ensure effective control of incoming waste in the event of a breakdown and/or non-availability at the facility, the following contingency delivery points are available, to ensure the protection of the environment;

Other Veolia Group Treatment and Disposal Facilities:

- Veolia Rainham Non-Hazardous Landfill (Compost / oversize material)
- Veolia Pitsea Compost (Compost / oversize material)
- Hadfields / Enva Wood Recycling Facilities (wood material)

In the event of a fire, water will be retained within the compost / wood processing area prior to off site disposal via road tanker or on site leachate treatment plant and connection to sewer following consultation with, and agreement from Thames Water. VES operates an extensive fleet of waste water tankers with a 24 hour call out availability.

Following the extinguishing of a fire and only when the site is cleared of all fire damaged wastes, fire water and the infrastructure repaired, checked and drainage systems cleaned and reinstated will the site be in a position to re-open. Prior to re-opening, the local Environment Agency office will be contacted and evidence provided to demonstrate the site is fit for purpose.

15. Fire Drills

A fire drill will be carried out every 6 months, following each drill an assessment is undertaken and any lessons learned will be implemented. A number of the site staff will be specifically trained and appointed as Fire Marshalls.

The fire drill will vary on each occasion and cannot be prescribed in advance. The precise nature of the drill will be decided by the fire marshal and operational management based on factors such as perceived risk, incidents at other facilities, experience of staff and consultation with Health / Safety / Environmental advisers etc. The drills will generally be focused around aspects of the FPP and Emergency Plan.

16. Emergency Management Plan

Emergency information and contacts

Site Name:	Rainham Compost		**Environmental Permit Reference:** EP3136GK
Address and Grid Reference:	Coldharbour Lane, Rainham, Essex, RM13 9YB. Grid reference TQ 52278 79637.		
Operating Hours:	Most operations will occur Monday - Friday 07:00 – 14:00 and Saturday 7:00 - 12:00 with other ancillary activities occurring during extended hours.		
Facility Type:	Rainham Compost	**No of Staff Drivers/Loaders: Transfer Station: Office:**	Up to 6 including regular contractors employed on site
Site Manager:	Philip Brown	**Telephone:**	+44 (0)7825 658470
Route from nearest main junction From the A13, turn onto Ferry, and then turn onto Coldharbour Lane			
RESPONSIBILITIES/CONTACTS In the event of an emergency/incident contact:			
Emergency Coordinator 1:	Ian Riach	**Telephone:**	+44 (0)7796 471 988
Emergency Coordinator 2:	Peter Budd	**Telephone:**	+44 (0)7734 911409
Area Manager:	Mark Aspden	**Telephone:**	+44 (0)07769 366456
Business Line Director:	Steve Mitchell	**Telephone:**	+44 (0)7831 196775
QHSE Manager:	Glenn Hotson	**Telephone:**	+44 (0)7736 340795
Crisis Hotline:	**08450 710755**		
Emergency Spill Response:	**08007838020**		
Emergency Services Direct Dial:	**999**		

17. Management System

Veolia ES Landfill Limited has a detailed management system which is audited to the three main standards, ISO 9001, ISO 14001 and OHSAS 18001.

The following documentation should be considered during any planning, reviewing or auctioning of the above plan.

Key management system documents and references

Document Name	Description	Reference Number
Environmental Aspects/Impacts Register	A review of the site and its operations to calculate its impact on the environment using a matrix scoring system. By highlighting any risks, measures are implemented to reduce the risk	ENV/2/004/001
Register of Significant Environmental Aspects	A summary of the above with relevant control methods assigned to each point	Local
Objectives & Targets	Continual improvement register undertaken by each contract. Local objectives set including environmental targets	SYS/2/003/001
Monitoring and Measurement of ENV performance	This document establishes the overarching procedures for monitoring and measuring Environmental Performance. It also outlines the process for ensuring alignment with VES corporate requirements	ENV/2/002
Environmental notification system	This procedure sets out the process by which employees may identify health, safety and environmental concerns and near misses. It is not mandatory but may be used to record matters where immediate access to RIVO is not available. It also provides a mechanism for providing feedback to the originator of the concern / near miss	HS/2/31
AVA	AVA is the Veolia's online reporting tool for observations, accidents, incidents and near misses. This tool is also used to register site visits from recognised authorities. Permit reviews are also undertaken via this portal. All reports registered are monitored via the QHSE	NA

	department, department heads and regional directors.	
Regulatory Documents	These included WML, Permits and exemptions as well as working plans	Local
Business Continuity Plan	This document covers the most significant impacts that could occur with recovery time objectives set against each activity type as to ensure compliance with regulatory authorities whilst minimising business disruption. The plan is reviewed yearly or earlier if it is needed to be activated and is subject to plan exchange and drills.	SYS/2/028/001

Document reference numbers are correct at the point this document was reviewed, some environmental documentation is cross fed into H&S documents

18. Drawings

JOB3527_RAIPLA960 (Fire Prevention Plan)
JOB3527_RAIPLA960 (Compost & Wood recycling 1st scenario)
JOB3527_RAIPLA960 (Compost & Wood recycling 2nd scenario)
JOB3527_RAIPLA960 (Compost & Wood recycling 3rd scenario)
JOB3527_RAIPLA960 (Compost & Wood recycling 4th scenario)
202106_1km Receptors - Rainham

19. Example check sheets

DAILY CHECKS RECORD: MOBILE PLANT

PLANT NO: Komptech Shredder W/E 25.09.21

DAY	DAILY CHECKS								CHECK AS REQUIRED						
	HOUR METER	ENGINE [10/30]		HYDRAULICS [5W/30]		SUMMER COOLANT ANTIFREEZE		GEAR OIL [220]	FUEL	RAD	AIR FILTER	ENGINE	TEETH CHECKED	GREASED	OPERATORS INITIALS
		LEVEL CHECK	AMOUNT ADDED	LEVEL CHECK	AMOUNT ADDED	LEVEL CHECK	AMOUNT ADDED	AMOUNT ADDED	AMOUNT ADDED	BLOWN OUT	BLOWN OUT	BLOWN OUT			
MON															
TUES															
WED															
THUR															
FRI															
SAT															
SUN															
TOTAL															

SAFETY CHECKS	DOORS LOCKABLE		TRACKS		EMERGENCY STOPS		ALTERNATOR & FAN BELTS		CONDITION OF SHAFTS		BATTERY COMPARTMENT BLOWN OUT & FREE OF DEBRIS		DIS CHARGE BELT GUARDING SECURE	

FILLER CAPS & GUARDING IN PLACE		CONDITION OF HOPPER/GREEDY BOARDS		CONDITION OF COLLECTION BELT		CONTROL PANEL IN WORKING ORDER		CONDITION OF DISCHARGE BELT		RED/AMBER/GREEN WARNING SYSTEM LIGHTS WORKING CORRECTLY	

MACHINE DEFECTS PLEASE GIVE BRIEF DESCRIPTION		FIRE EXTINGUISHER/ SUPPRESSION	CHARGED		REQUIRES RECHARGING		OPERATORS INITIALS
1							
2							
3							
4							

Managers/Authorised Person's Signature……..Date……..

Rainham Compost

DAILY CHECKS RECORD: MOBILE PLANT

PLANT NO: Doppstadt SM620 Trommel W/E 25.09.21

DAY	DAILY CHECKS									CHECK AS REQUIRED			
	HOUR METER	ENGINE [10/30]		HYDRAULICS [TRIAD 46]		GEAR OIL [85W-90]	ADBLUE	FUEL	AIR FILTER	RADIATOR	ENGINE	GREASED	OPERATORS INITIALS
		LEVEL CHECK	AMOUNT ADDED	LEVEL CHECK	AMOUNT ADDED	AMOUNT ADDED	ADDED	AMOUNT ADDED	BLOWN OUT	BLOWN OUT	BLOWN OUT		
MON													
TUES													
WED													
THURS													
FRI													
SAT													
SUN													
TOTAL													

SAFETY CHECKS													
	DRUM		EMERGENCY STOPS		CONTROL PANEL		TRACKS		HOPPER		COMPOST & OVERSIZE BELT		FILLER CAPS & ENGINE GUARDS	
	PANEL/DOOR SECURE		BRUSH INTACT		DOOR SAFETY SWITCHES WORKING				BOTH BELT GUARDINGS INTACT				BATTERY COMPARTMENT BLOWN OUT	

MACHINE DEFECTS PLEASE GIVE BRIEF DESCRIPTION		FIRE SUPPRESSION				OPERATORS INITIALS
		CHARGED		REQUIRES RECHARGING		
1						
2						
3						
4						
5						
6						

Managers/Authorised Person's Signature..... Date.....

Rainham Compost

DAILY CHECKS RECORD: MOBILE PLANT

PLANT NO: CAT 950 M L/S W/E 25.09.21

DAY	DAILY CHECKS										CHECK AS REQUIRED					
	HOUR METER	ENGINE [10/30]		TRANSMISSION [CT 30]		HYDRAULICS [10]		COOLANT/ ANTIFREEZE		FUEL	AIR FILTER	RADIATOR	ENGINE	GREASED	ADBLUE ADDED	OPERATORS INITIALS
		LEVEL CHECK	AMOUNT ADDED	LEVEL CHECK	AMOUNT ADDED	LEVEL CHECK	AMOUNT ADDED	LEVEL CHECK	AMOUNT ADDED	AMOUNT ADDED	BLOWN OUT	BLOWN OUT	BLOWN OUT			
MON																
TUES																
WED																
THUR																
FRI																
SAT																
SUN																
TOTAL																

SAFETY CHECKS													
	TOWING PIN		STEPS & WALKWAYS SECURE/CLEAR		MIRRORS		BRAKES		GLASS		INSTRUMENT PANEL		TYRES	

SAFETY CHECKS													
	HANDRAILS		FLASHING BEACON		FRONT & REAR LIGHTS		REVERSING BLEEPER		HORN		WHEEL NUTS/ INDICATORS		REVERSING CAMERA	

SAFETY CHECKS													
	CONDITION OF BUCKET/ CUTTING EDGE		FILLER CAPS & GUARDING		HAND HELD RADIO		AIR CON SYSTEM WORKING		WINDOW WIPERS		WEIGH LOADER		JET WASHED	

MACHINE DEFECTS PLEASE GIVE BRIEF DESCRIPTION BELOW		FIRE EXTINGUISHER/SUPPRESSION	CHARGED		REQUIRES CHARGING		OPERATORS INITIALS
1							
2							
3							
4							
5							

Managers/Authorised Person's Signature.....Date..... Total number recorded on tally counter of oversize loads reprocessed.....

Rainham Compost

SITE: Rainham **MONTH:** **COMPLETED BY:**

Item No.	Item:	Inspection date:	Satisfactory ?: Yes/No/ N/A	Comments/Action Required:	Target date:	Action Completed date:	Signed as completed:
	General Site						
1 #	Are you satisfied that general housekeeping standards are acceptable? (mess room/toilets/ showers/offices)						
2	Are waste materials/recyclates controlled?						
3	Are signs and road markings in good condition?						
4	Are barriers and height barriers in use and operational?						
5	Is access to/egress from site clear and safe?						
6	Are clocking on/access points operational?						
7 #	Are remote sensors (CCTV/beams etc.) clear and undamaged?						
8 #	Are smoking controls in place?						

						FOLLOW UP	
Item No.	Item:	Inspection date:	Satisfactory ?: Yes/No/ N/A	Comments/Action Required:	Target date:	Action Completed date:	Signed as completed:
9	Are pallet and other storage areas on site clear of buildings and maintained in a safe condition?						
10	Are segregating/retaining/push walls in good condition?						
11	Are battery charging areas maintained in a safe condition?						
12	Are contractors working on site adhering to the requirements under Control of Contractors procedure?						
	Site Drainage						
13	Are site drainage systems (Interceptors/Silt Traps/Cess Pits) being effectively managed?						
	Electrical						
14 #	Are Fixed Electrical Installations (panels) closed/secure/good condition & no combustible materials nearby?						
15	Are RCDs operational (i.e. is power isolated when tested)?						
16 #	Are Portable Appliance Tests up to date?						
						FOLLOW UP	

Item No.	Item:	Inspection date:	Satisfactory ?: Yes/No/ N/A	Comments/Action Required:	Target date:	Action Completed date:	Signed as completed:
17 #	Are Emergency Lighting Inspections being undertaken (where fitted)?						
	H&S						
18	Are issues (quality/availability) with PPE being raised to Procurement?						
19 #	Are first aid boxes (depot) correctly stocked/maintained?						
20 #	Does the site have trained and recognised first aiders?						
21	Has all fall arrest/prevention equipment been tested and certificates in date?						
22	Are ladders listed on a ladder register with records of inspection maintained?						
23	Is pit edge protection available/in use?						
24	Are risk assessments and COSHH assessments in place/reviewed?						
25	Are Medical Skin Surveillance checks (and others if applicable) being undertaken?						
						FOLLOW UP	

Item No.	Item:	Inspection date:	Satisfactory ?: Yes/No/ N/A	Comments/Action Required:	Target date:	Action Completed date:	Signed as completed:
26	Are WorkSafe observations being undertaken and logged on RIVO?						
27	Are local H&S meetings being undertaken and minutes recorded?						
28 #	Are all RIVO entries up to date?						
29	Is there an Asbestos Risk Assessment & monitoring program in place?						
30	**Where you have hand held, powered vibrating tools in use have they ALL been tested for vibration levels?**						
31	**Have all personnel using vibrating tools completed / received health surveillance in line with the procedure HS/2/012?**						
	Equipment/Plant						
32	Are LOLER inspection certificates for lifting equipment (non vehicle) all up to date?						
33	Are LOLER inspection certificates (vehicles - bin lifts; lifting chains; tail lifts) all up to date?						
						FOLLOW UP	

Item No.	Item:	Inspection date:	Satisfactory ?: Yes/No/ N/A	Comments/Action Required:	Target date:	Action Completed date:	Signed as completed:
34	Are up to date insurance inspection certificates in place for air receivers?						
35	Has regular maintenance/ inspections been carried out on exhaust ventilation equipment?						
36	Where portable heating appliances are in use are suitable controls in place?						
37	Have regular inspections and annual maintenance been carried out on Roller shutter doors?						
	Drivers						
38	Are driver licences (HGV/ADR/Plant) checked regularly - manually or via IDS?						
39	Are drivers safety equipment & PPE checks being undertaken? (State number checked in notes)						

						FOLLOW UP	
Item No.	**Item:**	**Inspection date:**	**Satisfactory ?: Yes/No/ N/A**	**Comments/Action Required:**	**Target date:**	**Action Completed date:**	**Signed as completed:**
	Emergency						
40 #	Have emergency response drills taken place within the required timescales? (Fire Evacuation at least 6 monthly, Environmental incident simulation at least annually)						
	Fire						
41 #	Are sprinkler heads clear of obstructions (i.e. stacked materials)?						
42 #	Are sprinkler main stop valves fully open?						
43 #	Are all fire fighting appliances (extinguishers, hydrants, hoses etc.) located correctly as per the fire plan?						
44	Are fire extinguishers serviced/maintained and fully loaded?						
45	Is the storage of flammable liquids managed and maintained appropriately?						
46	Are flammable gas storage areas segregated (distance/cages)?						
47	**Are fire escapes and escape routes clear from obstruction?**						

- Satisfactory, x - Unsatisfactory, NI – Not Inspected, NA – Not Applicable.
Please provide comment if not satisfactory (Continue below/on separate sheet)

20. Prevent-it system details

PREVENTiT
EARLY WARNING STOCKPILE MONITOR

Technical Specifications

Sensor Strings		
Sensing Range	-55 to 100	°C
Accuracy over entire range	±2	°C
Accuracy over 10-45°C range	±0.5	°C
Sensor Technology	Digital Semiconductor	
Working Range	0-90	°C
Cable outer diameter	6	mm
Sensor diameter max.	20	mm
Minimum bend radius	100	mm
Maximum number of sensors per string	80	
Maximum string length	60	m

Control Unit		
Environmental protection	IP65	
Case material	Powder-coated steel	
Case wall thickness	1.2	mm
Case dimensions	300×250×150	mm
Maximum number of string connections	8	
Minimum battery life (1 reading per hour with solar top-up)	6	months
Battery operating temperature range	-20 to 50	°C
Battery charging temperature range	5 to 30	°C
Maximum reading interval	20	s

Wireless Networking		
Operating frequency band	868	MHz
Range (outdoor, line of sight)	1	km
Network topography	mesh	
Maximum number of units per network	>100	

PC / Software	
Operating system	Windows 7 onwards with admin login
Wireless network interface connection	1 spare USB port
Data collection application	local Windows service
Data viewing application	Windows application
Data storage	Secure online database with daily backups

Call: 01322 667076 Email: enquiries@freelandscientific.com Email: http://www.preventit.co

FREELAND SCIENTIFIC LTD, ROSEDALE NURSERY, COLLEGE ROAD, HEXTABLE, KENT BR8 7LT


NOT WORRIED ABOUT FIRE AT YOUR RECYCLING SITE?
Why you should be:
A FIRE BREAKS OUT AT A UK WASTE MANAGEMENT SITE ALMOST EVERY DAY OF THE YEAR
It's not usually arson or human error that starts the fire.
THE MOST COMMON CAUSE IS SPONTANEOUS COMBUSTION
Heat generated within the stockpile builds up and ignites.
IS YOUR PERMIT AT RISK?
To prevent waste fires and lessen their impact, the Environment Agency has published new guidance for waste and recycling businesses.
Most importantly, it requires site operators to reduce the chance of a fire happening.
IF YOU DON'T PUT IN PLACE AND USE FIRE PREVENTION MEASURES, YOUR SITE PERMIT AND YOUR INSURANCE COULD BE AT RISK
PREVENTiT is the new low-cost fire prevention solution designed for you. Call us now on 01322 667076 or email maria@freelandscientific.com to ensure the safety of your site, your people and your business.
PREVENTiT
EARLY WARNING STOCKPILE MONITOR
Call: 01322 667076 Email: maria@freelandscientific.com Web: www.preventit.co
Don't let your recycling business go up in smoke!
PREVENTiT
EARLY WARNING STOCKPILE MONITOR
The NEW easy-to-use, low-cost fire prevention solution for the waste and recycling industry.
PREVENTiT
EARLY WARNING STOCKPILE MONITOR
Low cost disposable sensor cable
PREVENTiT is a new early warning system which monitors temperatures in your stockpiles. If any area rises too high, it sends an alert, allowing you to react to reduce the danger and prevent the fire before it's even started.
HOW IT WORKS.... YOUR FIVE SIMPLE STEPS TO FIRE SAFETY
1 The disposable sensor cable is laid across the material at various stages as the pile grows in height
2 The cable connects to the monitoring unit
3 The unit wirelessly transmits real-time temperature information from every sensor point to a PC
4 When any area of the pile approaches dangerous temperatures, the alarm activates
5 With this information, you know exactly when to rotate or move the stock to prevent risk of fire
The NEW easy-to-use, low-cost fire prevention solution for the waste and recycling industry.
Call: 01322 667076 or email: maria@freelandscientific.com